
NMI Settlement Fund

Actuarial Valuation as of September 30, 2020

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December 9, 2021



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**NMI Settlement Fund –
Actuarial Valuation as of September 30, 2020**

As part of our engagement with the NMI Settlement Fund, we performed an actuarial valuation of the NMI Settlement Fund as of September 30, 2020. The purpose of the actuarial valuation is to project the minimum annual payments to be made by the Commonwealth of the Northern Mariana Islands (CNMI) to pay 75% of the Class Members' Full Benefits.

In preparing this report, I 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. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete the results may be different and the calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the Fund have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Plan and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the Fund.

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 results were developed using models 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 additional cost or contribution requirements 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.

Actuarial computations presented in this report are for the purposes of determining the recommended funding amounts for the Fund. Determinations for other purposes may be significantly different from the results contained in this report. Therefore, additional determinations may be needed for other purposes.

Milliman's work is prepared solely for the use and benefit of the NMI Settlement 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) NMI Settlement Fund 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 the NMI Settlement Fund.
- (b) NMI Settlement Fund may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

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 pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

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. The undersigned 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 blue ink that reads "Richard A. Wright".

Richard A. Wright, FSA, MAAA
Principal, Consulting Actuary

Sincerely,

A handwritten signature in blue ink that reads "Kevin Poenisch".

Kevin Poenisch, FSA, MAAA
Actuary

TABLE OF CONTENTS

Section	Page
I VALUATION SUMMARY	
Introduction	1
Highlights	1
Results of Valuation	2
Actuarial Assumptions	3
Funding Method	4
II VALUATION EXHIBITS	
Exhibit 1. Summary of Fund Assets	4
Exhibit 2. Changes in Fund Assets	5
Exhibit 3. Summary of Census Data	6
Exhibit 4. Reconciliation of Census Data	7
Exhibit 5. Projected Benefit Payments	8
Exhibit 6. Projected Fund Balance	9
VI APPENDICES	
Appendix A. Summary of Pension Plan	10
Appendix B. Actuarial Cost Method and Assumptions.....	13
Appendix C. Risk Disclosure.....	15

SECTION I. VALUATION SUMMARY**INTRODUCTION**

Milliman, Inc. has been retained by the NMI Settlement Fund to provide an actuarial valuation of the Fund. The NMI Settlement Fund was created to pay pension benefits to members of the Northern Mariana Islands Retirement Fund who opted to become members of the NMI Settlement Fund.

Section 4.0 of the settlement agreement that created the NMI Settlement Fund requires the Commonwealth of the Northern Mariana Islands (CNMI) to make minimum annual payments each year to pay 75% of the Class Members' Full Benefits. The payments for fiscal years 2014 and 2015 were fixed at \$25,000,000 and \$27,000,000, respectively. The payments after fiscal year 2015 are to be determined by an independent actuary.

In our valuation we:

- Summarize the membership data.
- Estimate the future annual benefits to be paid by the NMI Settlement Fund.
- Review the current Fund balance.
- Project the fund balance forward for the expected life of the NMI Settlement Fund.
- Determine the minimum annual payments to be made by CNMI.

The results contained in this report represent our best estimates. 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

- Starting in FY 2018, the Settlement Fund essentially became a "pay as you go" entity, as the CNMI minimum payments are approximately equal to the pension payments (at 75%). A payment of \$42,000,000 was made for fiscal year 2020. We have determined that the minimum annual payment from CNMI should be \$40,000,000 for fiscal year 2021.
- The minimum payment for CNMI is estimated to be \$38,000,000 for FY 2022. The minimum payments are estimated to decline as follows: \$36,000,000 for FY 2023, \$34,000,000 for FY 2024, \$33,000,000 for FY 2025, \$32,000,000 for FY 2026, \$31,000,000 for FY 2027, \$30,000,000 for FY 2028, \$29,000,000 for FY 2029, \$28,000,000 for FY 2030, \$27,000,000 for FY 2031, and \$26,000,000 for FY 2032 through FY 2040. After FY 2040, CNMI payments are expected to be equal to the benefits and expenses paid by the NMI Settlement Fund. Exhibit 6 shows the projected Fund balance for the next 40 years.
- The mortality assumption was updated to the Pub-2010 table set forward 5 years for males and females, using 130% of the rates for ages 60 to 75, and projected generationally using 50% of the MP-2020 projection scale from 2020 onward. This mortality assumption was developed based on our review of actual CNMI experience from October 1, 2018 to September 30, 2020. The updated mortality table, set forward, table multiplier, and projection scale were selected so that the expected mortality is close to the actual mortality experience for each age.

SECTION I. VALUATION SUMMARY

RESULTS OF VALUATION

	September 30, 2020	September 30, 2019
Participant Counts		
Active Employees (Class I)	45	54
Active Employees (Class II)	<u>3</u>	<u>4</u>
Total Active Employees	48	58
Retirees	2,724	2,780
Vested Terminees	<u>58</u>	<u>57</u>
Total Participants	2,830	2,895
Market Value of Assets		
	\$130,784,550	\$124,973,837
Benefit Payments from NMI Settlement Fund		
	\$42,514,174	\$42,457,809
CNMI Annual Payments		
FY 2014	\$25,000,000	\$25,000,000
FY 2015	27,000,000	27,000,000
FY 2016	30,000,000	30,000,000
FY 2017	33,000,000	33,000,000
FY 2018	45,000,000	45,000,000
FY 2019	44,000,000	44,000,000
FY 2020	42,000,000	42,000,000
Projected CNMI Payments		
FY 2021	40,000,000	40,000,000
FY 2022	38,000,000	38,000,000
FY 2023	36,000,000	36,000,000
FY 2024	34,000,000	34,000,000
FY 2025	33,000,000	32,000,000
(see Exhibit 6 for FY 2026 and later years)		

This work product was prepared solely for the NMI Settlement 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 hire their own actuary or other qualified professional when reviewing this Milliman work product.

SECTION I. VALUATION SUMMARY**ACTUARIAL ASSUMPTIONS**

The following are the major assumptions used in the actuarial valuation. The assumptions are generally the same as those used in the 2012 actuarial valuation performed by the prior actuary, as stated in the audited financial statements of the Northern Mariana Islands Retirement Fund for the fiscal year ending September 30, 2012, except where indicated below. To the extent that actual experience differs from the assumptions below, future pension costs will differ.

Expected Investment Return: We have used the investment return assumption provided by the investment consultant of 3.50% for fiscal years 2021 through 2030 and 5.14% thereafter.

Mortality: The mortality table used in the previous actuarial study was the 1971 Group Annuity Mortality table for Males, with ages set forward 3 years for males. However, due to the relatively small sample size and the potential for adverse experience, we also showed the impact of using an improved mortality table, which is the RP 2000 mortality table for healthy lives projected to 2019 using Scale AA. For this actuarial study, we updated the mortality assumption to the Pub-2010 table set forward 5 years for males and females, using 130% of the rates for ages 60 to 75, and 50% of the MP-2020 projection scale from 2020 onward.

Salary Increases: Salaries are not assumed to increase in future years.

Retirement Age: The earlier of age 62, if eligible, or 25 years of vesting service.

Administrative Expenses: Administrative expenses and fees are assumed to be \$1,697,191 for fiscal year ending September 30, 2021, and are assumed to remain at that level until the fiscal year ending September 30, 2040, after which they are assumed to be 6.2% of benefit payments.

Rates of Withdrawal and Disability: The assumed rates of withdrawal and disability are shown in Appendix B.

Probability of Marriage: We have assumed that 94% of participants are married and that males are 5 years older than their female spouses.

A complete summary of actuarial assumptions is in Appendix B.

FUNDING METHOD

Section 4.0 of the settlement agreement that created the NMI Settlement Fund requires the Commonwealth of the Northern Mariana Islands (CNMI) to make minimum annual payments each year to pay 75% of the Class Members' Full Benefits. The payments for fiscal years 2014 and 2015 were fixed at \$25,000,000 and \$27,000,000, respectively. The payments after fiscal year 2015 are to be determined by an independent actuary. For fiscal years 2016, 2017, 2018, 2019, and 2020, CNMI made payments of \$30,000,000, \$33,000,000, \$45,000,000, \$44,000,000, and \$42,000,000 respectively. The payment for fiscal year 2021 is \$40,000,000.

SECTION II. VALUATION EXHIBITS

EXHIBIT 1. SUMMARY OF FUND ASSETS

Listed below are the assets reported for the NMI Settlement Fund in the Fund's financial statements.

	September 30, 2020	September 30, 2019
ASSETS		
Current Assets		
Cash	\$ 10,203,460	\$ 6,566,740
Receivables, net	148,267	188,869
Due from CNMI Government	0	17,693,037
CNMI judicial building loan receivable	1,303,939	2,019,860
Investments	119,080,802	98,408,431
Prepaid expenses	68,170	67,951
Total current assets	\$ 130,804,638	\$ 124,944,888
Property and equipment	\$ 306,781	\$ 325,985
Total Assets	\$ 131,111,419	\$ 125,270,873
LIABILITIES		
Current Liabilities		
Accounts payable and accrued expenses	326,869	297,036
TOTAL NET ASSETS	\$ 130,784,550	\$ 124,973,837
Assets Temporarily Restricted	30,797	30,797
UNRESTRICTED NET ASSETS	\$ 130,753,753	\$ 124,943,040

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SECTION II. VALUATION EXHIBITS

EXHIBIT 2. CHANGES IN FUND 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	
	September 30, 2020	September 30, 2019
Beginning Balance	\$ 124,943,040	\$ 116,467,385
Contributions and Payments		
CNMI Government Contribution	42,000,000	44,000,000
Employer supplemental payments	1,579,111	1,744,922
Active Settlement Class Member contributions	<u>509,027</u>	<u>573,235</u>
Total contributions	44,088,138	46,318,157
Investment Income		
Interest and dividends	3,485,886	3,536,509
Net appreciation in fair value of investments	<u>2,153,273</u>	<u>1,731,074</u>
Total investment income	5,639,159	5,267,583
Other Additions		
CNMI Government Contribution (APGA)	0	0
Local investment income	130,274	192,225
Rental and other income	164,507	588,265
Net assets released from restriction	<u>13,980,427</u>	<u>14,153,971</u>
Total other additions	14,275,208	14,934,461
TOTAL ADDITIONS	64,002,505	66,520,201
Benefit Payments		
Retirement benefits	47,101,196	47,812,085
Survivors benefits	8,329,087	8,255,098
Disability benefits	372,171	489,765
Death lump sum distributions	41,331	41,613
Refunds	<u>650,816</u>	<u>13,219</u>
Total benefit and refund payments	56,494,601	56,611,780
Other Deductions		
Personnel expenses	807,407	652,009
Professional expenses	435,134	233,315
General and administrative expenses	<u>454,650</u>	<u>547,442</u>
Total other deductions	1,697,191	1,432,766
TOTAL DEDUCTIONS	58,191,792	58,044,546
Ending Balance	\$ 130,753,753	\$ 124,943,040

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SECTION II. VALUATION EXHIBITS

EXHIBIT 3. SUMMARY OF CENSUS DATA

	September 30, 2020	September 30, 2019
Active Employees		
Class 1	45	54
Class 2	<u>3</u>	<u>4</u>
Total	48	58
Average age	53.4	53.5
Average service	24.0	22.8
Total salary	\$ 2,488,704	\$ 2,964,898
Retirees		
Healthy retiree	1,901	1,957
Disabled retiree	23	28
Back to service retirees	22	23
Surviving spouse	689	668
Child pensioner	<u>89</u>	<u>104</u>
Total	2,724	2,780
Vested Terminees	58	57
Average age	64.8	64.1
Average remaining life expectancy (years) ¹	17.2	16.0
Annual benefit payments at 100%	\$ 56,917,736	\$ 57,749,609
Annual benefit payments at 75%	\$ 42,688,302	\$ 43,312,207

¹ Average remaining life expectancy (years) as of September 30, 2019 was 16.0 under current mortality and 21.7 under improved mortality.

SECTION II. VALUATION EXHIBITS

EXHIBIT 4. RECONCILIATION OF CENSUS DATA

	Actives	Healthy Retirees*	Disabled Retirees	Surviving Spouses	Child Pensioners	Vested Terminees	Total
As of 9/30/19	58	1,980	28	668	104	57	2,895
New Participants				1	13		33
Active to Retiree, Surviving Spouse or Vested Terminee	(8)	4				4	0
Retiree to Surviving Spouse		(39)		39			0
Disabled Retiree to Healthy Retiree or Surviving Spouse		4	(5)	1			0
Vested Terminee to Retiree		2				(2)	0
Other (drops)	(2)	(28)	-	(20)	(28)	(1)	(81)
As of 9/30/20	48	1,923	23	689	89	58	2,830

* Includes healthy retirees and back to service retirees

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SECTION II. VALUATION EXHIBITS

EXHIBIT 5. PROJECTED BENEFIT PAYMENTS

Fiscal Year Ending 9/30	Active Employee Count	Active Employee Salary	Current Retirees and VTs	Future Retirees	Total Retirees and VTs	Benefit Payments at 75%
2021	48.0	\$2,488,704	2,780.0	-	2,780.0	\$ 42,659,502
2022	19.4	788,433	2,751.8	28.2	2,780.0	42,593,548
2023	16.0	616,902	2,718.3	31.1	2,749.5	42,424,177
2024	14.6	580,047	2,677.8	32.0	2,710.0	42,193,384
2025	13.3	513,164	2,629.7	32.8	2,662.7	41,889,690
2026	12.2	481,908	2,572.3	33.4	2,606.1	41,300,486
2027	11.1	423,515	2,509.9	34.0	2,544.4	40,800,477
2028	9.0	311,286	2,445.5	35.5	2,481.7	40,201,134
2029	8.0	277,566	2,377.3	35.8	2,414.0	39,550,187
2030	4.6	154,489	2,312.2	38.4	2,351.9	38,831,598
2031	3.8	129,926	2,241.7	38.5	2,281.7	38,016,803
2032	3.1	106,753	2,168.3	38.5	2,208.4	37,104,829
2033	2.3	74,675	2,096.6	38.4	2,137.0	36,155,525
2034	0.7	21,568	2,020.1	39.1	2,061.4	35,093,411
2035	0.7	21,455	1,941.9	38.1	1,982.6	33,979,754
2036	0.7	21,339	1,862.6	37.2	1,902.5	32,788,938
2037	0.7	21,220	1,781.3	36.1	1,820.4	31,535,045
2038	0.7	21,098	1,697.3	35.0	1,735.5	30,242,177
2039	0.7	20,972	1,611.9	33.9	1,649.3	28,884,884
2040	0.7	20,825	1,526.6	32.7	1,563.0	27,510,431
2041	0.7	20,672	1,440.8	31.4	1,476.2	26,097,966
2042	-	-	1,355.1	30.8	1,390.1	24,640,156
2043	-	-	1,268.7	29.4	1,302.6	23,170,667
2044	-	-	1,184.2	28.0	1,217.0	21,694,308
2045	-	-	1,101.1	26.6	1,132.6	20,221,300
2046	-	-	1,019.8	25.2	1,050.0	18,764,266
2047	-	-	940.7	23.7	969.6	17,332,731
2048	-	-	864.2	22.3	891.8	15,935,002
2049	-	-	790.6	20.8	816.8	14,578,399
2050	-	-	720.1	19.4	745.0	13,269,721
2051	-	-	653.0	17.9	676.4	12,014,933
2052	-	-	589.3	16.5	611.3	10,819,168
2053	-	-	529.2	15.1	549.7	9,686,534
2054	-	-	472.7	13.8	491.7	8,620,247
2055	-	-	419.8	12.5	437.5	7,622,602
2056	-	-	370.6	11.3	386.8	6,695,003
2057	-	-	325.0	10.2	339.8	5,838,290
2058	-	-	283.0	9.1	296.5	5,052,636
2059	-	-	244.6	8.0	256.8	4,337,593
2060	-	-	209.6	7.1	220.6	3,692,017

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SECTION II. VALUATION EXHIBITS

EXHIBIT 6. PROJECTED FUND BALANCE

FYE 9/30	Beginning Balance	CNMI Payments	Other Contribs	Investment Earnings	Benefit Payments at 75%	Expenses & Fees	Ending Balance
2021	\$130,753,753	\$40,000,000	\$1,012,853	\$4,517,864	(\$42,659,502)	(\$1,697,191)	\$131,927,777
2022	131,927,777	38,000,000	320,876	4,513,000	(42,593,548)	(1,697,191)	130,470,914
2023	130,470,914	36,000,000	251,067	4,428,752	(42,424,177)	(1,697,191)	127,029,365
2024	127,029,365	34,000,000	236,068	4,277,074	(42,193,384)	(1,697,191)	121,651,932
2025	121,651,932	33,000,000	208,847	4,076,202	(41,889,690)	(1,697,191)	115,350,100
2026	115,350,100	32,000,000	196,127	3,848,226	(41,300,486)	(1,697,191)	108,396,776
2027	108,396,776	31,000,000	172,362	3,595,694	(40,800,477)	(1,697,191)	100,667,164
2028	100,667,164	30,000,000	126,687	3,317,347	(40,201,134)	(1,697,191)	92,212,873
2029	92,212,873	29,000,000	112,964	3,015,098	(39,550,187)	(1,697,191)	83,093,557
2030	83,093,557	28,000,000	62,874	2,690,121	(38,831,598)	(1,697,191)	73,317,763
2031	73,317,763	27,000,000	52,877	3,443,142	(38,016,803)	(1,697,191)	64,099,788
2032	64,099,788	26,000,000	43,446	2,966,834	(37,104,829)	(1,697,191)	54,308,048
2033	54,308,048	26,000,000	30,391	2,487,600	(36,155,525)	(1,697,191)	44,973,323
2034	44,973,323	26,000,000	8,778	2,034,536	(35,093,411)	(1,697,191)	36,226,035
2035	36,226,035	26,000,000	8,732	1,613,545	(33,979,754)	(1,697,191)	28,171,367
2036	28,171,367	26,000,000	8,685	1,230,138	(32,788,938)	(1,697,191)	20,924,061
2037	20,924,061	26,000,000	8,636	889,850	(31,535,045)	(1,697,191)	14,590,311
2038	14,590,311	26,000,000	8,586	597,521	(30,242,177)	(1,697,191)	9,257,050
2039	9,257,050	26,000,000	8,535	358,272	(28,884,884)	(1,697,191)	5,041,782
2040	5,041,782	26,000,000	8,475	176,930	(27,510,431)	(1,697,191)	2,019,565
2041	2,019,565	25,680,040	8,413	51,903	(26,097,966)	(1,610,052)	51,903
2042	51,903	26,108,369	-	-	(24,640,156)	(1,520,116)	-
2043	-	24,600,127	-	-	(23,170,667)	(1,429,460)	-
2044	-	23,032,687	-	-	(21,694,308)	(1,338,379)	-
2045	-	21,468,805	-	-	(20,221,300)	(1,247,505)	-
2046	-	19,921,883	-	-	(18,764,266)	(1,157,617)	-
2047	-	18,402,033	-	-	(17,332,731)	(1,069,302)	-
2048	-	16,918,074	-	-	(15,935,002)	(983,072)	-
2049	-	15,477,779	-	-	(14,578,399)	(899,380)	-
2050	-	14,088,365	-	-	(13,269,721)	(818,644)	-
2051	-	12,756,166	-	-	(12,014,933)	(741,233)	-
2052	-	11,486,631	-	-	(10,819,168)	(667,463)	-
2053	-	10,284,122	-	-	(9,686,534)	(597,588)	-
2054	-	9,152,053	-	-	(8,620,247)	(531,806)	-
2055	-	8,092,860	-	-	(7,622,602)	(470,258)	-
2056	-	7,108,035	-	-	(6,695,003)	(413,032)	-
2057	-	6,198,469	-	-	(5,838,290)	(360,179)	-
2058	-	5,364,346	-	-	(5,052,636)	(311,710)	-
2059	-	4,605,191	-	-	(4,337,593)	(267,598)	-
2060	-	3,919,787	-	-	(3,692,017)	(227,770)	-

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SECTION III. APPENDICES**APPENDIX A. SUMMARY OF PLAN PROVISIONS**

The following description is a brief summary of the provisions of the Northern Marinas Islands Retirement Plan, as shown in the audited financial statements for the NMI Retirement Fund for the fiscal year ending September 30, 2012.

Membership: Class II members are all persons who were Fund members prior to the effective date of Public Law 6-17 and who did not choose to become Class I members.

Membership Service: Service is earned for actual compensated government employment after becoming a Fund member. 1/12 year of service is earned for each month of employment.

Benefit Formulas:

Class I Formula: The sum of (i) and (ii) below, but not less than \$6,000 nor greater than 85% of average annual salary.

- (i) The sum of 2.5% of average annual salary for each of the first 25 years of service with a maximum of 50% of average annual salary, plus
- (ii) 2.5% of average annual salary for each year of service in excess of 25 years.

The minimum amount of service retirement annuity payable by the Fund is \$6,000 per year. The maximum retirement annuity is 85% of "average annual salary."

Class II Formula: The sum of (i) and (ii) below, but not less than \$6,000 nor greater than 85% of average annual salary.

- (i) The sum of 2% of average annual salary for each of the first 10 years of service and 2.5% of average annual salary for each year of service in excess of 10 years, plus
- (ii) Twenty dollars (\$20) for each year of service reduced by 1/100th of 1% for each dollar that average annual salary exceeds \$6,000.

The minimum amount of service retirement annuity payable by the Fund is \$6,000 per year. The maximum retirement annuity is 85% of "average annual salary."

Class II members receive the greater of the benefit determined using the Class II formula or the benefit determined using the Class I formula as if all service had been rendered as a Class I member.

Average Annual Salary: Average of three highest annual salaries, or \$6,000, whichever is greater.

Normal Retirement:

Eligibility: Eligibility for Class I benefit is age 62 and 10 years of contributing membership after May 7, 1989. Eligibility for Class II benefit is age 60 or 25 years of membership service.

Form of Benefit: Payment is in the form of a life annuity with a cost of living increase each year for the first \$30,000 of benefits equal to that which is used by the United States of America Social

SECTION III. APPENDICES

Security System commencing on January 1 of each year subsequent to the anniversary of retirement after attainment of age 55.

Early Retirement:

Eligibility: Eligibility for Class I early retirement is age 52 and 10 years of membership service or 25 years of membership service. At least 10 years of membership service must be earned after May 7, 1989. Class II members are not eligible for early retirement.

Amount of Benefit: Same as normal retirement benefit, except reduced by an actuarially determined amount (3%) for each month the member is under 62 years of age.

Form of Benefit: Same as normal retirement benefit.

Termination:

Eligibility: Eligibility for Class I termination benefit is 10 years of contributing membership service. Eligibility for Class II termination benefit is 3 years of vesting service.

Amount of Benefit: Same as normal retirement benefit.

Form of Benefit: Same as normal retirement benefit, except the annuity commences at age 62 for Class I members and age 60 for Class II members.

Disability Retirement:

Eligibility: Members who are less than age 62, who are totally and permanently disabled and, in the case of non-occupational causes, who accumulate at least 5 years of membership service.

Amount of Benefit: 50% of the member's salary in effect as of the date of disability or 66 2/3% of member's salary in effect if individual became a member prior to December 5, 2003. At age 62, the member will receive a normal retirement benefit calculated assuming service had continued to age 62 at the same salary received at the time of disability and the Class I formula is used. Disability benefits will be reduced by the U.S. Social Security System, Workers' Compensation or other disability insurance payments.

Form of Benefit: Same as normal retirement benefit.

Survivor's Benefits:

Eligibility: Members who were active employees with at least 18 months of service for Class I and at least 3 years of service for Class II, or members who were receiving retirement or disability benefits.

Amount of Benefit: A surviving spouse will receive 50% of the member's normal retirement benefit, or benefit being paid at death, but not less than \$6,000 per year. Each surviving minor child (with a maximum of three children) will receive the greater of \$1,080 and 16 2/3% of the member's normal retirement benefit or the benefit being paid at death.

SECTION III. APPENDICES

Form of Benefit: The surviving spouse benefit will commence immediately if there are minor children, otherwise at the spouse's attainment of age 35, and continues until remarriage or death. Payment will be in the form of a life annuity with a cost of living increase each year equal to that which is used by the U.S. Social Security System, commencing January 1 subsequent to the anniversary of the spouse's annuity date after attainment of age 55.

The children's benefit commences immediately and continues until the respective child's attainment of age 18 (age 22 if a full-time student) unless the child is disabled.

Lump Sum Death Benefit:

Eligibility: Members who were active employees or members who were receiving retirement or disability benefits.

Amount of Benefit: A lump sum of \$1,000 plus, if there is no surviving spouse or children, a refund, reduced by pension payments already received, of 1/3rd of the accumulated employee contributions with interest.

Contributions: Class I members who are active employees contribute 10.5% per year. Class II members who are active employees contribute 11% per year.

SECTION III. APPENDICES

APPENDIX B. ACTUARIAL COST METHOD AND ASSUMPTIONS

	September 30, 2020	September 30, 2019																																				
Actuarial Cost Method	Entry Age Normal	Entry Age Normal																																				
Investment Return	3.50% for fiscal years 2021 through 2030, then 5.14% for each fiscal year thereafter.	3.60% for all future years																																				
Salary Increases	No future salary increases	No future salary increases																																				
Mortality	Pub-2010 set forward 5 years for Males and Females, using 130% of the rates for ages 60 to 75, and 50% of the MP-2020 projection scale from 2020 onward	(current) 1971 Group Annuity Mortality Table for Males with ages set forward 3 years for Males (improved) RP-2000 Combined Healthy table for Males and Females, projected to 2019 using Mortality Improvement Scale AA																																				
Retirement Age	Class I Members Earlier of age 62, if eligible, or 25 years of vesting service. Class II Members Earlier of age 60, if eligible, or 25 years of vesting service.	Class I Members Earlier of age 62, if eligible, or 25 years of vesting service. Class II Members Earlier of age 60, if eligible, or 25 years of vesting service.																																				
Marital Status	94% of participants are assumed to be married and males are assumed to be 5 years older than female spouses.	94% of participants are assumed to be married and males are assumed to be 5 years older than female spouses.																																				
Survivor Benefit – Minor Children	Married participants are assumed to have two minor children aged 13 on benefit commencement date.	Married participants are assumed to have two minor children aged 13 on benefit commencement date.																																				
Turnover	<table><tr><td>Age</td><td>Age</td></tr><tr><td>20</td><td>.1303</td></tr><tr><td>25</td><td>.1078</td></tr><tr><td>30</td><td>.0858</td></tr><tr><td>35</td><td>.0683</td></tr><tr><td>40</td><td>.0508</td></tr><tr><td>45</td><td>.0333</td></tr><tr><td>50</td><td>.0158</td></tr><tr><td>55 & up</td><td>.0000</td></tr></table>	Age	Age	20	.1303	25	.1078	30	.0858	35	.0683	40	.0508	45	.0333	50	.0158	55 & up	.0000	<table><tr><td>Age</td><td>Rate</td></tr><tr><td>20</td><td>.1303</td></tr><tr><td>25</td><td>.1078</td></tr><tr><td>30</td><td>.0858</td></tr><tr><td>35</td><td>.0683</td></tr><tr><td>40</td><td>.0508</td></tr><tr><td>45</td><td>.0333</td></tr><tr><td>50</td><td>.0158</td></tr><tr><td>55 & up</td><td>.0000</td></tr></table>	Age	Rate	20	.1303	25	.1078	30	.0858	35	.0683	40	.0508	45	.0333	50	.0158	55 & up	.0000
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SECTION III. APPENDICES

	September 30, 2020			September 30, 2019		
Disability	<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
	25	.00020	.00021	25	.00020	.00021
	30	.00023	.00036	30	.00023	.00036
	35	.00035	.00061	35	.00035	.00061
	40	.00060	.00093	40	.00060	.00093
	45	.00112	.00135	45	.00112	.00135
	50	.00310	.00185	50	.00310	.00185
	55	.00334	.00261	55	.00334	.00261
	60	.00441	.00352	60	.00441	.00352
Cost of Living Adjustment	2% per year			2% per year		
Administrative Expenses	\$1,697,191 per year from FY 2021 to FY 2040, then remaining a constant percentage of benefit payments.			\$1,432,766 per year from FY 2020 to FY 2040, then remaining a constant percentage of benefit payments.		

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SECTION III. APPENDICES**APPENDIX C. RISK DISCLOSURE**

The purpose of this appendix is to identify, assess, and provide illustrations of risks that are significant to the Settlement Fund, and in some cases to the Fund participants.

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, life expectancies may be longer or shorter than anticipated. 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 Settlement Fund.

In addition, investment returns may differ from the assumption. The larger the pool of assets, the more difficult it becomes to recover from unfavorable investment results. 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 plans make long-term promises and rely on long-term funding, it is important to consider how mature the Fund 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, the Plan's maturity, and relevant historical plan data.

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.

SECTION III. APPENDICES

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.