Illinois Municipal Retirement Fund

Gain/Loss Analysis of Financial Experience Among
Active Members During the Period
January 1, 2023 to December 31, 2023

GRS

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Report of IMRF Gain/Loss Analysis
During Calendar Year 2023

March 8, 2024

Board of Trustees
Illinois Municipal Retirement Fund
Oak Brook, Illinois

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, 2023 to December 31, 2023.**

This is one of several documents comprising the full actuarial report. For additional information please see the Annual Actuarial Valuation report dated March 8, 2024.

The valuation was based upon information, furnished by the 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 the 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 the 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.

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.

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

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

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MB/FP/BW:ah

Comments

Purpose of a 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 2023 gain/loss analysis is based on the active member population as reported for use in preparing the December 31, 2022 and December 31, 2023 regular annual actuarial valuations. Please note, however, that counts shown in this report may not match the December 31, 2023 or the December 31, 2022 valuations since data records for members who have more than one record have been combined. The 2022 reported active member data was matched with the 2023 reported active/inactive member data and the 2023 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					
			ECO			
	Regular	SLEP	Regular	SLEP	Total	Expected
Beginning of Year Census	170,685	4,068	61	1	174,815	
+ New People	29,367	486	2	0	29,855	
- Normal Retirement	4,148	164	4	0	4,316	4,800
- Early Retirement	820	2	0	0	822	1,020
- Vested Deferred Retirements	1,966	38	0	0	2,004	1,427
- Deaths	170	0	0	0	170	351
- Disabilities	251	5	0	0	256	30
- Other Terminations	16,191	203	1	0	16,395	16,286
End of Year Census	176,506	4,142	58	1	180,707	

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 ($913) million*** during the 2023 observation year, which is 1.72% of the beginning accrued liabilities. During the 2023 observation year, IMRF experienced a return on the Market Value of Assets of 13.6% (6.4% on Funding Value of Assets). The loss of $439.0 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 2023

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 | |
	2023	2022
Unfunded Liability January 1	$ 970,238,758	$ 736,003,199
(Assumed Payments)	(81,553,829)	(49,091,971)
Assumed Interest	67,420,446	51,601,401
Expected Unfunded Liability December 31	956,105,375	738,512,629
Change Due to Change in Assumptions	(29,009,402)	0
Change Due to Benefit Changes	0	0
Change Due to Investment Experience	439,031,784	23,294,564
Change Due to Demographic and Other Sources	503,214,401	208,431,565
Actual Unfunded Liability December 31	1,869,342,158	970,238,758
Gain (Loss) for the Year	**$ (913,236,783)**	**$ (231,726,129)**

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

	Regular	SLEP	ECO	Total
Prior Year	**6.65 %**	**17.99 %**	**39.73 %**	**7.15 %**
Tier 2 Structure	(0.12)%	(0.22)%	0.00 %	(0.12)%
Experience Study	(0.19)%	(0.87)%	(0.52)%	(0.21)%
Investment Return	0.43 %	0.71 %	3.78 %	0.44 %
Pay Increases	0.31 %	1.55 %	(0.80)%	0.35 %
Demographic	0.02 %	0.12 %	(1.47)%	0.03 %
Population Growth	(0.07)%	(0.33)%	(3.10)%	(0.10)%
Death and Disability Rate Change	(0.09)%	(0.09)%	(0.10)%	(0.09)%
Other	0.05 %	(0.39)%	0.35 %	0.05 %
Current Year	**6.99 %**	**18.47 %**	**37.87 %**	**7.50 %**

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 40. 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 and Losses by Risk Area
During Calendar Year 2023

Type of Risk Area	Gain (Loss) in Period			Percent of Liabilities
	Regular	SLEP	Totals	
	Millions of $			
Risks Related to Assumptions				
Economic Risk Areas				
Pay Increases	$(286.9)	$(64.4)	$ (351.3)	(0.66)%
Investment Return			(439.0)	(0.83)%
Demographic Risk Areas				
Service Retirements	(13.0)	(5.9)	(18.9)	(0.04)%
Early Retirements	(5.4)	(0.1)	(5.5)	(0.01)%
Vested Deferred Retirements	(14.5)	(2.7)	(17.2)	(0.03)%
Death and Survivor Benefits	(3.0)	(0.7)	(3.7)	(0.01)%
Disability Benefits	6.4	1.1	7.5	0.01%
Terminated with Refund	7.3	3.0	10.3	0.02%
Experience Study			29.0	0.06%
Risks not Related to Assumptions*			(124.4)	(0.23)%
Total Gain (or Loss) During Period			(913.2)	(1.72)%
Beginning of Year Accrued Liabilities			$53,112.9	100.0%

*   *This is primarily due to rehires of former employees and actual reserve transfers for retirees being higher than the estimated reserve transfers. This may be due to higher final average pay than expected, higher service at retirement than expected, miscellaneous effects of the ERI program or other data adjustments that are made when a final benefit calculation is performed. There may also be a small gain or loss due to retiree mortality which was included in this amount.*

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Gain/Loss Experience
During Calendar Year 2023

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

Pay Increases	(0.66)%
Investment Return	(0.83)%
Service Retirement Benefits	(0.04)%
Early Retirement Benefits	(0.01)%
Vested Benefits	(0.03)%
Death and Survivor Benefits	(0.01)%
Disability Benefits	0.01%
Refunds	0.02%
Experience Study	0.06%
Risks not Related to Assumptions	(0.23)%
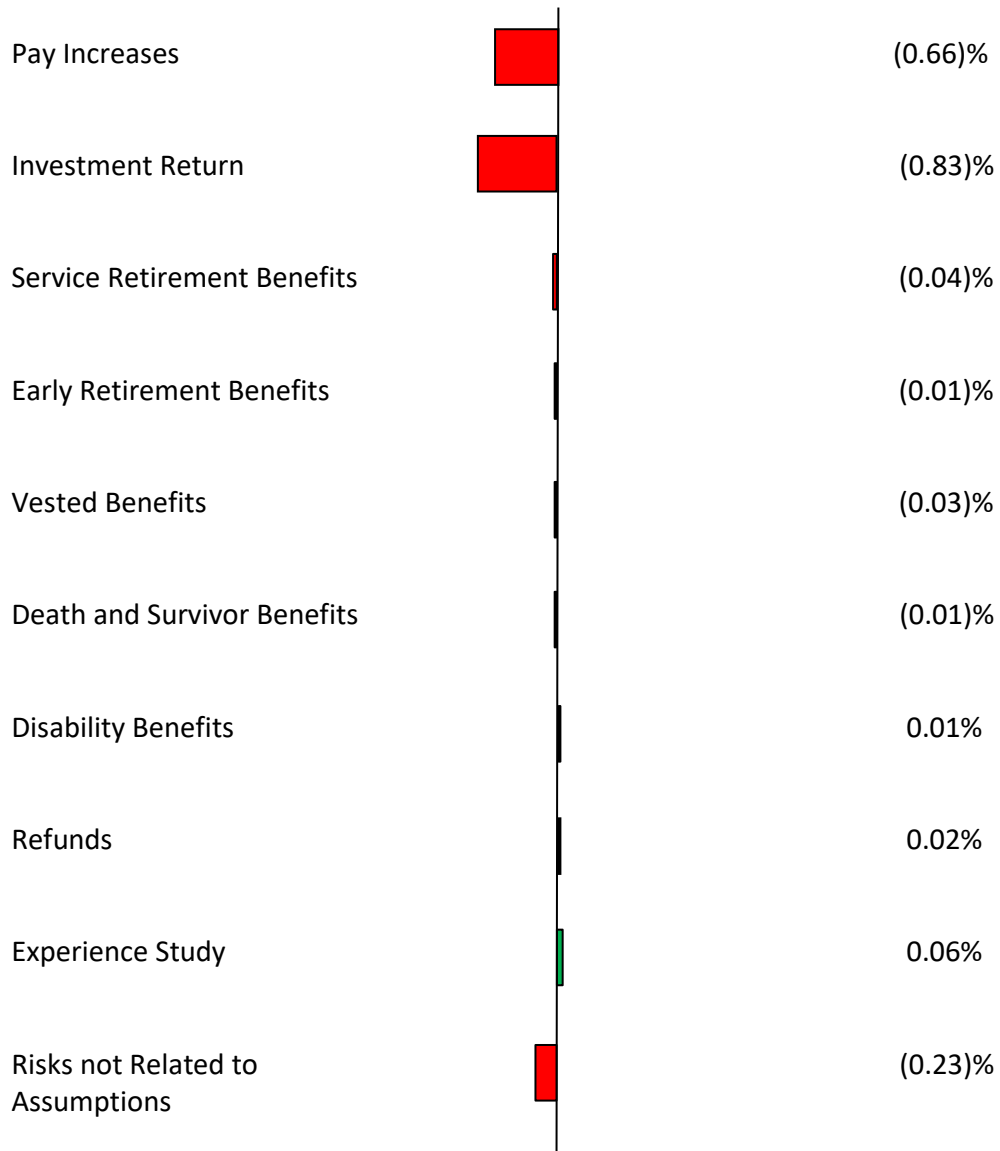
Experience Gains and Losses by Risk Area
Comparative Statement ($ in Millions)

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 [3]	Other	Total Gain (Loss) $	Percent of Liabilities
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 [1]	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 [1]	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) [2]	(195.2)	(0.7)%
2011 [1]	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 [1]	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 [1]	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 [4]	(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 [1]	(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 %
2021	(76.2)	2,174.5	(54.0)	(17.2)	(8.4)	1.2	8.9	49.6		76.2	2,154.6	4.4 %
2022	(256.7)	(23.3)	(34.1)	(12.2)	2.5	(3.7)	8.9	61.6		25.3	(231.7)	(0.5)%
2023 [1]	(351.3)	(439.0)	(18.9)	(5.5)	(17.2)	(3.7)	7.5	10.3	29.0	(124.4)	(913.2)	(1.7)%

[1] Changes in assumptions due to the Experience Study.
[2] Includes one-time data changes of approximately $250 million.
[3] Includes Experience Study changes.
[4] Change in Investment Rate of Return.

Development of Funding Value of Retirement System Assets
Gain (Loss) from Investment Return
During the Calendar Year 2023

Year Ended December 31	2022	2023	2024	2025	2026	2027
A. Funding Value Beginning of Year	$50,191,547,801	$52,142,670,028				
B. Market Value End of Year	48,200,907,225	52,765,060,134				
C. Market Value Beginning of Year	57,215,398,205	48,200,907,225				
D. Non-Investment/Administrative Net Cash Flow	(1,606,244,077)	(1,880,082,272)				
E. Investment Return						
E1. Market Total: B-C-D	(7,408,246,903)	6,444,235,181				
E2. Assumed Rate of Return	7.25%	7.25%				
E3. Assumed Amount of Return	**3,580,660,868**	**3,712,190,595**	-----------------------------------Scheduled-----------------------------------			
E4. Return Subject to Phase-in: E1-E3	(10,988,907,771)	2,732,044,586				
F. Phased-In Recognition of Investment Return						
F1. Current Year: 0.20xE4	(2,197,781,554)	546,408,917	Unknown	Unknown	Unknown	Unknown
F2. First Prior Year	997,213,235	(985,440,701)	$546,408,917	Unknown	Unknown	Unknown
F3. Second Prior Year	680,449,955	-	(985,440,701)	$546,408,917	Unknown	Unknown
F4. Third Prior Year	496,823,800	-	-	(985,440,701)	$546,408,917	Unknown
F5. Fourth Prior Year	-	-	-	-	(985,440,700)	$546,408,918
F6. Funding Corridor Adjustment						
F7. Total Scheduled Phase-in of Gain/(Loss)	**(23,294,564)**	**(439,031,784)**	(439,031,784)	(439,031,784)	(439,031,783)	546,408,918
G. Acceptable Phase-In of Investment Return						
G1. Projected Funding Value without Phase-In: A+D+E3	**52,165,964,592**	**53,974,778,351**				
G2. Limit on Phase-In: B-G1	(3,965,057,367)	(1,209,718,217)				
G3. Acceptable Phase-In Amount	(23,294,564)	(439,031,784)				
H. Funding Value End of Year: A+D+E3+G3	**52,142,670,028**	**53,535,746,567**				
I. Difference Between Market and Funding Value	(3,941,762,803)	(770,686,433)	(331,654,649)	107,377,135	546,408,918	-
J. Recognized Rate of Return (Funding Value)	7.2 %	6.4 %				
K. Market Rate of Return	(13.1)%	13.6 %				
L. Ratio of Funding Value to Market Value	108.2 %	101.5 %				

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, 2022

| | Years of Service to Valuation Date | | | | | | | | Total |
| | Male | | | | Female | | | | |
Age	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	Number
24 & Under	2,995				4,144				7,139
25- 29	4,944	145			7,221	86			12,396
30- 34	4,612	1,270	1		7,733	1,043			14,659
35- 39	3,598	2,704	25		7,644	2,630	22		16,623
40- 44	3,091	3,056	671	1	8,184	3,677	529		19,209
45- 49	2,504	2,345	1,636	5	7,410	4,091	1,499	2	19,492
50	489	468	386	4	1,319	931	372	1	3,970
51	550	424	474	4	1,394	1,052	466	2	4,366
52	597	483	571	7	1,432	1,229	563	3	4,885
53	526	461	544	7	1,366	1,305	571	10	4,790
54	538	451	553	15	1,296	1,199	614	10	4,676
55	531	437	523	34	1,266	1,267	683	25	4,766
56	528	462	509	42	1,141	1,270	678	21	4,651
57	554	437	439	40	1,129	1,282	701	36	4,618
58	603	464	470	76	1,084	1,361	837	38	4,933
59	560	487	465	70	1,025	1,385	800	56	4,848
60	581	514	476	85	967	1,303	931	58	4,915
61	553	516	387	107	963	1,183	916	61	4,686
62	514	461	374	90	816	1,110	877	62	4,304
63	481	427	303	74	714	911	812	67	3,789
64	428	383	225	64	674	875	682	67	3,398
65	409	343	195	61	476	673	668	37	2,862
66	316	319	161	41	417	553	470	38	2,315
67	283	227	100	23	329	345	267	18	1,592
68	238	229	52	17	282	254	189	18	1,279
69	215	173	62	14	232	197	153	12	1,058
70 & Over	999	827	243	54	888	788	562	105	4,466
Totals	32,237	18,513	9,845	935	61,546	32,000	14,862	747	170,685

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, 2022

Age	Male 0-7	Male 8-19	Male 20-34	Male 35 Plus	Female 0-7	Female 8-19	Female 20-34	Female 35 Plus	Total Number
			Years of Service to Valuation Date						
24 & Under									
25- 29									
30- 34									
35- 39	1								1
40- 44		1							1
45- 49		2	2			1			5
50		1							1
51		1	1			1			3
52						2			2
53		2					2		4
54									
55			1						1
56		1	3				1		5
57		1	2			1			4
58						3	1		4
59	1	1							2
60		2	2			1	1	1	7
61		1						1	2
62	1	1							2
63		2	1						3
64					1	1			2
65			1	1			1	1	4
66			1				1		2
67									
68									
69		1	2						3
70 & Over		1					1	1	3
Totals	**3**	**18**	**16**	**1**	**1**	**10**	**8**	**4**	**61**

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, 2022

Age	Male				Female				Total Number
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
24 & Under	119				22				141
25- 29	434				65	1			500
30- 34	441	99			64	23			627
35- 39	226	322			30	52			630
40- 44	127	411	75		17	59	13		702
45- 49	62	197	259		10	38	50		616
50	5	38	62		4	10	10		129
51	16	27	50		1	2	11		107
52	16	43	39	1		5	7		111
53	11	27	40		2	3	4		87
54	12	28	26		2	4	2		74
55	12	22	20		1	2	4		61
56	7	14	19	1	2	4	1		48
57	9	11	13		1	2	1		37
58	5	10	10	2		3	3		33
59	8	8	6		1	2	1		26
60	4	9	6	1		3	2		25
61	4	9	8			1	1		23
62	2	6	4			3			15
63	2	9	3	1		1			16
64	1	7	3			2		1	14
65	4	7	1			1			13
66	2	2		1			2		7
67	1	5	1	1			1		9
68			1						1
69	2	5					1		8
70 & Over	2	5		1					8
Totals	**1,534**	**1,321**	**646**	**9**	**222**	**221**	**114**	**1**	**4,068**

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, 2022

Age	Years of Service to Valuation Date								Total Number
	Male				Female				
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
70 & Over				1					1
Totals				1					1

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, 2023

| Age | Years of Service to Valuation Date | | | | | | | | Total Number |
| | Male | | | | Female | | | | |
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
24 & Under	3,447				4,783				8,230
25- 29	5,214	150			7,903	91			13,358
30- 34	4,862	1,297	1		8,297	1,108			15,565
35- 39	3,889	2,688	20		8,265	2,630	18		17,510
40- 44	3,286	3,154	644		8,781	3,740	485		20,090
45- 49	2,600	2,445	1,681	5	7,716	4,182	1,518	2	20,149
50	485	435	395	1	1,423	927	375		4,041
51	518	461	421	4	1,337	980	405	1	4,127
52	545	453	504	4	1,454	1,097	489	2	4,548
53	589	493	581	7	1,410	1,272	604	3	4,959
54	543	459	571	7	1,340	1,353	627	10	4,910
55	575	441	556	13	1,283	1,228	643	7	4,746
56	577	435	493	24	1,228	1,241	665	16	4,679
57	539	459	499	28	1,123	1,264	704	14	4,630
58	572	429	447	32	1,093	1,269	729	33	4,604
59	630	463	461	66	1,071	1,291	861	34	4,877
60	592	498	425	56	992	1,310	817	46	4,736
61	567	515	416	69	946	1,209	876	50	4,648
62	536	501	350	85	910	1,100	854	55	4,391
63	483	441	313	59	768	961	787	50	3,862
64	453	402	259	60	657	820	742	51	3,444
65	399	357	193	44	588	754	597	48	2,980
66	382	289	139	37	425	506	476	21	2,275
67	292	249	118	26	376	400	337	20	1,818
68	255	193	77	15	286	278	205	14	1,323
69	225	194	44	13	268	230	159	16	1,149
70 & Over	1,093	885	281	49	1,030	825	595	99	4,857
Totals	**34,148**	**18,786**	**9,889**	**704**	**65,753**	**32,066**	**14,568**	**592**	**176,506**

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, 2023

| Age | Years of Service to Valuation Date | | | | | | | | Total Number |
| | Male | | | | Female | | | | |
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
24 & Under									
25- 29									
30- 34									
35- 39	1								1
40- 44									
45- 49		2	2			1			5
50			1						1
51		1							1
52		1	1			1			3
53						2			2
54		2					2		4
55									
56			1						1
57		1	2				1		4
58		1	1			1			3
59						2	2		4
60		2							2
61		2	2			1	1		6
62		1						1	2
63	1	1							2
64		2	1						3
65					1	1			2
66			1				2		3
67			1			1	1		3
68									
69		1							1
70 & Over		1	2					2	5
Totals	**2**	**18**	**15**		**1**	**10**	**9**	**3**	**58**

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, 2023

| | Years of Service to Valuation Date | | | | | | | | Total |
| | Male | | | | Female | | | | |
Age	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	Number
24 & Under	130				32				162
25- 29	455	3			75	1			534
30- 34	457	126			53	19			655
35- 39	238	278	1		43	46			606
40- 44	135	425	84		21	59	16		740
45- 49	74	190	253		16	31	46		610
50	14	27	62			6	14		123
51	6	31	36		5	9	8		95
52	14	23	42			3	8		90
53	16	35	37			3	4		95
54	13	24	27		2	2	3		71
55	14	19	25		2	4	2		66
56	14	19	17		1	1	2		54
57	8	12	16		2	4	1		43
58	8	10	10		1	2	1		32
59	5	10	9	2		3	3		32
60	5	8	6		1	2	1		23
61	3	6	6	1	1	2	1		20
62	6	6	4				1		17
63	3	6	3			2	1		15
64	4	8	3			1			16
65		3	4			2		1	10
66	3	4	1		1	1			10
67	2	2					1		5
68	1	3	2				1		7
69									
70 & Over	4	6					1		11
Totals	**1,632**	**1,284**	**648**	**3**	**256**	**203**	**115**	**1**	**4,142**

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, 2023

Age	Years of Service to Valuation Date								Total Number
	Male				Female				
	0-7	8-19	20-34	35 Plus	0-7	8-19	20-34	35 Plus	
70 & Over				1					1
Totals				1					1

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

RETIREMENT EXPERIENCE

Active Tier 1 Regular Group Members Who Became Age and Service Retirees During Calendar Year 2023 (Retirement with Benefit Beginning Immediately)

Male				Female		
Age	Retirements	Exposure		Age	Retirements	Exposure
Under 55	3	3		Under 55	1	1
55	15	50		55	12	34
56	20	56		56	11	44
57	19	62		57	8	36
58	19	95		58	7	59
59	20	105		59	14	78
60	121	959		60	203	2,031
61	100	877		61	189	1,929
62	137	858		62	304	1,935
63	150	768		63	253	1,757
64	86	591		64	211	1,536
65	146	554		65	387	1,387
66	126	474		66	311	1,067
67	100	354		67	261	785
68	64	231		68	102	469
69	39	201		69	75	389
70	35	173		70	75	298
71	32	163		71	51	258
72	20	111		72	42	199
73	18	105		73	21	140
74	12	78		74	21	130
75 & Up	58	334		75 & Up	86	446
Total (55 & Up)	1,337	7,199		Total (55 & Up)	2,644	15,007
Average Rate:	0.1857			Average Rate:	0.1762	

Active Tier 1 Regular Group Members Who Became Early Service Retirees During Calendar Year 2023

Male				Female		
Age	Retirements	Exposure		Age	Retirements	Exposure
55	58	875		55	100	1,601
56	37	785		56	87	1,625
57	42	810		57	68	1,652
58	42	731		58	86	1,795
59	55	822		59	104	1,910
Total	234	4,023		Total	445	8,583
Average Rate:	0.0582			Average Rate:	0.0518	

Active Tier 2 Regular Group Members Who Became Age and Service Retirees During Calendar Year 2023 (Retirement with Benefit Beginning Immediately)

Male			Female		
Age	Retirements	Exposure	Age	Retirements	Exposure
Under 62	-	-	Under 62	-	-
63	1	-	63	-	-
64	-	-	64	-	-
65	-	-	65	-	-
66	-	-	66	-	-
67	19	71	67	18	73
68	11	58	68	12	41
69	9	58	69	6	42
70	14	41	70	14	43
71	9	36	71	3	21
72	4	25	72	4	23
73	5	21	73	2	14
74	4	14	74	1	13
75 & Up	19	81	75 & Up	8	41
Total (62 & Up)	95	405	Total (62 & Up)	68	311
Average Rate:	0.2346		Average Rate:	0.2186	

Active Tier 2 Regular Group Members Who Became Early Service Retirees During Calendar Year 2023

Male			Female		
Age	Retirements	Exposure	Age	Retirements	Exposure
62	5	125	62	8	187
63	9	98	63	10	143
64	11	85	64	17	159
65	21	81	65	26	137
66	12	64	66	22	88
Total	58	453	Total	83	714
Average Rate:	0.1280		Average Rate:	0.1162	

Active Tier 1 SLEP Group Members Who Became Age and Service Retirees During Calendar Year 2023 (Retirement with Benefit Beginning Immediately)

Male				Female		
Age	**Retirements**	**Exposure**		**Age**	**Retirements**	**Exposure**
Under 50	-	-		Under 50	-	-
50	34	85		50	4	18
51	20	56		51	2	8
52	12	56		52	5	11
53	16	44		53	3	6
54	9	33		54	1	2
55	6	34		55	1	3
56	6	16		56	3	5
57	5	18		57	-	2
58	4	16		58	-	1
59	2	8		59	-	3
60	1	14		60	-	1
61	7	15		61	2	5
62	2	9		62	1	4
63	2	11		63	-	-
64	3	9		64	-	1
65	1	7		65	-	3
66	2	3		66	-	-
67	1	3		67	1	3
68	1	4		68	-	-
69	-	-		69	-	-
70	1	2		70	-	1
71	1	1		71	-	-
72	-	-		72	-	-
73	1	1		73	-	-
74	-	1		74	-	-
75 & Up	-	-		75 & Up	-	-
Total (50 & Up)	137	446		Total (50 & Up)	23	77
Average Rate:	0.3072			Average Rate:	0.2987	

Active Tier 2 SLEP Group Members Who Became Age and Service Retirees During Calendar Year 2023
(Retirement with Benefit Beginning Immediately)

Male				Female		
Age	**Retirements**	**Exposure**		**Age**	**Retirements**	**Exposure**
Under 55	-	-		Under 55	-	-
55	-	3		55	-	-
56	-	1		56	-	-
57	-	3		57	-	-
58	-	3		58	-	-
59	-	-		59	-	1
60	-	-		60	-	-
61	-	1		61	-	-
62	1	3		62	-	-
63	1	3		63	-	-
64	1	1		64	-	-
65	-	1		65	-	1
66	1	2		66	-	-
67	-	2		67	-	-
68	-	1		68	-	-
69	-	3		69	-	-
70	-	-		70	-	-
71	-	-		71	-	-
72	-	-		72	-	-
73	-	-		73	-	-
74	-	-		74	-	-
75 & Up	-	1		75 & Up	-	-
Total (55 & Up)	4	28		Total (55 & Up)	-	2
Average Rate:	0.1429			Average Rate:	-	

Active Tier 2 SLEP Group Members Who Became Early Service Retirees During Calendar Year 2023

Male				Female		
Age	**Retirements**	**Exposure**		**Age**	**Retirements**	**Exposure**
50	-	5		50	-	3
51	-	3		51	-	2
52	-	6		52	-	1
53	-	6		53	-	1
54	2	7		54	-	-
Total	2	27		Total	-	7
Average Rate:	0.0741			Average Rate:	-	

Active ECO Group Members Who Became Age and Service Retirees During Calendar Year 2023 (Retirement with Benefit Beginning Immediately)

Male				Female		
Age	Retirements	Exposure		Age	Retirements	Exposure
Under 55	-	-		Under 55	-	-
55	-	-		55	-	-
56	-	2		56	-	-
57	2	5		57	-	1
58	-	1		58	-	4
59	-	-		59	-	1
60	-	3		60	-	2
61	-	4		61	1	1
62	-	1		62	-	1
63	-	-		63	-	-
64	-	3		64	-	-
65	-	1		65	1	2
66	-	2		66	-	2
67	-	-		67	-	-
68	-	-		68	-	-
69	1	2		69	-	-
70	-	1		70	-	-
71	-	-		71	-	-
72	-	-		72	-	1
73	-	1		73	-	-
74	-	-		74	-	-
75 & Up	-	-		75 & Up	-	1
Total (55 & Up)	3	26		Total (55 & Up)	2	16
Average Rate:	0.1154			Average Rate:	0.1250	

Active ECO SLEP Group Members Who Became Age and Service Retirees During Calendar Year 2023 (Retirement with Benefit Beginning Immediately)

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

DISABILITY EXPERIENCE

Tier 1 Regular Group Members Who Became Disability Retirees During Calendar Year 2023

Male		
Age	Disabilities*	Exposure
Under 20	-	-
20-24	-	-
25-29	-	1
30-34	1	212
35-39	2	1,661
40-44	7	3,170
45-49	4	3,747
50-54	12	4,671
55-59	12	4,985
60-64	24	4,611
65-69	7	2,156
70-74	1	812
75 and Over	-	397
Totals	70	26,423
Average Rate:	0.0026	

Female		
Age	Disabilities*	Exposure
Under 20	-	-
20-24	-	1
25-29	-	1
30-34	-	201
35-39	3	1,808
40-44	7	4,010
45-49	4	5,386
50-54	18	7,688
55-59	15	9,983
60-64	18	10,213
65-69	4	4,649
70-74	3	1,241
75 and Over	-	544
Totals	72	45,725
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.

Tier 2 Regular Group Members Who Became Disability Retirees During Calendar Year 2023

Male				Female		
Age	Disabilities*	Exposure		Age	Disabilities*	Exposure
Under 20	-	122		Under 20	-	136
20-24	1	2,463		20-24	3	3,337
25-29	3	4,949		25-29	5	7,125
30-34	1	5,588		30-34	5	8,501
35-39	2	4,625		35-39	6	8,232
40-44	3	3,645		40-44	6	8,260
45-49	3	2,774		45-49	8	7,597
50-54	7	2,716		50-54	7	7,204
55-59	5	2,758		55-59	9	5,985
60-64	7	2,658		60-64	13	4,379
65-69	6	1,652		65-69	4	1,838
70-74	2	772		70-74	1	593
75 and Over	1	385		75 and Over	1	243
Totals	41	35,107		Totals	68	63,430
Average Rate:	0.0012			Average Rate:	0.0011	

* 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.

Tier 1 SLEP Group Members Who Became Disability Retirees During Calendar Year 2023

Male				Female		
Age	**Disabilities***	**Exposure**		**Age**	**Disabilities***	**Exposure**
Under 20	-	-		Under 20	-	-
20-24	-	-		20-24	-	-
25-29	-	-		25-29	-	-
30-34	-	1		30-34	-	-
35-39	-	152		35-39	-	26
40-44	-	396		40-44	-	59
45-49	1	381		45-49	-	73
50-54	2	394		50-54	-	60
55-59	-	143		55-59	-	24
60-64	-	60		60-64	-	11
65-69	-	20		65-69	-	6
70-74	-	-		70-74	-	-
75 and Over	-	-		75 and Over	-	-
Totals	3	1,547		Totals	-	259
Average Rate:	0.0019			Average Rate:	-	

* *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.*

Tier 2 SLEP Group Members Who Became Disability Retirees During Calendar Year 2023

Male				Female		
Age	**Disabilities***	**Exposure**		**Age**	**Disabilities***	**Exposure**
Under 20	-	-		Under 20	-	-
20-24	-	83		20-24	-	20
25-29	-	421		25-29	-	60
30-34	1	542		30-34	-	81
35-39	-	391		35-39	-	58
40-44	-	224		40-44	-	35
45-49	-	114		45-49	-	19
50-54	-	80		50-54	-	16
55-59	1	55		55-59	-	7
60-64	-	28		60-64	-	1
65-69	-	13		65-69	-	1
70-74	-	4		70-74	-	-
75 and Over	-	2		75 and Over	-	-
Totals	2	1,957		Totals	-	298
Average Rate:	0.0010			Average Rate:	-	

* 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 2023

Male		
Age	Disabilities	Exposure
Under 20	-	-
20-24	-	-
25-29	-	-
30-34	-	-
35-39	-	1
40-44	-	1
45-49	-	4
50-54	-	5
55-59	-	8
60-64	-	12
65-69	-	5
70-74	-	2
75 and Over	-	-
Totals	-	38
Average Rate:	-	

Female		
Age	Disabilities	Exposure
Under 20	-	-
20-24	-	-
25-29	-	-
30-34	-	-
35-39	-	-
40-44	-	-
45-49	-	1
50-54	-	5
55-59	-	6
60-64	-	4
65-69	-	5
70-74	-	1
75 and Over	-	1
Totals	-	23
Average Rate:	-	

WITHDRAWAL EXPERIENCE

Tier 1 Regular Group Members Who Left Active Status
During Calendar Year 2023
with Eight or More Years of Service

Male		
Age	**Withdrawals**	**Exposure**
25-29	-	1
30-34	7	188
35-39	59	1,419
40-44	123	2,827
45-49	120	3,379
50-54	133	4,135
55 & Over	184	184
Total	626	12,133
Average Rate:	0.0516	

Female		
Age	**Withdrawals**	**Exposure**
25-29	-	-
30-34	8	117
35-39	103	1,309
40-44	186	2,984
45-49	259	4,211
50-54	284	6,409
55 & Over	419	419
Total	1,259	15,449
Average Rate:	0.0815	

Tier 2 Regular Group Members Who Left Active Status
During Calendar Year 2023
with Ten or More Years of Service

Male		
Age	**Withdrawals**	**Exposure**
25-29	1	16
30-34	26	395
35-39	39	647
40-44	21	499
45-49	17	359
50-54	11	326
55-59	16	345
60-61	19	147
62 & Over	14	14
Total	164	2,748
Average Rate:	0.0597	

Female		
Age	**Withdrawals**	**Exposure**
25-29	-	3
30-34	31	310
35-39	62	639
40-44	38	533
45-49	55	675
50-54	71	846
55-59	56	795
60-61	30	322
62 & Over	14	14
Total	357	4,137
Average Rate:	0.0863	

Tier 1 SLEP Group Members Who Left Active Status During Calendar Year 2023 with Seven or More Years of Service

Male		
Age	Withdrawals	Exposure
25-29	-	-
30-34	-	1
35-39	2	150
40-44	6	392
45-49	5	377
50-54	3	115
55 & Over	3	47
Total	19	1,082
Average Rate:	0.0176	

Female		
Age	Withdrawals	Exposure
25-29	-	-
30-34	-	-
35-39	1	26
40-44	2	59
45-49	5	73
50-54	1	14
55 & Over	-	10
Total	9	182
Average Rate:	0.0495	

Tier 2 SLEP Group Members Who Left Active Status During Calendar Year 2023 with Seven or More Years of Service

Male		
Age	**Withdrawals**	**Exposure**
25-29	-	6
30-34	6	159
35-39	8	202
40-44	7	120
45-49	1	62
50-54	1	7
55 & Over	2	16
Total	25	572
Average Rate:	0.0437	

Female		
Age	**Withdrawals**	**Exposure**
25-29	-	1
30-34	3	24
35-39	2	31
40-44	1	20
45-49	1	9
50-54	-	5
55 & Over	-	2
Total	7	92
Average Rate:	0.0761	

ECO Group Members Who Left Active Status
During Calendar Year 2023
with Eight or More Years of Service

Male		
Age	Withdrawals	Exposure
25-29	-	-
30-34	-	-
35-39	-	-
40-44	-	1
45-49	-	4
50-54	-	5
55 & Over	1	1
Total	1	11
Average Rate:	0.0909	

Female		
Age	Withdrawals	Exposure
25-29	-	-
30-34	-	-
35-39	-	-
40-44	-	-
45-49	-	1
50-54	-	5
55 & Over	-	-
Total	-	6
Average Rate:	-	

Tier 1 Regular Group Members Who Left Active Status
with No Monthly Benefit
During Calendar Year 2023
(Non-Vested Separations)

Male				Female		
Service Index	Withdrawals	Exposure		Service Index	Withdrawals	Exposure
1	88	369		1	234	823
2	120	677		2	224	1,264
3	65	446		3	156	855
4	38	363		4	125	837
5	43	396		5	133	906
6	46	385		6	131	923
7	39	374		7	92	861
8	30	242		8	99	636
9	27	188		9	86	501
10	15	182		10	68	444
11	20	181		11	69	462
12	24	253		12	56	497
13	34	560		13	116	889
14	37	728		14	100	1,078
15	56	936		15	107	1,238
16	67	974		16	104	1,434
17	42	904		17	91	1,263
18	28	862		18	84	1,018
19	28	697		19	67	866
20	23	617		20	34	736
21	35	580		21	41	612
22	23	607		22	39	688
23	11	621		23	39	699
24	20	639		24	31	594
25	16	498		25	25	487
26	23	417		26	24	368
27	10	328		27	15	279
28	12	281		28	14	215
29	18	229		29	7	177
30 and Over	57	667		30 and Over	42	485
Totals (Less Than or Equal to 8 Years of Service)	469	3,252		Totals (Less Than or Equal to 8 Years of Service)	1,194	7,105
Average Rate	0.1442			Average Rate	0.1681	

Tier 2 Regular Group Members Who Left Active Status
with No Monthly Benefit
During Calendar Year 2023
(Non-Vested Separations)

Male				Female		
Service Index	Withdrawals	Exposure		Service Index	Withdrawals	Exposure
1	1,051	4,065		1	2,337	8,512
2	1,267	6,457		2	2,712	12,631
3	599	3,717		3	1,181	6,655
4	426	3,080		4	874	5,977
5	340	3,139		5	789	5,854
6	254	2,722		6	560	4,982
7	185	2,304		7	422	4,129
8	173	2,271		8	279	3,660
9	137	2,076		9	219	3,244
10	96	1,684		10	187	2,638
11	87	1,226		11	185	2,031
12	61	1,052		12	124	1,493
13	14	412		13	38	537
14	-	10		14	3	15
15	1	6		15	1	10
16	1	9		16	1	7
17	-	6		17	1	9
18	-	3		18	1	9
19	-	4		19	1	1
20	-	1		20	-	1
21	-	-		21	-	-
22	-	-		22	-	2
23	-	1		23	-	1
24	-	1		24	2	3
25	-	-		25	-	1
26	-	2		26	-	1
27	-	-		27	-	-
28	-	-		28	-	2
29	-	-		29	-	-
30 and Over	-	1		30 and Over	-	-
Totals (Less Than or Equal to 10 Years of Service)	4,528	31,515		Totals (Less Than or Equal to 10 Years of Service)	9,560	58,282
Average Rate	0.1437			Average Rate	0.1640	

Tier 1 SLEP Group Members Who Left Active Status
with No Monthly Benefit
During Calendar Year 2023
(Non-Vested Separations)

Male				Female		
Service Index	Withdrawals	Exposure		Service Index	Withdrawals	Exposure
1	-	1		1	-	-
2	-	4		2	-	-
3	1	4		3	-	1
4	-	4		4	-	-
5	-	6		5	-	-
6	-	3		6	-	-
7	-	2		7	-	-
8	-	5		8	-	-
9	-	1		9	-	-
10	1	6		10	-	-
11	-	3		11	-	-
12	-	2		12	-	1
13	2	29		13	-	5
14	1	54		14	-	15
15	1	94		15	-	15
16	1	138		16	1	23
17	1	103		17	2	18
18	-	116		18	-	12
19	-	120		19	-	20
20	2	92		20	2	16
21	4	61		21	-	9
22	1	60		22	-	11
23	2	48		23	1	13
24	1	39		24	1	8
25	-	45		25	-	8
26	-	31		26	1	3
27	-	21		27	1	1
28	-	8		28	-	1
29	1	1		29	-	3
30 and Over	1	5		30 and Over	-	-
Totals (Less Than or Equal to 7 Years of Service)	1	24		Totals (Less Than or Equal to 7 Years of Service)	-	1
Average Rate	0.0417			Average Rate	0.0000	

Tier 2 SLEP Group Members Who Left Active Status
with No Monthly Benefit
During Calendar Year 2023
(Non-Vested Separations)

Male				Female		
Service Index	Withdrawals	Exposure		Service Index	Withdrawals	Exposure
1	29	149		1	6	19
2	54	334		2	7	42
3	18	194		3	3	40
4	19	181		4	2	26
5	19	197		5	2	30
6	9	143		6	3	20
7	8	133		7	1	20
8	2	119		8	-	18
9	4	102		9	1	14
10	6	108		10	2	17
11	5	76		11	2	12
12	2	71		12	2	14
13	2	37		13	-	5
14	4	10		14	-	2
15	-	15		15	-	1
16	-	9		16	-	3
17	-	6		17	-	1
18	-	6		18	-	2
19	-	4		19	-	-
20	-	2		20	-	-
21	-	1		21	-	-
22	-	3		22	-	1
23	-	1		23	-	-
24	-	1		24	-	-
25	-	-		25	-	1
26	-	1		26	-	1
27	-	-		27	-	-
28	-	-		28	-	-
29	-	-		29	-	-
30 and Over	-	-		30 and Over	-	-
Totals (Less Than or Equal to 7 Years of Service)	156	1,331		Totals (Less Than or Equal to 7 Years of Service)	24	197
Average Rate	0.1172			Average Rate	0.1218	

ECO Group Members Who Left Active Status
with No Monthly Benefit
During Calendar Year 2023
(Non-Vested Separations)

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

MORTALITY EXPERIENCE

Active Members Deaths
During Calendar Year 2023

Male		
Age	**Deaths**	**Exposure**
Under 20	-	122
20-24	3	2,546
25-29	1	5,371
30-34	2	6,343
35-39	3	6,830
40-44	2	7,436
45-49	3	7,020
50-54	7	7,866
55-59	9	7,949
60-64	19	7,369
65-69	15	3,846
70-74	15	1,590
75 and Over	9	784
Totals	88	65,072
Average Rate:	0.0014	

Female		
Age	**Deaths**	**Exposure**
Under 20	-	136
20-24	1	3,358
25-29	1	7,186
30-34	1	8,783
35-39	6	10,124
40-44	6	12,364
45-49	1	13,076
50-54	13	14,973
55-59	18	16,005
60-64	20	14,608
65-69	10	6,499
70-74	2	1,835
75 and Over	3	788
Totals	82	109,735
Average Rate:	0.0007	

Retired Members Deaths
During Calendar Year 2023

Male		
Age	**Deaths**	**Exposure**
Under 55	2	582
55-59	26	2,926
60-64	67	7,000
65-69	171	10,838
70-74	227	10,297
75-79	291	6,859
80-84	281	4,061
85-89	266	2,193
90-94	165	758
95-99	58	204
100-104	16	28
105 & Over	-	-
Totals	1,570	45,746
Actual Average Rate	0.0343	
Expected Average Rate	0.0348	

Female		
Age	**Deaths**	**Exposure**
Under 55	2	251
55-59	32	4,618
60-64	86	13,707
65-69	154	22,434
70-74	229	21,377
75-79	354	15,096
80-84	403	9,604
85-89	434	5,389
90-94	378	2,645
95-99	221	860
100-104	44	115
105 & Over	6	13
Totals	2,343	96,109
Actual Average Rate	0.0244	
Expected Average Rate	0.0257	

SALARY EXPERIENCE

Salary Increases by Age
During Calendar Year 2023*

Age Group Beginning of Year	Pay Increase During the Next Year		
	Regular	SLEP	ECO
20-24	7.47 %	15.96 %	0.00 %
25-29	8.64 %	11.02 %	0.00 %
30-34	8.56 %	8.90 %	0.00 %
35-39	7.80 %	8.46 %	0.00 %
40-44	7.36 %	7.28 %	3.73 %
45-49	6.85 %	9.56 %	3.10 %
50-54	6.47 %	9.95 %	3.96 %
55-59	6.29 %	11.06 %	1.90 %
60-64	5.92 %	11.77 %	6.99 %
65-69	5.75 %	15.80 %	2.50 %
70-74	5.60 %	7.08 %	15.79 %
75 & Over	5.72 %	58.68 %	6.37 %
Averages:			
Expected	3.08 %	4.43 %	3.05 %
Actual	6.75 %	9.34 %	5.14 %

* *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 2023

Service	Pay Increase During the Next Year		
Index	Regular	SLEP	ECO
1	15.60 %	27.39 %	0.00 %
2	12.38 %	13.91 %	32.02 %
3	10.39 %	10.93 %	15.45 %
4	9.77 %	7.12 %	0.00 %
5	9.43 %	7.96 %	0.00 %
6	8.57 %	7.70 %	0.00 %
7	8.46 %	10.46 %	0.00 %
8	7.94 %	9.42 %	3.77 %
9	7.85 %	11.26 %	0.70 %
10	7.68 %	9.46 %	0.00 %
11	7.44 %	9.61 %	105.04 %
12	7.68 %	6.71 %	3.65 %
13	7.09 %	6.56 %	1.77 %
14	7.20 %	6.96 %	0.00 %
15	6.62 %	8.24 %	1.84 %
16	6.88 %	8.10 %	2.34 %
17	6.73 %	7.01 %	3.44 %
18	6.00 %	6.96 %	0.00 %
19	5.88 %	6.38 %	3.08 %
20	6.26 %	6.11 %	7.39 %
21	6.07 %	8.32 %	6.10 %
22	5.49 %	8.67 %	2.47 %
23	6.01 %	6.40 %	3.91 %
24	5.52 %	10.88 %	0.44 %
25	5.57 %	11.79 %	0.00 %
26	5.07 %	12.76 %	3.34 %
27	5.55 %	15.31 %	1.93 %
28	5.12 %	6.22 %	2.44 %
29	5.02 %	10.50 %	1.38 %
30	5.67 %	8.45 %	0.00 %
31	5.05 %	4.27 %	0.00 %
32	5.08 %	26.01 %	0.00 %
33	4.97 %	19.25 %	0.00 %
34	4.11 %	19.99 %	0.00 %
35	5.26 %	36.22 %	1.89 %
36	4.78 %	25.36 %	0.00 %
37	5.64 %	2.96 %	0.00 %
38	4.66 %	3.60 %	0.00 %
39	5.38 %	48.89 %	0.00 %
40	4.20 %	0.00 %	0.00 %
Averages:			
Expected	4.44 %	4.43 %	3.15 %
Actual	8.08 %	9.34 %	5.60 %

March 8, 2024

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

Dear Mr. Nannini:

Enclosed are 12 copies of the Gain/Loss Analysis of Financial Experience Among Active Members during the period of January 1, 2023 to December 31, 2023 for the Illinois Municipal Retirement Fund (IMRF).

Your comments and/or questions will be welcome.

Sincerely,

GABRIEL, ROEDER, SMITH & COMPANY

Francois Pieterse, ASA, FCA, MAAA

FP:ah
Enclosures

cc: Sharon Brown, IMRF