Employees' Retirement System of the County of Milwaukee

Actuarial Valuation and Review as of January 1, 2021

May 2021

This report has been prepared at the request of the Board of Trustees to assist in administering the System. This valuation report may not be copied or reproduced in any form without the consent of the Board of Trustees and may only be provided to other parties in its entirety, unless expressly authorized by Segal. The measurements shown in this actuarial valuation may not be applicable for other purposes.





May 27, 2021

Board of Trustees Employees' Retirement System of the County of Milwaukee 901 North 9th Street Milwaukee, Wisconsin 53233

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of January 1, 2021, of the Employees' Retirement System of the County of Milwaukee. This report summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and, as required by the Retirement Code, is the basis for the Actual Funding Contribution for fiscal year 2021 and the Budget Contribution for fiscal year 2022.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Retirement System. The census information and financial information on which our calculations were based was prepared by the Retirement Plan Services (RPS) office. That assistance is gratefully acknowledged.

The actuarial calculations were directed under the supervision of Kim Nicholl, Matthew Strom, and Geoff Bridges. We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the System.

We look forward to reviewing this report and to answering any questions at an upcoming Board meeting.

Sincerely,

Kim M. Nicholl, FSA, FCA, MAAA, EA Senior Vice President and Actuary Matthew A. Strom, FSA, MAAA, EA Senior Vice President and Actuary Geoff Bridges, FSA, MAAA, EA

Consulting Actuary

Table of Contents

Section	ion 1: Actuarial Valuation Summary	5
Pu	urpose and Basis	<u>5</u>
Va	aluation Highlights	6
Section	ion 2: Actuarial Valuation Results	11
A.	. Membership Data	11
B.	. Financial Information	15
C.	. Actuarial Experience	18
D.	. Changes in the Actuarial Accrued Liability	23
E.	. Development of Unfunded Actuarial Accrued Liability	24
F.	. Amortization Schedule for Funding	25
G.	Gross Contribution Requirements	27
Н.	. State Mandated Member Contributions	28
I.	Reconciliation of Budget Contribution Requirement	29
J.	Contribution for prior year and variance from the funding calculation contribution	30
K.	. History of Employer Contributions	31
L.	Actuarial Balance Sheet	32
M.	l. Risk	33
Section	ion 3: Supplemental Information	35
Ex	xhibit A – Table of Plan Coverage	35
Ex	xhibit B – Reconciliation of Membership Data	36
Ex	xhibit C – Summary Statement of Income and Expenses on a Market Value Basis	37
Ex	xhibit D – Summary Statement of Plan Assets	38



Exhibit E – Development of the Fund Through December 31, 2020	39
Exhibit F – Definition of Pension Terms	40
Section 4: GASB 67 and 68 Information	43
Exhibit 1 – Net Pension Liability	43
Exhibit 2 – Schedules of Changes in Net Pension Liability	46
Exhibit 3 – Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions	47
Exhibit 4 – Pension Expense	49
Section 5: Actuarial Valuation Basis	
Exhibit I – Actuarial Assumptions and Actuarial Cost Method	50
Exhibit II – Summary of Plan Provisions	56
Section 6: Additional Summary Tables of Member Data	62



Section 1: Actuarial Valuation Summary

Purpose and Basis

This report was prepared by Segal to present a valuation of the Plan as of January 1, 2021. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The measurements shown in this actuarial valuation may not be applicable for other purposes. In particular, the measures herein are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations. 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; and changes in plan provisions or applicable law.

Certain disclosure information required by GASB Statements Nos. 67 and 68 as of December 31, 2020, for the System and the County is provided in *Section 4*.

The contribution requirements presented in this report are based on:

- The benefit provisions of the Pension Plan, as outlined in Chapter 201.24 of the County Code and administered by the Board;
- The characteristics of covered active members, inactive members, and retired members and beneficiaries as of January 1, 2021, provided by RPS;
- The unaudited assets of the Plan as of December 31, 2020, provided by RPS;
- Economic assumptions regarding future salary increases and investment earnings;
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.; and
- The System's funding policy.

Valuation Highlights

- 1. Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the unfunded actuarial accrued liability and the principal balance. The System's funding policy meets this standard.
- 2. Actual employer contributions made during the fiscal year ending December 31, 2020, were \$64,558,405. When combined with the employee contributions of \$12,342,595 and interest to the end of the year, the total contributions exceeded the actuarially determined contribution (referred to as the Actual Funding Contribution) for 2020 by \$5,177,416.
- 3. The results of this January 1, 2021, actuarial valuation are used to determine the Actual Funding Contribution for the fiscal year ending December 31, 2021, and the Budget Contribution for the fiscal year ending December 31, 2022. The Actual Funding Contribution for the year ending December 31, 2021 is \$74,035,425, a decrease of \$552,978 from the Actual Funding Contribution for the year ending December 31, 2020. The amortization bases of the unfunded actuarial accrued liability are shown in Section 2, Exhibit F of this report.
- 4. The 2022 Budget Contribution, expected to be contributed in 2022, is \$74,238,000.
- 5. The funded ratio (the ratio of the actuarial value of assets to actuarial accrued liability) is 75.3%, compared to the prior year's funded ratio of 74.5%. This ratio is one measure of funding status, and its history is a measure of funding progress. Using the market value of assets, the funded ratio is 77.8%, compared to 74.9% as of the prior valuation date. These measurements are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the System's benefit obligation or the need for or the amount of future contributions.
- 6. The rate of return on the market value of assets was 10.71% for the January 1, 2020 to December 31, 2020 plan year. The return on the actuarial value of assets was 7.96% for the same period due to the recognition of prior years' investment gains and losses. This resulted in an actuarial gain when measured against the assumed rate of return of 7.50%. We advise the Board to continue to monitor actual and anticipated investment returns relative to the assumed long-term rate of return on investments.
- 7. The actuarial value of assets is 96.83% of the market value of assets. The investment experience in the past several years has only been partially recognized in the actuarial value of assets. As the deferred net gain is recognized in future years, the cost of the Plan is likely to decrease unless the net gain is offset by future experience. The recognition of the deferred market gain of \$56,851,719 will also have an impact on the future funded ratio. If the net deferred gain were recognized immediately in the actuarial value of assets, the Actual Funding Contribution would decrease by \$4,901,432 to \$69,133,993.
- 8. The unfunded actuarial accrued liability is \$569,185,505, which is a decrease of \$22,501,132 since the prior valuation.
- 9. The actuarial gain from investment experience is \$7,711,164.
- 10. The net experience loss from sources other than investment experience was approximately 0.08% of the actuarial accrued liability. Additional detail regarding this loss is shown in *Section 2, Exhibit C*.



- 11. This report constitutes an actuarial valuation for the purpose of determining the actuarially determined contribution under the Plan's funding policy and measuring the progress of that funding policy. The Net Pension Liability (NPL) and Pension Expense under Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68, for inclusion in the plan and employer's financial statements as of December 31, 2020, and December 31, 2021, is shown in *Section 4* of this report. The Actual Funding Contribution in this valuation is expected to be used as the actuarially determined contribution (ADC) for GASB financial reporting.
- 12. This actuarial report as of January 1, 2021, is based on financial and demographic data as of that date. Changes subsequent to that date are not reflected and will affect future actuarial costs of the Plan.

Summary of Key Valuation Results

		2021	2020
Actuarially determined	Actual Funding Contribution for fiscal 2021 (and 2020)	\$74,035,425	\$74,588,403
contributions:	Amount actually contributed for fiscal 2021 (and 2020)	TBD	76,901,000
	Budget Contribution for fiscal 2022 (and 2021)	\$74,238,000	75,504,000
Actuarial accrued	Retired participants and beneficiaries	\$1,853,564,794	\$1,865,544,823
liability for plan year	Inactive vested participants	85,780,256	86,195,635
beginning January 1:	Active participants	365,905,574	368,594,831
	Total	2,305,250,624	2,320,335,289
	Employer normal cost for plan year beginning January 1 (as of January 1)	17,592,776	17,355,963
Assets for plan year	Market value of assets (MVA)	\$1,792,916,838	\$1,738,628,225
beginning January 1:	Actuarial value of assets (AVA)	1,736,065,119	1,728,648,652
	Actuarial value of assets as a percentage of market value of assets	96.83%	99.43%
Funded status for plan	Unfunded actuarial accrued liability based on MVA	\$512,333,786	\$581,707,064
year beginning January 1:	Funded percentage on MVA basis	77.78%	74.93%
	Unfunded actuarial accrued liability based on AVA	\$569,185,505	\$591,686,637
	Funded percentage on AVA basis	75.31%	74.50%
	Remaining amortization period (average)	16	17
Key assumptions:	Interest rate for determining liability as of January 1	7.50%	7.50%
	Inflation rate	2.50%	2.50%
	Interest rate for Budget Contribution for fiscal 2022 (and 2021)	7.50%	7.50%
Demographic data for	Number of retired members and beneficiaries	7,886	8,001
plan year beginning	Number of vested former members	1,262	1,293
January 1:	Number of active members	3,529	3,561
	Total payroll	\$204,754,607	\$200,365,711
	Average pay	58,021	56,267

Important Information About Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the Plan will be determined by the actual benefits and expenses paid and the actual investment experience of the Plan.

In order to prepare a valuation, Segal relies on a number of input items. These include:

Plan of benefits	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
Membership data	An actuarial valuation for a plan is based on data provided to the actuary by the System. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
Assets	The valuation is based on the market value of assets as of the valuation date, as provided by the System. The System uses an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
Actuarial assumptions	In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.



The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared at the request of the System and Board of Trustees. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- Actuarial results in this report are not rounded, but that does not imply precision.
- If the System is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The System should look to its other advisors for expertise in these areas.

As Segal has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan.

Section 2: Actuarial Valuation Results

A. Membership Data

The Actuarial Valuation and Review considers the number and demographic characteristics of covered participants, including active members, inactive members, retired members and beneficiaries. This section presents a summary of significant statistical data on these participant groups.

As shown below, the ratio of non-active members to active members has been generally increasing. This increases the risks associated with the plan as the liabilities and costs are larger relative to the payroll of the active members in the plan.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A and B.

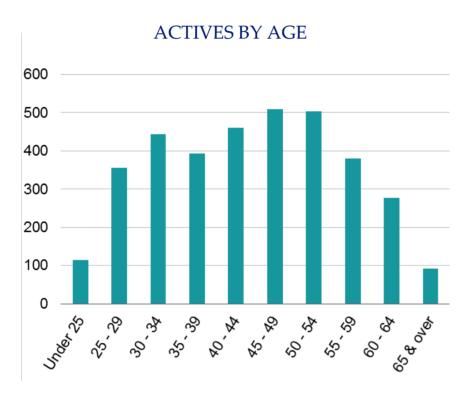
Member Population: 2012 – 2021

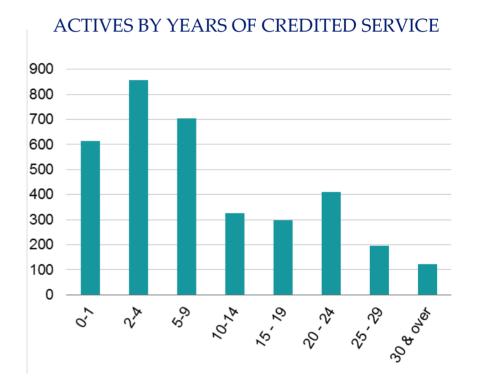
As of January 1	Active Members	Vested Terminated Members	Retired Members and Beneficiaries	Total Non- Actives	Ratio of Non-Actives to Actives
2012	3,972	1,341	7,747	9,088	2.29
2013	3,934	1,196	7,867	9,063	2.30
2014	3,911	1,411	7,940	9,351	2.39
2015	3,680	1,370	7,979	9,349	2.54
2016	3,619	1,387	7,991	9,378	2.59
2017	3,488	1,394	8,063	9,457	2.71
2018	3,502	1,371	8,037	9,408	2.69
2019	3,425	1,313	8,042	9,355	2.73
2020	3,561	1,293	8,001	9,294	2.61
2021	3,529	1,262	7,886	9,148	2.59

Active Members

Plan costs are affected by the age, years of creditable service and payroll of active members. In this year's valuation, there are 3,529 active members with an average age of 44.5, average years of benefit service of 9.4, and average pay of \$58,021. The 3,561 active members in the prior valuation had an average age of 44.3, average benefit service of 9.4 years, and average pay of \$56,267.

Distribution of Active Members as of January 1, 2021





Inactive Members

In this year's valuation, there are 1,262 inactive members with a vested right to a deferred or immediate benefit. Average monthly annuities for these members are \$701. For comparison, in the previous valuation, there were 1,293 inactive members with a vested right to a deferred or immediate benefit. Average monthly annuities for these members were \$703.

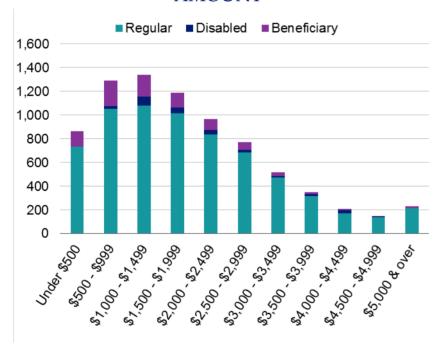
Retired Members and Beneficiaries

As of January 1, 2021, 6,975 retired members (including disability retirees) and 911 beneficiaries are receiving total monthly benefits of \$15,218,670. For comparison, in the previous valuation, there were 7,088 retired members and 913 beneficiaries receiving monthly benefits \$15,175,558.

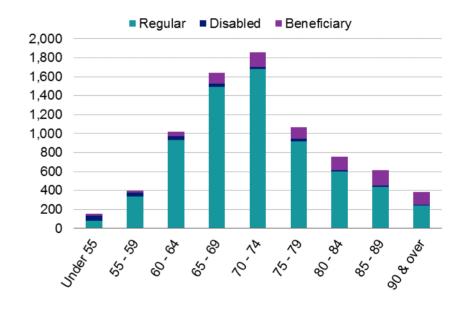
As of January 1, 2021, the average monthly benefit for retired members is \$1,981, compared to \$1,949 in the previous valuation. The average age for retired members is 72.2 in the current valuation, compared with 71.8 in the prior valuation.

Distribution of Pensioners as of January 1, 2021

PENSIONERS BY TYPE AND MONTHLY AMOUNT



PENSIONERS BY TYPE AND AGE



Historical Plan Population

The chart below demonstrates the progression of the active population over the last ten years. The chart also shows the growth among the retired population over the same time period.

Membership Data Statistics: 2012 – 2021

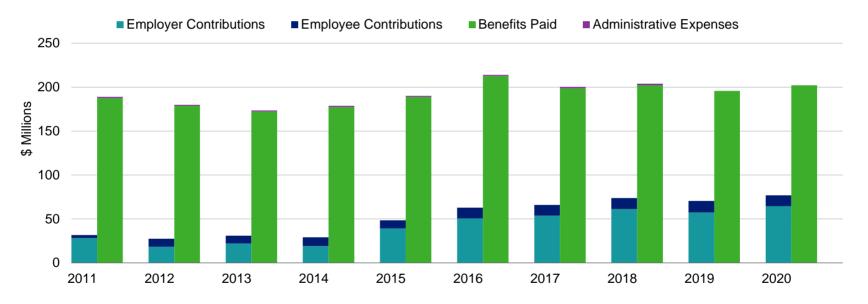
Active Members Retired Members Average Monthly As of **Average Average Average** January 1 Age Service Age **Amount** Count Count 2012 3,972 11.6 6,833 \$1,673 45.6 70.1 2013 3,934 45.8 11.7 6,999 70.5 1,733 2014 3,911 7,099 70.6 1,756 46.0 11.6 2015 3,680 46.0 7,092 1,782 11.7 70.8 2016 45.7 7,077 71.0 3,619 11.4 1,829 2017 3,488 45.2 10.3 7,147 71.1 1,868 2018 3,502 45.0 10.3 7,128 71.3 1,893 3,425 7,122 71.5 1,920 2019 44.8 10.0 2020 3,561 44.3 9.4 7,088 71.8 1,949 72.2 2021 3,529 44.5 9.4 6,975 1,981

B. Financial Information

Retirement plan funding anticipates that, over the long term, both contributions and investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments. Retirement plan assets change as a result of the net impact of these income and expense components. The System's negative cash flow (approximately \$125 million in 2020) also affects expected investment returns.

Additional financial information, including a summary of these transactions for the valuation year, is presented in *Section 3, Exhibits C, D* and *E*.

Comparison of Contributions to Benefits and Expenses Paid For Years Ended December 31, 2011 – 2020



It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has adopted an asset smoothing method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuation is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

Determination of Actuarial Value of Assets for Year Ended December 31, 2020

1	Market value of assets, December 31, 2020				\$1,792,916,838
		Original	Percent	Unrecognized	
2	Calculation of unrecognized return	Amount **	Deferred	Amount***	
(a)	Year ended December 31, 2020*	\$53,834,842	90%	\$48,451,358	
(b)	Year ended December 31, 2019	124,974,770	80	99,979,816	
(c)	Year ended December 31, 2018	-170,935,242	70	-119,654,668	
(d)	Year ended December 31, 2017	121,516,124	60	72,909,672	
(e)	Year ended December 31, 2016	-23,448,242	50	-11,724,120	
(f)	Year ended December 31, 2015	-103,841,093	40	-41,536,436	
(g)	Year ended December 31, 2014	-50,790,631	30	-15,237,189	
(h)	Year ended December 31, 2013	118,316,429	20	23,663,286	
(i)	Year ended December 31, 2012		10		
(j)	Year ended December 31, 2011		0		
(k)	Total unrecognized return				56,851,719
3	Actuarial value of assets as of December 31, 2020:	(1) - (2k)			\$1,736,065,119
4	Actuarial value as a percentage of market value:	(3) ÷ (1)			96.83%

^{*} Derivation of gain/(loss) for the year ending December 31, 2020 is shown on page 19

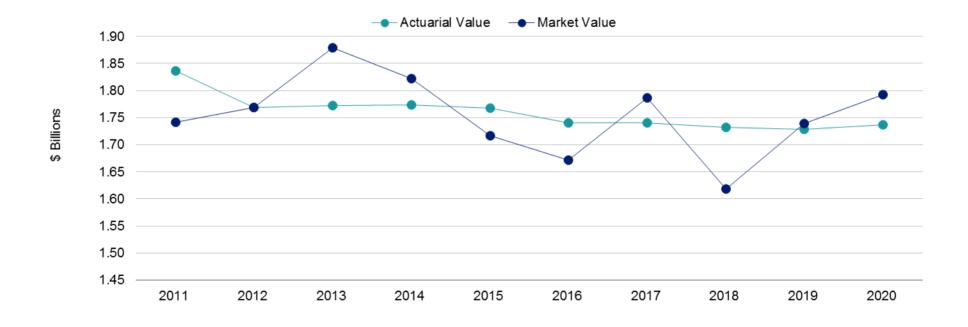
Assets were re-established at market value on January 1, 2013.

^{**}Total return minus expected return on a market value basis

^{***}Recognition at 10% per year over ten years

Both the actuarial value and market value of assets are representations of the Plan's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Plan's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

Actuarial Value of Assets vs. Market Value of Assets as of December 31, 2011 – 2020



C. Actuarial Experience

To calculate the actuarially determined contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single years' experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The net experience gain is \$5,769,471, which includes \$7,711,164 from investment gains and \$1,941,693 in losses from all other sources. The net experience variation from individual sources other than investments was 0.08% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

Actuarial Experience for Year Ended December 31, 2020

1	Net gain/(loss) from investments*	\$7,711,164
2	Net gain/(loss) from other experience	(\$1,941,693)
3	Net experience gain/(loss): 1 + 2	\$5,769,471

^{*} Details on next page.



Investment Experience

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the System's investment policy. The rate of return on the market value of assets was 10.71% for the year ended December 31, 2020.

For valuation purposes, the assumed rate of return on the actuarial value of assets is 7.50%. The actual rate of return on an actuarial basis for the 2020 plan year was 7.96%. Since the actual return for the year was greater than the assumed return, the Plan experienced an actuarial gain during the year ended December 31, 2020 with regard to its investments.

Investment Experience

		Year Ended December 31, 2020		Year E Decembe		
		Market Value Actuarial Value		Market Value	Actuarial Value	
1	Investment income	\$179,567,176	\$132,695,030	\$245,570,699	\$122,175,139	
2	Average value of assets	1,676,431,125	1,666,451,552	1,556,076,498	1,669,492,485	
3	Rate of return: 1 ÷ 2	10.71%	7.96%	15.78%	7.32%	
4	Assumed rate of return	ssumed rate of return 7.50% 7.50%		7.75%	7.75%	
5	Expected investment income: 2 x 4	125,732,334	124,983,866	120,595,929	129,385,668	
6	Actuarial gain/(loss): 1 − 5	<u>\$53,834,842</u>	<u>\$7,711,164</u>	<u>\$124,974,770</u>	<u>-\$7,210,529</u>	

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The table below shows the rate of return on an actuarial basis compared to the market value investment return for the last 17 years, including averages over select time periods.

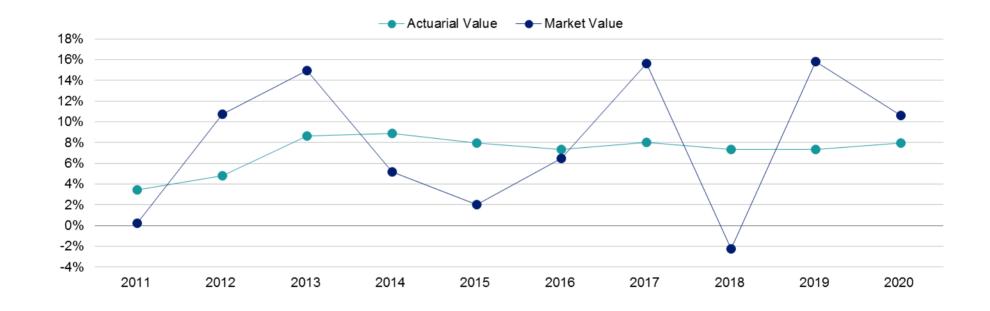
Investment Return – Actuarial Value vs. Market Value: 2004 – 2020

	Actuarial Value Investment Return					Actuarial Value Investment Return		Market Value Investment Return	
Year Ended Dec. 31	Amount	Percent	Amount	Percent	Year Ended Dec. 31	Amount	Percent	Amount	Percent
					2011	\$64,214,736	3.47%	\$4,039,718	0.22%
					2012	84,397,065	4.79	178,833,104	10.74
					2013	146,900,302	8.66	253,385,088	14.93
2004	\$106,051,092	7.67%	\$184,521,294	12.91%	2014	150,527,504	8.87	92,284,293	5.15
2005	142,925,632	10.45	123,206,736	8.25	2015	135,399,964	7.95	35,190,400	2.01
2006	174,981,665	12.48	202,170,056	13.41	2016	124,121,244	7.34	106,649,356	6.50
2007	193,083,715	13.05	98,642,968	6.12	2017	133,662,416	8.04	249,003,287	15.63
2008	53,668,265	3.03	-357,462,777	-22.44	2018	121,956,182	7.31	-38,060,799	-2.22
2009	74,459,006	3.87	313,462,671	20.19	2019	122,175,139	7.32	245,570,699	15.78
2010	104,127,935	5.51	203,770,758	11.60	2020	132,695,030	7.96	179,567,176	10.71
			Most recent five-year average re		return	7.59%		9.07%	
			Most recent ten-year average re			eturn	7.16%		7.76%
			Most r	ecent fifteen-	year averaç	ge return	7.27%		6.70%

Note: Each year's yield is weighted by the average asset value in that year.

Subsection B described the actuarial asset smoothing method that gradually recognizes fluctuations in the market value rate of return. The goal of this is to stabilize the actuarial rate of return and to produce more level pension plan costs.

Market and Actuarial Rates of Return for Years Ended December 31, 2011 - 2020



Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among participants,
- retirement experience (earlier or later than projected),
- mortality (more or fewer deaths than projected),
- the number of disability retirements (more or fewer than projected), and
- salary increases (greater or smaller than projected).

The net loss from this other experience for the year ended December 31, 2020, amounted to \$1,941,693, which is 0.08% of the actuarial accrued liability.

Experience Gain/(Loss) Due to Demographics For Year Ended December 31, 2020

Net turnover	-\$3,222,312
Retirement	-10,686,624
Mortality (more deaths than expected)	7,881,986
Disability retirements	21,155
Salary increase for continuing actives	456,354
Miscellaneous	<u>3,607,748</u>
Total	-\$1,941,693

D. Changes in the Actuarial Accrued Liability

The actuarial accrued liability as of January 1, 2021, is \$2,305,250,624, a decrease of \$15,084,665, or 0.7%, from the actuarial accrued liability as of the prior valuation date. The liability is expected to grow each year with normal cost and interest, and to decline due to benefit payments made. Additional fluctuations can occur due to actual experience that differs from expected (as discussed in the previous subsection).

Actuarial Assumptions

- No actuarial assumptions were changed in this valuation
- Details on actuarial assumptions and methods are in Section 5, Exhibit I.

Plan Provisions

- There were no plan provision changes is reflected in this valuation:
- A summary of plan provisions is in Section 5, Exhibit II.

E. Development of Unfunded Actuarial Accrued Liability

Development of Unfunded Actuarial Accrued Liability For Year Ended December 31, 2020

1	Unfunded actuarial accrued liability at beginning of year		\$591,686,637
2	Normal cost at beginning of year (includes expense reimbursement payable to County)		17,355,963
3	Total contributions		-76,901,000
4	Interest		
	• For whole year on 1 + 2	\$45,678,195	
	For partial year on 3 (See Exhibit J)	<u>-2,864,819</u>	
	Total interest		42,813,376
5	Expected unfunded actuarial accrued liability		\$574,954,976
6	Changes due to:		
	Experience (gain)/loss	-5,769,471	
	Assumptions	0	
	Funding method	0	
	Plan provisions	<u>0</u>	
	Total changes		-\$5,769,471
7	Unfunded actuarial accrued liability at end of year		<u>\$569,185,505</u>

F. Amortization Schedule for Funding

The actuarially determined contribution is equal to the employer normal cost payment and a payment on the unfunded actuarial accrued liability (UAAL). Payments towards the UAAL are determined by amortizing sources of UAAL over various time periods, with amounts determined as a level percentage of payroll. The UAAL payment was reestablished on January 1, 2014 and amortized over 21 years. Future unanticipated increases in UAAL are amortized over closed 20-year periods. UAAL arising from contribution variances are amortized over closed 5-year periods. Amortization payments are assumed to increase by the payroll growth assumption of 1.75%, which reflects the payroll increase assumption of 3.5%, limited to reflect the anticipated increases in the County's tax base.

Actual Funding Contribution Amortization Schedule for 2021

Туре	Date Established	Initial Period	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
Reestablished UAAL	01/01/2015	21	\$448,982,279	\$39,155,983	15	\$411,103,530
Increase to UAAL	01/01/2016	20	49,830,707	4,378,741	15	45,972,950
Actuarial Loss	01/01/2017	20	26,129,846	2,253,062	16	24,642,958
Contribution Variance	01/01/2017	5	2,068,560	481,907	1	481,907
MyChoice Contribution	01/01/2017	20	(2,918,641)	(251,662)	16	(2,752,559)
Actuarial Gain	01/01/2018	20	(3,290,263)	(278,399)	17	(3,160,530)
Contribution Variance	01/01/2018	5	(1,917,965)	(445,960)	2	(860,806)
Change in Assumptions	01/01/2018	20	63,931,243	5,409,419	17	61,410,489
Actuarial Loss	01/01/2019	20	6,600,732	548,478	18	6,442,031
Contribution Variance	01/01/2019	5	(4,687,868)	(1,089,052)	3	(3,044,517)
Actuarial Gain	01/01/2020	20	(9,111,095)	(743,491)	19	(9,008,920)
Contribution Variance	01/01/2020	5	(3,246,621)	(746,465)	4	(2,687,668)
Change in Assumptions	01/01/2020	20	52,178,675	4,257,929	19	51,593,527
Actuarial Gain	01/01/2021	20	(5,769,471)	(462,708)	20	(5,769,471)
Contribution Variance	01/01/2021	5	(5,177,416)	(1,190,395)	5	(5,177,416)
Total				\$51,277,387		\$569,185,505

^{*} Level percentage, except contribution variances

Payments for the subsequent year Budget Contribution are determined by rolling forward the outstanding balance and payment amounts for existing amortization bases, and estimating the amounts of any new sources of UAAL.

Budget Contribution Amortization Schedule for 2022

Туре	Date Established	Initial Period	Initial Amount	Annual Payment*	Years Remaining	Outstanding Balance
Reestablished UAAL	01/01/2015	21	\$448,982,279	\$39,841,213	14	\$399,843,614
Increase to UAAL	01/01/2016	20	49,830,707	4,455,369	14	44,713,774
Actuarial Loss	01/01/2017	20	26,129,846	2,292,490	15	24,069,139
MyChoice Contribution	01/01/2017	20	(2,918,641)	(256,066)	15	(2,688,465)
Actuarial Gain	01/01/2018	20	(3,290,263)	(283,271)	16	(3,098,291)
Contribution Variance	01/01/2018	5	(1,917,965)	(445,959)	1	(445,959)
Change in Assumptions	01/01/2018	20	63,931,243	5,504,084	16	60,201,151
Actuarial Loss	01/01/2019	20	6,600,732	558,076	17	6,335,569
Contribution Variance	01/01/2019	5	(4,687,868)	(1,089,053)	2	(2,102,125)
Actuarial Gain	01/01/2020	20	(9,111,095)	(756,502)	18	(8,885,336)
Contribution Variance	01/01/2020	5	(3,246,621)	(746,466)	3	(2,086,793)
Change in Assumptions	01/01/2020	20	52,178,675	4,332,442	18	50,885,769
Actuarial Gain	01/01/2021	20	(5,769,471)	(470,805)	19	(5,704,770)
Contribution Variance	01/01/2021	5	(5,177,416)	(1,190,395)	4	(4,286,047)
Actuarial Gain	01/01/2022	20	(6,962,696)	(558,404)	20	(6,962,696)
Contribution Variance	01/01/2022	5	(1,468,575)	(337,656)	5	(1,468,575)
Total				\$54,662,781		\$548,319,959

^{*} Level percentage, except contribution variances

For the 2021 Budget Contribution, a base for unexpected change in the unfunded actuarial accrued liability is added and amortized over 20 years. This gain is based on the amount of the deferred investment gain that will be recognized in the actuarial value of assets in the January 1, 2022 valuation. A base for a contribution variance for 2022 is added and amortized over 5 years. This variance is based on the difference between the County's anticipated contribution and the Actual Funding Contribution for 2021.

G. Gross Contribution Requirements

The actuarially determined contribution is equal to the employer normal cost payment and a payment on the unfunded actuarial accrued liability (as shown in *Section 2, Exhibit F*). The contribution requirements shown in this report are gross contribution amounts. It is our understanding that County staff will net out the amount of employee contributions that are collected to arrive at a net County contribution.

Gross Contribution Requirements

		Year Beginning January 1			
		2022	2022 2021		
		Budget	Actual	Budget	
1	Total normal cost, adjusted to end of year	\$19,575,000	\$18,912,234	\$19,311,000	
2	Net annual amortizations, adjusted to end of year	54,663,000	55,123,191	56,193,000	
3	Expenses	0	0	0	
4	Total contribution: 1 + 2 + 3, not less than zero	74,238,000	74,035,425	\$75,504,000	

The Actual Funding Contribution and 2022 Budget Contribution are based on participant data as of January 1, 2021.

For the 2022 Budget Contribution, the Normal Cost for 2022 is assumed to be 3.5% higher than the 2021 Normal Cost.

The amounts shown above are gross contribution amounts. It is our understanding that the County staff will net out the amount of employee contributions that are collected to arrive at net employer contributions.

H. State Mandated Member Contributions

The following table develops the member contribution rates for 2022. Public Safety and General employees contribute 50% of the allocated cost of the 2021 actuarially determined contribution.

Member Contribution Rates

		Non-Contributors	Public Safety	General	All Members
	ntion Results as of January 1, 2021				
1	Present value of future benefits	^ -	405.05 : 0	фооо <u>поо</u> от /	470.001.70
	a) Active members *	\$0	\$85,254,770	\$388,569,954	\$473,824,724
	b) Participants with deferred benefits	85,780,256	0	0	85,780,256
	c) Retirees and beneficiaries	1,853,564,794	0	0	1,853,564,794
	d) Total	1,939,345,050	85,254,770	388,569,954	2,413,169,774
2	Present value of future normal cost	0	17,972,715	89,946,435	107,919,150
3	Actuarial accrued liability: 1 – 2	1,939,345,050	67,282,055	298,623,519	2,305,250,624
4	Actuarial value of assets	1,460,504,667	50,669,557	224,890,895	1,736,065,119
5	Funded percentage: 4 ÷ 3	75.3%	75.3%	75.3%	75.3%
6	Unfunded actuarial accrued liability: 3 - 4	\$478,840,383	\$16,612,498	\$73,732,624	\$569,185,505
7	Total normal cost for the plan year	-	2,698,310	14,894,466	17,592,776
Proje	cted Member Contribution for 2022				
1	Annual contribution for 2021				
	a) Normal cost with interest	0	2,900,683	16,011,551	18,912,234
	b) Net annual amortization payments **	46,373,650	1,608,850	7,140,691	55,123,191
	c) Expenses	0	0	0	0
	d) Total contribution: a + b + c , not less than zero	46,373,650	4,509,533	23,152,242	74,035,425
2	Member contribution (50% of 1d for Contributors)	0	2,254,767	11,576,121	13,830,888
3	Expected salaries in 2021	0	22,067,012	182,687,595	204,754,607
4	Member contribution rate: 2 ÷ 3 ÷ 1.075 1/2	N/A	9.9%	6.1%	N/A

^{*} The actives in the Public Safety group include 306 members comprised of Represented Firefighters and Sheriffs and Non-Represented Firefighters and Sheriffs.

^{**} The net annual amortization payments for the contributors are prorated based on the contributors' actuarial accrued liability compared to total actuarial accrued liability of the retirement system.



I. Reconciliation of Budget Contribution Requirement

The chart below details the changes in the Budget Contribution requirement from the prior valuation to the current year's valuation.

Reconciliation of Budget Contribution Requirement From 2021 to 2022

		Amount	
1	2021 Budget Contribution		\$75,504,000
2	Increase/(decrease) during 2020 due to:		
	a) Unanticipated liability loss/(gain) with interest	-\$592,000	
	b) Asset experience different than expected	-464,000	
	c) 2020 expenses other than assumed	0	
	d) 2020 contribution variance other than assumed	-413,000	
	e) Change due to assumption/method/plan changes	0	
	f) Total		<u>-\$1,469,000</u>
3	2021 Actual Contribution (rounded): 1 + 2		\$74,035,000
4	Expected increase/(decrease) during 2021 due to:		
	a) Normal cost and existing amortization bases	\$1,166,000	
	b) Phase-in of deferred investment (gains) losses	-600,000	
	c) Increase in expenses	0	
	d) Expected contribution variance for 2021	-363,000	
	e) Full recognition of bases	0	
	f) Change due to assumption/method/plan changes	0	
	g) Total		\$203,000
5	2022 Budget Contribution: 3 + 4		\$74,238,000

J. Contribution for prior year and variance from the funding calculation contribution

Differences between the Actual Funding Contribution and the County's actual contributions with interest are amortized over five year periods using a level dollar basis. The following exhibit shows the calculation of the contribution variance for the 2020 plan year.

Calculation of Contribution Variance

		lte	em		Amount		
1	1 Total Actual Funding Contribution, end-of-year basis, for 2020 plan year (from January 1, 2020 actuarial valuation report)						
2	Total employer contr	ibutions made:					
	Contribution Made Bi-weekly 06/30/2020* Total	Fraction of a Year Invested 50.7%	Contribution Amount \$0 64,558,405 \$64,558,405	Interest to Year End** \$0	End of Year Amount \$0 <u>66,968,744</u> \$66,968,744		
3	Total member contrib	outions made:					
	Contribution Made Bi-weekly	Fraction of a Year Invested 50.0%	Contribution Amount \$12,342,595	Interest to Year End** \$454,480	End of Year Amount \$12,797,075		
4	Variance from funding	g calculation amount: 2 + 3 - 1			\$5,177,416		

^{*} Assumed employer contributions are made mid-year.

^{**} Interest to December 31, 2020 at 7.50% per annum

K. History of Employer Contributions

A history of the most recent years of contributions is shown below. Amounts contributed do not reflect interest.

History of Employer Contributions: 2008 – 2021

Fiscal Year Ended Dec. 31	Normal Cost with Interest	Net Amortization Payments	Expenses	Actuarially Determined Contribution	Amount Contributed	Percent Contributed
2008	\$21,012,737	\$32,050,873	N/A	\$53,063,610	\$34,981,095	65.92%
2009	21,395,539	8,959,996	N/A	30,355,535	60,123,920	198.07%
2010	20,736,844	6,813,146	N/A	27,549,990	32,969,145	119.67%
2011	19,480,089	7,327,948	N/A	26,808,037	31,589,401	117.84%
2012	14,488,711	10,386,482	N/A	24,875,193	27,451,148	110.36%
2013	16,105,425	12,164,620	N/A	28,270,045	30,952,781	109.49%
2014	15,235,436	14,329,489	N/A	29,564,925	29,057,000	98.28%
2015	16,999,506	39,300,143	\$1,554,175	57,853,824	48,405,459	83.67%
2016	17,381,870	44,459,669	1,225,857	63,067,396	63,769,182	101.11%
2017	16,405,955	47,838,754	1,554,742	65,799,451	65,991,000	100.29%
2018	17,105,095	52,640,182	1,677,304	71,422,581	72,194,000	101.08%
2019	17,024,645	52,974,997	0	69,999,642	70,533,656	100.76%
2020	18,657,660	55,930,743	0	74,588,403	76,901,000	103.10%
2021	18,912,234	55,123,191	0	74,035,425	TBD	TBD

L. Actuarial Balance Sheet

An overview of the Plan's funding is provided by an Actuarial Balance Sheet, which compares the total liabilities (current and future) to the total assets (current and future). The liabilities are calculated by determining the amount and timing of all future payments that will be made by the Plan for current participants. These payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value of all benefits, referred to as the "liability" of the Plan.

Second, this liability is compared to the assets. The "assets" for this purpose include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments for the unfunded actuarial accrued liability.

Actuarial Balance Sheet

Valuation as of

	January 1, 2021	January 1, 2020
Liabilities		
Present value of benefits for retired participants	\$1,853,564,794	\$1,865,544,823
Present value of benefits for inactive former participants	85,780,256	86,195,635
Present value of benefits for active participants	473,824,724	473,069,041
Total liabilities	2,413,169,774	\$2,424,809,499
Assets		
Total valuation value of assets	\$1,736,065,119	\$1,728,648,652
Present value of future employer and employee contributions for:		
» Future Normal Costs	107,919,150	104,474,210
» Unfunded actuarial accrued liability	<u>569,185,505</u>	<u>591,686,637</u>
Total of current and future assets	<u>\$2,413,169,774</u>	<u>\$2,424,809,499</u>

M. Risk

The actuarial valuation results depend on a single set of assumptions; however, there is a risk that emerging results may differ significantly as actual experience proves to be different than projected from the current assumptions.

We have not been engaged to perform a detailed analysis of the potential range of the impact of risks relative to Milwaukee County's future financial condition, but have included a brief discussion of some of the risks that may affect the Plan. A more detailed assessment of the risks could provide a better understanding of the risks inherent in the Plan. This assessment may include scenario testing, sensitivity testing, stress testing, and stochastic modeling. Milwaukee County might consider including stochastic modeling in order to provide a more detailed risk assessment.

A detailed risk assessment could be important for Milwaukee County because:

- The negative cash flow position of the Plan as a percentage of assets could be exacerbated by relatively small deviations from assumed future experience.
- Retired and inactive participants account for more than half of the Plan's liabilities, limiting options for reducing plan liabilities in the event of adverse experience.
- Projected employer contribution amounts may increase to an unsustainable percentage of County budget under adverse stress testing conditions.
- The risks identified below show significant potential for variability.

The following risks could significantly affect the Plans' future condition:

Investment Risk (the risk that returns will be different than expected)

The assets total approximately \$1.79 billion. If the actual market value return for the Plan Year were 1% different from the assumed (either higher or lower), the projected unfunded actuarial liability would change by about \$17.9 million.

If the prior year's investment performance resulted in a market value of assets that is 10% different from the current value, it would result in a change of \$179 million in the asset value. A 10% increase in assets would cause the unfunded liability (market value basis) to decrease from \$569 million to \$390 million. Likewise, a 10% decrease in the asset value, would cause the unfunded liability to increase from \$569 million to \$748 million.

The market value rate of return over the last ten years has ranged from a low of -2.2% to a high of 15.8%.

Longevity Risk (the risk that mortality experience will be different than expected)

The actuarial valuation includes an expectation of future improvement in life expectancy. Emerging plan experience that does not match these expectations will result in either an increase or decrease in the actuarially determined contribution.

A 10% reduction in the assumed mortality rates results in an increase in the liabilities of roughly 3% for most plans. For Milwaukee County, a 3% liability increase would result in an increase in the actuarial funding contribution of \$6.6 million. The actuarial funding contribution would increase from \$74.0 million to \$80.6 million.

Demographic Risk (the risk that participant experience will be different than assumed)

- Examples of this risk include:
- Actual retirements occurring earlier or later than assumed. The value of retirement plan benefits is sensitive to the rate of benefit accruals and any legacy early retirement subsidies that apply.
- More or less active participant turnover than assumed.
- Salary increases more or less than assumed.

Maturity Measures

The risk associated with a pension plan increases as it becomes more mature, meaning that the actives represent a smaller portion of the liabilities of the plan. When this happens, there is a greater risk that fluctuations in the experience of the non-active participants or of the assets of the plan can result in large swings in the contribution requirements.

- Currently the Plan has a non-active to active participant ratio of 2.6. For the prior year, benefits paid were \$125 million more than
 contributions received. As the Plan continues to mature, more cash will be needed from the investment portfolio to meet benefit
 payments.
- As of December 31, 2020, the retired life actuarial accrued liability represents 80% of the total actuarial accrued liability. In
 addition, the actuarial accrued liability for inactive vested participants represents 4% of the total. The higher the non-active
 actuarial accrued liability is as a percent of the total liability, the greater the risk of volatility in results.

Section 3: Supplemental Information

Exhibit A – Table of Plan Coverage

	As of Ja		
Category	2021	2020	Change From Prior Year
Active members in valuation:			
Number	3,529	3,561	-0.9%
Average age	44.5	44.3	-0.2
 Average years of benefit service 	9.4	9.4	0.0
Total payroll	\$204,754,607	\$200,365,711	+2.2%
Average pay	58,021	56,267	+3.1%
Total active vested members	1,955	1,930	+1.3%
Inactive members:			
Number of terminated vested	1,262	1,293	-2.4%
Average age	51.7	51.4	+0.3
Retired members:			
Number in pay status	6,720	6,825	-1.5%
Average age	72.4	72.1	+0.3
Average monthly benefit	\$1,973	\$1,942	+1.6%
Disability retirees:			
Number in pay status	255	263	-3.0%
Average age	65.3	65.0	+0.3
Average monthly benefit	\$2,195	\$2,131	+3.0%
Beneficiaries:			
Number in pay status	911	913	-0.2%
Average age	78.9	78.9	0.0
Average monthly benefit	\$1,536	\$1,490	+3.1%

Exhibit B – Reconciliation of Membership Data

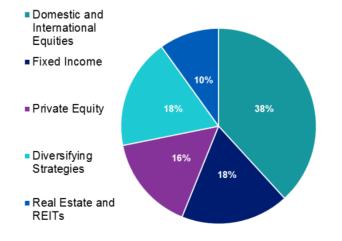
	Active Members	Vested Terminated Members	Disability Retirees	Retired Members	Beneficiaries	Total
Number as of January 1, 2020	3,561	1,293	263	6,825	913	12,855
New participants	382	N/A	N/A	N/A	N/A	382
Terminations – with vested rights	(47)	47	-	-	-	-
Terminations – without vested rights	(113)	N/A	N/A	N/A	N/A	(113)
Retirements	(111)	(58)	N/A	169	N/A	-
New disabilities	(3)	-	3	N/A	N/A	-
Return to work / rehire	41	(8)	-	-	N/A	33
Died with beneficiary	-	(1)	-	(69)	70	-
Died without beneficiary	(6)	(2)	(11)	(206)	(77)	(302)
Lump sum cash-outs	(175)	(10)	-	-	-	(185)
Certain period expired	N/A	N/A	-	-	(6)	(6)
Data adjustments	-	1	-	1	11	13
Number as of January 1, 2021	3,529	1,262	255	6,720	911	12,677

Exhibit C – Summary Statement of Income and Expenses on a Market Value Basis

	Year Ended December 31, 2020		Year I Decembe	
Net assets at market value at the beginning of the year		\$1,738,628,225		\$1,618,310,314
Contribution income:				
Employer contributions	\$64,558,405		\$57,316,293	
Member contributions	12,342,595		13,217,363	
 Less administrative expenses payable to the County 	0		0	
Net contribution income		\$76,901,000		\$70,533,656
Net other income		\$0		\$0
Investment income:				
Net appreciation in fair value	\$163,661,682		\$222,760,908	
Interest and dividends	9,038,617		11,729,648	
Securities lending income	119,257		133,541	
Other income	12,751,234		16,547,600	
 Less securities lending rebates and fees, net 	-38,128		-42,684	
Less administrative expenses payable by System	-3,899,576		-3,120,727	
Less investment expenses	<u>-2,065,910</u>		<u>-2,437,587</u>	
Net investment income		<u>\$179,567,176</u>		<u>\$245,570,699</u>
Total income available for benefits		\$256,468,176		\$316,104,355
Less benefit payments:				
Benefits paid to retirees and beneficiaries	-\$199,841,888		-\$193,688,371	
Refunds of contributions	<u>-2,337,675</u>		<u>-2,098,073</u>	
Net benefit payments		-\$202,179,563		-\$195,786,444
Change in reserve for future benefits		\$54,288,613		\$120,317,911
Net assets at market value at the end of the year		\$1,792,916,838		\$1,738,628,225

Exhibit D – Summary Statement of Plan Assets

	December 31, 2020	December 31, 2019
Cash equivalents	\$61,726,546	\$47,513,201
Total accounts receivable	7,544,326	4,933,770
Other assets	18,907,077	29,255,052
Investments:		
Fixed Income	\$314,079,620	\$359,494,857
Domestic and international equities	670,092,586	638,172,805
Private equity	276,134,074	205,051,663
Diversifying strategies	319,751,606	312,565,521
Real estate and REITs	<u>155,265,295</u>	<u>179,775,468</u>
Total investments at market value	\$1,735,323,181	\$1,695,060,314
Total assets	\$1,823,501,130	\$1,776,762,337
Total liabilities	-30,584,292	-38,134,112
Net assets at market value	\$1,792,916,838	\$1,738,628,225
Net assets at actuarial value	\$1,736,065,119	\$1,728,648,652



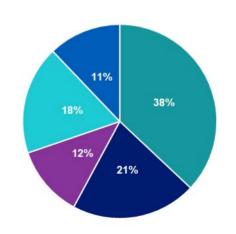


Exhibit E – Development of the Fund Through December 31, 2020

Er	ear ded c. 31	Employer Contributions	Member Contributions	Net Other Income*	Net Investment Return**	Admin. Expenses***	Benefit Payments****	Market Value of Assets at Year-End	Actuarial Value of Assets at Year-End	Actuarial Value as a Percent of Market Value
2	2007	-	•				-	\$1,665,511,165	\$1,627,287,632	97.70%
2	2008	\$34,840,886	\$140,209	\$397,797,000	-\$357,462,777	-\$1,031,291	-\$144,184,222	1,595,610,970	1,968,518,479	123.37%
2	2009	59,992,154	131,766	0	313,462,671	-1,312,156	-145,345,520	1,822,539,885	1,956,443,729	107.35%
2	2010	32,893,562	75,584	0	203,770,758	-1,310,356	-162,802,590	1,895,166,843	1,929,427,864	101.81%
2	2011	28,275,594	3,313,807	0	4,039,718	-1,158,921	-187,530,154	1,742,106,887	1,836,542,926	105.42%
2	2012	18,410,496	9,040,652	0	178,833,104	-1,187,236	-178,769,275	1,768,434,628	1,768,434,628	100.00%
2	2013	21,998,256	8,954,525	0	253,385,088	-1,289,344	-172,248,723	1,879,234,430	1,772,749,644	94.33%
2	2014	19,005,395	10,051,605	0	92,984,293	-1,329,904	-177,366,124	1,822,579,695	1,773,638,120	97.31%
2	2015	39,080,593	9,324,866	0	35,190,400	-1,204,226	-188,819,565	1,716,151,763	1,767,419,752	102.99%
2	2016	50,625,672	12,143,510	0	106,649,356	-1,225,857	-212,662,113	1,671,682,331	1,740,422,208	104.11%
2	2017	53,660,695	12,330,305	0	249,003,287	-1,677,304	-198,590,749	1,786,408,565	1,739,807,571	97.39%
2	2018	61,177,816	12,651,528	0	-38,060,799	-1,703,344	-202,163,452	1,618,310,314	1,731,726,301	107.01%
2	2019	57,316,293	13,217,363	0	245,570,699	0	195,786,444	1,738,628,225	1,728,648,652	99.43%
2	2020	64,558,405	12,342,595	0	179,567,176	0	202,179,563	1,792,916,838	1,736,065,119	96.83%

^{*} Proceeds from Pension Obligation Bonds



^{**} On a market basis, net of investment fees

^{***} Starting in 2019, admin expenses are being reported as zero because the County Board approved the termination of the reimbursement of the administrative costs by ERS to the County. Administrative expenses paid directly by ERS are treated as an offset to the Net Investment Return.

^{****} Includes withdrawal of membership accounts

Exhibit F – Definition of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Actuarial Accrued Liability for Actives:	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial Accrued Liability for Pensioners:	The single-sum value of lifetime benefits to existing pensioners. This sum takes into account life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial Cost Method:	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial Gain or Loss:	A measure of the difference between actual experience and expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge that may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield actuarial liabilities that are larger than projected. Actuarial gains will shorten the time required for funding the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.
Actuarially Equivalent:	Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV):	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is:
	Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.)
	Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and
	Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits:	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation:	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB, such as the Actuarially Determined Contribution (ADC) and the Net Pension Liability (NPL).
Actuarial Value of Assets (AVA):	The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.
Actuarially Determined:	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.
Actuarially Determined Contribution (ADC):	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
Amortization Method:	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization Payment:	The portion of the pension plan contribution, or ADC, that is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

The estimates upon which the cost of the Fund is calculated, including:
Investment return - the rate of investment yield that the Fund will earn over the long-term future;
Mortality rates - the death rates of employees and pensioners; life expectancy is based on these rates;
Retirement rates - the rate or probability of retirement at a given age;
Withdrawal rates - the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement;
Salary increase rates - the rates of salary increase due to inflation and productivity growth.
A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Open Amortization Period.
Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.
A retirement plan in which benefits are defined by a formula applied to the member's compensation and/or years of service.
A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
A periodic review and analysis of the actual experience of the Fund that may lead to a revision of one or more Actuarial Assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.
The ratio of the Actuarial Value of Assets (AVA) to the Actuarial Accrued Liability (AAL). Plans sometimes calculate a market funded ratio, using the market value of assets (MVA), rather than the AVA.

Section 4: GASB 67 and 68 Information

Exhibit 1 – Net Pension Liability

The components of the net pension liability at were as follows:

	January 1, 2021	January 1, 2020
Total pension liability	\$2,305,250,624	\$2,320,335,289
Plan fiduciary net position	<u>(1,792,916,838)</u>	(1,738,628,225)
Net pension liability	\$512,333,786	\$581,707,064
Plan fiduciary net position as a percentage of the total pension liability	77.8%	74.9%

The net pension liability was measured as of December 31, 2020, and is determined based on the total pension liability from the January 1, 2021, actuarial valuation.

Plan provisions. The plan provisions used in the measurement of the net pension liability are the same as those used in the actuarial valuation as of January 1, 2021.

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of January 1, 2021, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation 2.50%

Salary increases 3.50% to 6.21%, varying by age, including inflation and productivity

Investment rate of return 7.50%, net of pension plan investment expenses

Cost-of-living adjustments 2.00%

Mortality

Pre-retirement: Males – RP-2006 Employee male, projected with generational projection using scale MP-2016.

Females – RP-2006 Employee female, projected with generational projection using scale MP-2016.

Healthy Retiree: Males – 102% of RP-2006 Healthy Annuitant male, projected with generational projection using scale MP-

2016.

Females – 107% of RP-2006 Healthy Annuitant female, projected with generational projection using scale

MP-2016.

Disabled Retiree: Males – 97% of RP-2006 Disabled male, projected with generational projection using scale MP-2016.

Females – 95% of RP-2006 Disabled female, projected with generational projection using scale MP-2016.

The actuarial assumptions used were based on the results of an experience study dated October 12, 2017. They are the same as the assumptions used in the January 1, 2021 funding actuarial valuation.

The long-term expected rate of return on pension plan investments is 7.50%. The long-term expected rate of return was determined using a method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Discount rate: The discount rate used to measure the total pension liability was 7.50% as of December 31, 2020. The projection of cash flows used to determine the discount rate assumed plan member and employer contributions will be made at rates equal to those based on this January 1, 2021, Actuarial Valuation Report. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members as of December 31, 2020. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of December 31, 2020.

Sensitivity of the net pension liability to changes in the discount rate: The following presents the net pension liability, calculated using the discount rate of 7.50%, as well as what the net pension liability would be if it were calculated using a discount rate that is one-percentage-point lower (6.50%) or one-percentage-point higher (8.50%) than the current rate:

	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
Net pension liability as of December 31, 2020	\$742,093,215	\$512,333,786	\$318,404,951

Exhibit 2 – Schedules of Changes in Net Pension Liability

	Year Ending December 31, 2020	Year Ending December 31, 2019
Total pension liability		
Service cost	\$17,355,963	\$15,800,135
Interest	167,745,110	171,350,196
Change of benefit terms	0	0
Differences between expected and actual experience	1,993,825	(16,270,627)
Changes of assumptions	0	52,178,675
Benefit payments, including refunds of employee contributions	(202,179,563)	<u>(195,786,444)</u>
Net change in total pension liability	(\$15,084,665)	\$27,271,935
Total pension liability – beginning	<u>2,320,335,289</u>	<u>2,293,063,354</u>
Total pension liability – ending (a)	<u>\$2,305,250,624</u>	<u>\$2,320,335,289</u>
Plan fiduciary net position		
Contributions – employer	\$64,558,405	\$57,316,293
Contributions – employee	12,342,595	13,217,363
Net investment income	183,466,752	248,691,426
Benefit payments, including refunds of employee contributions	(202,179,563)	(195,786,444)
Administrative expense	(3,899,576)	(3,120,727)
Other	<u>0</u>	<u>0</u>
Net change in plan fiduciary net position	54,288,613	120,317,911
Plan fiduciary net position – beginning	<u>1,738,628,225</u>	<u>1,618,310,314</u>
Plan fiduciary net position – ending (b)	<u>\$1,792,916,838</u>	<u>\$1,738,628,225</u>
Net pension liability – ending (a) – (b)	<u>\$512,333,786</u>	<u>\$581,707,064</u>
Plan fiduciary net position as a percentage of the total pension liability	77.8%	74.9%
Covered employee payroll	\$200,365,711	\$191,043,797
Net pension liability as percentage of covered employee payroll	255.7%	304.5%

Exhibit 3 – Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

As shown in *Exhibit* 2, during the plan year that ended December 31, 2020, the changes in net pension liability due to differences between expected and actual demographic experience is an increase of \$1,993,825. The average expected remaining service lives of all members is 2.4 years, determined as of January 1, 2020 (the beginning of the measurement period ending December 31, 2020). Therefore, of the \$1,993,825 demographic loss, \$830,760 is recognized in pension expense in the current year and \$1,163,065 is reflected as a deferred outflow of resources related to pensions.

Based on the assumed investment return of 7.50% for the year ending December 31, 2020, the expected net investment income for the year was \$125,732,334. As shown in *Exhibit 2*, the actual net investment income for the year was \$183,466,752. The difference between actual and expected investment experience is a decrease in net pension liability of \$57,734,418, which is recognized over a 5-year period. Of this amount, \$11,546,882 is reflected in the current year and \$46,187,536 is reflected as a deferred inflow of resources related to pensions.

	Year Established	Original Balance	Original Amortization Period	Amortization Amount During 2020	Outstanding Balance at December 31, 2020
Outflows					·
Investments	2016	19,761,598	5.0 years	3,952,318	0
Investments	2018	167,716,897	5.0 years	33,543,379	67,086,758
Assumptions	2019	52,178,675	2.3 years	22,686,380	6,805,915
Demographics	2020	1,993,825	2.4 years	830,760	1,163,065
Total outflows				\$61,012,837	\$75,055,738
Inflows					
Investments	2017	125,341,015	5.0 years	25,068,203	25,068,203
Demographics	2018	751,483	2.2 years	68,317	0
Demographics	2019	16,270,627	2.3 years	7,074,186	2,122,255
Investment	2019	128,095,497	5.0 years	25,619,099	76,857,297
Investment	2020	57,734,418	5.0 years	11,546,882	46,187,536
Total inflows				\$69,376,687	\$150,235,291

Exhibit 3 – Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions (continued)

	December 31, 2020	December 31, 2019
Deferred Outflows of Resources (Outstanding Balances)		
Difference between expected and actual experience in the Total Pension Liability	\$1,163,065	\$0
Changes of assumptions	6,805,915	29,492,295
Net difference between projected and actual earnings on pension plan investments	N/A	N/A
Total Deferred Outflows of Resources	\$7,968,980	\$29,492,295
Deferred Inflows of Resources (Outstanding Balances)		
Difference between expected and actual experience in the Total Pension Liability	\$2,122,255	\$9,264,758
Changes of assumptions	0	C
Net difference between projected and actual earnings on pension plan investments	81,026,278	48,030,347
Total Deferred Inflows of Resources	\$83,148,533	\$57,295,105
Deferred outflows of resources and deferred inflows of resources related		
o pension will be recognized as follows:		
Year Ended December 31:		
2021	N/A	\$2,352,272
2022	(\$23,176,387)	(12,460,263)
2023	(3,290,299)	7,924,280
2024	(37,165,983)	(25,619,099)
2025	(11,546,884)	C
2026	0	C
Thereafter	0	O

Exhibit 4 – Pension Expense

Exhibit 4 below shows the individual components of collective pension expense, which totaled \$42,561,870 for the fiscal year that ended December 31, 2020.

Annual pension expense for the year can also be viewed as the change in net pension liability, plus employer contributions for the year, less the change in outstanding balances of deferred outflows and deferred inflows of resources from the end of the prior fiscal year to end of the current fiscal year. The change in net pension liability during the year was -\$69,373,278 and employer contributions were \$64,558,405. The net value of deferred outflows and deferred inflows of resources as of the end of the current fiscal year is -75,179,553 compared to the net value as of the end of the prior fiscal of -\$27,802,810 for a change of -\$47,376,743. Therefore, the pension expense for the fiscal year that ended December 31, 2020, is -\$69,373,278 + \$64,558,405 + \$47,376,743 or \$42,561,870.

	Fiscal Year Ending December 31, 2020	Fiscal Year Ending December 31, 2019
Components of pension expense		
Service Cost	17,355,963	15,800,135
Interest on the total pension liability	167,745,110	171,350,196
Projected earnings on plan investments	(125,732,334)	(120,595,929)
Contributions - member	(12,342,595)	(13,217,363)
Administrative expense	3,899,576	3,120,727
Current year recognition of:		
Changes of assumptions	22,686,380	37,439,743
Difference between expected and actual experience	(6,311,743)	(8,089,567)
Difference between projected and actual earnings on pension plan investments	(24,738,487)	6,724,431
Change of benefit terms	0	0
Total pension expense	\$42,561,870	\$92,532,373

Section 5: Actuarial Valuation Basis

Exhibit I – Actuarial Assumptions and Actuarial Cost Method

Rationale for Assumptions	The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the Actuarial Experience Study as of December 31, 2016 prepared by Conduent. Assumptions that were changed from the prior valuation include retirement rates, termination rates, disability rates, mortality rates, salary increase rates and the net investment return assumption. Current data is reviewed in conjunction with each annual valuation. Based on professional judgment, no assumption changes are warranted at this time, beyond the assumption changes recommended by Conduent in the most recent Actuarial Experience Study.		
Net Investment Return:	7.50%. The net investment return assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes, as well as the Plan's target asset allocation. The net investment return reduction phase-in to 7.50% was completed as of January 1, 2020.		

Salary Increases:		Age	General Employees	Elected Officials	Deputy Sheriffs	
		20	10.5%	3.5%	11.5%	
		25	6.0	3.5	10.0	
		30	5.0	3.5	7.1	
		35	4.2	3.5	5.6	
		40	4.0	3.5	3.2	
		45	3.0	3.5	3.0	
		50	3.0	3.5	3.0	
		55	3.0	3.0	3.0	
		60	3.0	3.0	3.0	
Payroll Growth:	the System u	ses 1.75%. This ra	zing the unfunded actuate reflects the anticip	ated growth rate of	the County's reven	ues.
Cost-of-Living Adjustments:			ar to retired employee: percentage. These inc			ortionate
Mortality Rates:	with generation female, proje	onal projection usir cted with generatio	iaries: For males, 102 ng scale MP-2016. Fo onal projection using s s, 97% of RP-2006 Dis	or females, 107% of cale MP-2016.	f RP-2006 Healthy A	Annuitant
	using scale N		les, 95% of RP-2006			
		IP-2016. For fema	ales, RP-2006 Employ ales, RP-2006 Employ			
	The tables re	asonably reflect the	e mortality experience	e of the Plan as of the	he measurement da	te.
			ne mortality tables pas surement date and tho		t date reflects future	mortality

Termination Rates before Retirement:

Rate (%)						
Withd						
General Employees	Elected Officials	Deputy Sheriffs	Disability			
25.0	4.0	18.6	0.00			
25.0	4.0	18.6	0.04			
10.1	4.0	8.6	0.05			
7.2	4.0	5.7	0.07			
6.0	4.0	3.0	0.17			
5.7	4.0	3.0	0.21			
5.7	4.0	2.0	0.21			
3.0	4.0	1.0	0.21			
0.0	0.0	0.0	0.21			
0.0	0.0	0.0	0.21			
	General Employees 25.0 25.0 10.1 7.2 6.0 5.7 5.7 3.0 0.0	General Employees Elected Officials 25.0 4.0 25.0 4.0 10.1 4.0 7.2 4.0 6.0 4.0 5.7 4.0 3.0 4.0 0.0 0.0	Withdrawal – Ultimate General Employees Elected Officials Officials Sheriffs 25.0 4.0 18.6 25.0 4.0 18.6 10.1 4.0 8.6 7.2 4.0 5.7 6.0 4.0 3.0 5.7 4.0 3.0 5.7 4.0 2.0 3.0 4.0 1.0 0.0 0.0 0.0			

Termination Rates before Retirement, continued:

Select rates for General Employees and Elected Officials are shown in the following table.

	Select Period Termination Rates (%)					
Age	General Employees Year 1	General Employees Year 2	General Employees Year 3	General Employees Year 4	General Employees Year 5	Elected Officials Under 5 Years
20	36.0	25.0	25.0	15.0	12.5	0.0
25	31.2	23.4	20.4	15.0	11.9	0.0
30	27.1	22.4	16.8	13.2	9.1	0.0
35	24.7	21.4	14.8	11.4	7.2	0.0
40	22.3	19.2	14.0	10.4	6.7	0.0
45	21.5	16.8	14.0	10.0	5.9	0.0
50	21.5	14.8	14.0	10.0	7.6	0.0
55	21.5	14.0	14.0	10.0	9.0	0.0
60	0.0	0.0	0.0	0.0	0.0	0.0

The withdrawal rates were based on historical and current demographic data, adjusted to reflect estimated future experience and professional judgment. As part of the analysis, a comparison was made between the actual withdrawals and disability retirements by age based on the prior assumptions over the most recent experience study period.

Retirement Rates:

Age	General Employees Eligible for Backdrop	General Employees Not Eligible for Backdrop	Elected Officials	Deputy Sheriffs
4= 40				
45-49	10.0	0.0	0.0	15.0
50	15.0	10.0	0.0	15.0
51-54	15.0	10.0	0.0	30.0
55	15.0	10.0	14.9	30.0
56	15.0	10.0	14.9	30.0
57	15.0	10.0	17.3	30.0
58	15.0	10.0	15.3	30.0
59	15.0	10.0	18.6	30.0
60	15.0	10.0	14.6	50.0
61	25.0	10.0	16.9	50.0
62	25.0	25.0	21.3	50.0
63	25.0	25.0	20.0	50.0
64	25.0	25.0	18.2	50.0
65	40.0	33.3	22.8	100.0
66	40.0	33.3	16.9	100.0
67	40.0	33.3	19.3	100.0
68	40.0	33.3	25.7	100.0
69	40.0	33.3	27.0	100.0
70	100.0	100.0	100.0	100.0

The retirement rates were based on historical and current demographic data, adjusted to reflect estimated future experience and professional judgment. As part of the analysis, a comparison was made between the actual retirements by age and the projected retirements based on the prior assumptions over the most recent experience study period.

Retirement Rates for Inactive Vested Participants:

100% of inactive vested participants are assumed to retire at the participants' Normal Retirement Age. The retirement rates for inactive vested participants are based on historical and current demographic data, adjusted to reflect estimated future experience and professional judgment.

Backdrop Utilization:	75% of retirees are assumed to elect the Backdrop. Of the employees electing the Backdrop, 75% are assumed to take the maximum possible Backdrop, based on eligibility for an unreduced benefit. 25% are assumed to take half of the maximum period. If those assumptions produce a Backdrop date after April 1, 2013, the participant is assumed to take the Backdrop using an effective date of April 1, 2013.
Unknown Data for Participants:	Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.
Salary Adjustments	The County pays active members biweekly. Since 2020 included 27 biweekly salary payments, the salaries for active members were adjusted. In years with 26 biweekly payments, the salaries will be adjusted as well.
Percent Married:	80%, with beneficiaries the same age as the participant.
Percent Married with at Least One Dependent Child:	21.6% for General Employees, 43.2% for Deputy Sheriffs and Elected Officials. For participants who die prior to age 60, it is assumed the dependent child will remain a dependent until the member would have turned age 60.
Disability Type:	For represented employees, disabilities are assumed to be 50% Ordinary and 50% Accidental. For non-represented employees, disabilities are assumed to be Ordinary (100%).
Benefit Election:	All participants are assumed to elect the Straight Life Annuity form of payment.
Death Benefits:	All death benefits are assumed to be ordinary.
Actuarial Value of Assets:	Market value of assets less unrecognized returns. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a ten-year period. The Actuarial Value of Assets was set equal to the Market Value of Assets at January 1, 2013.
Actuarial Cost Method:	Entry Age Actuarial Cost Method. Entry Age is the age at date of employment or, if date is unknown, current age minus years of service. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis.
	The outstanding balance of the Unfunded Actuarial Accrued Liability as of January 1, 2015 is being amortized over a fixed 21 year period. Changes to the Unfunded Actuarial Accrued Liability arising from plan changes, assumption changes, and experience gains and losses are amortized as a level percentage of payroll over a 20-year period. For this purpose, the payroll growth assumption is limited to 1.75%.
	The variance between the actual contribution and the contribution requirement for a year is amortized over a five year period on a level dollar basis.

Exhibit II – Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year:	January 1 through December 31
Plan Status:	Ongoing
Membership:	Any person regularly employed by the County at an annual wage or salary, including any person employed by the State of Wisconsin, but receiving a portion of compensation from the County.
Vesting Service:	Service during a period of employment with the County or in any department of in any town, village, city or metropolitan sewerage commission in the County, which department has by consolidation or merger been absorbed by the County. Creditable service shall consist of prior service, military service, and membership service, as well as service credited for military service in Vietnam. Additional credit for periods of military service will be earned as follows: • Less than 5 years of service with the County: no military service granted.
	 Between 5 and 10 years of service with the County: up to 1 year of military service granted. Between 10 and 15 years of service with the County: up to 2 years of military service granted. Between 15 and 20 years of service with the County: up to 3 years of military service granted. 20 or more years of service with the County: up to 4 years of military service granted.
Benefit Service:	Same as vesting service except that service prior to becoming a participant does not count.
Compensation:	Compensation is the full rate of compensation payable to the member if working the full normal working time for the member's position. Compensation includes authorized overtime payments and the compensation rate assumed to have been received while the member is on an authorized leave of absence. In cases where compensation includes maintenance, the Pension Board shall fix the value of that part of compensation not payable in money.
	Compensation shall not exceed \$290,000 in 2021, as indexed for the cost of living.

Final Average Salary (FAS):	Final average salary means the average annual salary for the highest three consecutive years of			
· mai /wo.ago caia.y (i /ic/).	service.			
	Exceptions:			
	 For Deputy Sheriffs hired on or after January 1, 1982, excluding DA investigators and non- represented Deputy Sheriffs, the final average salary means the average annual salary for the highest five years of service. 			
	 For DA investigators and non-Deputy Sheriffs hired before July 1, 1995 and all Deputy Sheriffs hired before January 1, 1982, the final average salary is increased by 7.5% for each year worked after January 1, 2001 to a maximum of 25%. 			
Voluntary Employee Contribution:	 Up to 10% of earnings, provided that the employee was contributing on January 1, 1971. The benefit payable to a member at termination of employment includes any voluntary contribution balance, in addition to the amounts described below. 			
Mandatory Employee Contribution:	 Public Safety and General employees contribute 50% of the allocated cost of the actuarially determined contribution. 			
Rule of 75:	For eligible employees, unreduced retirement if age plus credited service exceeds 75.			
Normal Retirement Eligibility:	Elected Officials			
	 Age 60, or age 55 with 30 years of service 			
	o If hired before January 1, 2006, Rule of 75 is available			
	Firefighters, Federated Nurses, and Machinists			
	 Age 60 with 5 years of service, or age 55 with 30 years of service 			
	 Rule of 75 for Firefighters hired before December 1, 1996, Nurses hired before January 1, 1997, and Machinists hired before January 1, 1994 			
	 For Federated Nurses and Machinists hired after January 1, 2012, age 64 or age 55 with 30 years of service 			
	Attorneys, Building Trades, non-represented employees, DC48, and TEAMCO			
	 Age 60, or age 55 with 30 years of service 			
	 Age 64 or age 55 with 30 years of service (for all hired after January 1, 2010 except DC48) 			
	 Age 64 or age 55 with 30 years of service (for DC48 hired after August 1, 2011) 			
	o Age 64 (non-represented employees)			
	 Rule of 75 for Attorneys, Building Trades, and non-represented employees hired before January 1, 2006 			
	o Rule of 75 for TEAMCO hired before January 1, 1994			
	o Rule of 75 for all DC48			

Normal Retirement Eligibility, continued:	Deputy Sheriffs
	 Age 57, or age 55 with 15 years of service
	 Rule of 75 for, non-represented Deputy Sheriffs, DA investigators, and Deputy Sheriffs hired before January 1, 1994.
Normal Retirement Amount:	Elected Officials
	 Hired before March 15, 2002: 2.5% of FAS per year of service prior to October 14, 2010 and 1.6% of FAS per years of service thereafter, not greater than 80%.
	 Hired on or after March 15, 2002: 2.0% of FAS per year of service prior to October 14, 2010 and 1.6% of FAS per years of service thereafter, not greater than 80%
	General Employees
	 2.0% of FAS per year of service, not greater than 80%
	 The rate is reduced to 1.6% of FAS per years of service as follows:
	 For non-represented employees, effective January 1, 2010
	 For Attorneys and TEAMCO, effective May 1, 2010
	 For Machinists, effective June 1, 2010
	 For DC48, effective August 1, 2011
	 For Building Trades and Federated Nurses, effective January 1, 2012
	Deputy Sheriffs
	 For Deputy Sheriffs hired before July 1, 1995, DA investigators and non-represented Deputy Sheriffs, 2.5% of FAS per year of service, not greater than 80%
	 For Deputy Sheriffs hired on or after July 1, 1995, 2.0% of FAS per years of service, not greater than 80%
	• For all members, 1.6% of FAS per year of service after 80% of FAS has been reached
Early Retirement:	Age Requirement: 55
	Service Requirement: 15 years
	 Amount: Benefits reduced by 5/12 of 1% for each month by which payment of benefits precedes Normal Retirement Age
	 Early Retirement is not applicable for Deputy Sheriffs, DA investigators and non-represented Deputy Sheriffs (they are eligible for unreduced retirement at age 55 with 15 years of service)
Ordinary Disability:	Service Requirement: 15 years
•	

Accidental Disability	All employees are eligible
	If the employee has attained normal retirement age, normal retirement benefits apply
	 If the employee has not attained normal retirement age, the benefit is computed as the normal retirement benefits but not less than 60% of FAS
	Employees whose benefit is not less than 75% of FAS
	 Elected Officials and non-represented employees hired before February 19, 1987
	 Attorneys hired on or after January 1, 1987
	 Building Trades hired before October 30, 1987
	 Federated Nurses hired before January 1, 1987
	o Machinists hired before May 18, 1988
	o DC48 hired before July 24, 1987
	 TEAMCO hired before January 12, 1988
	o Deputy Sheriffs
	 DA investigators and non-represented Deputy Sheriffs hired before February 19, 1987
	 Benefits received prior to age 62 are recalculated after age 62 to include service from the date of disability to age 62
Ordinary Death Benefit:	Only applicable to Deputy Sheriffs not eligible for normal retirement
	Only applicable if the cause of death was not an accident in active duty
	Employee has completed 1 year of service
	Surviving spouse or child shall be entitled to survivor benefits (see section on survivor benefits)
Accidental Death Benefit:	Only applicable to Deputy Sheriffs when death occurs due to an accident in active duty
	Benefit of 50% of FAS shall be paid
	o To surviving spouse for life or until remarriage
	 If surviving spouse benefit is not payable, to children under age 18
	 If surviving spouse and child benefits are not payable, to dependent parent for life
	 Benefit shall not be less than ordinary death benefit amount
Lump Sum Death Benefit:	If no other death benefit is payable, a lump sum of one half of FAS, not greater than \$2,000.
	Member must have 1 year of service

Survivor Benefits:	Member dies prior to age 60 after completing 1 year of service		
	 Surviving spouse has at least one child and was married to the member at least 1 year prior to death 		
	Monthly benefit of 40% of final salary prior to age 60		
	Reduced by monthly survivor benefits paid by Social Security		
	• At age 60, 50% of benefit based on actual FAS and service projected to age 60		
	 Additional benefit of 10% of final salary less social security benefits shall be paid to each eligible unmarried child under age 18. Age limit is 22 if unmarried child is a student. 		
Refund of Contributions:	Available at termination of employment		
Vesting:	Service Requirement: 5 years of service		
	Accrued benefit is at least \$10 per month		
	Amount: as per Normal Retirement Benefit		
	If member withdraws employee contributions, vested benefit does not apply		
Optional Forms of Benefits:	Options that pay a reduced benefit on an actuarially equivalent basis		
	 Option 1 – If member dies before benefits paid exceed the member's accumulated contributions at retirement, the balance is paid as a lump sum. 		
	 Option 2 – 50% Joint and Survivor Annuity. 		
	 Option 3 – 100% Joint and Survivor Annuity. 		
Cost of Living Adjustment (COLA):	2% of original benefit amount per year to retired employees. Surviving spouses get a proportionate increase based on survivorship percentage.		

Backdrop: Members that are not eligible Elected Officials, non-represented employees and Deputy Sheriffs hired on or after March 15, 2002 Machinists and TEAMCO hired on or after November 4, 2005 Attorneys hired on or after January 1, 2006 Federated Nurses hired on or after December 15, 2005 o Firefighters hired on or after June 19, 2007 DC48 hired on or after February 1, 2007 Retiring members who satisfy eligibility criteria may elect to use a past retirement date • Member must have been eligible to retire at Backdrop date Backdrop date must be at least 1 year prior to the date the member terminated employment · Backdrop monthly benefit calculated using service and salary as of Backdrop date Member receives cash payment of payments from Backdrop date to retirement date, including interest On and after April 1, 2013, if the Backdrop date is after April 1, 2013 the Backdrop benefit will not reflect any service or salary for the period from April 1, 2013 to the Backdrop date. This provision does not apply to Elected Officials, Building Trades, Machinists, Federated Nurses

and Firefighters.

Section 6: Additional Summary Tables of Member Data

TABLE 1 – SUMMARY OF MEMBERSHIP DATA AS OF JANUARY 1, 2021

Active Participants

	General Employees	Deputy Sheriffs	Elected Officials	Total
Number of Participants	3,271	252	6	3,529
Average Annual Salaries*	\$57,464	\$67,407	\$110,684	\$58,021
Average Age	44.8	40.7	57.2	43.5
Average Benefit Service	9.1	13.6	11.2	9.4

^{*} The salaries shown in the table above represent a rate of pay increased by the salary assumption

Inactive Participants

	Number	Annual Annuities	Average Annuities	Average Age
Participants with Deferred Benefits	1,262	\$10,622,618	\$8,417	51.7
Retired Participants	6,720	159,102,995	23,676	72.4
Beneficiaries	911	16,790,544	18,431	78.6
Disability Retirees	255	6,715,478	26,335	65.3
Total	9,148	\$193,231,635	\$21,119	70.0

^{*}Only included for participants with deferred annuities

TABLE 2 – MEMBERSHIP STATISTICS (UNAUDITED)

Active Participants

Members as of January 1, 2020	3,561
Changes during the year:	
New enrollments	423
Vested terminations	(47)
Nonvested terminations	(113)
Retirements	(114)
Deaths in active service	(6)
Withdrawals	(175)
Data Adjustment	0
Members as of December 31, 2020	3,529

Retirements and Survivors

	Maximum Pension	Refund	100%	75%	50%	25%	5%	10-Yr	Survivors and Beneficiaries	Total
January 1, 2020	3,288	214	1,482	306	930	532	41	295	913	8,001
Changes during the year:										
Adjustments (actuary)	1	-	-	-	-	-	-	-	11	12
Retirements	81	-	29	8	22	18	-	14	70	242
Benefits Expired	-	-	-	-	-	-	-	-	(6)	(6)
Pensioner Deaths	(131)	(29)	(59)	(3)	(46)	(11)	-	(7)	(77)	(363)
December 31, 2020	3,239	185	1,452	311	906	539	41	302	911	7,886

TABLE 3A – PARTICIPANTS IN ACTIVE SERVICE AS OF DECEMBER 31, 2020 BY AGE, YEARS OF CREDITABLE SERVICE, AND AVERAGE PAYROLL

All Employee Groups

(Compensation in cells with fewer than 20 records has been suppressed)

Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	115	115								
	\$46,695	\$46,695								
25 - 29	355	331	24							
	\$48,192	\$47,892	\$52,331							
30 - 34	444	331	102	11						
	\$51,352	\$50,201	\$54,768							
35 - 39	393	228	107	44	13	1				
	\$54,884	\$50,618	\$61,321	\$59,502						
40 - 44	461	187	108	67	70	29				
	\$60,847	\$52,925	\$66,581	\$71,903	\$60,772	\$65,214				
45 - 49	509	169	90	53	69	103	25			
	\$62,169	\$55,262	\$60,661	\$70,500	\$60,331	\$68,677	\$74,883			
50 - 54	503	131	69	44	59	121	65	12	1	1
	\$63,913	\$57,984	\$67,421	\$60,326	\$68,178	\$64,934	\$69,208			
55 - 59	380	89	60	31	54	63	42	35	5	1
	\$60,164	\$56,370	\$55,164	\$70,231	\$59,013	\$56,691	\$65,901	\$69,292		
60 - 64	278	60	48	31	44	42	22	20	9	2
	\$61,288	\$65,995	\$55,853	\$53,567	\$53,144	\$61,512	\$75,913	\$63,122		
65 & over	91	20	14	9	16	6	10	10	4	2
	\$67,727	\$54,114								
Total	3,529	1,661	622	290	325	365	164	77	19	6
	\$58,021	\$51,939	\$60,414	\$65,539	\$60,836	\$63,971	\$70,193	\$68,897		

TABLE 3B – PARTICIPANTS IN ACTIVE SERVICE AS OF DECEMBER 31, 2020 BY AGE, YEARS OF CREDITABLE SERVICE, AND AVERAGE PAYROLL

General Employees

(Compensation in cells with fewer than 20 records has been suppressed)

Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	102	102								
011001 20	\$45,907	\$45,907								
25 - 29	311	290	21							
25 - 29										
	\$46,594	\$46,309	\$50,540							
30 - 34	405	309	86	10						
	\$50,403	\$49,571	\$53,010							
35 - 39	372	224	97	40	10	1				
	\$54,416	\$50,453	\$60,867	\$59,137						
40 - 44	436	180	106	65	65	20				
	\$60,333	\$52,775	\$66,707	\$71,855	\$59,510	\$59,811				
45 - 49	459	168	89	53	66	72	11			
	\$60,695	\$55,259	\$60,637	\$70,500	\$59,537	\$65,515				
50 - 54	453	130	69	44	54	96	47	11	1	1
	\$62,810	\$57,984	\$67,421	\$60,326	\$67,853	\$63,016	\$66,171			
55 - 59	369	88	60	31	53	60	38	33	5	1
	\$59,675	\$55,978	\$55,164	\$70,231	\$58,709	\$55,800	\$64,907	\$68,900		
60 - 64	273	59	47	31	44	41	20	20	9	2
	\$60,344	\$64,796	\$55,107	\$53,567	\$53,144	\$61,189	\$70,413	\$63,122		
65 & over	91	20	14	9	16	6	10	10	4	2
	\$67,727	\$54,114								
Total	3,271	1,570	589	283	308	296	126	74	19	6
	\$57,464	\$51,518	\$60,144	\$65,534	\$60,200	\$61,460	\$67,332	\$68,521		

TABLE 3C – PARTICIPANTS IN ACTIVE SERVICE AS OF DECEMBER 31, 2020 BY AGE, YEARS OF CREDITABLE SERVICE, AND AVERAGE PAYROLL

Deputy Sheriffs

(Compensation in cells with fewer than 20 records has been suppressed)

Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	13	13								
25 - 29	44	41	3							
	\$59,489	\$59,096								
30 - 34	38	21	16	1						
	\$60,618	\$57,873								
35 - 39	21	4	10	4	3					
	\$63,165									
40 - 44	25	7	2	2	5	9				
	\$69,805									
45 - 49	50	1	1		3	31	14			
	\$75,696					\$76,023				
50 - 54	50	1			5	25	18	1		
	\$73,907					\$72,299				
55 - 59	10				1	3	4	2		
60 - 64	1					1				
65 & over										
Total	252	88	32	7	17	69	36	3		
	\$67,407	\$57,686	\$64,434			\$74,746	\$76,831			

TABLE 3D – PARTICIPANTS IN ACTIVE SERVICE AS OF DECEMBER 31, 2020 BY AGE, YEARS OF CREDITABLE SERVICE, AND AVERAGE PAYROLL

Elected Officials

(Compensation in cells with fewer than 20 records has been suppressed)

Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25										
25 - 29										
30 - 34	1	1								
										-
35 - 39										-
										-
40 - 44										-
										-
45 - 49										-
										-
50 - 54										-
										-
55 - 59	1	1								-
										-
60 - 64	4	1	1				2			-
										-
65 & over										-
										-
Total	6	3	1				2			-
										-

TABLE 4 – ACTIVE AND DEFERRED VESTED MEMBERS OBTAINING RETIREMENT ELIGIBILITY OVER NEXT FIVE CALENDAR YEARS

Actives Reaching Retirement Eligibility

Year	General Employees	Elected Officials	Deputy Sheriffs	Total
Eligible at Valuation Date	593	4	13	610
2021	92	-	3	95
2022	80	-	9	89
2023	77	1	10	88
2024	93	-	14	107
2025	92	-	11	103
Total Over Next 5 Years	434	1	47	482
Grand Total Eligible	1,027	5	60	1,092

Deferred Vested Members Reaching Retirement Age

Year	Total
2021	77
2022	54
2023	63
2024	49
2025	46
Total Over Next 5 Years	289

TABLE 5 – RETIREE AND BENEFICIARY MEMBERSHIP DATA AS OF JANUARY 1, 2021

Number and Average Annual Benefits

Age Last Birthday	Number	Annual Benefit	Average Annual Benefit
Retired Participants			
Under 60	413	\$12,727,368	\$30,817
60 – 64	931	21,805,030	23,421
65 – 69	1,491	34,584,949	23,196
70 – 74	1,683	40,735,100	24,204
75 – 79	920	21,796,660	23,692
80 & over	1,282	27,453,888	21,415
Total	6,720	\$159,102,995	\$23,676
Beneficiaries			
Under 60	42	\$710,682	\$16,921
60 – 64	43	755,467	17,569
65 – 69	115	2,220,534	19,309
70 – 74	150	3,132,773	20,885
75 – 79	120	2,345,947	19,550
80 & over	441	7,625,141	17,291
Total	911	\$16,790,544	\$18,431
Disabled Participants			
Under 60	95	\$3,045,863	\$32,062
60 – 64	44	1,087,357	24,713
65 – 69	36	992,258	27,563
70 – 74	22	492,159	22,371
75 – 79	26	482,307	18,550
80 & over	32	615,533	19,235
Total	255	\$6,715,478	\$26,335
Grand Total	7,886	\$182,609,017	\$23,156

TABLE 6 – FIVE-YEAR HISTORY OF MEMBERSHIP DATA

Active Participants

Valuation as of January 1	Number of Active Participants	Percentage Change in Membership	Total Annual Payroll	Percentage Change in Payroll
2021	3,529	-0.90%	\$204,754,607	2.19%
2020	3,561	3.97%	200,365,711	4.88%
2019	3,425	-2.20%	191,043,797	0.92%
2018	3,502	0.40%	189,298,469	1.66%
2017	3,488	-3.62%	186,213,740	-4.44%

Retired, Disabled, and Beneficiary Participants

Valuation as of January 1	Number on roll	Additions	Deletions	Percentage Change in Membership	Annual Annuities	Percentage Change in Annuities
2021	7,886	254	369	-1.44%	\$182,609,017	0.28%
2020	8,001	254	295	-0.51%	182,097,756	1.07%
2019	8,042	307	302	0.06%	180,165,695	1.71%
2018	8,037	333	294	-0.32%	177,140,993	1.24%
2017	8,063	363	291	0.90%	174,967,121	3.36%

TABLE 7A – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2021 All Employees

(Compensation in cells with fewer than 20 records has been suppressed)

Age Number Compensation Number Compensation Number Compensation 18 1 1 19 1 1 20 3 5 8 21 7 4 11 22 9 8 17 23 15 14 29 24 29 \$1,379,442 19 48 25 37 1,727,345 16 53	Total
19 1 1 20 3 5 8 21 7 4 11 22 9 8 17 23 15 14 29 24 29 \$1,379,442 19 48	Compensation
20 3 5 8 21 7 4 11 22 9 8 17 23 15 14 29 24 29 \$1,379,442 19 48	
21 7 4 11 22 9 8 17 23 15 14 29 24 29 \$1,379,442 19 48	
22 9 8 17 23 15 14 29 24 29 \$1,379,442 19 48	
23 15 14 29 24 29 \$1,379,442 19 48	
24 29 \$1,379,442 19 48	
· , ,	\$1,373,651
25 37 1,727,345 16 53	2,255,500
	2,496,581
26 37 1,846,065 23 \$1,068,959 60	2,915,024
27 37 1,876,449 38 1,756,226 75	3,632,675
28 44 2,174,929 37 1,580,916 81	3,755,845
29 40 2,103,515 46 2,204,694 86	4,308,209
30 32 1,649,248 44 2,107,546 76	3,756,794
31 50 2,807,160 40 1,821,822 90	4,628,982
32 34 1,924,329 45 2,266,599 79	4,190,929
33 35 1,937,303 53 2,418,371 88	4,355,674
34 51 2,953,699 60 2,914,216 111	5,867,914
35 43 2,396,544 55 2,731,471 98	5,128,015
36 29 1,586,090 54 3,277,391 83	4,863,481
37 2,167,453 49 2,563,601 86	4,731,054
38 24 1,441,947 39 1,840,470 63	3,282,417
39 22 1,353,193 41 2,211,201 63	3,564,394

TABLE 7A – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2021 All Employees

(Compensation in cells with fewer than 20 records has been suppressed)

			Men		Women		Total
	Age	Number	Compensation	Number	Compensation	Number	Compensation
	40	47	\$3,067,638	45	\$2,384,034	92	\$5,451,673
	41	37	2,202,109	54	3,280,543	91	5,482,652
	42	47	2,871,590	57	3,307,495	104	6,179,085
	43	35	2,206,079	41	2,511,077	76	4,717,157
	44	53	3,688,671	45	2,531,271	98	6,219,942
	45	56	3,898,842	52	3,058,826	108	6,957,668
	46	34	2,279,224	55	2,718,271	89	4,997,496
Ī	47	39	2,395,123	40	2,477,113	79	4,872,237
	48	57	3,584,135	60	3,572,601	117	7,156,737
	49	60	4,137,339	56	3,522,528	116	7,659,867
	50	58	3,926,580	49	3,200,907	107	7,127,487
Ī	51	43	2,857,334	60	3,800,287	103	6,657,620
	52	42	2,885,249	52	2,902,338	94	5,787,586
Ī	53	41	2,904,537	54	2,915,438	95	5,819,975
	54	39	2,827,790	65	3,927,935	104	6,755,725
Ī	55	54	3,390,498	48	2,838,707	102	6,229,205
	56	29	2,054,992	38	2,007,861	67	4,062,854
	57	44	2,557,992	29	1,728,711	73	4,286,703
	58	25	1,629,225	31	1,643,296	56	3,272,521
	59	42	2,770,012	40	2,241,143	82	5,011,155
	60	31	1,869,945	39	2,683,459	70	4,553,404

TABLE 7A – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2021 All Employees

		Men		Women		Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
61	30	\$1,751,832	37	\$2,043,793	67	\$3,795,625
62	29	1,910,501	33	1,891,847	62	3,802,347
63	16		19		35	2,288,062
64	21	1,431,234	23	1,167,525	44	2,598,759
65	16		11		27	1,801,171
66	10		12		22	1,486,412
67	5		5		10	
68	3		1		4	
69	7		5		12	
70	4		4		8	
71	1		1		2	
72	2		1		3	
73						
74						
75	1				1	
76						
77						
78	1		1		2	
Total	1,674	\$102,999,069	1,855	\$101,755,538	3,529	\$204,754,607

TABLE 7B – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2021 All Employees

Service Nu	mber 109	Compensation	Number	0		
0	109		Hamboi	Compensation	Number	Compensation
		\$4,493,168	106	\$4,492,148	215	\$8,985,315
1	166	8,279,067	233	10,919,487	399	19,198,554
2	157	8,537,442	205	10,411,581	362	18,949,023
3	130	7,556,136	139	7,619,027	269	15,175,162
4	95	5,389,751	131	6,935,132	226	12,324,884
5	84	5,139,465	119	6,403,018	203	11,542,482
6	59	3,904,331	102	5,646,701	161	9,551,033
7	60	4,278,011	66	3,691,748	126	7,969,759
8	57	3,537,233	56	2,865,383	113	6,402,616
9	60	3,677,931	42	2,513,361	102	6,191,292
10	41	2,831,534	34	2,098,715	75	4,930,249
11	29	1,828,407	24	1,421,403	53	3,249,810
12	38	2,732,667	40	2,500,141	78	5,232,808
13	42	2,656,624	34	1,891,174	76	4,547,798
14	21	1,421,566	22	1,725,485	43	3,147,051
15	30	1,829,930	43	2,578,451	73	4,408,381
16	28	1,841,194	34	2,037,558	62	3,878,753
17	18		23	1,259,117	41	2,511,421
18	32	2,244,030	21	1,182,430	53	3,426,460
19	38	2,642,380	30	1,628,057	68	4,270,438
20	51	3,212,551	50	2,646,930	101	5,859,481
21	42	2,621,785	50	3,019,063	92	5,640,848
22	51	3,490,108	42	2,582,152	93	6,072,261
23	41	2,745,522	27	1,619,188	68	4,364,710

TABLE 7B – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2021 All Employees

		Men	о оарр. оо	Women		Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
24	36	\$2,691,546	21	\$1,440,656	57	\$4,132,202
25	18		20	1,249,010	38	2,568,865
26	38	2,790,052	15		53	3,864,231
27	21	1,490,836	26	1,640,000	47	3,130,836
28	9		14		23	1,619,623
29	20	1,598,554	16		36	2,673,995
30	12		11		23	1,615,058
31	9		15		24	1,808,885
32	9		13		22	1,523,345
33	6		9		15	
34	4		4		8	
35	3		3		6	
36	4		3		7	
37	1		4		5	
38						
39	1		2		3	
40	1		3		4	
41	2		2		4	
42	1				1	
43						
44			1		1	
Total	1,674	\$102,999,069	1,855	\$101,755,538	3,529	\$204,754,607

TABLE 7C – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2021 General Employees

		Men		Women		Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
18			1		1	
19			1		1	
20	3		5		8	
21	7		4		11	
22	7		8		15	
23	12		13		25	\$1,144,782
24	23	\$1,094,560	18		41	1,909,199
25	30	1,346,641	16		46	2,115,877
26	27	1,238,512	22	\$1,006,908	49	2,245,419
27	29	1,398,588	37	1,687,938	66	3,086,526
28	34	1,581,188	37	1,580,916	71	3,162,104
29	33	1,676,203	46	2,204,694	79	3,880,897
30	26	1,277,824	43	2,053,010	69	3,330,834
31	40	2,196,950	39	1,772,173	79	3,969,123
32	28	1,553,417	45	2,266,599	73	3,820,016
33	33	1,813,128	52	2,354,474	85	4,167,602
34	42	2,381,182	57	2,744,341	99	5,125,523
35	40	2,198,559	54	2,674,197	94	4,872,756
36	26	1,384,690	53	3,224,218	79	4,608,908
37	35	2,049,087	49	2,563,601	84	4,612,688
38	21	1,263,592	38	1,766,443	59	3,030,036
39	18		38	2,019,860	56	3,118,502

TABLE 7C – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2021 General Employees

		Men		Women		Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
40	42	\$2,743,525	45	\$2,384,034	87	\$5,127,560
41	33	1,924,081	54	3,280,543	87	5,204,624
42	43	2,608,400	56	3,230,838	99	5,839,238
43	33	2,065,502	41	2,511,077	74	4,576,580
44	45	3,101,686	44	2,455,702	89	5,557,388
45	51	3,534,967	50	2,908,453	101	6,443,419
46	32	2,118,207	54	2,635,196	86	4,753,404
47	34	2,025,428	39	2,401,832	73	4,427,260
48	43	2,525,762	57	3,345,183	100	5,870,946
49	46	3,054,657	53	3,309,501	99	6,364,157
50	48	3,201,155	47	3,050,636	95	6,251,790
51	31	1,961,956	58	3,642,360	89	5,604,316
52	34	2,274,877	49	2,739,391	83	5,014,268
53	33	2,296,257	53	2,840,373	86	5,136,630
54	36	2,593,691	64	3,852,348	100	6,446,038
55	51	3,165,290	46	2,687,410	97	5,852,700
56	28	1,979,122	38	2,007,861	66	3,986,984
57	42	2,391,700	29	1,728,711	71	4,120,411
58	23	1,480,822	31	1,643,296	54	3,124,118
59	41	2,694,597	40	2,241,143	81	4,935,741
60	29	1,704,273	39	2,683,459	68	4,387,732
61	30	1,751,832	37	2,043,793	67	3,795,625

TABLE 7C – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2021 General Employees

		Men		Women		Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
62	28	1,773,774	33	1,891,847	61	3,665,621
63	15		19		34	2,158,870
64	20	1,298,597	23	1,167,525	43	2,466,122
65	16		11		27	1,801,171
66	10		12		22	1,486,412
67	5		5		10	
68	3		1		4	
69	7		5		12	
70	4		4		8	
71	1		1		2	
72	2		1		3	
73						
74						
75	1				1	
76						
77						
78	1		1		2	
Total	1,455	\$87,984,494	1,816	\$99,119,465	3,271	\$187,103,959

TABLE 7D – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2021 General Employees

		Men		Women		Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
0	109	\$4,493,168	106	\$4,492,148	215	\$8,985,315
1	140	6,798,474	229	10,706,079	369	17,504,553
2	146	7,810,567	205	10,411,581	351	18,222,147
3	110	6,421,438	136	7,438,283	246	13,859,720
4	81	4,544,304	129	6,831,403	210	11,375,708
5	70	4,265,317	114	6,079,492	184	10,344,809
6	56	3,715,535	101	5,583,884	157	9,299,419
7	52	3,757,370	66	3,691,748	118	7,449,117
8	52	3,208,736	55	2,799,237	107	6,007,973
9	58	3,548,535	42	2,513,361	100	6,061,896
10	41	2,831,534	33	2,024,688	74	4,856,222
11	25	1,574,717	24	1,421,403	49	2,996,120
12	36	2,600,482	40	2,500,141	76	5,100,623
13	41	2,592,510	34	1,891,174	75	4,483,684
14	20	1,356,639	22	1,725,485	42	3,082,125
15	28	1,718,905	43	2,578,451	71	4,297,356
16	27	1,765,955	34	2,037,558	61	3,803,514
17	17		23	1,259,117	40	2,431,343
18	29	2,044,135	21	1,182,430	50	3,226,565
19	34	2,346,763	30	1,628,057	64	3,974,820
20	44	2,684,532	48	2,495,460	92	5,179,991
21	34	2,025,595	46	2,716,956	80	4,742,551
22	36	2,369,463	38	2,280,154	74	4,649,617
23	31	1,985,001	24	1,457,207	55	3,442,208

TABLE 7D – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2021 General Employees

		Men		Women		Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
24	18		18		36	\$2,513,750
25	13		18		31	1,988,226
26	20	\$1,402,417	15		35	2,476,596
27	13		24	\$1,481,950	37	2,354,492
28	7		14		21	1,469,002
29	18		15		33	2,391,564
30	11		11		22	1,539,158
31	8		15		23	1,717,970
32	7		12		19	
33	6		9		15	
34	4		4		8	
35	3		3		6	
36	4		3		7	
37	1		4		5	
38						
39	1		2		3	
40	1		3		4	
41	2		2		4	
42	1				1	
43						
44			1		1	
Total	1,455	\$ 87,984,494	1,816	\$99,119,465	3,271	\$187,103,959

TABLE 7E – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2021 Deputy Sheriffs

		Men		Women		Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
22	2				2	
23	3		1		4	
24	6		1		7	
25	7				7	
26	10		1		11	
27	8		1		9	
28	10				10	
29	7				7	
30	6		1		7	
31	10		1		11	
32	6				6	
33	2		1		3	
34	8		3		11	
35	3		1		4	
36	3		1		4	
37	2				2	
38	3		1		4	
39	4		3		7	
40	5				5	
41	4				4	
42	4		1		5	
43	2				2	

TABLE 7E – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2021 Deputy Sheriffs

		Men		Women		Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
44	8		1		9	
45	5		2		7	
46	2		1		3	
47	5		1		6	
48	14		3		17	
49	14		3		17	
50	10		2		12	
51	12		2		14	
52	8		3		11	
53	8		1		9	
54	3		1		4	
55	3		2		5	
56	1				1	
57	1				1	
58	2				2	
59	1				1	
60	1				1	
Grand Tota	l 213	\$14,350,471	39	\$2,636,073	252	\$16,986,544

TABLE 7F – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2021 Deputy Sheriffs

		Men		Women		Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
0						
1	25	\$1,396,874	4		29	\$1,610,282
2	9				9	
3	20	1,134,698	3		23	1,315,442
4	14		2		16	
5	14		5		19	
6	3		1		4	
7	8				8	
8	5		1		6	
9	2				2	
10			1		1	
11	4				4	
12	2				2	
13	1				1	
14	1				1	
15	2				2	
16	1				1	
17	1				1	
18	3				3	
19	4				4	
20	7		2		9	
21	8		4		12	

TABLE 7F – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2021 Deputy Sheriffs

		Men		Women		Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
22	15		4		19	
23	10		3		13	
24	18		3		21	1,618,451
25	4		2		6	
26	18				18	
27	8		2		10	
28	2				2	
29	1		1		2	
30	1				1	
31						
32	2		1		3	
Total	213	\$14,350,471	39	\$2,636,073	252	\$16,986,544

TABLE 7G – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2021 Elected Officials

		Men		Women		Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
34	1				1	
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54						
55						

TABLE 7G – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Age as of January 1, 2021 Elected Officials

		Men		Women		Total
Age	Number	Compensation	Number	Compensation	Number	Compensation
56						
57	1				1	
58						
59						
60	1				1	
61						
62	1				1	
63	1				1	
64	1				1	
Total	6				6	

TABLE 7H – DETAILED TABULATIONS OF THE DATA

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2021 Elected Officials

		Men		Women		Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
0						
1	1				1	
2	2				2	
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						

TABLE 7H – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Salaries of Members in Active Service Distributed by Years of Service as of January 1, 2021 Elected Officials

		Men		Women		Total
Service	Number	Compensation	Number	Compensation	Number	Compensation
22						
23						
24						
25	1				1	
26						
27						
28						
29	1				1	
30						
31	1				1	
Total	6				6	

TABLE 7I – DETAILED TABULATIONS OF THE DATA

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
20	2	\$28,703	2	\$12,277	4	\$40,980
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32	2	15,270	1	10,464	3	25,734
33						
34						
35						
36						
37	1	6,088			1	6,088
38	1	17,223			1	17,223
39						
40	1	22,362	1	4,637	2	26,999
41	1	45,757			1	45,757
42			1	17,391	1	17,391

TABLE 7I – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
43	1	\$37,902	1	\$6,732	2	\$44,634
44	2	80,032			2	80,032
45	2	57,723	2	63,812	4	121,535
46	3	69,876	1	50,506	4	120,381
47	2	53,904	1	29,293	3	83,198
48	1	48,375			1	48,375
49	6	259,053	5	143,217	11	402,270
50	8	346,067	6	175,454	14	521,521
51	18	672,608	2	92,078	20	764,686
52	5	190,785	9	271,679	14	462,464
53	15	630,961	15	349,487	30	980,449
54	17	664,769	20	614,242	37	1,279,011
55	20	705,326	32	927,528	52	1,632,854
56	22	888,563	44	1,187,052	66	2,075,614
57	32	1,031,744	65	1,743,252	97	2,774,996
58	41	1,156,197	36	1,062,648	77	2,218,845
59	40	1,120,678	63	1,572,199	103	2,692,877
60	41	1,103,298	108	2,313,840	149	3,417,138
61	61	1,746,793	108	2,195,846	169	3,942,639
62	78	2,177,985	112	2,436,287	190	4,614,272
63	76	1,866,947	169	3,835,010	245	5,701,957
64	116	2,860,847	149	3,111,002	265	5,971,848
65	107	2,878,873	165	3,272,561	272	6,151,434

TABLE 7I – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
66	131	\$3,437,790	174	\$3,577,167	305	\$7,014,957
67	142	3,668,453	199	3,901,484	341	7,569,937
68	147	4,393,583	211	3,929,109	358	8,322,692
69	146	3,980,159	220	4,758,562	366	8,738,721
70	179	5,055,653	200	3,640,879	379	8,696,531
71	172	4,766,334	230	4,254,030	402	9,020,364
72	157	4,883,982	200	3,960,448	357	8,844,430
73	172	4,704,039	232	4,817,326	404	9,521,364
74	122	3,744,012	192	4,556,197	314	8,300,209
75	102	2,781,441	133	2,787,553	235	5,568,993
76	93	2,445,440	128	2,701,845	221	5,147,285
77	92	2,513,558	130	2,481,887	222	4,995,445
78	90	2,673,556	134	2,706,855	224	5,380,412
79	62	1,634,584	102	1,898,195	164	3,532,779
80	69	1,951,354	81	1,553,282	150	3,504,636
81	64	1,684,887	101	1,977,407	165	3,662,294
82	44	1,153,552	100	2,071,513	144	3,225,065
83	53	1,357,208	98	1,628,986	151	2,986,194
84	51	1,407,966	93	1,730,161	144	3,138,127
85	33	929,139	88	1,705,260	121	2,634,398
86	33	999,957	70	1,310,685	103	2,310,642
87	28	841,141	60	1,010,036	88	1,851,176
88	42	1,057,444	70	1,298,900	112	2,356,344

TABLE 7I – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
89	33	850,555	61	1,200,434	94	2,050,989
90	19	533,011	79	1,252,036	98	1,785,047
91	22	463,507	61	937,913	83	1,401,420
92	17	375,864	55	772,752	72	1,148,616
93	14	366,751	46	755,887	60	1,122,638
94	8	129,384	39	537,624	47	667,009
95	6	172,452	26	390,370	32	562,822
96	7	188,812	24	332,209	31	521,021
97	6	80,494	14	231,880	20	312,374
98	1	24,229	13	136,826	14	161,055
99	5	76,292	13	139,598	18	215,890
100	1	8,458	3	25,140	4	33,598
101			1	11,774	1	11,774
102						
103			1	1,479	1	1,479
104						
105						
106	1	7,087			1	7,087
Total	3,086	\$86,126,834	4,800	\$96,482,183	7,886	\$182,609,017

TABLE 7J – DETAILED TABULATIONS OF THE DATA

Age Number Annuities Number Annuities Number Annuities 49 1 \$85,519 1 \$85,519 50 4 190,705 2 \$54,688 6 245,393 51 8 350,465 2 92,078 10 442,543 52 3 133,199 7 238,949 10 372,149 53 11 451,806 11 278,792 22 730,598 54 16 649,619 14 410,189 30 1,059,808 55 18 638,977 25 726,473 43 1,365,449 56 18 713,950 31 820,487 49 1,534,438 57 26 910,664 54 1,460,478 80 2,371,142 58 38 1,049,145 33 986,546 71 2,035,691 59 39 1,097,217 52 1,38			Men		Women		Total
50 4 190,705 2 \$54,688 6 245,393 51 8 350,465 2 92,078 10 442,543 52 3 133,199 7 238,949 10 372,149 53 11 451,806 11 278,792 22 730,598 54 16 649,619 14 410,189 30 1,059,808 55 18 638,977 25 726,473 43 1,365,449 56 18 713,950 31 820,487 49 1,534,438 57 26 910,664 54 1,460,478 80 2,371,142 58 38 1,049,145 33 986,546 71 2,035,691 59 39 1,097,217 52 1,387,422 91 2,484,639 60 40 1,095,847 95 2,080,782 135 3,176,628 61 57 1,626,183 98 1,9	Age	Number	Annuities	Number	Annuities	Number	Annuities
51 8 350,465 2 92,078 10 442,543 52 3 133,199 7 238,949 10 372,149 53 11 451,806 11 278,792 22 730,598 54 16 649,619 14 410,189 30 1,059,808 55 18 638,977 25 726,473 43 1,365,449 56 18 713,950 31 820,487 49 1,534,438 57 26 910,664 54 1,460,478 80 2,371,142 58 38 1,049,145 33 986,546 71 2,035,691 59 39 1,097,217 52 1,387,422 91 2,484,639 60 40 1,095,847 95 2,080,782 135 3,176,628 61 57 1,626,183 98 1,996,096 155 3,622,279 62 71 2,047,080 104	49	1	\$85,519			1	\$85,519
52 3 133,199 7 238,949 10 372,149 53 11 451,806 11 278,792 22 730,598 54 16 649,619 14 410,189 30 1,059,808 55 18 638,977 25 726,473 43 1,365,449 56 18 713,950 31 820,487 49 1,534,438 57 26 910,664 54 1,460,478 80 2,371,142 58 38 1,049,145 33 986,546 71 2,035,691 59 39 1,097,217 52 1,387,422 91 2,484,639 60 40 1,095,847 95 2,080,782 135 3,176,628 61 57 1,626,183 98 1,996,096 155 3,622,279 62 71 2,047,080 104 2,292,397 175 4,339,476 63 70 1,740,436 15	50	4	190,705	2	\$54,688	6	245,393
53 11 451,806 11 278,792 22 730,598 54 16 649,619 14 410,189 30 1,059,808 55 18 638,977 25 726,473 43 1,365,449 56 18 713,950 31 820,487 49 1,534,438 57 26 910,664 54 1,460,478 80 2,371,142 58 38 1,049,145 33 986,546 71 2,035,691 59 39 1,097,217 52 1,387,422 91 2,484,639 60 40 1,095,847 95 2,080,782 135 3,176,628 61 57 1,626,183 98 1,996,096 155 3,622,279 62 71 2,047,080 104 2,292,397 175 4,339,476 63 70 1,740,436 150 3,416,380 220 5,156,815 64 108 2,667,105	51	8	350,465	2	92,078	10	442,543
54 16 649,619 14 410,189 30 1,059,808 55 18 638,977 25 726,473 43 1,365,449 56 18 713,950 31 820,487 49 1,534,438 57 26 910,664 54 1,460,478 80 2,371,142 58 38 1,049,145 33 986,546 71 2,035,691 59 39 1,097,217 52 1,387,422 91 2,484,639 60 40 1,095,847 95 2,080,782 135 3,176,628 61 57 1,626,183 98 1,996,096 155 3,622,279 62 71 2,047,080 104 2,292,397 175 4,339,476 63 70 1,740,436 150 3,416,380 220 5,156,815 64 108 2,667,105 138 2,842,725 246 5,509,830 65 101 2,788,202	52	3	133,199	7	238,949	10	372,149
55 18 638,977 25 726,473 43 1,365,449 56 18 713,950 31 820,487 49 1,534,438 57 26 910,664 54 1,460,478 80 2,371,142 58 38 1,049,145 33 986,546 71 2,035,691 59 39 1,097,217 52 1,387,422 91 2,484,639 60 40 1,095,847 95 2,080,782 135 3,176,628 61 57 1,626,183 98 1,996,096 155 3,622,279 62 71 2,047,080 104 2,292,397 175 4,339,476 63 70 1,740,436 150 3,416,380 220 5,156,815 64 108 2,667,105 138 2,842,725 246 5,509,830 65 101 2,788,202 139 2,746,630 240 5,534,832 66 121 3,	53	11	451,806	11	278,792	22	730,598
56 18 713,950 31 820,487 49 1,534,438 57 26 910,664 54 1,460,478 80 2,371,142 58 38 1,049,145 33 986,546 71 2,035,691 59 39 1,097,217 52 1,387,422 91 2,484,639 60 40 1,095,847 95 2,080,782 135 3,176,628 61 57 1,626,183 98 1,996,096 155 3,622,279 62 71 2,047,080 104 2,292,397 175 4,339,476 63 70 1,740,436 150 3,416,380 220 5,156,815 64 108 2,667,105 138 2,842,725 246 5,509,830 65 101 2,788,202 139 2,746,630 240 5,534,832 66 121 3,272,258 158 3,185,999 279 6,458,256 67 131	54	16	649,619	14	410,189	30	1,059,808
57 26 910,664 54 1,460,478 80 2,371,142 58 38 1,049,145 33 986,546 71 2,035,691 59 39 1,097,217 52 1,387,422 91 2,484,639 60 40 1,095,847 95 2,080,782 135 3,176,628 61 57 1,626,183 98 1,996,096 155 3,622,279 62 71 2,047,080 104 2,292,397 175 4,339,476 63 70 1,740,436 150 3,416,380 220 5,156,815 64 108 2,667,105 138 2,842,725 246 5,509,830 65 101 2,788,202 139 2,746,630 240 5,534,832 66 121 3,272,258 158 3,185,999 279 6,458,256 67 131 3,393,138 181 3,526,007 312 6,919,146 68 137	55	18	638,977	25	726,473	43	1,365,449
58 38 1,049,145 33 986,546 71 2,035,691 59 39 1,097,217 52 1,387,422 91 2,484,639 60 40 1,095,847 95 2,080,782 135 3,176,628 61 57 1,626,183 98 1,996,096 155 3,622,279 62 71 2,047,080 104 2,292,397 175 4,339,476 63 70 1,740,436 150 3,416,380 220 5,156,815 64 108 2,667,105 138 2,842,725 246 5,509,830 65 101 2,788,202 139 2,746,630 240 5,534,832 66 121 3,272,258 158 3,185,999 279 6,458,256 67 131 3,393,138 181 3,526,007 312 6,919,146 68 137 4,099,569 193 3,578,005 330 7,677,574 69 138<	56	18	713,950	31	820,487	49	1,534,438
59 39 1,097,217 52 1,387,422 91 2,484,639 60 40 1,095,847 95 2,080,782 135 3,176,628 61 57 1,626,183 98 1,996,096 155 3,622,279 62 71 2,047,080 104 2,292,397 175 4,339,476 63 70 1,740,436 150 3,416,380 220 5,156,815 64 108 2,667,105 138 2,842,725 246 5,509,830 65 101 2,788,202 139 2,746,630 240 5,534,832 66 121 3,272,258 158 3,185,999 279 6,458,256 67 131 3,393,138 181 3,526,007 312 6,919,146 68 137 4,099,569 193 3,578,005 330 7,677,574 69 138 3,901,307 192 4,093,834 330 7,995,141 70 <td< td=""><td>57</td><td>26</td><td>910,664</td><td>54</td><td>1,460,478</td><td>80</td><td>2,371,142</td></td<>	57	26	910,664	54	1,460,478	80	2,371,142
60 40 1,095,847 95 2,080,782 135 3,176,628 61 57 1,626,183 98 1,996,096 155 3,622,279 62 71 2,047,080 104 2,292,397 175 4,339,476 63 70 1,740,436 150 3,416,380 220 5,156,815 64 108 2,667,105 138 2,842,725 246 5,509,830 65 101 2,788,202 139 2,746,630 240 5,534,832 66 121 3,272,258 158 3,185,999 279 6,458,256 67 131 3,393,138 181 3,526,007 312 6,919,146 68 137 4,099,569 193 3,578,005 330 7,677,574 69 138 3,901,307 192 4,093,834 330 7,995,141 70 174 4,940,831 177 3,022,621 351 7,963,452	58	38	1,049,145	33	986,546	71	2,035,691
61 57 1,626,183 98 1,996,096 155 3,622,279 62 71 2,047,080 104 2,292,397 175 4,339,476 63 70 1,740,436 150 3,416,380 220 5,156,815 64 108 2,667,105 138 2,842,725 246 5,509,830 65 101 2,788,202 139 2,746,630 240 5,534,832 66 121 3,272,258 158 3,185,999 279 6,458,256 67 131 3,393,138 181 3,526,007 312 6,919,146 68 137 4,099,569 193 3,578,005 330 7,677,574 69 138 3,901,307 192 4,093,834 330 7,995,141 70 174 4,940,831 177 3,022,621 351 7,963,452	59	39	1,097,217	52	1,387,422	91	2,484,639
62 71 2,047,080 104 2,292,397 175 4,339,476 63 70 1,740,436 150 3,416,380 220 5,156,815 64 108 2,667,105 138 2,842,725 246 5,509,830 65 101 2,788,202 139 2,746,630 240 5,534,832 66 121 3,272,258 158 3,185,999 279 6,458,256 67 131 3,393,138 181 3,526,007 312 6,919,146 68 137 4,099,569 193 3,578,005 330 7,677,574 69 138 3,901,307 192 4,093,834 330 7,995,141 70 174 4,940,831 177 3,022,621 351 7,963,452	60	40	1,095,847	95	2,080,782	135	3,176,628
63 70 1,740,436 150 3,416,380 220 5,156,815 64 108 2,667,105 138 2,842,725 246 5,509,830 65 101 2,788,202 139 2,746,630 240 5,534,832 66 121 3,272,258 158 3,185,999 279 6,458,256 67 131 3,393,138 181 3,526,007 312 6,919,146 68 137 4,099,569 193 3,578,005 330 7,677,574 69 138 3,901,307 192 4,093,834 330 7,995,141 70 174 4,940,831 177 3,022,621 351 7,963,452	61	57	1,626,183	98	1,996,096	155	3,622,279
64 108 2,667,105 138 2,842,725 246 5,509,830 65 101 2,788,202 139 2,746,630 240 5,534,832 66 121 3,272,258 158 3,185,999 279 6,458,256 67 131 3,393,138 181 3,526,007 312 6,919,146 68 137 4,099,569 193 3,578,005 330 7,677,574 69 138 3,901,307 192 4,093,834 330 7,995,141 70 174 4,940,831 177 3,022,621 351 7,963,452	62	71	2,047,080	104	2,292,397	175	4,339,476
65 101 2,788,202 139 2,746,630 240 5,534,832 66 121 3,272,258 158 3,185,999 279 6,458,256 67 131 3,393,138 181 3,526,007 312 6,919,146 68 137 4,099,569 193 3,578,005 330 7,677,574 69 138 3,901,307 192 4,093,834 330 7,995,141 70 174 4,940,831 177 3,022,621 351 7,963,452	63	70	1,740,436	150	3,416,380	220	5,156,815
66 121 3,272,258 158 3,185,999 279 6,458,256 67 131 3,393,138 181 3,526,007 312 6,919,146 68 137 4,099,569 193 3,578,005 330 7,677,574 69 138 3,901,307 192 4,093,834 330 7,995,141 70 174 4,940,831 177 3,022,621 351 7,963,452	64	108	2,667,105	138	2,842,725	246	5,509,830
67 131 3,393,138 181 3,526,007 312 6,919,146 68 137 4,099,569 193 3,578,005 330 7,677,574 69 138 3,901,307 192 4,093,834 330 7,995,141 70 174 4,940,831 177 3,022,621 351 7,963,452	65	101	2,788,202	139	2,746,630	240	5,534,832
68 137 4,099,569 193 3,578,005 330 7,677,574 69 138 3,901,307 192 4,093,834 330 7,995,141 70 174 4,940,831 177 3,022,621 351 7,963,452	66	121	3,272,258	158	3,185,999	279	6,458,256
69 138 3,901,307 192 4,093,834 330 7,995,141 70 174 4,940,831 177 3,022,621 351 7,963,452	67	131	3,393,138	181	3,526,007	312	6,919,146
70 174 4,940,831 177 3,022,621 351 7,963,452	68	137	4,099,569	193	3,578,005	330	7,677,574
	69	138	3,901,307	192	4,093,834	330	7,995,141
71 164 4,635,159 207 3,866,954 371 8,502,112	70	174	4,940,831	177	3,022,621	351	7,963,452
	71	164	4,635,159	207	3,866,954	371	8,502,112

TABLE 7J – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
72	147	\$4,711,816	171	\$3,402,812	318	\$8,114,628
73	165	4,585,575	199	4,038,592	364	8,624,167
74	116	3,641,798	163	3,888,943	279	7,530,741
75	94	2,697,356	111	2,281,581	205	4,978,937
76	86	2,376,481	105	2,192,360	191	4,568,841
77	81	2,353,161	110	2,160,360	191	4,513,521
78	84	2,568,419	107	2,100,515	191	4,668,935
79	61	1,616,720	81	1,449,707	142	3,066,427
80	62	1,857,948	61	1,178,094	123	3,036,041
81	59	1,627,588	83	1,639,865	142	3,267,453
82	42	1,132,159	73	1,410,601	115	2,542,760
83	46	1,267,119	70	1,157,585	116	2,424,705
84	45	1,339,703	60	1,041,230	105	2,380,934
85	31	892,389	66	1,249,188	97	2,141,577
86	33	999,957	43	757,663	76	1,757,620
87	23	780,846	36	651,218	59	1,432,064
88	39	1,050,266	37	585,779	76	1,636,045
89	30	818,941	35	676,929	65	1,495,870
90	17	510,888	49	772,800	66	1,283,689
91	19	437,289	36	530,806	55	968,096
92	15	354,839	34	514,429	49	869,268
93	13	346,277	23	336,184	36	682,461
94	7	125,922	18	238,616	25	364,537

TABLE 7J – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
95	5	\$165,259	16	\$259,705	21	\$424,964
96	6	177,329	14	169,409	20	346,738
97	5	76,727	7	68,268	12	144,996
98	1	24,229	6	46,239	7	70,468
99	4	66,676	8	74,443	12	141,119
100	1	8,458	2	20,772	3	29,230
101			1	11,774	1	11,774
102						
103			1	1,479	1	1,479
Total	3,889	\$78,012,480	2,831	\$81,090,515	6,720	\$159,102,995

TABLE 7K – DETAILED TABULATIONS OF THE DATA

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
40			1	\$22,362	1	\$22,362
41			1	45,757	1	45,757
42						
43			1	37,902	1	37,902
44			2	80,032	2	80,032
45	1	\$49,695	2	57,723	3	107,417
46	1	50,506	1	47,535	2	98,041
47			2	53,904	2	53,904
48			1	48,375	1	48,375
49	3	100,799	5	173,534	8	274,333
50	3	97,238	4	155,362	7	252,600
51			9	306,316	9	306,316
52	2	32,730	1	50,681	3	83,411
53	4	70,695	3	121,189	7	191,885
54	5	185,304	1	15,150	6	200,454
55	5	174,384	2	66,349	7	240,734
56	8	280,164	4	174,612	12	454,776
57	8	174,358	5	113,777	13	288,135
58	3	76,102	2	101,490	5	177,592
59	4	58,377	1	23,461	5	81,838
60	5	124,740			5	124,740
61	5	131,327	3	101,285	8	232,612
62	1	23,978	5	106,881	6	130,859

TABLE 7K – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
63	9	\$251,488	6	\$126,511	15	\$377,999
64	4	70,005	6	151,142	10	221,147
65	3	80,176	3	64,304	6	144,479
66	2	34,109	4	88,387	6	122,496
67	1	35,103	7	248,698	8	283,801
68	1	14,430	6	212,005	7	226,435
69	6	177,635	3	37,412	9	215,047
70	3	62,592	1	36,091	4	98,683
71	3	44,573	3	94,951	6	139,524
72	3	47,696	3	79,545	6	127,240
73	3	54,861	1	35,282	4	90,143
74	1	10,455	1	26,114	2	36,569
75			4	43,447	4	43,447
76	4	61,134	1	7,488	5	68,622
77	3	60,207	2	58,418	5	118,625
78	6	103,646	2	50,439	8	154,084
79	3	79,664	1	17,864	4	97,527
80	2	41,908	2	53,004	4	94,912
81	1	22,128	1	19,004	2	41,132
82	1	15,625			1	15,625
83	2	41,676	2	39,077	4	80,753
84	2	26,004	1	29,110	3	55,114
85	1	24,288			1	24,288

TABLE 7K – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
86	2	\$28,623			2	\$28,623
87	2	38,524	2	\$39,947	4	78,470
88	2	49,935			2	49,935
89	2	25,115			2	25,115
90	2	51,294			2	51,294
91	2	22,966			2	22,966
92	1	16,388			1	16,388
93	1	14,231			1	14,231
94						
95						
96						
97	1	16,686			1	16,686
Total	137	\$3,253,564	118	\$3,461,914	255	\$6,715,478

TABLE 7L – DETAILED TABULATIONS OF THE DATA

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
20	2	\$28,703	2	\$12,277	4	\$40,980
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32	2	15,270	1	10,464	3	25,734
33						
34						
35						
36						
37	1	6,088			1	6,088
38	1	17,223			1	17,223
39						
40			1	4,637	1	4,637
41						
42			1	17,391	1	17,391

TABLE 7L – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
43			1	\$6,732	1	\$6,732
44						
45			1	14,117	1	14,117
46	2	\$22,340			2	22,340
47			1	29,293	1	29,293
48						
49			2	42,418	2	42,418
50			1	23,528	1	23,528
51	1	15,827			1	15,827
52	1	6,905			1	6,905
53	1	57,966			1	57,966
54			1	18,749	1	18,749
55			2	26,671	2	26,671
56			5	86,400	5	86,400
57	1	7,303	3	108,416	4	115,719
58	1	5,562			1	5,562
59			7	126,400	7	126,400
60	1	7,452	8	108,318	9	115,770
61	1	19,325	5	68,422	6	87,747
62	2	24,024	7	119,912	9	143,936
63			10	167,143	10	167,143
64	2	42,600	7	198,271	9	240,871
65	3	26,368	23	445,755	26	472,123

TABLE 7L – DETAILED TABULATIONS OF THE DATA (CONTINUED)

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
66	6	\$77,146	14	\$357,058	20	\$434,205
67	4	26,617	17	340,373	21	366,990
68	4	82,009	17	336,673	21	418,682
69	5	41,440	22	487,093	27	528,533
70	4	78,731	20	555,666	24	634,396
71	5	36,224	20	342,503	25	378,728
72	7	92,621	26	509,940	33	602,561
73	6	83,182	30	723,873	36	807,055
74	5	76,100	28	656,799	33	732,899
75	4	40,637	22	505,972	26	546,609
76	6	61,471	19	448,351	25	509,822
77	9	101,979	17	261,320	26	363,299
78	4	54,699	21	502,694	25	557,393
79			18	368,825	18	368,825
80	5	40,402	18	333,281	23	373,683
81	4	38,295	17	315,413	21	353,709
82	2	21,393	26	645,287	28	666,680
83	5	51,012	26	429,724	31	480,736
84	5	39,153	31	662,926	36	702,079
85	2	36,750	21	431,783	23	468,533
86			25	524,398	25	524,398
87	3	20,348	22	320,294	25	340,642
88	3	7,178	31	663,186	34	670,364

TABLE 7L – DETAILED TABULATIONS OF THE DATA (CONTINUED)

The Number and Annual Benefits Payable to Members Receiving Benefits Distributed by Age as of January 1, 2021 Beneficiaries

		Men		Women		Total
Age	Number	Annuities	Number	Annuities	Number	Annuities
89	3	\$31,614	24	\$498,390	27	\$530,004
90	2	22,123	28	427,942	30	450,065
91	3	26,218	23	384,141	26	410,358
92	2	21,025	20	241,935	22	262,960
93	1	20,474	22	405,471	23	425,945
94	1	3,463	21	299,008	22	302,471
95	1	7,193	10	130,665	11	137,858
96	1	11,484	10	162,800	11	174,284
97	1	3,767	6	146,926	7	150,693
98			7	90,587	7	90,587
99	1	9,616	5	65,155	6	74,771
100			1	4,368	1	4,368
101						
102						
103						
104						
105						
106	1	7,087			1	7,087
Total	137	\$1,574,405	774	\$15,216,139	911	\$16,790,544

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