
Government of Guam Retirement Fund

Actuarial Valuation as of September 30, 2024

Prepared by:

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May 29, 2025



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**Re: Government of Guam Retirement Fund –
Actuarial Valuation as of September 30, 2024**

As part of our engagement with the Board of Trustees, we performed an actuarial valuation of the Government of Guam Retirement Fund as of September 30, 2024. The purpose of this valuation is to determine the required contribution under the provisions of GCA Section 8137.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the Fund's staff. This information includes, but is not limited to, financial information, member census data, and plan provisions. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete the results may differ and the calculations may need to be revised.

Actuarial assumptions, including discount rates, mortality tables, and others identified in this report, and actuarial cost methods are adopted by the Fund. The Fund is responsible for selecting the plan's funding policy, actuarial valuation methods, asset valuation methods, and assumptions. The policies, methods, and assumptions used in this valuation are those that have been so adopted and are described in this report. The Fund is solely responsible for communicating to Milliman any changes required thereto. All costs, liabilities, rates of interest, and other factors for the Fund have been determined on the basis of actuarial assumptions and methods which, in our professional opinion, are individually reasonable (taking into account the experience of the Fund and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated future experience affecting the Fund and are expected to have no significant bias. The assumptions have been adopted by the Board of Trustees and are based on the 2015-2020 actuarial experience study.

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

The valuation results were developed using models intended for valuations that use standard actuarial techniques. We have reviewed the models, including their inputs, calculations, and outputs for consistency, reasonableness, and appropriateness to the intended purpose and in the compliance

with generally accepted actuarial practice and relevant actuarial standards of practice (ASOP).

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or modifications to contribution calculations based on the Fund's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The Board of Trustees has the final decision regarding the appropriateness of the assumptions and actuarial cost methods.

Actuarial computations presented in this report are for the purposes of determining the recommended funding amounts for the Fund. The calculations in this report have been made on a basis consistent with our understanding of the Fund's funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the plan provisions described in Appendix A. Determinations for other purposes may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes. Disclosures for GASB Statements No. 67, 68 and 73 for the Government of Guam Defined Benefit Plan and the Government of Guam Defined Contribution Plan are issued under separate cover.

Milliman's work is prepared solely for the use and benefit of the Government of Guam Retirement Fund. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third-party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exception(s):

- (a) GGRF may provide a copy of Milliman's work, in its entirety, to its professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit GGRF.
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No third-party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

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

The signing actuaries are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board and the *Code of Professional Conduct and Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States*, published by the American Academy of Actuaries. We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,

A handwritten signature in black ink, appearing to read 'Nick Collier'.

Nick Collier, ASA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in black ink, appearing to read 'Reid Earnhardt'.

Reid Earnhardt, ASA, EA, MAAA
Consulting Actuary

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INTRODUCTION

Milliman, Inc. has been retained by the Government of Guam Retirement Fund to provide an actuarial valuation of the retirement fund. In our valuation we:

- Summarize the membership data.
- Calculate the actuarial accrued liability and normal cost.
- Determine the contribution requirements.
- Project the fund balance and security ratio forward 40 years.

The results contained in this report represent a reasonable estimate. However, it is likely that actual experience will vary from these estimates. To the extent that actual experience differs from the anticipated experience, actual plan costs will vary as well.

HIGHLIGHTS

- The required contribution under GCA Section 8137 is 33.85% of payroll. Of this amount, 29.57% is for the unfunded actuarial accrued liability of the defined benefit plans (Old DB Plan and DB 1.75 Plan), 1.17% is for the normal cost of the DB plans, and 3.11% is for contributions and expenses for the defined contribution (DC) plan.

The primary reasons for the increase in the contribution rate from 30.77% for the prior year was the recognition of investment gain and loss over the 3-year asset smoothing period, salary increases that were greater than expected, and the inclusion of valuing the changes from Public Law 36-130. Higher than expected payroll increase had a partially offsetting impact. Payroll higher than expected lowers the contribution rate as a percent of payroll, but the related salary increases increase expected benefits resulting in a higher unfunded liability.

Contribution rate in 9/30/23 actuarial valuation	30.77%
2021-22 investment loss (final 1/3 rd recognition) *	3.96%
2022-23 investment gain (second 1/3 rd recognition) *	(0.57%)
2023-24 investment gain (first 1/3 rd recognition) *	(1.76%)
Actual payroll increase for 2023-24 of 6.25% vs. assumption of 2.50%	(1.08%)
Salary increases greater than assumed	1.09%
Other factors, including impact of P.L 36-130 and non-salary-related demographic changes	<u>1.44%</u>
Contribution rate in 9/30/24 actuarial valuation	33.85%

* Investment returns that differ from the actuarial assumption of 7% are recognized over a 3-year period.

- As the remaining period to pay off the unfunded actuarial accrued liability declines, year-to-year changes in the contribution rate will become increasingly sensitive in the future to investment gains and losses and other experience. As noted in the 2015-2020 experience study, and on page 8 of this report, **we recommend a change in the amortization method** be adopted to help mitigate this potential contribution rate volatility due to the short amortization period (8.58 years as of this valuation). Our understanding is that legislation would be required to make such a change.

- The defined benefit (Old DB) payroll for the 2023-24 fiscal year was \$72.4 million compared with \$76.6 million for the 2022-23 fiscal year. The defined benefit (DB 1.75) payroll for the 2023-24 fiscal year was \$260.7 million compared with \$171.7 million for the 2022-23 fiscal year, reflecting the additional payroll for defined contribution members who transferred to the DB 1.75 plan.
- The total defined benefit and defined contribution payroll for the 2023-24 fiscal year, was \$633.8 million compared with \$596.5 million for the 2022-23 fiscal year, an increase of 6.25%.
- Based on the audited financial statements, we calculated an investment return on the total market value of assets of 23.9% for the fiscal year ending September 30, 2024. The average annual return on the market value of assets for the last 5 fiscal years has been 7.1%. The investment return on the actuarial value of assets, which recognizes investment gains and losses over a 3-year period, was 4.3% for the fiscal year ending September 30, 2024.
- The unfunded actuarial accrued liability increased from \$1.213 billion as of September 30, 2023, to \$1.362 billion as of September 30, 2024. The payment required to amortize the unfunded actuarial accrued liability under GCA Section 8137 has increased from \$156.4 million to \$192.1 million. The payment as a percentage of payroll has increased from 25.58% to 29.6%.
- On December 27, 2022, Public Law No. 36-130 was signed into law. The law provides for the following:
 - All employees who are members in the Defined Contribution System at any time between June 1, 2023 and December 31, 2023, may elect to become Defined Benefit 1.75 Plan members effective as of January 1, 2024.
 - All new employees whose employment commences on or after January 1, 2024, may elect to become Defined Benefit 1.75 members.
 - The Defined Benefit 1.75 Plan service retirement amount is increased from 1.75% to 2.75% for service after 25 years. The maximum benefit remains at 85%.
 - Effective January 1, 2024, active public safety and law enforcement officers of the Defined Benefit 1.75 Plan will be eligible for unreduced service retirement after reaching age 55 with 25 years of service or age 57 with 5 years of service.

The impact of P.L 36-130 has been included for the first time in this actuarial valuation as of September 30, 2024.

RESULTS OF VALUATION

		9/30/2024	9/30/2023
Participant Counts			
Active Old DB	Non-Uniformed	711	816
	Uniformed	<u>102</u>	<u>117</u>
	Total	813	933
Active DB 1.75 Participants		4,538	2,640
Active DC Participants		<u>5,796</u>	<u>7,697</u>
Total Active Participants (Old DB, DB 1.75, DC)		11,147	11,270
Retired (Old DB)		7,125	7,201
Retired (DB 1.75)		364	292
Inactive/Terminated (Old DB, DB 1.75)			
Assumed to withdraw contributions		2,968	2,982
<u>Not</u> assumed to withdraw contributions		73	79
Total DB Participants (Old DB and DB 1.75)		15,881	14,127
		(\$millions)	(\$millions)
Actual Payroll for Prior Fiscal Year			
Defined benefit (Old DB) payroll		\$ 72.4	\$ 76.6
Defined benefit (DB 1.75) payroll		260.7	171.7
Defined contribution (DC) payroll		<u>300.8</u>	<u>348.3</u>
Total payroll (DB and DC)		\$633.8	\$596.5
Expected Payroll for Next Fiscal Year			
Defined benefit (Old DB) payroll		\$ 69.6	\$ 73.3
Defined benefit (DB 1.75) payroll		290.2	173.0
Defined contribution (DC) payroll		<u>289.9</u>	<u>365.1</u>
Total payroll (DB and DC)		\$649.7	\$611.4
Financial Status			
Actuarial accrued liability		\$3,541.4	\$3,232.6
Actuarial value of assets		<u>2,179.7</u>	<u>2,019.3</u>
Unfunded actuarial accrued liability (UAAL)		\$1,361.7	\$1,213.3
Security ratio		61.55%	62.47%
		% of DB Payroll	% of DB Payroll
Normal Cost			
Total normal cost ¹		\$ 41.8 11.61%	\$ 30.3 12.29%
Estimated employee contributions		<u>(34.2)</u> <u>(9.51%)</u>	<u>(23.4)</u> <u>(9.51%)</u>
Government normal cost		\$ 7.6 2.11%	\$ 6.9 2.78%
		% of Total Payroll	% of Total Payroll
Required Contribution per GCA §8137			
Unfunded actuarial accrued liability cost		\$ 192.1 29.57%	\$ 156.4 25.58%
Government DB normal cost		7.6 1.17%	6.9 1.12%
Expected government DC contributions ¹		<u>20.2</u> <u>3.11%</u>	<u>24.9</u> <u>4.07%</u>
Total DB and DC contribution		\$ 219.9 33.85%	\$ 188.1 30.77%

¹ Includes budgeted administrative expenses.

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5-YEAR HISTORICAL SUMMARY

The following table summarizes the principal valuation results over the last 5 years.

	9/30/2024	9/30/2023	9/30/2022	9/30/2021	9/30/2020
Participant Counts					
Active (Old DB)	813	933	1,070	1,226	1,420
Active (DB 1.75)	4,538	2,640	2,906	2,994	3,020
Retired (Old DB)	7,125	7,201	7,283	7,291	7,275
Retired (DB 1.75)	364	292	249	197	124
Inactives (Old DB)	3,027	3,045	3,087	3,101	3,136
Inactives (DB 1.75)	<u>14</u>	<u>16</u>	<u>18</u>	<u>21</u>	<u>121</u>
Total (DB)	15,881	14,127	14,613	14,830	15,096
Active (DC)	5,796	7,697	7,571	7,070	6,810
Actual Payroll (\$millions)					
DB payroll (Old DB)	\$ 72.4	\$ 76.6	\$ 81.2	\$ 90.8	\$101.5
DB payroll (DB 1.75)	260.7	171.7	162.2	160.6	161.7
DC payroll	<u>300.8</u>	<u>348.3</u>	<u>312.1</u>	<u>281.2</u>	<u>256.3</u>
Total payroll	\$633.8	\$596.6	\$555.5	\$532.5	\$519.5
Financial Status (\$millions)					
Accrued liability	\$3,541.4	\$3,232.6	\$3,236.6	\$3,267.5	\$3,228.1
Actuarial assets	<u>2,179.7</u>	<u>2,019.3</u>	<u>2,063.6</u>	<u>2,125.3</u>	<u>2,053.9</u>
UAAL	\$1,361.7	\$1,213.3	\$1,173.0	\$1,142.2	\$1,174.2
Security ratio	61.55%	62.47%	63.76%	65.04%	63.62%
Contribution Rate					
DB Normal Cost (as % of DB payroll)	2.11%	2.78%	2.95%	3.89%	4.36%
% of Total Payroll					
UAAL Rate	29.57%	25.58%	24.18%	22.90%	22.63%
DB Normal Cost	1.17%	1.12%	1.19%	1.72%	2.08%
DC Contribution	<u>3.11%</u>	<u>4.07%</u>	<u>4.06%</u>	<u>3.81%</u>	<u>3.61%</u>
Actuarial Rate ¹	33.85%	30.77%	29.43%	28.43%	28.32%
Budget Rate ²	**	30.77%	29.43%	28.43%	28.32%
Investment Yield (Market Value)					
	23.9%	11.6%	-17.7%	19.1%	4.1%

¹ "Actuarial Rate" is the contribution rate determined in the actuarial valuation. Contribution rates apply to the fiscal year beginning one year after the valuation date.

² "Budget Rate" is the contribution rate set by the legislature. The budget rate for 2025-26 has not yet been determined.

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ACTUARIAL ASSUMPTIONS

The following are the major assumptions used in the actuarial valuation. The assumptions are based upon the actuarial experience study for the period October 1, 2015, through September 30, 2020, and subsequent information as it pertains to the interest rate assumption. The rationale for each significant assumption is provided in that experience study and in the discussion below. To the extent that actual experience differs from the assumptions below, future pension costs will differ.

Interest Rate. The interest rate used to discount future benefit payments to the present was 7.0% as of September 30, 2024. This assumption is unchanged from the prior valuation. Milliman's expected returns on various asset classes over the next 30 years are shown below, assuming inflation averages 2.50% over the next 30 years. The target asset allocation is the expected long-term asset allocation and is based on the Fund's investment policy.

Asset Class	(a) Target Asset Allocation	(b) Expected Nominal Return	(a) x (b) Component Return
U.S. Equities (large cap)	26.0%	7.83%	2.03%
U.S. Equities (small cap)	4.0%	9.32%	0.37%
Non-U.S. Equities	17.0%	10.12%	1.72%
Non-U.S. Equities (emerging markets)	3.0%	11.79%	0.35%
U.S. Fixed Income (aggregate)	22.0%	4.86%	1.07%
Risk Parity	8.0%	6.53%	0.52%
High Yield Bonds	8.0%	6.54%	0.52%
Global Real Estate (REITs)	2.5%	9.34%	0.23%
Global Equity	7.5%	8.59%	0.64%
Global Infrastructure	2.0%	8.42%	0.17%
Expected arithmetic mean (1 year)			7.64%
Expected geometric mean (30 years)			6.91%

The discount rate assumption of 7.0% is about equal to the expected geometric mean over 30 years, but lower than the average arithmetic return for one year. The geometric mean is lower than the arithmetic mean due to the expected volatility of investments. Note that if investments fail to achieve the assumed interest rate, future required contributions will increase.

Mortality. The mortality table used for retirees is the PUB-2010 General Healthy Retiree Amount-Weighted mortality table, set forward by 4 years for males and 2 years for females, then increased by 30% for ages less than 80. The mortality table used for active employees is the PUB-2010 General Employees Amount-Weighted mortality table, set forward by 4 years for males and 2 years for females, then increased by 30% for ages less than 80. The mortality table used for healthy beneficiaries is the PUB-2010 General Contingent Survivors Amount-Weighted mortality table, set forward by 3 years for males and 4 years for females, then increased by 30% for ages less than 80. The mortality table used for disabled lives is the PUB-2010 Disabled Retiree Amount-Weighted mortality table, set forward by 4 years for males and 2 years for females, then increased by 30% for ages less than 80. Mortality improvement is projected generationally from 2010 using 50% of Mortality Improvement Scale MP-2020. This is the same assumption used for the prior actuarial valuation.

Salary Increases. Salaries are assumed to increase annually by 6.0% for employees in their first 5 years of service, 4.5% for service between 6 and 10 years, and 3.0% for service after 10 years. These are the same rates used in the prior actuarial valuation.

Total Payroll Growth. The total payroll for defined benefit and defined contribution members is assumed to increase 2.50% per year.

Retirement Age. We have assumed 40% of employees will retire when first eligible for unreduced retirement. Thereafter, 20% of employees will retire at each year until age 75, at which time all remaining employees are assumed to retire. This is the same assumption used in the prior actuarial valuation.

Return of Contributions. We have assumed that any current Old DB Plan employees who terminate employment prior to retirement and who have less than 20 years of service will elect a return of contributions in lieu of a deferred benefit. Old DB Plan employees with at least 20 years of service who terminate employment are assumed to collect an annuity benefit when eligible. Old DB Plan employees with between 20 and 24 years of service who terminate employment and are ineligible for the service retirement benefit, and DB 1.75 Plan employees who terminate employment with less than 25 years of service are assumed to retire at age 60.

Current terminated or inactive members with at least 5 years of service and a contributions balance that exceeds \$10,000 who have not withdrawn their contributions and for whom sufficient earnings data are available to value their retirement benefits are assumed to retire upon eligibility for unreduced benefits. All other terminated and inactive members are assumed to elect to withdraw their contributions. These assumptions are unchanged from the prior actuarial valuation.

Administrative Expenses. Total administrative expenses are assumed to be \$7,463,000, which is the amount budgeted for the year ending September 30, 2025. Of this amount, \$5,224,100 is allocated to the defined benefit plan and \$2,238,900 to the defined contribution plan.

Rates of Withdrawal. The assumed rates of withdrawal are shown in Appendix B. The withdrawal rates are unchanged from the prior actuarial valuation.

Rates of Disability. The assumed rates of disability are shown in Appendix B. The disability rates are unchanged from the prior actuarial valuation.

Plan Election Percentage. We have assumed that 15% of future hires will elect to join the Defined Benefit 1.75 Plan, and 85% will elect to join the Defined Contribution Plan. We will continue to monitor this assumption as experience develops.

Probability of Marriage. We have assumed that 75% of retirees will be married at retirement. This assumption is unchanged from the prior actuarial valuation.

Leave Adjustments. For Old DB Plan members, we have assumed that unused leave will increase a member's service by 1.5 years, and that unused leave will increase average earnings by 3% at retirement. These assumptions are unchanged from the prior actuarial valuation.

Survivor Benefit – Minor Children. We have assumed there to be an average of 0.2 eligible child survivors at the time of a retiree's death, with payments to the child survivor continuing for 6 years.

Payments to current child survivors are assumed to be payable through age 21. These assumptions are unchanged from the prior actuarial valuation.

Asset Valuation Method. Investment gains/losses relative to the assumed investment return are phased in over a period of 3 years. This valuation method is unchanged from the prior valuation.

A complete summary of actuarial assumptions is in Appendix B.

FUNDING METHOD

GCA Section 8137 required a contribution sufficient to fully fund the unfunded actuarial accrued liability by 2031 (within 80 years from May 1, 1951). P.L. 33-186 extended this period by 2 years to 2033. The required contribution shown in this report includes a payment for the normal cost of active members of the Fund, and amortizes the unfunded actuarial accrued liability over the remaining 8.58 years as a level percentage of total payroll (including both defined benefit and defined contribution members).

The unfunded actuarial accrued liability is the difference between the actuarial accrued liability and the actuarial value of assets. We believe the unfunded actuarial accrued liability is appropriate in accordance with actuarial standards for assessing the sufficiency of plan assets to cover the estimated cost of the Fund's benefit obligations, and for assessing the amount of future contributions.

Based on the current funding method, the employer contribution rate is projected to drop substantially in 2034. The employer contribution rate will also become more and more volatile as the remaining period is reduced. For example, in the year 2032, any investment gains or losses for the prior year will be amortized over one year. As we did in the 2015-2020 experience study, we continue to recommend a change in the amortization method be considered for future valuations to one that splits the current unfunded actuarial accrued liability into 5 or more bases, which are amortized over a staggered period to provide a "phase down" of the employer contribution over a period of years. In addition, we recommend amortizing future changes to the unfunded actuarial accrued liability over 15 years from the date of the change. Please see illustration in Exhibit 15 of our 2015-2020 experience study report.

Exhibits 17 and 18 project the employer and employee contributions, fund balance, actuarial accrued liability and security ratio forward 40 years based upon the current funding method. Upon request, we can produce similar exhibits showing these metrics under proposed amortization methodology.

SECTION II. FUND ASSETS

EXHIBIT 1. SUMMARY OF DB PLAN ASSETS

Listed below are the assets reported for the defined benefit (DB) pension plan in the Fund's financial statements, excluding certain receivables and liabilities whose payments are deducted from employer contributions to the Fund.

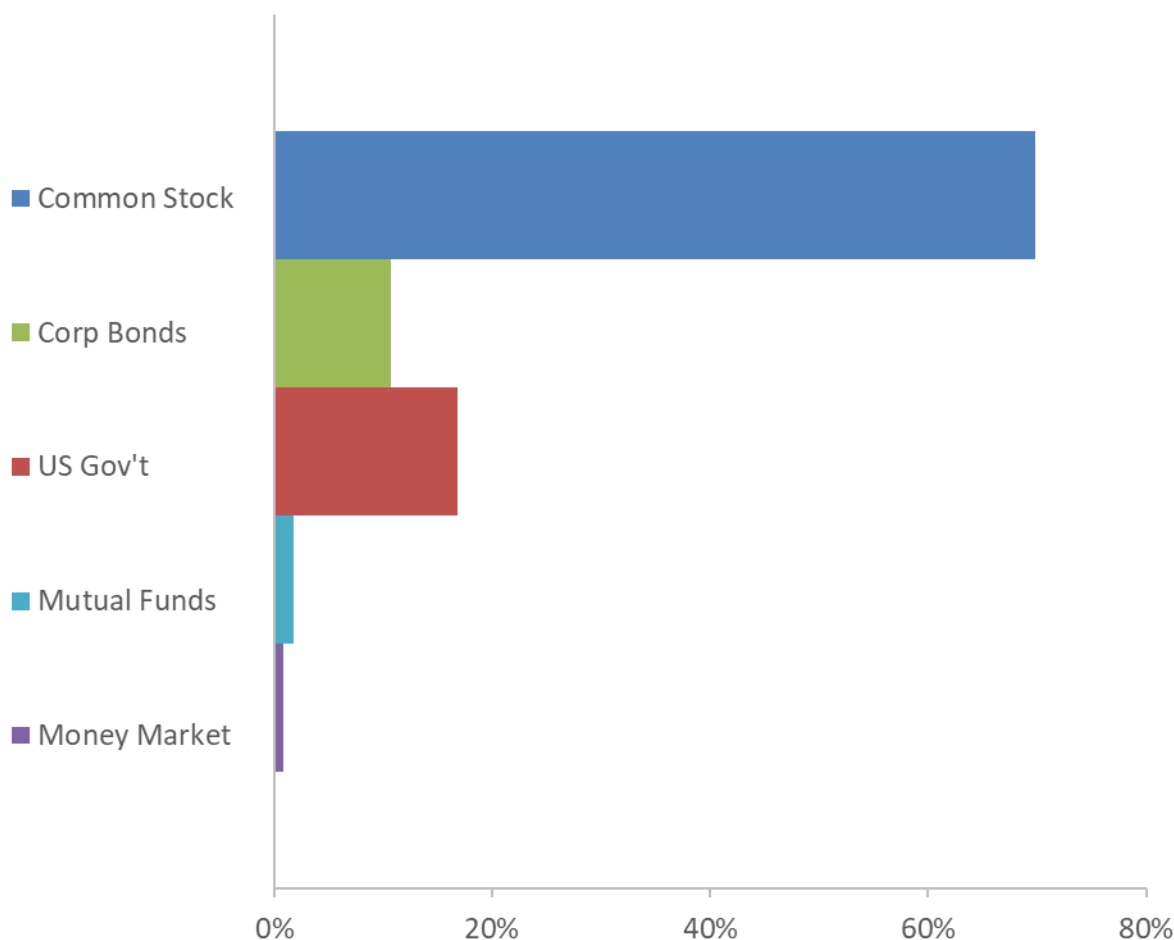
	9/30/2024	9/30/2023
Investments		
Common stocks	\$ 1,675,065,102	\$ 1,328,842,274
U.S. government securities	403,835,085	265,370,061
Corporate bonds and notes	258,020,356	216,239,024
Money market funds	19,453,767	26,811,000
Mutual funds	<u>42,421,944</u>	<u>35,165,559</u>
Total investments	2,398,796,254	1,872,427,918
Receivables		
Employer contributions, net	2,707,487	2,306,891
Employer contributions, unfunded liability	1,742,033	2,788,733
Member contributions	904,343	780,485
Interest and penalties on contributions	95,356	95,356
Supplemental/insurance benefits advanced	0	1,996,097
Notes receivable for service credits	2,559,697	789,591
Accrued investment income	6,884,823	5,884,730
Other receivables	769,176	725,085
Due from brokers for unsettled trades	605,110	8,457,347
Due from DC plan	<u>599,850</u>	<u>293,590</u>
Total receivables	16,867,875	24,117,905
Cash and cash equivalents	13,280,191	8,481,607
Prepaid expenses	0	0
Property and equipment	<u>1,172,972</u>	<u>627,477</u>
Total assets	\$ 2,430,117,292	\$ 1,905,654,907
Liabilities		
Accounts payable and accrued expenses	\$ 4,842,487	\$ 4,174,536
Due to brokers for unsettled trades	<u>3,520,116</u>	<u>11,725,236</u>
Total liabilities	\$ 8,362,603	\$ 15,899,772
Valuation Assets	<u>\$ 2,421,754,689</u>	<u>\$ 1,889,755,135</u>

¹ Excludes adjustments for retirement system's net pension liability, net OPEB liability, and net deferred inflows and outflows of resources.

EXHIBIT 2. DB PLAN ASSET ALLOCATION

The allocation of assets among various investment classes is an important determinant of expected future investment returns.

	DB ASSET ALLOCATION	
	9/30/2024	9/30/2023
Common stocks	69.8%	71.0%
Corporate bonds and notes	10.8%	11.5%
U.S. government securities	16.8%	14.2%
Mutual funds	1.8%	1.9%
Money market funds	<u>0.8%</u>	<u>1.4%</u>
Total	100.0%	100.0%



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EXHIBIT 3. CHANGES IN DB PLAN ASSETS

Assets increase or decrease each year due to employer contributions, investment income, benefit payments to retiring participants, plan expenses paid by the trust fund, and any realized and unrealized gains and losses from investments.

	FISCAL YEAR ENDING	
	9/30/2024	9/30/2023
Beginning Balance	\$ 1,889,755,135	\$ 1,777,556,631
Adjustments	0	393,297
Contributions		
Employer contributions	167,809,996	147,930,940
Member contributions	36,458,165	24,023,499
Decrease/(increase) in excluded assets	<u>0</u>	<u>0</u>
Total contributions	204,268,161	171,954,439
Investment Income		
Net appreciation in fair value	419,499,135	166,394,961
Interest	29,289,475	20,763,507
Dividends	17,400,279	17,285,665
Other investment income	522,858	1,007,377
Investment expenses	<u>(6,074,152)</u>	<u>(5,313,438)</u>
Total investment income	460,637,595	200,138,072
Benefit Payments		
Age and service annuities	216,655,099	214,703,487
Disability annuities	3,844,447	4,066,373
Survivor annuities	34,672,316	34,253,411
Refunds to separated employees	3,352,557	2,945,758
Interest on refunded contributions	<u>519,638</u>	<u>228,123</u>
Total benefit payments	259,044,057	256,197,152
Administrative Expenses²	6,574,133	4,090,152
Transfer from DC (for DB 1.75 Plan)¹	132,711,988	n/a
Ending Balance	\$ 2,421,754,689	\$ 1,889,755,135

¹ Assets received due to Public Law 36-130 allowing DC plan members to transfer to the DB 1.75 plan during the election period of June 1, 2023 to December 31, 2023.

² Administrative expense includes the prior year to current year change in the deferred outflows and inflows of resources, and the change in net pension liability, as shown in the GASB 67 report.

SECTION II. FUND ASSETS

EXHIBIT 4. ACTUARIAL VALUE OF ASSETS

The actuarial value of assets is equal to the market value of DB plan assets adjusted to phase in gains and losses relative to the assumed rate of return over a 3-year period, and to exclude certain receivables and liabilities whose payments are deducted from employer contributions to the Fund.

	9/30/2024	9/30/2023
Valuation assets at market value	\$ 2,421,754,689	\$ 1,889,755,135
(Gains)/Losses excluded from actuarial value (see below)	<u>(242,085,618)</u>	<u>129,548,600</u>
Actuarial value of assets	\$ 2,179,669,071	\$ 2,019,303,735
Actuarial value as % of market value	90.0%	106.9%

3-Year Phase-in of Gains and (Losses)

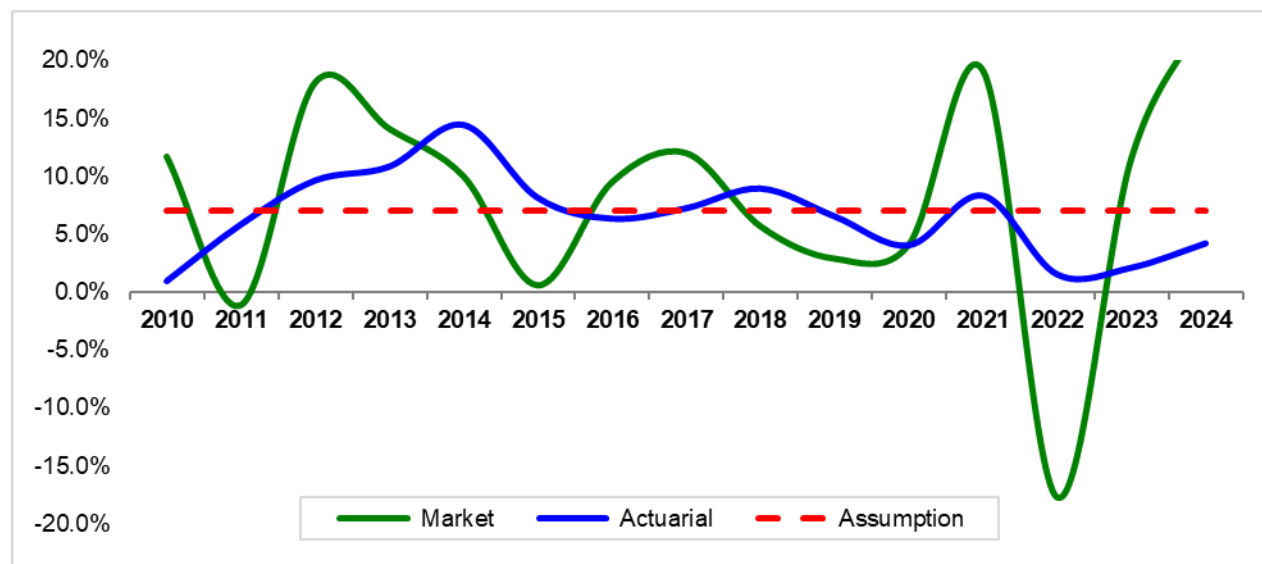
Year	Expected Return ¹	Actual Return	Gain/(Loss)	Percent Excluded	Excluded From Market Value
2023/2024	\$137,080,051	\$460,637,595	\$323,557,544	66.67%	\$215,705,029
2022/2023	121,389,603	200,531,369	79,141,766	33.33%	26,380,589
2021/2022	155,211,704	(391,717,627)	(546,929,331)	0.00%	<u>0</u>
Total					\$242,085,618

¹ Expected return is based on the assumed investment return, which is 7.0%.

EXHIBIT 5. HISTORICAL RETURNS ON DB PLAN ASSETS

The following table shows the historical return on DB plan assets over the last 15 years. The assumed actuarial valuation rate is 7.0%.

Fiscal Year Ending 9/30	Return on Market Value	Return on Actuarial Value
2024	23.9%	4.3%
2023	11.6%	2.2%
2022	(17.7)%	1.6%
2021	19.1%	8.4%
2020	4.1%	4.1%
2019	2.9%	6.6%
2018	5.7%	9.0%
2017	12.0%	7.3%
2016	9.5%	6.4%
2015	0.6%	8.2%
2014	10.0%	14.5%
2013	14.1%	10.9%
2012	18.1%	9.7%
2011	(1.1)%	5.9%
2010	11.7%	1.0%
Average of last 5 years	7.1%	4.1%
Average of last 10 years	6.6%	5.8%
Average of last 15 years	7.8%	6.6%



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EXHIBIT 6a. ACTIVE EMPLOYEES (Old DB Plan)

	9/30/2024	9/30/2023
Active Employees – Non-Uniformed		
Number vested	704	803
Number not vested	<u>7</u>	<u>13</u>
Total	711	816
Average age	58.9	58.1
Average service	30.8	29.9
Average earnings	\$ 80,083	\$ 72,111
Average accumulated contributions	\$ 250,820	\$ 233,263
Active Employees – Uniformed		
Number vested	102	117
Number not vested	<u>0</u>	<u>0</u>
Total	102	117
Average age	56.7	56.0
Average service	31.3	30.6
Average earnings	\$ 103,894	\$ 105,382
Average accumulated contributions	\$ 303,323	\$ 285,723
Active Employees – Total Old DB Plan		
Number vested	806	920
Number not vested	<u>7</u>	<u>13</u>
Total	813	933
Average age	58.6	57.8
Average service	30.9	30.0
Average earnings	\$ 83,070	\$ 76,283
Average accumulated contributions	\$ 257,407	\$ 239,842

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EXHIBIT 6b. ACTIVE EMPLOYEES (DB 1.75 Plan)

	9/30/2024	9/30/2023
Active Employees – DB 1.75 Plan		
Number vested	3,864	2,640
Number not vested	<u>674</u>	<u>0</u>
Total	4,538	2,640
Average age	46.7	48.9
Average service	14.6	16.4
Average earnings	\$ 61,694	\$ 63,385
Average accumulated contributions	\$ 63,760	\$ 77,446
Active Employees – Total Old DB and DB 1.75		
Number vested	4,670	3,560
Number not vested	<u>681</u>	<u>13</u>
Total	5,351	3,573
Average age	48.5	51.2
Average service	17.1	19.9
Average earnings	\$ 64,942	\$ 66,753
Average accumulated contributions	\$ 93,182	\$ 119,852

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EXHIBIT 7. ACTIVE EMPLOYEES BY AGENCY

	9/30/24 DC	9/30/24 DB 1.75	9/30/24 Old DB	9/30/23 DC	9/30/23 DB 1.75	9/30/23 Old DB
Bureau of Budget & Management Research	1	12	1	7	7	1
Bureau of Statistics & Plans	18	13	4	26	9	3
Bureau of Women's Affairs	1	2	0	2	1	0
Chief Medical Examiner	1	2	0	2	0	0
Civil Service Commission ¹	5	5	1	4	5	2
Customs & Quarantine	19	115	20	104	27	24
Dept of Administration ²	84	54	16	88	43	21
Dept of Agriculture	53	34	9	62	13	10
Dept of Corrections	71	110	11	102	54	11
Dept of Labor	66	33	6	98	14	6
Dept of Land Management	21	13	8	29	4	8
Dept of Law	110	48	14	101	50	17
Dept of Mental Health & Substance Abuse	181	81	11	236	40	12
Dept of Military Affairs	50	21	3	51	9	3
Dept of Parks and Recreation	21	16	5	29	11	7
Dept of Public Health & Social Services	281	194	25	353	106	34
Dept of Public Works	203	125	29	249	65	32
Dept of Revenue and Taxation	90	61	10	108	44	10
Dept of Youth Affairs	27	30	11	36	20	13
D.I.S.I.D.	15	10	3	16	5	3
Governor's Office	141	10	4	152	5	6
Guam Energy Office	9	2	1	7	2	0
Guam Environmental Protection Agency	27	29	2	30	20	3
Guam Ethics Commission ¹	0	4	0	0	1	0
Guam Fire Dept	48	191	12	82	137	19
Guam Police Dept	71	244	37	180	117	39
KGTF	0	2	1	10	1	1
Lt. Governor's Office	12	1	0	15	0	0
Mayor's Council	162	30	8	219	15	10
Office of Technology	4	11	3	12	3	4
Office of the Public Auditor	23	7	0	11	3	0
Guam Commission for Educator Certification ¹	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
General Fund Total	1,815	1,510	255	2,421	831	299
Dept of Chamorro Affairs	23	14	3	42	7	3
Guam Department of Education	1,819	1,125	287	2,355	750	332
Gov't of Guam Retirement Fund	14	23	0	23	14	2
Guam Int'l Airport Authority	59	140	30	119	75	31
Guam Community College	115	95	20	136	71	22
Guam Economic Dev. Authority	16	21	1	31	7	2
Guam Housing and Urban Renewal Authority	32	82	12	76	35	12
Guam Housing Corporation	10	10	3	11	7	3
Guam Legislature ³	16	23	3	30	13	3
Guam Memorial Hospital Authority	767	423	23	982	190	27
Guam Power Authority	165	230	46	199	159	53
Guam Visitors Bureau	49	20	1	39	13	1
Guam Waterworks Authority	209	123	12	250	95	12
Judiciary of Guam ³	178	211	24	286	96	29
Port Authority of Guam	132	222	27	218	130	34
Public Defender ³	41	23	10	49	14	11
University of Guam	<u>336</u>	<u>243</u>	<u>56</u>	<u>430</u>	<u>133</u>	<u>57</u>
Others Total	3,981	3,028	558	5,276	1,809	634
GRAND TOTAL	5,796	4,538	813	7,697	2,640	933

¹ Previously included in Department of Administration² Department of Administration includes Guam Election Commission³ Previously grouped with General Fund Total Above

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EXHIBIT 8a. RETIRED EMPLOYEES (Old DB Plan)

	9/30/2024	9/30/2023
Service Retirees		
Count	5,048	5,112
Average age	72.2	71.7
Average benefit	\$41,449	\$40,599
Median benefit	\$37,137	\$36,410
Disabled Retirees		
Count	142	156
Average age	71.0	70.6
Average benefit	\$24,583	\$24,123
Median benefit	\$23,278	\$22,594
Survivors		
Count	1,742	1,748
Average age	74.3	73.8
Average benefit	\$19,923	\$18,918
Median benefit	\$17,644	\$16,767
Child Pensioners		
Count	193	185
Average age	16.5	16.4
Average benefit	\$2,880	\$2,880
Median benefit	\$2,880	\$2,880
Total Retirees and Survivors ¹		
Count	6,932	7,016
Average age	72.7	72.2
Average benefit	\$35,694	\$34,831
Median benefit	\$31,296	\$30,688

¹ Excludes child pensioners.

EXHIBIT 8b. RETIRED EMPLOYEES (DB 1.75 Plan)

	9/30/2024	9/30/2023
Service Retirees		
Count	308	241
Average age	68.1	67.9
Average benefit	\$27,391	\$24,412
Median benefit	\$23,742	\$21,876
Disabled Retirees		
Count	7	8
Average age	58.6	55.5
Average benefit	*	*
Median benefit	*	*
Survivors		
Count	49	43
Average age	58.8	57.2
Average benefit	\$12,954	\$10,088
Median benefit	\$11,177	\$8,313
Child Pensioners		
Count	0	0
Average age	n/a	n/a
Average benefit	n/a	n/a
Median benefit	n/a	n/a
Total Retirees and Survivors ¹		
Count	364	292
Average age	66.6	66.0
Average benefit	\$25,414	\$22,249
Median benefit	\$21,762	\$19,183

* Not shown since less than 20 members.

¹ Excludes child pensioners.

EXHIBIT 9. TERMINATED AND INACTIVE MEMBERS (DB)

	9/30/2024	9/30/2023
Assumed to Withdraw Contributions		
Count	2,968	2,982
Accumulated contributions (Old DB)	\$ 1,721,867	\$ 1,731,538
Accumulated contributions (DB 1.75)	<u>38,367</u>	<u>43,161</u>
Accumulated contributions (Total DB)	\$ 1,760,234	\$ 1,774,698
Not Assumed to Withdraw Contributions		
Count	73	79
Average age	63.7	63.0
Average accrued benefit	\$ 10,880	\$ 11,193
Accumulated contributions	\$ 4,505,230	\$ 4,939,437

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EXHIBIT 10. RECONCILIATION OF MEMBERSHIP DATA

Old DB Plan

	Active	Inactive Assumed to Refund	Inactive Assumed to Retire	Retiree	Survivor	Disabled	Child	Total
9/30/2023	933	2,966	79	5,112	1,748	156	185	11,179
Terminated	-	-	-	-	-	-	-	-
Retired	(107)	-	(4)	114	-	-	-	3
Became Disabled	(1)	-	-	-	-	1	-	-
Rehired	4	(3)	(1)	-	-	-	-	-
New	-	-	-	-	84	-	57	141
Death	(16)	(9)	(1)	(178)	(90)	(15)	-	(309)
Benefits Expired	-	-	-	-	-	-	(49)	(49)
Net change	(120)	(12)	(6)	(64)	(6)	(14)	8	(214)
9/30/2024	813	2,954	73	5,048	1,742	142	193	10,965

DB 1.75 Plan

	Active	Inactive Assumed to Refund	Inactive Assumed to Retire	Retiree	Survivor	Disabled	Child	Total
9/30/2023	2,640	16	-	241	43	8	-	2,948
Terminated	-	-	-	-	-	-	-	-
Retired	(53)	-	-	55	-	-	-	2
Became Disabled	(3)	-	-	-	-	3	-	-
Rehired	-	-	-	-	-	-	-	-
New Hires	79	-	-	-	11	-	-	90
Transfers	1,968	-	-	17	-	-	-	1,985
Death	(93)	(2)	-	(5)	(5)	(4)	-	(109)
Net change	1,898	(2)	-	67	6	(1)	-	1,968
9/30/2024	4,538	14	-	308	49	7	-	4,916

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EXHIBIT 11a. ACTUARIAL ACCRUED LIABILITY (Old DB Plan)

The actuarial accrued liability has been calculated using the Entry Age Normal actuarial cost method and is equal to the present value of benefits for all Old DB Plan members, less the present value of future normal costs for active Old DB Plan employees.

	Old DB Plan 9/30/2024	Old DB Plan 9/30/2023
Present Value of Benefits		
Active employees –		
Retirement	\$ 488,191,658	\$ 516,659,561
Disability	2,709,509	2,928,370
Death	4,434,549	4,615,665
Withdrawal	<u>3,103,729</u>	<u>3,886,459</u>
Total active PVB	498,439,445	528,090,055
Retirees and Survivors		
Retirees	1,955,254,974	1,962,705,649
Disabled retirees	29,884,480	32,344,241
Survivors	<u>272,757,701</u>	<u>265,757,773</u>
Total retirees and survivors	2,257,897,155	2,260,807,663
Terminated and inactive members		
Assumed to retire	5,714,850	6,178,303
Assumed to elect return of contributions	<u>1,721,867</u>	<u>1,731,538</u>
Total terminated and inactive members	7,436,717	7,909,841
Total PVB	\$ 2,763,773,317	\$ 2,796,807,559
Present Value of Future Normal Cost		
Active employees –		
Retirement	\$ 22,959,841	\$ 25,304,434
Disability	572,952	657,948
Death	581,999	668,196
Withdrawal	<u>8,820,452</u>	<u>9,907,584</u>
Total active PVFNC	\$ 32,935,244	\$ 36,538,162
Actuarial Accrued Liability		
Active members	\$ 465,504,201	\$ 491,551,893
Retirees and survivors	2,257,897,155	2,260,807,663
Terminations and inactives	<u>7,436,717</u>	<u>7,909,841</u>
Total accrued liability	\$ 2,730,838,073	\$ 2,760,269,397

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EXHIBIT 11b. ACTUARIAL ACCRUED LIABILITY (DB 1.75 Plan)

The actuarial accrued liability has been calculated using the Entry Age Normal actuarial cost method and is equal to the present value of benefits for all DB 1.75 Plan members, less the present value of future normal costs for active DB 1.75 Plan employees.

	DB 1.75 Plan 9/30/2024	DB 1.75 Plan 9/30/2023
Present Value of Benefits		
Active employees –		
Retirement	\$ 777,440,318	\$ 429,027,411
Disability	16,600,701	11,150,269
Death	17,806,565	11,151,840
Withdrawal	<u>160,952,480</u>	<u>96,521,910</u>
Total active PVB	972,800,064	547,851,430
Retirees and Survivors		
Retirees	88,025,248	61,031,332
Disabled retirees	2,007,915	2,029,770
Survivors	<u>7,736,378</u>	<u>5,831,850</u>
Total retirees and survivors	97,769,541	68,892,952
Terminated and inactive members		
Assumed to retire	0	0
Assumed to elect return of contributions	<u>38,367</u>	<u>43,161</u>
Total terminated and inactive members	38,367	43,161
Total PVB	\$ 1,070,607,972	\$ 616,787,543
Present Value of Future Normal Cost		
Active employees –		
Retirement	\$ 164,098,190	\$ 86,259,203
Disability	7,135,362	4,564,963
Death	6,607,795	3,999,433
Withdrawal	<u>82,194,546</u>	<u>49,666,312</u>
Total active PVFNC	\$ 260,035,893	\$ 144,489,911
Actuarial Accrued Liability		
Active members	\$ 712,764,171	\$ 403,361,519
Retirees and survivors	97,769,541	68,892,952
Terminations and inactives	<u>38,367</u>	<u>43,161</u>
Total accrued liability	\$ 810,572,079	\$ 472,297,632

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EXHIBIT 12. CALCULATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

The unfunded actuarial accrued liability is used to determine the funding requirements. The unfunded actuarial accrued liability equals the actuarial accrued liability less the valuation assets.

	9/30/2024	9/30/2023
OLD DB PLAN		
Actuarial Accrued Liability		
Active members	\$ 465,504,201	\$ 491,551,893
Retirees and survivors	2,257,897,155	2,260,807,663
Terminations and inactives	<u>7,436,717</u>	<u>7,909,841</u>
Total accrued liability	\$ 2,730,838,073	\$ 2,760,269,397
DB 1.75 PLAN		
Actuarial Accrued Liability		
Active members	\$ 712,764,171	\$ 403,361,519
Retirees and survivors	97,769,541	68,892,952
Terminations and inactives	<u>38,367</u>	<u>43,161</u>
Total accrued liability	\$ 810,572,079	\$ 472,297,632
TOTAL (Old DB Plan plus DB 1.75 Plan)		
Actuarial Accrued Liability		
Active members	\$ 1,178,268,372	\$ 894,913,412
Retirees and survivors	2,355,666,696	2,329,700,615
Terminations and inactives	<u>7,475,084</u>	<u>7,953,002</u>
Total accrued liability	\$ 3,541,410,152	\$ 3,232,567,029
Actuarial Value of Assets	<u>2,179,669,071</u>	<u>2,019,303,735</u>
Unfunded Actuarial Accrued Liability	\$ 1,361,741,081	\$ 1,213,263,294
Security Ratio = (Actuarial Value of Assets / AAL)	61.55%	62.47%
Market Value of Assets	\$ 2,421,754,689	\$ 1,889,755,135
Market Value of Assets / AAL	68.38%	58.46%

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EXHIBIT 13. CALCULATION OF ACTUARIAL GAIN/LOSS

	Year Ending 9/30/2024	Year Ending 9/30/2023
Unfunded Actuarial Accrued Liability, beginning of year	\$ 1,213,263,294	\$ 1,172,997,750
Additions:		
Employer normal cost	6,624,682	6,634,722
Interest to end of year	<u>85,392,158</u>	<u>82,574,273</u>
Total additions	92,016,840	89,208,995
Deductions:		
Employer contributions for year	(167,809,996)	(147,930,940)
Interest on contributions	<u>(5,774,014)</u>	<u>(5,090,014)</u>
Total deductions	(173,584,010)	(153,020,954)
Other Changes:		
Changes due to Public Law No. 36-130	105,179,941	0
Changes in assumptions and methods	<u>0</u>	<u>0</u>
Net other changes	105,179,941	0
Expected UAAL, end of year	\$ 1,236,876,065	\$ 1,109,185,791
Actual UAAL, end of year	<u>1,361,741,081</u>	<u>1,213,263,294</u>
Actuarial Gain/(Loss)	\$ (124,865,016)	\$ (104,077,503)
Components of Actuarial Gain/(Loss):		
Investment gain/(loss) on actuarial value of assets	\$ (83,585,659)	\$ (97,395,932)
Other gains/(losses)	<u>(41,279,357)</u>	<u>(6,681,571)</u>
Total actuarial gain/(loss)	\$ (124,865,016)	\$ (104,077,503)

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EXHIBIT 14. NORMAL COST

The normal cost has been calculated using the Entry Age Normal actuarial cost method.

	9/30/2024		9/30/2023	
OLD DB Plan				
Expected payroll for next fiscal year	\$ 69,562,666		\$ 73,307,658	
Normal cost ¹		% of Old DB Payroll		% of Old DB Payroll
Retirement	\$ 5,736,475	8.25%	\$ 6,281,224	8.57%
Disability	141,997	0.20%	161,451	0.22%
Death	145,061	0.21%	164,970	0.23%
Withdrawal	<u>2,192,725</u>	<u>3.15%</u>	<u>2,440,571</u>	<u>3.33%</u>
Total active normal cost	\$ 8,216,258	11.81%	\$ 9,048,216	12.34%
Assumed DB administrative expenses	<u>1,010,214</u>	<u>1.45%</u>	<u>1,541,994</u>	<u>2.10%</u>
Total normal cost and expenses	\$ 9,226,472	13.26%	\$ 10,590,210	14.45%
Expected member contributions	<u>(6,628,337)</u>	<u>(9.53%)</u>	<u>(6,995,232)</u>	<u>(9.54%)</u>
Government portion of normal cost	\$ 2,598,135	3.73%	\$ 3,594,978	4.90%
DB 1.75 Plan				
Expected payroll for next fiscal year	\$ 290,165,492		\$ 173,020,278	
Normal cost ¹		% of DB 1.75 Payroll		% of DB 1.75 Payroll
Retirement	\$ 18,849,886	6.50%	\$ 10,194,413	5.89%
Disability	799,036	0.28%	525,463	0.30%
Death	730,002	0.25%	452,068	0.26%
Withdrawal	<u>7,958,326</u>	<u>2.74%</u>	<u>4,883,222</u>	<u>2.82%</u>
Total active normal cost	\$ 28,337,250	9.77%	\$ 16,055,166	9.28%
Assumed DB administrative expenses	<u>4,213,886</u>	<u>1.45%</u>	<u>3,639,406</u>	<u>2.10%</u>
Total normal cost and expenses	\$ 32,551,136	11.22%	\$ 19,694,572	11.38%
Expected member contributions	<u>(27,565,722)</u>	<u>(9.50%)</u>	<u>(16,436,926)</u>	<u>(9.50%)</u>
Government portion of normal cost	\$ 4,985,414	1.72%	\$ 3,257,646	1.88%
TOTAL DB Plans				
Expected payroll for next fiscal year	\$ 359,728,158		\$ 246,327,935	
Total active normal cost ¹	\$ 36,553,508	% of DB Payroll	\$ 25,103,383	% of DB Payroll
Assumed DB administrative expenses	<u>5,224,100</u>	<u>1.45%</u>	<u>5,181,400</u>	<u>2.10%</u>
Total normal cost and expenses	\$ 41,777,608	11.61%	\$ 30,284,783	12.29%
Expected member contributions	<u>(34,194,059)</u>	<u>(9.51%)</u>	<u>(23,432,158)</u>	<u>(9.51%)</u>
Government portion of normal cost	\$ 7,583,549	2.11%	\$ 6,852,625	2.78%

¹ Includes interest to mid-year.

EXHIBIT 15. AMORTIZATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

Pursuant to GCA Section 8137, as modified by P.L. 33-186, the unfunded liabilities of the Government of Guam Retirement Fund are to be completely funded within 82 years from May 1, 1951. As of September 30, 2024, there are 8.58 years remaining in the funding period. The amortization of the unfunded actuarial accrued liability is calculated as a constant percentage of total payroll, which is assumed to grow at 2.50% per year.

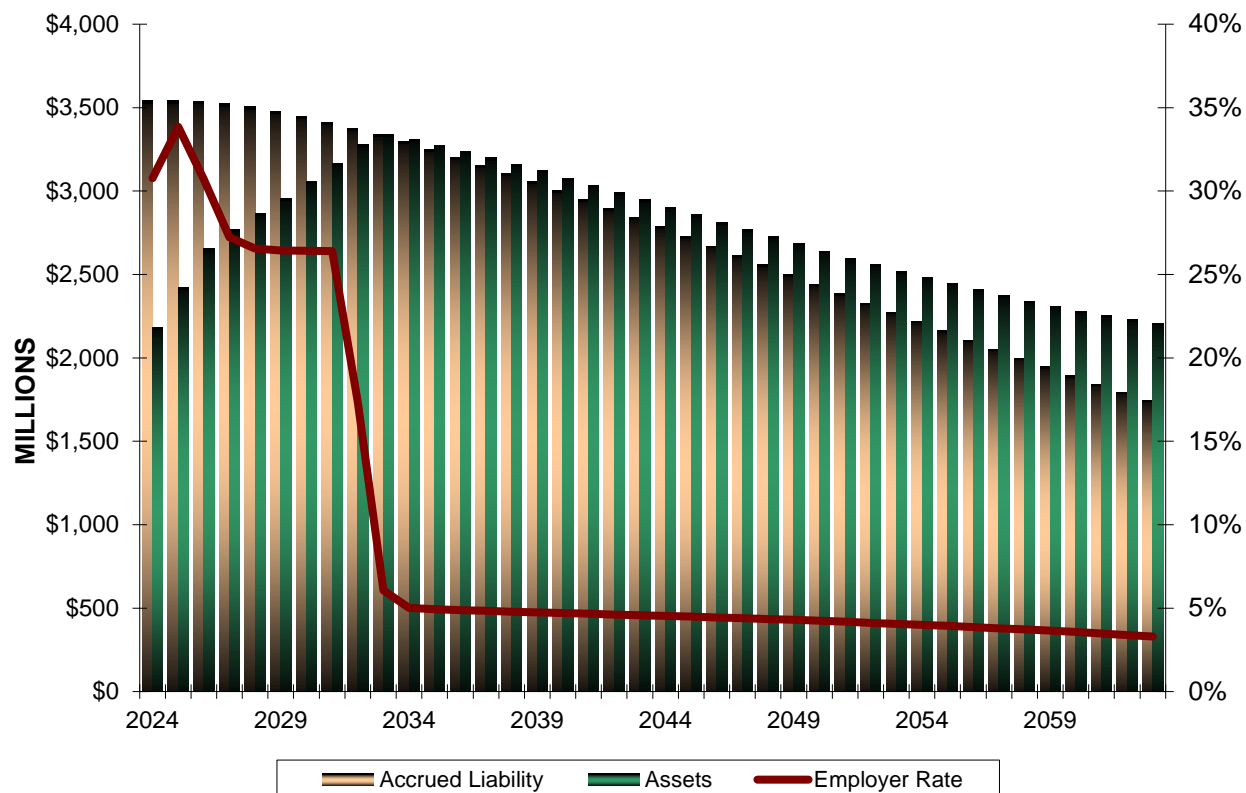
	9/30/2024	9/30/2023
Total payroll (DB and DC) for fiscal year following	\$ 649,672,581	\$ 611,445,966
Unfunded actuarial accrued liability	1,361,741,081	1,213,263,294
Remaining funding period	8.58 years	9.58 years
Annual amortization	\$ 192,130,878	\$ 156,424,332
As % of total payroll (DB and DC)	29.57%	25.58%

EXHIBIT 16. ACTUARIALLY DETERMINED CONTRIBUTION

The Actuarially Determined Contribution (ADC) is equal to the sum of (1) the government normal costs for the defined benefit plans (Old DB and DB 1.75), (2) the amortization payment towards the unfunded actuarial accrued liability of the defined benefit plans (Old DB and DB 1.75), and (3) the expected government contributions to the defined contribution (DC) plan. The required contribution is then divided by the sum of the DB and DC payroll to determine the contribution rate as a percentage of payroll.

	9/30/2024	9/30/2023
Expected payroll for next fiscal year		
Old defined benefit (Old DB)	\$ 69,562,666	\$ 73,307,658
Defined Benefit 1.75 (DB 1.75)	290,165,492	173,020,278
Defined contribution (DC)	<u>289,944,423</u>	<u>365,118,030</u>
Total payroll (DB and DC)	\$ 649,672,581	\$ 611,445,966
Government normal cost including expenses (DB)	\$ 7,583,549	\$ 6,852,625
As % of DB payroll	2.11%	2.78%
As % of total payroll (DB and DC)	1.17%	1.12%
Amortization of UAAL (DB)	\$ 192,130,878	\$ 156,424,332
As % of total payroll (DB and DC)	29.57%	25.58%
Government DC contributions	\$ 20,215,454	\$ 24,857,918
As % of DC payroll	6.97%	6.81%
As % of total payroll (DB and DC)	3.11%	4.07%
Total DB and DC contributions	\$ 219,929,881	\$ 188,134,875
% of total payroll (DB and DC)	33.85%	30.77%

EXHIBIT 17. PROJECTION OF CONTRIBUTION RATE¹



¹ The contribution rate is the combined employer rate for the DB and DC plans.

EXHIBIT 17. PROJECTION OF CONTRIBUTION RATE (values)

Year Ending 9/30	\$'s in millions									
	PAYROLL ¹		CONTRIB RATE		CONTRIBUTIONS			Invest Earnings ³	Benefits/ Expenses	DB Fund Actuarial
	DB	DC	DB	DC ²	DB	DC ²	EE			
2024										\$2,179.67
2025	\$359.73	\$289.94	30.77%	23.82%	\$110.68	\$69.08	\$34.17	\$167.45	\$(274.06)	2,421.23
2026	346.24	319.67	33.85%	26.88%	117.20	85.92	32.89	175.45	(282.06)	2,658.49
2027	335.54	347.02	30.70%	23.80%	103.01	82.59	31.88	183.64	(288.78)	2,770.83
2028	326.39	373.24	27.22%	20.37%	88.84	76.05	31.01	190.61	(293.14)	2,864.20
2029	318.42	398.70	26.55%	19.75%	84.54	78.74	30.25	196.94	(296.89)	2,957.78
2030	311.76	423.28	26.43%	19.67%	82.40	83.25	29.62	203.45	(299.74)	3,056.76
2031	305.88	447.54	26.41%	19.68%	80.78	88.08	29.06	210.41	(301.51)	3,163.59
2032	300.23	472.02	26.39%	19.69%	79.23	92.94	28.52	218.00	(301.10)	3,281.18
2033	295.28	496.28	17.34%	10.67%	51.20	52.93	28.05	223.94	(299.01)	3,338.29
2034	290.65	520.70	6.06%	0.00%	17.61	-	27.61	224.96	(298.54)	3,309.94
2035	285.21	546.43	5.02%	0.00%	14.32	-	27.09	222.81	(299.69)	3,274.47
2036	280.51	571.91	4.94%	0.00%	13.86	-	26.65	220.32	(298.81)	3,236.49
2037	275.47	598.26	4.88%	0.00%	13.44	-	26.17	217.75	(295.54)	3,198.31
2038	271.25	624.33	4.84%	0.00%	13.13	-	25.77	215.17	(292.11)	3,160.27
2039	266.99	650.98	4.79%	0.00%	12.79	-	25.36	212.55	(290.10)	3,120.87
2040	262.83	678.09	4.75%	0.00%	12.48	-	24.97	209.77	(290.02)	3,078.08
2041	259.03	705.42	4.71%	0.00%	12.20	-	24.61	206.83	(287.86)	3,033.85
2042	255.70	732.86	4.66%	0.00%	11.92	-	24.29	203.85	(283.84)	2,990.07
2043	252.74	760.53	4.62%	0.00%	11.68	-	24.01	200.91	(279.59)	2,947.08
2044	250.27	788.32	4.58%	0.00%	11.46	-	23.78	198.00	(276.41)	2,903.90
2045	247.92	816.64	4.54%	0.00%	11.26	-	23.55	195.01	(274.83)	2,858.90
2046	245.69	845.49	4.50%	0.00%	11.06	-	23.34	191.95	(271.81)	2,813.44
2047	244.09	874.37	4.44%	0.00%	10.84	-	23.19	188.90	(267.59)	2,768.78
2048	242.59	903.83	4.40%	0.00%	10.67	-	23.05	185.92	(263.04)	2,725.39
2049	241.48	933.60	4.35%	0.00%	10.50	-	22.94	183.02	(258.92)	2,682.93
2050	240.89	963.56	4.30%	0.00%	10.36	-	22.88	180.13	(256.28)	2,640.02
2051	240.61	993.96	4.25%	0.00%	10.23	-	22.86	177.24	(252.70)	2,597.65
2052	240.64	1,024.80	4.18%	0.00%	10.06	-	22.86	174.43	(248.02)	2,556.98
2053	240.62	1,056.44	4.11%	0.00%	9.89	-	22.86	171.75	(243.14)	2,518.34
2054	240.74	1,088.76	4.06%	0.00%	9.77	-	22.87	169.20	(238.53)	2,481.66
2055	241.18	1,121.55	4.00%	0.00%	9.65	-	22.91	166.69	(236.70)	2,444.21
2056	241.99	1,154.81	3.94%	0.00%	9.53	-	22.99	164.17	(233.76)	2,407.14
2057	242.97	1,188.75	3.86%	0.00%	9.38	-	23.08	161.73	(229.26)	2,372.07
2058	244.60	1,222.91	3.79%	0.00%	9.27	-	23.24	159.44	(224.45)	2,339.56
2059	246.44	1,257.76	3.72%	0.00%	9.17	-	23.41	157.30	(220.46)	2,308.99
2060	248.86	1,292.95	3.65%	0.00%	9.08	-	23.64	155.28	(217.30)	2,279.69
2061	251.60	1,328.75	3.57%	0.00%	8.98	-	23.90	153.38	(213.13)	2,252.82
2062	254.82	1,365.04	3.48%	0.00%	8.87	-	24.21	151.66	(208.46)	2,229.10
2063	258.52	1,401.84	3.39%	0.00%	8.76	-	24.56	150.17	(203.80)	2,208.79

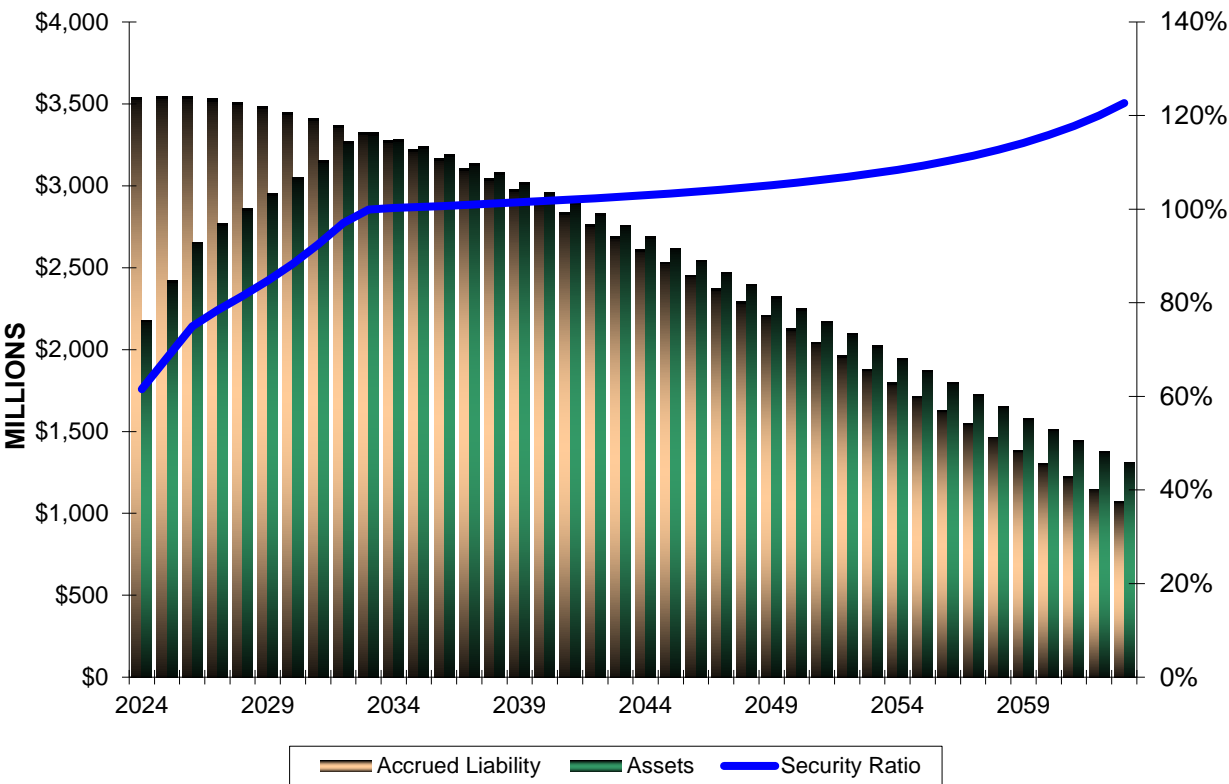
¹ Payroll is assumed to increase 2.50% per year with 15% of new members assumed to enter DB 1.75 plan and 85% DC plan.

² DC rate and contributions are those for payment towards UAAL and plan expenses only.

³ Investment earnings are assumed to be 7.0% per year on the market value of assets.

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EXHIBIT 18. PROJECTION OF SECURITY RATIO



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SECTION IV. VALUATION EXHIBITS

EXHIBIT 18. PROJECTION OF SECURITY RATIO (values)

Year Ending 9/30	\$'s in millions EMPLOYER CONTRIBUTIONS					Security Ratio
	Payroll ¹	DB Rate	Contribs DB Plan	DB Fund AVA ²	Accrued Liability	
2024				\$2,179.67	\$3,541.41	61.55%
2025	\$649.67	30.77%	\$179.76	2,421.23	3,539.87	68.40%
2026	665.91	33.85%	203.12	2,658.49	3,535.70	75.19%
2027	682.56	30.70%	185.60	2,770.83	3,523.02	78.65%
2028	699.63	27.22%	164.89	2,864.20	3,504.14	81.74%
2029	717.12	26.55%	163.28	2,957.78	3,479.06	85.02%
2030	735.04	26.43%	165.65	3,056.76	3,448.42	88.64%
2031	753.42	26.41%	168.86	3,163.59	3,413.26	92.69%
2032	772.26	26.39%	172.17	3,281.18	3,375.70	97.20%
2033	791.56	17.34%	104.13	3,338.29	3,337.53	100.02%
2034	811.35	6.06%	17.61	3,309.94	3,296.34	100.41%
2035	831.64	5.02%	14.32	3,274.47	3,250.31	100.74%
2036	852.43	4.94%	13.86	3,236.49	3,202.16	101.07%
2037	873.74	4.88%	13.44	3,198.31	3,153.85	101.41%
2038	895.58	4.84%	13.13	3,160.27	3,105.66	101.76%
2039	917.97	4.79%	12.79	3,120.87	3,055.85	102.13%
2040	940.92	4.75%	12.48	3,078.08	3,001.86	102.54%
2041	964.44	4.71%	12.20	3,033.85	2,947.35	102.93%
2042	988.55	4.66%	11.92	2,990.07	2,893.31	103.34%
2043	1,013.27	4.62%	11.68	2,947.08	2,839.70	103.78%
2044	1,038.60	4.58%	11.46	2,903.90	2,784.91	104.27%
2045	1,064.56	4.54%	11.26	2,858.90	2,727.22	104.83%
2046	1,091.18	4.50%	11.06	2,813.44	2,669.77	105.38%
2047	1,118.46	4.44%	10.84	2,768.78	2,612.68	105.97%
2048	1,146.42	4.40%	10.67	2,725.39	2,556.78	106.59%
2049	1,175.08	4.35%	10.50	2,682.93	2,500.45	107.30%
2050	1,204.46	4.30%	10.36	2,640.02	2,441.57	108.13%
2051	1,234.57	4.25%	10.23	2,597.65	2,383.84	108.97%
2052	1,265.43	4.18%	10.06	2,556.98	2,327.71	109.85%
2053	1,297.07	4.11%	9.89	2,518.34	2,273.38	110.78%
2054	1,329.49	4.06%	9.77	2,481.66	2,220.04	111.78%
2055	1,362.73	4.00%	9.65	2,444.21	2,162.11	113.05%
2056	1,396.80	3.94%	9.53	2,407.14	2,106.41	114.28%
2057	1,431.72	3.86%	9.38	2,372.07	2,051.70	115.61%
2058	1,467.51	3.79%	9.27	2,339.56	1,999.13	117.03%
2059	1,504.20	3.72%	9.17	2,308.99	1,946.06	118.65%
2060	1,541.81	3.65%	9.08	2,279.69	1,892.79	120.44%
2061	1,580.35	3.57%	8.98	2,252.82	1,841.75	122.32%
2062	1,619.86	3.48%	8.87	2,229.10	1,792.26	124.37%
2063	1,660.36	3.39%	8.76	2,208.79	1,744.42	126.62%

¹ Payroll is assumed to increase 2.50% per year with 15% of new members assumed to enter the DB 1.75 plan and 85% assumed to enter the DC plan.

² Actuarial Value of Assets. Investment earnings are assumed to be 7.0% per year on the market value of assets.

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APPENDIX A. SUMMARY OF PLAN PROVISIONS

The following description is only a brief summary of the more important provisions of the retirement plan. Actual plan provisions are contained in Chapter 8 of the Guam Code, as modified by Public Law 33-186.

Membership Conditions and Exclusions (Old DB Plan): All employees of the Government of Guam hired on or before September 30, 1995 are required to participate as a condition of employment, except:

- a) Persons who are compensated on a fee basis;
- b) Independent contractors;
- c) Persons employed for a specific project;
- d) Persons employed in the Senior Citizens' Community Employment Program; and
- e) Persons with less than 20 years of service prior to September 30, 1995 who elect to transfer to the Government of Guam Defined Contribution Fund. Participants have an annual opportunity to transfer.

Membership is optional for:

- a) Temporary, seasonal, intermittent and part-time employees;
- b) Persons employed for a specific period of time and not domiciled in Guam; and
- c) Employees of a public corporation of the Government of Guam.

Membership is also applicable to members of the Legislature with special provisions for:

- a) The determination of average annual salary for pension computation purposes; and
- b) Contributions.

Membership Conditions and Exclusions (DB 1.75 Plan): All employees of the Government of Guam who were in the Defined Contribution Plan and were still employed had the option to transfer to the Defined Benefit 1.75 Plan effective January 1, 2018. All employees who were members in the Defined Contribution System (DC Plan) at any time between June 1, 2023, and December 31, 2023, had the option to elect to become Defined Benefit 1.75 Plan members effective January 1, 2024. Employees hired on or after January 1, 2024, have the option to select either the DB 1.75 Plan or the DC Plan. After having made such election to become a DB 1.75 Plan member, the member may not change such election or again become an active member of the DC Plan. The account balances of members electing to transfer from the DC Plan to the DB 1.75 Plan were transferred to the Defined Benefit 1.75 Retirement System on the effective date of the transfer.

Pension Credits: Employees are entitled to pension credit for:

- a) Service rendered to the Government prior to May 1, 1951 when the Fund began operations.
- b) Service on or after May 1, 1951 for which contributions are required to be made by the employees.
- c) Casual or part-time employment under prescribed conditions for which contributions must be made.
- d) Unused and accumulated sick and annual (vacation) leaves with 12 days of service counted as a full month; 6 to 11 days, ½ month; and less than 6 days disregarded.

- e) For employees hired before June 1, 1989, pension credit is granted up to a maximum of 5 years for Federal service, provided the employee terminates membership in the Federal Civil Service Retirement Fund and makes a contribution to the Government of Guam Retirement Fund equal to the amount contributed by the member and his employer during the period which is equal in length to the period for which service credit is requested, and which ends on the member's termination date of such employment with interest from the date of such termination to the date of payment.
- f) For employees hired before June 1, 1989, educational leave time or periods of termination for educational training purposes, if contributions are made to the Fund with interest. Members who first joined the fund prior to January 31, 1987, may receive credit for up to the normal period of time required to complete degree without having been employed by the government prior to the period during which the degree was earned.
- g) Military service prior to May 1, 1951, if not considered for any Federal Government Pension other than for disability. If entry into military service occurred after May 1, 1951, total pension credit is limited to 5 years in the aggregate, provided the employee was in the service of the Government of Guam at date of entry into military service and returned to the Government of Guam service within one year following discharge from military service under conditions other than dishonorable, or within 6 months after completion of education under the various education benefits programs for veterans; otherwise the total credit is limited to three years.

Schedule for Computing Service: The following schedule shall govern the computation of pension credit: 12 days or more during any month constitutes a month of service; 6 to 11 days, ½ month; less than 6 days is disregarded. Nine months or more during any year constitutes a year of service.

Vesting of Pension Credit: Vesting occurs after at least 5 years of service.

Upon separation from service, an employee may optionally leave the contribution credits in the Fund and qualify for a deferred retirement annuity, based upon the total pension credit. If the pension credit is 25 years or more, no refund of contributions is payable and the employee must accept a deferred retirement annuity.

Conditions for Service Retirement: With respect to any employee who originally became a member of the Fund prior to October 1, 1981:

- a) Such member may retire on a service retirement annuity at age 60 or over, or at age 55 in the case of a member of the uniformed personnel after at least 10 years of service. Upon retirement, a member of the uniformed personnel shall be considered one grade above that held at date of retirement.
- b) A member with at least 25 years of service may retire at any age on an unreduced retirement annuity.
- c) Any retired employee with at least 25 years of credit service shall be entitled to the full retirement annuity on and after September 30, 1981.
- d) Any member, active or inactive, may retire after 20 years of service, regardless of age. In such case, the retirement annuity shall be reduced ¼ of 1% for each month that the age of the member is less than 60 years (3% per year).

With respect to an employee who became a member of the Fund on or after October 1, 1981, and prior to August 22, 1984, the following provisions shall govern:

- a) Such member may retire on a service retirement annuity at age 60 or over, or at age 55 if a member of the uniformed personnel after at least 15 years of service and upon retirement shall be considered one rank grade above that held at such date.
- b) A member with at least 30 years of service shall be eligible for service retirement, regardless of age, without reduction for early retirement.
- c) Any member, whether in an active or inactive status, may retire after 25 years of service, at any age, on an annuity reduced $\frac{1}{4}$ of 1% per month (3% per year) for each month member's age is less than 60.

With respect to any employee becoming a member of the Fund on or after August 22, 1984, and a member of the Old DB Plan:

- a) Such member may retire on a service retirement annuity at age 65 or over, or at age 60 in the case of a member of the uniformed personnel after at least 15 years of service. Upon retirement, a member of the uniformed personnel shall be considered one grade above that held at date of retirement.
- b) A member with at least 30 years of service may retire at any age on an unreduced retirement annuity.
- c) Any member, active or inactive, may retire after 25 years of service, regardless of age. In such case, the retirement annuity shall be reduced $\frac{1}{4}$ of 1% for each month that the age of the member is less than 65 years (3% per year).

With respect to any employee in the DB 1.75 Plan:

- a) Any member is eligible for an unreduced service retirement annuity at age 62 with 5 years of service.
- b) Uniformed personnel as defined in §8104(p), Article 1, Chapter 8, Title 4 of the Guam Code Annotated who are active employees on or after January 1, 2024 are eligible for unreduced retirement at age 55 with 25 years of service, or age 57 with 5 years of service.
- c) Any member, active or inactive, may retire after the attainment of age 55 with 25 years of service. In such case, the retirement annuity for non-Uniformed personnel shall be reduced $\frac{1}{2}$ of 1% for each month that the age of the member is less than 62 years (6% per year).

Amount of Service Retirement Annuity (Old DB Plan): A basic annuity of 2.00% of "average annual salary" for each of the first 10 years of credited service; and 2.5% of "average annual salary" for each full year of pension credit above 10 years, plus twenty dollars (\$20.00) multiplied by years of credited service reduced by an amount equal to one hundredth of one percent (.01%) of said amount for each one dollar (\$1.00) that a member's average annual salary exceeds the amount of six thousand dollars (\$6,000).

The minimum amount of service retirement annuity payable by the Fund is \$1,200 per year. The maximum retirement annuity is 85% of "average annual salary."

Amount of Service Retirement Annuity (DB 1.75): A basic annuity of 1.75% of "average annual salary" for each year of credited service for first 25 years, then 2.75% for next 15 years. The minimum amount of service retirement annuity payable by the Fund is \$1,200 per year. The maximum retirement annuity is 85% of "average annual salary."

Average Annual Salary: Average of three highest annual salaries received by a member during the entire period of pension credit. A minimum of \$6,000 applies to Old DB Plan members.

The annual salary of the member shall include the basic rate of salary on which contributions were made by the member and any salary on which the member made contributions as required under GCA, Section 8136(a). Effective October 1, 1986, salary can include payment for unused annual leave upon retirement for Old DB Plan members. In case of members of the Legislature, the average annual salary is the salary of the Director of Administration at the member's date of retirement, or the average of the three highest annual salaries received by the member during the period of membership credit, whichever is greater.

Automatic Increase in Annuity: Effective July 1, 1984, any member retiring from service and entitled to benefits after September 1, 1972, is to receive each year, on the anniversary date of retirement, an increment of \$600 if the annual annuity is \$3,500 or less; \$400 if the annuity is between \$3,500 and \$6,300 per year; \$300 if the annuity is between \$6,300 and \$10,100; and \$200 if the annuity exceeds \$10,100 per year.

Disability Retirement: Upon total and permanent disability due to physical or mental causes, an employee under age 65 is entitled to a disability retirement annuity. For employees hired prior to August 22, 1984, the amount of the disability retirement annuity will be 66-2/3% of the employee's salary in effect on the date of disability. Subsequent employees will have an annuity amount based on 66-2/3% (50% for DB 1.75 Plan members) of the average of the highest three years of salary. If the disability was not due to occupational causes, the employee must have Government of Guam service credit of at least six years, or five years in the case of terminal illness, in order to qualify, except that new members since May 28, 1985, may not retire if a disability arises from impairment or conditions existing prior to employment.

A disability retirement annuitant must submit to a medical examination at least once a year during the first five years of disability, and at least once every three years thereafter, by a physician or physicians designated by the Board in order to establish continuing disability and entitlement to benefits. Should a disability annuitant resume gainful employment in a position other than the particular job in which he was engaged when declared disabled, the disability retirement benefit shall continue as initially determined.

A member receiving disability retirement benefits since December 1, 1972, is entitled to receive on the anniversary date of retirement, an annual increase of \$300 if the benefit is \$3,000 per year or less; \$250 per year where the annuity is between \$3,000 and \$6,000 per year; \$200 per year where the annuity is between \$6,000 and \$10,000 per year; and \$100 if the annuity exceeds \$10,000 per year.

Re-entry Into Service: A member on retirement who re-enters services as an employee eligible for membership shall have the annuity suspended during the period of employment without losing rights to automatic increases in the retirement annuity during the period of re-employment. This provision does not apply to Department of Education employees who occupy positions dealing with the Chamorro Language and Culture Program in Guam schools, persons employed as classroom teachers, guidance or health counselors when critical need arises, nor elected officials.

Benefits to Survivors: Benefits are payable to a surviving spouse and children under age 21, upon the death of a member while in service after at least three years of service, or occurring while on retirement. The benefit to children of an annuitant or member whose death occurs while in service after at least three years of service is payable until age 25 if they are full-time students in an accredited educational institution, or payable regardless of age if disabled and disability occurred before age 18.

If only a spouse survives the active or retired member, the annuity payable is 60% of the service or disability retirement annuity earned by the member, subject to a minimum of \$1,200 per year.

The annuity to a child is \$2,880 per year, subject to a maximum payment to five or more minor children of \$14,400 per year. The term “child” or “children” includes any natural child or adopted child under age 21, or any permanently disabled child whose incapacity began before the child attained age 21.

A survivor annuitant is entitled to an automatic increase in annuity each year on the anniversary date of the annuity of \$600 if the annuity is \$3,500 per year or less; \$400 if the annuity is between \$3,500 and \$6,300 per year; \$300 if the annuity is between \$6,300 and \$10,100; and \$200 if the annuity is more than \$10,100 per year.

A surviving spouse or minor child surviving the member is entitled, in addition to the above, a death benefit of \$1,000 payable in a lump sum.

A survivor's annuity terminates upon death or re-marriage under the age of 40, attainment of age 21 of the child, or the termination of the incapacity of a disabled child.

Optional Privilege at Retirement: Upon retirement from service, any unmarried employee, if in good health as determined by medical examination, may elect to receive, on an actuarial equivalent basis in lieu of the full retirement annuity, a reduced retirement annuity payable during the annuitant's lifetime, plus an annuity to a designated beneficiary to become payable at death of the annuitant. The annuity to the beneficiary is to be paid at the same rate and under the same conditions that apply to a survivor of a married member whose death occurs while in service.

Death Benefit – Active and Retired Members Without Survivors: Upon death of a member while in service, leaving no survivors eligible for annuities, the designated beneficiary or estate is entitled to a refund of the contribution credits, plus interest, together with a death benefit of \$1,000 payable in a lump sum.

Upon death of a retired member, if no survivors' annuities are payable, the death benefit to a designated beneficiary or the estate of the member consists of the excess, if any, of: (1) the total contribution credits of the member at retirement, plus interest, over (2) the total amount of annuity payments made to the retired member, plus the sum of \$1,000.

Death Benefit – Inactive Members: Upon the death of an inactive member with at least 20 years of pension credit, and survived by a spouse or minor children, the following benefit options are provided: (a) the surviving spouse or children, as the case may be, may elect to receive the annuities prescribed if the death of a member occurs while in service; or (b) a refund of the deceased member's total contribution credits, plus interest.

Refund of Members' Contributions: Upon complete separation from service, or transfer to the Government of Guam Defined Contribution Fund, a member with less than 25 years of pension credit may receive a refund of the total contributions, plus interest (except that no interest is payable if the total pension credit is less than one year).

Contributions by Members: Each Old DB Plan member shall contribute to the Fund 9½% of salary earned and accruing after October 1, 1997; and at the member's option, 10½% of non-base pay subsequent to October 1, 1997. Each DB 1.75 Plan member shall contribute to the Fund 9½% of salary earned and accruing after January 1, 2018.

APPENDIX B. ACTUARIAL COST METHOD AND ASSUMPTIONS

	September 30, 2024	September 30, 2023																								
Actuarial Cost Method	Entry Age Normal	Entry Age Normal																								
Interest Rate	7.00%	7.00%																								
Long-term Expected Rate of Return on Plan Assets	7.00%	7.00%																								
Salary Increases	<table><tr><td>Service</td><td>% Increase</td></tr><tr><td>0 – 5</td><td>6.0%</td></tr><tr><td>6 – 10</td><td>4.5%</td></tr><tr><td>11 – 15</td><td>3.0%</td></tr><tr><td>16 – 20</td><td>3.0%</td></tr><tr><td>Over 20</td><td>3.0%</td></tr></table>	Service	% Increase	0 – 5	6.0%	6 – 10	4.5%	11 – 15	3.0%	16 – 20	3.0%	Over 20	3.0%	<table><tr><td>Service</td><td>% Increase</td></tr><tr><td>0 – 5</td><td>6.0%</td></tr><tr><td>6 – 10</td><td>4.5%</td></tr><tr><td>11 – 15</td><td>3.0%</td></tr><tr><td>16 – 20</td><td>3.0%</td></tr><tr><td>Over 20</td><td>3.0%</td></tr></table>	Service	% Increase	0 – 5	6.0%	6 – 10	4.5%	11 – 15	3.0%	16 – 20	3.0%	Over 20	3.0%
Service	% Increase																									
0 – 5	6.0%																									
6 – 10	4.5%																									
11 – 15	3.0%																									
16 – 20	3.0%																									
Over 20	3.0%																									
Service	% Increase																									
0 – 5	6.0%																									
6 – 10	4.5%																									
11 – 15	3.0%																									
16 – 20	3.0%																									
Over 20	3.0%																									
Total Payroll Growth (DB and DC)	2.50%	2.50%																								
Plan Election for New Hires	15% of new members are assumed to enter the DB 1.75 Plan, and 85% are assumed to elect the DC Plan.	NA																								
Cost of Living Adjustment	Specified in Plan	Specified in Plan																								
Mortality																										
Healthy Retiree	PUB-2010 General Retiree table 130% before age 80 +4 for males +2 for females projected generationally using 50% of Scale MP-2020 from 2010	PUB-2010 General Retiree table 130% before age 80 +4 for males +2 for females projected generationally using 50% of Scale MP-2020 from 2010																								
Healthy Beneficiaries	PUB-2010 General Contingent Survivors table 130% before age 80 +3 for males +4 for females projected generationally using 50% of Scale MP-2020 from 2010	PUB-2010 General Contingent Survivors table 130% before age 80 +3 for males +4 for females projected generationally using 50% of Scale MP-2020 from 2010																								
Disability																										
Incidence	Custom age-based table based upon actual experience (see attached)	Custom age-based table based upon actual experience (see attached)																								
Post-disability mortality	PUB-2010 Disabled Retiree table 130% before age 80 +4 for males +2 for females projected generationally using 50% of Scale MP-2020 from 2010	PUB-2010 Disabled Retiree table 130% before age 80 +4 for males +2 for females projected generationally using 50% of Scale MP-2020 from 2010																								

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	September 30, 2024	September 30, 2023
Withdrawal Rates	Service-based rates (see Withdrawal column of Probability of Separation from Active Service table)	Service-based rates (see Withdrawal column of Probability of Separation from Active Service table)
Retirement Age	40% assumed to retire at earliest eligibility for unreduced benefits. 20% per year thereafter until age 75 100% at age 75	40% assumed to retire at earliest eligibility for unreduced benefits. 20% per year thereafter until age 75 100% at age 75
Return of Contributions	100% of current Plan employees who withdraw before retirement and who have less than 20 years of service are assumed to elect a return of contributions Terminated or inactive members with at least 5 years of service and an account balance of at least \$10,000 and who have not withdrawn their contributions are assumed to retire upon eligibility for unreduced benefits. All other employees who have previously withdrawn are assumed to elect a return of contributions. Contributions earn 4.5% interest	100% of current Old DB Plan employees who withdraw before retirement and who have less than 20 years of service are assumed to elect a return of contributions Terminated or inactive members with at least 5 years of service and an account balance of at least \$10,000 and who have not withdrawn their contributions are assumed to retire upon eligibility for unreduced benefits. All other employees who have previously withdrawn are assumed to elect a return of contributions. Contributions earn 4.5% interest
Marital Status	Retiree data included spouse information. For active employees, 75% are assumed to have spouses at retirement. The assumed age difference is 3 years (+3 for a male spouse; -3 for a female spouse).	Retiree data included spouse information. For active employees, 75% are assumed to have spouses at retirement. The assumed age difference is 3 years (+3 for a male spouse; -3 for a female spouse).
Leave Adjustments	Assumed to add 1.5 years of service (Old DB only) and increase average earnings (Old DB only) by 3% at retirement	Assumed to add 1.5 years of service (Old DB only) and increase average earnings (Old DB only) by 3% at retirement
Administrative Expenses	\$7,463,000 per year (equal to budgeted expense for year ending 9/30/25), allocated 70% to DB and 30% to DC.	\$7,402,000 per year (equal to budgeted expense for year ending 9/30/24), allocated 70% to DB and 30% to DC.
Survivor Benefit – Minor Children	An average of 0.2 eligible child survivors for each retiree, with payments paid for 6 years. Payments to current child survivors	An average of 0.2 eligible child survivors for each retiree, with payments paid for 6 years. Payments to current child survivors

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	September 30, 2024	September 30, 2023
	are assumed to be payable through age 21.	are assumed to be payable through age 21.
Asset Valuation Method	3-year phase-in of gains/losses relative to interest rate assumption	3-year phase-in of gains/losses relative to interest rate assumption

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Probabilities of Separation from Active Service
(per 100 working at each age)

MALE					FEMALE				
Age	Death	Disability	Service	Withdrawal	Age	Death	Disability	Service	Withdrawal
20	0.04	0.03	0	15.0	20	0.01	0.02	0	15.0
21	0.04	0.03	1	13.0	21	0.01	0.02	1	13.0
22	0.04	0.03	2	10.0	22	0.01	0.02	2	10.0
23	0.04	0.03	3	8.0	23	0.01	0.02	3	8.0
24	0.04	0.03	4	7.0	24	0.01	0.02	4	7.0
25	0.04	0.03	5	6.0	25	0.01	0.02	5	6.0
26	0.05	0.03	6	5.0	26	0.02	0.02	6	5.0
27	0.05	0.03	7	4.0	27	0.02	0.02	7	4.0
28	0.05	0.03	8	3.0	28	0.02	0.02	8	3.0
29	0.05	0.03	9	2.0	29	0.02	0.02	9	2.0
30	0.06	0.03	10	2.0	30	0.02	0.02	10	2.0
31	0.06	0.03	11	2.0	31	0.01	0.02	11	2.0
32	0.07	0.03	12	2.0	32	0.03	0.02	12	2.0
33	0.07	0.03	13	2.0	33	0.03	0.02	13	2.0
34	0.07	0.03	14	2.0	34	0.03	0.02	14	2.0
35	0.08	0.03	15	2.0	35	0.04	0.02	15	2.0
36	0.09	0.03	16	2.0	36	0.04	0.02	16	2.0
37	0.09	0.03	17	2.0	37	0.04	0.02	17	2.0
38	0.10	0.03	18	2.0	38	0.05	0.02	18	2.0
39	0.11	0.03	19	2.0	39	0.05	0.02	19	2.0
40	0.12	0.05	20 & over	2.0	40	0.06	0.03	20 & over	2.0
41	0.13	0.05			41	0.06	0.03		
42	0.14	0.05			42	0.07	0.03		
43	0.15	0.05			43	0.07	0.03		
44	0.17	0.05			44	0.08	0.03		
45	0.18	0.10			45	0.09	0.05		
46	0.19	0.10			46	0.09	0.05		
47	0.21	0.10			47	0.10	0.05		
48	0.23	0.10			48	0.11	0.05		
49	0.25	0.10			49	0.12	0.05		
50	0.26	0.15			50	0.13	0.10		
51	0.28	0.15			51	0.14	0.10		
52	0.31	0.15			52	0.15	0.10		
53	0.33	0.15			53	0.16	0.10		
54	0.36	0.15			54	0.17	0.10		
55	0.38	0.25			55	0.19	0.15		
56	0.41	0.25			56	0.20	0.15		
57	0.45	0.25			57	0.22	0.15		
58	0.48	0.25			58	0.24	0.15		
59	0.52	0.27			59	0.26	0.14		
60	0.56	0.38			60	0.29	0.19		
61	0.61	0.38			61	0.32	0.19		
62	0.66	0.38			62	0.35	0.19		
63	0.71	0.38			63	0.38	0.19		
64	0.77	0.38			64	0.43	0.19		

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APPENDIX C. SUMMARY OF PARTICIPANT DATA

Active Non-Uniformed – Old DB Plan

Age	COUNT			ANNUAL SALARIES		
	Males	Females	Total	Males	Females	Total
Under 20	-	-	-	-	-	-
20 – 24	-	-	-	-	-	-
25 – 29	-	-	-	-	-	-
30 – 34	-	-	-	-	-	-
35 – 39	-	-	-	-	-	-
40 – 44	-	-	-	-	-	-
45 – 49	13	13	26	*	*	-
50 – 54	74	117	191	\$ 5,488,443	\$ 9,390,844	\$ 14,879,287
55 – 59	87	138	225	6,676,782	10,780,239	17,457,020
60 – 64	62	99	161	5,011,335	8,167,062	13,178,397
65 – 69	29	39	68	2,657,074	3,138,328	5,795,403
70 & Over	<u>10</u>	<u>30</u>	<u>40</u>	*	<u>2,632,883</u>	<u>2,632,883</u>
Total	275	436	711	\$ 19,833,634	\$ 34,109,356	\$ 53,942,990

* Not shown if fewer than 20 members. The totals only sum the cells that are displayed.

Age	SERVICE									Total
	0 - 4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 20	-	-	-	-	-	-	-	-	-	-
20 – 24	-	-	-	-	-	-	-	-	-	-
25 – 29	-	-	-	-	-	-	-	-	-	-
30 – 34	-	-	-	-	-	-	-	-	-	-
35 – 39	-	-	-	-	-	-	-	-	-	-
40 – 44	-	-	-	-	-	-	-	-	-	-
45 – 49	-	2	2	1	2	9	10	-	-	26
50 – 54	4	2	2	8	7	50	110	8	-	191
55 – 59	2	4	4	10	3	31	118	51	2	225
60 – 64	1	3	6	10	8	17	71	33	12	161
65 – 69	-	-	4	4	1	9	28	15	7	68
70 & Over	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>2</u>	<u>15</u>	<u>10</u>	<u>12</u>	<u>40</u>
Total	7	11	19	33	21	118	352	117	33	711

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Active Uniformed – Old DB Plan

Age	COUNT			ANNUAL SALARIES		
	Males	Females	Total	Males	Females	Total
Under 20	-	-	-	-	-	-
20 – 24	-	-	-	-	-	-
25 – 29	-	-	-	-	-	-
30 – 34	-	-	-	-	-	-
35 – 39	-	-	-	-	-	-
40 – 44	-	-	-	-	-	-
45 – 49	6	-	6	*	-	*
50 – 54	31	4	35	\$ 2,839,948	*	\$ 2,839,948
55 – 59	30	6	36	3,620,123	*	3,620,123
60 – 64	18	1	19	*	*	*
65 – 69	2	2	4	*	*	*
70 & Over	<u>2</u>	<u>-</u>	<u>2</u>	<u>*</u>	<u>-</u>	<u>*</u>
Total	89	13	102	\$ 6,460,071	*	\$ 6,460,071

* Not shown if fewer than 20 members. The totals only sum the cells that are displayed.

Age	SERVICE									Total
	0 – 4	5 – 9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 20	-	-	-	-	-	-	-	-	-	-
20 – 24	-	-	-	-	-	-	-	-	-	-
25 – 29	-	-	-	-	-	-	-	-	-	-
30 – 34	-	-	-	-	-	-	-	-	-	-
35 – 39	-	-	-	-	-	-	-	-	-	-
40 – 44	-	-	-	-	-	-	-	-	-	-
45 – 49	-	-	-	-	-	5	1	-	-	6
50 – 54	-	-	-	-	3	14	16	2	-	35
55 – 59	-	1	1	-	1	4	18	10	1	36
60 – 64	-	-	1	-	-	1	7	9	1	19
65 – 69	-	-	-	-	-	-	1	2	1	4
70 & Over	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>2</u>
Total	-	1	3	-	4	24	44	23	3	102

Active Total – Old DB Plan

Age	COUNT			ANNUAL SALARIES		
	Males	Females	Total	Males	Females	Total
Under 20	-	-	-	-	-	-
20 – 24	-	-	-	-	-	-
25 – 29	-	-	-	-	-	-
30 – 34	-	-	-	-	-	-
35 – 39	-	-	-	-	-	-
40 – 44	-	-	-	-	-	-
45 – 49	19	13	32	*	*	*
50 – 54	105	121	226	\$ 8,328,392	\$ 9,783,430	\$ 18,111,821
55 – 59	117	144	261	10,296,905	11,273,891	21,570,796
60 – 64	80	100	180	6,978,159	8,274,799	15,252,958
65 – 69	31	41	72	2,877,066	3,413,829	6,290,895
70 & Over	<u>12</u>	<u>30</u>	<u>42</u>	<u>*</u>	<u>2,632,883</u>	<u>2,632,883</u>
Total	364	449	813	\$ 28,480,522	\$ 35,378,831	\$ 63,859,353

* Not shown if fewer than 20 members. The totals only sum the cells that are displayed.

Age	SERVICE									Total
	0 - 4	5 – 9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 20	-	-	-	-	-	-	-	-	-	-
20 – 24	-	-	-	-	-	-	-	-	-	-
25 – 29	-	-	-	-	-	-	-	-	-	-
30 – 34	-	-	-	-	-	-	-	-	-	-
35 – 39	-	-	-	-	-	-	-	-	-	-
40 – 44	-	-	-	-	-	-	-	-	-	-
45 – 49	-	2	2	1	2	14	11	-	-	32
50 – 54	4	2	2	8	10	64	126	10	-	226
55 – 59	2	5	5	10	4	35	136	61	3	261
60 – 64	1	3	7	10	8	18	78	42	13	180
65 – 69	-	-	4	4	1	9	29	17	8	72
70 & Over	<u>-</u>	<u>-</u>	<u>2</u>	<u>-</u>	<u>-</u>	<u>2</u>	<u>16</u>	<u>10</u>	<u>12</u>	<u>42</u>
Total	7	12	22	33	25	142	396	140	36	813

Active Non-Uniformed – DB 1.75 Plan

Age	COUNT			ANNUAL SALARIES		
	Males	Females	Total ¹	Males	Females	Total
Under 20	1	1	2	*	*	*
20 – 24	44	27	71	\$ 1,402,003	\$ 795,314	\$ 2,197,317
25 – 29	148	145	293	5,956,342	5,943,652	11,899,994
30 – 34	215	274	489	9,695,757	13,003,708	22,699,464
35 – 39	197	254	451	10,840,853	13,482,213	24,323,067
40 – 44	219	290	509	13,183,475	17,114,231	30,297,707
45 – 49	258	367	625	16,866,301	23,844,059	40,710,360
50 – 54	299	381	680	20,066,825	25,983,957	46,050,782
55 – 59	214	272	486	15,270,974	17,708,305	32,979,279
60 – 64	152	211	363	11,565,627	13,841,673	25,407,300
65 – 69	60	90	150	4,794,490	5,794,489	10,588,979
70 & Over	<u>31</u>	<u>40</u>	<u>71</u>	<u>2,501,863</u>	<u>2,960,587</u>	<u>5,462,449</u>
Total	1,838	2,352	4,190	\$ 112,144,509	\$ 140,472,188	\$ 252,616,697

* Not shown if fewer than 20 members. The totals only sum the cells that are displayed.

¹38 participants did not have a provided sex. Based on known sex, unknown are assumed to be approximately 44% male.

Age	SERVICE									Total
	0 - 4	5 - 9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 20	2	-	-	-	-	-	-	-	-	2
20 – 24	66	5	-	-	-	-	-	-	-	71
25 – 29	191	99	3	-	-	-	-	-	-	293
30 – 34	138	259	88	4	-	-	-	-	-	489
35 – 39	66	158	151	73	3	-	-	-	-	451
40 – 44	49	129	125	145	56	5	-	-	-	509
45 – 49	53	113	91	127	139	101	1	-	-	625
50 – 54	51	94	94	122	102	196	20	1	-	680
55 – 59	34	64	72	117	65	91	32	9	2	486
60 – 64	17	34	45	91	59	80	25	12	-	363
65 – 69	3	16	19	27	30	38	14	3	-	150
70 & Over	<u>4</u>	<u>5</u>	<u>1</u>	<u>16</u>	<u>21</u>	<u>14</u>	<u>6</u>	<u>3</u>	<u>1</u>	<u>71</u>
Total	674	976	689	722	475	525	98	28	3	4,190

Active Uniformed – DB 1.75 Plan

Age	COUNT			ANNUAL SALARIES		
	Males	Females	Total	Males	Females	Total
Under 20	-	-	-	-	-	-
20 – 24	-	-	-	-	-	-
25 – 29	5	-	5	*	-	*
30 – 34	28	6	34	\$ 1,688,162	*	\$ 1,688,162
35 – 39	41	7	48	2,543,149	*	2,543,149
40 – 44	44	8	52	2,913,981	*	2,913,981
45 – 49	49	8	57	3,895,800	*	3,895,800
50 – 54	74	7	81	6,705,623	*	6,705,623
55 – 59	47	2	49	4,653,912	*	4,653,912
60 – 64	15	4	19	*	*	*
65 – 69	2	-	2	*	-	*
70 & Over	<u>1</u>	<u>-</u>	<u>1</u>	<u>*</u>	<u>-</u>	<u>*</u>
Total	306	42	348	\$ 22,400,626	-	\$ 22,400,626

* Not shown if fewer than 20 members. The totals only sum the cells that are displayed.

Age	SERVICE									Total
	0 – 4	5 – 9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 20	-	-	-	-	-	-	-	-	-	-
20 – 24	-	-	-	-	-	-	-	-	-	-
25 – 29	-	4	1	-	-	-	-	-	-	5
30 – 34	-	15	19	-	-	-	-	-	-	34
35 – 39	-	16	26	6	-	-	-	-	-	48
40 – 44	-	7	17	21	7	-	-	-	-	52
45 – 49	-	4	14	13	9	17	-	-	-	57
50 – 54	-	3	7	10	12	35	13	1	-	81
55 – 59	-	-	3	8	1	22	9	6	-	49
60 – 64	-	1	1	-	1	10	5	1	-	19
65 – 69	-	-	-	1	1	-	-	-	-	2
70 & Over	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>
Total	-	50	88	59	31	85	27	8	-	348

Active Total – DB 1.75 Plan

Age	COUNT			ANNUAL SALARIES		
	Males	Females	Total ¹	Males	Females	Total
Under 20	1	1	2	*	-	*
20 – 24	44	27	71	\$ 1,402,003	\$ 795,314	\$ 2,197,317
25 – 29	153	145	298	6,188,099	5,943,652	12,131,751
30 – 34	243	280	523	11,383,918	13,332,414	24,716,332
35 – 39	238	261	499	13,384,002	13,840,562	27,224,564
40 – 44	263	298	561	16,097,456	17,534,608	33,632,065
45 – 49	307	375	682	20,762,100	24,407,205	45,169,305
50 – 54	373	388	761	26,772,448	26,616,302	53,388,750
55 – 59	261	274	535	19,924,886	17,900,882	37,825,768
60 – 64	167	215	382	13,103,370	14,180,751	27,284,121
65 – 69	62	90	152	5,051,058	5,794,489	10,845,547
70 & Over	<u>32</u>	<u>40</u>	<u>72</u>	<u>2,570,295</u>	<u>2,960,587</u>	<u>5,530,882</u>
Total	2,144	2,394	4,538	\$ 136,639,635	\$ 143,306,766	\$ 277,450,902

* Not shown if fewer than 20 members. The totals only sum the cells that are displayed.

¹38 participants did not have a provided sex. Based on known sex, unknown are assumed to be approximately 44% male.

Age	SERVICE									Total
	0 – 4	5 – 9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 20	2	-	-	-	-	-	-	-	-	2
20 – 24	66	5	-	-	-	-	-	-	-	71
25 – 29	191	103	4	-	-	-	-	-	-	298
30 – 34	138	274	107	4	-	-	-	-	-	523
35 – 39	66	174	177	79	3	-	-	-	-	499
40 – 44	49	136	142	166	63	5	-	-	-	561
45 – 49	53	117	105	140	148	118	1	-	-	682
50 – 54	51	97	101	132	114	231	33	2	-	761
55 – 59	34	64	75	125	66	113	41	15	2	535
60 – 64	17	35	46	91	60	90	30	13	-	382
65 – 69	3	16	19	28	31	38	14	3	-	152
70 & Over	<u>4</u>	<u>5</u>	<u>1</u>	<u>16</u>	<u>21</u>	<u>15</u>	<u>6</u>	<u>3</u>	<u>1</u>	<u>72</u>
Total	674	1026	777	781	506	610	125	36	3	4,538

Service Retirees

Age	COUNT			ANNUAL BENEFITS**		
	Males	Females	Total	Males	Females	Total
Under 25	-	-	-	-	-	-
25 – 29	-	-	-	-	-	-
30 – 34	-	-	-	-	-	-
35 – 39	-	-	-	-	-	-
40 – 44	-	-	-	-	-	-
45 – 49	1	-	1	*	-	-
50 – 54	62	35	97	\$ 3,903,713	\$ 1,586,535	\$ 5,490,248
55 – 59	237	166	403	14,554,359	8,339,934	22,894,293
60 – 64	429	360	789	21,920,276	16,358,853	38,279,129
65 – 69	513	513	1,026	22,239,580	19,996,360	42,235,940
70 & Over	<u>1,298</u>	<u>1,742</u>	<u>3,040</u>	<u>51,107,556</u>	<u>57,617,847</u>	<u>108,725,403</u>
Total	2,540	2,816	5,356	\$ 113,725,483	\$ 103,899,530	\$ 217,625,013

* Not shown if fewer than 20 members. The totals only sum the cells that are displayed.

** Annual benefits shown do not include ad hoc COLAs or Supplemental Annuity Payments.

Age	ANNUAL BENEFIT LEVEL									Total
	<\$5k	\$5-10k	\$10-15k	\$15-20k	\$20-25k	\$25-30k	\$30-40k	\$40-50k	\$50k+	
Under 40	-	-	-	-	-	-	-	-	-	-
40 – 44	-	-	-	-	-	-	-	-	-	-
45 – 49	-	-	-	-	-	-	-	1	-	1
50 – 54	-	-	1	3	3	11	16	16	47	97
55 – 59	-	-	7	8	12	24	63	83	206	403
60 – 64	4	2	25	30	51	65	147	162	303	789
65 – 69	5	27	34	47	87	117	229	194	286	1,026
70 – 74	3	17	36	59	105	155	329	219	217	1,140
75 – 79	-	10	29	55	122	140	252	154	121	883
80 – 84	-	-	32	60	76	79	145	80	89	561
85 – 89	-	-	32	36	45	39	74	22	33	281
90 & Over	<u>-</u>	<u>1</u>	<u>27</u>	<u>37</u>	<u>32</u>	<u>20</u>	<u>29</u>	<u>13</u>	<u>16</u>	<u>175</u>
Total	12	57	223	335	533	650	1,284	944	1,318	5,356

Disabled Retirees

Age	COUNT			ANNUAL BENEFITS**		
	Males	Females	Total	Males	Females	Total
Under 25	-	-	-	-	-	-
25 – 29	-	-	-	-	-	-
30 – 34	-	-	-	-	-	-
35 – 39	-	-	-	-	-	-
40 – 44	-	-	-	-	-	-
45 – 49	-	-	-	-	-	-
50 – 54	4	4	8	*	*	*
55 – 59	12	6	18	*	*	*
60 – 64	10	8	18	*	*	*
65 – 69	16	8	24	*	*	-
70 & Over	<u>31</u>	<u>50</u>	<u>81</u>	<u>\$ 793,238</u>	<u>\$ 1,054,433</u>	<u>\$ 1,847,671</u>
Total	73	76	149	\$ 793,238	\$ 1,054,433	\$ 1,847,671

* Not shown if fewer than 20 members. The totals only sum the cells that are displayed.

** Annual benefits shown do not include ad hoc COLAs or Supplemental Annuity Payments.

Age	ANNUAL BENEFIT LEVEL									Total
	<\$5k	\$5-10k	\$10-15k	\$15-20k	\$20-25k	\$25-30k	\$30-40k	\$40-50k	\$50k+	
Under 40	-	-	-	-	-	-	-	-	-	-
40 – 44	-	-	-	-	-	-	-	-	-	-
45 – 49	-	-	-	-	-	-	-	-	-	-
50 – 54	-	-	-	5	-	-	-	3	-	8
55 – 59	-	-	1	2	2	5	4	4	-	18
60 – 64	-	-	1	7	4	3	1	-	2	18
65 – 69	-	-	1	7	6	4	5	-	1	24
70 – 74	-	-	3	9	6	8	5	1	-	32
75 – 79	-	-	2	7	4	6	4	1	-	24
80 – 84	-	-	1	11	5	-	1	-	-	18
85 – 89	-	-	2	1	3	1	-	-	-	7
90 & Over	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total	-	-	11	49	30	27	20	9	3	149

This work product was prepared solely for the Government of Guam Retirement Fund for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing this Milliman work product.

Surviving Spouses, QDRO and Child Pensioners

Age	COUNT			ANNUAL BENEFITS**		
	Males	Females	Total	Males	Females	Total
Under 20	47	41	88	\$ 148,256	\$ 118,080	\$ 266,336
20 – 24	7	16	23	*	*	-
25 – 29	4	5	9	*	*	*
30 – 34	5	6	11	*	*	*
35 – 39	-	8	8	-	*	*
40 – 44	4	15	19	*	*	*
45 – 49	10	26	36	*	285,421	285,421
50 – 54	12	61	73	*	1,106,336	1,106,336
55 – 59	13	90	103	*	1,663,615	1,663,615
60 – 64	18	147	165	*	2,955,396	2,955,396
65 – 69	41	245	286	737,978	5,090,166	5,828,144
70 & Over	<u>220</u>	<u>943</u>	<u>1,163</u>	<u>3,947,580</u>	<u>18,634,696</u>	<u>22,582,276</u>
Total	381	1,603	1,984	\$ 4,833,814	\$ 29,853,710	\$ 34,687,524

* Not shown if fewer than 20 members. The totals only sum the cells that are displayed.

** Annual benefits shown do not include ad hoc COLAs or Supplemental Annuity Payments.

*** Payees receiving benefits under Qualified Domestic Relations Orders (QDROs) are included with surviving spouses.

Age	ANNUAL BENEFIT LEVEL									Total
	<\$5k	\$5-10k	\$10-15k	\$15-20k	\$20-25k	\$25-30k	\$30-40k	\$40-50k	\$50k+	
Under 40	133	1	-	2	-	-	2	-	1	139
40 – 44	14	-	4	1	-	-	-	-	-	19
45 – 49	18	2	7	5	2	1	1	-	-	36
50 – 54	13	4	18	10	10	11	5	2	-	73
55 – 59	10	5	26	32	11	6	7	5	1	103
60 – 64	2	14	41	36	29	21	17	3	2	165
65 – 69	7	7	63	82	62	33	21	8	3	286
70 – 74	1	15	86	85	56	40	38	5	4	330
75 – 79	1	16	96	86	54	24	32	5	3	317
80 – 84	1	7	60	74	43	17	17	5	4	228
85 – 89	-	9	58	58	26	16	11	2	-	180
90 & Over	<u>-</u>	<u>8</u>	<u>44</u>	<u>38</u>	<u>10</u>	<u>5</u>	<u>3</u>	<u>-</u>	<u>-</u>	<u>108</u>
Total	200	88	503	509	303	174	154	35	18	1,984

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Inactive and Terminated Members Who are Assumed Not to Withdraw Contributions

Age	COUNT			ANNUAL BENEFITS		
	Males	Females	Total	Males	Females	Total
Under 25	-	-	-	-	-	-
25 – 29	-	-	-	-	-	-
30 – 34	-	-	-	-	-	-
35 – 39	-	-	-	-	-	-
40 – 44	-	-	-	-	-	-
45 – 49	1	-	1	*	-	*
50 – 54	6	6	12	*	*	*
55 – 59	13	8	21	*	*	-
60 – 64	9	7	16	*	*	*
65 – 69	2	4	6	*	*	*
70 & Over	<u>12</u>	<u>5</u>	<u>17</u>	<u>*</u>	<u>*</u>	<u>*</u>
Total	43	30	73	\$ 502,303	\$ 291,929	\$ 794,232

* Not shown if fewer than 20 members. The totals only sum the cells that are displayed.

APPENDIX D. RISK DISCLOSURE

The purpose of this appendix is to identify, assess, and provide illustrations of risks that are significant to the Plan, and in some cases to the Plan's participants. Historical data is included.

The results of the actuarial valuation are based on one set of reasonable assumptions. However, it is almost certain that future experience will not exactly match the assumptions. As an example, investments may perform better or worse than assumed in any single year and over any longer time horizon. It is therefore important to consider the potential impacts of these likely differences when making decisions that may affect the future financial health of the Plan, or of the Plan's participants.

In addition, as plans mature they accumulate larger pools of assets and liabilities. This increases the potential risk to plan funding and the finances of those who are responsible for plan funding. As an example, it is more difficult for a plan sponsor to deal with the effects of a 10% investment loss on a plan with \$1 billion in assets and liabilities than if the same plan sponsor is responsible for a 10% investment loss on a plan with \$1 million in assets and liabilities. Since pension plans make long-term promises and rely on long-term funding, it is important to consider how mature the Plan is today, and how mature it may become in the future.

Actuarial Standard of Practice No. 51 (ASOP 51) addresses these issues by providing actuaries with guidance for assessing and disclosing the risk associated with measuring pension liabilities and the determination of pension plan contributions. Specifically, it directs the actuary to:

- Identify risks that may be significant to the Plan.
- Assess the risks identified as significant to the Plan. The assessment does not need to include numerical calculations.
- Disclose plan maturity measures and historical information that are significant to understanding the Plan's risks.

ASOP 51 states that if in the actuary's professional judgment, a more detailed assessment would be significantly beneficial in helping the individuals responsible for the Plan to understand the risks identified by the actuary, then the actuary should recommend that such an assessment be performed.

This appendix uses the framework of ASOP 51 to communicate important information about: significant risks to the Plan. Relevant historical plan data information is contained in other sections of this report.

Investment Risk

Definition: The potential that investment returns will be different than expected.

Identification: To the extent that actual investment returns differ from the assumed investment return, the Plan's future assets, funding contributions, and funded status may differ significantly from those presented in this valuation.

Assessment: If the prior year's investment performance had been 150 basis points less than the 7.0% investment return assumption, it would have resulted in assets on a market value basis approximately \$29.4 million lower than expected. The asset loss would be recognized in the actuarial value of assets as a \$9.8 million loss in each of the next three years. A \$9.8 million decrease in actuarial value of assets would increase the contribution rate by 0.22% (from 33.85% to 34.07% in this valuation).

Interest Rate Risk

Definition: The potential that interest rates will be different than expected.

Identification: The pension liabilities reported herein have been calculated by computing the present value of expected future benefit payments using the interest rate(s) described in Appendix B. If interest rates in future valuations differ from this valuation, future pension liabilities, funding contributions, and funded status may differ significantly from those presented in this valuation. As a general rule, using a higher interest rate to compute the present value of future benefit payments will result in a lower pension liability, and vice versa.

Assessment: If the interest rate changes by 1%, the estimated change in pension liability is approximately 9.3%.

Demographic Risks

Definition: The potential that mortality or other demographic experience will be different than expected.

Identification: The pension liabilities reported herein have been calculated by assuming that participants will follow patterns of demographic experience (e.g., mortality, withdrawal, disability, retirement, form of payment election, etc.) as described in Appendix B. If actual demographic experience or future demographic assumptions are different from what is assumed to occur in this valuation, future pension liabilities, funding contributions, and funded status may differ significantly from those presented in this valuation. Note that we periodically perform an actuarial experience study of the Plan and provide recommendations for revisions where appropriate. An experience study has been performed for the period October 1, 2015 to September 30, 2020, and the recommendations from that study were first reflected in the actuarial valuation as of September 30, 2022.

Retirement Risk

Definition: The potential for participants to retire and receive subsidized benefits more valuable than expected.

Identification: The Old DB Plan has valuable early retirement benefits. For example, for an employee who originally became a member of the Fund prior to October 1, 1981, the benefit is unreduced at 25 years of service (regardless of age). If the participant has reached 20 years of service, the benefit is reduced at 3% per year below age 60. For employees who became members of the Fund after October 1, 1981, the early retirement benefits are also subsidized but not as subsidized as for those prior to October 1, 1981. Since the Old DB Plan is closed to new members, this risk diminishes as the population matures.

Duration Risk

Definition: Duration is a measure of the weighted average time until the plan's benefits are expected to be paid. It is an indicator of sensitivity to changes in interest rates: the higher the plan's duration, the more sensitive a plan's obligations are to changes in interest rates. Duration typically decreases as a plan matures and retiree liabilities exceed liabilities for active members.

Identification: The combined duration for the Old DB Plan and the DB 1.75 plan is approximately 9.3 years, which implies that plan liabilities would be expected to increase about 9.3% in response to a 1% decrease in interest rate.

Amortization/Funding Period

Definition: The Unfunded Actuarial Accrued Liability (UAAL) is the portion of the liability that has not yet been funded (equals liabilities minus assets). This amount is amortized over a specific period of time and is included in the determination of the contributions that are required each year.

Identification: The plan currently has a UAAL of \$1,362 million, which is approximately 38% of the total liabilities. This amount is currently amortized over 8.58 years which produces a contribution requirement for this component of \$192.1 million, which represents approximately 87% of the total of DB and DC contributions required for this year (\$219.9 million).

Assessment: Based on the current statutorily-defined funding policy that specifies all UAL will be paid in full by May 2033, the employer contribution rate is projected to drop substantially in 2034. The employer contribution rate will also become more and more volatile as the amortization period (remaining years until May 2033) is reduced. For example, in the actuarial valuation as of September 30, 2032, any investment gains or losses for the prior year will be amortized in less than 1 year. **As we did in the 2015-2020 experience study, we continue to recommend a change in the amortization method be adopted to reduce the future volatility in the employer contribution rate and smooth the projected decline in the employer contribution rate.**

Low-Default-Risk Obligation Measure (LDROM)

Effective for measurement dates February 15, 2023 or later, Actuarial Standard of Practice 4 (ASOP 4) states that when performing a funding valuation, the actuary should calculate and disclose a low-default-risk obligation measure (LDROM) of the benefits earned or accrued under the actuarial cost method used as of the measurement date. The actuary should select a discount rate derived from low-default-risk fixed income securities. We have used the Bond Buyer General Obligation 20-Bond Municipal Bond Index. The index is a 20-year high quality AA municipal bond rate and, based on Section 3.11.c. of ASOP 4, we believe this index meets the requirements for a discount rate for the LDROM. The index was 3.81% as of September 30, 2024.

This required disclosure shows significantly higher plan liabilities and a lower funded ratio than under the funding valuation assumption, as shown in the following chart. It provides the participating employers and other interested parties with additional funding metrics of the Plan for informational purposes, but does not impact the funding of the Plan which is based on the valuation assumptions.

	Bond Buyer Index*	Plan's Current Assumption
Interest Rate	3.81%	7.00%
Accrued Liability on September 30, 2024	\$4.90 billion**	\$3.54 billion
Funded Ratio on September 30, 2024 (Actuarial Value of Assets)	44%	62%

** This would be considered a "low-default-risk obligation measure (LDROM)" using the language of ASOP 4.*

*** Calculated using the same actuarial assumptions and methods that were used for this valuation, except for the interest rate.*

GGRF's investment policy and strategy is complex, and its target asset allocation reflects a balance of risk and return. The expected return based on GGRF's target allocation, and consequently the investment return assumption, is significantly higher than the discount rate based on the Bond Buyer Index. Investing in asset classes with a low default risk would be expected to reduce future investment returns and therefore increase future contributions needed and lower the current Funded Ratio. However, the lower investment risk levels would be expected to result in lower year-to-year volatility in the contribution rate, and a portfolio with a lower default risk might provide more benefit security for members if the associated liabilities are adequately funded. Conversely, investing in asset classes with higher expected returns and volatility would be expected to decrease future contributions and increase the current Funded Ratio, but it would increase the year-to-year volatility of the contribution rate and could provide less benefit security for members. A change away from the current return-seeking-with-reasonable-risk investment strategy is not being considered by GGRF.

APPENDIX E. GLOSSARY OF KEY TERMS

Actuarial Accrued Liability or Total Pension Liability. The Present Value of Future Benefits allocated to past service in accordance with the actuarial cost method. GASB 67 uses the term Total Pension Liability.

Actuarial Cost Method. A method of allocating the present value of benefits to past and future periods. Actuarial cost methods take into consideration the effect of wage inflation.

Actuarial Gains and Losses. Changes to the Actuarial Accrued Liability due to deviations from the actuarial assumptions. These can include gains and losses from investments, employee turnover, disability, retirement, mortality, and administrative expenses.

Actuarial Value of Assets. A method of valuing Fund assets that may smooth gains and losses that occur in the market value over a period of time.

GASB. Government Accounting Standards Board. GASB Statements No. 67, and 68 are accounting standards issued by GASB that require certain items be disclosed in the Fund's financial statements.

Fiduciary Net Position. The market value of Fund assets.

Net Pension Liability. The dollar value of the Total Pension Liability that exceeds the market value of Fund assets. A fully funded plan will have no Net Pension Liability.

Normal Cost or Service Cost. The value of benefits earned for one year of service. The normal cost is calculated in accordance with the actuarial cost method. The accumulation of all normal costs assigned to past service equals the Actuarial Accrued Liability. GASB 68 uses the term Service Cost.

Present Value of Benefits. The sum of all benefits expected to be paid in the future by the retirement system, with the payments discounted to the present using the valuation interest rate. This includes benefits to be earned in the future for current employees.

Present Value of Future Normal Cost. The sum of all future normal costs expected for current employees, with the costs discounted back to the present using the valuation interest rate.

Security Ratio. The percentage of the Actuarial Accrued Liability that is funded by the Fund assets. A fully funded plan will have a security ratio of 100%.

Unfunded Actuarial Accrued Liability. The dollar value of the Actuarial Accrued Liability that exceeds the Actuarial Value of Assets. A fully funded plan will have no unfunded actuarial accrued liability.