



**Cavanaugh Macdonald**  
CONSULTING, LLC

*The experience and dedication you deserve*



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

**Retiree Health Benefits Report**

**Prepared as of December 31, 2016  
and Approved by the Board of  
Trustees on June 1, 2017**





# Cavanaugh Macdonald

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June 1, 2017

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 retiree health benefits actuarial valuation of the Retirement System for Employees of the City of Cincinnati (System) prepared as of December 31, 2016. The purpose of this report is to provide a summary of the funded status of the System as of December 31, 2016, to recommend rates of contribution, and to provide accounting information under Governmental Accounting Standards Board Statements No. 43 and No. 45 (GASB 43 and 45).

On the basis of the valuation, it is recommended that employer contributions to the System be set at a rate of 0.71% of payroll (approximately \$1,152,000) for the City's fiscal year ending June 30, 2018. The retiree health 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.

The valuation reflects the benefit changes created by Ordinance 336-2016 adopted by the City Council on October 26, 2016, including retiree health benefit ineligibility for members hired after December 31, 2015.

Since the previous valuation, we updated the initial per capita health care costs, the contribution rates for those retirees participating in the Select Plan and the Model Plan, and the rates of health care inflation used to project the per capita health care costs to reflect the System's recent experience. Additionally, the per capita health care costs have been adjusted to reflect the anticipated cost reductions associated with providing prescription drug benefits through a new pharmacy benefit manager, CVS/caremark.

Per the Collaborative Settlement Agreement (CSA), the City is to fund retiree health benefits at "actuarially appropriate levels". As the term "actuarially appropriate levels" is vague and the amount has yet to be defined, we recommend the Board conduct an evaluation of the long-term funding of retiree health benefits to ensure the payment of future normal costs and amortization of any Unfunded Accrued Liability (UAL). Failure to make such payments is likely to result in a deterioration of the funded status over time.

The valuation has been prepared in accordance with the parameters set forth in Statements No. 43 and No. 45 of the Governmental Accounting Standards Board. The annual required contribution (ARC) for the City under GASB for the City's fiscal year ending June 30, 2018 is 0.71% of payroll, based on a 30-year period for amortization of the unfunded accrued liability.



Board of Trustees  
June 1, 2017  
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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.

The actuarial computations presented in this report are for purposes of determining the recommended funding amounts for retiree health benefits. Use of these computations for purposes other than meeting these requirements may not be appropriate.

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,

A handwritten signature in blue ink, appearing to read 'Eric H. Gary'.

Eric H. Gary, FSA, FCA, MAAA  
Principal and Chief Health Actuary

A handwritten signature in blue ink, appearing to read 'Edward J. Koebel'.

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

EG/EK:bw



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**RETIREMENT SYSTEM FOR EMPLOYEES OF THE CITY OF CINCINNATI  
REPORT OF THE ACTUARY  
ON THE VALUATION  
PREPARED AS OF DECEMBER 31, 2016**

**RETIREE HEALTH BENEFITS 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, 2016	December 31, 2015
Active members <sup>1</sup> :		
Number <sup>2</sup>	2,769	2,931
Annualized compensation	\$ 162,287,018	\$ 167,248,240
Retired members and surviving spouses receiving retiree health benefits:	3,792	3,847
Number of spouses receiving retiree health benefits:	<u>1,461</u>	<u>1,482</u>
Total	5,253	5,329
Number of members and beneficiaries entitled to deferred benefits <sup>3</sup>	191	191
Assets:		
Market Value	\$ 468,973,000	\$ 456,918,000
Actuarial Value	485,844,648	474,746,152
Unfunded actuarial accrued liability	\$ (35,818,968)	\$ 10,086,799
Amortization Period	30 years	30 years
Funded Ratio		
Market Value	104.2%	94.2%
Actuarial Value	108.0%	97.9%
<b>City's Fiscal Year Ending</b>	<b>June 30, 2018</b>	<b>June 30, 2017</b>
City annual required contribution % of pay rate (ARC):	Covered <sup>4</sup> Total <sup>4</sup>	
Normal	2.45%	2.27%
Accrued liability	<u>(1.74%)</u>	<u>(1.61%)</u>
Total	0.71%	0.66%
City annual required contribution in dollars (ARC):		
Normal	\$ 3,976,000	\$ 5,402,000
Accrued liability	<u>(2,824,000)</u>	<u>786,000</u>
Total	\$ 1,152,000	\$ 6,188,000

<sup>1</sup>Includes 49 members participating in the Deferred Retirement Option Plan (DROP) as of December 31, 2016.

<sup>2</sup>In addition, there are 719 eligible part-time employees as of December 31, 2016, compared to 979 eligible part-time employees as of December 31, 2015. As of December 31, 2016, there were 300 full-time employees and 273 part-time employees assumed to be ineligible for retiree health benefits.

<sup>3</sup>Of the 191 members and beneficiaries entitled to deferred benefits, 23 are assumed eligible to receive retiree health benefits.

<sup>4</sup>With the December 31, 2015 closure of the plan, covered compensation reflects the pay of retiree health benefits-eligible active employees (\$162,287,018) and total compensation reflects the pay of all pension-eligible employees (\$175,122,601). Both covered compensation and total compensation include the compensation of current DROP participants (\$3,222,649).



2. The major benefit and contribution provisions of the System, as reflected in the valuation, are summarized in Schedule G. The valuation reflects the plan changes included in Ordinance 336-2016 adopted by the City Council on October 26, 2016. In addition to incorporating many of the changes mandated by the Collaborative Settlement Agreement (CSA), the Ordinance also:
  - Excluded members hired after December 31, 2015 from eligibility to receive retiree health benefits.
  - Established benefit and eligibility provisions for Group E and F members not covered under the CSA similar to employees who are covered under the CSA.
  - Specified eligibility and postemployment contribution requirements for the retiree health benefits payable to members and beneficiaries entitled to deferred benefits.
  - Modified eligibility and postemployment contribution requirements for retiree health benefits paid as the result of an in-service death.
  
3. Schedule E of this report outlines the full set of actuarial assumptions and methods used in the valuation. The following changes were made to the methods and assumptions since the previous valuation:
  - The assumed initial per capita health care costs used to project the per capita health care costs have been updated to reflect the System's recent experience.
  - The assumed per capita health care costs have been adjusted to reflect the anticipated cost reductions associated with providing prescription drug benefits through a new pharmacy benefit manager, CVS/caremark
  - As the contribution rates for those retirees participating in the Select Plan and the Model Plan are based upon retiree health care cost experience, retiree contribution rates were updated to reflect the System's recent experience.
  - As members hired after December 31, 2015 are ineligible to receive retiree health benefits, future contribution rates for retiree health benefit recipients are now based upon the projected retiree health care costs associated with each projection year's closed group of participants.



- The assumed rates of health care inflation have been updated to reflect the anticipated future experience of the plan.
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, 2016 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.
  6. As shown in the Summary of Principal Results, the funding ratio is the ratio of the actuarial value of assets to the accrued liability and is different based on market value of assets. The funded ratio is an indication of progress in funding the promised benefits. When the ratio is less than 100%, there is a need, in addition to the normal cost contributions, for contributions toward payment of the unfunded accrued liability. When the ratio is 100% or more, the amortized surplus may be used to reduce the normal cost contributions. The funded ratio does not have any relationship to measuring sufficiency if the plan had to settle its liabilities.



**SECTION II – MEMBERSHIP DATA**

1. Data regarding the membership of the System for use as a basis of the valuation was furnished by the System. The valuation included 2,769 active and DROP members with annualized compensation totaling \$162,287,018. In addition, there are 719 part-time employees hired before December 31, 2015. The majority of these part-time employees are seasonal employees that have a de minimis impact on the liabilities of the System. As of December 31, 2016, there were 300 full-time employees and 273 part-time employees assumed to be ineligible for retiree health benefits.
2. The following table shows the number of retired members and spouses in receipt of retiree health benefits, and those members with deferred retiree health benefits as of December 31, 2016.

**THE NUMBER OF RETIRED MEMBERS AND BENEFICIARIES AS OF DECEMBER 31, 2016**

Group	Number
Retired members and surviving spouses currently receiving retiree health benefits	3,792
Spouses currently receiving retiree health benefits	<u>1,461</u>
Total	5,253
Terminated vested members eligible for retiree health benefits	23
Terminated vested members not eligible for retiree health benefits	<u>168</u>
Total	5,444

Note: In addition, there are 7,437 inactive participants hired before December 31, 2015 who are former employees with an employee account balance in the pension plan, but are assumed not to be vested. No retiree health benefit liability is assumed for these individuals, as per Ordinance 336-2016, they are ineligible to receive retiree health benefits.

3. Table 1 in Schedule H shows the distribution by age and years of membership service of the number of active members included in the valuation, while Table 2 shows the number of retired members, beneficiaries, and spouses included in the valuation, distributed by age. Table 3 provides a distribution of members, beneficiaries, and spouses included in the valuation, by health care plan.





### **SECTION III – ASSETS**

1. As of December 31, 2016, the market value of assets available for the purpose of providing retiree health benefits amounted to \$468,973,000, as reported by the System. The estimated investment return for the plan year was 9.24%. Schedule D shows a reconciliation of the market value of assets from December 31, 2015 to December 31, 2016.
2. The market related actuarial value of assets using a 5-year smoothing technique of investment gains and losses is \$485,844,648. The estimated investment return for the plan year ending December 31, 2016 on an actuarial value of assets basis was 8.67%, which can be compared to the investment return assumed for the period of 7.50%. Schedule C shows the development of the actuarial value of assets as of December 31, 2016.



#### **SECTION IV – COMMENTS ON VALUATION**

1. Schedule B of this report contains the valuation balance sheet that shows the present and prospective assets and liabilities of the System as of December 31, 2016. The valuation was prepared in accordance with the actuarial assumptions set forth in Schedule E and the actuarial cost method that is described in Schedule F.
2. The valuation balance sheet shows that the System has total prospective liabilities of \$480,550,900, of which \$322,992,259 is for the prospective retiree health benefits payable on account of present retired members, beneficiaries of deceased members, and terminated members entitled to deferred retiree health benefits, and \$157,558,641 is for the prospective retiree health benefits payable on account of present active members. Against these liabilities, the System has a total present actuarial value of assets of \$485,844,648 as of December 31, 2016. The difference of \$5,293,748 between the total liabilities and the total present assets represents the present value of surplus contributions.
3. The actuarially determined contributions of the System consist of normal contributions and accrued liability contributions. The valuation indicates that normal contributions at the rate of 2.45% of payroll are required under the entry age method. Estimated budgeted administrative expenses are included in the normal cost rate. The expenses for the fiscal year ending June 30, 2017 are estimated to be 0.38% of payroll. As active employees do not contribute to retiree health benefits, the full amount of 2.45% is payable by the City.
4. Prospective normal contributions at the rate of 2.45% have a present value of \$30,525,220 net of administrative expenses. When this amount is increased by \$5,293,748, which is the present value of excess contributions, a surplus of \$35,818,968 results. The development of the unfunded accrued liability is shown in Schedule A.
5. As can be seen from Schedule I of our report, the System had a gain for the year. This gain has five main sources: (1) lower per capita health care costs primarily the result of anticipated cost reductions associated with providing prescription drug benefits through a new pharmacy benefit manager, CVS/caremark, (2) the change in methodology used to value projected contribution rates for retiree health benefit recipients, (3) the asset performance was better than expected, (4) the



pre-payment of retiree health benefit costs in 2015, and (5) mortality experience gains from current retiree health benefit recipients.

6. The valuation's discount rate assumption of 7.50% reflects the System's intent, in the long-term, to fully-fund retiree health benefits. If the System is unable to maintain the fully-funded status of retiree health benefits due to a reduction in asset levels resulting from investment returns below the current target rate of return, higher than expected benefit payments, and/or the inability to make future contributions, the valuation of retiree health benefits liabilities may require the use of a lower discount rate.
7. The impact of the Affordable Care Act (ACA) was addressed in this valuation. Review of the information currently available did not identify any specific provisions of the ACA that are anticipated to significantly impact results. While the impact of certain provisions such as the excise tax on high-value health insurance plans beginning in 2020 (if applicable) and participation changes due to the individual mandate should be recognized in the determination of liabilities, overall future plan costs and the resulting liabilities are driven by amounts employers and retirees can afford (i.e., trend). The trend assumption forecasts the anticipated increase to initial per capita costs, taking into account health care cost inflation, increases in benefit utilization, plan changes, and technological advances. Given the uncertainty regarding the ACA's implementation (e.g., the impact of excise tax on high-value health insurance plans, changes in participation resulting from the implementation of state-based health insurance exchanges), continued monitoring of the ACA's impact on the System's liability will be required.
8. On June 2, 2015, GASB Statement No. 74 and GASB Statement No. 75 (GASB 74 and 75) were unanimously adopted by the GASB Board. The disclosure requirements of GASB 74 and 75 will be similar to the disclosure requirements for pension benefits under GASB Statement No. 67 and GASB Statement No. 68. GASB 74 relates to accounting disclosures for plans and, as such, replaces GASB 43 beginning with fiscal years ending December 31, 2017. GASB 75 relates to accounting disclosures for contributing employers and, as such, replaces GASB 45 beginning with fiscal years ending December 31, 2018. GASB 74 and 75 will require applicable OPEB plans and contributing employers to disclose the net OPEB liability on the statement of financial position and



book an accounting expense based upon the entry age normal actuarial cost method. Beyond the use of a specified actuarial cost method, GASB's new disclosure standards will also require the discount rate used to calculate liabilities to be based upon the yield of 20-year, tax-exempt municipal bonds and the expected rate of return on plan assets, to the extent plan assets are projected to be available for the payment of future benefits. Additionally, GASB 74 and 75 will bring about many other changes in the liability valuation and accounting disclosure processes currently in place that are expected to significantly impact data collection, timing, and effort. As details for the new GASB OPEB disclosure standards emerge, planning and coordination between plans, contributing employers, actuaries, and auditors is recommended.

9. The information provided in this report is for the purposes of funding retiree health benefits and fulfilling the accounting disclosure requirements of GASB 43 and 45. Nothing in this report is intended to indicate termination sufficiency.
10. Calculations in this report, including the funded ratio, are based on an actuarial value of assets that uses a smoothing method (see Schedule E for a description). If the market value of assets was used instead of the actuarial value of assets, different results would be obtained.



**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 retiree health benefits payable on his or her behalf. On the basis of the valuation, the normal contribution rate was determined to be 2.45%. As active employees do not contribute to retiree health benefits, the full amount of 2.45% is payable by the City.
3. A reduction to the normal contribution of 1.74% of payroll will deplete the surplus within a 30-year period.
4. The total City ARC rate required for the City's fiscal year ending June 30, 2018 is, therefore, 0.71% of payroll. It is our recommendation the employer contributions to the System be set at the ARC rate of 0.71% of payroll.
5. The following table summarizes the employer contributions that were determined by the December 31, 2016 valuation and are recommended for use.

**EMPLOYER ANNUAL REQUIRED CONTRIBUTIONS (ARC)  
FOR CITY'S FISCAL YEAR ENDING JUNE 30, 2018**

Contribution	Percentage of Active Members' Compensation	Dollar Amount
Normal	2.45%	\$ 3,976,000
Accrued Liability	<u>(1.74)</u>	<u>(2,824,000)</u>
Total	0.71%	\$ 1,152,000



**SECTION VI – ACCOUNTING INFORMATION**

1. Governmental Accounting Standards Board Statements No. 43 and No. 45 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of participants by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED PARTICIPANTS  
AS OF DECEMBER 31, 2016**

Group	Total
Retired members and surviving spouses currently receiving retiree health benefits	3,792
Spouses currently receiving retiree health benefits	1,461
Terminated vested members eligible for retiree health benefits	23
Active Participants	
Full-Time	2,720
DROP	49
Part-Time	<u>719</u>
<b>Total</b>	<b>8,764</b>

2. Another such item is 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 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)
12/31/2011	\$668,392	\$653,404	\$ (14,988)	102.3%	\$165,029	(9.1)%
12/31/2012	634,173	641,876	7,703	98.8	167,148	4.6
12/31/2013	674,709	618,508	(56,201)	109.1	163,477	(34.4)
12/31/2014	706,959	590,902	(116,057)	119.6	164,575	(70.5)
12/31/2015	474,746	484,833	10,087	97.9	174,963	5.8
12/31/2016	485,845	450,026	(35,819)	108.0	168,785*	(21.2)

\*Includes \$6,497,593 in eligible part-time active employee compensation. This amount excludes \$13,901,237 in compensation for full-time and part-time employees hired after December 31, 2015.



3. Following is the calculation of the annual OPEB cost and net OPEB obligation for the City's fiscal year ending June 30, 2017.

Annual OPEB Cost and Net OPEB Obligation for City's Fiscal Year Ending June 30, 2017		
(a)	Employer annual required contribution*	\$ 6,188,000
(b)	Interest on net OPEB obligation	6,286,000
(c)	Adjustment to annual required contribution	<u>6,844,000</u>
(d)	Annual OPEB cost (a) + (b) – (c)	\$ 5,630,000
(e)	Employer contributions made for the City's fiscal year ending June 30, 2017	<u>TBD</u>
(f)	Increase (decrease) in net OPEB obligation (d) – (e)	\$ TBD
(g)	Net OPEB obligation beginning of the City's fiscal year	<u>83,808,000</u>
(h)	Net OPEB obligation end of the City's fiscal year (f) + (g)	\$ TBD

\*Developed from the December 31, 2015 valuation.

#### TREND INFORMATION\*

City's Fiscal Year Ending	Annual OPEB Cost (AOC)	Percentage of AOC Contributed	Net OPEB Obligation (NOO)
December 31, 2012	\$ (313,000)	(639)%**	\$84,487,000
June 30, 2013	2,441,000	38**	86,004,000
June 30, 2014	5,707,000	36**	89,663,000
June 30, 2015	537,000	355**	88,295,000
June 30, 2016	(3,935,000)	14**	83,808,000
June 30, 2017	5,630,000	TBD	TBD

\* Historical information provided in the City's financial statements.

\*\* All employer contributions are the result of payments received from the Centers for Medicare & Medicaid Services (CMS) under the Retiree Drug Subsidy Program (RDS).



4. The annual required contribution (ARC), stated as a percentage of payroll and in dollars, determined in accordance with the parameters of GASB 43 and 45, is shown below.

Employer Annual Required Contribution (ARC) City's Fiscal Year Ending June 30, 2018		
Contribution	Percentage of Active Members' Compensation	Dollar Amount
Normal	2.45%	\$3,976,000
Accrued liability	<u>(1.74)</u>	<u>(2,824,000)</u>
Total	0.71%	\$1,152,000

5. Additional information as of December 31, 2016 follows:

Valuation date	12/31/2016
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)	4.00% - 7.50%
Health care trend rate (includes inflation)	7.75%/5.75% initial (varies by age) 5.00% ultimate
Inflation	3.00%





**SECTION VII – EXPERIENCE**

Actual experience will never (except by coincidence) follow 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, 2016 is shown below.

	<u>\$ Thousands</u>
(1) UAAL as of December 31, 2015	\$ 10,087
(2) Normal cost from December 31, 2015 valuation	5,402
(3) Actual employer contributions*	602
(4) Interest accrual: $[(1) \times 0.075] + \{[(2) - (3)] \times 0.075 \times 0.50\}$	<u>937</u>
(5) Expected UAAL before changes: (1) + (2) – (3) + (4)	\$ 15,824
(6) Change due to plan amendments	0
(7) Change due to asset transfer	0
(8) Change due to actuarial assumptions or methods	<u>(38,843)</u>
(9) Expected UAAL after changes: (5) + (6) + (7) + (8)	\$ (23,019)
(10) Actual UAAL as of December 31, 2016	<u>(35,819)</u>
(11) Gain/(loss): (9) – (10)	\$ 12,800
(12) Gain/(loss) as a percent of the December 31, 2015 actuarial accrued liabilities (\$484,833)	2.64%

\* All employer contributions are the result of payments received from the Centers for Medicare & Medicaid Services (CMS) under the Retiree Drug Subsidy Program (RDS) for the 2015 calendar year.

Valuation Date December 31	Actuarial Gain/(Loss) as a % of Beginning Accrued Liabilities
2011	(4.0)%
2012	(8.7)%
2013	5.4%
2014	5.5%
2015	0.5%
2016	2.6%



**SCHEDULE A**

**DEVELOPMENT OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY  
AS OF DECEMBER 31, 2016**

	December 31, 2016	December 31, 2015
(1) Present value of prospective benefits:		
(a) Present active members	\$ 157,558,641	\$ 189,419,850
(b) Present retired members, beneficiaries and former members entitled to deferred vested retiree health benefits		
	<u>322,992,259</u>	<u>337,620,535</u>
(c) Total	\$ 480,550,900	\$ 527,040,385
(2) Present value of future normal contributions	<u>30,525,220</u>	<u>42,207,434</u>
(3) Actuarial accrued liabilities: 1(c) – (2)	\$ 450,025,680	\$ 484,832,951
(4) Actuarial value of assets	<u>485,844,648</u>	<u>474,746,152</u>
(5) Unfunded actuarial accrued liability (UAAL): (3) – (4)	\$ (35,818,968)	\$ 10,086,799
(6) Contribution Rate as a % of Payroll		
(a) Normal Cost	2.45%	3.23%
(b) UAAL	<u>(1.74)%</u>	<u>0.47%</u>
(c) Total	0.71%	3.70%
(7) Contribution in Dollars		
(a) Normal Cost	\$ 3,976,000	\$ 5,402,000
(b) UAAL	<u>(2,824,000)</u>	<u>786,000</u>
(c) Total	\$ 1,152,000	\$ 6,188,000



**SCHEDULE B**  
**VALUATION BALANCE SHEET**

Present and prospective assets and liabilities as of December 31, 2016:

<u>ACTUARIAL LIABILITIES</u>	
Present value of prospective retiree health benefits payable on account of present retired members, beneficiaries of deceased members, and terminated members entitled to deferred benefits	\$ 322,992,259
Present value of prospective retiree health benefits payable on account of present active members	<u>157,558,641</u>
Total liabilities	<u>\$ 480,550,900</u>
<u>PRESENT AND PROSPECTIVE ASSETS</u>	
Actuarial value of assets	\$ 485,844,648
Present value of future contributions	
City normal contributions	\$ 30,525,220
Unfunded accrued liability contributions	<u>(35,818,968)</u>
Total prospective contributions	<u>\$ (5,293,748)</u>
Total assets	<u>\$ 480,550,900</u>



### SCHEDULE C

#### DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

(1)	Actuarial Value of Assets as of December 31, 2015	\$	474,746,152
(2)	Market Value of Assets as of December 31, 2016	\$	468,973,000
(3)	Market Value of Assets as of December 31, 2015	\$	456,918,000
(4)	Net Cash Flow During Plan Year		
	(a) Contributions	\$	602,000
	(b) Net Benefit Payments and Net Transfers		(28,988,000)
	(c) Administrative Expenses		(446,000)
	(d) Investment Expenses		<u>(2,299,000)</u>
	(e) Net Cash Flow: (a) + (b) + (c) + (d)	\$	(31,131,000)
(5)	Investment Income		
	(a) Market Total: (2) – (3) - (4)(e)	\$	43,186,000
	(b) Assumed Rate		7.50%
	(c) Amount for Immediate Recognition		
	$[(3) \times (5)(b)] + \{[(4)(a) + (4)(b) + 4(c)] \times (5)(b) \times 0.5\} - (4)(d)$	\$	35,486,650
	(d) Amount for Phased-In Recognition: (5)(a) – (5)(c)	\$	7,699,350
(6)	Recognized Amounts for Plan Year		
	(a) Current Year: $0.20 \times (5)(d)$	\$	1,539,870
	(b) First Prior Year		(10,935,913)
	(c) Second Prior Year		(1,031,047)
	(d) Third Prior Year		11,838,705
	(e) Fourth Prior Year		<u>5,331,231</u>
	(f) Total Recognized Investment Gain/(Loss)	\$	6,742,846
(7)	Actuarial Value of Assets as of December 31, 2016		
	(1) + (4)(e) + (5)(c) + (6)(f)	\$	485,844,648
	80% of Market Value EOY		375,178,400
	120% of Market Value EOY		562,767,600
(8)	Final Actuarial Value of Assets as of December 31, 2016	\$	485,844,648
(9)	Rate of Return on Actuarial Value		8.67%



**SCHEDULE D**

**CURRENT ASSET INFORMATION**

<i>Receipts</i>		
(1) Contributions		
• City Contributions	\$ 0	
• Medicare Reimbursements	<u>602,000</u>	
Total Contributions		\$ 602,000
(2) Investment Income		
• Interest and Dividends	\$ 7,195,000	
• Net Appreciation (Depreciation) in Fair Value of Investments	35,737,000	
• Other Investment Earnings	254,000	
• Investment Expenses	<u>(2,299,000)</u>	
Total Investment Income		<u>\$ 40,887,000</u>
(3) Total Receipts		\$ 41,489,000
<i>Disbursements</i>		
(4) Net Benefits Paid	\$ (28,988,000)	
(5) Administrative Expenses	<u>\$ (446,000)</u>	
(6) Total Disbursements		\$ (29,434,000)
(7) Net Increase/(Decrease): (3) + (6)		\$ 12,055,000
<i>Reconciliation of Asset Balances</i>		
(8) Market Value at December 31, 2015		\$456,918,000
(9) Excess of Receipts Over Disbursements		<u>12,055,000</u>
(10) Market Value at December 31, 2016		\$468,973,000
(11) Estimated Rate of Return on Market Value of Assets		9.24%



**SCHEDULE D**  
**(continued)**

**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	\$746,029	0.40%	\$621,691	19.13%
12/31/2010	726,412	2.43	657,319	13.10
12/31/2011	668,392	(1.65)	616,464	0.87
12/31/2012	634,173	0.15	652,864	11.95
12/31/2013	674,709	12.02	726,098	16.81
12/31/2014	706,959	10.01	737,722	6.38
12/31/2015	474,746	7.39	456,918	(0.11)
12/31/2016	485,845	8.67	468,973	9.24



**SCHEDULE E**

**OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS**

VALUATION DATE: December 31, 2016

DISCOUNT RATE: 7.50% per year, net of investment expenses

INFLATION ASSUMPTION: 3.00% per year

HEALTH CARE COST TREND RATES: The initial per capita health care costs and contributions are expected to increase each year with inflation (trend). The following chart details the trend assumption by year and payment age.

Calendar Year	Payment Age <65	Payment Age 65+
2017	7.75%	5.75%
2018	7.00	5.50
2019	6.50	5.25
2020	6.00	5.00
2021	5.50	5.00
2022	5.25	5.00
2023+	5.00	5.00

AGE RELATED MORBIDITY: Per capita health care costs are adjusted to reflect expected cost changes related to age. The increase to the net incurred claims is assumed to be:

Payment Age	Annual Increase
<30	0.0%
30 – 34	1.0
35 – 39	1.5
40 – 44	2.0
45 – 49	2.6
50 – 54	3.3
55 – 59	3.6
60 – 64	4.2
65 – 69	3.0
70 – 74	2.5
75 – 79	2.0
80 – 84	1.0
85 - 89	0.5
90+	0.0

SPOUSE COVERAGE IN RETIREE HEALTH BENEFIT PLANS: Actual census data, payment form elections, and current health care plan elections for spouses of current retirees were used. For spouses of eligible future retirees, a 100% spouse coverage election rate is assumed for those members choosing a joint & survivor payment form, and a 15% spouse coverage election rate is assumed for those members selecting a single life annuity payment form. Under a joint & survivor payment form, retiree health benefits are available until the death of the last annuitant.



**SCHEDULE E**  
**(continued)**

RETIREE HEALTH CARE PLAN INITIAL PER CAPITA COSTS: Paid claims and cost data were provided by the System, Anthem, and OptumRx for the period of January 1, 2015 through December 31, 2016. Claims data were provided separately for medical and prescription drug benefits. CMC accepted this information without audit and has relied upon the sources for the accuracy of the data; however, CMC did review the information for reasonableness. On the basis of this review, CMC believes the data and information provided to be sufficiently complete and reliable, and that it is appropriate for the purposes intended.

Assumed adult per capita health care costs were based on past experience and trended forward to the valuation period. Costs were adjusted to account for any changes in administration, plan changes, and large claims, if appropriate. Additionally, the per capita health care costs have been adjusted based upon information provided by the System to reflect the anticipated cost reductions associated with providing prescription drug benefits through a new pharmacy benefit manager, CVS/caremark. As some participants elect to cover dependents, the assumed adult costs include the additional costs of coverage for non-spouse dependents.

Future experience may differ significantly from the cost estimates presented in this report due to unforeseen and random events. As such, the valuation's results should be viewed as having a likely range of variability.

The following chart details the initial adult per capita health care cost assumptions. These amounts include medical, drug, and administrative costs and represent the full cost of providing benefits. The average medical, drug, and administrative costs shown are normalized to age 65 and then age adjusted in calculating liabilities. Additionally, health care costs for all prospective health care plan participants and existing retirees not yet age 65 who were hired prior to April 1, 1986 are adjusted to account for their potential ineligibility for premium-free Medicare Part A.

Annual Medical, Drug, and Administrative Costs			
Plan	Payment Age <65	Payment Age 65+	
		Not Enrolled in Medicare Part A	Enrolled in Medicare Part A
Secure Plan	\$21,152	\$6,751	\$3,509
Select Plan	\$15,991	\$6,346	\$2,964
Model Plan	\$15,718	\$5,988	\$2,925

RETIREE HEALTH CARE PLAN CONTRIBUTIONS: Assumed adult per capita health care contribution rates were developed for those participants in the 2016 Select Plan who are required to contribute a portion of retiree health benefit costs as defined in Schedule C. Contributions were determined to fully-fund retiree health benefit costs in 2017 based upon Medicare eligibility status. Rates are based on retiree cost experience, enrollment, and trended based on the assumptions. The following chart details the full (100%) adult per capita contribution assumptions. These amounts include medical, drug, and third party administrative costs.

Plan	Payment Age <65	Payment Age 65+		
		Not Enrolled in Medicare Part A	Enrolled in Medicare Part A	Current Average
Select Plan	\$13,409	\$7,855	\$3,763	\$4,091
Model Plan	\$12,163	\$5,988	\$3,007	\$3,052





**SCHEDULE E**  
**(continued)**

As members hired after December 31, 2015 are ineligible to receive retiree health benefits, the contributions assumed for years beyond 2017 are based upon the projected retiree health care costs associated with each projection year's closed group of participants, reflecting the impact of aging and health care inflation.

**HEALTH BENEFIT PLAN PARTICIPATION:** Actual census data and current plan elections provided by the System were used for those currently receiving retiree health benefits. Group 1 members who retired prior to September 1, 2007 and currently qualify for the Secure Plan, are assumed to re-qualify in all future years. All current participants not qualifying for the Secure Plan are covered either by the Select Plan or the Model Plan. Current participants are assumed to maintain their current retiree health benefits coverage until they are no longer eligible.

The active members of Group C with at least 15 years of creditable service shall be entitled to retiree health benefits under the Select Plan as Group 1 members. All other eligible future retirees electing retiree health benefits are assumed to be covered by the Model Plan. 90% of eligible future retirees in Group 1 are assumed to elect retiree health benefits. Eligible future retirees in Group 2 are required to pay the portion of their cost as determined by the point system, so retiree health benefit election rates are assumed to reduce as the level of cost sharing increases. The point system is based upon the sum of the member's full years of service and the member's age at separation from service. The assumed contribution rates and rates of participation for Group 1 and Group 2 members are as follows:

Group	Assumed Rate of Participation (%)	Retiree Contribution of Cost (%)	
		Select Plan	Model Plan
Group 1 / Group 2 with 90+ Points	90	5	10
Group 2 with 80 – 89 Points	80	25	25
Group 2 with 70 – 79 Points	60	50	50
Group 2 with 60 – 69 Points	40	75	75

For those eligible future retirees of Group 2 with less than 60 points, the System will pay 25% of the full premium for retiree coverage only (spouse or dependent coverage are not available). It is assumed 0% of these eligible future retirees will elect retiree health benefits.

As credible experience for Group 2 participation is not yet available, the rates of participation are estimates and actual results may be materially different. As such, this assumption will need to be revised as credible experience evolves.

**MEDICARE COVERAGE AND ELIGIBILITY:** Retiree health benefit participants age 65 and older who are eligible for premium-free Medicare Part A benefits are assumed to be enrolled in Medicare Part A. For those retiree health benefit participants who are not eligible for premium-free Medicare Part A coverage, the System is assumed to remain the primary payer. For a portion of the Medicare eligible group, the premium-free Medicare Part A eligibility status is provided by the System. As the premium-free Medicare Part A eligibility status is determined from a wide range of sources with varying and, at times, limited content, the premium-free Medicare Part A eligibility status data is incomplete. Adjustments have been made to account for this incompleteness. As the true status of those who are, or will be eligible for premium-free Medicare Part A is uncertain, actual results may be materially different. For all unidentified current retirees, hired prior to April 1, 1986, and not assumed eligible for premium-free Medicare Part A coverage through their spouse, as well as those active employees hired prior to April 1, 1986, 15% are assumed to not qualify for premium-free Medicare Part A coverage. The assumption of 15% is based upon estimates from the current retiree population. 100% of deferred vested members receiving health care benefits are assumed to obtain the 40 or more quarters of Medicare-covered employment required for premium-free Medicare Part A coverage as a result of their subsequent employment.

All retiree health benefit participants age 65 and older are assumed to be enrolled in Medicare Part B.



**SCHEDULE E**  
**(continued)**

SALARY INCREASES: Salary increases are assumed to vary by service. Representative rates are as follows:

Service	Annual Increase
0	7.5%
5	5.0
10	4.5
20	4.5
30	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:

Age	Annual Rate of Withdrawal			
	<u>Less than One Year of Service</u>	<u>Between One and Three Years of Service</u>	<u>Between Three and Five Years of Service</u>	<u>Five or More Years of Service</u>
20	25.0%	10.0%	7.5%	5.0%
25	25.0	10.0	7.5	5.0
30	25.0	10.0	7.5	3.5
35	25.0	10.0	4.0	2.8
40	25.0	10.0	4.0	2.3
45	25.0	10.0	4.0	1.5
50	25.0	10.0	4.0	1.5
55	25.0	10.0	4.0	1.5
60	25.0	10.0	4.0	1.5
65	25.0	10.0	4.0	1.5
70	25.0	10.0	4.0	1.5



**SCHEDULE E**  
**(continued)**

<b>Annual Rate of Retirement</b>				
<u>Age</u>	<u>Early Retirement</u>	<u>Less than 30 Years of Service</u>	<u>30 Years of Service</u>	<u>31+ Years of Service</u>
<b>Groups C, D, E, and F*</b>				
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
<b>Group G</b>				
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

\* For purposes of valuing CSA Employee members eligible for DROP benefits, the rates listed for 30 or more years of service are adjusted as follows:

- 30% of members who are expected to retire with 31, 32, 33, 34, or 35 years of service are assumed to enter the DROP upon attaining 30 year of service.
- 10% of members who are expected to retire with 30 years of service are assumed to enter the DROP upon attaining 30 years of service.



**SCHEDULE E**  
**(continued)**

<u>Age</u>	<u>Annual Rate of Disability</u>	
	<u>Groups C, D, E, and F</u>	<u>Group G</u>
20	0.01%	0.01%
25	0.02	0.02
30	0.03	0.03
35	0.05	0.05
40	0.09	0.09
45	0.15	0.15
50	0.27	0.27
55	0.42	0.42
60	0.00	0.50
67	0.00	0.00

**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.

**EXPENSES:** Estimated budgeted administrative expenses of 0.38% of payroll are added to the normal cost rate.

**PERCENT MARRIED:** 70% of male members and 30% of female members are assumed to be married and elect a joint & survivor payment form. Males are assumed to be three years older than their 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 was assumed that 50% of the eligible vested members who terminate 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.

**PERCENT ELECTING MEDICAL EXPENSE REIMBURSEMENT PROGRAM (MERP):** Based upon current participation in the MERP, 0% of current and future retiree health benefits participants are assumed to elect the MERP. As credible experience for MERP participation is not yet available, the assumed rate of participation is an estimate and actual results may be materially different. As such, this assumption will need to be reviewed as credible experience evolves.

**PART-TIME EMPLOYEES:** On July 1, 1991, the plan was amended to include part-time employees. As these employees do not exhibit the same decremental patterns as full-time employees, and the liability is deemed to be de minimis, the results of this valuation are based upon full-time employees only.



## **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 retiree health 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 retiree health benefit, as well as the possibility of his terminating with a service, disability or survivor's benefit. The present value of the expected retiree health 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 retiree health benefits payable from the System on account of the present group of members and beneficiaries.
2. The employer contributions required to support the retiree health 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 retiree health benefits to be paid from the System.



**SCHEDULE G**

**SUMMARY OF MAIN SYSTEM PROVISIONS  
AS INTERPRETED FOR VALUATION PURPOSES**

Pension Benefit Eligibility

All active employees of the City except for the following:

- Members of the Police and Fireman’s Disability and Pension Fund of Ohio.
- Elected City officials.
- Employees for whom the City contributes to PERS.
- Members of the faculties, teaching staffs, research staffs, and administrative staff of the University of Cincinnati appointed to positions covered by the Teachers Insurance and Annuity Association Social Security Plan.
- Persons becoming employees after June 1, 1961, who are employed in any of the following employment classifications: bricklayer, carpenter, carpenter foreman, cement finisher, electrician, electrician foreman, painter, painter foreman, plasterer, plumber, sign painter, steamfitter and pipefitter, tinsmith, or composition roofer.
- Persons hired as police recruits who are not currently enrolled as a member of the System prior to their date of hire.
- Current contributing members of the School Employees Retirement System (SERS) or the State Teachers Retirement System (STRS) who are hired by the City on a seasonal, temporary, or part-time basis.

Members of the System are divided into the following groups:

Group	Criteria
A, B	Any member who has retired prior to 7/1/2011.
C	Any member who, as of June 30, 2011, was an active or deferred vested member and had either: <ul style="list-style-type: none"> <li>a) Completed at least 30 years of service, or</li> <li>b) Reached age 60 and completed at least 5 years of service.</li> </ul>



**SCHEDULE G**  
**(continued)**

Pension Benefit Eligibility (continued)

Group	Criteria
D	Any active member who, between July 1, 2011 and December 31, 2013: 1) Either a) Completed at least 30 years of service, or b) Reached age 60 and completed at least 5 years of service; and 2) Retired prior to January 1, 2014.
E	Any active member who: 1) Between July 1, 2011 and December 31, 2013 either: a) Completed at least 30 years of service, or b) Reached age 60 and completed at least 5 years of service; and 2) Retires on or after January 1, 2014.
F	Any active member whose most recent membership enrollment date was prior to January 1, 2010 and who is not in groups A through E.  Any deferred vested member whose most recent membership enrollment date was prior to January 1, 2010, is not in groups A through E, and has at least five years of service prior to the date they separate from employment.
G	Any member whose most recent membership enrollment date is on or after January 1, 2010, or  Any member rehired on or after January 1, 2010, who has fewer than 5 years of service as of June 30, 2011, or  Any retiree of the System who is receiving a service retirement allowance and is re-employed on or after April 1, 2013.



**SCHEDULE G**  
**(continued)**

Pension Benefit Eligibility (continued)

Members in the System are further classified as follows:

Class	Criteria
CSA Retiree  (CSA participants corresponding to Retirees Class)	Group A and B members and their designated optionees.
CSA Employee  (CSA participants corresponding to Current Employees Class)	Group C, D, E, and F members (and their designated optionees) that were vested and employed on 7/1/2011.
CMC Employee  (Non-CSA participants.)	Group E and F members (and their designated optionees) that were either vested or employed on 7/1/2011 and no break in employment service since 1/1/2010 and prior to becoming vested.
Non-CSA  (Non-CSA participants.)	Group G members and their designated optionees; or  Inactive members not assigned to a group because they were neither employed nor vested on 7/1/2011.

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

Normal Retirement

*Groups A, B, C, D, E, and F:*

Age 60 with 5 years of service or 30 years of service.

*Group G:*

Age 67 with 5 years of service or age 62 with 30 years of service.





**SCHEDULE G**  
**(continued)**

Pension Benefit Eligibility (continued)

Early Retirement

*Groups A, B, C, D, E, and F:*  
Age 55 with 25 years of service.

*Group G:*  
Age 57 with 15 years of service.

Deferred Retirement Option Plan (DROP): Current Employees Class members with at least 30 years of service may participate in the DROP.

Disability Retirement Eligibility: 5 years of service.

Deferred Vested Retirement Eligibility: 5 years of service.

Retiree Health Benefits Eligibility

Per Ordinance 336-2016 adopted by the City Council on October 26, 2016, employees hired after December 31, 2015 are not eligible to receive retiree health benefits.

Group 1: Those members of Group C or those members hired before January 9, 1997. For those members of Group C or those members who retire under the System prior to January 1, 2016 (including their survivors receiving pension benefits), a minimum of 15 years of service is required. For those members who retire under the System after December 31, 2016 (including their survivors receiving pension benefits), a minimum attained age of 60 with 20 years of service or 30 years of service regardless of age is required.

Group 2: Those participants hired on or after January 9, 1997. For those members who retire under the System prior to January 1, 2016 (including their survivors receiving pension benefits), a minimum of 15 years of service is required. For those members who retire under the System after December 31, 2016 (including their survivors receiving pension benefits), a minimum attained age of 60 with 20 years of service or 30 years of service regardless of age is required. Group 2 participants entitled to a deferred retirement allowance are eligible for health benefits upon attainment of the Medicare eligibility age.



**SCHEDULE G**  
**(continued)**

Deferred Retirement Option Plan (DROP): Eligible Current Employees Class members may effectively retire and freeze their accrual of years of service with the System and defer receipt of retirement benefits, including retiree health benefits, for a period not to exceed five years while continuing City employment. For valuation purposes, current DROP participants are assumed to be active members, receiving health care benefits as an active employee. Service does not accrue while participating in the DROP and retiree health benefits are assumed to begin upon exit from active employment.

Members and Beneficiaries Assumed to be Eligible for Deferred Retiree Health Benefits as of December 31, 2016: Per Ordinance 336-2016 adopted by the City Council on October 26, 2016, members of Group C and their associated beneficiaries are eligible for retiree health benefits under the Select Plan based upon a minimum of 15 years of service. All other eligible members and their associated beneficiaries are eligible for retiree health benefits under the Model Plan based upon a minimum attained age of 60 with 20 years of service or 30 years of service regardless of age.

Dependents: A retiree may elect to cover an eligible spouse and/or eligible dependent children by paying the applicable retiree contribution rate for the specified enrollment tier.

Retiree Health Benefits

The System offers health care benefits (medical, prescription drugs, dental, and vision coverage) to eligible retirees, beneficiaries, and their dependents before and during Medicare eligibility.

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, members who retired prior to September 1, 2007, and who establish their annual household income to be less than \$30,000, are eligible to receive medical and prescription drug coverage under the Secure Plan. Those members who retired prior to September 1, 2007 who do not qualify for coverage under the Secure Plan may elect medical and prescription drug coverage through either the Select Plan or Model Plan based upon eligibility.

Those members of Group C or those members who retired on or after September 1, 2007 (including those employees who retired under a special incentive plan in 2007) but prior to January 1, 2016 may elect medical and prescription drug coverage through the Select Plan. Those members not eligible for the Secure Plan or the Select Plan may elect coverage under the Model Plan.



**SCHEDULE G  
(continued)**

**Retiree Contributions**

Participants covered by the Secure Plan do not contribute towards the cost of medical and prescription drug coverage. Group 1 participants covered by the Select Plan contribute an amount equal to five percent of the full cost of medical and prescription drug benefits of the retiree group with costs adjusted based upon the Medicare eligibility age (age 65). Group 1 participants covered by the Model Plan contribute an amount equal to ten percent of the full cost of medical and prescription drug benefits of the retiree group with costs adjusted based upon the Medicare eligibility age (age 65). Group 2 participants will pay the portion of the full cost of medical and prescription drug benefits of the coverage option for which they are eligible as determined by the point system.

Points	Retiree Contribution of Cost (%)	
	Select Plan	Model Plan
90+	5	10
80 – 89	25	
70 – 79	50	
60 – 69	75	
Less than 60	75% of full premium for retiree only (spouse or dependent coverage is not available)	

**Active Service Death Benefits**

A surviving spouse, eligible dependent child, and orphan receiving survivor pension benefits as a result of death during employment of an eligible active member is eligible to receive retiree health benefits based upon the eligibility and terms applicable to the associated member.

**Medicare Part B Premium Reimbursement**

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, the System no longer reimburses the Medicare Part B premiums for retirees and spouses. As such, it is assumed the System has no liability under GASB 43 and 45 for Medicare Part B premium reimbursements.

All Medicare eligible retirees and dependents are responsible for the payment of the required Medicare Part B premiums. Retiree health benefits participants who are eligible for but do not enroll or maintain their enrollment in Medicare Part B will be responsible for the medical expenses Medicare Part B otherwise would have paid. As such, it is assumed the System is the secondary payer for Medicare Part B benefits.

**Dental Benefits**

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, all members electing to participate in the dental plan will be required to pay the full cost of dental coverage. As such, it is assumed the System has no liability under GASB 43 and 45 for dental benefits.



**SCHEDULE G**  
**(continued)**

Vision Benefits

Under the provisions of Ordinance 85-2011, beginning January 1, 2012, all members electing to participate in the vision plan will be required to pay the full cost of vision coverage. As such, it is assumed the System has no liability under GASB 43 and 45 for vision benefits.



**SCHEDULE H**

**TABLE 1**

**SCHEDULE OF ELIGIBLE\* ACTIVE MEMBERS BY AGE AND SERVICE  
AS OF DECEMBER 31, 2016**

Age	Completed Years of Service							Total
	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30+	
Under 20	1							1
Avg Pay	15,376							15,376
20 - 24	18							18
Avg Pay	41,330							41,330
25 - 29	87	29	2					118
Avg Pay	45,060	46,651	37,351					45,320
30 - 34	136	86	31	7				260
Avg Pay	53,269	53,136	51,719	48,151				52,902
35 - 39	100	86	44	34	6			270
Avg Pay	51,174	54,297	53,762	57,230	52,824			53,390
40 - 44	75	76	62	63	12	4		292
Avg Pay	57,143	60,168	59,043	65,256	57,919	54,682		60,082
45 - 49	50	74	82	87	51	62	1	407
Avg Pay	55,331	59,114	58,112	59,104	64,453	63,187	81,596	59,790
50 - 54	62	46	52	80	84	207	24	555
Avg Pay	61,872	55,413	52,031	58,662	64,103	64,646	68,617	61,616
55 - 59	32	37	50	73	57	200	61	510
Avg Pay	57,575	64,999	57,480	53,688	62,740	63,330	64,792	61,245
60 - 64	21	28	27	31	34	69	27	237
Avg Pay	60,532	69,258	56,976	54,257	60,539	60,582	71,142	61,561
65 - 69	4	8	13	16	11	12	9	73
Avg Pay	79,851	65,964	49,220	64,809	51,365	51,669	66,309	58,983
70 & Over	3	1	4	4	3	7	6	28
Avg Pay	122,127	41,776	86,872	37,810	51,623	53,794	60,892	64,416
<b>Total</b>	<b>589</b>	<b>471</b>	<b>367</b>	<b>395</b>	<b>258</b>	<b>561</b>	<b>128</b>	<b>2,769</b>
<b>Avg Pay</b>	<b>53,870</b>	<b>57,329</b>	<b>56,062</b>	<b>58,274</b>	<b>62,163</b>	<b>63,032</b>	<b>66,904</b>	<b>58,609</b>

Average Age 48.01

Average Service 15.16

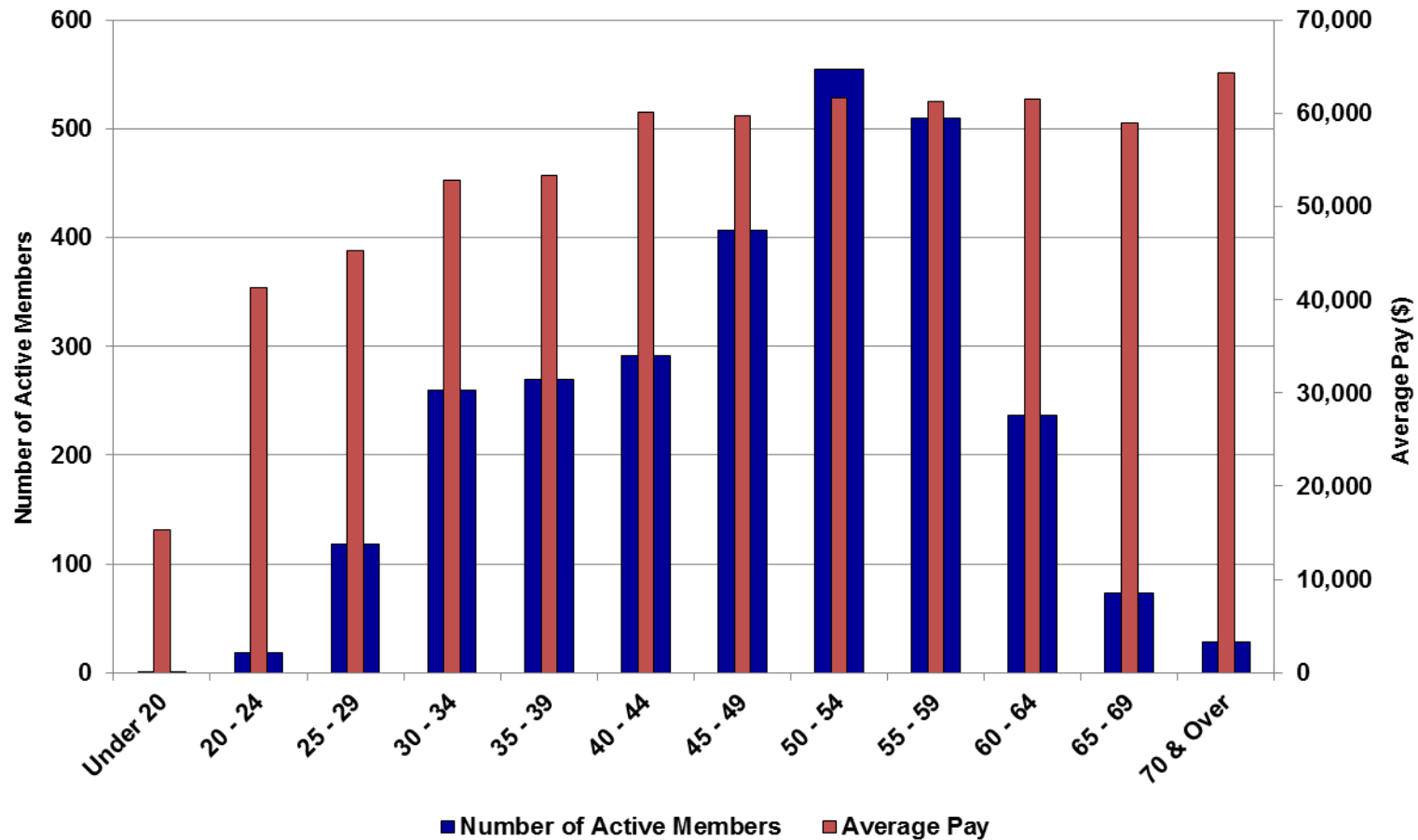
\*With the December 31, 2015 closure of the retiree health benefits plan, this exhibit reflects only those active members, including current DROP participants, who are assumed eligible to receive retiree health benefits.



**SCHEDULE H**  
**(Continued)**

**CHART 1**

**DISTRIBUTION OF ELIGIBLE\* ACTIVE MEMBERS BY AGE  
AS OF DECEMBER 31, 2016**



\*With the December 31, 2015 closure of the retiree health benefits plan, this exhibit reflects only those active members, including current DROP participants, who are assumed eligible to receive retiree health benefits.



**SCHEDULE H  
(Continued)**

**TABLE 2**

**SCHEDULE OF PARTICIPATING RETIREES/SURVIVING SPOUSES AND COVERED SPOUSES BY AGE  
AS OF DECEMBER 31, 2016**

<u>Attained Age</u>	<u>Number of Retirees/DROP/ Surviving Spouses</u>	<u>Number of Covered Spouses</u>	<u>Total</u>
39 & Under	0	1	1
40 - 44	2	3	5
45 - 49	6	7	13
50 - 54	32	59	91
55 - 59	207	151	358
60 - 64	606	313	919
65 - 69	832	368	1,200
70 - 74	654	254	908
75 - 79	483	160	643
80 - 84	405	97	502
85 - 89	295	35	330
90 - 94	204	11	215
95 - 99	57	2	59
100 & Over	9	0	9
<b>Total</b>	<b>3,792</b>	<b>1,461</b>	<b>5,253</b>

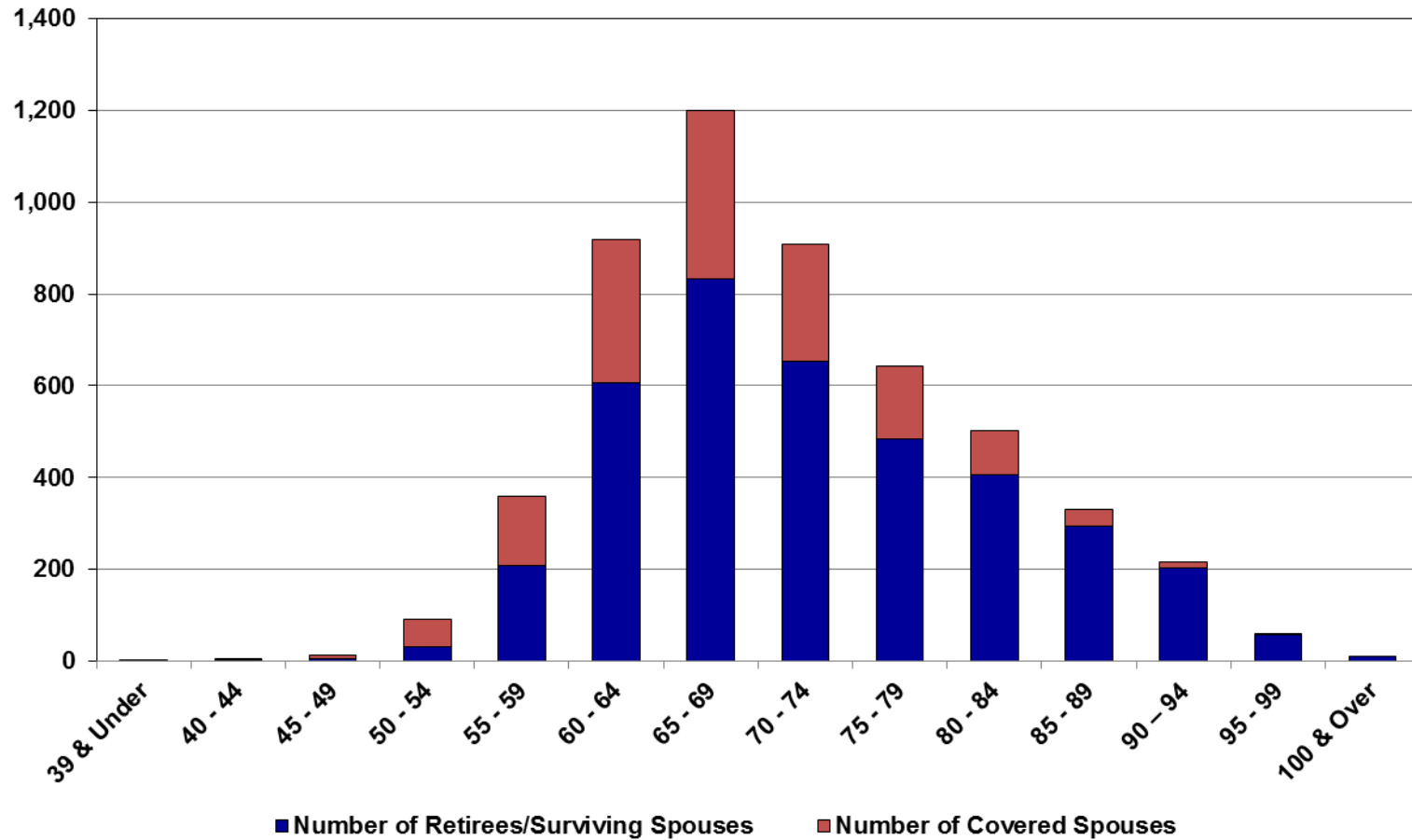
In addition, there are 23 members and beneficiaries assumed to be eligible for deferred retiree health benefits.



**SCHEDULE H**  
**(Continued)**

**CHART 2**

**SCHEDULE OF PARTICIPATING RETIREES/SURVIVING SPOUSES AND COVERED SPOUSES BY AGE  
AS OF DECEMBER 31, 2016**







**SCHEDULE H**  
**(Continued)**

**TABLE 3**

**SCHEDULE OF PARTICIPATING RETIREES/SURVIVING SPOUSES  
AND COVERED SPOUSES BY HEALTH CARE PLAN  
AS OF DECEMBER 31, 2016**

<u>Health Care Plan</u>	<u>Age &lt; 65</u>	<u>Age 65+</u>	<u>Total</u>
Secure Plan	19	243	262
Select Plan	1,307	3,621	4,928
Model Plan	61	2	63
<b>Total</b>	1,387	3,866	5,253



**SCHEDULE I**

**ANALYSIS OF FINANCIAL EXPERIENCE**

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

Type of Activity	\$ Gain (or Loss) For Year Ending 12/31/2016	\$ Gain (or Loss) For Year Ending 12/31/2015
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (1,371)	\$ (2,392)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(123)	(61)
<b>Death-in-Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	346	(84)
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	60	698
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss. Applies to salary-based benefits.	0	0
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(1,232)	(1,257)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	5,406	(749)
<b>Death After Retirement.</b> If retirees live longer than assumed, there is a loss. If not as long, a gain.	4,726	6,524
<b>Other.</b> Miscellaneous gains and losses resulting from cost experience, changing demographics of the retired membership, changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>4,988</u>	<u>40</u>
<b>Gain (or Loss) During Year From Experience</b>	<u>\$ 12,800</u>	<u>\$ 2,719</u>
<b>Non-Recurring Items.</b> Adjustments for plan amendments, asset transfers, assumption changes, or method changes.	<u>38,843</u>	<u>(132,436)</u>
<b>Composite Gain (or Loss) During Year</b>	<u>\$ 51,643</u>	<u>\$ (129,717)</u>