

CITY OF EVANSTON
POLICE PENSION FUND
ACTUARIAL VALUATION
AS OF JANUARY 1, 2018
CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING DECEMBER 31, 2019

August 21, 2018

Board of Trustees
City of Evanston
Police Pension Fund
2100 Ridge Avenue
Evanston, IL 60201

Re: Actuarial Valuation Report – City of Evanston Police Pension Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Evanston Police Pension Fund. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. Please note that this valuation may not be applicable for any other purposes.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Article 3, Illinois Pension Code, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the Board, financial reports prepared by the custodian bank and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.


The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Evanston, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Evanston Police Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By: 
Jason L. Franken, FSA, EA, MAAA

By: 
Julie E. Franken, EA, MAAA

JLF/lke
Enclosures

TABLE OF CONTENTS

Section	Title	Page
I	Introduction	
	a. Summary of Report	5
	b. Changes Since Prior Valuation	6
	c. Comparative Summary of Principal Valuation Results	7
II	Valuation Information	
	a. Development of Amortization Payment	12
	b. Detailed Actuarial (Gain)/Loss Analysis	13
	c. Reconciliation of Changes in Contribution Requirement	14
	d. Statutory Minimum Required Contribution	15
	e. Projection of Benefit Payments	16
	f. Actuarial Assumptions and Methods	17
	g. Glossary	19
III	Trust Fund	20
IV	Member Statistics	
	a. Statistical Data	24
	b. Age and Service Distribution	25
	c. Valuation Participant Reconciliation	26
V	Summary of Current Plan	27

SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Evanston Police Pension Fund performed as of January 1, 2018 has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ended December 31, 2019.

The contribution requirements, compared with those set forth in the January 1, 2017 actuarial report, are as follows:

Valuation Date Applicable to Fiscal Year Ending	1/1/2018 <u>12/31/2019</u>	1/1/2017 <u>12/31/2018</u>
Total Recommended Contribution % of Projected Annual Payroll	\$12,701,183 81.3%	\$12,604,006 82.1%
Member Contributions (Est.) % of Projected Annual Payroll	1,547,438 9.9%	1,520,563 9.9%
City Recommended Contribution % of Projected Annual Payroll	11,153,745 71.4%	11,083,443 72.2%

As you can see, the Total Recommended Contribution, shows an increase when compared to the results determined in the January 1, 2017 actuarial valuation report. The increase is attributable lower than expected mortality experience, lower than expected termination experience and higher than expected disability experience. In addition, the contribution increased due to an increase in liability resulting from projecting assumed mortality improvement to the current valuation date.

The increase was offset by favorable experience realized by the plan during the year. Favorable plan experience resulted from lower than assumed salary increases for older, higher service members and higher than expected asset returns. Assets earned an 8.22% investment return (Actuarial basis) which exceeded the 6.25% assumption. The changes in assumptions from last year also lowered the contribution requirement.

CHANGES SINCE PRIOR VALUATION

Plan Changes Since Prior Valuation

No plan changes have occurred since the prior valuation.

Actuarial Assumption/Method Changes Since Prior Valuation

Based on the results of the 2017 Department of Insurance experience study, the following assumption changes were made:

- Updated retirement, termination and disability rate tables.
- Updated the percentage of disabilities assumed to be in the line of duty from 70% to 60%.
- Updated the percentage of deaths assumed to be in the line of duty from 5% to 10%.

There were no method changes since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>1/1/2018</u>	Old Assump <u>1/1/2018</u>	<u>1/1/2017</u>
A. Participant Data			
Number Included			
Actives	163	163	165
Service Retirees	134	134	131
Beneficiaries	30	30	30
Disability Retirees	17	17	16
Terminated Vested	<u>18</u>	<u>18</u>	<u>17</u>
Total	362	362	359
Total Annual Payroll	\$15,614,913	\$15,614,913	\$15,343,727
Payroll Under Assumed Ret. Age	15,614,913	15,614,913	15,343,727
Annual Rate of Payments to:			
Service Retirees	9,626,349	9,626,349	9,101,757
Beneficiaries	1,098,598	1,098,598	1,090,300
Disability Retirees	734,813	734,813	657,648
Terminated Vested	145,066	145,066	145,066
B. Assets			
Actuarial Value	115,898,879	115,898,879	106,910,133
Market Value	121,629,667	121,629,667	106,191,547
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	101,106,922	95,601,471	93,606,670
Disability Benefits	8,058,364	9,684,653	9,576,763
Death Benefits	2,135,207	1,770,080	1,786,142
Vested Benefits	7,166,105	9,824,077	9,878,568
Service Retirees	137,430,697	137,430,697	131,512,620
Beneficiaries	9,320,481	9,320,481	9,302,182
Disability Retirees	10,559,438	10,559,438	9,443,840
Terminated Vested	<u>1,717,250</u>	<u>1,717,250</u>	<u>1,591,404</u>
Total	277,494,464	275,908,147	266,698,189

C. Liabilities - (Continued)	New Assump <u>1/1/2018</u>	Old Assump <u>1/1/2018</u>	<u>1/1/2017</u>
Present Value of Future Salaries	164,003,250	155,445,884	154,263,163
Present Value of Future Member Contributions	16,252,722	15,404,687	15,287,479
Normal Cost (Retirement)	3,132,011	2,953,029	2,958,973
Normal Cost (Disability)	507,807	630,107	619,137
Normal Cost (Death)	98,828	80,927	83,280
Normal Cost (Vesting)	<u>403,887</u>	<u>524,764</u>	<u>547,719</u>
Total Normal Cost	4,142,533	4,188,827	4,209,109
Present Value of Future Normal Costs	39,869,402	38,298,578	38,877,917
Accrued Liability (Retirement)	70,288,610	67,893,240	65,463,965
Accrued Liability (Disability)	3,023,667	3,821,350	3,709,033
Accrued Liability (Death)	1,237,845	1,087,882	1,082,740
Accrued Liability (Vesting)	4,047,074	5,779,231	5,714,488
Accrued Liability (Inactives)	<u>159,027,866</u>	<u>159,027,866</u>	<u>151,850,046</u>
Total Actuarial Accrued Liability	237,625,062	237,609,569	227,820,272
Unfunded Actuarial Accrued Liability (UAAL)	121,726,183	121,710,690	120,910,139
Funded Ratio (AVA / AL)	48.8%	48.8%	46.9%

	New Assump <u>1/1/2018</u>	Old Assump <u>1/1/2018</u>	<u>1/1/2017</u>
D. Actuarial Present Value of Accrued Benefits			
Vested Accrued Benefits			
Inactives	159,027,866	159,027,866	151,850,046
Actives	22,843,027	24,354,339	22,856,563
Member Contributions	<u>14,836,983</u>	<u>14,836,983</u>	<u>14,346,424</u>
Total	196,707,876	198,219,188	189,053,033
Non-vested Accrued Benefits	<u>4,674,373</u>	<u>4,816,652</u>	<u>5,237,057</u>
Total Present Value Accrued Benefits	201,382,249	203,035,840	194,290,090
Funded Ratio (MVA / PVAB)	60.4%	59.9%	54.7%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	(1,653,591)	0	
New Accrued Benefits	0	8,437,186	
Benefits Paid	0	(11,475,943)	
Interest	0	11,784,507	
Other	<u>0</u>	<u>0</u>	
Total	(1,653,591)	8,745,750	

	New Assump	Old Assump	
Valuation Date	1/1/2018	1/1/2018	1/1/2017
Applicable to Fiscal Year Ending	<u>12/31/2019</u>	<u>12/31/2019</u>	<u>12/31/2018</u>

E. Pension Cost

Normal Cost ¹	\$4,401,441	\$4,450,629	\$4,472,178
% of Total Annual Payroll ¹	28.2	28.5	29.1
Administrative Expenses ¹	157,920	157,920	131,532
% of Total Annual Payroll ¹	1.0	1.0	0.9
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 23 years (as of 1/1/2018) ¹	8,141,822	8,140,663	8,000,296
% of Total Annual Payroll ¹	52.1	52.1	52.1
Total Recommended Contribution	12,701,183	12,749,212	12,604,006
% of Total Annual Payroll ¹	81.3	81.6	82.1
Expected Member Contributions ¹	1,547,438	1,547,438	1,520,563
% of Total Annual Payroll ¹	9.9	9.9	9.9
Expected City Contribution	11,153,745	11,201,774	11,083,443
% of Total Annual Payroll ¹	71.4	71.7	72.2

F. Past Contributions

Plan Years Ending:	<u>12/31/2017</u>
Total Recommended Contribution	11,758,667
City	10,237,200
Actual Contributions Made:	
Members (excluding buyback)	1,521,467
City	<u>10,300,549</u>
Total	11,822,016

G. Net Actuarial (Gain)/Loss 881,865

¹ Contributions developed as of 1/1/2018 displayed above have been adjusted to account for assumed interest.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Accrued Liability</u> ¹
2018	97,963,677
2019	95,944,585
2020	93,799,300
2025	80,886,015
2031	59,221,080
2036	34,064,298
2041	0

¹ Target funded percentage is 90%, so not all of the Unfunded Actuarial Accrued Liability is amortized.

I. (i) 3 Year Comparison of Actual and Assumed Salary Increases

		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2017	4.49%	4.41%
Year Ended	12/31/2016	4.55%	4.34%
Year Ended	12/31/2015	3.46%	4.42%

(ii) 3 Year Comparison of Investment Return on Actuarial Value

		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2017	8.22%	6.25%
Year Ended	12/31/2016	7.22%	6.50%
Year Ended	12/31/2015	5.26%	6.50%

DEVELOPMENT OF JANUARY 1, 2018 AMORTIZATION PAYMENT

(1) Unfunded Actuarial Accrued Liability as of January 1, 2017	\$120,910,139
(2) Sponsor Normal Cost developed as of January 1, 2017	2,688,546
(3) Expected administrative expenses for the year ended December 31, 2017	123,795
(4) Expected interest on (1), (2) and (3)	7,728,786
(5) Sponsor contributions to the System during the year ended December 31, 2017	10,300,549
(6) Expected interest on (5)	321,892
(7) Expected Unfunded Actuarial Accrued Liability as of December 31, 2017, (1)+(2)+(3)+(4)-(5)-(6)	120,828,825
(8) Change to UAAL due to Assumption Change	15,493
(9) Change to UAAL due to Actuarial (Gain)/Loss	881,865
(10) Unfunded Accrued Liability as of January 1, 2018	121,726,183
(11) UAAL Subject to Amortization (90% AAL less Actuarial Assets)	97,963,677

<u>Date</u> <u>Established</u>	<u>Years</u> <u>Remaining</u>	<u>1/1/2018</u> <u>Amount</u>	<u>Amortization</u> <u>Amount</u>
1/1/2018	23	97,963,677	7,662,891

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of January 1, 2017	\$120,910,139
(2) Expected UAAL as of January 1, 2018	120,828,825
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(2,103,251)
Salary Increases	(611,369)
Active Decrements	1,064,284
Inactive Mortality	1,415,050
Other/Mortality Update	<u>1,117,151</u>
Change in UAAL due to (Gain)/Loss	881,865
Assumption Changes	<u>15,493</u>
(4) Actual UAAL as of January 1, 2018	\$121,726,183

RECONCILIATION OF CHANGES IN CONTRIBUTION REQUIREMENT

(1) Contribution Determined as of January 1, 2017	\$ 11,083,443
(2) Summary of Contribution Impact by component:	
Change in Normal Cost	(21,549)
Change in Assumed Administrative Expense	26,388
Investment Return (Actuarial Asset Basis)	(140,679)
Salary Increases	(40,892)
New Entrants	-
Active Decrements	71,186
Inactive Mortality	94,648
Data Corrections	-
Contributions/Benefit Payments (More) or Less than Expected	6,583
Increase in Amortization Payment Due to Payroll Growth Assumption	-
Change in Expected Member Contributions	(26,875)
Assumption Change	(48,029)
Other/Mortality Update	<u>149,521</u>
Total Change in Contribution	70,302
(3) Contribution Determined as of January 1, 2018	\$11,153,745

STATUTORY MINIMUM REQUIRED CONTRIBUTION

Contribution requirements shown on this page are calculated according to statutory minimum funding requirements of the Illinois Pension Code. We do not believe this method is sufficient to fund future benefits; as such, we recommend funding according to the contributions developed in Section E of this report.

	New Assump 1/1/2018	Old Assump 1/1/2018	1/1/2017
Valuation Date	<u>12/31/2019</u>	<u>12/31/2019</u>	<u>12/31/2018</u>
Applicable to Fiscal Year Ending	<u>12/31/2019</u>	<u>12/31/2019</u>	<u>12/31/2018</u>
Actuarial Accrued Liability (PUC)	229,937,112	230,611,649	220,980,819
Actuarial Value of Assets	<u>115,898,879</u>	<u>115,898,879</u>	<u>106,910,133</u>
Unfunded Actuarial Accrued Liability (UAAL)	114,038,233	114,712,770	114,070,686
UAAL Subject to Amortization	91,044,522	91,651,605	91,972,604
Normal Cost ¹	\$4,851,511	\$4,851,848	\$4,797,019
% of Total Annual Payroll ¹	31.1	31.1	31.3
Administrative Expenses ¹	157,920	157,920	131,532
% of Total Annual Payroll ¹	1.0	1.0	0.9
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 23 years (as of 1/1/2018) ¹	5,528,140	5,565,002	5,415,187
% of Total Annual Payroll ¹	35.4	35.5	35.3
Total Required Contribution	10,537,571	10,574,770	10,343,738
% of Total Annual Payroll ¹	67.5	67.6	67.5
Expected Member Contributions ¹	1,547,438	1,547,438	1,520,563
% of Total Annual Payroll ¹	9.9	9.9	9.9
Expected City Contribution	8,990,133	9,027,332	8,823,175
% of Total Annual Payroll ¹	57.6	57.7	57.6
Assumptions and Methods:			
Actuarial Cost Method	Projected Unit Credit		
Amortization Method	90% Funding by 2040		
Payroll Growth Assumption	3.50%		

All other assumptions and methods are as described in the Actuarial Assumptions and Methods section.

¹ Contributions developed as of 1/1/2018 displayed above have been adjusted to account for assumed interest.

PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2018	375,578	11,422,766	11,798,344
2019	708,792	11,527,108	12,235,900
2020	1,046,657	11,681,970	12,728,627
2021	1,400,023	11,839,749	13,239,772
2022	1,760,322	11,983,086	13,743,408
2023	2,178,504	12,107,767	14,286,271
2024	2,594,078	12,169,871	14,763,949
2025	3,030,203	12,205,607	15,235,810
2026	3,577,021	12,229,759	15,806,780
2027	4,071,888	12,227,711	16,299,599
2028	4,660,676	12,179,948	16,840,624
2029	5,266,468	12,110,592	17,377,060
2030	5,962,675	12,000,028	17,962,703
2031	6,724,054	11,855,542	18,579,596
2032	7,510,930	11,675,699	19,186,629
2033	8,346,777	11,475,088	19,821,865
2034	9,174,416	11,221,326	20,395,742
2035	10,021,565	10,928,958	20,950,523
2036	10,874,600	10,626,404	21,501,004
2037	11,686,564	10,258,203	21,944,767
2038	12,476,086	9,854,036	22,330,122
2039	13,280,839	9,416,568	22,697,407
2040	14,007,874	8,949,289	22,957,163
2041	14,749,600	8,475,673	23,225,273
2042	15,507,697	7,963,537	23,471,234
2043	16,154,101	7,451,272	23,605,373
2044	16,850,808	6,918,923	23,769,731
2045	17,407,966	6,385,646	23,793,612
2046	17,964,463	5,857,995	23,822,458
2047	18,374,178	5,342,163	23,716,341
2048	18,709,891	4,843,243	23,553,134
2049	18,972,839	4,365,827	23,338,666
2050	19,181,576	3,913,470	23,095,046
2051	19,336,114	3,488,627	22,824,741
2052	19,438,186	3,093,013	22,531,199
2053	19,484,400	2,726,965	22,211,365
2054	19,476,061	2,389,839	21,865,900
2055	19,407,420	2,081,635	21,489,055
2056	19,279,730	1,802,050	21,081,780
2057	19,089,930	1,549,962	20,639,892

ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate 6.25% per year compounded annually, net of investment related expenses. This is approximately supported by the target asset allocation and expected return of the asset classes. We will continue to monitor this to ensure that the rate continues to be supported.

Mortality Rate ***Healthy Lives:***
 RP-2000 Combined Healthy Mortality with a blue-collar adjustment, projected to the valuation date with Scale BB. 10% of active deaths are assumed to be in the line of duty.

Disabled Lives:
 RP-2000 Disabled Retiree Mortality with a blue-collar adjustment, projected to the valuation date with Scale BB.

The mortality assumptions sufficiently accommodate future mortality improvements.

Retirement Age See table on following page. This is based on an experience study performed in 2017.

Disability Rate See table on following page. 60% of the disabilities are assumed to be in the line of duty. This is based on an experience study performed in 2017.

Termination Rate See table on following page. This is based on an experience study performed in 2017.

Salary Increases Graded schedule based age.

Age	Increase
25	7.36%
30	5.48%
35	4.53%
40	4.02%
45	3.81%
50	3.68%
55+	3.62%

Inflation 2.50%.

Cost-of-Living Adjustment	<u>Tier 1</u> : 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55. <u>Tier 2</u> : 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.
Marital Status	80% of Members are assumed to be married.
Spouse's Age	Males are assumed to be three years older than females.
Funding Method	Entry Age Normal Cost Method.
Actuarial Asset Method	Investment gains and losses are smoothed over a 5-year period.
Funding Policy Amortization Method	The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2040. The initial amortization amount is 90% of the Accrued Liability less the Actuarial Value of Assets.
Payroll Growth	None.
Administrative Expenses	Expenses paid out of the fund other than investment-related expenses are assumed to be equal to those paid in the previous year.

Decrement Tables

% Terminating During the Year		% Becoming Disabled During the Year		% Retiring During the Year (Tier 1)		% Retiring During the Year (Tier 2)	
Age	Rate	Age	Rate	Age	Rate	Age	Rate
20	14.00%	20	0.000%	50 - 51	15%	50 - 54	5%
25	10.40%	25	0.030%	52 - 54	20%	55	40%
30	5.60%	30	0.140%	55 - 64	25%	56 - 64	25%
35	3.10%	35	0.260%	65 - 69	40%	65 - 69	40%
40	1.90%	40	0.420%	70+	100%	70+	100%
45	1.50%	45	0.590%				
50	1.50%	50	0.710%				
56+	0.00%	55	0.900%				
		60	1.150%				

GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year following the valuation date of all covered members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded.

Unfunded Accrued Liability is a liability which arises when a pension plan is initially established or improved and such establishment or improvement is applicable to all years of past service.

Total Recommended Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over a period ending in 2040. The recommended amount is adjusted for interest according to the timing of contributions during the year.

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

- (a) The normal cost accrual rate equals:
 - (i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by
 - (ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.
- (b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.
- (c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.
- (d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

STATEMENT OF FIDUCIARY NET POSITION
December 31, 2017

<u>ASSETS</u>	<u>MARKET VALUE</u>
Total Cash and Equivalents	7,200,035
Receivables:	
From Police Officers' Trust Fund	25,633
From City	41,826
Accrued Past Due Interest	237,170
Total Receivable	304,629
Investments:	
Municipal Obligations	15,053
Corporate Bonds	13,037,852
U.S. Gov't and Agency Obligations	23,164,774
Stocks	31,342,501
Mutual Funds	46,580,667
Total Investments	114,140,847
Total Assets	121,645,511
 <u>LIABILITIES</u>	
Liabilities:	
Payable:	
Vouchers Payable	15,844
Total Liabilities	15,844
Net Assets:	
Active and Retired Members' Equity	121,629,667
NET POSITION RESTRICTED FOR PENSIONS	121,629,667
TOTAL LIABILITIES AND NET ASSETS	121,645,511

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
 FOR THE YEAR ENDED December 31, 2017
 Market Value Basis

ADDITIONS

Contributions:

Member	1,521,467
City	10,300,549

Total Contributions 11,822,016

Investment Income:

Net Increase in Fair Value of Investments	15,505,051
Less Investment Expense ¹	(264,371)

Net Investment Income 15,240,680

Total Additions 27,062,696

DEDUCTIONS

Distributions to Members:

Benefit Payments	11,342,344
Refund of Contributions/Transfers	133,599

Total Distributions 11,475,943

Administrative Expenses 148,631

Total Deductions 11,624,574

Net Increase in Net Position 15,438,122

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 106,191,545

End of the Year 121,629,667

¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION

December 31, 2017

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of the Market Value of Assets.

Plan Year Ending	Gain/(Loss)	Gains/(Losses) Not Yet Recognized				
		Amounts Not Yet Recognized by Valuation Year				
		2018	2019	2020	2021	2022
12/31/2014	2,767,428	553,486	0	0	0	0
12/31/2015	(5,955,336)	(2,382,134)	(1,191,067)	0	0	0
12/31/2016	1,135,676	681,406	454,270	227,135	0	0
12/31/2017	8,597,538	6,878,030	5,158,523	3,439,015	1,719,508	0
Total		5,730,788	4,421,726	3,666,150	1,719,508	0

Development of Investment Gain/Loss

Market Value of Assets, 12/31/2016	106,191,545
Contributions Less Benefit Payments & Administrative Expenses	197,442
Expected Investment Earnings ¹	6,643,142
Actual Net Investment Earnings	<u>15,240,680</u>
2018 Actuarial Investment Gain/(Loss)	8,597,538

¹ Expected Investment Earnings = 6.25% x (106,191,545 + 0.5 x 197,442)

Development of Actuarial Value of Assets

Market Value of Assets, 12/31/2017	121,629,667
(Gains)/Losses Not Yet Recognized	<u>(5,730,788)</u>
Actuarial Value of Assets, 12/31/2017	115,898,879
(A) 12/31/2016 Actuarial Assets:	106,910,133
(I) Net Investment Income:	
1. Interest and Dividends	2,830,019
2. Realized Gains (Losses)	2,272,474
3. Change in Actuarial Value	3,953,182
4. Investment Expenses	<u>(264,371)</u>
Total	8,791,304
(B) 12/31/2017 Actuarial Assets:	115,898,879
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	8.22%
Market Value of Assets Rate of Return:	14.34%
12/31/2017 Limited Actuarial Assets:	115,898,879
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	2,103,251

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS
December 31, 2017
Actuarial Asset Basis

INCOME		
Contributions:		
Member	1,521,467	
City	10,300,549	
Total Contributions		11,822,016
Earnings from Investments		
Interest & Dividends	0	
Miscellaneous Income	2,830,019	
Net Realized Gain (Loss)	2,272,474	
Change in Actuarial Value	3,953,182	
Total Earnings and Investment Gains		9,055,675
EXPENSES		
Administrative Expenses:		
Investment Related ¹	264,371	
Other	148,631	
Total Administrative Expenses		413,002
Distributions to Members:		
Benefit Payments	11,342,344	
Refund of Contributions/Transfers	133,599	
Total Distributions		11,475,943
Change in Net Assets for the Year		8,988,746
Net Assets Beginning of the Year		106,910,133
Net Assets End of the Year ²		115,898,879

¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

² Net Assets may be limited for actuarial consideration.

STATISTICAL DATA

	<u>1/1/2015</u>	<u>1/1/2016</u>	<u>1/1/2017</u>	<u>1/1/2018</u>
<u>Actives - Tier 1</u>				
Number	134	124	123	117
Average Current Age	41.7	41.9	42.8	43.3
Average Age at Employment	27.9	28.3	28.2	28.3
Average Past Service	13.8	13.6	14.6	15.0
Average Annual Salary	\$94,738	\$96,458	\$99,810	\$102,843
<u>Actives - Tier 2</u>				
Number	29	34	42	46
Average Current Age	28.6	29.4	30.2	31.0
Average Age at Employment	26.5	27.2	27.8	28.0
Average Past Service	2.1	2.2	2.4	3.0
Average Annual Salary	\$68,958	\$70,692	\$73,027	\$77,875
<u>Service Retirees</u>				
Number	129	135	131	134
Average Current Age	68.8	68.7	69.2	69.8
Average Annual Benefit	\$64,025	\$66,878	\$69,479	\$71,838
<u>Beneficiaries</u>				
Number	28	28	30	30
Average Current Age	76.5	76.5	77.1	77.7
Average Annual Benefit	\$34,551	\$36,388	\$36,343	\$36,620
<u>Disability Retirees</u>				
Number	16	16	16	17
Average Current Age	59.8	60.8	61.8	61.1
Average Annual Benefit	\$40,278	\$40,691	\$41,103	\$43,224
<u>Terminated Vested</u>				
Number	13	16	17	18
Average Current Age	41.2	40.9	41.0	41.5
Average Annual Benefit ¹	\$9,242	\$24,178	\$24,178	\$24,178

¹ Average Annual Benefit for Terminated Vested members reflects the benefit for members entitled to a future annual benefit from the plan.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	0	0	0	0	0	0	0	0	0	0	0	0
25 - 29	2	5	0	9	1	1	0	0	0	0	0	18
30 - 34	3	4	2	2	2	16	5	0	0	0	0	34
35 - 39	0	2	0	0	0	11	19	1	0	0	0	33
40 - 44	0	0	0	0	0	4	14	14	0	0	0	32
45 - 49	0	0	0	0	0	0	4	9	6	0	0	19
50 - 54	0	0	0	0	0	0	1	5	3	7	0	16
55 - 59	0	0	0	0	0	0	1	0	1	7	0	9
60 - 64	0	0	0	0	0	0	0	1	0	0	0	1
65+	0	0	0	0	0	0	0	0	1	0	0	1
Total	5	11	2	11	3	32	44	30	11	14	0	163

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 1/1/2017	165
b. Terminations	
i. Vested (partial or full) with deferred benefits	(1)
ii. Non-vested or full lump sum distribution received	(1)
iii. Transferred service to other fund	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	(1)
e. Retired	<u>(4)</u>
f. Continuing participants	158
g. New entrants	<u>5</u>
h. Total active life participants in valuation	163

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	131	30	16	17	194
Retired	4	0	0	0	4
Vested Deferred	0	0	0	1	1
Death, With Survivor	(1)	1	0	0	0
Death, No Survivor	0	(1)	0	0	(1)
Disabled	0	0	1	0	1
Refund of Contributions	0	0	0	0	0
Rehires	0	0	0	0	0
Expired Annuities	0	0	0	0	0
Data Corrections	0	0	0	0	0
Hired/Termed in Same Year	0	0	0	0	0
b. Number current valuation	134	30	17	18	199

SUMMARY OF CURRENT PLAN

Article 3 Pension Fund

The Plan is established and administered as prescribed by “Article 3. Police Pension Fund – Municipalities 500,000 and Under” of the Illinois Pension Code.

Plan Administration

The Plan is administered by a Board of Trustees comprised of:

- a) Two members appointed by the Municipality,
- b) Two active Members of the Police Department elected by the Membership, and
- c) One retired Member of the Police Department elected by the Membership.

Credited Service

Complete years of service as a sworn police officer employed by the Municipality.

Normal Retirement

Date

Tier 1: Age 50 and 20 years of Credited Service.

Tier 2: Age 55 with 10 years of Credited Service.

Benefit

Tier 1: 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is \$1,000 per month.

Tier 2: 2.50% per year of service times the average salary for the eight consecutive years prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is \$1,000 per month.

Form of Benefit

Tier 1: For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member’s benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity.

Tier 2: Same as above, but with 66 2/3% of benefit continued to spouse.

Early Retirement

Date

Tier 1: Age 60 and 8 years of Credited Service.

Tier 2: Age 50 with 10 years of Credited Service.

Benefit

Tier 1: Normal Retirement benefit with no minimum.

Tier 2: Normal Retirement benefit, reduced 6% each year before age 55, with no minimum benefit.

Form of Benefit

Same as Normal Retirement.

Disability Benefit

Eligibility Total and permanent as determined by the Board of Trustees.

Benefit Amount A maximum of:

- a.) 65% of salary attached to the rank held by Member on last day of service, and;
- b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.

For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service.

Cost-of-Living Adjustment

Tier 1:

Retirees: An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

Disabled Retirees: An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.

Tier 2: An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.

Pre-Retirement Death Benefit

Service Incurred 100% of salary attached to rank held by Member on last day of service.

Non-Service Incurred A maximum of:

- a.) 50% of salary attached to the rank held by Member on last day of service, and;
- b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.

For non-service deaths with less than 10 years of service, a refund of member contributions is provided.

Vesting (Termination)

Vesting Service Requirement	Tier 1: 8 years. Tier 2: 10 years.
Non-Vested Benefit	Refund of Member Contributions.
Vested Benefit	Either the termination benefit, payable upon reaching age 60 (55 for Tier 2), provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination (8-year final average salary for Tier 2) times creditable service.

Contributions

Employee	9.91% of Salary.
Municipality	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.