

# **PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

## **June 30, 2015 Actuarial Valuation Report**

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.



1550 Liberty Ridge Drive  
Suite 200  
Wayne, PA 19087-5572

Tel +1 610 687.5644  
Fax +1 610.687.4236

[www.milliman.com](http://www.milliman.com)

August 31, 2016

Mr. Pedro R. Ortiz Cortés  
Administrator  
Puerto Rico Government Employees and  
Judiciary Retirement System Administration  
437 Ponce de León Avenue  
Hato Rey, PR 00918

Dear Mr. Ortiz:

This report presents the results of the actuarial valuation of the Puerto Rico Government Employees Retirement System (PRGERS), a cost-sharing multiple employer defined benefit pension plan, as of June 30, 2015. Section I contains highlights of the valuation including a general discussion. 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 present information pertaining to the operation of the plan for inclusion in financial statements based on relevant Statements of the Government Accounting Standards Board (GASB);
- to review the experience under the plan since the previous valuation; 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.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

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

### 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.

The asset information used for the valuation was taken from unaudited financial statements as of June 30, 2015 provided by PRGERS on August 8, 2016 and is subject to change upon audit. The asset information used for the determination of the 2016-2017 Additional Uniform Contribution (AUC) was taken from unaudited financial statements as of June 30, 2015 provided by PRGERS on February 18, 2016, which have been subsequently revised after the issuance of the 2016-2017 AUC. Therefore, the asset values in the AUC determination differ from those for the valuation.

### Future Measurements

This valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

benefits. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

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.

Act 3, the comprehensive pension reform enacted on April 4, 2013, is a dynamic 50-year plan that is designed to provide enough cash for the System to be able to make full Basic System Benefit payments as they come due, to pay the new lower System Administered Benefits, and to pay debt service on the Pension Obligation Bonds. The reforms enacted through Act 3, by design, are a very long term plan, and constant monitoring will be needed to make sure the System stays on track. Actual experience may turn out better or worse than expected, thus future adjustments may be needed. Receipt of the Additional Uniform Contribution under Act 32 of 2013 (as amended by Act 244 of 2014) is critical to the System's ability to make payments as they come due.

### 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 PRGERS. We believe that the actuarial assumptions and

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

methods used in this actuarial valuation are reasonable for the main purposes of this report as stated herein.

Actuarial computations presented in this report are for purposes of fulfilling financial accounting requirements under the GASB Statements 45 and 67. The calculations in the enclosed report have been made on a basis consistent with our understanding of the plan provisions described in Section VII 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



Timothy J. Nugent, F.S.A.  
Member American Academy of Actuaries



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

GDB:TJN:KAW\PRG01-10  
g:\corr\2016\prg\PRGERS\_Val\_June302015.docx

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## TABLE OF CONTENTS

	<u>Page</u>
SECTION I - SUMMARY	1
Subsection A - Summary of Principal Results	1
Subsection B - General Discussion	3
SECTION II - SYSTEM ASSETS	13
Subsection A - Statement of Fiduciary Net Position	13
Subsection B - Statement of Changes in Fiduciary Net Position	14
Subsection C - Estimated Annual Rate of Return	15
Subsection D - Estimated Historical Rates of Return	15
SECTION III - MANAGEMENT INFORMATION	16
Subsection A - Allocation of Actuarial Liability by Pension Law and System Entity	16
Subsection B - Accumulated Member Contributions for Active Members	17
Subsection C - Projection to Determine 2016-2017 Additional Uniform Contribution	18
Subsection D - Asset Projection if only partial Additional Uniform Contributions are received	25
SECTION IV - GASB 67 ACCOUNTING INFORMATION	28
Subsection A - Projection to Determine GASB 67 Date of Depletion (if any)	28
Subsection B - Net Pension Liability	29
Subsection C - GASB 67 Benefit Obligations	30
Subsection D - Changes in Net Pension Liability	31
Subsection E - Sensitivity Analysis	31

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## TABLE OF CONTENTS

	<u>Page</u>
SECTION V - GASB 45 ACCOUNTING INFORMATION	32
Subsection A - Benefit Obligations	32
Subsection B - Development of Unfunded Actuarial Accrued Liability and Amortization Payment	33
Subsection C - Development of Annual Required Contribution	33
Subsection D - Development of Net OPEB Obligation	34
Subsection E - Development of Annual OPEB Cost	34
Subsection F - Schedule of Employer Contributions	35
Subsection G - Schedule of Funding Progress	36
Subsection H - Additional Information	37
SECTION VI - CENSUS DATA	38
Subsection A - Summary of Members	38
SECTION VII - SUMMARY OF PRINCIPAL PLAN PROVISIONS	39
SECTION VIII - ACTUARIAL ASSUMPTIONS	58
SECTION IX - ACTUARIAL METHODS	71

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION I – SUMMARY

### A. Summary of Principal Results of June 30, 2015 Actuarial Valuation

#### ***GASB 67 Accounting (\$ amounts in thousands)***

	June 30, 2014 <u>Valuation</u>	June 30, 2015 <u>Valuation</u>
Total Pension Liability <sup>1</sup>		
Basic System Benefits	\$27,244,865	\$29,788,489
System Administered Benefits	<u>2,974,652</u>	<u>2,880,673</u>
Total	30,219,517	32,669,162
Net Fiduciary Position	80,666	(578,633)
Net Pension Liability	30,138,851	33,247,795

#### ***GASB 45 Accounting (\$ amounts in thousands)***

	June 30, 2014 <u>Valuation</u>	June 30, 2015 <u>Valuation</u>
Actuarial Accrued Liability <sup>1</sup>	\$1,438,475	\$1,428,788
Actuarial Value of Assets	<u>0</u>	<u>0</u>
Unfunded Actuarial Accrued Liability	1,438,475	1,428,788
Employer Normal Cost	0	0
as a percent of payroll	0.00%	0.00%
Annual Required Contribution		
for upcoming fiscal year	103,878	107,739
as a percent of payroll	2.98%	3.25%

<sup>1</sup> A discussion of the benefits included in the Total Pension Liability and Actuarial Accrued Liability begins on page 3 of this section.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION I – SUMMARY**

	July 1, 2013 Census Data <u>Collection</u>	July 1, 2014 Census Data <u>Collection</u>
<b><i>Participant Data</i></b>		
<u>Active Members</u>		
Number	125,671	119,790
Average Salary	\$27,764	\$27,709
Total Annual Salary	\$3,489,096,000	\$3,319,280,000
<u>Retirees</u>		
Number	94,395	97,056
Average Monthly Basic System Benefit <sup>1</sup>	\$1,059	\$1,092
Average Monthly System Administered Benefit <sup>1</sup>	\$72	\$68
<u>Disabled Members</u>		
Number	16,649	15,820
Average Monthly Basic System Benefit <sup>1</sup>	\$436	\$490
Average Monthly System Administered Benefit <sup>1</sup>	\$185	\$124
<u>Beneficiaries</u>		
Number	13,453	13,866
Average Monthly Basic System Benefit <sup>1</sup>	\$228	\$307
Average Monthly System Administered Benefit <sup>1</sup>	\$99	\$79

Basic System Benefit and System Administered Benefit amounts shown above are for pension benefits, including minimum benefits and COLAs, and excludes benefits payable at a later date to Law 70 Section 4B retirees. Special Law "bonus" benefits are not reflected.

<sup>1</sup> Amounts as of July 1, 2013 do not reflect the increase in the minimum monthly benefit from \$400 to \$500 effective July 1, 2013 under Act 3 for current pensioners and the corresponding increase for current beneficiaries.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION I – SUMMARY

### **B. General Discussion**

#### Basic System Benefits

As summarized in Section VII, the Puerto Rico Government Employees Retirement System (PRGERS) provides benefits to members, or their beneficiaries, upon:

- Retirement
- Disability
- Vested withdrawal
- Death
- Nonvested withdrawal (return of contributions)

These benefits will be referred to as the “Basic System Benefits” throughout this report. The contributions required by statute to fund the Basic System Benefits listed above total 24.275% of payroll for the 2015-2016 fiscal year, comprising 10% from members and 14.275% from employers. These contribution rates are not actuarially determined. Statutory funding requirements in future years will increase under Law 116 (see page 4).

For members who retired prior to July 1, 2013 annuity benefits are subject to a \$500 monthly minimum. The amount in excess of \$200 and less than \$300 is a System Administered Benefit (see below) for all employees. The amount in excess of \$300 and less than \$400 is a System Administered Benefit for Public Corporation and Municipality employees.

#### System Administered Benefits

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

- Additional minimum pension benefits (if retired prior to July 1, 2013)
- Ad-hoc cost-of-living adjustments (COLAs) provided in past years
- Additional benefits due to death or disability for reasons specified in Act 127
- Medical insurance plan contribution (if retired prior to July 1, 2013)
- Christmas bonus (if retired prior to July 1, 2013)
- Medication bonus (if retired prior to July 1, 2013)

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION I – SUMMARY

System 2000 and Act 3 participants, other than those members receiving a disability annuity or receiving benefits under Act 127, do not receive any System Administered Benefits.

These benefits are funded on a pay-as-you-go basis from the General Fund or specific entity 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 PRGERS assets.

### Other Benefits

This report does not address the guarantee insurance reserve for life insurance on loans to plan members. (Please see Notes to Basic Financial Statements on pages 25 and 61 and Statements of Plan Net Assets on page 21 of the System’s June 30, 2014 Basic Financial Statements.)

### Law 116 Employer Contributions

During the 2010-2011 fiscal year, Law 116 was enacted which increased employer contributions from the prior 9.275% of compensation to 10.275% of compensation effective July 1, 2011. For the next four fiscal years effective July 1, employer contributions will increase annually by 1% of compensation. For the next five fiscal years, employer contributions will increase annually by 1.25% of compensation, reaching an ultimate employer contribution rate of 20.525% effective July 1, 2020.

### Other Contributions

In addition to the payroll based contributions described under Basic System Benefits above, the System will receive Supplemental Contributions and an Additional Uniform Contribution from the General Fund, public corporations or municipalities.

The Act 3 Supplemental Contribution equals \$2,000 for each pensioner (including beneficiaries receiving survivor benefits) who was previously benefitting as an Act 447 or Act 1 member while an active employee. This contribution will pay for the Medical Insurance Plan Contribution (up to \$1,200 per member), the Christmas Bonus (\$200 per member), and Medication Bonus (\$100 per member) payable to members who retired

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION I – SUMMARY

prior to July 1, 2013. The excess of these Supplemental Contributions will remain in the System to pay down the unfunded actuarial accrued liability.

The Act 32 (as amended by Act 244) Additional Uniform Contribution that will be received each fiscal year from 2013-2014 through 2032-2033 is defined in Act 244 as follows:

“Additional Uniform Contribution.- shall mean, (a) for purposes of FY 2013-14, one hundred and twenty million dollars (\$120,000,000.00) and (b) for purposes of each fiscal year between 2014-15 and 2032-33, the uniform contribution certified by the external actuary of the System at least one hundred and twenty (120) days prior to the start of such fiscal year as necessary to avoid having the projected gross assets of the System, during any subsequent fiscal year, to fall below one billion dollars (\$1,000,000,000.00).”

As of the time of this report, only a fraction of the Additional Uniform Contributions from prior years has been received by the System.

### System Experience since Prior Valuation

The approximate actual rate of return on gross assets was 3.49% for 2014-2015. Net assets are negative as of June 30, 2015, so it is no longer mathematically possible to determine a rate of return on net assets during the prior fiscal year.

Our analysis of System experience from June 30, 2014 to June 30, 2015 resulted in a liability gain of \$0.5 billion (e.g. – the original June 30, 2014 Total Pension Liability of \$30.2 billion was expected to increase to \$30.4 billion as of June 30, 2015, and instead decreased to \$29.9 billion prior to the changes in assumptions).

Major sources of gains and losses from the June 30, 2014 valuation to the June 30, 2015 valuation are as follows:

1. \$90 million loss on new entrants.
2. \$250 million loss on roughly 1,700 “pop-up” retirees who were not in the prior year census data.
3. \$700 million gain on roughly 4,000 deaths among retirees.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION I – SUMMARY

4. \$330 million loss on roughly 3,850 active members who retired during the one-year period.
5. \$330 million gain on roughly 7,850 active members terminating employment.

For Item 2, the entire \$250 million is not a loss to the extent that these new retirees were previously included in the deferred vested liability. However, we cannot determine what portion of the 1,700 retirees emerged from deferred vested status since deferred vested census data is not complete and the deferred vested liability is developed by placing a loading assumption on the Act 447 and Act 1 liabilities to account for deferred vested members.

### Change in Assumptions since Prior Valuation

This valuation reflects a decrease in the investment return assumption from 6.75% per year to 6.55% per year. The 6.55% assumption reflects the asset allocation for the non-loan portion of the portfolio that was adopted by the Board during December 2013 as shown below and Milliman's capital market assumptions as of June 30, 2015. In addition, the assumption reflects that loans to members comprise approximately 20% of the portfolio and, as provided by the System, have an approximate return of 9.1% with no volatility.

Asset Class	Target Allocation
Domestic Equity	25%
International Equity	10%
Fixed Income	64%
Cash	1%

Please note that this new interest rate assumption of 6.55% per year is equal to the highest debt service of the Pension Obligation Bonds. The debt service on the Pension Obligation Bonds ranges from 5.85% to 6.55%.

Under the prior GASB 25/27, the investment return assumption was used to discount all projected Basic System Pension Benefits and System Administered Pension Benefits to determine the Actuarial Accrued Liability. Under GASB 67, the investment return assumption is an input that is used in the calculation of the single equivalent interest rate that is used to discount these benefits to determine the Total Pension Liability.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION I – SUMMARY

As a result of the decrease in the investment return assumption, the assumed investment return on the Defined Contribution Hybrid Contribution Accounts (80% of the net investment return assumption) was decreased from 5.40% to 5.24%.

This valuation reflects no change in the 3.10% per year interest rate assumption for GASB 45 purposes. The 3.10% assumption reflects Milliman's capital market assumptions as of June 30, 2015 and assumes that the Commonwealth's General Fund (the assets used to pay the GASB 45 benefits) is invested approximately in 75% cash and 25% short-term bonds.

The projected mortality improvement scale was updated from Scale AA to Scale MP-2015, which was published by the Society of Actuaries in October 2015. Also, as Scale MP-2015 is a two-dimensional mortality improvement scale, the base mortality rates for the post-retirement mortality assumption were set to the 2010 rates – the central year of the 2007 to 2012 PRGERS experience study upon which the rates were based. In addition, the pre-retirement mortality rates were also updated to reflect updated mortality tables published by the Society of Actuaries.

This valuation also reflects a salary freeze until July 1, 2017 due to Act 66. Act 66 mandates a salary freeze only for Central Government employees and mandates savings for public corporations. Due to the Act 66 required savings for public corporations and the current economic conditions in Puerto Rico, the salary freeze has also been assumed for public corporation and municipal employees.

### Changes in Methods since the Prior Valuation

There have not been any changes in methods since the prior valuation.

### Changes in Plan Provisions since Prior Valuation

There were not any changes in plan provisions made during the 2014-2015 plan year.

Law 211-2015 is an early retirement incentive program that was passed on December 8, 2015. While retirements under Law 211-2015 have not taken place yet, note that there are over 11,000 members as of January 1, 2016 who are eligible to retire under Law 211-2015.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION I – SUMMARY

### Overview of Recent Significant Changes in Plan Provisions

#### *Act 3*

Act 3, enacted on April 4, 2013, is a broad ranging dynamic 50-year plan with several significant changes that will eventually result in all active and retired members participating in a member funded hybrid plan. The focus of Act 3 is on cash flow for roughly the first half of the period, followed by a “catch-up” period for the second half. During the first half of the 50-year period, the combination of benefit changes and additional funding are designed to provide enough cash such that the System is expected to be able to pay full benefits and Pension Obligation Bond (“POB”) debt service on schedule. During this time the System is expected to have gross assets on hand that are less than the outstanding POB liability. During the second half of the 50-year period, continued high employer contribution rates will be used to “catch up” and fill in member notional accounts with real assets. A summary of the plan provisions reflecting Act 3 is included in Section VII.

#### *Act 32 (as amended by Act 244)*

In addition to Act 3 discussed above, a separate law was passed, Act 32 (as amended by Act 244), which requires an additional annual contribution from the Commonwealth for 20 years. The initial additional annual contribution is defined as \$120 million, and with subsequent amounts adjusted as necessary for the System’s gross assets to remain above \$1 billion.

### Early Retirement Incentive Contributions

The early retirement incentive contributions are reflected in the System’s financial statements in the year of the incentive even though these contributions are typically scheduled to be paid by the employer to the System over many years. As directed by the System, the actual employer contributions for GASB 67 accounting reflect early retirement incentive contributions on an accrual basis to match the amounts shown in the System’s financial statements.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION I – SUMMARY

### GASB Pension Accounting Information

GASB has recently issued two new statements: Statement No. 67, “*Financial Reporting for Pension Plans*” (GASB 67), and Statement No. 68, “*Accounting and Financial Reporting for Pensions*” (GASB 68). GASB 67 and 68 replace the prior GASB 25 and 27 respectively. The effective date of GASB 67 (which applies to financial reporting on a plan basis) was the fiscal year ending June 30, 2014. The effective date of GASB 68 (which applies to financial reporting by contributing employers) is the fiscal year ending June 30, 2015.

Pension accounting results in Section IV of this report have been prepared under GASB 67 parameters to determine a Total Pension Liability at the end of the fiscal year. The Net Fiduciary Position is then subtracted to arrive at the Net Pension Liability at the end of the fiscal year. The Net Pension Liability reflects the full amount of the unfunded liability, and thus can be significantly volatile from year to year.

### GASB OPEB Accounting Information

Accounting results for the Medical Insurance Plan Contribution shown in Section V of this report are calculated under Governmental Accounting Standards Board Statement No. 45, “*Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*” (GASB 45). (Note that the Medication Bonus has been included in the GASB 67 results as a Pension Benefit because members can receive the bonus without submitting documentation to substantiate medication expenses.)

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 benefit is not funded in advance, the ARC for this benefit has been calculated based on an assumed investment return rate of 3.10% based on the asset allocation of the Commonwealth’s general assets that are used to pay this benefit.

We note that, as a cost-sharing multiple employer plan, PRGERS is not required to report a Net OPEB Obligation. In accordance with paragraph 23 of GASB 45, the employers that participate in the plan should recognize annual OPEB expense equal to their contractually required contributions to the plan. The employers do not have an Annual Required Contribution (ARC) or a Net OPEB Obligation. (PRGERS reports an

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION I – SUMMARY

ARC for the system as a whole, not separate ARCs for the individual employers.) Any difference between contributions required and contributions made would produce an OPEB liability or asset at the employer level.

Note that GASB issued GASB 75 in June 2015 which makes changes to GASB 45 similar to how GASB 25/27 were updated by GASB 67/68. GASB 75 is effective beginning with the 2017-2018 fiscal year, unless earlier adoption occurs.

### GASB 67 Projection to Determine Date of Depletion (if any)

GASB 67 requires that a projection be performed for the System to determine a date of depletion, if any, and the resulting effective discount rate. This complex projection is used to determine the point at which the System is expected to deplete assets per GASB 67. The analysis includes a projection of member and employer contributions, benefit payments, and administrative expenses attributable to current members. Amounts attributable to members hired in the future are excluded except to the extent that employer contributions exceed the cost of benefits for those future members. *Because the date of depletion projection does not incorporate all projected cash inflows to and outflows from the System, the results will differ from those in a comprehensive cash flow projection that models all inflows and outflows. In other words, the GASB 67 date of depletion is not the same as the date that the System would be expected to exhaust assets.*

Once a depletion date has been determined, it is used as an input in the determination of the accounting liability as follows:

- The present value of all future benefits for GASB 67 accounting purposes is determined as follows:
  - For projected benefit payments occurring prior to the date of depletion, the discount rate is based on the System's expected return on assets.
  - For projected benefit payments occurring after the date of depletion, the discount rate is based on a tax-free municipal bond index.
- Based on the resulting present value of all future benefits for GASB 67 accounting purposes, a single equivalent interest rate can be imputed that yields the same present value.

GASB 67 and its implementation guide do not address the mechanics of the date of depletion projection when the retirement system is the issuer of Pension Obligation

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION I – SUMMARY

Bonds (POBs) – e.g. whether the date of depletion projection should be performed on a gross assets or net assets basis. Typically, the governmental sponsor issues the POBs and contributes the proceeds to the retirement system. However, PRGERS issued the POBs and is responsible for repaying the interest and principal on the bonds. As directed by the Treasury Department, the Government Development Bank, and the System (after consultation with the auditor), the asset basis for the date of depletion projection is the System's net assets (the gross assets less the Pension Obligation Bond proceeds). On this basis, net assets were exhausted in the 2014-2015 fiscal year and no calculation needs to be performed, as the tax-free municipal bond index applies in all years, and is thus the single equivalent interest rate that is used as the discount rate in the determination of the Total Pension Liability.

### Cash Flow Projection for Basic System Benefits

PRGERS is a mature retirement system with a significant retiree population. Based on the statutory funding requirements prior to Act 3, the annual benefit payments and administrative expenses paid by the system were significantly larger than the member and employer contributions made to the system. Due to the small asset base, investment income was insufficient to cover this negative cash flow, and assets were projected to become exhausted by the end of this decade. Act 3, enacted on April 4, 2013, and Act 32 (as amended by Act 244) provided for significant pension reforms and additional contributions to the System to counter the imminent expected asset exhaustion.

As discussed earlier, Act 3 is a dynamic 50-year plan that is designed to provide enough cash for PRGERS to be able to make full Basic System Benefit payments as they come due, to pay the new lower System Administered Benefits, and to pay debt service on the POB's. The reforms enacted through Act 3, by design, is a very long term plan, and constant monitoring will be needed to make sure the System stays on track. Actual experience may turn out better or worse than expected, thus future adjustments may be needed. Receipt of the Additional Uniform Contribution under Act 32 of 2013 (as amended by Act 244 of 2014) is critical to the System's ability to make payments as they come due.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION I – SUMMARY

***PRGERS net assets have been exhausted in the 2014-2015 fiscal year. If the increasing Law 116 employer contributions, the Supplemental Contribution under Act 3, and the Additional Uniform Contribution under Act 32 (as amended by Act 244) are not paid in full on an annual basis, PRGERS will continue being rapidly disfunded and gross assets will be exhausted.***

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION II - SYSTEM ASSETS**

**A. Statement of Fiduciary Net Position**

	<b><u>June 30, 2014</u></b>	<b><u>June 30, 2015</u></b>
<b>Assets</b>		
Cash and cash equivalents	269,492,000	366,389,000
Receivables and prepaid expenses:		
Accounts receivable	256,220,000	398,082,000
Prepaid bond cost	<u>0</u>	<u>0</u>
Total receivables	256,220,000	398,082,000
Investments:		
Bonds and notes	1,337,292,000	764,445,000
Nonexchange commingled trust funds	750,482,000	0
Stocks	102,000	409,001,000
Investments in limited partnerships	54,146,000	0
Total loans to plan members	619,379,000	607,617,000
Alternative investment	0	54,027,000
COFINA investment	0	89,139,000
Other assets	<u>5,695,000</u>	<u>784,000</u>
Total investments	2,767,096,000	1,925,013,000
Invested securities lending cash collateral	126,648,000	80,071,000
Capital assets	11,211,000	10,522,000
Total assets	3,430,667,000	2,780,077,000
<b>Liabilities</b>		
Bonds payable	3,091,463,000	3,119,325,000
Securities lending cash collateral	126,648,000	80,071,000
Other liabilities	<u>131,890,000</u>	<u>159,314,000</u>
Total liabilities	3,350,001,000	3,358,710,000
<b>Net position restricted for pensions</b>	80,666,000	(578,633,000)

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION II - SYSTEM ASSETS

### **B. Statement of Changes in Fiduciary Net Position**

**June 30, 2015**

Additions	
a. Contributions	
Employer Contributions	\$550,809,000
Member Contributions	339,650,000
Early Retirement Programs	23,000
Interest on cultural loans	432,000
Appropriations for Special Laws	<u>186,137,000</u>
Total Contributions	\$1,077,051,000
b. Investment Income	
Interest Income	\$81,768,000
Dividend Income	60,000
Net Appreciation of Investments	(46,452,000)
Other Income	37,542,000
Investment Related Expenses	<u>(2,775,000)</u>
Net Investment Income	\$70,143,000
Total Additions	\$1,147,194,000
Deductions	
Refund of Contributions	\$31,350,000
Annuities and Death Benefits	1,355,188,000
Special Law Benefits	186,137,000
Interest on cultural loans	432,000
Administrative Expenses	25,744,000
Other Expenses	13,242,000
Cost of Bonds	<u>194,400,000</u>
Total deductions	\$1,806,493,000
Net Increase (Decrease)	(\$659,299,000)
Net position restricted for pensions	
Beginning of year (June 30, 2014)	80,666,000
End of year (June 30, 2015)	(\$578,633,000)

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION II - SYSTEM ASSETS**

**C. Estimated Annual Rate of Return for year ending June 30, 2015**

	<b><u>Gross Asset Basis</u></b>	<b><u>Net Asset Basis</u></b>
1. Value of Assets as of June 30, 2014	\$3,172,129,000	\$80,666,000
2. Total Contributions	1,077,051,000	1,077,051,000
3. Benefit Payments and Expenses	1,806,493,000	1,806,493,000
4. Value of Assets as of June 30, 2015	2,540,692,000	(578,633,000)
5. Non-Investment Increment: (2) - (3)	(729,442,000)	(729,442,000)
6. Investment Increment: (4) - (1) - (5)	98,005,000	70,143,000
7. Time Weighted Value: (1) +.5 * (5)	2,807,408,000	(284,055,000)
8. Estimated Annual Rate of Return: (6) / (7)	3.49%	N/A

**D. Estimated Historical Rates of Return**

<b><u>Plan Year Ending</u></b>	<b><u>Gross Asset Basis</u></b>	<b><u>Net Asset Basis</u></b>
June 30, 2015	3.49%	N/A
June 30, 2014	8.46%	94.73%
June 30, 2013	7.88%	31.38%
June 30, 2012	7.39%	22.31%
June 30, 2011	16.55%	51.55%
 5-year Compounded Annual Return	 8.67%	 N/A

*Prior year returns were calculated by Milliman using the methodology in Section D above, based on asset amounts and cash flows shown in prior valuation reports.*

*The rates of return determined on a gross asset basis are for illustrative purposes only and assume non-investment cash flows are the same as that determined on a net asset basis. Because of the significant amount of Pension Obligation Bond proceeds that are currently invested (approximately \$3 billion), the net asset returns are significantly larger than the returns on a gross asset basis.*

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION III - MANAGEMENT INFORMATION**

**A. Allocation of Liability by Pension Law and System Entity as of June 30, 2015**

	<b>GASB 67 Total Pension Liability for:</b>			Actuarial Accrued Liability for GASB 45 <u>Benefits</u>
	<u>Basic System Benefits</u>	<u>System Administered Benefits</u>	<u>Basic System and System Administered Benefits</u>	
<b>Government</b>				
Act 447	\$14,210,903,000	\$1,362,226,000	\$15,573,129,000	\$854,280,000
Act 1	2,994,632,000	271,025,000	3,265,657,000	99,591,000
System 2000 / Act 3	<u>1,252,910,000</u>	<u>353,186,000</u>	<u>1,606,096,000</u>	<u>1,481,000</u>
	18,458,445,000	1,986,437,000	20,444,882,000	955,352,000
<b>Public Corporations</b>				
Act 447	6,662,032,000	558,170,000	7,220,202,000	259,426,000
Act 1	925,141,000	28,201,000	953,342,000	23,421,000
System 2000 / Act 3	<u>482,151,000</u>	<u>1,488,000</u>	<u>483,639,000</u>	<u>441,000</u>
	8,069,324,000	587,859,000	8,657,183,000	283,288,000
<b>Municipalities</b>				
Act 447	2,147,597,000	220,671,000	2,368,268,000	163,690,000
Act 1	679,627,000	48,545,000	728,172,000	26,031,000
System 2000 / Act 3	<u>433,496,000</u>	<u>37,162,000</u>	<u>470,658,000</u>	<u>427,000</u>
	3,260,720,000	306,378,000	3,567,098,000	190,148,000
<b>Total</b>				
Act 447	23,020,532,000	2,141,067,000	25,161,599,000	1,277,396,000
Act 1	4,599,400,000	347,770,000	4,947,170,000	149,043,000
System 2000 / Act 3	<u>2,168,557,000</u>	<u>391,836,000</u>	<u>2,560,393,000</u>	<u>2,349,000</u>
	\$29,788,489,000	\$2,880,673,000	\$32,669,162,000	\$1,428,788,000

*(Numbers shown may not add due to rounding.)*

System Administered Benefits for System 2000 and Act 3 members are enhanced death and disability benefits for hazardous duty employees covered by Act 127 and the related bonus benefits for these members. GASB 45 benefits are the medical insurance plan contributions for these members.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION III - MANAGEMENT INFORMATION

### **B. Accumulated Member Contributions for Active Members as of July 1, 2014**

	<u>Contribution Account Balances</u>
Government	
Act 447	\$509,860,000
Act 1	1,071,791,000
System 2000 / Act 3	<u>581,782,000</u>
	2,163,433,000
Public Corporations	
Act 447	199,251,000
Act 1	301,511,000
System 2000 / Act 3	<u>205,348,000</u>
	706,110,000
Municipalities	
Act 447	81,766,000
Act 1	236,139,000
System 2000 / Act 3	<u>207,399,000</u>
	525,304,000
Total	
Act 447	790,877,000
Act 1	1,609,441,000
System 2000 / Act 3	<u>994,529,000</u>
	3,394,847,000
Market Value of Assets as of June 30, 2015	(578,633,000)

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION III – MANAGEMENT INFORMATION

#### **C. Projection to Determine 2016-2017 Additional Uniform Contribution**

The projection to determine the Additional Uniform Contribution (“AUC”) for fiscal years 2016-2017 through 2032-2033 was performed on a deterministic basis and reflects the following:

- Asset information from unaudited financial statements as of June 30, 2015 provided by PRGERS on February 18, 2016. These asset statements have been subsequently revised after the issuance of the 2016-2017 AUC. Therefore, the asset values in the AUC determination discussed in this section differ from those detailed in the remaining sections of this valuation.
- The unaudited July 1, 2015 gross asset amount of \$2.565 billion is used as the beginning gross asset value. This amount reflects \$2.764 billion assets offset by \$0.199 billion in liabilities. Pension Obligation Bond (“POB”) proceeds are included in the gross asset value. While there is a liability of \$3.119 billion as of July 1, 2015 for the POBs, in the cash flow projection to determine the AUC the POB debt service payments are reflected as a cash outflow on a year-by-year basis along with benefit payments and administrative expenses.
- Projected investment income is based on the June 30, 2015 investment return assumption of 6.55% per year.
- All demographic assumptions are assumed to be met in future years (i.e. – no gains or losses from demographic sources are expected to occur).
- Employer contributions in each future year are calculated based on the statutory payroll-based employer contribution rate as applied to the projected future payroll.
- This projection assumes that all contributions, including the AUCs, will be paid when due. This includes:
  - the unpaid balance of the 2013-2014 AUC of \$86 million,
  - the unpaid balance of the 2014-2015 AUC of \$71 million, and
  - the entire 2015-2016 AUC of \$352 million.
- This projection starts with the active membership of 119,790 from the July 1, 2014 census data, and reflects an ultimate future active membership of 110,000 active members in years July 1, 2024 and later.
  - Census data as of July 1, 2015 is not yet available, but per discussions with PRGERS the July 1, 2015 active membership level has decreased to roughly 119,000. This reduction is incorporated into the AUC projection.
  - Law 211-2015 is an early retirement incentive program that was passed on December 8, 2015. While retirements under Law 211-2015 have not

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION III – MANAGEMENT INFORMATION

taken place yet, there are over 11,000 members as of January 1, 2016 who are eligible to retire under Law 211-2015. In this AUC analysis we have assumed that 50% of the eligible membership will ultimately retire under Law 211-2015, and that the positions vacated by these retirees will not be filled with new hires.

- PRGERS has estimated that there will be a further decrease in the active membership headcount based on positions vacated due to natural attrition that are not filled with new hires. The estimate incorporated in this analysis is a total decrease of 3% of active membership headcount over a 5 year period.
- The new entrant cohort used for projection purposes is based on new entrants between July 1, 2013 and June 30, 2014.
- Administrative expenses are assumed to grow 2.5% per year.
- While the projection assumes that the additional contributions are paid at the end of the fiscal year, the estimated AUC amount was determined assuming that the additional contributions for a fiscal year would be accelerated as necessary during the fiscal year to prevent asset exhaustion within that fiscal year.

***Based on the methodology and inputs discussed above, including the collection of \$509 million on behalf of all prior fiscal years, the Additional Uniform Contribution for Fiscal Year 2016-2017 is \$596 million, payable at the end of the fiscal year.***

The chart at the end of the subsection shows \$490 million in 2015-2016 instead of \$509 million, because \$19 million of unpaid prior year AUC's is held as a receivable on the System's asset statement as of June 30, 2015.

As seen on the chart at the end of this subsection, the AUC of \$596 million payable from Fiscal Year 2016-2017 to 2032-2033, is projected on a deterministic basis to prevent a decrease in assets below \$1 billion in any future year. Note that assets initially decrease in the years after the AUC payment period ends, with a minimum projected asset value occurring at the end of Fiscal Year 2044-2045. The tabular results of the projection are shown on the page following the chart.

Due to potential future deviation in demographic experience, and volatility in investment returns, even assuming that all past due amounts are paid and that the full amount of the AUC is paid every year through FY 2032-33, there is no guarantee that gross assets will remain above \$1 billion in all years thereafter. Also please note the volatility of the

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION III – MANAGEMENT INFORMATION

AUC itself will increase each year as FY 2032-33 approaches and the remaining payment period shrinks.

#### *Illiquid Assets*

The Act 32 AUC calculation is based on the objective of maintaining a \$1 billion gross asset buffer at all times. It is important to note that a material portion of System assets are illiquid in nature. Thus if the Act 32 AUC is not paid in full and the \$1 billion buffer is not maintained, the System will run into liquidity issues and may be forced to sell illiquid assets, potentially at significant loss to the further detriment of the System.

Based on the unaudited asset statements provided for the AUC determination, as of July 1, 2015, PRGERS had approximately \$762 million in illiquid assets, comprised primarily of loans to System members and the COFINA investment. This projection assumes that these illiquid assets will be converted to liquid assets when needed.

#### *Annual Re-calculation of AUC*

The Act 32-2013 Additional Uniform Contribution (“AUC”) is subject to extreme volatility each and every year. Based on the design as set in statute, the AUC is a “solve for” balancing item that links the System’s current non-AUC contributions (from members and employers), the System’s current disbursements (benefit payments, administrative expenses, Pension Obligation Bond debt service), the statutory \$1 billion gross asset buffer, and all emerging experience as defined below.

The annual re-calculation of the AUC reflects all available System experience at the time of the determination. The AUC will increase or decrease annually depending on items including, but not limited to, the following:

- Demographic gains/losses (including changes in the size of the active membership and/or total payroll different than expected)
- Investment gains/losses
- Assumption changes
- Benefit provision changes
- Other statutory changes

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION III – MANAGEMENT INFORMATION

#### *Changes in AUC*

The FY 2016-17 AUC has increased markedly from the FY 2015-16 AUC. Further commentary follows below on these results.

#### Active Membership Decrease

There was a decrease of roughly 6,000 active members since the prior census collection date (July 1, 2013 to July 1, 2014), and further, based on information received from the System, there was an additional decrease of over 1,000 members by the end of the 2014-15 fiscal year, bringing the active membership under 119,000.

Further decreases in active membership are anticipated in the AUC calculation, due to the passage of Act 211-2015 and the System's estimate of additional expected attrition without replacement. These future decreases bring the ultimate projected active membership to 110,000.

Because PRGERS is funded by statutory Act 116 employer contributions (currently 14.275% of payroll in FY 2015-16, increasing to 20.525% of payroll in FY 2020-21 and thereafter) and Act 3 member contributions (10% of payroll), decreases in active membership and the ensuing decreases in projected payroll mean that fewer dollars are expected to be contributed to PRGERS in future years from these sources. The significant decrease in expected income from Act 116 employer contributions and Act 3 member contributions causes a significant increase in the AUC necessary to maintain the projected \$1 billion gross asset level in all future years, and is reflected over the AUC period which ends in FY 2032-33.

***It is important to note that the System's unfunded liabilities are funded with dollars, not percentages of payroll.*** With contributions expressed as percentages of payroll under Act 3 and Act 116, when payroll declines the statutory rates generate less dollars, and the Act 32 AUC must increase to generate the same level of dollars.

#### Other factors

Due to the definition of the AUC, including the \$1 billion fixed gross asset buffer, on a year to year basis the AUC will fluctuate in response to all items that impact the System. While the actual and projected decreases in headcount above account for the majority of the increase year over year, other items that will impact the change in AUC include:

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## **PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

### **SECTION III – MANAGEMENT INFORMATION**

- Actual trailing investment return – The June 30, 2015 gross assets are lower than was expected, which increases the AUC.
- Change in investment return assumption – The future investment return assumption has been decreased. The lower expected return on System assets, which increases the AUC, is offset by the lower expected Act 3 annuities due to a decrease in the expected interest credits applied to member Defined Contribution Hybrid Contribution Accounts.
- Demographic gain/loss – The System experienced a small demographic gain, which decreases the AUC.
- Assumption changes – The projected mortality improvement assumption has been updated, which increases the AUC.
- Benefit provision changes – There were no changes in benefits year over year. As discussed above, an expectation of future active membership decreases has been incorporated on behalf of expected retirements under Act 211.

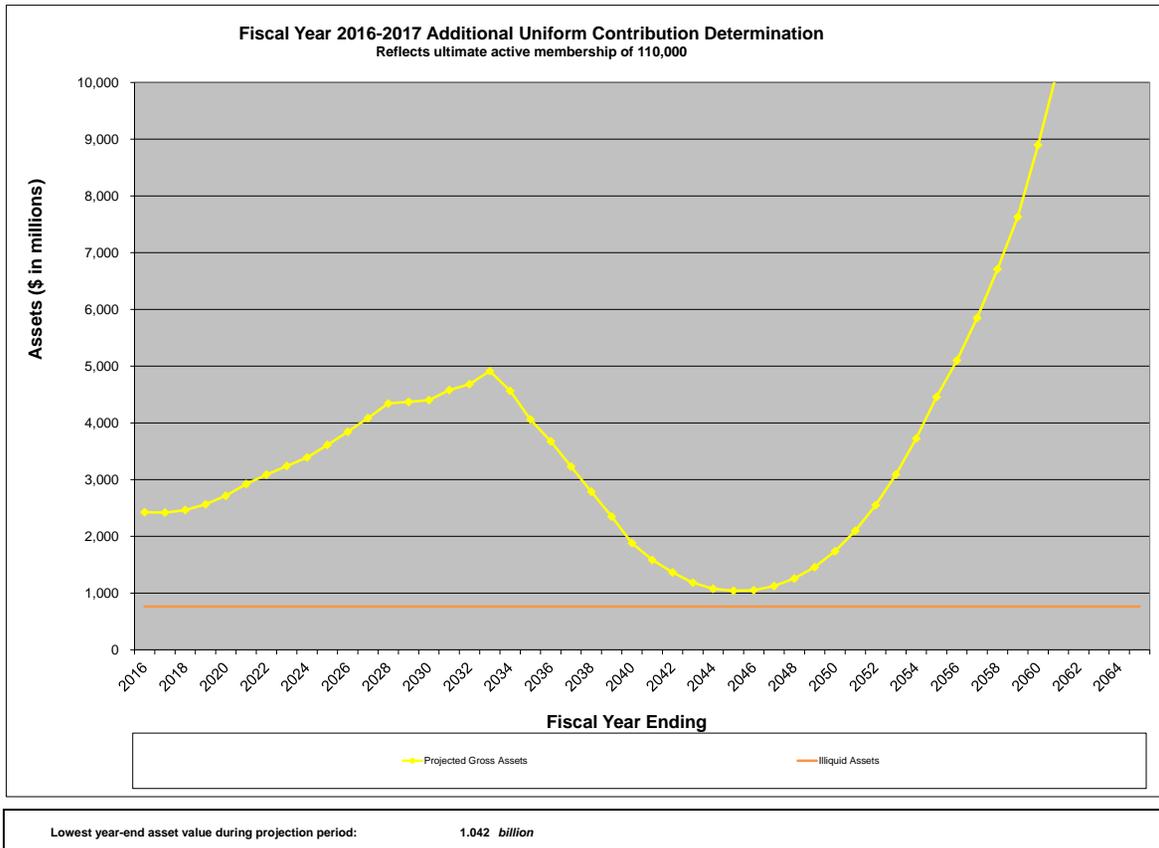
This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION III – MANAGEMENT INFORMATION

### Fiscal Year 2016-2017 Additional Uniform Contribution Determination (Based on results of this June 30, 2015 valuation and preliminary June 30, 2015 assets)

INPUT ITEMS						
Fiscal Period		Investment Return	Employer Contribution Rate	Employee Contribution Rate	Additional Uniform Contribution (\$ millions)	Illiquid Asset Balance at Year-End (\$ millions)
July 1 to	June 30					
2015	2016	6.55%	14.275%	10.000%	490	762
2016	2017	6.55%	15.525%	10.000%	596	762
2017	2018	6.55%	16.775%	10.000%	596	762
2018	2019	6.55%	18.025%	10.000%	596	762
2019	2020	6.55%	19.275%	10.000%	596	762
2020	2021	6.55%	20.525%	10.000%	596	762
2021	2022	6.55%	20.525%	10.000%	596	762
2022	2023	6.55%	20.525%	10.000%	596	762
2023	2024	6.55%	20.525%	10.000%	596	762
2024	2025	6.55%	20.525%	10.000%	596	762
2025	2026	6.55%	20.525%	10.000%	596	762
2026	2027	6.55%	20.525%	10.000%	596	762
2027	2028	6.55%	20.525%	10.000%	596	762
2028	2029	6.55%	20.525%	10.000%	596	762
2029	2030	6.55%	20.525%	10.000%	596	762
2030	2031	6.55%	20.525%	10.000%	596	762
2031	2032	6.55%	20.525%	10.000%	596	762
2032	2033	6.55%	20.525%	10.000%	596	762
2033	2034	6.55%	20.525%	10.000%	0	762
2034	2035	6.55%	20.525%	10.000%	0	762
2035	2036	6.55%	20.525%	10.000%	0	762
2036	2037	6.55%	20.525%	10.000%	0	762
2037	2038	6.55%	20.525%	10.000%	0	762
2038	2039	6.55%	20.525%	10.000%	0	762
2039	2040	6.55%	20.525%	10.000%	0	762
2040	2041	6.55%	20.525%	10.000%	0	762
2041	2042	6.55%	20.525%	10.000%	0	762
2042	2043	6.55%	20.525%	10.000%	0	762
2043	2044	6.55%	20.525%	10.000%	0	762
2044	2045	6.55%	20.525%	10.000%	0	762
2045	2046	6.55%	20.525%	10.000%	0	762
2046	2047	6.55%	20.525%	10.000%	0	762
2047	2048	6.55%	20.525%	10.000%	0	762
2048	2049	6.55%	20.525%	10.000%	0	762
2049	2050	6.55%	20.525%	10.000%	0	762
2050	2051	6.55%	20.525%	10.000%	0	762
2051	2052	6.55%	20.525%	10.000%	0	762
2052	2053	6.55%	20.525%	10.000%	0	762
2053	2054	6.55%	20.525%	10.000%	0	762
2054	2055	6.55%	20.525%	10.000%	0	762
2055	2056	6.55%	20.525%	10.000%	0	762
2056	2057	6.55%	20.525%	10.000%	0	762
2057	2058	6.55%	20.525%	10.000%	0	762
2058	2059	6.55%	20.525%	10.000%	0	762
2059	2060	6.55%	20.525%	10.000%	0	762
2060	2061	6.55%	20.525%	10.000%	0	762
2061	2062	6.55%	20.525%	10.000%	0	762
2062	2063	6.55%	20.525%	10.000%	0	762
2063	2064	6.55%	20.525%	10.000%	0	762
2064	2065	6.55%	20.525%	10.000%	0	762



This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION III – MANAGEMENT INFORMATION

### Fiscal Year 2016-2017 Additional Uniform Contribution Determination

(Based on results of this June 30, 2015 valuation and preliminary June 30, 2015 assets)

Fiscal Period		Contributions					Disbursements				Commonwealth Pay-as-you-go Benefit Payments	Investment Return	System Assets (including POB proceeds)				
		July 1 to	June 30	Employer	Employee	Law 70	System-Admin Bonus Benefits	Total	Benefits	Admin Expenses			POB's	Total	Begin	Cash Flow	Income
2015	2016	456	320	34	110	920	1,497	28	167	1,692	0	6.55%	2,565	(772)	143	490	2,426
2016	2017	490	315	35	113	953	1,496	28	167	1,691	0	6.55%	2,426	(738)	135	596	2,419
2017	2018	535	319	35	115	1,004	1,496	29	167	1,692	0	6.55%	2,419	(688)	136	596	2,463
2018	2019	582	323	35	118	1,058	1,496	30	167	1,693	0	6.55%	2,463	(635)	141	596	2,565
2019	2020	627	326	34	120	1,107	1,503	31	167	1,701	0	6.55%	2,565	(594)	149	596	2,716
2020	2021	675	329	33	123	1,160	1,512	31	167	1,710	0	6.55%	2,716	(550)	160	596	2,922
2021	2022	692	332	31	126	1,171	1,525	32	217	1,774	0	6.55%	2,922	(603)	172	596	3,087
2022	2023	690	336	28	129	1,183	1,541	33	234	1,808	0	6.55%	3,087	(625)	182	596	3,240
2023	2024	698	340	26	132	1,196	1,560	34	239	1,833	0	6.55%	3,240	(637)	192	596	3,391
2024	2025	706	344	24	135	1,209	1,579	35	174	1,788	0	6.55%	3,391	(579)	203	596	3,611
2025	2026	718	350	21	138	1,227	1,598	36	176	1,810	0	6.55%	3,611	(583)	218	596	3,842
2026	2027	731	356	19	141	1,247	1,616	36	181	1,833	0	6.55%	3,842	(586)	233	596	4,085
2027	2028	744	363	18	144	1,269	1,632	37	187	1,856	0	6.55%	4,085	(587)	249	596	4,343
2028	2029	757	369	17	146	1,289	1,649	38	429	2,116	0	6.55%	4,343	(827)	258	596	4,370
2029	2030	770	375	16	148	1,309	1,667	39	428	2,134	0	6.55%	4,370	(825)	260	596	4,401
2030	2031	784	382	14	150	1,330	1,685	40	290	2,015	0	6.55%	4,401	(685)	266	596	4,578
2031	2032	798	389	13	151	1,351	1,701	41	376	2,118	0	6.55%	4,578	(767)	275	596	4,682
2032	2033	813	396	11	152	1,372	1,717	42	264	2,023	0	6.55%	4,682	(651)	286	596	4,913
2033	2034	830	404	10	152	1,396	1,731	43	271	2,045	0	6.55%	4,913	(649)	301	0	4,565
2034	2035	847	413	8	152	1,420	1,744	44	412	2,200	0	6.55%	4,565	(780)	274	0	4,059
2035	2036	866	422	6	152	1,446	1,754	45	277	2,076	0	6.55%	4,059	(630)	246	0	3,675
2036	2037	885	431	5	150	1,471	1,763	47	325	2,135	0	6.55%	3,675	(664)	219	0	3,230
2037	2038	906	441	3	148	1,498	1,766	48	319	2,133	0	6.55%	3,230	(635)	191	0	2,786
2038	2039	927	452	2	146	1,527	1,766	49	312	2,127	0	6.55%	2,786	(600)	163	0	2,349
2039	2040	951	463	2	143	1,559	1,764	50	347	2,161	0	6.55%	2,349	(602)	134	0	1,881
2040	2041	975	475	1	139	1,590	1,760	51	185	1,996	0	6.55%	1,881	(406)	110	0	1,585
2041	2042	999	487	0	134	1,620	1,755	53	126	1,934	0	6.55%	1,585	(314)	94	0	1,365
2042	2043	1,027	501	0	130	1,658	1,744	54	122	1,920	0	6.55%	1,365	(262)	81	0	1,184
2043	2044	1,054	514	0	125	1,693	1,737	55	80	1,872	0	6.55%	1,184	(179)	72	0	1,077
2044	2045	1,084	528	0	119	1,731	1,726	57	50	1,833	0	6.55%	1,077	(102)	67	0	1,042
2045	2046	1,112	542	0	114	1,768	1,716	58	50	1,824	0	6.55%	1,042	(56)	66	0	1,052
2046	2047	1,146	558	0	108	1,812	1,698	60	50	1,808	0	6.55%	1,052	4	69	0	1,125
2047	2048	1,177	573	0	102	1,852	1,684	61	50	1,795	0	6.55%	1,125	57	76	0	1,258
2048	2049	1,211	590	0	96	1,897	1,669	63	50	1,782	0	6.55%	1,258	115	86	0	1,459
2049	2050	1,247	607	0	91	1,945	1,653	64	50	1,767	0	6.55%	1,459	178	101	0	1,738
2050	2051	1,283	625	0	85	1,993	1,637	66	50	1,753	0	6.55%	1,738	240	122	0	2,100
2051	2052	1,321	643	0	80	2,044	1,624	68	50	1,742	0	6.55%	2,100	302	147	0	2,549
2052	2053	1,359	662	0	74	2,095	1,614	69	50	1,733	0	6.55%	2,549	362	179	0	3,090
2053	2054	1,398	681	0	69	2,148	1,608	71	50	1,729	0	6.55%	3,090	419	216	0	3,725
2054	2055	1,439	701	0	64	2,204	1,608	73	50	1,731	0	6.55%	3,725	473	258	0	4,457
2055	2056	1,481	721	0	59	2,261	1,613	75	233	1,921	0	6.55%	4,457	340	303	0	5,100
2056	2057	1,524	742	0	54	2,320	1,623	76	217	1,916	0	6.55%	5,100	404	347	0	5,851
2057	2058	1,568	764	0	49	2,381	1,640	78	203	1,921	0	6.55%	5,851	460	398	0	6,709
2058	2059	1,614	786	0	45	2,445	1,661	80	236	1,977	0	6.55%	6,709	468	455	0	7,632
2059	2060	1,662	810	0	40	2,512	1,688	82	0	1,770	0	6.55%	7,632	742	524	0	8,898
2060	2061	1,711	834	0	36	2,581	1,719	84	0	1,803	0	6.55%	8,898	778	608	0	10,284
2061	2062	1,762	858	0	33	2,653	1,755	86	0	1,841	0	6.55%	10,284	812	700	0	11,796
2062	2063	1,814	884	0	29	2,727	1,795	89	0	1,884	0	6.55%	11,796	843	800	0	13,439
2063	2064	1,868	910	0	26	2,804	1,840	91	0	1,931	0	6.55%	13,439	873	908	0	15,220
2064	2065	1,924	937	0	23	2,884	1,889	93	0	1,982	0	6.55%	15,220	902	1,026	0	17,148

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION III – MANAGEMENT INFORMATION

#### **D. Asset Projection if no further Additional Uniform Contributions are received**

The following chart and table display the projection results if no further Additional Uniform Contributions are paid. In particular, it is assumed that:

- the 2016-2017 AUC of \$596 million is not received on an annual basis from 2016-2017 to 2032-2033,
- the 2015-2016 AUC of \$352 million is not received, and
- the unpaid 2013-2014 and 2014-2015 AUC amounts totaling \$157 are not received.

As shown on the following chart, gross assets would be expected to be depleted early in the 2019-2020 year. The System would be operating on a pay-as-you-go basis from 2019-2020 through 2046-2047, when assets would begin to accumulate.

When assets are exhausted, the projection assumes that employer and employee contributions will first be allocated toward paying bondholders, with the remainder being used to pay retiree benefits. It is further assumed that any shortfall will be covered on a pay-as-you-go basis by the Commonwealth.

Note that the projected assets drop below the current illiquid asset level of \$762 million during 2017-2018.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

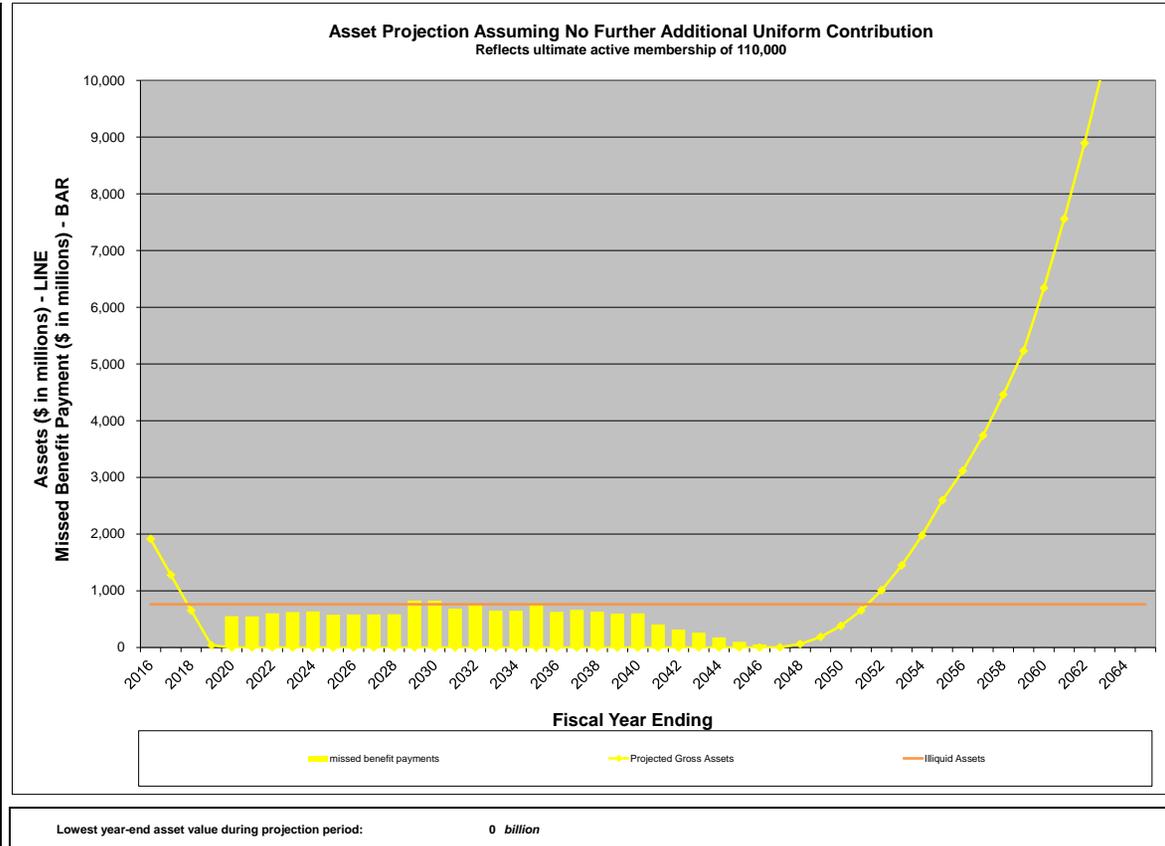
# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION III – MANAGEMENT INFORMATION

### Asset Projection if no further Additional Uniform Contributions are received

(Based on results of this June 30, 2015 valuation and preliminary June 30, 2015 assets less \$19 million AUC receivable)

INPUT ITEMS						
Fiscal Period		Investment Return	Employer Contribution Rate	Employee Contribution Rate	Additional Uniform Contribution (\$ millions)	Illiquid Asset Balance at Year-End (\$ millions)
July 1 to	June 30					
2015	2016	6.55%	14.275%	10.000%	0	762
2016	2017	6.55%	15.525%	10.000%	0	762
2017	2018	6.55%	16.775%	10.000%	0	762
2018	2019	6.55%	18.025%	10.000%	0	762
2019	2020	6.55%	19.275%	10.000%	0	762
2020	2021	6.55%	20.525%	10.000%	0	762
2021	2022	6.55%	20.525%	10.000%	0	762
2022	2023	6.55%	20.525%	10.000%	0	762
2023	2024	6.55%	20.525%	10.000%	0	762
2024	2025	6.55%	20.525%	10.000%	0	762
2025	2026	6.55%	20.525%	10.000%	0	762
2026	2027	6.55%	20.525%	10.000%	0	762
2027	2028	6.55%	20.525%	10.000%	0	762
2028	2029	6.55%	20.525%	10.000%	0	762
2029	2030	6.55%	20.525%	10.000%	0	762
2030	2031	6.55%	20.525%	10.000%	0	762
2031	2032	6.55%	20.525%	10.000%	0	762
2032	2033	6.55%	20.525%	10.000%	0	762
2033	2034	6.55%	20.525%	10.000%	0	762
2034	2035	6.55%	20.525%	10.000%	0	762
2035	2036	6.55%	20.525%	10.000%	0	762
2036	2037	6.55%	20.525%	10.000%	0	762
2037	2038	6.55%	20.525%	10.000%	0	762
2038	2039	6.55%	20.525%	10.000%	0	762
2039	2040	6.55%	20.525%	10.000%	0	762
2040	2041	6.55%	20.525%	10.000%	0	762
2041	2042	6.55%	20.525%	10.000%	0	762
2042	2043	6.55%	20.525%	10.000%	0	762
2043	2044	6.55%	20.525%	10.000%	0	762
2044	2045	6.55%	20.525%	10.000%	0	762
2045	2046	6.55%	20.525%	10.000%	0	762
2046	2047	6.55%	20.525%	10.000%	0	762
2047	2048	6.55%	20.525%	10.000%	0	762
2048	2049	6.55%	20.525%	10.000%	0	762
2049	2050	6.55%	20.525%	10.000%	0	762
2050	2051	6.55%	20.525%	10.000%	0	762
2051	2052	6.55%	20.525%	10.000%	0	762
2052	2053	6.55%	20.525%	10.000%	0	762
2053	2054	6.55%	20.525%	10.000%	0	762
2054	2055	6.55%	20.525%	10.000%	0	762
2055	2056	6.55%	20.525%	10.000%	0	762
2056	2057	6.55%	20.525%	10.000%	0	762
2057	2058	6.55%	20.525%	10.000%	0	762
2058	2059	6.55%	20.525%	10.000%	0	762
2059	2060	6.55%	20.525%	10.000%	0	762
2060	2061	6.55%	20.525%	10.000%	0	762
2061	2062	6.55%	20.525%	10.000%	0	762
2062	2063	6.55%	20.525%	10.000%	0	762
2063	2064	6.55%	20.525%	10.000%	0	762
2064	2065	6.55%	20.525%	10.000%	0	762



This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION III – MANAGEMENT INFORMATION

### Asset Projection if no further Additional Uniform Contributions are received

(Based on results of this June 30, 2015 valuation and preliminary June 30, 2015 assets less \$19 million AUC receivable)

	Fiscal Period		Contributions				Disbursements				Commonwealth Pay-as-you-go Benefit Payments	Investment Return	System Assets (including POB proceeds)					
	July 1 to	June 30	Employer	Employee	Law 70	System-Admin Bonus Benefits	Total	Benefits	Admin Expenses	POB's			Total	Begin	Cash Flow	Income	AUC	End
	2015	2016	456	320	34	110	920	1,497	28	167	1,692	0	6.55%	2,546	(772)	142	0	1,916
	2016	2017	490	315	35	113	953	1,496	28	167	1,691	0	6.55%	1,916	(738)	102	0	1,280
	2017	2018	535	319	35	115	1,004	1,496	29	167	1,692	0	6.55%	1,280	(688)	62	0	654
	2018	2019	582	323	35	118	1,058	1,496	30	167	1,693	0	6.55%	654	(635)	22	0	41
	2019	2020	627	326	34	120	1,107	1,503	31	167	1,701	553	6.55%	41	(594)	0	0	0
	2020	2021	675	329	33	123	1,160	1,512	31	167	1,710	550	6.55%	0	(550)	0	0	0
	2021	2022	682	332	31	126	1,171	1,525	32	217	1,774	603	6.55%	0	(603)	0	0	0
	2022	2023	690	336	28	129	1,183	1,541	33	234	1,808	625	6.55%	0	(625)	0	0	0
	2023	2024	698	340	26	132	1,196	1,560	34	239	1,833	637	6.55%	0	(637)	0	0	0
	2024	2025	706	344	24	135	1,209	1,579	35	174	1,788	579	6.55%	0	(579)	0	0	0
	2025	2026	718	350	21	138	1,227	1,598	36	176	1,810	583	6.55%	0	(583)	0	0	0
	2026	2027	731	356	19	141	1,247	1,616	36	181	1,833	586	6.55%	0	(586)	0	0	0
	2027	2028	744	363	18	144	1,269	1,632	37	187	1,856	587	6.55%	0	(587)	0	0	0
	2028	2029	757	369	17	146	1,289	1,649	38	429	2,116	827	6.55%	0	(827)	0	0	0
	2029	2030	770	375	16	148	1,309	1,667	39	428	2,134	825	6.55%	0	(825)	0	0	0
	2030	2031	784	382	14	150	1,330	1,685	40	290	2,015	685	6.55%	0	(685)	0	0	0
	2031	2032	798	389	13	151	1,351	1,701	41	376	2,118	767	6.55%	0	(767)	0	0	0
	2032	2033	813	396	11	152	1,372	1,717	42	264	2,023	651	6.55%	0	(651)	0	0	0
	2033	2034	830	404	10	152	1,396	1,731	43	271	2,045	649	6.55%	0	(649)	0	0	0
	2034	2035	847	413	8	152	1,420	1,744	44	412	2,200	780	6.55%	0	(780)	0	0	0
	2035	2036	866	422	6	152	1,446	1,754	45	277	2,076	630	6.55%	0	(630)	0	0	0
	2036	2037	885	431	5	150	1,471	1,763	47	325	2,135	664	6.55%	0	(664)	0	0	0
	2037	2038	906	441	3	148	1,498	1,766	48	319	2,133	635	6.55%	0	(635)	0	0	0
	2038	2039	927	452	2	146	1,527	1,766	49	312	2,127	600	6.55%	0	(600)	0	0	0
	2039	2040	951	463	2	143	1,559	1,764	50	347	2,161	602	6.55%	0	(602)	0	0	0
	2040	2041	975	475	1	139	1,590	1,760	51	185	1,996	406	6.55%	0	(406)	0	0	0
	2041	2042	999	487	0	134	1,620	1,755	53	126	1,934	314	6.55%	0	(314)	0	0	0
	2042	2043	1,027	501	0	130	1,658	1,744	54	122	1,920	262	6.55%	0	(262)	0	0	0
	2043	2044	1,054	514	0	125	1,693	1,737	55	80	1,872	179	6.55%	0	(179)	0	0	0
	2044	2045	1,084	528	0	119	1,731	1,726	57	50	1,833	102	6.55%	0	(102)	0	0	0
	2045	2046	1,112	542	0	114	1,768	1,716	58	50	1,824	56	6.55%	0	(56)	0	0	0
	2046	2047	1,146	558	0	108	1,812	1,698	60	50	1,808	0	6.55%	0	4	0	0	4
	2047	2048	1,177	573	0	102	1,852	1,684	61	50	1,795	0	6.55%	4	57	2	0	63
	2048	2049	1,211	590	0	96	1,897	1,669	63	50	1,782	0	6.55%	63	115	8	0	186
	2049	2050	1,247	607	0	91	1,945	1,653	64	50	1,767	0	6.55%	186	178	18	0	382
	2050	2051	1,283	625	0	85	1,993	1,637	66	50	1,753	0	6.55%	382	240	33	0	655
	2051	2052	1,321	643	0	80	2,044	1,624	68	50	1,742	0	6.55%	655	302	53	0	1,010
	2052	2053	1,359	662	0	74	2,095	1,614	69	50	1,733	0	6.55%	1,010	362	78	0	1,450
	2053	2054	1,398	681	0	69	2,148	1,608	71	50	1,729	0	6.55%	1,450	419	108	0	1,977
	2054	2055	1,439	701	0	64	2,204	1,608	73	50	1,731	0	6.55%	1,977	473	145	0	2,595
	2055	2056	1,481	721	0	59	2,261	1,613	75	233	1,921	0	6.55%	2,595	340	181	0	3,116
	2056	2057	1,524	742	0	54	2,320	1,623	76	217	1,916	0	6.55%	3,116	404	217	0	3,737
	2057	2058	1,568	764	0	49	2,381	1,640	78	203	1,921	0	6.55%	3,737	460	260	0	4,457
	2058	2059	1,614	786	0	45	2,445	1,661	80	236	1,977	0	6.55%	4,457	468	307	0	5,232
	2059	2060	1,662	810	0	40	2,512	1,688	82	0	1,770	0	6.55%	5,232	742	367	0	6,341
	2060	2061	1,711	834	0	36	2,581	1,719	84	0	1,803	0	6.55%	6,341	778	440	0	7,559
	2061	2062	1,762	858	0	33	2,653	1,755	86	0	1,841	0	6.55%	7,559	812	521	0	8,892
	2062	2063	1,814	884	0	29	2,727	1,795	89	0	1,884	0	6.55%	8,892	843	610	0	10,345
	2063	2064	1,868	910	0	26	2,804	1,840	91	0	1,931	0	6.55%	10,345	873	706	0	11,924
	2064	2065	1,924	937	0	23	2,884	1,889	93	0	1,982	0	6.55%	11,924	902	810	0	13,636

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION IV – GASB 67 ACCOUNTING INFORMATION

### **A. Projection to Determine GASB 67 Date of Depletion (if any)**

As directed by the System, the asset basis for the date of depletion projection is the System's net assets (the gross assets less the Pension Obligation Bond proceeds). On this basis, net assets were exhausted in the 2014-2015 fiscal year and no projection was needed to be performed as of June 30, 2015, as the tax-free municipal bond index applies in all years, and is thus the single equivalent interest rate that is used as the discount rate in the determination of the Total Pension Liability.

The tax free municipal bond index of 3.80% as of June 30, 2015 was used as the discount rate in the determination of the Total Pension Liability as of June 30, 2015.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION IV - GASB 67 ACCOUNTING INFORMATION**

**B. Net Pension Liability**

<b>Net Pension Liability</b>	<b><u>June 30, 2014</u></b>	<b><u>June 30, 2015</u></b>
Total pension liability	\$30,219,517,000	\$32,669,162,000
Fiduciary net position	80,666,000	(578,633,000)
Net pension liability	30,138,851,000	33,247,795,000
Fiduciary net position as a % of total pension liability	0.27%	-1.77%
Covered payroll	\$3,489,096,000	\$3,319,280,000
Net pension liability as a % of covered payroll	863.80%	1001.66%

The total pension liability was determined by an actuarial valuation as of July 1, 2014, calculated based on the discount rate and actuarial assumptions as shown in Section VIII and was then projected forward to June 30, 2015. There have been no significant changes between the valuation date of July 1, 2014 and the fiscal year end. Any significant changes during this period must be reflected as prescribed by GASB 67. Covered Payroll is as of July 1, 2014.

**Discount Rate**

The plan's fiduciary net position was not projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the total pension liability is equal to the single equivalent rate that results in the same actuarial present value as the long-term expected rate of return applied to benefit payments, to the extent that the plans's fiduciary net position is projected to be sufficient to make projected benefit payments, and the municipal bond rate applied to benefit payments, to the extent that the plan's fiduciary net position is not projected to be sufficient.

	<b><u>June 30, 2014</u></b>	<b><u>June 30, 2015</u></b>
Discount rate	4.29%	3.80%
Long-term expected rate of return net of investment expense	6.75%	6.55%
Municipal bond rate *	4.29%	3.80%

\* Bond Buyer General Obligation 20-Bond Municipal Bond Index

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION IV - GASB 67 ACCOUNTING INFORMATION**

**C. GASB 67 Benefit Obligations as of June 30, 2014**

	<u>Basic System Benefits</u>	<u>System Administered Benefits</u>	<u>Total</u>
1. Projected Benefits Payable to Retirees and Beneficiaries			
Retirees	\$18,213,124,000	\$1,513,568,000	\$19,726,692,000
Disabled Members	1,155,458,000	398,995,000	1,554,453,000
Beneficiaries	<u>519,189,000</u>	<u>164,599,000</u>	<u>683,788,000</u>
Total	19,887,771,000	2,077,162,000	21,964,933,000
2. Projected Benefits Payable to Vested Terminated Members	1,304,002,000	93,464,000	1,397,466,000
3. Actuarial Accrued Liability for Active Members	8,524,764,000	710,047,000	9,234,811,000
4. Return of Contributions due to former Members	71,952,000	0	71,952,000
5. Total Pension Liability as of June 30, 2015: (1) + (2) + (3) + (4)	\$29,788,489,000	\$2,880,673,000	\$32,669,162,000

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

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION IV - GASB 67 ACCOUNTING INFORMATION**

**D. Changes in Net Pension Liability**

<b>Changes in Net Pension Liability</b>	<b>Total Pension Liability (a)</b>	<b>Increase (Decrease) Plan Fiduciary Net Position (b)</b>	<b>Net Pension Liability (a) - (b)</b>
Balances as of June 30, 2014	\$30,219,517,000	\$80,666,000	\$30,138,851,000
Changes for the year:			
Service cost	425,564,000		425,564,000
Interest on total pension liability	1,279,556,000		1,279,556,000
Effect of plan changes	0		0
Effect of economic/demographic (gains) or losses	(463,898,000)		(463,898,000)
Effect of assumptions changes or inputs	2,781,098,000		2,781,098,000
Benefit payments	(1,572,675,000)	(1,572,675,000)	0
Administrative expenses		(25,744,000)	25,744,000
Other expenses		(13,242,000)	13,242,000
Cost of bonds		(194,400,000)	194,400,000
Member contributions		339,650,000	(339,650,000)
Net investment income		70,143,000	(70,143,000)
Employer contributions		736,969,000	(736,969,000)
Balances as of June 30, 2015	\$32,669,162,000	(\$578,633,000)	\$33,247,795,000

**E. Sensitivity Analysis**

The following presents the net pension liability of PRGERS, calculated using the discount rate of 3.80%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (2.80%) or 1 percentage point higher (4.80%) than the current rate.

	<b>1% Decrease 2.80%</b>	<b>Current Discount Rate 3.80%</b>	<b>1% Increase 4.80%</b>
Total pension liability	\$37,336,239,000	\$32,669,162,000	\$28,845,235,000
Fiduciary net position	(578,633,000)	(578,633,000)	(578,633,000)
Net pension liability	37,914,872,000	33,247,795,000	29,423,868,000

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION V - GASB 45 ACCOUNTING INFORMATION

### A. Benefit Obligations

1. Projected Benefits Payable to Retirees and Beneficiaries:	
Retirees	\$1,244,935,000
Disabled Members	183,853,000
Beneficiaries	<u>0</u>
Total	1,428,788,000
2. Projected Benefits Payable to Vested Terminated Members:	0
3. Actuarial Accrued Liability for Active Members	0
4. Total Actuarial Accrued Liability as of June 30, 2015:	1,428,788,000
5. Total Employer Normal Cost as of December 31, 2015:	0

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

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION V - GASB 45 ACCOUNTING INFORMATION**

**B. Development of Unfunded Actuarial Accrued Liability and Amortization Payment Payable as of December 31, 2015:**

1. Actuarial Accrued Liability as of June 30, 2015:	\$1,428,788,000
2. Actuarial Value of Assets as of June 30, 2015:	0
3. Unfunded Actuarial Accrued Liability as of June 30, 2015: (1) - (2)	1,428,788,000
4. Amortization Period in years	17
5. Amortization Factor at beginning of year	13.4656
6. Amortization Amount Payable as of December 31, 2015: [ (3) / (5) ] * ( 1.0310 ^ 0.5 )	\$107,739,000

**C. Development of Annual Required Contribution**

1. Total Employer Normal Cost as of December 31, 2015:	\$0
2. Amortization Payment as of December 31, 2015:	107,739,000
3. Annual Required Contribution*: (1) + (2)	107,739,000

\* Assumes payments made throughout the year.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION V - GASB 45 ACCOUNTING INFORMATION

#### **D. Development of Net OPEB Obligation as of June 30, 2015**

1. Net OPEB Obligation as of June 30, 2014	\$203,454,000
2. Annual OPEB Cost for Fiscal Year 2014 - 2015	95,267,000
3. Fiscal Year 2014 - 2015 Employer Contribution	106,037,000
4. Net OPEB Obligation as of June 30, 2015: (1) + (2) - (3)	\$192,684,000

#### **E. Development of Fiscal Year 2015 - 2016 Annual OPEB Cost**

1. Annual Required Contribution	\$107,739,000
2. Interest on Net OPEB Obligation as of June 30, 2015	5,973,000
3. Adjustment to the Annual Required Contribution	14,753,000
4. Fiscal Year 2015 - 2016 Annual OPEB Cost: (1) + (2) - (3)	\$98,959,000

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

The above Net OPEB Obligation and Annual OPEB Cost are determined as if PRGERS was a single employer plan instead of a cost-sharing multiple employer plan. See Section I for more information.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION V - 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>
2016 *	\$107,083,000	\$107,739,000	99.39%
2015	106,037,000	103,878,000	102.08
2014	102,085,000	88,508,000	115.34
2013	91,823,000	154,999,000	59.24
2012	94,664,000	133,654,000	70.83
2011	93,851,000	129,395,000	72.53
2010	88,599,000	128,294,000	69.06

- \* Actual Employer Contribution for the year ended June 30, 2016 assumes:  
- contribution of \$107.083 million for Special Law OPEB benefits.

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

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION V - 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>
06/30/2015	\$0	\$1,428,788,000	\$1,428,788,000	0.0%	\$3,319,280,000	43.0%
06/30/2014	0	1,438,475,000	1,438,475,000	0.0%	3,489,096,000	41.2%
06/30/2013	0	1,482,879,000	1,482,879,000	0.0%	3,489,096,000	42.5%
06/30/2012	0	2,120,970,000	2,120,970,000	0.0%	3,570,339,000	59.4%
06/30/2011	0	1,758,389,000	1,758,389,000	0.0%	3,666,402,000	48.0%
06/30/2010	0	1,699,373,000	1,699,373,000	0.0%	3,818,332,000	44.5%

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

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION V - 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, 2016. The ARC is for the Medical Insurance Plan Contribution. See Section I for more information.

Valuation Date:	June 30, 2015
Actuarial Cost Method:	Entry Age Normal
Amortization method:	18 years closed (beginning July 1, 2014), level dollar
Remaining Amortization Period:	17 years
Asset valuation method:	not applicable
Assumptions:	
Investment rate of return	3.10%
Projected Salary Increases	not applicable
Projected Payroll Growth	not applicable
Inflation	not applicable
Cost of Living Adjustments	not applicable

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VI - CENSUS DATA**

**A. Summary of Member Data as of July 1, 2014:**

	<b>Act 447</b>	<b>Act 1</b>	<b>System 2000 / Act 3</b>	<b>Total</b>
<b>Active Members</b>				
Count	15,778	39,957	64,055	119,790
Average Age	54.0	49.3	41.7	45.9
Average Salary	\$33,697	\$30,252	\$24,648	\$27,709
Average Creditable Service	27.2	19.4	8.6	14.7
<b>Retired Members</b>				
Count	88,765	8,180	111	97,056
Average Age	69.2	62.9	66.4	68.7
Average Monthly Basic System Benefit	\$1,162	\$331	\$836	\$1,092
Average Monthly System Administered Benefit	\$71	\$32	\$27	\$68
<b>Disabled Members</b>				
Count	13,902	1,834	84	15,820
Average Age	70.0	63.5	53.3	69.2
Average Monthly Basic System Benefit	\$486	\$518	\$552	\$490
Average Monthly System Administered Benefit	\$133	\$60	\$4	\$124
<b>Beneficiaries in payment</b>				
Count	13,723	100	43	13,866
Average Age	73.7	64.7	65.5	73.6
Average Monthly Basic System Benefit	\$305	\$429	\$528	\$307
Average Monthly System Administered Benefit	\$79	\$83	\$31	\$79

Basic System Benefit and System Administered Benefit amounts shown above are for pension benefits, including minimum benefits up to \$500 per month and COLAs, and excludes benefits payable at a later date to Law 70 Section 4B retirees. Special Law "bonus" benefits are not reflected.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

# PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

## SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

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.

Act 3 of 2013, in conjunction with other recent funding and design changes, provided for a comprehensive pension redesign of PRGERS. This summary details the provisions under Act 3.

Certain provisions are different for the three groups of members who entered PRGERS prior to July 1, 2013 as described below.

- Act 447 members are generally those members hired before April 1, 1990.
- Act 1 members are generally those members hired on or after April 1, 1990 and on or before December 31, 1999.
- System 2000 members are generally those members hired on or after January 1, 2000 and on or before June 30, 2013.

### 1. Type of Plan

The System is a contributory, hybrid defined benefit plan.

### 2. Effective Date

The System was established in 1951 by Act 447 to be effective January 1, 1952. The plan was last amended under Act 3, approved April 4, 2013.

### 3. Eligibility for Membership

Members of the Employees Retirement System of the Government of Puerto Rico and its Instrumentalities include all regular full-time and non-municipal temporary employees who are not contributing to other Retirement Systems (Articles 1-104 and 1-105). Employees include those in the following categories:

- Police of Puerto Rico,
- Firefighters of Puerto Rico,
- Elective officers of the People of Puerto Rico and the employees of the Legislature,

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

- Officers and employees of the Government of Puerto Rico,
- Officers and employees of public enterprises,
- Officers and employees, including mayors, of the municipalities, and
- Irregular personnel fulfilling the requirements of regular employee.

Membership is mandatory, except for the Governor of Puerto Rico, Government Secretaries, heads of public agencies and instrumentalities, the Governor's aides, gubernatorial appointees of commissions and boards, members of the Legislature, the Controller of Puerto Rico, the employees of the Agricultural Extension Service of the U.P.R., the Ombudsman and the Commonwealth Election Board employees (Article 1-105). In addition, membership is optional for eligible employees while working and residing outside the territorial limits of the Commonwealth of Puerto Rico (Act 112 of 2004).

#### 4. Definitions

- a. Fiscal Year: A Fiscal Year is a 12-month period beginning on July 1 and ending on June 30 (Article 1-104).
- b. General Fund: The General Expenses Budget of the Government of the Commonwealth of Puerto Rico.
- c. Government of Puerto Rico or Government: The Government of the Commonwealth of Puerto Rico, its departments, divisions, bureaus, offices, agencies and dependencies (Article 1-104).
- d. Public Enterprise: Any government instrumentality of the People of Puerto Rico (Article 1-104).
- e. Municipality: The Municipality of San Juan (Article 1-104).
- f. Employer: The Government of Puerto Rico, any public enterprise that has elected to participate in the System, or any municipality that has elected to participate in the System (Articles 1-104 and 1-110).
- g. Employee: Any officer or employee of the Employer regularly employed on a full time basis (Article 1-104).

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS**  
**AS OF JUNE 30, 2015**

- h. Creditable Service for Act 447 members: The years and months of plan participation, during which contributions have been made, beginning on the later of date of hire or January 1, 1952 and ending on date of separation from service. For purposes of calculating Creditable Service, the following schedule shall apply:

Service During a Fiscal Year	Creditable Service Earned
15 days during the same month	1 month
2 months and 15 days to 5 months and 14 days	½ year
5 months and 15 days to 8 months and 14 days	¾ year
8 months and 15 days to 12 months	1 year

*Note: All of the days have to be during the same month.*

Months in which less than 15 days of service are rendered do not count towards Creditable Service. (Article 1-106)

In general, Creditable Service may be earned for any period of employment during which no contributions were made if Accumulated Contributions for such periods are paid to the System. The same rules hold for rehired employees who previously received a refund of Accumulated Contributions at separation. (Article 1-106)

Creditable Service also includes purchased service, if any (Article 1-106).

- i. Creditable Service for Act 1 members: The years and completed months of plan participation, during which contributions have been made, beginning on date of hire and ending on date of separation from service. (Articles 1-106 and 2-109) For purposes of calculating Creditable Service, the following schedule shall apply:

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS**  
**AS OF JUNE 30, 2015**

Service During a Fiscal Year	Creditable Service Earned
Less than 3 months	None
3 to 5 months	½ year
6 to 8 months	¾ year
9 months or more	1 year

In general, Creditable Service may be earned for any period of employment during which no contributions were made if Accumulated Contributions for such periods are paid to the System. The same rules hold for rehired employees who previously received a refund of Accumulated Contributions at separation. (Article 1-106)

Creditable Service also includes purchased service, if any (Article 1-106).

- j. Compensation: The gross cash compensation, excluding bonuses and overtime, upon which contributions by a Member to the Fund are based (Article 1-104).
- k. Average Compensation for Act 447 members: The average of the 3 highest years (36 highest months) of compensation that the participant has received for Creditable Service (Article 1-104).
- l. Average Compensation for Act 1 members: The average of the last 5 years of compensation that the participant has received for Creditable Service. If annual compensation in the averaging period exceeds by more than 10% the annual compensation in the immediately preceding year, the compensation in excess of said 10% shall not be included in the calculation of Average Compensation. (Article 2-108)
- m. Contributions: The amount deducted from the compensation of a Member and the employer (Section 781).
- n. Regular Interest: The interest rate as prescribed by the Board of Trustees (Article 1-104). The rate of 2.50% has always been in effect.
- o. Accumulated Contributions: The sum of all amounts deducted from the compensation of a Member prior to July 1, 2013 with Regular Interest (Article 1-104).

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS**  
**AS OF JUNE 30, 2015**

- p. Actuarial Equivalent: Equality in value such that the present value of the amount under any form of payment is essentially the same as the present value of the amount under the normal form of annuity payment for single participants. Actuarially Equivalent factors are determined based on annuity and mortality tables adopted by the Board of Trustees based on the system’s experience and in accordance with the recommendations of the actuary.

For purposes of converting the Defined Contribution Hybrid Contribution Account to a lifetime annuity, the current factors adopted by the Board are the single life annuity factors using an interest rate of 4% and the RP-2000 Healthy Annuitant Mortality Table for ages 50 and over and the RP-2000 Employee Mortality Table for ages under 50, projected to 2025 using Scale AA and blended 50% male / 50% female.

- q. Public Officers in High-Risk Positions: The Commonwealth of Puerto Rico Police, the Municipal Police, the Commonwealth Firefighter Corps, the Municipal Firefighter Corps, and the Custody Officers Corps.
- r. Social Security Retirement Age (SSRA): The Social Security Retirement Age varies based on the year of birth as indicated in the table below.

Year of Birth	Social Security Retirement Age
1937 or earlier	65 years
1938	65 years and 2 months
1939	65 years and 4 months
1940	65 years and 6 months
1941	65 years and 8 months
1942	65 years and 10 months
1943 to 1954	66 years
1955	66 years and 2 months
1956	66 years and 4 months
1957	66 years and 6 months
1958	66 years and 8 months
1959	66 years and 10 months
1960 and later	67 years

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

- s. Retirement Savings Account: The individual retirement account established for each member of System 2000 (Article 1-104). Each member has a nonforfeitable right to the value of his Retirement Savings Account (Article 3-107).
- t. Credits to Retirement Savings Account: The credits to the retirement savings account include (1) any initial transfer balance for transferred participants, (2) contributions of the members to System 2000, and (3) the investment yield for each semester of the fiscal year based on the investment alternatives elected by the member (Article 3-107).
- u. Investment Alternatives for Retirement Savings Account: System 2000 members could choose to allocate their Retirement Savings Account, in multiples of 10%, to the following investment options prior to July 1, 2013. Changes in allocation could have been made annually, effective each July 1.
  - i. Fixed income – The yield is equal to the average monthly yield of the Two-Year Constant Maturity Treasuries during each semester of the fiscal year.
  - ii. System's investment portfolio – The yield is equal to 90% (75% prior to July 1, 2004) of the investment portfolio yield of the System during each semester of each fiscal year minus management fees such as fees payable to administrators of the portfolio.
  - iii. Other alternatives adopted by the Board of the System.
- v. Defined Contribution Hybrid Contribution Account: The individual account established for each active member as of July 1, 2013 and for each future member thereafter. Each member has a nonforfeitable right to their contributions to the Defined Contribution Hybrid Contribution Account and, for the System 2000 members, the initial transfer of their Retirement Savings Account as of June 30, 2013.
- w. Credits to Defined Contribution Hybrid Contribution Account: The credits to the retirement savings account include (1) the Retirement Savings Account as of June 30, 2013 for System 2000 members, (2) contributions by all members after June 30, 2013 to PRGERS, and (3) the investment yield for each semester of the fiscal year as determined by the Board. The investment yield determined by the Board shall never be less than 80% of the investment portfolio yield of the

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

System during each semester of each fiscal year minus management fees such as, but not limited to, fees payable to administrator of the portfolio, safekeeping of securities and investment counseling.

5. Coordination with Social Security for Act 447 members: Except for police, mayors and employees of the Agricultural Extension Service of the U.P.R., participants may elect to coordinate coverage under the System with Federal Social Security by selecting the lower of two contribution options. Those participants selecting Option (1), the Coordination Plan, are subject to a benefit recalculation upon attainment of Social Security Retirement Age. Those participants selecting Option (2), the Supplementation Plan, will continue to receive the same benefits for life, without any adjustments at SSRA. At any time up to retirement, participants may change from Option (1) to Option (2) by making a contribution including interest to the System, retroactive to the later of July 1, 1968 or the date of plan entry, that will bring their career Accumulated Contributions to the Option (2) level. All police, mayors and employees of the Agricultural Extension Service of the U.P.R. are covered under Option (2), the Supplementation Plan.

6. Retirement Benefits

- a. Eligibility for Act 447 members: Act 447 members who were eligible to retire as of June 30, 2013 would continue to be eligible to retire at any time. Prior to July 1, 2013, Act 447 members could retire upon (1) attainment of age 55 with 25 years of Creditable Service, (2) attainment of age 58 with 10 years of Credited Service, (3) any age with 30 years of Creditable Service, (4) for Public Officers in High Risk Positions, attainment of age 50 with 25 years of Creditable Service, and (5), for Mayors, attainment of age 50 with 8 years of Creditable Service as a Mayor. In addition, Act 447 members who would attain 30 years of Creditable Service by December 31, 2013 would be eligible to retire at any time.

Act 447 members who were not eligible to retire as of June 30, 2013 and did not attain 30 years of Creditable Service by December 31, 2013 would be eligible to retire upon attainment of the retirement eligibility age shown in the table below with 10 years of Creditable Service.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS**  
**AS OF JUNE 30, 2015**

Date of Birth	Attained Age as of June 30, 2013	Retirement Eligibility Age
July 1, 1957 or later	55 or less	61
July 1, 1956 to June 30, 1957	56	60
Before July 1, 1956	57 and up	59

In addition to the requirements in the table above, Act 447 Public Officers in High Risk Positions who were not eligible to retire as of June 30, 2013 and did not attain 30 years of Creditable Service by December 31, 2013 are eligible to retire directly from active service upon the attainment of age 55 with 30 years of Creditable Service.

- b. Eligibility for Act 1 members: Act 1 members who were eligible to retire as of June 30, 2013 would continue to be eligible to retire at any time. Prior to July 1, 2013, Act 1 members could retire upon (1) attainment of age 55 with 25 years of Creditable Service, (2) attainment of age 65 with 10 years of Credited Service, (3) for Public Officers in High Risk Positions, any age with 30 years of Creditable Service, and (4) for Mayors, attainment of age 50 with 8 years of Creditable Service as a Mayor.

Act 1 members who were not eligible to retire as of June 30, 2013 would be eligible to retire upon attainment of age 65 with 10 years of Creditable Service. In addition, Act 1 Public Officers in High Risk Positions who were not eligible to retire as of June 30, 2013 are eligible to retire directly from active service upon the attainment of age 55 with 30 years of Creditable Service.

- c. Eligibility for System 2000 members: System 2000 members who were eligible to retire as of June 30, 2013 would continue to be eligible to retire at any time. Prior to July 1, 2013, System 2000 members could retire upon attainment of age 55 for Public Officers in High Risk Positions and attainment of age 60 otherwise.

System 2000 members who were not eligible to retire as of June 30, 2013 would be eligible to retire upon attainment of age 55 for Public Officers in High Risk Positions and upon attainment of the retirement eligibility age shown in the table below otherwise.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS**  
**AS OF JUNE 30, 2015**

Date of Birth	Attained Age as of June 30, 2013	Retirement Eligibility Age
July 1, 1957 or later	55 or less	65
July 1, 1956 to June 30, 1957	56	64
July 1, 1955 to June 30, 1956	57	63
July 1, 1954 to June 30, 1955	58	62
Before July 1, 1954	59 and up	61

- d. Eligibility for members hired after June 30, 2013: Attainment of age 58 if a Public Officer in a High Risk Position and attainment of age 67 otherwise.
- e. Benefit: An annuity payable for the lifetime of the member equal to the annuitized value of the balance in the Defined Contribution Hybrid Contribution Account at the time of retirement, plus, for Act 447 and Act 1 members, the Accrued Benefit determined as of June 30, 2013. If the balance in the Defined Contribution Hybrid Contribution Account is \$10,000 or less, the balance in the Defined Contribution Hybrid Contribution Account shall be paid as a lump sum instead of as an annuity.
- f. Accrued Benefit as of June 30, 2013 for Act 447 members: The accrued benefit as of June 30, 2013 shall be determined based on the Average Compensation for Act 447 members, the years of Creditable Service, and the attained age of the member all as of June 30, 2013. For Act 447 Mayors, the Highest Compensation as a Mayor is determined as of June 30, 2013.

If the Act 447 member had at least 30 years of Creditable Service as of June 30, 2013, the accrued benefit equals 65% of Average Compensation if the member was under age 55 as of June 30, 2013 or 75% of Average Compensation if the member was at least age 55 as of June 30, 2013. For participants selecting the Coordination Plan, the benefit is re-calculated at SSRA as 1.5% of Average Compensation up to \$6,600 multiplied by years of Creditable Service, up to 30 years, plus 65% (75% if member was at least age 55 as of June 30, 2013) of Average Compensation in excess of \$6,600.

If the Act 447 member had less than 30 years of Creditable Service as of June 30, 2013, and attains 30 years of Creditable Service by December 31, 2013, the accrued benefit equals 55% of Average Compensation if the member was under

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## **PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

### **SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS** **AS OF JUNE 30, 2015**

age 55 as of June 30, 2013 or 60% of Average Compensation if the member was at least age 55 as of June 30, 2013. For participants selecting the Coordination Plan, the benefit is re-calculated at SSRA as 1.5% of Average Compensation up to \$6,600 multiplied by years of Creditable Service, up to 30 years, plus 55% (60% if member was at least age 55 as of June 30, 2013) of Average Compensation in excess of \$6,600. Member contributions received from Act 447 members eligible for this transitory benefit during the period beginning July 1, 2013 and ending upon the attainment of 30 years of Creditable Service are considered pre-July 1, 2013 contributions; the contributions to the Defined Contribution Hybrid Contribution Account begin after the member attains 30 years of Creditable Service.

If the Act 447 member had less than 30 years of Creditable Service as of December 31, 2013, the accrued benefit equals 1.5% of Average Compensation multiplied by years of Creditable Service up to 20 years, plus 2% of Average Compensation multiplied by years of Creditable Service in excess of 20 years. Maximum benefit is 75% of Average Compensation. Except for Commonwealth Police and Commonwealth Firefighters, the benefit is actuarially reduced for each year payment commences prior to age 58. For participants selecting the Coordination Plan, the basic benefit is re-calculated at SSRA as 1% of Average Compensation up to \$6,600 multiplied by years of Creditable Service up to 20 years, plus 1.5% of Average Compensation up to \$6,600 multiplied by years of Creditable Service in excess of 20 years, plus 1.5% of Average Compensation in excess of \$6,600 multiplied by years of Creditable Service up to 20 years, plus 2.0% of Average Compensation in excess of \$6,600 multiplied by years of Creditable Service in excess of 20 years. Except for Police and Firefighters, the benefit is actuarially reduced for each year payment commences prior to age 58.

For Act 447 Mayors with at least 8 years of Creditable Service as a mayor, the accrued benefit will not be less than 5% of Highest Compensation as a Mayor for each year of Creditable Service as a Mayor up to 10 years, plus 1.5% of Highest Compensation as Mayor for each year of non-Mayoral Creditable Service up to 20 years, plus 2.0% of Highest Compensation as Mayor for each year of non-Mayoral Creditable Service in excess of 20 years. Non-Mayoral Creditable Service includes service earned as a Mayor in excess of 10 years. Maximum benefit is 90% of Highest Compensation as a Mayor.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

- g. Accrued Benefit as of June 30, 2013 for Act 1 members: The accrued benefit as of June 30, 2013 shall be determined based on the Average Compensation for Act 1 members, the years of Creditable Service, and the attained age of the member all as of June 30, 2013. For Act 1 Mayors, the Highest Compensation as a Mayor is determined as of June 30, 2013.

If the Act 1 Commonwealth Police or Commonwealth Firefighter had at least 30 years of Creditable Service as of June 30, 2013, the accrued benefit equals 65% of Average Compensation if the member was under age 55 as of June 30, 2013 or 75% of Average Compensation if the member was at least age 55 as of June 30, 2013.

For all other Act 1 members, the accrued benefit equals 1.5% of Average Compensation multiplied by years of Creditable Service. The benefit is actuarially reduced for each year payment commences prior to age 65.

For Act 1 Mayors with at least 8 years of Creditable Service as a mayor, the accrued benefit will not be less than 5% of Highest Compensation as a Mayor for each year of Creditable Service as a Mayor up to 10 years, plus 1.5% of Highest Compensation as Mayor for each year of non-Mayoral Creditable Service up to 20 years, plus 2.0% of Highest Compensation as Mayor for each year of non-Mayoral Creditable Service in excess of 20 years. Non-Mayoral Creditable Service includes service earned as a Mayor in excess of 10 years. Maximum benefit is 90% of Highest Compensation as a Mayor.

- h. Compulsory Retirement: All Act 447 and Act 1 Public Officers in High Risk Positions must retire upon attainment of age 58 and 30 years of creditable service. A two year extension may be requested by the member from the Superintendent of the Puerto Rico Police, the Chief of the Firefighter Corps, or supervising authority as applicable.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

#### 7. Termination Benefits

##### a. Lump Sum Withdrawal

Eligibility: A Member is eligible upon termination of service prior to 5 years of service or if the balance in the Defined Contribution Hybrid Contribution Account is \$10,000 or less.

Benefit: The benefit equals a lump sum payment of the balance in the Defined Contribution Hybrid Contribution Account as of the date of the permanent separation of service.

##### b. Deferred Retirement

Eligibility: A Member is eligible upon termination of service with 5 or more years of service (10 years of Creditable Service for Act 447 and Act 1 members) prior to the applicable retirement eligibility, provided the member has not taken a lump sum withdrawal of the Accumulated Contributions and the Defined Contribution Hybrid Contribution Account.

Benefit: An annuity payable for the lifetime of the member commencing at the applicable retirement eligibility age equal to the annuitized value of the balance in the Defined Contribution Hybrid Contribution Account at the time of retirement, plus, for Act 447 and Act 1 members, the Accrued Benefit determined as of June 30, 2013.

#### 8. Death Benefits

##### a. Pre-retirement Death Benefit

Eligibility: Any current non-retired member is eligible.

Benefit: A refund of the Defined Contribution Hybrid Contribution Account, plus the Accumulated Contributions for Act 447 and Act 1 members.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

#### b. High-Risk Death Benefit under Act 127

Eligibility: Police, firefighters, and other employees in specified high-risk positions who die in the line of work due to reasons specified in Act 127 of 1958 (as amended).

Spouse's Benefit: 50% of the participant's Compensation at date of death, payable as an annuity until death or remarriage (Act 127 of 1958 as amended).

Children's Benefit: 50% of the participant's Compensation at date of death, payable as an annuity, allocated pro-rata among eligible children. The annuity is payable for life for a disabled child, until age 18 for a non-disabled child not pursuing studies, and until age 25 for a non-disabled child who is pursuing studies. (Act 127 of 1958 as amended)

Benefit if no spouse or children: The parents of the member shall each receive 50% of the participant's Compensation at date of death, payable as an annuity for life. (Act 127 of 1958 as amended)

Post-death increases: Effective July 1, 1996 and subsequently every three years, the above death benefits are increased by 3% provided that the beneficiary(ies) had been receiving payments for at least three years. (Act 127 of 1958 as amended)

The cost of these benefits is paid by the General Fund (Act 127 of 1958 as amended).

#### c. Post-retirement Death Benefit for Members who retired prior to July 1, 2013

Eligibility: Any retiree or disabled member receiving a monthly benefit who has not elected a reversionary annuity and whose benefits commenced prior to July 1, 2013.

Benefit: The benefit is as follows (Law 105 as amended by Law 4):

- (i) For those married or with dependent children at the time of death, the annual income to a widow, or widower or dependent children is equal to 60% (50% if

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

in the Coordination Plan - 30% prior to January 1, 2004) of the retirement benefit payable for life for a surviving spouse and/or disabled children and payable until age 18 (age 25 if pursuing studies) for non-disabled children. If in the Coordination Plan, the benefit to the surviving spouse does not begin until the spouse's attainment of age 60 and the surviving spouse must have been married to the member for at least 10 years to be eligible for this benefit. The increase in the percentage from 30% to 50% if in the Coordination Plan is paid by the General Fund for former government employees or by the public enterprise or municipality for their former employees (Act 158 of 2003).

- (ii) The benefit, when there is no relation as stated above, is equal to the remaining balance of Accumulated Contributions at the time of retirement 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. Either the General Fund for former government employees or the public enterprise or municipality for their former employees pays the difference, up to \$250, between (1) the Accumulated Contributions less the lifetime annual income paid and (2) \$1,000. The System pays for the rest. (Article 2-113 and Act 524 of 2004)

#### d. Post-retirement Death Benefit for Members who retired after June 30, 2013

Eligibility: Any retiree or disabled member who began receiving a monthly benefit after June 30, 2013.

Benefit: If the member elected at the time of retirement to transfer a portion of the annuity to a beneficiary by selecting an actuarially equivalent optional form of payment, the applicable survivor benefit.

For all members, the excess, if any, of the Defined Contribution Hybrid Contribution Account, plus the Accumulated Contributions for Act 447 and Act 1 members, at the time of retirement over the total annuity payments paid to the member and any beneficiary per the terms of the optional form of payment shall be payable to a beneficiary or the Member's estate.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

- e. Beneficiaries receiving occupational death benefits as of June 30, 2013 continue to be eligible to receive such benefits.

#### 9. Disability Benefits

##### a. Disability

Eligibility: All members are eligible upon the occurrence of disability.

Benefit: The balance of the Defined Contribution Hybrid Contribution Account payable as lump sum distribution, an immediate annuity or a deferred annuity at the election of the participant. Act 447 and Act 1 members remain eligible to receive the accrued benefit as of June 30, 2013 commencing at the applicable retirement eligibility age.

##### b. High Risk Disability under Act 127

Eligibility: Police, firefighters, and other employees in specified high-risk positions who are disabled in the line of work due to reasons specified in Act 127 of 1958 (as amended).

Benefit: 80% (100% for Act 447 members) of Compensation as of date of disability, payable as an annuity. If the member dies while still disabled, this annuity benefit continues to his beneficiaries. Beneficiaries include the surviving spouse and/or disabled children (for life), non-disabled children until age 18 (age 25 if pursuing studies), and the parents if no other beneficiaries. Effective July 1, 1996 and subsequently every three years, the disability benefit is increased by 3% provided that the member (or beneficiary) had been receiving payments for at least three years. (Act 127 of 1958 as amended) The cost of these benefits is paid by the General Fund.

- c. Members who qualified for occupational or non-occupational disability benefits as of June 30, 2013 continue to be eligible to receive such benefits.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

#### 10. 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 23 approved on September 23, 1983. The benefits are paid 50% by the General Fund and 50% by the System.
- b. Minimum Benefit for members who retired before July 1, 2013: The minimum monthly lifetime income for members who retired or become disabled before July 1, 2013 is \$500 per month effective July 1, 2013 (\$400 per month effective July 1, 2007 and \$300 per month up to June 30, 2007). The increase in the minimum monthly benefit from \$200 per month to \$300 per month is paid by the General Fund for former government employees or by the public enterprise or municipality for their former employees. The increase in the minimum monthly benefit from \$300 per month to \$400 per month is to be paid by the System for former government employees or by the public enterprise or municipality for their former employees. (Act 156 of 2003, Act 35 of 2007, and Act 3 of 2013.)
- c. Coordination Plan Minimum Benefit: A minimum monthly benefit is payable upon attainment of SSRA such that the benefit, when added to the Social Security Benefit, is not less than the benefit payable prior to SSRA.

11. 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 10 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 35). 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 35). The COLAs granted in 1992 to all retirees and in 1998 to retirees who are former government or municipal employees shall be paid by the System. All other COLAs granted in 1995 and later shall be paid by the General Fund for former government employees or by the public enterprise or municipality for their former employees. (Various Acts)

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

12. Medical Insurance Plan Contribution: A payment of up to \$100 per month to the eligible medical insurance plan selected by the retiree or disabled member provided the member retired prior to July 1, 2013. This benefit is paid from the Supplemental Contributions (see item 14c) received from the General Fund for former government employees or by the public corporation or municipality for their former employees. (Act 483 as amended by Act 3)

13. Special “Bonus” Benefits:

- a. Christmas Bonus: An annual bonus of \$200 for each retiree, beneficiary, and disabled member paid in December provided the member retired prior to July 1, 2013. This benefit is paid from the Supplemental Contributions (see item 14c) received from the General Fund for former government employees or by the public corporation or municipality for their former employees. (Act 144 as amended by Act 3)
- b. Medication Bonus: An annual bonus of \$100 for each retiree, beneficiary, and disabled member to cover health costs paid in July provided the member retired prior to July 1, 2013. Evidence of coverage is not required. The amount is prorated if there are multiple beneficiaries. This benefit is paid from the Supplemental Contributions (see 14c) received from the General Fund for former government employees or by the public corporation or municipality for their former employees. (Act 155 as amended by Act 3)

14. Contributions

- a. Member Contributions: Effective July 1, 2013, contributions by members are 10% of Compensation. However, for Act 447 Members who selected the Coordination Plan, the member contributions are 7% of Compensation up to \$6,600 plus 10% of Compensation in excess of \$6,600 during the 2013-2014 fiscal year and 8.5% of Compensation up to \$6,600 plus 10% of Compensation in excess of \$6,600 during the 2014-2015 fiscal year. Members may voluntarily make additional contributions to their Defined Contribution Hybrid Contribution Account.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

Prior to July 1, 2013, contributions by Act 447 Members selecting the Coordination Plan were 5.775% of Compensation up to \$6,600 plus 8.275% of Compensation in excess of \$6,600. Contributions by all other Members were 8.275% of Compensation. System 2000 members may also have made voluntary contributions of up to 1.725% of compensation prior to July 1, 2013.

- b. Employer Contributions: Prior to July 1, 2011, employer contributions were 9.275% of Compensation. Effective July 1, 2011, employer contributions are 10.275% of Compensation. For the next four fiscal years effective July 1, employer contributions will increase annually by 1% of Compensation. For the next five fiscal years, employer contributions will increase annually by 1.25% of Compensation, reaching an employer contribution rate of 20.525% of Compensation effective July 1, 2020. (Article 2-116 as amended by Law 116 of 2010 and Act 3 of 2013).
  - c. Supplemental Contributions from the General Fund, Public Corporations, and Municipalities: Effective July 1, 2013, the System will receive a supplemental contribution of \$2,000 each fiscal year for each pensioner (including beneficiaries receiving survivor benefits) who was previously benefitting as an Act 447 or Act 1 member while an active employee. This supplemental contribution will be paid by the General Fund for former government employees or by the public corporation or municipality for their former employees. (Act 3 of 2013)
  - d. Additional Uniform Contribution: During the 2013-2014 fiscal year, the System will receive an Additional Uniform Contribution of \$120 million. During each fiscal year from 2014-2015 through 2032-2033, the System will receive an Additional Uniform Contribution certified by the external actuary of the System as necessary to avoid having the projected gross assets of the System, during any subsequent fiscal year, to fall below \$1 billion. The Additional Uniform Contribution will be paid by the General Fund, public corporations, and municipalities. (Act 32 of 2013 as amended)
15. Service Purchase: Prior to July 1, 2013, active members with eligible service from prior employment may elect to purchase service in PRGERS. The cost of the purchase is calculated by applying the PRGERS statutory 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 9.5% per year (6% prior to April 4,

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VII – SUMMARY OF PRINCIPAL PLAN PROVISIONS AS OF JUNE 30, 2015

2013) until 6 months after the time of the service purchase request. Any amount not covered by asset transfers from the member's prior pension fund is payable by the member (Law 10 of 1992, Law 14 of 1981, Law 122 of 2000, Laws 203 and 33 of 2007). Effective July 1, 2013, only veterans may purchase service for time spent under military leave prior to June 30, 2013. In addition, public employees in active military service are permitted to make voluntary contributions to the Defined Contribution Hybrid Contribution Account during the years of military leave.

16. Law 70 Retirement Incentive: During the 2010-2011 fiscal year, Law 70 provided for an early retirement incentive. Additional window periods occurred through December 31, 2012. Under Section 4A of Law 70, active members could terminate employment immediately and receive a bonus equal to one, three, or six months of salary (paid by the Commonwealth). 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 for government employees and Public Corporations for their employees 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 / Public Corporation is paying the pension benefit to the member or any surviving beneficiary, the General Fund / Public Corporation will also pay a contribution equal to the employer contribution rate (12.275% for the 2013-2014 fiscal year plus the employee contribution rate for Public Corporations (currently 10%)) of final salary to the System. The employer contribution rate applied to final salary increases as under Law 116 to a rate of 20.525% of payroll in 2020-2021 and thereafter. Under Section 4C of Law 70, active members who had at least 30 years of service could retire immediately and receive a bonus equal to six months of salary (paid by the Commonwealth). For any active employee who retired under Section 4C, the Public Corporation will pay a contribution equal to the employer contribution rate (12.275% for the 2013-2014 fiscal year, increasing to 20.525% in 2020-2021 and thereafter) plus the employee contribution rate (currently 10%) of final salary to the System for five years after retirement.

#### 17. Changes in Plan Provisions since Prior Valuation

None.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### **SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

Investment Return: 6.55% per annum, net of investment expenses. Based on the System's investment policy, including target asset allocation and expectations regarding the loan portfolio, and Milliman's capital market assumptions as of June 30, 2015.

Municipal Bond Rate: 3.80% per annum (Bond Buyer General Obligation 20-Bond Municipal Bond Index)

GASB 67 discount rate: 3.80% per annum

GASB 45 discount rate: 3.10% per annum. Based on the Commonwealth's asset allocation for the general assets that are used to pay this benefit and Milliman's capital market assumptions as of June 30, 2015.

Compensation Increases: 3.0% per year. No compensation increases are assumed until July 1, 2017 as a result of Act 66 and the current general economy. Based on professional judgment and System input.

Defined Contribution Hybrid Contribution Account: Member contributions to the Defined Contribution Hybrid Contribution Account are assumed to be 10.0% of Compensation. Defined Contribution Hybrid Contribution Accounts are assumed to grow prospectively using a 5.24% annual investment return (80% of the net investment return assumption as shown above).

Basis for demographic assumptions: The post-retirement healthy and disabled mortality assumptions used in this valuation are based on a study of plan's experience from 2007 to 2012 and updated expectations regarding future mortality improvement. Most other demographic assumptions used in this valuation are based on a 2009 experience study using data as of June 30, 2003, June 30, 2005, and June 30, 2007. Certain demographic assumptions (e.g. termination and retirement) were impacted by the Act 3 pension reforms and were revised based on the new retirement eligibility and expected future experience. All assumptions were reviewed with PRGERS staff for reasonableness and are documented in this Section.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

Termination: Withdrawal rates vary by employment category, age, and service.

Employment Category	Annual Rate of Termination
Act 447 General Employees under age 58 or less than 10 years of service	2.0%
Act 447 General Employees at least age 58 with at least 10 years of service	0.0
Act 447 Public Officers in High Risk Positions under age 50 or less than 10 years of service	1.6
Act 447 Public Officers in High Risk Positions ages 50 to 57 with less than 25 years of service	1.6
Act 447 Public Officers in High Risk Positions at least age 58 with at least 10 years of service or at least age 50 with at least 25 years of service	0.0
Act 1 General Employees	2.0
Act 1 Public Officers in High Risk Positions	1.6
System 2000 and Act 3 General Employees	2.0
System 2000 and Act 3 Public Officers in High Risk Positions	1.6

Commencement of benefits for terminated vested members: Future terminated members with a vested benefit are assumed to retire at the ages shown below, or at the attained age on the valuation date if later.

Employment Category	Act 447	Act 1	System 2000	Act 3
General Employees	61	65	65	67
Public Officers in High Risk Positions	61	65	55	58

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

Retirement: Rates of retirement vary by employment category, Act, age and years of Creditable Service, and whether the member was eligible to retire as of June 30, 2013 for Act 447, Act 1, and System 2000 members.

Act 447 General Employees who were eligible to retire as of June 30, 2013 or attained 30 years of Creditable Service by December 31, 2013			
Age	Service condition		
	10 years	25 years	30 years
45 to 49			10.0%
50 to 53			15.0
54			20.0
55 to 57		10.0%	20.0
58	5.0%	10.0	20.0
59 to 64	10.0	15.0	20.0
65 to 69	15.0	15.0	20.0
70	100.0	100.0	100.0

Act 447 General Employees who were not eligible to retire as of June 30, 2013 and did not attain 30 years of Creditable Service by December 31, 2013		
Age	Year of Retirement Eligibility	
	First	Second and Later
59	20.0%	15.0%
60	25.0	15.0
61 to 69	30.0	15.0
70	100.0	100.0

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

Act 447 Public Officers in High Risk Positions who were eligible to retire as of June 30, 2013			
Age	Service condition		
	10 years	25 years	30 years
45 to 48			10.0%
49			15.0
50		7.0%	15.0
51 to 56		15.0	20.0
57		20.0	30.0
58	2.5%	20.0	100.0
59 to 64	10.0	25.0	100.0
65 to 69	10.0	30.0	100.0
70	100.0	100.0	100.0

Act 447 Public Officers in High Risk Positions who were not eligible to retire as of June 30, 2013		
Age	Service condition	
	10 years	30 years
55		50.0%
56		15.0
57		15.0
58		100.0
59 to 64	25.0%	100.0
65	100.0	100.0

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

Act 1 General Employees who were eligible to retire as of June 30, 2013		
Age	Service condition	
	10 years	25 years
55 to 57		4.5%
58		4.5
59		8.0
60		9.0
61		10.0
62		13.0
63 to 64		14.0
65	15.0%	50.0
66	15.0	15.0
67	100.0	100.0

Act 1 General Employees who were not eligible to retire as of June 30, 2013	
Age	Any Service
65	50.0%
66	20.0
67	100.0

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

Act 1 Public Officers in High Risk Positions who were eligible to retire as of June 30, 2013			
Age	Service condition		
	10 years	25 years	30 years
45 to 48			10.0%
49 to 50			15.0
51 to 54			20.0
55 to 56		5.0%	20.0
57		5.0	30.0
58		5.0	100.0
59 to 60		5.0	
61 to 64		10.0	
65	10.0%	50.0	
66 to 69	10.0	10.0	
70	100.0	100.0	

Act 1 Public Officers in High Risk Positions who were not eligible to retire as of June 30, 2013		
Age	Service condition	
	10 years	30 years
55		40.0%
56		15.0
57		15.0
58 to 64		100.0
65	100.0	100.0

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

System 2000 General Employees		
Age	Eligible to Retire as of June 30, 2013	Not Eligible to Retire as of June 30, 2013
60	15.0%	
61 to 64	15.0	10.0%
65	15.0	40.0
66	15.0	20.0
67	100.0	100.0

System 2000 Public Officers in High Risk Positions	
Age	Any Service
55	25.0%
56 to 64	20.0
65 to 66	25.0
67	100.0

Act 3 Employees		
Age	General Employees	Public Officers in High Risk Positions
58		30.0%
59 to 64		20.0
65 to 66		25.0
67	100.0%	100.0

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

Disability: Rates are based on the six month elimination period rates in the 1987 Commissioners Group Disability Table, adjusted as set forth in the table below.

Act	Adjustment to 1987 CGDT	
	Members Covered under Act 127	Other Members
447	100%	75%
1	100%	75%
2000 and 3 General Employees	<ul style="list-style-type: none"> <li>• 100% for ages 50 and younger</li> <li>• 300% for ages 60 and older</li> <li>• Interpolated from 100% to 300% in the 10 years between age 50 and age 60</li> </ul>	75%
2000 and 3 Public Officers in High Risk Positions	<ul style="list-style-type: none"> <li>• 100% for ages 40 and younger</li> <li>• 300% for ages 50 and older</li> <li>• Interpolated from 100% to 300% in the 10 years between age 40 and age 50</li> </ul>	n/a

100% of disabilities occurring while in active service are assumed to be occupational for members covered under Act 127.

Pre-retirement Mortality: For general employees not covered under Act 127, RP-2014 Employee Mortality Rates for males and females adjusted to reflect Mortality Improvement Scale MP-2015 from the 2006 base year, and projected forward using MP-2015 on a generational basis. For members covered under Act 127, RP-2014 Employee Mortality Rates with blue collar adjustments for males and females adjusted to reflect Mortality Improvement Scale MP-2015 from the 2006 base year, and projected forward using MP-2015 on a generational basis. As generational tables, they reflect mortality improvements both before and after the measurement date.

100% of deaths while in active service are assumed to be occupational for members covered under Act 127.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### **SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

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 2007 to 2012 and updated expectations regarding future mortality improvement. The 2010 base rates are equal to 92% of the rates from the UP-1994 Mortality Table for Males and 95% of the rates from the UP-1994 Mortality Table for Females, both projected from 1994 to 2010 using Scale AA. These base rates are projected using Mortality Improvement Scale MP-2015 on a generational basis. As a generational table, it reflects mortality improvements both before and after the measurement date.

Post-retirement Disabled Mortality: Rates which vary by gender are assumed for disabled retirees based on a study of plan's experience from 2007 to 2012 and updated expectations regarding future mortality improvement. The 2010 base rates are equal to 105% of the rates from the UP-1994 Mortality Table for Males and 115% of the rates from the UP-1994 Mortality Table for Females. These base rates are projected using Mortality Improvement Scale MP-2015 on a generational basis. As a generational table, it reflects mortality improvements both before and after the measurement date.

Marriage: 100% of current active members covered under Act 127 who die in service or become disabled are assumed to have qualifying beneficiaries receiving the maximum benefits possible, which are approximated by a spouse with males 4 years older than females.

Form of Payment: For members retiring after June 30, 2013 (other than under Law 127), upon disability an immediate lump sum distribution of the Defined Contribution Hybrid Contribution Account plus, for Act 447 and Act 1 members, a modified cash refund of the accrued benefit as of June 30, 2013 commencing at retirement eligibility; otherwise, a modified cash refund.

For members retiring after June 30, 2013 under Law 127, a Joint & 100% Survivor benefit of the Law 127 Disability benefit.

Marital status was provided for current retired and disabled members who retired prior to July 1, 2013. For those indicated as married, a joint and survivor annuity was assumed (as shown in the following table), with an adjustment for the probability the spouse has pre-deceased the retiree as of the valuation date. Those not married were assumed to have a modified cash refund (as shown in the following table). The

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

spouse’s date of birth was imputed based on an assumed age difference of 4 years with males older than females.

Assumed Form of Payment for Members retired before July 1, 2013		
Act	Marital Status	Form of Payment
447	Married at retirement	Joint and 60% survivor benefit – Supplementation Joint and 50% survivor benefit – Coordinated (30% is Basic System Benefit) (20% is System Administered Benefit)
447	Not married at retirement	Modified cash refund (approximated by single life annuity with 3 years certain)
1	Married at retirement	Joint and 60% survivor benefit
1	Not married at retirement	Modified cash refund (approximated by single life annuity with 3 years certain for Mayors, Police & Fire and 5 years certain for other members)
305 (System 2000) - Disabled	Married at retirement	Joint and 60% survivor benefit
305 (System 2000) - Disabled	Not married at retirement	Modified cash refund (approximated by single life annuity with 5 years certain)

All Act 127 retirees were assumed to have a joint and 100% survivor benefit regardless of marital status. The survivor was approximated by a spouse with an assumed age difference of 4 years with males older than females. An adjustment was made for the probability the survivor has pre-deceased the retiree as of the valuation date.

Members who terminate employment with a vested benefit are assumed to elect to receive a deferred pension benefit in lieu of a refund of contributions.

No future dependent children were assumed to become beneficiaries.

No surviving spouse is assumed to become re-married.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### **SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

Medical Insurance Plan Contribution: 85% of current service and disability retirees who retired before July 1, 2013 are assumed to receive a monthly medical insurance continuation benefit of \$100 per month.

Deferred Vested Participants: Complete census data on deferred vested participants was not available. The actuarial accrued liabilities for Act 447 and Act 1 members have been increased by 5% to approximate the value of the liability on behalf of deferred vested participants.

Service Purchase and Data Reporting Issues: Active liabilities for benefits earned prior to June 30, 2013 are increased by 20% for members of Act 447 to approximate the value of service purchases not yet reflected in the census data, and also data reporting issues, including members who have higher past salaries than provided in the valuation census data, and members who are reported as participating in Act 1 or System 2000 while active but who retire under Act 447.

Administrative Expenses: Average of past two year's administrative expense, rounded up to the nearest \$250,000. For the 2015-2016 plan year, this amount is \$27,750,000.

Census Data Collection Date: July 1, 2014. When information is provided by participant category in this report, the category is determined as of the census data collection date.

Special Data Adjustments: Upon review of the July 1, 2014 census data submitted by PRGERS, we observed several areas where data was missing, inconsistent, or invalid. We reviewed each issue and presented an analysis to PRGERS that consisted of a description of the data issue, a proposed solution, and a brief rationale supporting the proposed solution. The recommendations were reviewed by PRGERS staff, revised as applicable, and applied to the census data in order to prepare it for use in the valuation. The majority of the data edits and assumptions were applied to the following data items:

- Date of birth
- Date of hire
- Gender
- Allocation of Basic System Benefits and System Administered Benefits
- Accumulated Employee Contributions
- Defined Contribution Hybrid Contribution Account Balances

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## **PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

### **SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

- Employment Category Code (Police / Fire Code)
- Plan Code (Coordinated / Supplementation option)
- Form of payment and beneficiary characteristics, if applicable
- Benefit commencement date
- Retirement Law
- Entity Class

The census data provided for active participants as of June 30, 2014 appeared to reflect the members' Defined Contribution Hybrid Contribution Accounts as of July 1, 2015, instead of as of July 1, 2014. Adjustments were made to approximate account balances as of July 1, 2014.

Credited service is based on the greater of "Years Worked" reported in the valuation census data and the elapsed time from date of hire to the valuation date.

Accrued benefits as of June 30, 2013 were estimated for Act 447 and Act 1 active members primarily based on the data submitted for the June 30, 2013 and earlier valuations.

The census data provided for the participants in pay status as of June 30, 2014 did not reflect the increase in the minimum benefit to \$500 per month under Act 3 for participants in pay status prior to July 1, 2013. Pension benefits were increased as necessary to bring the total pension benefits for pre July 1, 2013 retirees and disabled retirees as of June 30, 2014 to \$500 per month and the total pension benefits for pre July 1, 2013 beneficiaries as of June 30, 2014 to \$250 per month. The increase was assumed to be a Basic System Benefit.

For current disabled retirees and beneficiaries receiving benefits under Act 127, the pension benefits paid by System assets (e.g. the Basic System Benefit) was assumed to be 30% of the total reported pension benefit.

Benefits for current beneficiaries who are under age 23 as of the valuation date were assumed to cease at age 23. Benefits for current beneficiaries who are age 23 or older as of the valuation data were assumed to be payable for life. In addition, the current level of benefit for all beneficiaries was assumed to remain constant.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### **SECTION VIII – SUMMARY OF ACTUARIAL ASSUMPTIONS AS OF JUNE 30, 2015**

Benefits not valued: The minimum post-retirement death benefit of \$1,000 for retirees without surviving beneficiaries who retired prior to July 1, 2013 is not explicitly valued. The additional liability associated with this benefit is expected to be de minimis.

The special mayor retirement age for Act 447 and Act 1 mayors is not valued. The additional liability due to this reduced retirement age is expected to be de minimis.

Moreover, this report does not address the guarantee insurance reserve for life insurance on loans to plan members. (Please see Notes to Basic Financial Statements on pages 25 and 61 and Statements of Plan Net Position on page 21 of the System's June 30, 2014 Basic Financial Statements.)

Changes in actuarial assumptions since the prior valuation: The investment return assumption was decreased from 6.75% to 6.55%. Accordingly, the assumed investment return on the Defined Contribution Hybrid Contribution Account (80% of the net investment return assumption) was decreased from 5.40% to 5.24%.

The projected mortality improvement scale was updated from Scale AA to Scale MP-2015, which was published by the Society of Actuaries in October 2015. Also, as Scale MP-2015 is a two-dimensional mortality improvement scale, the base mortality rates for the post-retirement mortality assumption were set to the 2010 rates – the central year of the 2007 to 2012 PRGERS experience study upon which the rates were based. In addition, the pre-retirement mortality rates were also updated to reflect updated mortality tables published by the Society of Actuaries.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

## PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM

### SECTION VIII – SUMMARY OF ACTUARIAL METHODS AS OF JUNE 30, 2015

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.

#### Asset Valuation Method

The Market Value of Assets.

#### Liability Determination

The results as of June 30, 2015 are based on projecting the System obligations determined as of the census data collection date of July 1, 2014 for one year using roll-forward methods, assuming no liability gains or losses. However, the amount of the return of contributions due to former members was provided by the System as of June 30, 2015.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.

**PUERTO RICO GOVERNMENT EMPLOYEES RETIREMENT SYSTEM**

**SECTION VIII – SUMMARY OF ACTUARIAL METHODS AS OF JUNE 30, 2015**

Changes in actuarial methods since the prior valuation

None.

This report was prepared solely to provide assistance to PRGERS. Milliman and PRGERS do not intend to benefit and assume no duty or liability to other parties who receive this report. Milliman and PRGERS recommend that any third party recipient of this report be aided by its own actuary or other qualified professional when reviewing the Milliman report. Any distribution of this report should be made in its entirety.