



Cavanaugh Macdonald
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Federated States of Micronesia
Social Security Administration

Actuarial Valuation as of
January 1, 2017





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

January 3, 2019

Board of Trustees
Federated States of Micronesia Social Security Administration

Dear Trustees:

At your request, we have performed an actuarial valuation of the Federated States of Micronesia Social Security Administration (FSMSSA) as of January 1, 2017. The major findings of the valuation are contained in this report which reflects the benefit provisions in place on January 1, 2017. An experience study was completed covering the six-year period ending December 31, 2016. As a result, all of the recommended assumptions were adopted and are first used in this valuation.

The current funded status of the Plan is 15.1%. At this funding level, the sustainability of the Plan is heavily dependent on the amount of contributions. Over the past few years, the Federated States of Micronesia Nation Government has been contributing \$1 million to \$2 million per year in excess of its employer contributions. Without continued contributions of at least this level, the Trust assets are expected to be depleted over the next 25 years. Continued contributions at the current level would delay depletion for at least several more years, depending upon the amount of additional contributions. The actual depletion date will depend on actual investment experience, the number and payroll of the workers, and the demographic experience of the membership. As a result, serious attention should be given to analyzing the sustainability of the System.

In preparing our report, we relied, without audit, on information supplied by FSMSSA staff. This information includes, but is not limited to, statutory provisions, member data and financial information. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

We further certify that all costs, liabilities, rates of interest and other factors for the FSMSSA have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer the best estimate of anticipated experience affecting the System. Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C.

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

On the basis of the foregoing, I hereby certify that, to the best of my 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 Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries. While these standards are not binding for work performed outside of the United States, I nonetheless believe that these standards provide appropriate guidance in performing actuarial work.

I respectfully submit the following report and look forward to discussing it with you.

Sincerely,

A handwritten signature in cursive script that reads "Brent A. Banister".

Brent A. Banister, PhD, FSA, EA, FCA, MAAA
Chief Actuary



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EXECUTIVE SUMMARY

This report presents the results of the January 1, 2017 actuarial valuation of the retirement benefits provided to workers through the Federated States of Micronesia Social Security Administration (FSMSSA). The primary purposes of performing the valuation are:

- Compare the accrued liability to the market value of Trust assets in order to determine the current funded status.
- Provide a basis for determining the effect of any future proposed changes to the system.
- Project assets and liabilities to judge the System's future sustainability.

An experience study was completed covering the six-year period ending December 31, 2016. As a result, all of the recommended assumption changes were adopted and are first reflected in this valuation, including:

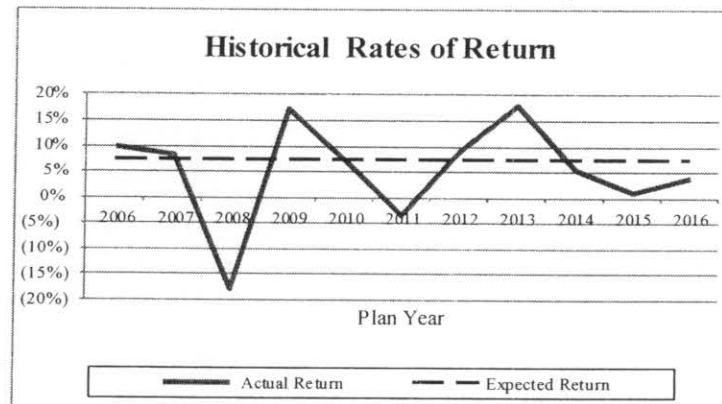
- investment return decreased to 7.00%,
- setting price inflation at 2.25%,
- expenses increased to 1.00% of covered wages,
- salary increases changed to an age-based table,
- mortality assumptions changed to better reflect observed experience, and
- retirement rates changed to better reflect observed experience.

The principal results of this valuation are the calculation of the accrued liability and the funded ratio. The accrued liability represents the portion of the value of future benefits allocated to years of service earned by workers as of the valuation date, including benefits currently being paid. The funded ratio is an indication of how well-funded the System is at any point in time with respect to the accrued liability. As of January 1, 2017, the System's accrued liability is \$336,409,000 and the market value of Trust assets is \$50,672,000, resulting in an unfunded accrued liability of \$285,737,000 and a funded ratio of 15.1%.

Perhaps the most important aspect of the System's funding to consider is its long-term solvency. Without the additional contributions from the Federated States of Micronesia National Government (National Government), the excess of benefit payments and expenses over contributions is expected to deplete the assets in about 25 years. However, if those additional contributions continue to be made, then the depletion date will be pushed further into the future. Please see Exhibit 10 for more information.

The System's funded status is impacted by the investment performance of the Trust. Since the prior valuation (2014), the Trust has experienced investment returns of 5.5%, 0.9% and 4.1% over the past three years, all of which are below the assumed rate of return of 7.5% which applied to those years. In addition, the average return over the past five years is 7.4%.

See the graph below for a summary of the Trust's recent investment performance:





EXECUTIVE SUMMARY

When discussing the financial health of a retirement system, a common benchmark is the funded ratio of the System which, as mentioned above, is calculated as the market value of Trust assets divided by accrued liability. The funded ratio as of January 1, 2017 is 15.1%. The financial condition of the System is such that the current assets and the current level of expected payroll-based contributions cannot support the level of expected benefit payments. While the market value of assets at January 1, 2017 was \$50.7 million, the expected benefit payments for the next few years are around \$21 million per year, whereas regular contributions are expected to be between \$19 million and \$21 million. Looking forward and assuming the current statutory contributions are made each year, the assets are expected to be depleted in about 25 years if all assumptions are met and no additional contributions are made by the National Government (see Exhibit 10). However, if the National Government continues to make additional contributions, it will have a positive impact on the System's solvency. For example, if the National Government contributes an additional \$2.0 million each year, then the assets are expected to last for many more years.

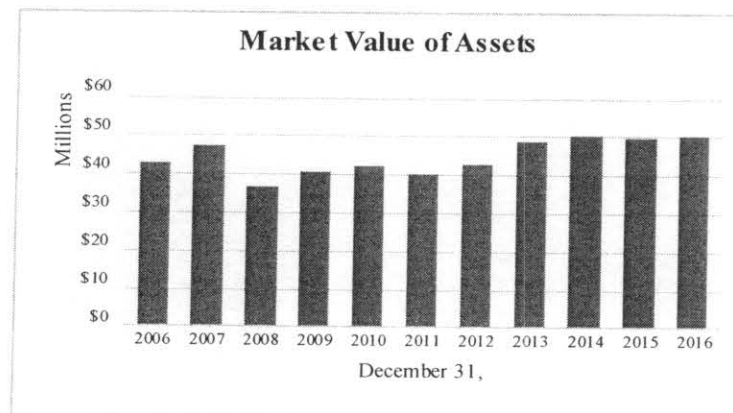
ASSETS

As of January 1, 2017, the System had total funds of \$50,672,000 when measured on a market value basis. This was an increase of \$1,538,000 from the January 1, 2014 valuation. The market value of assets is used directly in the actuarial calculation of the System's funded status and the recommended contribution.

During the past few years, the benefit payments have exceeded contributions by around \$1.7 million per year. As these funds are removed from the investable assets, the portfolio allocation may need to be adjusted to provide a greater degree of liquidity. If this happens, the expected return on assets may decrease, accelerating the depletion of the System's assets and increasing the probability that a cash infusion may be necessary to ensure the payment of future benefits.

The components of the change in the market value of assets and the historical trend are shown below:

	2016	2015	2014
Net Assets, Beginning of Year	\$50,018,000	\$50,317,000	\$49,134,000
▯ Contributions	18,563,000	17,624,000	17,642,000
▯ Benefit Payments and Refunds	(20,244,000)	(19,444,000)	(19,317,000)
▯ Administrative Expenses	(1,237,000)	(1,245,000)	(1,166,000)
▯ Net Investment Return	<u>3,572,000</u>	<u>2,766,000</u>	<u>4,024,000</u>
Net Assets, End of Year	\$50,672,000	\$50,018,000	\$50,317,000
Estimated Rate of Return	4.1%	0.9%	5.5%





EXECUTIVE SUMMARY

LIABILITIES

The first step in determining the contribution amount for the System is to calculate the liability for all expected future benefit payments for current members. This liability represents the present value of future benefits (PVFB) expected to be earned by the current members, assuming that all actuarial assumptions are realized in the future. Thus, the PVFB reflects future service and salary increases that are expected to occur in the future before a benefit becomes payable. The PVFB components can be found in the liabilities portion of the valuation balance sheet (see Exhibit 5).

The other critical measurement of plan liability in the valuation process is the accrued liability. This is the portion of the PVFB that will not be paid by the future normal costs (i.e. it is the portion of the PVFB that is allocated to prior service periods).

The following chart compares the accrued liability and System assets (at market value) for the current and prior valuation. Note that these measures do not indicate whether or not the System would have sufficient assets if it were terminated, nor do they indicate what level of future contributions will be required.

	As of January 1	
	2017	2014
Workers Earning Benefits	\$132,703,000	\$128,270,000
Retirees, Spouses, Children, and Disabled Workers Receiving Benefits	150,496,000	129,208,000
Fully Insured Inactive Workers Entitled to a Future Benefit	<u>53,210,000</u>	<u>50,135,000</u>
Total Accrued Liability	\$336,409,000	\$307,613,000
Assets at Market Value	<u>50,672,000</u>	<u>49,134,000</u>
Unfunded Accrued Liability	\$285,737,000	\$258,479,000
Funded Ratio (Market Value)	15.1%	16.0%

Although the funded ratio did not change much from the January 1, 2014 valuation to the January 1, 2017 valuation, the funded status of the Federated States of Micronesia Social Security Administration is very low and without additional contributions, the depletion of the Trust assets is likely to occur in about 25 years. However, if the National Government continues to make additional contributions, it will have a positive impact on the System's solvency. For example, if the National Government contributes an additional \$2.0 million each year, then the assets are expected to last much longer. While we have prepared some very basic projections of future assets, the Administration may want to have more robust projections prepared, using different sets of assumptions, in order to evaluate the risk of depleting the Trust assets and to develop plans to move the System to a stronger financial status and long-term sustainability.



EXECUTIVE SUMMARY

COMMENTS

As noted in the certification letter, this valuation was performed with new assumptions following an experience study. The net impact of these changes is discussed more fully in the experience study report, but the net effect was relatively modest.

While a social security program does not necessarily need to be prefunded, there are certainly some advantages to having a significant asset reserve available. Over time, the investment return on the assets will provide funds that would otherwise need to be made by workers, employers, or the government. A significant asset reserve can also help during a sustained economic downturn when normal revenue sources may be diminished. Ultimately, a fully funded program would likely be able to reduce contributions or improve benefits because of the significant asset pool available. In order to move from the current situation of having only a small part of the benefits funded, there are several options available. Obviously, any option to increase funding involves more money going in or less money coming out, so the options to improve funding will almost certainly be undesirable for at least one group of people. Examples of options which could be considered are:

- Increased funding from the National Government or other outside sources.
- Include additional workers in the Social Security program to receive additional contributions.
- Additional restrictions on the availability of death or disability benefits.
- Provide a lower percentage of the Cumulative Maximum Covered Earnings for earnings in excess of an amount such as \$500,000 or \$600,000.

If any of these items is of potential interest, we would encourage a study of the impact before implementation to be sure that the expected outcomes are what was intended.



EXECUTIVE SUMMARY

FEDERATED STATES OF MICRONESIA SOCIAL SECURITY ADMINISTRATION

PRINCIPAL VALUATION RESULTS

		January 1, 2017	January 1, 2014	% Chg
MEMBERSHIP				
1.	Active Membership			
	- Number of Members	15,582	17,271	(9.8)
	- Total Payroll	\$129,779,290	\$119,476,036	8.6
	- Average Age	40.2	39.1	2.8
	- Average Service	10.4	9.7	7.2
2.	Inactive Membership			
	- Inactive, Fully Insured	3,738	2,328	60.6
	- Number of Retirees / Beneficiaries	6,473	6,210	4.2
	- Average Annual Benefit	\$2,958	\$2,743	7.8
ASSETS AND LIABILITIES				
1.	Net Assets			
	- Market Value (MVA)	\$50,672,000	\$49,134,000	3.1
2.	Accrued Liability (AL)			
	- Retirees, Disabled Members and Spouses	\$150,496,000	\$129,208,000	16.5
	- Inactive, Fully Insured Members	53,210,000	50,135,000	6.1
	- Active Members	<u>132,703,000</u>	<u>128,270,000</u>	3.5
	- Total	\$336,409,000	\$307,613,000	9.4
3.	Unfunded Accrued Liability	\$285,737,000	\$258,479,000	10.5
4.	Funded Ratio			
	MVA / AL	15.1%	16.0%	(5.6)



EXHIBIT 1
STATEMENT OF NET ASSETS

	Assets and Liabilities as of:		
	<u>12/31/2016</u>	<u>12/31/2015</u>	<u>12/31/2014</u>
<u>ASSETS</u>			
Cash and Cash Equivalents	\$ 4,152,302	\$ 3,165,615	\$ 2,252,822
Receivables:			
Contributions	\$ 2,948,089	\$ 2,943,789	\$ 2,773,881
Due from FSM National Government	0	1,000,000	0
Accrued Interest	0	0	87,032
Other	60,504	7,895	5,008
Total Receivables	\$ 3,008,593	\$ 3,951,684	\$ 2,865,921
Prepayments	\$ 5,548	\$ 1,750	\$ 1,800
Investments:			
Fixed Income	\$ 14,890,932	\$ 14,694,669	\$ 14,691,607
Stocks	28,802,191	28,310,526	30,638,051
Total Investments	\$ 43,693,123	\$ 43,005,195	\$ 45,329,658
Depreciable Fixed Assets, Net	69,916	99,865	81,774
Total Assets	\$ 50,929,482	\$ 50,224,109	\$ 50,531,975
<u>LIABILITIES</u>			
Accounts Payable	(226,559)	(176,412)	(183,277)
Other Liabilities and Accruals	(31,261)	(29,494)	(25,380)
Accrued Management Fees	0	0	(6,041)
Total Liabilities	\$ (257,820)	\$ (205,906)	\$ (214,698)
<u>NET POSITION</u>			
Held in Trust for Pension Benefits	\$ 50,671,662	\$ 50,018,203	\$ 50,317,277



VALUATION RESULTS

EXHIBIT 2

STATEMENT OF CHANGES IN NET ASSETS

	Additions and Deductions for Fiscal Years Ended:		
	12/31/2016	12/31/2015	12/31/2014
Additions:			
Contributions	\$ 18,563,485	\$ 17,623,995	\$ 17,641,983
Investment Income:			
Net Change in Fair Value of Assets	\$ 1,261,672	\$ (328,309)	\$ 2,025,184
Interest and Dividends	1,035,757	1,038,314	869,992
Investment Expenses	(279,777)	(239,643)	(235,249)
Net Investment Income	\$ 2,017,652	\$ 470,362	\$ 2,659,927
Other Income			
Contributions from FSM National Government	\$ 1,000,000	\$ 2,000,000	\$ 1,000,000
Other	553,052	295,849	364,982
Total Other Income	\$ 1,553,052	\$ 2,295,849	\$ 1,364,982
Total Additions	\$ 22,134,189	\$ 20,390,206	\$ 21,666,892
Deductions:			
Benefit Payments:			
Retirement	\$ (12,675,626)	\$ (12,086,658)	\$ (11,799,765)
Survivors	(5,662,711)	(5,503,425)	(5,621,815)
Disability	(1,632,870)	(1,514,583)	(1,502,864)
Lump Sum	(249,568)	(319,275)	(369,481)
Total Benefit Payments	\$ (20,220,775)	\$ (19,423,941)	\$ (19,293,925)
Refunds	\$ (23,303)	\$ (20,053)	\$ (23,022)
Administrative Expenses	\$ (1,236,652)	\$ (1,245,286)	\$ (1,166,208)
Total Deductions	\$ (21,480,730)	\$ (20,689,280)	\$ (20,483,155)
Net Increase (Decrease) in Plan Assets	\$ 653,459	\$ (299,074)	\$ 1,183,737
Plan Net Assets, Beginning of Year	\$ 50,018,203	\$ 50,317,277	\$ 49,133,540
Plan Net Assets, End of Year	\$ 50,671,662	\$ 50,018,203	\$ 50,317,277
Estimated Rate of Return, Net of Expenses	4.09%	0.94%	5.50%



VALUATION RESULTS

EXHIBIT 3

TRUST ASSET HISTORY

Fiscal Year End	Beginning of Year Market Value of Assets	Prior Year Adjustment	Contributions	Trust Gain or (Loss)	Other Income	Benefit Payments	Administrative Expenses
3/31/1996	\$19,708,993		\$7,679,774	\$3,672,982	\$4,600	(\$6,140,340)	(\$738,817)
3/31/1997	24,187,192		8,220,669	2,706,638	7,917	(6,562,802)	(654,383)
3/31/1998	27,905,231		8,953,398	7,876,250	5,057	(7,736,924)	(721,912)
3/31/1999	36,281,100		8,041,629	4,189,816	4,894	(8,222,560)	(803,865)
3/31/2000	39,491,014		8,357,388	4,084,332	9,951	(8,996,669)	(1,018,511)
12/31/2000	41,927,505		6,914,430	(1,527,557)	5,441	(6,893,415)	(666,969)
12/31/2001	39,759,435	(16,237)	10,486,084	(4,305,329)	4,422	(9,582,168)	(823,461)
12/31/2002	35,522,746	90,251	11,715,449	(3,001,899)	4,937	(9,990,634)	(809,256)
12/31/2003	33,531,594		11,398,884	4,120,949	65,454	(10,865,848)	(904,131)
12/31/2004	37,346,902		12,275,901	2,351,940	52,002	(11,321,238)	(923,670)
12/31/2005	39,781,837		12,129,796	3,648,998	65,924	(12,029,049)	(940,444)
12/31/2006	42,657,062		12,130,506	4,142,225		(12,586,560)	(968,012)
12/31/2007	45,375,221		12,855,762	3,723,433		(13,663,880)	(968,986)
12/31/2008	47,321,550		12,901,363	(8,274,474)		(14,241,374)	(989,810)
12/31/2009	36,717,255		14,145,653	6,149,139		(15,304,704)	(961,778)
12/31/2010	40,745,566		16,069,490	2,981,702		(16,488,738)	(946,950)
12/31/2011	42,631,070	(226,965)	16,593,155	(1,420,816)	1,551,234	(17,650,875)	(1,067,434)
12/31/2012	40,409,369		16,371,874	3,670,433	1,487,874	(18,016,644)	(1,083,370)
12/31/2013	42,839,536		17,244,974	7,503,017	1,432,411	(18,685,027)	(1,201,371)
12/31/2014	49,133,540		17,641,983	2,659,927	1,364,982	(19,316,947)	(1,166,208)
12/31/2015	50,317,277		17,623,995	470,362	2,295,849	(19,443,994)	(1,245,286)
12/31/2016	50,018,203		18,563,485	2,017,652	1,553,052	(20,244,078)	(1,236,652)
12/31/2017	50,671,662						

Note: Historical asset information prior to 12/31/2014 was taken from prior actuarial valuations prepared by the prior actuary.



EXHIBIT 4

TRUST INVESTMENT EXPERIENCE HISTORY

<u>Fiscal Year End</u>	<u>Return</u>		<u>Fiscal Year End</u>	<u>Return</u>
3/31/1996	18.26%		12/31/2006	9.88%
3/31/1997	10.96%		12/31/2007	8.37%
3/31/1998	27.97%		12/31/2008	-17.90%
3/31/1999	11.71%		12/31/2009	17.20%
3/31/2000	10.56%		12/31/2010	7.40%
12/31/2000	-3.67%	Return for 9 months	12/31/2011	-3.36%
12/31/2001	-10.82%		12/31/2012	9.22%
12/31/2002	-8.32%		12/31/2013	17.76%
12/31/2003	12.55%		12/31/2014	5.50%
12/31/2004	6.43%		12/31/2015	0.94%
12/31/2005	9.44%		12/31/2016	4.09%

Note: Historical asset information prior to 12/31/2014 was taken from prior actuarial valuations prepared by the prior actuary.

Average Annual Return

5-Year Average	7.35%
22.75 Year Average	5.83%



VALUATION RESULTS

EXHIBIT 5

ACTUARIAL BALANCE SHEET

An actuarial statement of the status of the System in balance sheet form as of January 1, 2017 is as follows:

Assets

Current Assets (Market Value)	\$ 50,672,000
Present Value of Future Normal Costs	109,550,000
Present Value of Future Contributions to Fund the Unfunded Accrued Liability	285,737,000
Total Assets	\$ 445,959,000

Liabilities

Present Value of Future Retirement Benefits for:

Active Workers:		
Retirement Benefits	\$ 179,319,000	
Death Benefits	20,183,000	
Disability Benefits	42,751,000	
Total		\$ 242,253,000
Inactive, Fully Insured Members		53,210,000
Retired Members, Disabled Members and Spouses Receiving Benefits		150,496,000
Total Liabilities		\$ 445,959,000



VALUATION RESULTS

EXHIBIT 6

UNFUNDED ACCRUED LIABILITY

1.	Present Value of Future Benefits	\$	445,959,000
2.	Present Value of Future Normal Costs		109,550,000
3.	Accrued Liability (1) – (2)		336,409,000
4.	Market Value of Assets		50,672,000
5.	Unfunded Accrued Liability (3) – (4)		285,737,000
6.	Funded Ratio (4)/(3)		15.1%



VALUATION RESULTS

EXHIBIT 7
NORMAL COST

	<u>Total</u>	<u>Percent of Total</u>
Normal Cost as of January 1, 2017:		
a. Retirement benefits	\$ 5,648,494	67.5%
b. Pre-retirement death benefits	992,432	11.9%
c. Disability benefits	<u>1,725,442</u>	20.6%
d. Total normal cost	\$ 8,366,368	100.0%
e. Projected salary	\$ 122,901,876	
f. Normal cost rate (d) / (e)	6.81%	

The Normal Cost rate is a measure of the value of the benefits provided. If all assumption had always been met and would always be met in the future, this rate of pay plus an expense rate (approximately 1%) is required on pay for all workers to fully the provide the promised benefits.



**EXHIBIT 8
PROJECTED BENEFIT PAYMENTS**

<u>Plan Year Ending December 31</u>	<u>Current Active Members</u>	<u>Current Inactive Members</u>	<u>Total</u>
2017	\$ 686,000	\$ 20,434,000	\$ 21,120,000
2018	1,431,000	19,744,000	21,175,000
2019	2,067,000	19,098,000	21,165,000
2020	2,733,000	18,478,000	21,211,000
2021	3,530,000	17,945,000	21,475,000
2022	4,769,000	17,582,000	22,351,000
2023	6,201,000	17,332,000	23,533,000
2024	7,799,000	17,001,000	24,800,000
2025	9,323,000	16,722,000	26,045,000
2026	10,942,000	16,361,000	27,303,000
2027	12,499,000	15,943,000	28,442,000
2028	14,054,000	15,467,000	29,521,000
2029	15,591,000	15,001,000	30,592,000
2030	17,134,000	14,480,000	31,614,000
2031	18,771,000	13,964,000	32,735,000
2032	20,356,000	13,409,000	33,765,000
2033	21,900,000	12,802,000	34,702,000
2034	23,555,000	12,261,000	35,816,000
2035	25,377,000	11,654,000	37,031,000
2036	27,028,000	11,055,000	38,083,000

Note: Cash flows are the expected future non-discounted payments to current members based on the current actuarial assumptions. Inactive members include both those who are receiving benefit payments and those who are not working, but fully insured and entitled to future benefit payments. To the extent actual experience differs from the assumptions, the actual benefit payments will also vary, perhaps significantly.



EXHIBIT 9
HISTORICAL FUNDED STATUS

Actuarial Valuation Date	Market Value of Assets (a)	Accrued Liability (AL) (b)	Unfunded AL (UAL) (b-a)	Funded Ratio (a / b)
1/1/2002	\$35,523,000	\$217,649,000	\$182,126,000	16.3%
1/1/2004	37,347,000	240,247,000	202,900,000	15.5%
1/1/2006	42,657,000	262,187,000	219,530,000	16.3%
1/1/2009	36,717,000	269,191,000	232,474,000	13.6%
1/1/2011	42,361,000	287,771,000	245,410,000	14.7%
1/1/2014	49,134,000	307,613,000	258,479,000	16.0%
1/1/2017	50,672,000	336,409,000	285,737,000	15.1%

Note: Historical asset information prior to 1/1/2017 was taken from prior actuarial valuations prepared by the prior actuary.



VALUATION RESULTS

EXHIBIT 10
PROJECTION OF CASH FLOW

An actuarial valuation collects data, and using certain assumptions, determines a liability by projecting life expectancy and salary information into the future. Using the same assumptions as those used in the valuation, and with a few additional assumptions, a cash flow projection can show the sustainability of the System.

Below is a projection of the System's assets using the same assumptions as those in Appendix B. The following assumptions have also been utilized:

- 1) Annual increase in total contributions: 2.75%
2) Annual increase in administrative expenses: 2.75%
3) Additional contributions: None

Table with 5 columns: Year, Beginning Market Value of Assets, Expected Contributions, Expected Benefit Payments and Expenses, Ending Market Value of Assets. Rows range from 2017 to 2036.



APPENDIX A – SUMMARY OF BENEFIT PROVISIONS

Applicable Laws:

Public Law 2-74, as amended by Public Laws 5-120, 6-111, 7-118, 7-119, 7-120, 9-56, 12-51, 12-76, 14-37, 15-73 and 16-10.

Workers and Employer's Contributions:

Workers, self-employed workers and employers each pay 6% of Maximum Covered Earnings per quarter. Effective October 1, 2009, contributions increase to 7% each and effective January 1, 2013, the rate increases to 7.5%.

Self-employed with employees - remuneration shall be deemed to be twice the amount paid to the highest paid employee reported by the self-employed person in the quarter, up to maximum covered earnings.

Self-employed with no employees - Remuneration is deemed to be 5% of the gross revenue of the business for the previous calendar year subject to maximum covered earnings.

Coverage:

All employees employed by an employer incorporated or doing business in the Federated States of Micronesia are covered unless both the employer and employee are currently subject to another recognized social security system.

Eligibility for and Computation of Benefits is based on the following definitions:

Quarters of Coverage: A calendar quarter in which contributions were made for at least \$300 of earnings.

Currently Insured: Credited with at least 20 quarters of coverage during the most recent previous 25 calendar quarters.

Fully Insured: Credited with at least one quarter of coverage for each year between the later of attainment of age 21 or June 30, 1968, and the date the worker attains age 60. The worker must have at least 12 quarters of coverage. If age 60 on or before December 31, 2006, no more than 38 quarters are required. No more than 50 quarters for everyone else.

Maximum Covered Earnings: Effective January 1, 2008, the \$5,000 quarterly limit increases to \$6,000; \$7,000 on January 1, 2013; \$8,000 on January 1, 2018; \$9,000 on January 1, 2023 and \$10,000 on October 1, 2028.

Minimum Benefit: \$75 per month. \$100 per month effective January 1, 2012.



APPENDIX A – SUMMARY OF BENEFIT PROVISIONS

Basic Benefit:

A worker's monthly Basic Benefit is calculated as 1/12 of:

1. 16.5% of the first \$10,000 of Cumulative Maximum Covered Earnings for which contributions have been made, plus
2. 3.0% of the next \$30,000 of Cumulative Maximum Covered Earnings for which contributions have been made, plus
3. 2.0% of the next \$262,500 of Cumulative Maximum Covered Earnings for which contributions have been made, plus
4. 1.0% of Cumulative Maximum Covered Earnings in excess of \$302,500 for which contributions have been made.

Old Age Insurance Benefit:

Eligibility: Age 60 and Fully Insured

Amount: Greater of the Basic Benefit or the Minimum Benefit, subject to the earnings test. Active workers who turn 60 after January 1, 2011 will receive 50% of the Basic Benefit from ages 60 to 64. The reduced benefit will not be subject to the earnings test.

Disability Insurance Benefit:

Eligibility: Disabled for three months and Currently and Fully Insured at time of disability

Amount: Unreduced Basic Benefit earned at time of disability. Sum of disability benefit and workers compensation benefit may not exceed 80% of the highest covered compensation earned in the year of disability and the prior five years. The benefit ceases should the worker recover from the disability.

Surviving Spouse Benefit:

Eligibility: Worker must have been Fully Insured at time of death.

Amount: 60% of the Basic Benefit earned at the time of death, subject to the earnings test. Paid until the earlier of the date the spouse remarries or dies. This benefit is reduced by any Old Age Insurance Benefit that the spouse may be entitled to based on his or her own earnings history.

Surviving Child Benefit:

Eligibility: Worker must have been Fully at time of death.

Amount: 15% of the Basic Benefit for each dependent child under the age of 18 or 22 if a student. The benefit ceases if the child marries or is adopted by a close relative.

The sum of all survivors' benefits cannot exceed 100% of the Basic Benefit earned at the time of death.



APPENDIX A – SUMMARY OF BENEFIT PROVISIONS

Payment to Foreign Citizens residing outside the FSM:

Payments to citizens and nationals of the Republic of Palau, the Republic of the Marshall Islands and the United States shall be made as if they were citizens or nationals of the Federated States of Micronesia as long as those nations give citizens and nationals of the Federated States of Micronesia reciprocal treatment. For citizens and nationals of other countries who are fully insured, a lump sum payment equal to total worker paid contributions as of the date the worker turned age 60, became disabled, or died. The lump sum payment is reduced by any payments already made to the worker, surviving spouse or child before the lump sum is paid.

Lump Sum Death Benefit:

Eligibility: After the death of any covered worker and rights to all survivors benefits have ceased.

Amount: Four percent of total Maximum Covered Earnings for which contributions have been paid, less the value of any benefits already paid.

Lump Sum Benefit (other than death):

Eligibility: Age 60 and not Fully Insured, native born citizen of the Federated States of Micronesia or resident for at least 10 years and must have lived in the Federated States of Micronesia for at least one year immediately preceding death.

Amount: Four percent of total Maximum Covered Earnings for which contributions have been paid.

Earnings Test

Benefits are reduced by \$1 for every \$2 of earnings in excess of \$300 received each quarter.



APPENDIX B: ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Cost Method – Entry Age Normal

The actuarial cost method is a procedure for allocating the actuarial present value of pension benefits and expenses to time periods. The method used for the valuation is known as the Entry Age Normal actuarial cost method, and has the following characteristics:

- (i) The annual normal costs for each individual active participant are sufficient to accumulate the value of the participant's pension at time of retirement.
- (ii) Each annual normal cost is a constant percentage of the participant's year-by-year projected covered compensation.

The Entry Age Normal actuarial cost method allocates the actuarial present value of each participant's projected benefits on a level basis over the participant's assumed pensionable compensation rates between the entry age of the participant and the assumed exit ages.

The portion of the actuarial present value allocated to the valuation year is called the normal cost. The portion of the present value not provided for by the actuarial present value of future normal costs is called accrued liability. Deducting actuarial assets from the accrued liability determines the unfunded actuarial accrued liability or (surplus).

Actuarial Value of Assets

The actuarial value of assets is equal to the market value of assets.



APPENDIX B: ACTUARIAL METHODS AND ASSUMPTIONS

Actuarial Assumptions

- Actuarial Cost Method: Entry Age Method, Level Percent of Pay
- Inflation: 2.25% per year
- Investment Income: 7.00% per year
- Expenses: 1.00% of Covered Wages
- Salary Increase: Salaries are assumed to increase according to an age-based table. A summary of the table is shown below:

Age	Rate
25	10.25%
30	7.25%
35	5.50%
40	4.55%
45	4.05%
50	3.75%
55	3.25%
60	2.75%
65	2.25%

- Mortality: RP-2000 Combined Mortality Table, with male and female ages set forward five years. Table includes an anticipated margin to reflect future mortality improvement.
- Disabled Mortality: RP-2000 Disabled Mortality Table, with male and female ages set forward five years and a 5% minimum rate. Table includes an anticipated margin to reflect future mortality improvement.
- Retirement Age: Based on the following schedule:

Age	Rate
60	40%
61	30%
62	25%
63	20%
64	20%
65	65%
66	70%
67	75%
68	80%
69	90%
70	100%



APPENDIX B: ACTUARIAL METHODS AND ASSUMPTIONS

Pre-retirement Spouse Benefit: 80% of the workers are assumed to be married, and males are assumed to be 3 years older than their spouses.

Surviving male spouses are assumed to not remarry.

Pre-retirement
Children's Benefit:

Married workers are assumed to have 3 children, and each child is assumed to be age 13 at the time of death of the worker.

Post Retirement
Survivor's Benefit:

80% of active workers are assumed to be married when they retire. Males are assumed to be 3 years older than their spouses. The impact of a spouse benefit being affected by the spouses' own work record is assumed to be negligible.

Disability:

Rates are from the 2003 US Social Security Trustees Report Intermediate Assumptions, adjusted for FSM experience.

Foreign Workers:

Liability of foreign workers (not yet in pay) is reduced by 85% to reflect leaving the FSM and not being eligible for benefits.

Earnings Applied
To the Earnings Test:

Retirees: 80% of what the retiree was earning prior to retirement until age 65, none thereafter.

Disabled Retirees, Surviving Spouses, Children: None

Workers included
in the Valuation:

Workers who have covered quarters in at least one of the last two years, are not currently indicated in the data files supplied by the Administration as deceased, disabled, retired, having received a lump sum or closed with no future benefits payable, and who are age 21 or older are assumed to continue working and earn 4 quarters of coverage until they become disabled, die, or retire. Workers who have not earned any quarters of coverage during the last two years are assumed to stay out of the work force. Salary used as a basis to project future salaries is the greatest of the salaries earned during the last two years. If this salary is based on less than four quarters of coverage, it is converted to an annual salary.



APPENDIX C: MEMBERSHIP DATA

MEMBERSHIP DATA SUMMARY

	<u>January 1, 2017</u>	<u>January 1, 2014</u>	<u>% Change</u>
1. Total Number of Participants in Valuation:			
(a) Active Participants	15,582	17,271	(9.8%)
(b) Inactive, Fully Insured	3,738	2,328	60.6%
(c) Retirees, Disableds and Beneficiaries	<u>6,473</u>	<u>6,210</u>	4.2%
(d) Total	25,793	25,809	(0.1%)
2. Average Age of Participants in Valuation:			
(a) Active Participants	40.2	39.1	2.8%
(b) Inactive, Fully Insured	56.2	55.2	1.8%
(c) Retirees and Disabled Members	68.0	67.4	0.9%
(d) Beneficiaries	53.2	48.0	10.8%



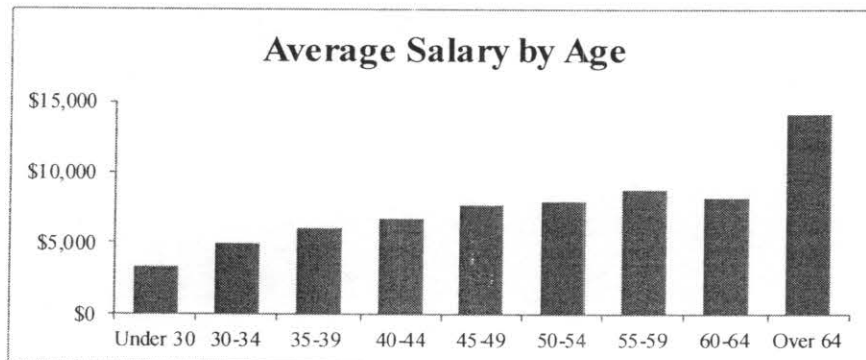
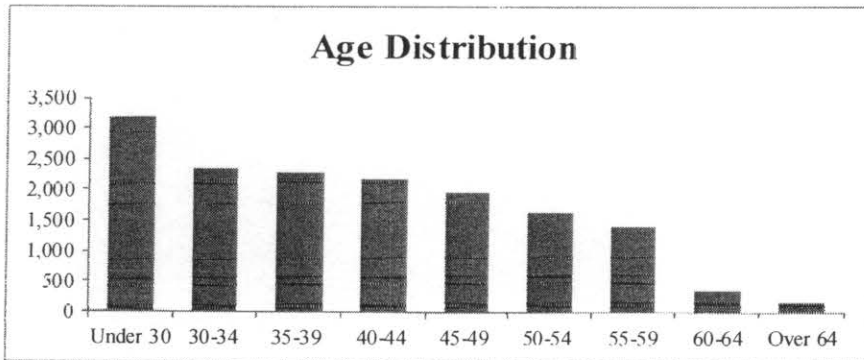
APPENDIX C: MEMBERSHIP DATA

SCHEDULE I

ACTIVE WORKERS AS OF JANUARY 1, 2017

Age	Count of Members			Reported Taxable Wages for FY 2016*		
	Males	Females	Total	Males	Females	Total
Under 30	1,717	1,464	3,181	\$ 5,342,000	\$ 5,153,000	\$ 10,495,000
30-34	1,369	977	2,346	6,539,000	5,185,000	11,724,000
35-39	1,354	929	2,283	7,787,000	5,942,000	13,729,000
40-44	1,358	833	2,191	8,994,000	5,727,000	14,721,000
45-49	1,211	741	1,952	9,606,000	5,559,000	15,165,000
50-54	1,134	524	1,658	9,487,000	3,837,000	13,324,000
55-59	964	458	1,422	8,655,000	3,985,000	12,640,000
60-64	255	119	374	2,241,000	878,000	3,119,000
Over 64	131	44	175	1,913,000	582,000	2,495,000
Total	9,493	6,089	15,582	\$ 60,564,000	\$ 36,848,000	\$ 97,412,000

* Wages are \$0 for certain individuals who did not work in 2016, but did in 2015 and are anticipated to return to work in 2017.





APPENDIX C: MEMBERSHIP DATA

SCHEDULE I (continued)

ACTIVE WORKERS AS OF JANUARY 1, 2017

Males

Age	Service									Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	
Under 30	1,539	174	4	0	0	0	0	0	0	1,717
30-34	794	438	130	6	1	0	0	0	0	1,369
35-39	525	384	316	116	10	2	1	0	0	1,354
40-44	368	298	277	285	121	9	0	0	0	1,358
45-49	227	223	199	208	253	97	3	1	0	1,211
50-54	135	144	153	170	232	224	73	3	0	1,134
55-59	82	84	102	107	144	190	203	52	0	964
60-64	47	27	40	27	19	25	36	34	0	255
Over 64	18	9	13	13	10	14	8	20	26	131
Total	3,735	1,781	1,234	932	790	561	324	110	26	9,493

Females

Age	Service									Total
	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	
Under 30	1,305	154	4	1	0	0	0	0	0	1,464
30-34	482	383	108	4	0	0	0	0	0	977
35-39	299	255	271	97	6	0	0	1	0	929
40-44	183	148	175	223	95	9	0	0	0	833
45-49	110	113	128	132	171	83	4	0	0	741
50-54	49	69	77	87	95	87	58	2	0	524
55-59	30	36	42	46	57	75	113	58	1	458
60-64	8	17	16	22	14	16	16	9	1	119
Over 64	9	8	4	6	3	5	2	4	3	44
Total	2,475	1,183	825	618	441	275	193	74	5	6,089

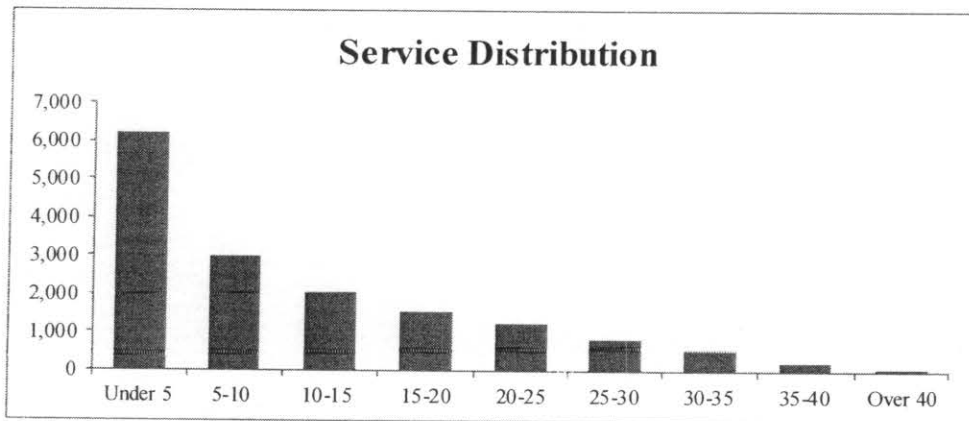


APPENDIX C: MEMBERSHIP DATA

SCHEDULE I (continued)

ACTIVE WORKERS AS OF JANUARY 1, 2017

Age	Total									Total	
	Under 5	5-10	10-15	15-20	Service 20-25	25-30	30-35	35-40	Over 40		
Under 30	2,844	328	8	1	0	0	0	0	0	0	3,181
30-34	1,276	821	238	10	1	0	0	0	0	0	2,346
35-39	824	639	587	213	16	2	1	1	0	0	2,283
40-44	551	446	452	508	216	18	0	0	0	0	2,191
45-49	337	336	327	340	424	180	7	1	0	0	1,952
50-54	184	213	230	257	327	311	131	5	0	0	1,658
55-59	112	120	144	153	201	265	316	110	1	1	1,422
60-64	55	44	56	49	33	41	52	43	1	1	374
Over 64	27	17	17	19	13	19	10	24	29	29	175
Total	6,210	2,964	2,059	1,550	1,231	836	517	184	31	31	15,582



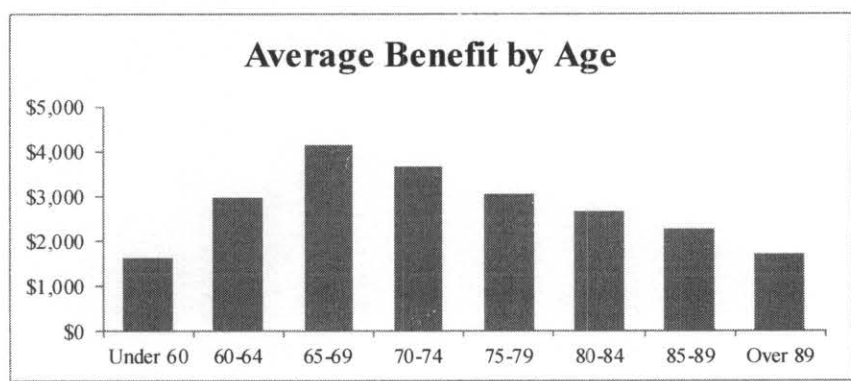
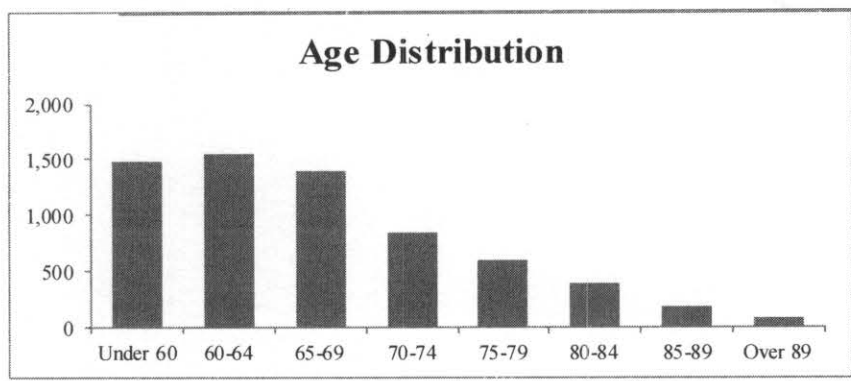


APPENDIX C: MEMBERSHIP DATA

SCHEDULE II

RETIREES, DISABLEDS AND BENEFICIARIES AS OF JANUARY 1, 2017

<u>Age</u>	<u>Count</u>			<u>Current Annual Benefits</u>		
	<u>Males</u>	<u>Females</u>	<u>Total</u>	<u>Males</u>	<u>Females</u>	<u>Total</u>
Under 60	573	902	1,475	\$826,000	\$1,579,000	\$2,405,000
60-64	858	687	1,545	2,578,000	1,978,000	4,556,000
65-69	725	670	1,395	3,519,000	2,264,000	5,783,000
70-74	439	397	836	1,915,000	1,158,000	3,073,000
75-79	279	309	588	1,031,000	762,000	1,793,000
80-84	147	235	382	528,000	480,000	1,008,000
85-89	53	123	176	165,000	237,000	402,000
Over 89	13	63	76	35,000	94,000	129,000
Total	3,087	3,386	6,473	\$10,597,000	\$8,552,000	\$19,149,000





APPENDIX C: MEMBERSHIP DATA

SCHEDULE III

INACTIVE, FULLY INSURED MEMBERS AS OF JANUARY 1, 2017

Age	Count of Members			Expected Annual Benefit		
	Males	Females	Total	Males	Females	Total
Under 30	0	0	0	\$ 0	\$ 0	\$ 0
30-34	3	5	8	9,000	12,000	21,000
35-39	56	38	94	153,000	104,000	257,000
40-44	183	141	324	529,000	436,000	965,000
45-49	291	233	524	905,000	760,000	1,665,000
50-54	413	305	718	1,390,000	985,000	2,375,000
55-59	585	366	951	1,916,000	1,199,000	3,115,000
60-64	339	198	537	1,122,000	636,000	1,758,000
Over 64	387	195	582	1,267,000	597,000	1,864,000
Total	2,257	1,481	3,738	\$7,291,000	\$4,729,000	\$12,020,000

