Cavanaugh Macdonald
CONSULTING, LLC

The experience and dedication you deserve

city of CINCINNATI RETIREMENT

Report of the Actuary on the Annual Valuation of the Retirement System for Employees of the City of Cincinnati

Pension Report

Prepared as of December 31, 2014
Approved by the Board of Trustees on June 4, 2015

www.CavMacConsulting.com

June 4, 2015

Board of Trustees
Retirement System for Employees of the City of Cincinnati
801 Plum Street
Cincinnati, OH 45202

Members of the Board:

We are pleased to submit the results of the pension actuarial valuation of the Retirement System for Employees of the City of Cincinnati (CRS) prepared as of December 31, 2014. The purpose of this report is to provide a summary of the funded status of the System as of December 31, 2014 and to recommend actuarially determined contribution rates. The information needed for the City under Governmental Accounting Standards Board Statements No. 67 and 68 (GASB 67 and 68) will be provided in a separate report. However, for informational purposes, we have also provided accounting information under GASB 25 and 27 in Section VI.

On the basis of the valuation, it is recommended that employer contributions to the System be set at a rate of 44.31% of payroll (approximately $69,939,000) for the City's fiscal year ending June 30, 2016. This includes $6,177,557, or 3.91% of payroll, for the 2007 Early Retirement Incentive Program (ERIP). The benefits of the System are included in the calculated contribution rate which is developed using the entry age cost method. Five-year smoothed market value of plan assets is used for the actuarial value of assets. Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions within a 30-year period.

Since the previous valuation, no changes were made to the methods, assumptions, or plan provisions. The proposed plan and funding changes included in the Settlement Agreement between the City of Cincinnati and various plaintiff groups representing certain active and retirement members of CRS has not been included in these valuation results.

This is to certify that the independent consulting actuary is a Member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the System and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System. While not verifying the data at source, the actuary performed tests for consistency and reasonability.

Future actuarial results may differ significantly from the current results 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. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

We trust that the report will meet the approval of the Board and will furnish the desired information concerning the financial condition of the System.

Respectfully submitted,

Edward J. Koebel, EA, FCA, MAAA
Principal and Consulting Actuary

Eric Gary, FSA, FCA, MAAA
Chief Health Actuary

EJK/EG:bdm

\\CAVAN-VM-FILE01\shared\City of Cincinnati\Pension\Valuation\2014\Report CRS 20141231.docx

TABLE OF CONTENTS

RETIREMENT SYSTEM FOR EMPLOYEES OF THE CITY OF CINCINNATI
REPORT OF THE ACTUARY
ON THE VALUATION
PREPARED AS OF DECEMBER 31, 2014

PENSION REPORT

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the current and preceding valuations are summarized below.

Valuation Date	December 31, 2014	December 31, 2013
Active members:		
Number*	2,804	2,957
Annualized covered compensation	$ 157,825,141	$ 155,965,246
Retired members and beneficiaries receiving benefits:		
Number	4,319	4,409
Annual allowances	$ 157,072,728	154,968,952
Number of members and beneficiaries entitled to deferred benefits	197	158
Assets:		
Market Value	$ 1,522,851,000	$ 1,537,511,000
Actuarial Value	1,453,922,202	1,424,933,036
Unfunded actuarial accrued liability	$ 805,900,209	$ 829,188,077
Amortization Period	30 years	30 years
Funded Ratio		
Market Value	67.4%	68.2%
Actuarial Value	64.3%	63.2%
City's Fiscal Year Ending	**June 30, 2016**	**June 30, 2015**
City actuarially determined contribution rate (ADC):		
Normal Cost	2.15%	1.70%
Unfunded Actuarial Accrued Liability	38.25	42.79
Sub-total	40.40%	44.49%
ERIP**	3.91	3.96
Total	44.31%	48.45%
City estimated actuarially determined contribution in dollars (ADC):		
Normal Cost	$ 3,393,000	$ 2,650,000
Unfunded Actuarial Accrued Liability	60,368,000	66,738,000
Sub-total	$ 63,761,000	$ 69,388,000
ERIP**	6,178,000	6,178,000
Total	$ 69,939,000	$ 75,566,000

*In addition, there are 795 part-time employees at December 31, 2014.

**Contributions to the ERIP are $6,177,557 for the 2015 and 2016 fiscal years.

2. The major benefit and contribution provisions of the System as reflected in the valuation are summarized in Schedule G. No changes were made since the previous valuation.

3. Schedule E of this report outlines the full set of actuarial assumptions and methods used in the valuation. No changes were made since the previous valuation. However, after an internal review of current valuation procedures, we have made some minor programming and method changes. The biggest effect of these changes resulted in a slightly larger total normal cost rate.

4. Schedule C shows the development of the actuarial value of assets. The entry age actuarial cost method was used to prepare the valuation. Schedule F contains a brief description of the actuarial cost method.

5. Comments on the valuation results as of December 31, 2014 are given in Section IV, comments on the experience and actuarial gains and losses during the valuation year are given in Section VII and further discussion of the contributions is set out in Section V.

SECTION II – MEMBERSHIP DATA

1. Data regarding the membership of the System for use as a basis of the valuation were furnished by the System. The valuation included 2,804 active members with annualized compensation totaling $157,825,141. In addition, there are 795 part-time employees. The majority of these part-time employees are seasonal employees that have a de minimis impact on the liabilities of the System.

2. The following table shows the number of retired members in receipt of a benefit and those members with a deferred benefit as of December 31, 2014 together with the amount of their annual retirement benefits payable under the System as of that date.

THE NUMBER AND ANNUAL BENEFITS OF RETIRED MEMBERS AND BENEFICIARIES AS OF DECEMBER 31, 2014

GROUP	NUMBER*	ANNUAL RETIREMENT BENEFITS
Participants Receiving Benefits	4,319	$ 157,072,728
Participants with a Deferred Benefit	197	2,962,361
Total	4,516	$ 160,035,089

*In addition, there are 7,170 inactive participants who are former employees who have an employee account balance in the plan but are not otherwise vested in an employer provided benefit.

3. Table 1 in Schedule H shows a reconciliation of participating members for the past plan year; Table 2 in Schedule H shows the distribution by age and years of membership service of the number of active members included in the valuation; and Table 3 shows the number and annual benefits of retired members and beneficiaries included in the valuation, distributed by age.

SECTION III – ASSETS

As of December 31, 2014, the total market value of assets amounted to $2,260,573,000, as reported by the System, of which $1,522,851,000 has been allocated for pension purposes. The actuarial value of assets used for the current pension valuation was $1,453,922,202. Schedule C shows the development of the actuarial value of assets as of December 31, 2014. Schedule D shows a reconciliation of the market value of asset balances from December 31, 2013 to December 31, 2014.

SECTION IV – COMMENTS ON VALUATION

1. Schedule B of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the System as of December 31, 2014. The valuation was prepared in accordance with the actuarial assumptions set forth in Schedule E and the actuarial cost method which is described in Schedule F.

2. The valuation balance sheet shows that the System has total prospective liabilities of $2,405,959,757, of which $1,784,574,681 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members, and terminated members entitled to deferred benefits, and $621,385,076 is for the prospective benefits payable on account of present active members. Against these liabilities, the System has a total present actuarial value of assets of $1,453,922,202 as of December 31, 2014. The difference of $952,037,555 between the total liabilities and the total present assets represents the present value of future contributions.

3. The contributions to the System consist of normal contributions and accrued liability contributions. The valuation indicates that normal contributions at the rate of 11.15% of payroll are required under the entry age method. Of this amount, 9.00% will be paid by the members and the remaining 2.15% is payable by the City.

4. Prospective normal contributions at the rate of 11.15% have a present value of $146,137,346. When this amount is subtracted from $952,037,555, which is the present value of the total future contributions to be made, there remains $805,900,209 as the amount of unfunded accrued liability contributions. The development of the unfunded accrued liability is shown in Schedule A.

5. Of the $805,900,209, $38,590,507 is due to the Early Retirement Incentive Plan (ERIP) that is being funded with separate contributions by the City in the future (FY2012 through FY 2024). The schedule of ERIP contributions is as follows:

City Fiscal Year	Contribution Amount*
2009*	$2,353,816
2010*	3,025,768
2011*	3,697,720
2012*	4,369,672
2013**	2,520,812
2014**	5,713,578
2015-2023**	6,177,557
2024**	3,088,778

*Determined by the previous actuary in letter dated May 23, 2008 and adjusted for payment timing.

**The schedule of contributions that was prepared by the previous actuary was revised such that the present value of the total payments in the table above is equal to the initial unfunded liability ($42,271,108) of the ERIP based upon the assumptions in the Plan as of the ERIP separation date.

6. As can be seen from Schedule I of our report, the System had an actuarial gain for the year. Most of this gain came from the investment income, which has seen positive investment returns on a market value basis for three out of the last five years. Please see Schedule D of our report for a historical table of Market Value of Assets, Actuarial Value of Assets and the rates of return for each. The other component of the gain came from census data improvements provided by

staff this year. This gain was offset by losses due to retirements and withdrawals during the year and higher salary increases than expected.

SECTION V – CONTRIBUTIONS PAYABLE

1. The contributions consist of a normal contribution and an accrued liability contribution as determined by actuarial valuation.
2. The normal contribution rate is calculated as the level percentage of payroll which, if applied for the average new member during the entire period of his anticipated covered service, would be required to meet the cost of all benefits payable on his behalf. On the basis of the valuation, the normal contribution rate was determined to be 11.15%. Of this amount, 9.00% will be paid by the members and the remaining 2.15% is payable by the City.
3. A contribution of 38.25% of payroll will liquidate the portion of the unfunded accrued liability not attributed to the ERIP within a 30-year period.
4. An additional contribution is required for the City's fiscal year ending June 30, 2016 of $6,177,557, or 3.91% of payroll, for the ERIP.
5. The total contribution rate required for the City's fiscal year ending June 30, 2016 is, therefore, 44.31% of payroll.

6. The following table summarizes the employer contributions which were determined by the December 31, 2014 valuation and are recommended for use.

CITY ACTUARIALLY DETERMINED CONTRIBUTIONS (ADC)
FOR CITY FISCAL YEAR ENDING JUNE 30, 2016

	PERCENTAGE OF ACTIVE MEMBERS' COMPENSATION	EMPLOYER ACTUARIALLY DETERMINED CONTRIBUTION (ADC)
Normal Cost	2.15%	$ 3,393,000
Unfunded Accrued Liability	38.25	60,368,000
Sub-Total	40.40%	$ 63,761,000
ERIP	3.91	6,178,000
Total	44.31%	$ 69,939,000

SECTION VI – ACCOUNTING INFORMATION

Governmental Accounting Standards Board (GASB) has issued Statement No. 67 which replaces Statement No. 25 for plan years beginning after June 15, 2013. The information required under GASB 67 will be issued in a separate report. The following information is provided for informational purposes and for disclosure in the financial statements of the employer under GASB 27.

1. The following is a distribution of the number of employees by type of membership:

NUMBER OF ACTIVE AND RETIRED PARTICIPANTS
AS OF DECEMBER 31, 2014

GROUP	TOTAL
Retired participants and beneficiaries currently receiving benefits	4,319
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	197
Inactive participants*	7,170
Active Participants	
Full-Time	2,804
Part-Time	795
Total	15,285

* Participants who are former employees who have an employee account balance in the plan but are not otherwise vested in an employer provided benefit.

2. The schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS
Dollar Amounts in Thousands

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b – a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b – a) / c)
12/31/2009	$1,631,407	$2,125,738	$494,331	76.7%	$170,416	290.1%
12/31/2010	1,565,949	2,085,987	520,038	75.1	167,589	310.3
12/31/2011	1,466,077	2,194,505	728,428	66.8	165,029	441.4
12/31/2012	1,367,695	2,229,818	862,123	61.3	167,148	515.8
12/31/2013	1,424,933	2,254,121	829,188	63.2	163,477	507.2
12/31/2014	1,453,922	2,259,822	805,900	64.3	164,575*	489.7

*Includes $6,749,941 in part-time active employee compensation.

3. The calculation of the annual pension cost and net pension obligation for the City's fiscal year ending June 30, 2015 is shown below.

Annual Pension Cost and Net Pension Obligation for City Fiscal Year Ending June 30, 2015		
(a)	Employer annual required contribution*	$ 75,566,000
(b)	Interest on net pension obligation	14,355,000
(c)	Adjustment to annual required contribution	16,206,000
(d)	Annual pension cost (a) + (b) – (c)	$ 73,715,000
(e)	Employer contributions made for City's fiscal year ending June 30, 2015	TBD
(f)	Increase (decrease) in net pension obligation (d) – (e)	$ TBD
(g)	Net pension obligation beginning of City's fiscal year	191,401,000
(h)	Net pension obligation end of City's fiscal year (f) + (g)	$ TBD

* Developed from the December 31, 2013 valuation.

TREND INFORMATION
Dollar Amounts in Thousands

City Fiscal Year Ending	Annual Pension Cost (APC)	Percentage of APC Contributed	Net Pension Obligation (NPO)
December 31, 2012	$48,888,000	69%	$135,822,000
June 30, 2013	32,843,000	49	152,514,000
June 30, 2014	76,626,000	49	191,401,000
June 30, 2015	73,715,000	TBD	TBD

4. The actuarially determined contribution (ADC) as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below.

CITY FISCAL YEAR ENDING JUNE 30, 2016	PERCENTAGE OF ACTIVE MEMBERS' COMPENSATION	EMPLOYER ANNUAL REQUIRED CONTRIBUTION (ARC)
Normal Cost	2.15%	$ 3,393,000
Unfunded Accrued Liability	38.25	60,368,000
Sub-Total	40.40	$ 63,761,000
ERIP	3.91	6,178,000
Total	44.31%	$ 69,939,000

5. Additional information as of December 31, 2014 follows:

Valuation date	12/31/2014
Actuarial cost method	Entry age
Amortization period	Level dollar open
Remaining amortization period	30 years
Asset valuation method	Five-year smoothed market value
Actuarial assumptions:	
Investment rate of return (includes inflation)	7.50%
Projected salary increases (includes inflation)*	3.00% - 7.50%
Inflation	3.00%
Cost-of-living adjustments	2.00% - 3.00%

*Select salary increases for 5-year period beginning December 31, 2011.

SECTION VII – EXPERIENCE

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain/(loss) for the year ended December 31, 2014 is shown below.

			$ Thousands
(1)	UAAL* as of December 31, 2013	$	829,188
(2)	Total normal cost from last valuation		16,688
(3)	Total actual contributions		49,668
(4)	Interest accrual: [(1) + (2)] x .075 - [(3) x .0375]		61,578
(5)	Expected UAAL before changes: (1) + (2) – (3) + (4)	$	857,787
(6)	Change due to plan amendments		0
(7)	Change due to actuarial assumptions or methods		0
(8)	Expected UAAL after changes: (5) + (6) + (7)	$	857,787
(9)	Actual UAAL as of December 31, 2014	$	805,900
(10)	Gain/(loss): (8) – (9)	$	51,887
(11)	Gain/(loss) as percent of actuarial accrued liabilities at start of year ($2,254,121)		2.3%

*Unfunded actuarial accrued liability, prior to the restatement of the actuarial value of assets.

Valuation Date December 31	Actuarial Gain/(Loss) as a % of Beginning Accrued Liabilities
2009	6.8%
2010	(5.5)%
2011	(7.2)%
2012	(5.0)%
2013	2.8%
2014	2.3%

SCHEDULE A

DEVELOPMENT OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY

	December 31, 2014	December 31, 2013
(1) Present value of prospective benefits:		
(a) Present active full time members	$ 617,715,384	$ 601,761,009
(b) Present active part time and seasonal members	3,669,692	3,610,557
(c) Present retired members, beneficiaries, former members entitled to deferred vested benefits and inactive members	1,784,574,681	1,793,683,922
(d) Total	$ 2,405,959,757	$ 2,399,055,488
(2) Present value of future normal contributions	146,137,346	144,934,375
(3) Actuarial accrued liabilities: 1(d) – (2)	$ 2,259,822,411	$ 2,254,121,113
(4) Actuarial value of assets	1,453,922,202	1,424,933,036
(5) Unfunded actuarial accrued liability (UAAL): (3) – (4)	$ 805,900,209	$ 829,188,077
(6) Actuarially Determined Contribution Rate as a % of Payroll		
(a) Normal Cost	2.15%	1.70%
(b) UAAL	38.25%	42.79%
(c) Sub-Total	40.40%	44.49%
(d) ERIP	3.91%	3.96%
(e) Total	44.31%	48.45%
(7) Estimated Contribution in dollars		
(a) Normal Cost	$ 3,393,000	$ 2,650,000
(b) UAAL	60,368,000	66,738,000
(c) Sub-Total	$ 63,761,000	$ 69,388,000
(d) ERIP	6,178,000	6,178,000
(e) Total	$ 69,939,000	$ 75,566,000

SCHEDULE B

VALUATION BALANCE SHEET

Present and prospective assets and liabilities as of December 31, 2014:

ACTUARIAL LIABILITIES		
Present value of prospective benefits payable on account of present retired members, beneficiaries of deceased members, terminated members entitled to deferred benefits and inactive members		$1,784,574,681
Present value of prospective benefits payable on account of present active members		621,385,076
Total liabilities		$2,405,959,757
PRESENT AND PROSPECTIVE ASSETS		
Actuarial value of assets		$1,453,922,202
Present value of future contributions		
City and Member Normal contributions	$ 146,137,346	
Unfunded accrued liability contributions	805,900,209	
Total prospective contributions		$ 952,037,555
Total assets		$2,405,959,757

SCHEDULE C

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

(1)	Actuarial Value of Assets as of December 31, 2013		$ 1,424,933,036
(2)	Market Value of Assets as of December 31, 2014		$ 1,522,851,000
(3)	Market Value of Assets as of December 31, 2013		$ 1,537,511,000
(4)	Net Cash Flow During Plan Year		
	(a)	Contributions	$ 49,668,000
	(b)	Benefit Payments and Net Transfers	160,096,000
	(c)	Administrative Expenses	1,240,000
	(d)	Investment Expenses	13,168,000
	(e)	Net Cash Flow: (a) – (b) – (c) – (d)	$ (124,836,000)
(5)	Investment Income		
	(a)	Market Total: (2) – (3) – (4)(e)	$ 110,176,000
	(b)	Assumed Rate	7.50%
	(c)	Amount for Immediate Recognition	
	[(3) x (5)(b)] + [[(4)(a) – (4)(b)] x (5)(b) x 0.5] + (4)(c) + (4)(d)		$ 125,580,275
	(d)	Amount for Phased-In Recognition: (5)(a) – (5)(c)	$ (15,404,275)
(6)	Recognized Amounts for Plan Year		
	(a)	Current Year: 0.20 x (5)(d)	$ (3,080,855)
	(b)	First Prior Year	25,772,630
	(c)	Second Prior Year	11,893,860
	(d)	Third Prior Year	(19,853,392)
	(e)	Fourth Prior Year	13,512,648
	(f)	Total Recognized Investment Gain/(Loss)	$ 28,244,891
(7)	Actuarial Value of Assets as of December 31, 2014		
	(1) + (4)(e) + (5)(c) + (6)(f)		$ 1,453,922,202
		80% of Market Value EOY	1,218,280,800
		120% of Market Value EOY	1,827,421,200
(8)	Final Actuarial Value of Assets as of December 31, 2014		$ 1,453,922,202
(9)	Rate of Return on Actuarial Value		10.18%

SCHEDULE D

CURRENT ASSET INFORMATION

Receipts		
(1) Contributions		$ 49,668,000
(2) Investment Income		
• Interest and Dividends	$ 21,616,000	
• Net Appreciation (Depreciation) in Fair Value of Investments	88,039,000	
• Other Investment Earnings	521,000	
• Investment Expenses	(13,168,000)	
Total Investment Income		$ 97,008,000
(3) Total Receipts		$ 146,676,000
Disbursements		
(4) Benefits Paid	$ 160,096,000	
(5) Administrative Expenses	1,240,000	
(6) Total Disbursements		$ 161,336,000
(7) Excess of Receipts Over Disbursements: (3) - (6)		$ (14,660,000)
Reconciliation of Asset Balances		
(8) Market Value at December 31, 2013		$1,537,511,000
(9) Excess of Receipts Over Disbursements		(14,660,000)
(10)Market Value at December 31, 2014		$1,522,851,000
(11)Estimated Rate of Return on Market Value of Assets		6.46%

HISTORICAL ASSET INFORMATION
($ in thousands)

Valuation Date	Actuarial Value of Assets		Market Value of Assets	
	Amount	Rate of Return	Amount	Rate of Return
12/31/2009	$1,631,407	0.16%	$1,370,133	18.93%
12/31/2010	1,565,949	2.07	1,445,156	13.11
12/31/2011	1,466,077	0.24	1,353,822	0.88
12/31/2012	1,367,695	0.25	1,409,032	12.06
12/31/2013	1,424,933	12.11	1,537,511	16.99
12/31/2014	1,453,922	10.18	1,522,851	6.46

SCHEDULE E

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

INVESTMENT RATE OF RETURN: 7.50% per year, net of expenses.

INFLATION ASSUMPTION: 3.00% per annum.

SALARY INCREASES: Salary increases are assumed to vary by service. In addition, salary increases are assumed to be lower for a five-year select period beginning with the December 31, 2011 valuation. Representative rates are as follows:

	Annual Increase	
Service	Select Period	Ultimate Period
0	7.0%	7.5%
5	4.5	5.0
10	3.0	4.5
20	3.0	4.5
30	3.0	4.0

SEPARATIONS FROM ACTIVE SERVICE: For death rates, RP-2000 Combined Mortality Table set forward two years for males and set forward one year for females and using a Scale AA projection to 2020 was used. Representative values of the assumed annual rates of separation from active service are as follows:

	Annual Rate of Withdrawal				Annual Rate of Disability
Age	Less than One Year of Service	Between One and Three Years of Service	Between Three and Five Years of Service	Five or More Years of Service	
20	25.0%	10.0%	7.5%	5.0%	0.01%
25	25.0	10.0	7.5	5.0	0.02
30	25.0	10.0	7.5	3.5	0.03
35	25.0	10.0	4.0	2.8	0.05
40	25.0	10.0	4.0	2.3	0.09
45	25.0	10.0	4.0	1.5	0.15
50	25.0	10.0	4.0	1.5	0.27
55	25.0	10.0	4.0	1.5	0.42
60	25.0	10.0	4.0	1.5	0.00
65	25.0	10.0	4.0	1.5	0.00
70	25.0	10.0	4.0	1.5	0.00

	Annual Rate of Retirement			
Age	Early Retirement	Less than 30 Years of Service	30 Years of Service	31+ Years of Service
		Groups C, D, E, and F		
50			45.0	30.0
55	10.0%		45.0	30.0
59	10.0		45.0	30.0
60		25.0%	30.0	25.0
61		20.0	20.0	20.0
65		20.0	20.0	20.0
70		100.0	100.0	100.0
		Group G		
57	10.0%			
60	20.0			
62	20.0		25.0%	20.0%
65	20.0		25.0	20.0
67		25.0%	25.0	20.0
69		20.0	20.0	20.0
70		100.0	100.0	100.0

DEATHS AFTER RETIREMENT: The RP-2000 Combined Mortality Table set forward two years for males and set forward one year for females and using a Scale AA projection to 2020 is used for the period after retirement and for dependent beneficiaries. The RP-2000 Disabled Mortality Table (set back 5 years for females) is used for the period after disability.

PERCENT MARRIED: 70% of male members and 30% of female members are assumed to be married with the male three years older than his spouse.

ASSETS: Actuarial value, as developed in Schedule C. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected market value. In addition, the actuarial value of assets cannot be less than 80% or more than 120% of the market value of assets.

WITHDRAWAL ASSUMPTION: It is assumed that 100% of vested members who terminate with less than 15 years of service elect to withdraw their contributions and that 50% of vested members who terminate with 15 or more years of service elect to withdraw their contributions while the remaining 50% elect to leave their contributions in the plan in order to be eligible for a benefit at their retirement date.

VALUATION METHOD: Entry age actuarial cost method. See Schedule F for a brief description of this method.

SCHEDULE F

ACTUARIAL COST METHOD

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 7.50%), of each member's expected benefits at retirement or death is determined, based on age, service and sex. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his terminating with a service, disability or survivor's benefit. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable from the System on account of the present group of members and beneficiaries.
2. The employer contributions required to support the benefits of the System are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.
3. The normal contribution is determined using the entry age actuarial cost method. Under this method, a calculation is made to determine the level percentage of payroll which, if applied for the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.
4. The unfunded accrued liability is determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets held, from the present value of expected benefits to be paid from the System.

SCHEDULE G

SUMMARY OF MAIN SYSTEM PROVISIONS
AS INTERPRETED FOR VALUATION PURPOSES

Eligibility

All active employees of the City except for the following:

- Members of the State Police and Fireman's Disability and Pension Fund.
- Employees who are members of PERS, STRS, or the Public School Employees Retirement System.
- Elected officials.

As part of the plan provisions from Ordinance 84-2011 that were passed by the City Council on March 16, 2011 and adopted by the Board, participants in the System were divided into the following groups:

Group	Criteria
AB	Retirees as of 7/1/2011.
C	Active members who attain 30 years of service or age 60 with 5 years of service before 7/1/2011.
D	Active members who first attain 30 years of service or age 60 with 5 years of service on or after 7/1/2011 but before 1/1/2014 and retire on or before 1/1/2014.
E	Active members who first attain 30 years of service or age 60 with 5 years of service on or after 7/1/2011 but before 1/1/2014 and retire after 1/1/2014.
F	Active members hired before 1/1/2010 and not in groups C, D, or E.
G	Active members hired on or after 1/1/2010.

Service Retirement Benefit

Groups AB, C and D:

Normal Retirement Eligibility: Age 60 with 5 years of service or 30 years of service.

Early Retirement Eligibility: Age 55 with 25 years of service.

Benefit Formula Multiplier: Members hired prior to July 12, 1998 were given a one-time irrevocable option to choose either the benefit formula using a 2.22% multiplier or the benefit formula using a 2.50% multiplier. For members hired on or after July 12, 1998, benefits are calculated using a 2.50% multiplier.

Average Highest Compensation: Average of the highest three consecutive years of compensation.

Years of Service	Years or fractional years of full-time service rendered to the plan sponsor.
Benefit	a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement. b) A pension which together with the annuity produces a total annual retirement allowance equal to the product of the applicable benefit formula multiplier, the member's average highest compensation, and the number of years of service. Early Retirement Benefit is actuarially reduced from normal retirement age.

Group E:

Normal Retirement Eligibility	Age 65 with 5 years of service or age 60 with 30 years of service.
Reduced Normal Retirement Eligibility	Age 60 with 5 years of service or 30 years of service.

Retirement benefit is composed of as many as three components:

Part A Benefit: for service earned through December 31, 2013

Part B Benefit: for service earned on and after January 1, 2014 up to a combined 30 years of service

Part C Benefit: for service earned on or after January 1, 2014 in excess of a combined 30 years of service.

Benefit Formula Multiplier	**Part A Benefit:** Members hired prior to July 12, 1998 were given a one-time irrevocable option to choose either the benefit formula using a 2.22% multiplier or the benefit formula using a 2.50% multiplier. For members hired on or after July 12, 1998, benefits are calculated using a 2.50% multiplier. **Part B Benefit:** 2.20% multiplier **Part C Benefit:** 2.00% multiplier
Average Highest Compensation	**Part A Benefit:** Average of the highest three consecutive years of compensation **Part B Benefit:** Average of the highest five consecutive years of compensation

Part C Benefit: Average of the highest five consecutive years of compensation

Years of Service	Years or fractional years of full-time service rendered to the plan sponsor.

Benefit

a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement.

b) A pension which together with the annuity produces a total annual retirement allowance equal to the sum of Part A, Part B, and Part C benefits each of which is the product of the applicable benefit formula multiplier, the applicable average highest compensation, and the applicable number of years of service.

Reduced Normal Retirement Part A benefits will not be actuarially reduced.

Reduced Normal Retirement Part B and C benefits are actuarially reduced from normal retirement age.

Group F:

Normal Retirement Eligibility	Age 65 with 5 years of service or age 60 with 30 years of service.
Reduced Normal Retirement Eligibility	Age 60 with 5 years of service or 30 years of service.
Early Retirement Eligibility	Prior to January 1, 2014, age 55 with 25 years of service or age 57 with 15 years of service. On or after January 1, 2014, age 57 with 15 years of service.

Retirement benefit is composed of as many as three components:

Part A Benefit: for service earned through June 30, 2011

Part B Benefit: for service earned on and after July 1, 2011 up to a combined 30 years of service

Part C Benefit: for service earned on or after July 1, 2011 in excess of a combined 30 years of service.

Benefit Formula Multiplier	**<u>Part A Benefit:</u>** Members hired prior to July 12, 1998 were given a one-time irrevocable option to choose either the benefit formula using a 2.22% multiplier or the benefit formula using a 2.50% multiplier. For members hired on or after July 12, 1998, benefits are calculated using a 2.50% multiplier. **<u>Part B Benefit:</u>** 2.20% multiplier **<u>Part C Benefit:</u>** 2.00% multiplier
Average Highest Compensation	**<u>Part A Benefit:</u>** Average of the highest three consecutive years of compensation **<u>Part B Benefit:</u>** Average of the highest five consecutive years of compensation **<u>Part C Benefit:</u>** Average of the highest five consecutive years of compensation
Years of Service	Years or fractional years of full-time service rendered to the plan sponsor.
Benefit	a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement. b) A pension which together with the annuity produces a total annual retirement allowance equal to the sum of Part A, Part B, and Part C benefits each of which is the product of the applicable benefit formula multiplier, the applicable average highest compensation, and the applicable number of years of service. Reduced Normal Retirement Part A benefits will not be actuarially reduced. Reduced Normal Retirement Part B and C benefits are actuarially reduced from normal retirement age. Early Retirement Part A, B, and C benefits are actuarially reduced from normal retirement age.

<u>Group G</u>

Normal Retirement Eligibility	Age 67 with 5 years of service or age 62 with 30 years of service.
Early Retirement Eligibility	Age 57 with 15 years of service.

Benefit Formula Multiplier	Benefit is calculated using a 2.20% multiplier for all years of service up to 30 years and a 2.00% multiplier for all service in excess of 30 years.
Average Highest Compensation	Average of the highest five consecutive years of compensation.
Years of Service	Years or fractional years of full-time service rendered to the plan sponsor.
Benefit	a) An annuity which is actuarially equivalent to the accumulated contributions of the member at the time of retirement. b) A pension which together with the annuity produces a total annual retirement allowance equal to the product of the applicable benefit formula multiplier, the member's average highest compensation, and the number of years of service. Early Retirement Benefit is actuarially reduced from normal retirement age.

In no event shall the retirement allowance be greater than 90% of a member's average highest compensation.

In no event shall the retirement allowance be greater than that permitted by Section 415 of the Internal Revenue Code.

The average highest compensation used in the calculation of benefits depends on which benefit formula applies to the member. The formula that uses the 2.22% multiplier includes overtime compensation and the lump sum payment for unused vacation, unused sick-pay, etc. The formulas that use all other multipliers do not include overtime or the lump sum payment.

Disability Retirement Benefit

Eligibility	5 years of service.
Benefit	90% of normal retirement benefit at disability date but not less than the smaller of: (1) 25% of average highest compensation (2) 90% of the retirement benefit member would have become entitled to had he continued in service to normal retirement age without further change in average highest compensation.

Deferred Vested Retirement Benefit

Eligibility	5 years of service.
Benefit	Normal retirement benefit beginning at normal retirement age.

Preretirement Death Benefit

(1) Refund of contributions with interest.

(2) Survivor Benefits according to type of survivors if member has at least 18 months of service.

Postretirement Death Benefit

(1) Lump sum $5,000 for group AB only.

(2) If no Joint and Survivor Option is selected, balance of member contributions not received back in retirement benefit payments prior to death.

Optional Forms of Benefit

(1) Joint and 100% Survivor Payment

(2) Joint and 50% Survivor Payment

(3) 66 2/3% Joint and Survivor Payment

(4) 80% Joint and Survivor Payment

Postretirement Increases

3% compounded annually commencing one year after retirement for groups AB and C.

For all other groups, increases will be indexed to the CPI-U with a maximum of 2% per year and will be based on simple interest.

Contributions

By Members:	Each member, commencing January 1, 1978, contributes at a rate of 7% of the salary used to compute retirement benefits until his retirement. Beginning January 1, 2010, the employee contribution rate will be increased ½% per year over 4 years to reach 9% of pay.
By Employers:	The sponsoring employer makes annual contributions based on members' salaries so that, when members become eligible for benefits, reserves will have been accumulated adequate to provide the pension and other benefits payable by the plan on account of creditable service.

2007 Early Retirement Window	City employees who have 28 years or more of service credit prior to January 1, 2008 were eligible. Those electing to retire prior to January 1, 2008 were credited with two more years of service.

SCHEDULE H

TABLE 1

STATUS RECONCILIATION OF PARTICIPATING MEMBERS

	Active Full Time	Active Part Time	Receiving Benefits	Deferred Benefits	Total
Participants as of December 31, 2013	2,957	1,117	4,409	158	8,641
A. Receiving Benefits	(52)	(4)	71	(15)	
B. Terminated Vested	(51)	(3)		54	
C. Terminated Non-Vested	(92)	(489)			(581)
D. Deaths	(4)	(2)	(196)	(1)	(203)
E. Rehires	7	23			30
F. New Participants	154	206			360
G. New Member Due to Death of Participant			45	1	46
H. Part Time to Full Time	27	(27)			
I. Full Time to Part Time	(75)	75			
J. Refunds	(67)	(101)		(10)	(178)
K. Data Corrections			(10)	10	
Participants as of December 31, 2014	2,804	795	4,319	197	8,115

In addition, there are 7,170 inactive participants who are former employees who have an employee account balance in the plan but are not otherwise vested in an employer provided benefit.

SCHEDULE H
(Continued)

TABLE 2

SCHEDULE OF ACTIVE MEMBERS BY AGE AND SERVICE
AS OF DECEMBER 31, 2014

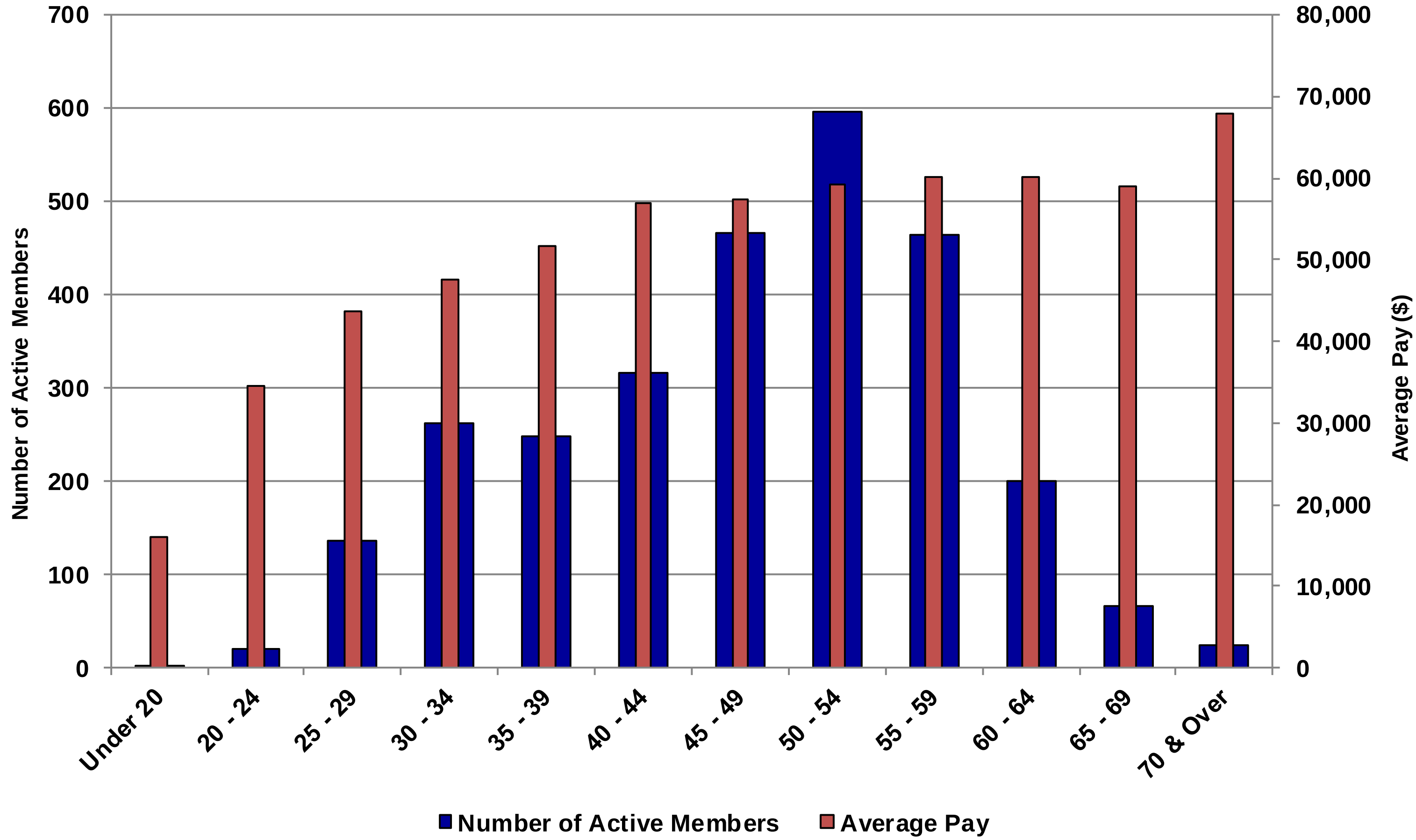
	Completed Years of Service							
Age	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30+	Total
Under 20	1							1
Avg Pay	15,999							15,999
20 - 24	21							21
Avg Pay	34,562							34,562
25 - 29	109	26	1					136
Avg Pay	42,936	46,253	45,770					43,591
30 - 34	127	98	36	1				262
Avg Pay	46,330	49,449	46,022	56,238				47,492
35 - 39	86	78	56	27	1			248
Avg Pay	47,987	50,289	55,537	60,175	43,146			51,723
40 - 44	69	79	76	65	24	4		317
Avg Pay	55,522	57,721	56,081	57,070	61,532	57,641		57,003
45 - 49	62	66	99	70	76	91	2	466
Avg Pay	51,632	56,038	53,716	58,250	62,299	61,849	53,277	57,435
50 - 54	47	43	74	68	142	199	23	596
Avg Pay	56,880	57,525	53,642	58,841	60,872	59,998	71,232	59,294
55 - 59	26	46	49	56	84	166	38	465
Avg Pay	56,641	63,957	53,581	54,530	59,917	60,635	74,186	60,239
60 - 64	24	22	33	25	33	47	16	200
Avg Pay	64,069	67,422	53,446	57,850	57,647	61,326	64,054	60,202
65 - 69	6	7	16	7	14	12	5	67
Avg Pay	72,790	62,558	59,266	44,754	53,852	59,739	70,609	59,105
70 & Over	3		4	4	5	2	7	25
Avg Pay	95,035		63,520	46,527	66,173	59,337	74,821	67,943
Total	581	465	444	323	379	521	91	2,804
Avg Pay	49,691	54,982	53,950	57,178	60,471	60,618	71,051	56,286

Average Age 47.46 Average Service 14.43

SCHEDULE H
(Continued)

CHART 1

DISTRIBUTION OF ACTIVE MEMBERS BY AGE
AS OF DECEMBER 31, 2014



SCHEDULE H
(Continued)

TABLE 3

SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES
AS OF DECEMBER 31, 2014

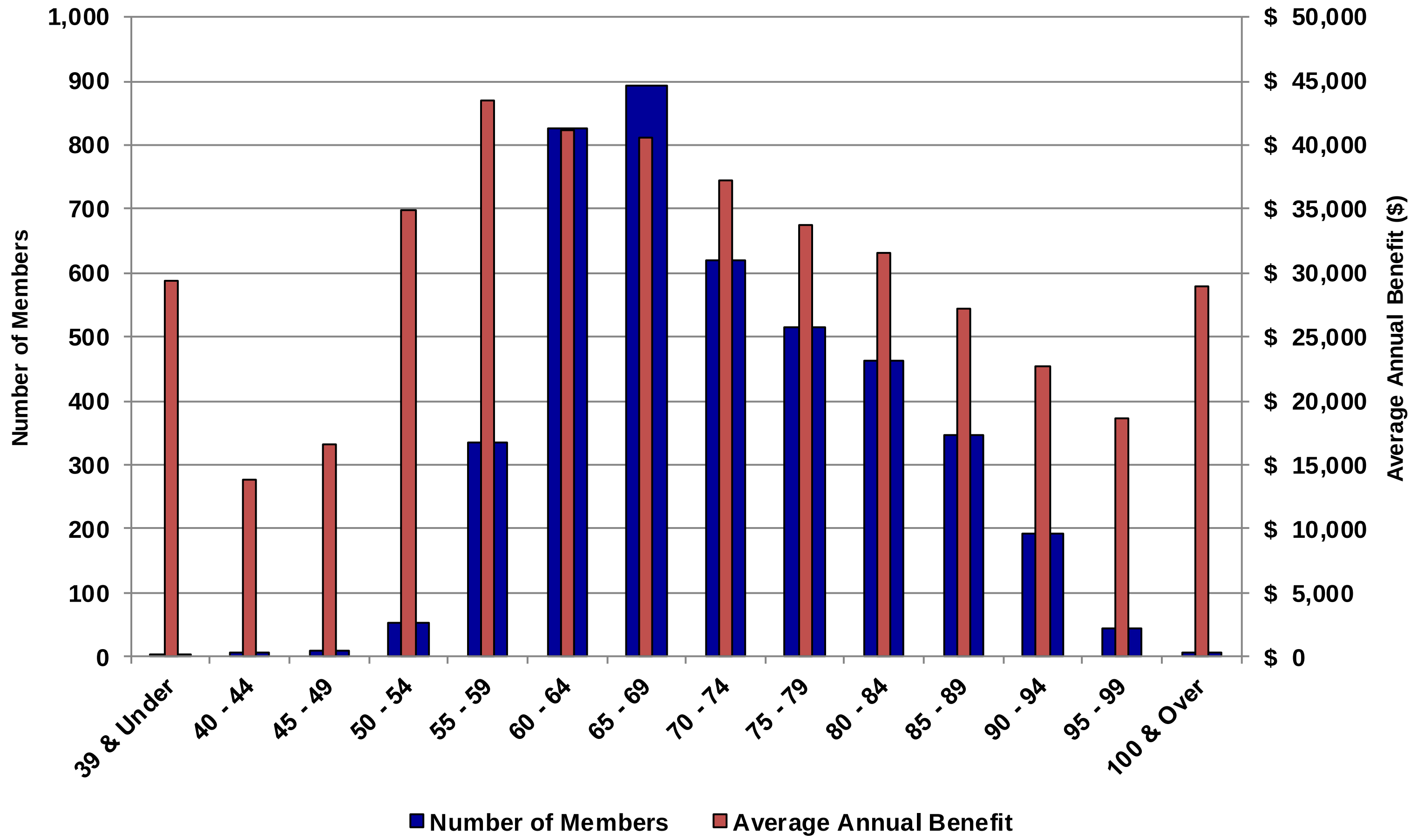
Attained Age	Number of Members	Total Annual Benefits	Average Annual Benefit
39 & Under	3	$ 87,986	$ 29,329
40 - 44	7	97,409	13,916
45 - 49	9	149,067	16,563
50 - 54	54	1,887,102	34,946
55 - 59	336	14,624,331	43,525
60 - 64	825	33,989,453	41,199
65 - 69	893	36,248,569	40,592
70 - 74	619	23,023,784	37,195
75 - 79	516	17,425,234	33,770
80 - 84	463	14,624,945	31,587
85 - 89	348	9,450,930	27,158
90 - 94	193	4,393,553	22,765
95 - 99	45	838,927	18,643
100 & Over	8	231,438	28,930
Total	**4,319**	**$ 157,072,728**	**$ 36,368**

In addition, there are 197 deferred vested employees and beneficiaries entitled to deferred annual benefits totaling $2,962,361.

SCHEDULE H
(Continued)

CHART 2

DISTRIBUTION OF RETIRED MEMBERS AND BENEFICIARIES
AS OF DECEMBER 31, 2014



SCHEDULE I

ANALYSIS OF FINANCIAL EXPERIENCE

**Gains & Losses in Accrued Liabilities
Resulting from Difference Between
Assumed Experience & Actual Experience
($ Thousands)**

Type of Activity	$ Gain (or Loss) For Year Ending 12/31/2014	$ Gain (or Loss) For Year Ending 12/31/2013
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	$ (1,001)	$ (10,109)
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(77)	96
Death-in-Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(684)	(841)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(4,714)	(3,787)
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(1,641)	11,111
New Members. Additional unfunded accrued liability will produce a loss.	(603)	(750)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	36,688	60,722
Death After Retirement. If retirants live longer than assumed, there is a loss. If not as long, a gain.	26,087	3,329
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	(2,168)	2,085
Gain (or Loss) During Year From Experience	$ 51,887	$ 61,856
Non-Recurring Items. Adjustments for plan amendments, assumption changes, or method changes.	0	0
Composite Gain (or Loss) During Year	$ 51,887	$ 61,856