

# Illinois Municipal Retirement Fund

Gain/Loss Analysis of Financial Experience Among  
Active Members During the Period

January 1, 2020 to December 31, 2020



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March 15, 2021

Board of Trustees  
Illinois Municipal Retirement Fund  
Oak Brook, Illinois 60521

Ladies and Gentlemen:

**Submitted in this report are the results of the annual gain and loss analysis** of financial experience among the active members of the Illinois Municipal Retirement Fund (IMRF) covering the period from **January 1, 2020 to December 31, 2020.**

This is one of several documents comprising the full actuarial report. For additional information please see the Annual Actuarial Valuation report dated March 15, 2021.

The valuation was based upon information, furnished by IMRF staff, concerning Retirement Fund benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by IMRF Staff. GRS is not responsible for unauthorized use of this report.

The valuations are based upon current plan provisions related to Regular Members, Sheriff's Law Enforcement Personnel (SLEP), and Elected County Officials (ECO) employment.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of IMRF as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Mark Buis, Francois Pieterse, and Laura Frankowiak are Members of the American Academy of Actuaries (MAAA). These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled. We are relying on the GRS actuaries and Internal Software, Training, and Processes Team who developed and maintain the model.

The signing actuaries are independent of the plan sponsor.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY



Mark Buis, FSA, EA, FCA, MAAA



Francois Pieterse, ASA, FCA, MAAA



Laura Frankowiak, ASA, FCA, MAAA

MB/FP/LF:ah



## Comments

**Purpose of Gain/Loss Analysis.** Regular actuarial valuations give valuable information about the composite change in unfunded actuarial accrued liabilities -- whether or not the liabilities are increasing or decreasing and by how much.

Valuations do not show the portion of the change attributable to each risk area within the retirement system financial mechanism: the rate of investment return which plan assets will earn; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of pay increases; and the ages at actual retirement. In an actuarial valuation, assumptions must be made as to what these rates will be, for the next year and for decades in the future.

***The objective of a gain and loss analysis is to determine the portion of the change in actuarial condition (unfunded actuarial accrued liabilities) attributable to each risk area.***

The fact that actual experience differs from assumed experience is to be expected -- ***the future cannot be predicted with precision.*** The economic risk areas (particularly investment return and pay increases) are volatile. Inflation directly affects economic risk areas, and inflation seems to defy reliable prediction.

Changes in the assumed experience for a risk area should be made when the differences between assumed and actual experience have been observed to be sizable and persistent. A gain and loss analysis covering a relatively short period may or may not be indicative of ***long-term trends, which are the basis of financial assumptions.***

**Data Used.** The 2020 gain/loss analysis is based on the active member population as reported for use in preparing the December 31, 2019 and December 31, 2020 regular annual actuarial valuations. Please note however, that counts shown in this report may not match the December 31, 2020 or the December 31, 2019 valuations since data records for members who have more than one record have been combined. The 2019 reported active member data was matched with the 2020 reported active/inactive member data and the 2020 reported data for retirees and beneficiaries. This matching shows the movement of persons from active member status to various inactive status categories (e.g., retirement, death, disability, etc.). A reconciliation of the population is shown on the following page.

## Comments

	Active Population Reconciliation					
	Actual					Expected
	Regular	SLEP	ECO		Total	
			Regular	SLEP		
Beginning of Year Census	172,899	4,118	88	5	177,110	
+ New People	16,464	291	1	0	16,756	
- Normal Retirement	4,801	140	7	1	4,949	5,213
- Early Retirement	935	0	0	0	935	1,099
- Vested Deferred Retirements	2,140	30	15	0	2,185	1,281
- Deaths	149	4	0	0	153	497
- Disabilities	323	13	0	0	336	39
- Other Terminations	15,070	163	1	0	15,234	14,516
End of Year Census	165,945	4,059	66	4	170,074	

The expected number of disabilities is based on the assumed rates of disability for permanent disability. The actual number of disabilities shown above is comprised of both temporary and permanent disability cases with temporary cases making up the majority.

The retirement system had **a net experience gain/(loss) of \$1,498 million** during the 2020 observation year, which is 3.16% of the beginning accrued liabilities. During the 2020 observation year, IMRF experienced a return on the Market Value of Assets of 14.6% (10.0% on Funding Value of Assets). The gain of \$1,177 million related to investment return and described on the following page is based on the Actuarial Value of Assets (AVA), which is a five-year smoothed market value. In this method, a portion of the current years' market value loss is combined with portions of the gains or losses from the prior four years to arrive at the AVA. See page 7 for a full description of this method.

## Changes in Unfunded Actuarial Accrued Liabilities During Calendar Year 2020

The schedule below estimates the total gain or loss on Retirement Fund activities for the year as the difference between Expected and Actual Unfunded Liability.

	Unfunded Liability Development During	
	2020	2019
Unfunded Liability January 1	\$ 4,421,715,330	\$ 4,524,158,460
(Assumed Payments)	(327,270,697)	(336,629,003)
Assumed Interest	308,849,181	326,641,691
Expected Unfunded Liability December 31	4,403,293,814	4,514,171,148
Change Due to Change in Assumptions	(357,008,491)	0
Change Due to Benefit Changes	0	0
Change Due to Investment Experience	(1,177,273,755)	(367,178,690)
Change Due to Demographic and Other Sources	36,498,798	274,722,872
Actual Unfunded Liability December 31	2,905,510,366	4,421,715,330
<b>Gain (Loss) for the Year</b>	<b>\$ 1,497,783,448</b>	<b>\$ 92,455,818</b>

The following schedule reconciles the employer contribution rate from last year to this year.

	Regular	SLEP	ECO	Total
<b>Prior Year</b>	<b>10.62 %</b>	<b>23.70 %</b>	<b>71.68 %</b>	<b>11.23 %</b>
Experience Study	(0.90)%	(1.77)%	(4.26)%	(0.94)%
Tier 2 Structure	(0.10)%	(0.18)%	0.00 %	(0.10)%
Investment Return	(1.07)%	(1.74)%	(8.80)%	(1.09)%
Pay Increases	0.01 %	0.33 %	(0.16)%	0.02 %
Demographic	0.04 %	(0.12)%	(3.10)%	0.03 %
Payroll Growth	0.05 %	0.07 %	6.51 %	0.06 %
Death and Disability Rate Change	(0.01)%	(0.01)%	(0.01)%	(0.01)%
Other	(0.06)%	(0.47)%	(0.50)%	(0.07)%
<b>Current Year</b>	<b>8.59 %</b>	<b>19.81 %</b>	<b>61.37 %</b>	<b>9.13 %</b>

The next page shows the breakdown of the total gain or loss by source. Risk areas related to assumptions include economic risks and demographic risks. Economic risks relate to pay increases and investment return. Demographic risks relate to rates of retirement, death, disability, and other terminations. Actual number counts for each decrement are shown on pages 16 to 35. It is important to note that liability weighting was used to develop assumptions for certain decrements (such as retirement and age-based withdrawal) and therefore looking at number counts alone is not always the best indicator of plan experience.

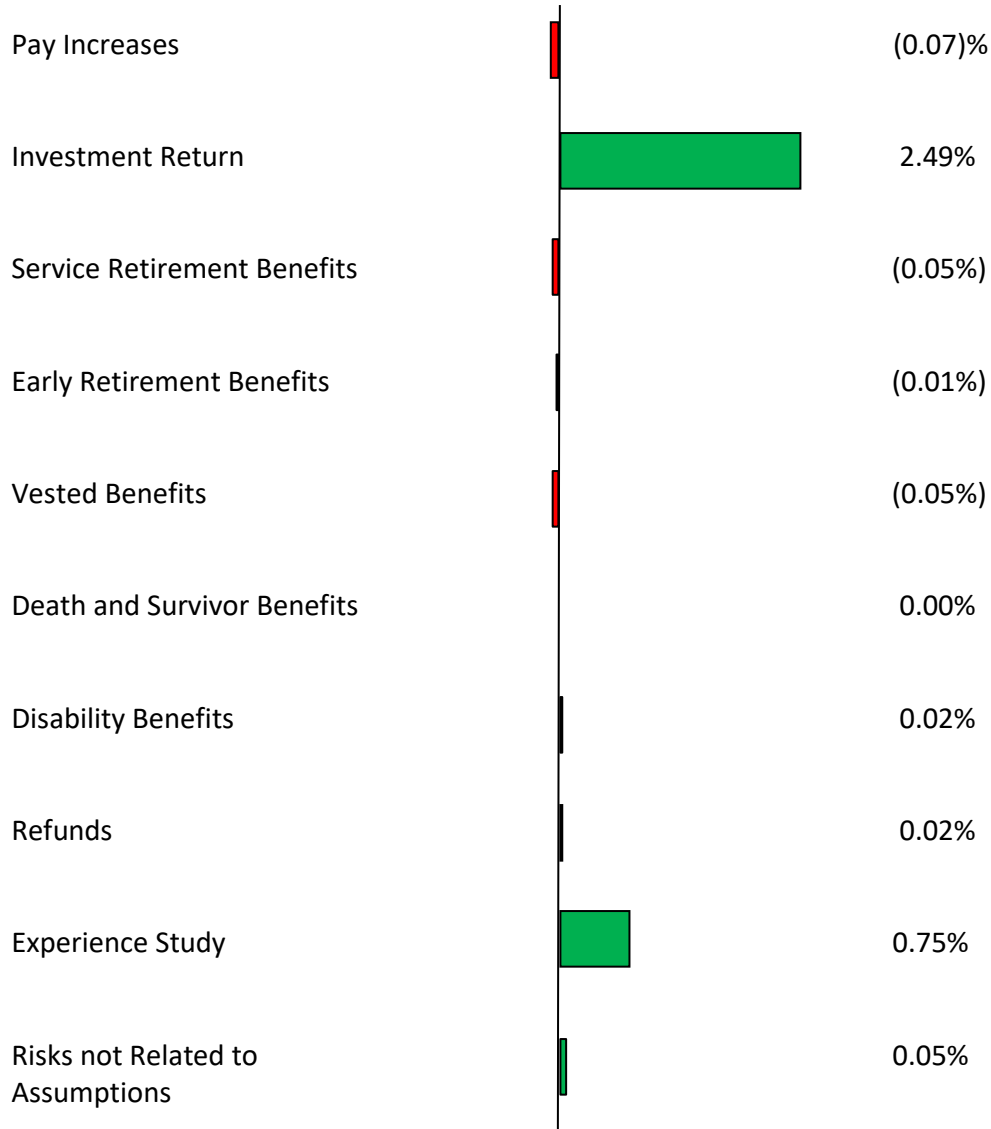
## Changes in Active Member Accrued Liabilities Gains & Losses by Risk Area During Calendar Year 2020

Type of Risk Area	Gain (Loss) in Period			Percent of Liabilities
	Regular	SLEP	Totals	
	Millions of \$			
<b>Risks Related to Assumptions</b>				
<b>Economic Risk Areas</b>				
<i>Pay Increases</i>	\$(11.8)	\$(15.2)	\$ (27.0)	(0.07)%
<i>Investment Return</i>			1,177.3	2.49%
<b>Demographic Risk Areas</b>				
<i>Service Retirements</i>	(26.3)	0.7	(25.6)	(0.05)%
<i>Early Retirements</i>	(6.6)	0.0	(6.6)	(0.01)%
<i>Vested Deferred Retirements</i>	(20.8)	(2.9)	(23.7)	(0.05)%
<i>Death and Survivor Benefits</i>	(2.5)	0.2	(2.3)	0.00%
<i>Disability Benefits</i>	8.4	2.2	10.6	0.02%
<i>Terminated with Refund</i>	10.4	5.2	15.6	0.02%
<b>Experience Study</b>			357.0	0.75%
<b>Risks not Related to Assumptions</b>			22.5	0.05%
<b>Total Gain (or Loss) During Period</b>			1,497.8	3.16%
<b>Beginning of Year Accrued Liabilities</b>			\$47,357.9	100.0%



# Gain/Loss Experience During Calendar Year 2020

Gain/Loss Experience Expressed as a % of Beginning of Year Liabilities



## Experience Gains & Losses by Risk Area Comparative Statement (\$ in Millions)

Experience Period	Pay Increases	Investment Return	Service Retirement	Early Retirement	Vested Deferred Retirement	Death and Survivor Benefits	Disability Benefits	Terminated with Refund	Experience Study / Change in Discount Rate <sup>3</sup>	Other	Total Gain (Loss)	
											\$	Percent of Liabilities
2001	\$(29.5)	\$ 69.4	(4.9)	\$(1.0)	\$(20.3)	\$2.9	\$ 10.0	\$ 11.4		\$ 1.4	\$ 39.4	0.3 %
2002 <sup>1</sup>	19.5	(611.8)	(9.9)	(2.0)	(31.0)	4.3	6.9	2.3		(66.7)	(688.4)	(4.5)%
2003	36.8	(404.6)	(18.4)	(5.4)	(28.0)	2.3	5.9	10.0		(250.0)	(651.4)	(3.9)%
2004	(0.3)	(478.5)	(14.7)	(5.3)	(27.5)	3.4	7.3	15.8		(183.0)	(682.6)	(3.8)%
2005 <sup>1</sup>	130.0	23.8	(10.4)	(5.0)	(28.3)	1.9	12.0	19.3		(111.2)	32.1	0.2 %
2006	23.5	262.2	(8.6)	(3.4)	(32.7)	2.1	9.4	11.1		(211.7)	51.9	0.3 %
2007	(15.4)	305.8	(8.4)	(2.6)	(35.3)	4.1	10.2	23.2		(170.5)	111.1	0.6 %
2008 <sup>1</sup>	8.2	(3,331.5)	2.4	(2.1)	(40.8)	1.8	11.4	9.1		(40.5)	(3,382.0)	(12.6)%
2009	70.2	(343.2)	11.6	(0.5)	(38.3)	3.5	12.9	(11.8)		(53.5)	(349.1)	(1.4)%
2010	359.6	(90.5)	(0.2)	0.0	(32.3)	3.3	7.3	(0.3)		(442.1) <sup>2</sup>	(195.2)	(0.7)%
2011 <sup>1</sup>	238.9	(164.3)	(22.9)	(5.7)	(25.9)	7.3	8.2	19.9	\$ (181.1)	(163.3)	(288.9)	(1.0)%
2012	230.2	71.0	2.0	(3.0)	(24.7)	6.5	20.8	23.8		(89.0)	237.6	0.8 %
2013	141.5	811.5	(11.6)	(2.8)	(22.7)	3.2	15.7	45.1		(74.0)	905.9	2.8 %
2014 <sup>1</sup>	64.2	767.6	(19.3)	(4.9)	(19.7)	(2.2)	17.2	37.9	(1,309.7)	34.9	(434.0)	(1.3)%
2015	22.9	313.2	(28.5)	(4.7)	(16.8)	(3.4)	15.8	33.0		(100.6)	230.9	0.6 %
2016	312.7	(109.9)	(20.2)	(2.6)	(14.1)	(3.3)	12.0	35.7		(185.5)	24.8	0.1 %
2017 <sup>1</sup>	104.3	475.5	(21.8)	(2.6)	(17.8)	(8.2)	9.7	22.4	1,094.6	(32.6)	1,623.5	3.9 %
2018 <sup>4</sup>	(40.1)	(385.8)	(19.5)	(5.3)	(14.5)	(7.7)	11.5	31.2	(1,191.0)	92.9	(1,528.3)	(3.6)%
2019	(45.1)	367.2	(20.2)	(7.4)	(18.2)	(10.3)	17.0	32.4		(222.9)	92.5	0.2 %
2020 <sup>1</sup>	(27.0)	1,177.3	(25.6)	(6.6)	(23.7)	(2.3)	10.6	15.6	357.0	22.5	1,497.8	3.2 %

<sup>1</sup> Changes in assumptions due to the Experience Study.

<sup>2</sup> Includes one-time data changes of approximately \$250 million.

<sup>3</sup> Includes Experience Study Changes.

<sup>4</sup> Change in Investment Rate of Return.

## Development of Funding Value of Retirement System Assets Gain (Loss) from Investment Return During the Calendar Year 2020

Year Ended December 31	2019	2020	2021	2022	2023	2024
A. Funding Value Beginning of Year	\$40,829,952,193	\$42,936,185,938				
B. Market Value End of Year	44,923,481,136	50,229,709,593				
C. Market Value Beginning of Year	38,755,630,459	44,923,481,136				
D. Non-Investment/Administrative Net Cash Flow	(1,178,399,497)	(1,166,605,356)				
E. Investment Return						
E1. Market Total: B-C-D	7,346,250,174	6,472,833,813				
E2. Assumed Rate of Return	7.25%	7.25%				
<b>E3. Assumed Amount of Return</b>	<b>2,917,454,552</b>	<b>3,070,584,036</b>	-----Scheduled-----			
E4. Return Subject to Phase-in: E1-E3	4,428,795,622	3,402,249,777				
F. Phased-In Recognition of Investment Return						
F1. Current Year: 0.20xE4	885,759,124	680,449,955	Unknown	Unknown	Unknown	Unknown
F2. First Prior Year	(518,580,434)	496,823,800	\$680,449,955	Unknown	Unknown	Unknown
F3. Second Prior Year	-	-	496,823,800	\$680,449,955	Unknown	Unknown
F4. Third Prior Year	-	-	-	496,823,800	\$680,449,955	Unknown
F5. Fourth Prior Year	-	-	-	-	496,823,798	\$680,449,957
F6. Funding Corridor Adjustment						
<b>F7. Total Scheduled Phase-in of Gain/(Loss)</b>	<b>367,178,690</b>	<b>1,177,273,755</b>	1,177,273,755	1,177,273,755	1,177,273,753	680,449,957
G. Acceptable Phase-In of Investment Return						
G1. Projected Funding Value without Phase-In: A+D+E3	<b>42,569,007,248</b>	<b>44,840,164,618</b>				
G2. Limit on Phase-In: B-G1	2,354,473,888	5,389,544,975				
G3. Acceptable Phase-In Amount	367,178,690	1,177,273,755				
<b>H. Funding Value End of Year: A+D+E3+G3</b>	<b>42,936,185,938</b>	<b>46,017,438,373</b>				
I. Difference Between Market and Funding Value	1,987,295,198	4,212,271,220	3,034,997,465	1,857,723,710	680,449,957	-
J. Recognized Rate of Return (Funding Value)	8.2 %	10.0 %				
K. Market Rate of Return	19.2 %	14.6 %				
L. Ratio of Funding Value to Market Value	95.6 %	91.6 %				

The Funding Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment return (line E4) are phased-in over a closed 5-year period subject to a 20% corridor. The acceptable phase-in amount (Item G3) is the minimum of Items F7 and G2, if G2 is positive. If G2 is negative, the acceptable phase-in amount is the greater of Items F7 and G2.



## Regular Employees in Valuation by Age and Years of Service as of December 31, 2019

Age	Years of Service to Valuation Date								Total Number
	Men				Women				
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
24 & Under	2,658				3,494				6,152
25- 29	4,984	105			7,052	64			12,205
30- 34	4,475	1,212			7,122	1,082			13,891
35- 39	3,420	2,804	26		7,232	2,865	34		16,381
40- 44	2,690	3,001	632		7,580	3,718	459		18,080
45- 49	2,453	2,503	1,617	8	7,667	4,687	1,404	3	20,342
50	471	523	453	4	1,642	1,281	386		4,760
51	482	496	484	2	1,468	1,189	461		4,582
52	498	473	503	6	1,456	1,322	551	2	4,811
53	527	525	550	8	1,348	1,457	543	4	4,962
54	504	499	550	27	1,299	1,531	626	14	5,050
55	599	525	594	51	1,259	1,658	706	25	5,417
56	536	566	542	57	1,189	1,659	711	23	5,283
57	601	579	595	54	1,162	1,656	829	55	5,531
58	574	577	526	104	1,148	1,619	858	59	5,465
59	594	561	517	86	1,035	1,652	920	65	5,430
60	576	541	462	95	916	1,512	964	81	5,147
61	508	518	411	97	872	1,439	846	84	4,775
62	536	478	350	115	670	1,270	929	60	4,408
63	491	451	315	78	670	1,123	837	58	4,023
64	432	383	239	48	571	894	710	48	3,325
65	418	373	196	52	473	687	593	57	2,849
66	312	305	143	39	344	472	408	17	2,040
67	291	269	114	25	253	370	263	20	1,605
68	232	204	65	15	197	292	225	22	1,252
69	211	193	51	22	191	214	157	14	1,053
70 & Over	893	798	205	48	732	780	532	92	4,080
<b>Totals</b>	<b>30,966</b>	<b>19,462</b>	<b>10,140</b>	<b>1,041</b>	<b>59,042</b>	<b>36,493</b>	<b>14,952</b>	<b>803</b>	<b>172,899</b>

Figures on this page may not always match corresponding figures from the regular valuation due to differences in tabulation methods.

## ECO Regular Employees in Valuation by Age and Years of Service as of December 31, 2019

Age	Years of Service to Valuation Date								Total Number
	Men				Women				
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
24 & Under									
25- 29									
30- 34									
35- 39									
40- 44		4				1			5
45- 49		3	1			4			8
50		2				2			4
51			1						1
52		2	1						3
53		1	3			1			5
54		2	1			1			4
55						4			4
56	1	1					1		3
57		5				2		1	8
58	1	3				1		1	6
59	1					1			2
60	1	1	1						3
61		1				3			4
62			2	1			1	1	5
63		1	2			1	2		6
64		1					1		2
65		3		1					4
66		1	2						3
67							1		1
68									
69		2					1		3
70 & Over		3						1	4
<b>Totals</b>	<b>4</b>	<b>36</b>	<b>14</b>	<b>2</b>		<b>21</b>	<b>7</b>	<b>4</b>	<b>88</b>

Figures on this page may not always match corresponding figures from the regular valuation due to differences in tabulation methods.

## SLEP Employees in Valuation by Age and Years of Service as of December 31, 2019

Age	Years of Service to Valuation Date								Total Number
	Men				Women				
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
24 & Under	102				18				120
25- 29	408	5			45	3			461
30- 34	353	110			43	26			532
35- 39	189	421			36	58			704
40- 44	116	400	63		14	71	15		679
45- 49	54	244	337		8	60	40		743
50	7	49	75		2	7	8		148
51	13	45	52		1	4	9		124
52	13	28	43		1	5	7		97
53	5	23	39		1	5	4		77
54	5	21	26		1	6	1		60
55	9	21	11			6	6		53
56	7	13	23			2	5		50
57	7	12	14	1		5	3		42
58	3	15	11			3	1		33
59	10	10	7	2		4	4		37
60	5	14	13		1	4	1		38
61	3	12	5	1		2	3		26
62	2	11	1	1		1			16
63	3	4	1	1		1	2	1	13
64	3	8	3	1		2	1		18
65	1	3	5	1		1			11
66	4	7	1	1			2		15
67	2	7		1					10
68		1							1
69		2				1			3
70 & Over	2	4	1						7
<b>Totals</b>	<b>1,326</b>	<b>1,490</b>	<b>731</b>	<b>10</b>	<b>171</b>	<b>277</b>	<b>112</b>	<b>1</b>	<b>4,118</b>

Figures on this page may not always match corresponding figures from the regular valuation due to differences in tabulation methods.

## ECO SLEP Employees in Valuation by Age and Years of Service as of December 31, 2019

Age	Years of Service to Valuation Date								Total Number
	Men				Women				
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
24 & Under									
25- 29									
30- 34									
35- 39									
40- 44									
45- 49									
50									
51									
52		1							1
53		1							1
54									
55									
56									
57									
58									
59									
60									
61									
62									
63		1							1
64									
65									
66									
67									
68									
69				2					2
70 & Over									
<b>Totals</b>		<b>3</b>		<b>2</b>					<b>5</b>

Figures on this page may not always match corresponding figures from the regular valuation due to differences in tabulation methods.

## Regular Employees in Valuation by Age and Years of Service as of December 31, 2020

Age	Years of Service to Valuation Date								Total Number
	Men				Women				
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
24 & Under	2,363				3,008				5,371
25- 29	4,760	110			6,637	69			11,576
30- 34	4,414	1,215			6,940	1,062			13,631
35- 39	3,308	2,789	34		6,796	2,741	23		15,691
40- 44	2,730	2,960	665		7,276	3,718	530	1	17,880
45- 49	2,298	2,388	1,620	7	7,044	4,259	1,399	3	19,018
50	511	500	502	5	1,440	1,210	466	1	4,635
51	467	504	485	4	1,496	1,277	457		4,690
52	492	459	527	2	1,357	1,161	533	2	4,533
53	480	460	523	12	1,352	1,304	601	7	4,739
54	483	498	596	22	1,222	1,402	618	10	4,851
55	487	484	529	45	1,223	1,444	686	19	4,917
56	606	498	535	52	1,131	1,566	734	26	5,148
57	511	541	544	61	1,092	1,549	751	41	5,090
58	591	545	562	73	1,026	1,484	905	61	5,247
59	525	577	474	123	1,038	1,440	947	60	5,184
60	536	531	474	96	898	1,473	947	70	5,025
61	546	514	392	101	828	1,286	958	73	4,698
62	452	471	370	82	778	1,193	838	79	4,263
63	474	435	274	93	556	1,051	819	57	3,759
64	426	411	281	68	537	942	763	47	3,475
65	358	345	200	42	427	707	578	45	2,702
66	332	302	123	35	361	466	414	44	2,077
67	255	252	95	22	271	334	259	16	1,504
68	234	234	96	17	196	291	205	17	1,290
69	176	161	54	11	147	223	168	17	957
70 & Over	868	775	205	66	708	744	533	95	3,994
<b>Totals</b>	<b>29,683</b>	<b>18,959</b>	<b>10,160</b>	<b>1,039</b>	<b>55,785</b>	<b>34,396</b>	<b>15,132</b>	<b>791</b>	<b>165,945</b>

Figures on this page may not always match corresponding figures from the regular valuation due to differences in tabulation methods.



## ECO Regular Employees in Valuation by Age and Years of Service as of December 31, 2020

Age	Years of Service to Valuation Date								Total Number
	Men				Women				
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
24 & Under									
25- 29									
30- 34									
35- 39									
40- 44		3				1			4
45- 49	1	1	3			2			7
50						2			2
51		2				2			4
52			1						1
53			1						1
54		1	3				1		5
55		2	1			1			4
56						4			4
57	1	1							2
58		3	1				1	1	6
59		2				1		1	4
60		1				1			2
61	1	1	1						3
62						2			2
63				1			1		2
64			1			1	1		3
65							1		1
66		2							2
67		1	1						2
68									
69									
70 & Over		3					1	1	5
<b>Totals</b>	<b>3</b>	<b>23</b>	<b>13</b>	<b>1</b>		<b>17</b>	<b>6</b>	<b>3</b>	<b>66</b>

Figures on this page may not always match corresponding figures from the regular valuation due to differences in tabulation methods.

## SLEP Employees in Valuation by Age and Years of Service as of December 31, 2020

Age	Years of Service to Valuation Date								Total Number
	Men				Women				
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
24 & Under	85				15				100
25- 29	383	5			49	1			438
30- 34	374	91			57	15			537
35- 39	203	391			30	62			686
40- 44	116	414	70		17	73	11		701
45- 49	47	215	317		12	48	50		689
50	12	53	72	1	1	5	8		152
51	8	42	48		3	5	7		113
52	14	35	46		1	4	7		107
53	15	26	33		1	5	4		84
54	7	20	37		1	4	2		71
55	5	17	23	1	1	5	1		53
56	9	20	8	1		6	6		50
57	7	12	20		1	2	4		46
58	8	11	13	1		4	4		41
59	4	12	8			2	1		27
60	8	8	8	2		3	2		31
61	6	12	10	1		2			31
62	1	11	7	1		2	2	1	25
63	3	9	2			1			15
64	3	2	1	1			2	1	10
65	2	6	1	1			1		11
66		2	4	1		1			8
67	4	6	2				1		13
68	2	6		2					10
69		1							1
70 & Over	2	6					1		9
<b>Totals</b>	<b>1,328</b>	<b>1,433</b>	<b>730</b>	<b>13</b>	<b>189</b>	<b>250</b>	<b>114</b>	<b>2</b>	<b>4,059</b>

Figures on this page may not always match corresponding figures from the regular valuation due to differences in tabulation methods.

## ECO SLEP Employees in Valuation by Age and Years of Service as of December 31, 2020

Age	Years of Service to Valuation Date								Total Number
	Men				Women				
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
24 & Under									
25- 29									
30- 34									
35- 39									
40- 44									
45- 49									
50									
51									
52									
53									
54		1							1
55									
56									
57									
58									
59									
60									
61									
62									
63									
64		1							1
65									
66									
67									
68									
69									
70 & Over				2					2
<b>Totals</b>		<b>2</b>		<b>2</b>					<b>4</b>

Figures on this page may not always match corresponding figures from the regular valuation due to differences in tabulation methods.

# RETIREMENT EXPERIENCE

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## Active Regular Group Members Who Became Age & Service Retirees During Calendar Year 2020 (Retirement with Benefit Beginning Immediately)

Male		
Age	Retirements	Exposure
Under 55	8	8
55	23	76
56	20	82
57	18	80
58	28	121
59	20	140
60	116	1,156
61	118	1,001
62	164	975
63	134	887
64	105	748
65	170	632
66	156	527
67	111	406
68	73	355
69	59	257
70	52	219
71	35	152
72	30	122
73	21	129
74	25	103
75 & Up	110	414
Total (55 & Up)	1,588	8,582
Average Rate:	0.1850	

Female		
Age	Retirements	Exposure
Under 55	15	15
55	10	33
56	17	50
57	5	47
58	12	82
59	16	82
60	256	2,601
61	262	2,449
62	329	2,250
63	345	2,117
64	265	1,834
65	453	1,537
66	382	1,149
67	201	731
68	131	567
69	122	495
70	81	312
71	62	275
72	49	225
73	43	184
74	39	138
75 & Up	110	432
Total (55 & Up)	3,190	17,590
Average Rate:	0.1814	

## Active Regular Group Members Who Became Early Service Retirees During Calendar Year 2020

Male		
Age	Retirements	Exposure
55	67	1,029
56	56	1,078
57	37	1,105
58	69	1,054
59	66	1,040
Total	295	5,306
Average Rate:	0.0556	

Female		
Age	Retirements	Exposure
55	128	2,231
56	120	2,360
57	110	2,383
58	145	2,351
59	137	2,505
Total	640	11,830
Average Rate:	0.0541	

## Active SLEP Group Members Who Became Age & Service Retirees During Calendar Year 2020 (Retirement with Benefit Beginning Immediately)

Male		
Age	Retirements	Exposure
Under 50	-	-
50	30	84
51	22	67
52	12	65
53	9	33
54	6	38
55	4	22
56	6	24
57	2	18
58	2	10
59	5	15
60	4	23
61	1	22
62	2	12
63	1	8
64	1	6
65	4	11
66	3	10
67	-	8
68	1	5
69	-	1
70	1	2
71	1	2
72	-	-
73	-	1
74	-	-
75 & Up	-	1
Total (50 & Up)	117	488
Average Rate:	0.2398	

Female		
Age	Retirements	Exposure
Under 50	-	-
50	2	10
51	2	8
52	3	8
53	2	6
54	1	5
55	1	3
56	1	6
57	2	3
58	-	5
59	3	3
60	-	3
61	2	6
62	-	3
63	-	-
64	2	6
65	1	1
66	-	1
67	1	2
68	-	-
69	-	-
70	-	1
71	-	-
72	-	-
73	-	-
74	-	-
75 & Up	-	-
Total (50 & Up)	23	80
Average Rate:	0.2875	

**Active ECO Group Members Who Became Age & Service Retirees  
During Calendar Year 2020  
(Retirement with Benefit Beginning Immediately)**

Male		
Age	Retirements	Exposure
Under 55	-	-
55	-	1
56	-	-
57	-	2
58	1	5
59	-	3
60	-	-
61	-	2
62	2	3
63	-	3
64	1	1
65	-	2
66	1	5
67	-	1
68	-	-
69	-	-
70	-	2
71	-	2
72	-	1
73	-	-
74	-	-
75 & Up	-	-
Total (55 & Up)	5	33
Average Rate:	0.1515	

Female		
Age	Retirements	Exposure
Under 55	-	-
55	-	4
56	-	1
57	1	3
58	-	1
59	-	2
60	-	1
61	-	-
62	1	4
63	-	3
64	-	2
65	-	-
66	-	-
67	-	-
68	-	1
69	-	1
70	-	-
71	-	-
72	-	-
73	-	-
74	-	-
75 & Up	-	1
Total (55 & Up)	2	24
Average Rate:	0.0833	

## Active ECO SLEP Group Members Who Became Age & Service Retirees During Calendar Year 2020 (Retirement with Benefit Beginning Immediately)

Male		
Age	Retirements	Exposure
Under 50	-	-
50	-	-
51	-	-
52	-	-
53	1	-
54	-	-
55	-	-
56	-	-
57	-	-
58	-	-
59	-	-
60	-	-
61	-	-
62	-	-
63	-	-
64	-	1
65	-	-
66	-	-
67	-	-
68	-	-
69	-	2
70	-	-
71	-	-
72	-	-
73	-	-
74	-	-
75 & Up	-	-
Total (50 & Up)	1	3
Average Rate:	0.3333	

Female		
Age	Retirements	Exposure
Under 50	-	-
50	-	-
51	-	-
52	-	-
53	-	-
54	-	-
55	-	-
56	-	-
57	-	-
58	-	-
59	-	-
60	-	-
61	-	-
62	-	-
63	-	-
64	-	-
65	-	-
66	-	-
67	-	-
68	-	-
69	-	-
70	-	-
71	-	-
72	-	-
73	-	-
74	-	-
75 & Up	-	-
Total (50 & Up)	-	-
Average Rate:	-	



# DISABILITY EXPERIENCE

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## Regular Group Members Who Became Disability Retirees During Calendar Year 2020

Male		
Age	Disabilities*	Exposure
Under 20	-	112
20-24	2	2,111
25-29	2	4,955
30-34	4	5,671
35-39	5	6,199
40-44	12	6,291
45-49	11	6,452
50-54	30	7,522
55-59	35	8,784
60-64	31	7,500
65-69	14	3,843
70-74	-	1,431
75 and Over	-	738
Totals	146	61,609
Average Rate:	0.0024	

Female		
Age	Disabilities*	Exposure
Under 20	-	87
20-24	2	2,752
25-29	7	6,940
30-34	7	8,143
35-39	8	9,858
40-44	5	11,634
45-49	18	13,343
50-54	40	16,399
55-59	45	18,277
60-64	34	15,306
65-69	9	6,163
70-74	1	1,755
75 and Over	1	633
Totals	177	111,290
Average Rate:	0.0016	

*\* The numbers shown above may be overstated due to inclusion of temporary disability cases. Actual numbers may vary once the permanent cases have been determined.*

## SLEP Group Members Who Became Disability Retirees During Calendar Year 2020

Male		
Age	Disabilities*	Exposure
Under 20	-	-
20-24	-	69
25-29	-	387
30-34	-	459
35-39	2	600
40-44	3	602
45-49	1	622
50-54	2	483
55-59	1	186
60-64	1	98
65-69	-	43
70-74	-	1
75 and Over	-	1
Totals	10	3,551
Average Rate:	0.0028	

Female		
Age	Disabilities*	Exposure
Under 20	-	-
20-24	-	9
25-29	-	50
30-34	-	62
35-39	-	97
40-44	2	102
45-49	-	107
50-54	-	67
55-59	-	42
60-64	1	20
65-69	-	4
70-74	-	-
75 and Over	-	-
Totals	3	560
Average Rate:	0.0054	

*\* The numbers shown above may be overstated due to inclusion of temporary disability cases. Actual numbers may vary once the permanent cases have been determined.*

## ECO Group Members Who Became Disability Retirees During Calendar Year 2020

Male		
Age	Disabilities	Exposure
Under 20	-	-
20-24	-	-
25-29	-	-
30-34	-	-
35-39	-	-
40-44	-	4
45-49	-	3
50-54	-	13
55-59	-	13
60-64	-	10
65-69	-	8
70-74	-	5
75 and Over	-	-
Totals	-	56
Average Rate:	-	

Female		
Age	Disabilities	Exposure
Under 20	-	-
20-24	-	-
25-29	-	-
30-34	-	-
35-39	-	-
40-44	-	1
45-49	-	3
50-54	-	4
55-59	-	11
60-64	-	10
65-69	-	2
70-74	-	-
75 and Over	-	1
Totals	-	32
Average Rate:	-	

## ECO SLEP Members Who Became Disability Retirees During Calendar Year 2020

Male		
Age	Disabilities	Exposure
Under 20	-	-
20-24	-	-
25-29	-	-
30-34	-	-
35-39	-	-
40-44	-	-
45-49	-	-
50-54	-	2
55-59	-	-
60-64	-	1
65-69	-	2
70-74	-	-
75 and Over	-	-
Totals	-	5
Average Rate:	-	

Female		
Age	Disabilities	Exposure
Under 20	-	-
20-24	-	-
25-29	-	-
30-34	-	-
35-39	-	-
40-44	-	-
45-49	-	-
50-54	-	-
55-59	-	-
60-64	-	-
65-69	-	-
70-74	-	-
75 and Over	-	-
Totals	-	-
Average Rate:	-	

## **WITHDRAWAL EXPERIENCE**

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**Regular Group Members Who Left Active Status  
During Calendar Year 2020  
with Eight or More Years of Service**

<b>Male</b>		
<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>
25-29	8	124
30-34	59	1,212
35-39	141	2,880
40-44	135	3,642
45-49	154	4,113
50-54	144	5,139
55 & Over	297	297
Total	938	17,407
Average Rate:	0.0539	

<b>Female</b>		
<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>
25-29	9	73
30-34	98	1,071
35-39	198	2,852
40-44	260	4,253
45-49	332	5,950
50-54	461	9,310
55 & Over	756	756
Total	2,114	24,265
Average Rate:	0.0871	

**SLEP Group Members Who Left Active Status  
During Calendar Year 2020  
with Seven or More Years of Service**

<b>Male</b>		
<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>
25-29	1	13
30-34	6	140
35-39	12	432
40-44	10	503
45-49	14	583
50-54	4	152
55 & Over	3	69
Total	50	1,892
Average Rate:	0.0264	

<b>Female</b>		
<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>
25-29	-	3
30-34	2	24
35-39	1	65
40-44	1	90
45-49	3	100
50-54	2	24
55 & Over	1	21
Total	10	327
Average Rate:	0.0306	



**ECO Group Members Who Left Active Status  
During Calendar Year 2020  
with Eight or More Years of Service**

Male		
Age	Withdrawals	Exposure
25-29	-	-
30-34	-	-
35-39	-	-
40-44	-	4
45-49	-	3
50-54	3	13
55 & Over	8	8
Total	11	28
Average Rate:	0.3929	

Female		
Age	Withdrawals	Exposure
25-29	-	-
30-34	-	-
35-39	-	-
40-44	-	1
45-49	-	3
50-54	-	4
55 & Over	4	4
Total	4	12
Average Rate:	0.3333	

**ECO SLEP Group Members Who Left Active Status  
During Calendar Year 2020  
with Seven or More Years of Service**

<b>Male</b>		
<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>
25-29	-	-
30-34	-	-
35-39	-	-
40-44	-	-
45-49	-	-
50-54	-	2
55 & Over	-	-
Total	-	2
Average Rate:	-	

<b>Female</b>		
<b>Age</b>	<b>Withdrawals</b>	<b>Exposure</b>
25-29	-	-
30-34	-	-
35-39	-	-
40-44	-	-
45-49	-	-
50-54	-	-
55 & Over	-	-
Total	-	-
Average Rate:	-	

**Regular Group Members Who Left Active Status  
with No Monthly Benefit  
During Calendar Year 2020  
(Non-Vested Separations)**

Male		
Service Index	Withdrawals	Exposure
1	863	3,469
2	1,155	5,952
3	699	4,703
4	500	3,848
5	406	3,551
6	330	3,212
7	234	2,819
8	193	2,260
9	123	1,945
10	104	1,346
11	77	942
12	87	1,200
13	75	1,227
14	59	1,147
15	56	1,094
16	55	904
17	35	776
18	31	781
19	26	797
20	28	809
21	21	831
22	22	685
23	21	567
24	22	471
25	16	432
26	11	341
27	9	289
28	6	236
29	9	221
30 and Over	45	847
Totals (Less Than or Equal to 8 Years of Service)	4,380	29,814
Average Rate	0.1469	

Female		
Service Index	Withdrawals	Exposure
1	2,105	7,570
2	2,668	12,196
3	1,644	9,297
4	1,112	7,471
5	814	6,427
6	651	5,703
7	439	4,796
8	345	3,825
9	281	2,981
10	223	2,162
11	196	1,709
12	204	1,904
13	183	2,175
14	172	1,960
15	148	1,614
16	111	1,313
17	83	1,118
18	73	930
19	73	1,083
20	62	1,061
21	45	920
22	46	712
23	52	584
24	20	458
25	27	363
26	21	316
27	15	247
28	11	199
29	7	161
30 and Over	61	591
Totals (Less Than or Equal to 8 Years of Service)	9,778	57,285
Average Rate	0.1707	

**SLEP Group Members Who Left Active Status  
with No Monthly Benefit  
During Calendar Year 2020  
(Non-Vested Separations)**

Male		
Service Index	Withdrawals	Exposure
1	27	133
2	33	257
3	19	184
4	12	156
5	17	153
6	10	136
7	4	139
8	6	115
9	3	102
10	6	93
11	3	76
12	5	121
13	-	158
14	6	119
15	2	143
16	1	130
17	1	126
18	1	110
19	1	117
20	1	98
21	3	62
22	2	79
23	3	72
24	1	60
25	-	45
26	-	39
27	2	22
28	2	9
29	1	8
30 and Over	-	3
Totals (Less Than or Equal to 7 Years of Service)	122	1,158
Average Rate	0.1054	

Female		
Service Index	Withdrawals	Exposure
1	1	14
2	6	34
3	-	22
4	-	21
5	1	21
6	2	19
7	1	22
8	-	13
9	2	22
10	1	17
11	-	19
12	2	22
13	1	28
14	-	23
15	-	15
16	-	22
17	-	25
18	-	18
19	1	26
20	-	18
21	2	17
22	1	12
23	-	9
24	-	8
25	-	5
26	-	6
27	-	2
28	-	-
29	-	-
30 and Over	-	1
Totals (Less Than or Equal to 7 Years of Service)	11	153
Average Rate	0.0719	

**ECO Group Members Who Left Active Status  
with No Monthly Benefit  
During Calendar Year 2020  
(Non-Vested Separations)**

Male		
Service Index	Withdrawals	Exposure
1	-	-
2	1	1
3	-	-
4	-	-
5	-	1
6	-	1
7	-	-
8	-	-
9	-	-
10	-	1
11	-	-
12	3	3
13	-	1
14	1	3
15	-	1
16	3	1
17	-	-
18	-	-
19	-	1
20	1	-
21	1	4
22	-	-
23	2	-
24	-	-
25	-	1
26	-	2
27	-	-
28	-	2
29	-	-
30 and Over	-	-
Totals (Less Than or Equal to 8 Years of Service)	1	3
Average Rate	0.3333	

Female		
Service Index	Withdrawals	Exposure
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	2
11	-	-
12	-	1
13	1	2
14	-	-
15	-	-
16	-	-
17	-	-
18	-	2
19	-	-
20	-	1
21	-	-
22	-	-
23	-	-
24	-	-
25	1	-
26	-	-
27	-	-
28	1	-
29	-	-
30 and Over	1	-
Totals (Less Than or Equal to 8 Years of Service)	-	-
Average Rate	0.0000	

**ECO SLEP Group Members Who Left Active Status  
with No Monthly Benefit  
During Calendar Year 2020  
(Non-Vested Separations)**

Male		
Service Index	Withdrawals	Exposure
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	1
11	-	-
12	-	-
13	-	-
14	-	1
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30 and Over	-	-
Totals (Less Than or Equal to 7 Years of Service) Average Rate	-	-
	0.0000	

Female		
Service Index	Withdrawals	Exposure
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-
11	-	-
12	-	-
13	-	-
14	-	-
15	-	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-
21	-	-
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30 and Over	-	-
Totals (Less Than or Equal to 7 Years of Service) Average Rate	-	-
	0.0000	

# MORTALITY EXPERIENCE

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## Active Members Deaths During Calendar Year 2020

Male		
Age	Deaths	Exposure
Under 20	-	112
20-24	1	2,180
25-29	2	5,342
30-34	3	6,130
35-39	1	6,799
40-44	3	6,897
45-49	6	7,077
50-54	9	8,020
55-59	13	8,983
60-64	17	7,609
65-69	20	3,896
70-74	5	1,437
75 and Over	8	739
Totals	88	65,221
Average Rate:	0.0013	

Female		
Age	Deaths	Exposure
Under 20	-	87
20-24	-	2,761
25-29	1	6,990
30-34	-	8,205
35-39	5	9,955
40-44	3	11,737
45-49	5	13,453
50-54	12	16,470
55-59	9	18,330
60-64	14	15,336
65-69	9	6,169
70-74	4	1,755
75 and Over	3	634
Totals	65	111,882
Average Rate:	0.0006	



## Retired Members Deaths During Calendar Year 2020

Male		
Age	Deaths	Exposure
Under 55	4	450
55-59	32	3,128
60-64	89	7,257
65-69	182	10,038
70-74	240	8,793
75-79	265	5,657
80-84	308	3,651
85-89	287	1,971
90-94	200	874
95-99	62	186
100-104	11	19
105 & Over	2	2
Totals	1,682	42,026
Actual Average Rate	0.0400	
Expected Average Rate	0.0350	

Female		
Age	Deaths	Exposure
Under 55	1	224
55-59	26	5,126
60-64	88	13,261
65-69	160	20,427
70-74	227	18,051
75-79	346	12,340
80-84	409	8,003
85-89	465	4,926
90-94	435	2,635
95-99	231	809
100-104	53	137
105 & Over	2	5
Totals	2,443	85,944
Actual Average Rate	0.0284	
Expected Average Rate	0.0262	

## **SALARY EXPERIENCE**

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## Salary Increases by Age During Calendar Year 2020\*

Age Group Beginning of Year	Pay Increase During the Next Year		
	Regular	SLEP	ECO
25-29	7.37 %	14.40 %	0.00 %
30-34	4.84 %	10.10 %	0.00 %
35-39	5.10 %	6.93 %	0.00 %
40-44	4.89 %	4.92 %	0.00 %
45-49	4.43 %	4.51 %	1.05 %
50-54	4.22 %	4.23 %	1.41 %
55-59	3.77 %	4.14 %	2.03 %
60-64	3.25 %	5.27 %	2.63 %
65-69	2.98 %	1.71 %	2.56 %
70-74	2.49 %	6.59 %	(0.48)%
75 & Over	1.31 %	1.21 %	3.05 %
Averages:			
Expected	3.17 %	4.16 %	3.08 %
Actual	3.78 %	5.31 %	1.95 %

\* Members active both at the beginning and end of year and have 5 or more years of service at the beginning of the year for Regular and ECO groups and 0 or more years of service for SLEP and ECO SLEP groups (increases for SLEP groups are correlated primarily with service).

## Salary Increases by Years of Service During Calendar Year 2020

Service Index	Pay Increase During the Next Year		
	Regular	SLEP	ECO
1	15.80 %	12.65 %	0.00 %
2	9.52 %	13.66 %	0.00 %
3	6.62 %	8.07 %	0.00 %
4	5.52 %	5.68 %	0.00 %
5	5.15 %	5.27 %	1.30 %
6	4.91 %	6.30 %	(0.20)%
7	4.63 %	5.61 %	0.00 %
8	4.27 %	5.02 %	0.00 %
9	4.45 %	7.66 %	6.62 %
10	4.11 %	5.44 %	2.02 %
11	4.19 %	4.50 %	0.00 %
12	3.61 %	2.64 %	2.69 %
13	4.10 %	2.96 %	1.37 %
14	3.49 %	0.68 %	4.22 %
15	3.76 %	4.63 %	0.00 %
16	3.51 %	3.96 %	(0.57)%
17	3.38 %	4.02 %	1.16 %
18	3.07 %	3.29 %	2.47 %
19	3.23 %	2.88 %	2.84 %
20	3.37 %	4.27 %	2.32 %
21	3.44 %	4.45 %	1.96 %
22	3.48 %	3.91 %	(0.75)%
23	3.49 %	5.44 %	4.27 %
24	3.19 %	6.45 %	2.19 %
25	3.67 %	6.97 %	1.31 %
26	3.07 %	6.61 %	(1.50)%
27	3.28 %	6.60 %	0.00 %
28	3.42 %	5.13 %	(0.31)%
29	3.43 %	4.85 %	0.00 %
30	3.46 %	5.86 %	0.00 %
31	3.89 %	13.84 %	2.04 %
32	3.61 %	7.30 %	2.82 %
33	3.12 %	8.67 %	0.00 %
34	3.16 %	5.56 %	0.00 %
35	4.27 %	5.27 %	0.00 %
36	3.72 %	5.08 %	4.25 %
37	3.67 %	4.44 %	0.00 %
38	3.90 %	0.00 %	0.00 %
39	2.99 %	0.00 %	0.00 %
40	3.13 %	0.27 %	0.00 %
Averages:			
Expected	4.02 %	4.16 %	3.12 %
Actual	4.86 %	5.31 %	1.94 %



March 18, 2021

Mr. Mark Nannini  
Chief Financial Officer  
Illinois Municipal Retirement Fund  
2211 South York Road, Suite 500  
Oak Brook, Illinois 60523

Dear Mark:

Enclosed are fifteen copies of the Gain/Loss Analysis of Financial Experience Among Active Members during the period of January 1, 2020 to December 31, 2020 for the Illinois Municipal Retirement Fund (IMRF).

Your comments and/or questions will be welcome.

Sincerely,

A handwritten signature in black ink, appearing to read "F. Pieterse". The signature is written in a cursive, flowing style.

Francois Pieterse, ASA, FCA, MAAA

FP:ah  
Enclosures

cc: Audrey Brown-Ryce, IMRF