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The City of Omaha
Police & Fire Retirement System

Actuarial Valuation as of
January 1, 2014

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July 10, 2014

Board of Trustees
City of Omaha Police and Fire Retirement System
1819 Farnam Street
Omaha, NE 68183

RE: January 1, 2014 Actuarial Valuation

Members of the Board:

In accordance with your request, we have completed an Actuarial Valuation of the City of Omaha Police and Fire Retirement System as of January 1, 2014 for the plan year ending December 31, 2014. The major findings of the valuation are contained in this report. While there have been no changes to the plan provisions, there have been changes to the actuarial assumptions and methods used in this report as a result of the experience study that was performed in 2013.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the City's staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information provided in prior years. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our calculations may need to be revised.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: experience differing from that anticipated by the 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 System's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts. Actuarial computations presented in this report under GASB Statements No. 25 and 27 are for purposes of fulfilling financial accounting requirements for the City. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the City's funding requirements and goals. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

The consultants who worked on this assignment are pension actuaries. CMC's advice is not intended to be a substitute for qualified legal or accounting counsel.

This is to certify that the independent consulting actuaries are members of the American Academy of Actuaries, have experience in performing valuations for public retirement plans, and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board and the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement plan and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System. The Board of Trustees has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix B.

We respectfully submit the following report and look forward to discussing it with you.

Sincerely,

Patrice Beckham

Brent A. Banister

Patrice A. Beckham, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

Brent A. Banister, PhD, FSA, EA, FCA, MAAA
Chief Pension Actuary

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EXECUTIVE SUMMARY

This report presents the results of the January 1, 2014 actuarial valuation of the City of Omaha Police and Fire Retirement System. The primary purposes of performing the valuation are:

- to estimate the liabilities for the future benefits expected to be paid by the System;
- to determine the actuarial contribution rate, based on the System's funding policy;
- to measure and disclose various asset and liability measures;
- to monitor any deviation between actual plan experience and experience predicted by the actuarial assumptions so that recommendations for assumption changes can be made when appropriate;
- to analyze and report on any significant trends in contributions, assets and liabilities over the past several years.

The plan provisions reflected in this report are unchanged from last year's report. However, the employee contribution rate for Police members declined from 16.35% to 15.35%, as scheduled in the current bargaining agreement. A number of actuarial assumptions and methods have changed from last year's report, including:

- changing the actuarial assumptions by reducing disability rates, decreasing mortality for disabled retirees (longer life expectancy), introducing new, separate salary increase assumptions for Police and Fire members;
- modifying the current asset smoothing method to reflect more smoothing by recognizing 25% of the difference between the actual market value and expected value instead of 33% (current);
- resetting the amortization period to a closed 30 year period beginning January 1, 2014.

The actuarial valuation results provide a "snapshot" view of the System's financial condition on January 1, 2014. The unfunded actuarial liability (UAL) in the current valuation is $623 million, an increase of $10 million over last year's UAL of $613 million. The net change of $10 million includes the impact of both actual experience during 2013 and changes in the actuarial assumptions and methods that are first reflected in the current valuation.

The valuation results reflect net unfavorable experience for the past plan year as is demonstrated by an unfunded actuarial liability that was higher than expected based on the actuarial assumptions used in the January 1, 2013 actuarial valuation. Favorable experience on the actuarial value of assets resulted in a gain of $14 million, however unfavorable experience on demographic experience produced an actuarial loss of $18 million. Changes in the actuarial assumptions resulted in a $5 million decrease in the UAL, while the modification to the asset smoothing method increased the UAL by $3 million. The shortfall in the contributions for 2013 also increased the UAL by $7 million. Overall, the UAL increased by $10 million.

The System uses an asset smoothing method in the valuation process. As a result, the System's funded status and the recommended contribution rate are based on the actuarial (smoothed) value of assets – not the pure market value. The investment return on the market value of assets during 2013 was nearly 18%, much higher than the assumed rate of 8.0%. Due to this investment experience, the rate of return on the actuarial value of assets for the 2013 plan year was 10% (after reflecting the modification to the asset smoothing method). The System now has a deferred gain (market value of assets exceeds actuarial value). Actual returns over the next few years will determine the rate at which the deferred investment gain of $31 million is recognized. With the current deferred gains, a return of 2% on the market value of assets in 2014 would still result in an 8.0% return on the actuarial value of assets.

The following table summarizes the impact of the various changes. Please note that the relative impact of the various changes by component is dependent on the order in which they are evaluated.

	Normal Cost	Unfunded Actuarial Liability	Actuarial Contribution Rate
1/1/13 valuation	23.525%	$613.0M	62.272%
1/1/14 valuation before changes	(0.327%)	10.8	0.145%
Change in asset valuation method	0.000%	3.5	0.215%
Change in actuarial assumptions	(0.095%)	(4.7)	(0.483%)
Change in amortization period to 30 years	0.000%	0.0	(9.288%)
Inclusion of DROP Payroll	0.000%	0.0	(0.723%)
1/1/14 valuation	23.103%	$622.6M	52.138%

ASSETS

As of January 1, 2014, the System had total funds of $579.5 million, when measured on a market value basis. This was an increase of $89.7 million from the prior year and represents an approximate rate of return of 17.8%.

The market value of assets is not used directly in the actuarial calculation of the System's funded status and the actuarial contribution rate. An asset valuation method is used to smooth the effects of market fluctuations. In the prior valuation, the actuarial value of assets was equal to the expected asset value (based on last year's actuarial value of assets, net cash flows and a rate of return equal to the actuarial assumed rate of 8.0%) plus 1/3 of the difference between the actual market value and the expected asset value. The method was modified in the current valuation to recognize 1/4 of the difference between the actual market and expected asset values, a change which results in more smoothing of investment experience. The modified method produced an actuarial value of assets that was $3.5 million lower than what the prior method would have produced. See Exhibit 2 for the detailed development of the actuarial value of assets as of January 1, 2014. The rate of return on the actuarial value of assets, after reflecting the modification to the smoothing method, was 10.1%.

The components of the change in the market value and actuarial value of assets are shown below:

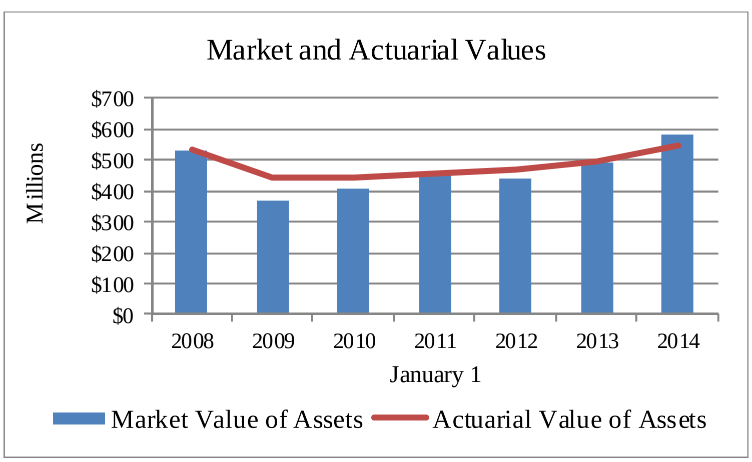
	Market Value ($M)		Actuarial Value ($M)	
Net Assets, January 1, 2013	$	489.8	$	495.8
• City and Member Contributions	+	65.5	+	65.5
• Benefit Payments and Refunds	–	63.1	–	63.1
• Investment Gain/(Loss)	+	87.3	+	53.7
• Change in Asset Valuation Method	+	N/A	+	(3.5)
Net Assets, January 1, 2014		579.5		548.4
Estimated Net Rate of Return		17.8%		10.1%

The total investment gain that is not recognized as of January 1, 2014 is $31.1 million, a significant change from the $3.0 million deferred loss in last year's valuation. The unrecognized gains will be reflected in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent they are not offset by the recognition of losses derived from future experience. This means that earning the assumed rate of investment return of 8.0% per year (net of investment expenses) on a market value basis will result in an actuarial gain on the actuarial value of assets in the next few years.

The unrecognized investment gain is 5.7% of the market value of assets at January 1, 2014. If the deferred gains were recognized immediately in the actuarial value of assets, the unfunded actuarial liability would decrease by $31.1 million to $591.5 million, the funded percentage would increase from 47% to 49%, the actuarially determined contribution rate would decrease from 52.138% to 51.400%, and the contribution shortfall would decrease from 1.544% to 0.806%.

A comparison of asset values on both a market and actuarial basis for the last six years is shown below.

	January 1 ($M)					
	2014	2013	2012	2011	2010	2009
Market Value of Assets	$579	$490	$440	$453	$405	$366
Actuarial Value of Assets	$548	$496	$467	$456	$440	$439
Actuarial Value/Market Value	95%	101%	106%	101%	109%	120%



An asset smoothing method is used to mitigate the volatility in the market value of assets. By using a smoothing method, the actuarial (or smoothed) value can be either above or below the pure market value. The significant investment losses in 2008 resulted in the actuarial value of assets being above the market value for the five years after the drop. In the current valuation, the actuarial value of assets is less than the market value.

LIABILITIES

The first step in determining the contribution level for the System is to calculate the liabilities for all expected future benefit payments. These liabilities represent the present value of future benefits (PVFB) expected to be earned by the current members, assuming that all actuarial assumptions are realized. Thus, the PVFB reflects service and salary increases that are expected to occur in the future before a benefit becomes payable. The PVFB components can be found in the liabilities portion of the valuation balance sheet (see Exhibit 3).

The other critical measurement of System liabilities in the valuation process is the actuarial liability (AL). This is the portion of the PVFB that will not be paid by the future normal costs (i.e. it is the portion of the PVFB that is allocated to past service).

The following chart compares the Actuarial Liability (AL) and assets for the current and prior valuation.

	As of January 1	
	2014	2013
Actuarial Liability (AL)	$ 1,170,967,753	$ 1,108,874,778
Assets at Actuarial Value	$ 548,360,223	$ 495,847,234
Unfunded Actuarial Liability (AVA)	$ 622,607,530	$ 613,027,544
Funded Ratio (Actuarial Value)	47%	45%
Assets at Market Value	$ 579,494,652	$ 489,800,140
Unfunded Actuarial Liability (MVA)	$ 591,473,101	$ 619,074,638
Funded Ratio (Market Value)	49%	44%

EXPERIENCE FOR THE 2013 PLAN YEAR

The difference between the actuarial liability and the actuarial value of assets at the same date is referred to as the unfunded actuarial liability (UAL). Benefit improvements, experience gains/losses, changes in the actuarial assumptions or methods, and actual contributions made will impact the amount of the unfunded actuarial liability.

Actuarial gains (or losses) result from actual experience that is more (or less) favorable than anticipated based on the actuarial assumptions. These “experience” (or actuarial) gains or losses are reflected in the unfunded actuarial liability and are measured as the difference between the expected unfunded actuarial liability and the actual unfunded actuarial liability, taking into account any changes due to assumptions, methods or benefit provision changes. The experience for 2013, in total, was unfavorable (a higher unfunded actuarial liability than expected). There was an actuarial gain of around $14 million on the actuarial value of assets and an actuarial loss of about $18 million on liabilities.

The change in the unfunded actuarial liability between January 1, 2013 and 2014 is shown below (in millions):

Unfunded Actuarial Liability, January 1, 2013	$613
• Expected change in UAL	2
• Contribution shortfall in 2013	7
• Investment experience	(14)
• Demographic experience	18
• Other experience	(1)
• Changes in actuarial assumptions	(5)
• Change in asset valuation method	3
Unfunded Actuarial Liability, January 1, 2014	$623

The amortization period was reset to 30 years in the 2014 valuation. This change was made as part of the 2013 experience study to better reflect the long term financing structure in place to eliminate the unfunded actuarial liability.

CONTRIBUTION LEVELS

The annual contribution to the System is composed of two parts:

(1) The normal cost (which is the allocation of costs attributed to the current year's membership service) and,
(2) The amortization payment on the Unfunded Actuarial Liability (UAL).

The normal cost rate is independent of the System's funded status and represents the cost, as a percent of payroll, of the benefits provided by the System which is allocated to the current year of service. The UAL payment is intended to fund the UAL over the amortization period set in the funding policy. As mentioned earlier, the amortization period was reset to a closed 30 year period in the current valuation.

		January 1, 2014	January 1, 2013	% Chg
1.	Normal Cost Rate	23.103%	23.525%	(1.8)
2.	UAL Contribution Rate	29.035%	38.747%	(25.1)
3.	Total Contribution Rate (1) + (2)	52.138%	62.272%	(16.3)
4.	Less Employee Contribution Rate	(16.179%)	(16.695%)	(3.1)
5.	Less City Contribution Per Ordinance	(33.345%)	(33.366%)	(0.1)
6.	Less City Prior Service Payment	(1.070%)	(1.144%)	(6.5)
7.	Contribution Shortfall	1.544%	11.067%	(86.0)

The total normal cost for the System is 23.103% of pay, or about $27 million this year. When offset by the expected employee contributions, the employer portion of the normal cost is 6.924% of pay, or about $8 million. The normal cost represents the long-term cost of the benefit structure in the System, given the current actuarial assumptions and plan membership.

The UAL contribution rate declined due to resetting the amortization period to 30 years. Due to the number of members now in the DROP, their covered payroll was included in the expected payroll for 2014 resulting in a smaller UAL contribution rate. We believe this is a better reflection of the System's financing as both members and the city contribute while members are in DROP.

As scheduled in the current bargaining agreement, the employee contribution rate for Police members declined from 16.35% to 15.35% effective January 1, 2014. There was no change for Fire members. As a result, the overall employee contribution rate decreased by 0.516% of total payroll.

The System's total actuarial contribution rate (payable as a percent of member payroll) decreased by 10.134% of total pay, from 62.272% on January 1, 2013 to 52.138% on January 1, 2014. The contribution shortfall decreased from 11.067% in last year's valuation to 1.544% in the current valuation. The primary components of the change in the total actuarial contribution rate are as follows:

	Rate
Total Actuarial Contribution Rate, January 1, 2013	62.272 %
• Actuarial (Gain) / Loss - Investment Experience	(0.649)
• Actuarial (Gain) / Loss - Demographic Experience	0.824
• Other Experience	(1.052)
• Contributions Less Than Actuarial Rate	0.626
• Change in Normal Cost Rate	(0.327)
• Change in Asset Valuation Method	0.215
• Change in Amortization Method	(9.288)
• Change in Actuarial Assumptions	(0.483)
Total Actuarial Contribution Rate, January 1, 2014	52.138 %

As a result of actual plan experience during 2013 and the changes to assumptions and methods, the System has an unfunded actuarial liability of $623 million (actuarial liability is greater than actuarial assets). Effective January 1, 2014, the unfunded actuarial liability is being funded over a closed 30-year period that begins on January 1, 2014. This change, which is more reflective of the financing plan for the UAL, extends the number of years over which the unfunded actuarial liability is paid, resulting in yearly payments that are lower. As the table above shows, this change is the most significant factor in the reduction of the actuarial contribution rate. The resulting UAL payment is 29.035% of pay. As a result, the total contribution rate for 2014 is 52.138% of pay (23.103% + 29.035%). The scheduled contributions for the year are 50.621%. The resulting contribution shortfall is 1.544%.

COMMENTS

On January 1, 2014, the actuarial value of assets was $548 million and the market value of assets was $579 million. The $3 million in deferred losses that existed in the prior valuation has been eliminated and there is now $31 million in deferred gains. The investment return of nearly 18% resulted in a gain on actuarial assets, despite the deferred losses, but there was a liability loss during 2013 that more than offset the investment gain. The funded ratio of the system remains low, but increased from 44% on a market value basis in the 2013 valuation to 49% in the 2014 actuarial valuation.

The contribution shortfall in the 2014 valuation decreased significantly to 1.544% of pay (about $2 million) due to the combined impact of actual experience in 2013 and the change in actuarial assumptions and methods, the most significant which was resetting the amortization period to a closed 30 year period. However, the shortfall of 1.544% is based on the actuarial valuation performed on January 1, 2014 which is a snapshot measurement on that date assuming no change in either the normal cost rate or the UAL contribution rate. It also assumes that all actuarial assumptions will be met in all future years. Given the benefit structure for the System, and new hires in particular, an evaluation of the System based solely on the actuarial valuation prepared as of January 1, 2014 does not accurately portray the long term financial health of the System. As new hires in the future become members of the system, replacing current active members, the normal cost rate is expected to decline, reflecting the lower cost benefit structure for new hires. As a result, the portion of the total contribution rate available to pay off the UAL is expected to increase each year in the future until all current active members have been replaced by new members under the lower cost benefit structure. While the System's financial health is expected to improve in future years, it is impossible to anticipate the long term funding progress without performing an open group projection of future valuation results. This actuarial analysis is beyond the scope of the regular valuation services provided to the System under the fixed fee in our current contract. However, we strongly recommend the Board consider adding a projection model to the current valuation services in order to assist them and other interested parties in better understanding the long term funding of the System.

As mentioned earlier in this report, the System uses an asset smoothing method in the actuarial valuation. While this is a very common practice for public retirement systems, it is important to be aware of the potential impact of the unrecognized investment experience. The key valuation results from the 2014 valuation, using both the actuarial and market value of assets, are shown in the following table to provide full disclosure of the impact of asset smoothing on the funding of the System. Because the actuarial and market value of assets are significantly different, so are the actuarial contribution rates.

	$ Millions	
	Using Actuarial Value of Assets	**Using Market Value of Assets**
Actuarial Liability	$1,171.0	$1,171.0
Asset Value	548.4	579.5
Unfunded Actuarial Liability	622.6	591.5
Present Value of Prior Service Payments	11.8	11.8
Unfunded Actuarial Liability for Funding	$610.8	$579.7
Funded Ratio	46.8%	49.5%
Normal Cost Rate	23.103%	23.103%
UAL Contribution Rate	29.035%	28.297%
Actuarial Contribution Rate	52.138%	51.400%
Employee Contribution Rate	(16.179%)	(16.179%)
City Contribution Rate	(34.415%)	(34.415%)
Contribution Shortfall	1.544%	0.806%

THE CITY OF OMAHA POLICE AND FIRE RETIREMENT SYSTEM

PRINCIPAL VALUATION RESULTS

		January 1, 2014	January 1, 2013	% Chg
MEMBERSHIP				
1.	Active Membership			
	- Number of Members	1,391	1,411	(1.4)
	- Projected Payroll for Upcoming Fiscal Year	$121,040,325	$116,056,740	4.3
	- Average Projected Payroll	$87,017	$82,251	5.8
	- Average Attained Age	40.0	39.8	0.5
	- Average Entry Age	28.4	28.5	(0.1)
2.	Inactive Membership			
	- Number of Retirees / Beneficiaries*	1,284	1,241	3.5
	- Number of Disabilities	232	237	(2.1)
	- Number of Deferred Vesteds	13	12	8.3
	- Average Annual Benefit	$43,879	$42,088	4.3
ASSETS AND LIABILITIES				
1.	Net Assets			
	- Market Value	$579,494,652	$489,800,140	18.3
	- Actuarial Value	$548,360,223	$495,847,234	10.6
2.	Projected Liabilities			
	- Retired Members and Beneficiaries*	$683,345,301	$638,192,530	7.1
	- Disabled Members	81,770,787	80,017,372	2.2
	- DROP Balances	2,669,360	1,041,598	156.3
	- Other Inactive Members	6,969,352	4,202,467	65.8
	- Active Members	660,720,852	644,289,243	2.6
	- Total Liability	$1,435,475,652	$1,367,743,210	5.0
3.	Actuarial Liability	$1,170,967,753	$1,108,874,778	5.6
4.	Unfunded Actuarial Liability	$622,607,530	$613,027,544	1.6
5.	Funded Ratios			
	Actuarial Value Assets / Actuarial Liability	46.83%	44.72%	4.7
	Market Value Assets / Actuarial Liability	49.49%	44.17%	12.0
CONTRIBUTIONS				
1.	Normal Cost Rate	23.103%	23.525%	(1.8)
2.	UAL Rate	29.035%	38.747%	(25.1)
3.	Total Contribution Rate (1) + (2)	52.138%	62.272%	(16.3)
4.	Less Employee Contribution Rate	(16.179%)	(16.695%)	(3.1)
5.	Less City Contribution Per Ordinance	(33.345%)	(33.366%)	(0.1)
6.	Less City Prior Service Payment	(1.070%)	(1.144%)	(6.5)
7.	Contribution Shortfall	1.544%	11.067%	(86.0)

* Includes 34 DROP participants in the 2014 valuation and 12 in the 2013 valuation

EXHIBIT 1
SUMMARY OF FUND ACTIVITY

(Market Value Basis)

For Year Ended December 31, 2013

Assets at January 1, 2013	$	489,800,140
Receipts:		
City Contributions		43,838,750
Employee Contributions		21,659,947
Investment Earnings		90,564,700
Total Receipts		156,063,397
Disbursements:		
Benefits Payments		62,564,780
Refund of Contributions		559,981
Investment Fees		3,244,124
Total Disbursements		66,368,885
Assets as of December 31, 2013	$	579,494,652
Annualized Yield		
- Gross		18.5%
- Net of Expenses		17.8%

EXHIBIT 2

DETERMINATION OF ACTUARIAL VALUE OF ASSETS

The actuarial value of assets is used to minimize the impact of annual fluctuations in the market value of investments on the contribution rate. The current asset valuation method is called the "Expected +25% Method." This has been changes from prior years, where the "Expected + 33% Method" was used.

The "expected value" of assets is determined by applying the investment return assumption to last year's actuarial value of assets and the net difference of receipts and disbursements for the year. The actual market value is compared to the expected value and 25% of the difference (positive or negative) is added to the expected value to arrive at the actuarial value of assets for the current year.

1.	Actuarial Value of Assets as of January 1, 2013	$	495,847,234
2.	Actual Receipts / Disbursements		
	a. Total Contributions		65,498,698
	b. Benefit Payments/Other		(63,124,761)
	c. Net Change		2,373,937
3.	Expected Actuarial Value of Assets as of January 1, 2014 { (1) * 1.08} + {(2c) * 1.08 ^{½}}		537,982,080
4.	Market Value of Assets as of January 1, 2014		579,494,652
5.	Excess of Market Value over Expected Actuarial Value as of January 1, 2014		41,512,572
6.	Preliminary Actuarial Value of Assets as of January 1, 2014 [(3) + 1/4 of (5)]		548,360,223
7.	Calculation of 20% Corridor		
	a. 80% of (4)		463,595,722
	b. 120% of (4)		695,393,582
8.	Final Actuarial Value of Assets as of January 1, 2014 (6), but not < (7a), nor > (7b)	$	548,360,223
9.	Rate of Return on Actuarial Value of Assets		10.1%

EXHIBIT 2 (continued)

A historical comparison of the market and actuarial value of assets is shown below:

Date	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	AVA / MVA
1/1/2008	$529,923,390	$530,493,413	100.1%
1/1/2009	365,923,877	439,108,652	120.0%
1/1/2010	405,390,038	440,478,409	108.7%
1/1/2011	452,640,303	456,158,774	100.8%
1/1/2012	440,429,392	467,375,458	106.1%
1/1/2013	489,800,140	495,847,234	101.2%
1/1/2014	579,494,652	548,360,223	94.6%

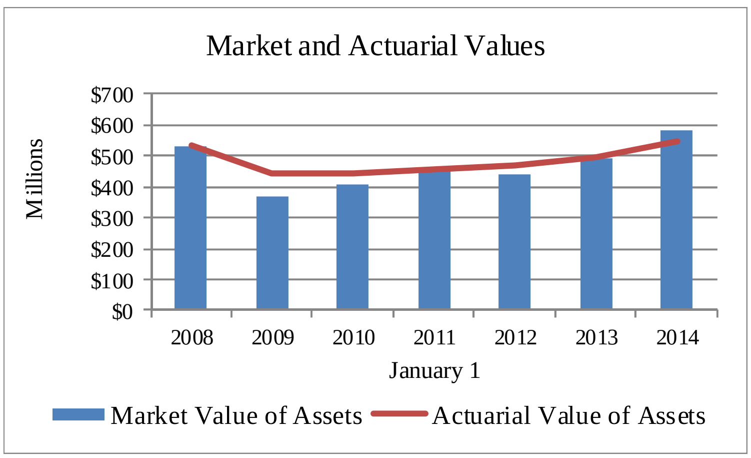


EXHIBIT 3

ACTUARIAL BALANCE SHEET

An actuarial statement of the status of the plan in balance sheet form as of January 1, 2014 is as follows:

Assets

Current assets (actuarial value)		$ 548,360,223
Present value of future normal costs		264,507,899
Present value of future contributions to fund unfunded actuarial liability		622,607,530
Total Assets		$ 1,435,475,652

Liabilities

Present value of future retirement benefits for:		
Active employees	$ 647,554,982	
Retired employees, contingent annuitants and spouses receiving benefits	683,345,301	
Estimated DROP balances	2,669,360	
Deferred vested employees	6,787,971	
Inactive employees due refunds	181,381	
Inactive employees – disabled	81,770,787	
Total		$ 1,422,309,782
Present value of future death benefits payable upon death of active members		8,082,425
Present value of future benefits payable upon termination of active members		5,083,445
Total Liabilities		$ 1,435,475,652

EXHIBIT 4

UNFUNDED ACTUARIAL LIABILITY

As of January 1, 2014

The actuarial liability is the portion of the present value of future benefits which will not be paid by future normal costs. The actuarial value of assets is subtracted from the actuarial liability to determine the unfunded actuarial liability.

The City makes scheduled payments of $1,327,600 annually through the year 2028. The present value of these contributions was applied to the Unfunded Actuarial Liability (UAL) to determine the amount of the UAL to be funded as a percent of payroll (contribution rates).

1.	Present Value of Future Benefits	$ 1,435,475,652
2.	Present Value of Future Normal Costs	264,507,899
3.	Actuarial Liability (1) – (2)	1,170,967,753
4.	Actuarial Value of Assets	548,360,223
5.	Unfunded Actuarial Liability (3) – (4)	622,607,530
6.	Present Value of Prior Service Payments	11,809,362
7.	Adjusted Unfunded Actuarial Liability (Payable from Payroll Related Contributions) (5) – (6)	$ 610,798,168

EXHIBIT 5

CALCULATION OF ACTUARIAL GAIN / (LOSS)
For Plan Year Ending December 31, 2013

Liabilities		
1. Actuarial liability less prior service payments as of January 1, 2013	$	1,096,662,700
2. Normal cost for 2013 (mid-year)		26,403,410
3. Interest at 8.00% on (1) and (2) to December 31, 2013		88,768,835
4. Benefit payments during 2013		63,124,761
5. Interest on benefit payments		2,476,415
6. Assumption changes		(4,634,436)
7. Expected actuarial liability as of December 31, 2013	$	1,141,599,333
(1) + (2) + (3) - (4) - (5) + (6)		
8. Actuarial liability less prior service payments as of December 31, 2013	$	1,159,158,391
Assets		
9. Actuarial value of assets as of January 1, 2013	$	495,847,234
10. Contributions during 2013		65,498,698
11. Benefit payments during 2013		63,124,761
12. Interest on items (9), (10) and (11)		39,760,909
13. Change in asset valuation method		(3,459,381)
14. Expected actuarial value of assets as of December 31, 2013	$	534,522,699
(9) + (10) - (11) + (12) + (13)		
15. Actual actuarial value of assets as of December 31, 2013	$	548,360,223
(Gain) / Loss		
16. Expected unfunded actuarial liability / (surplus)		
(7) – (14)	$	607,076,635
17. Actual unfunded actuarial liability / (surplus)		
(8) – (15)	$	610,798,168
18. Actuarial Gain / (Loss)		
(16) – (17)	$	(3,721,534)
19. Actuarial Gain / (Loss) on Actuarial Assets		
(14) – (15)	$	13,837,524
20. Actuarial Gain / (Loss) on Actuarial Liability		
(7) – (8)	$	(17,559,058)

EXHIBIT 6

ANALYSIS OF EXPERIENCE

The purpose of conducting an actuarial valuation of a retirement plan is to estimate the costs and liabilities for the benefits expected to be paid from the plan, to determine the annual level of contribution for the current plan year that should be made to support these benefits and, finally, to analyze the plan's experience. The costs and liabilities of this retirement plan depend not only upon the benefit formula and plan provisions but also upon factors such as the investment return on the Fund, mortality rates among active and retired members, withdrawal and retirement rates among active members, rates at which salaries increase and the rate at which the cost of living increases.

The actuarial assumptions employed as to these and other contingencies in the current valuation are set forth in Appendix B of this report.

Since the overall results of the valuation will reflect the choice of assumptions made, periodic studies of the various components of the plan's experience are conducted in which the experience for each component is analyzed in relation to the assumption used for that component (called an experience study). This summary is not intended to be an actual "experience study" but rather an analysis of sources of gain and loss in the past plan year.

Gain/(Loss) By Source

The System experienced a net actuarial loss on liabilities of $17.6 million during the plan year ended December 31, 2013, and an actuarial gain on assets of $13.8 million. The net actuarial loss was $3.7 million. The major components of this net actuarial experience loss are shown below:

Liability Sources		Gain/(Loss)
Salary Increases	$	(5,593,000)*
Mortality		(4,548,000)
Terminations		(615,000)
Retirements		(4,111,000)
Disability		1,134,000
New Entrants/Rehires		(523,000)
Retiree Benefit Adjustments		(2,749,000)*
Miscellaneous		(554,000)
Total Liability Gain/(Loss)	$	(17,559,000)
Asset Gain/(Loss)	$	13,839,000
Net Actuarial Gain/(Loss)	$	(3,720,000)

* Results from the delay in the implementation of Fire pay scales as a result of ongoing negotiations and litigation from 2008 to 2012.

EXHIBIT 7

DEVELOPMENT OF 2014 ACTUARIAL CONTRIBUTION RATE

The actuarial cost method used to determine the required level of annual contributions to support the expected benefits is the Entry Age Normal Cost Method. Under this method, the total cost is comprised of the normal cost rate and the unfunded actuarial liability (UAL) payment. The System is financed by contributions from the employees and the City.

1.	(a)	Normal Cost	$	27,285,957
	(b)	Expected Payroll in 2014 for Current Actives	$	118,106,703
	(c)	Normal Cost Rate (a) / (b)		23.103%
2.		Unfunded Actuarial Liability Payable from Payroll Related Contributions	$	610,798,168
3.		Amortization Factor Level Percent of Payroll over 30 Years*		18.29735
4.		Unfunded Actuarial Liability (UAL) Payment $[(2) / (3)] \times 1.08^{1/2}$	$	34,691,367
5.		Prior Service Payment		1,327,600
6.		Total Projected Payroll for the Year, Including DROP Members	$	124,051,668
7.		UAL and Prior Service Payments as Percent of Pay [(4) + (5)] / (6)		29.035%
8.		Total Contribution Rate (1c) + (7)		52.138%
9.		Employee Contribution Rate		16.179%
10.		City Ordinance Contribution Rate		33.345%
11.		City Prior Service Contribution Rate		1.070%
12.		Contribution Shortfall (8) – (9) – (10) – (11)		1.544%

*This assumes all actuarial assumptions are met in the future, including a 4% increase in total covered payroll.

SECTION II

SYSTEM ACCOUNTING INFORMATION

In an effort to enhance the understandability and usefulness of the pension information that is included in the financial reports of pension plans for state and local governments, the Governmental Accounting Standards Board (GASB) has issued Statement No. 25 – Financial Reporting for Defined Benefit Pension Plans and Statement No. 27 – Accounting for Pension by State and Local Governmental Employers.

GASB Statement No. 25 establishes a financial reporting framework for defined benefit plans. In addition to two required statements regarding plan assets, the statement requires two schedules and accompanying notes disclosing information relative to the funded status of the plan and historical contribution patterns.

- The Schedule of Funding Progress provides historical information about the funded status of the plan and the progress being made in accumulating sufficient assets to pay benefits when due.
- The Schedule of Employer Contributions provides historical information about the annual required contribution (ARC) and the percentage of the ARC that was actually contributed.

GASB Statement No. 27 establishes standards for the measurement, recognition, and display of pension expense and related liabilities. Annual pension cost is measured and disclosed on the accrual basis of accounting. In general, the annual pension cost is equal to the ARC with adjustments for past under-contributions or over-contributions. These adjustments are based on the net pension obligation (NPO) that represents the cumulative difference since 1987 between the annual pension cost and the actual contributions to the plan. The first adjustment is equal to interest on the NPO which is added to the ARC. The second adjustment is an amortization of the NPO which is deducted from the ARC. Effective January 1, 2003, the System uses the Entry Age Normal method to determine the ARC and the unfunded actuarial liability (or surplus) is amortized as a level percentage of payroll.

In July 2012, GASB issued new statements that will significantly change the accounting for pension benefits provided by governmental employers. The new statements, Numbers 67 and 68, will not be effective for the City of Omaha until fiscal years beginning in 2014 and 2015 respectively. The new Statements have no impact on the accounting information provided in this report, but are mentioned here because of their significance and applicability in future years.

EXHIBIT 8

SCHEDULE OF EMPLOYER CONTRIBUTIONS

In accordance with Statement No. 25 of the Governmental Accounting Standards Board

Fiscal Year Ending	Annual Required Contribution* (a)	Total Employer Contribution* (b)	Percentage of ARC Contributed (b) / (a)
12/31/2008	$ 38,073,021	21,700,806	57.00%
12/31/2009	50,507,561	22,701,608	44.95%
12/31/2010	55,488,062	24,183,493	43.58%
12/31/2011	49,945,979	30,775,568	61.62%
12/31/2012	54,310,693	35,302,037	65.00%
12/31/2013	52,895,180	43,838,750	82.88%

*Information prior to 2011 was provided by the prior actuary and has not been reviewed or verified by Cavanaugh Macdonald Consulting.

Notes to the Required Schedules:

1. The traditional Entry Age Normal cost method is used.

2. The actuarial value of assets is determined based on a method that smoothes the effects of short term volatility in the market value investments. The actuarial value is equal to the expected value, based on the assumed rate of return, plus 1/4 of the difference between market and expected values. A corridor of 80% to 120% of market value is also applied.

3. Economic assumptions are as follows:
   - Investment return rate: 8.00%
   - Salary increase rates: Vary based on Police or Fire decrease to 4% at 20 or 25 years of service
   - Inflation rate: 3.25%
   - Payroll growth: 4.00%
   - Post-retirement benefit increases: the lesser of 3% or $50 ($65 for Fire retirements after June 30, 2007). The increase will be made annually, beginning in the 13th month of retirement.

4. The amortization method is a closed 30-year period, level percentage of payroll, starting January 1, 2014.

EXHIBIT 9

DEVELOPMENT OF THE NET PENSION OBLIGATION IN ACCORDANCE WITH GASB STATEMENT NO. 27

Fiscal Year End:	12/31/2007	12/31/2008	12/31/2009	12/31/2010	12/31/2011	12/31/2012	12/31/2013	12/31/2014
Assumptions and Methods								
Interest Rate	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
Payroll Growth	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Amortization Period (years)	30	30	30	30	22	21	20	30
Cost Method	EA Normal	EA Normal	EA Normal	EA Normal	EA Normal	EA Normal	EA Normal	EA Normal
Annual Pension Cost								
Annual Required Contribution (ARC)	$34,842,280	$38,073,021	$50,507,561	$55,488,062	$49,945,979	$54,310,693	$52,895,180	$43,524,890
Interest on NPO	2,530,416	3,639,524	4,917,174	7,098,244	9,539,950	11,185,515	12,814,721	13,633,595
Adjustment to ARC	(2,809,629)	(4,041,120)	(5,459,749)	(7,881,485)	(8,137,044)	(9,833,151)	(11,635,221)	(9,679,301)
Annual Pension Cost	$34,563,067	$37,671,425	$49,964,986	$54,704,821	$51,348,885	$55,663,357	$54,074,680	$47,479,184
Contribution for the Year	$20,699,211	$21,700,806	$22,701,608	$24,183,493	$30,775,568	$35,302,037	$43,838,750	TBD
Net Pension Obligation (NPO)								
NPO at beginning of year	$31,630,195	$45,494,051	$61,464,670	$88,728,048	$119,249,376	$139,822,693	$160,184,013	$170,419,943
Annual Pension Cost for Year	34,563,067	37,671,425	49,964,986	54,704,821	51,348,885	55,663,357	54,074,680	47,479,184
Contributions for year	(20,699,211)	(21,700,806)	(22,701,608)	(24,183,493)	(30,775,568)	(35,302,037)	(43,838,750)	TBD
NPO at end of year	$45,494,051	$61,464,670	$88,728,048	$119,249,376	$139,822,693	$160,184,013	$170,419,943	TBD

Note: All information prior to 2011 in this exhibit was provided by the prior actuary and has not been reviewed or verified by Cavanaugh Macdonald Consulting, LLC.

EXHIBIT 10

SCHEDULE OF FUNDING PROGRESS

In Accordance with Statement No. 25 of the Governmental Accounting Standards Board

Actuarial Valuation Date[1]	Market Value of Assets[2] (a)	Actuarial Liability (AL) (b)	Unfunded AL (UAL)[3] (b-a)	Funded Ratio (a / b)	Covered Payroll (P / R) (c)	UAL as a Percentage of Covered P / R [(b-a) / c]
12/31/2008	$365,900,000	$ 947,600,000	$581,700,000	38.6%	$ 99,500,000	584.6%
12/31/2009	405,400,000	1,026,200,000	620,800,000	39.5%	103,900,000	597.5%
12/31/2010	452,600,000	1,093,300,000	640,700,000	41.4%	111,200,000	576.2%
1/1/2011	456,158,774	1,028,866,353	572,707,579	44.3%	105,025,610	545.3%
1/1/2012	467,375,458	1,077,607,299	610,231,841	43.4%	110,027,537	554.6%
1/1/2013	495,847,234	1,108,874,778	613,027,544	44.7%	116,056,740	528.2%
1/1/2014	548,360,223	1,170,967,753	622,607,530	46.8%	121,040,325	514.4%

1. Results prior to 2011 were provided by the prior actuary and were reported at the end of the year rather than the valuation date. All information prior to 2011 in this exhibit was provided by the prior actuary and has not been reviewed or verified by Cavanaugh Macdonald Consulting, LLC

2. The prior actuary reported the market value of assets in column (a). Our understanding of GASB 25/27 is that the valuation methodology should be used for GASB calculations to the extent it complies with GASB 25 parameters. Information reported as of 1/1/2011 and later reflects the valuation methodology, including the actuarial value of assets.

3. As of 1/1/2011 the Unfunded AL is not reduced by the Present Value of Prior Service Payments. For the calculation of the Unfunded AL used for funding purposes, please refer to Exhibit 4 of this report.

EXHIBIT 11

THREE-YEAR TREND INFORMATION

Fiscal Year Ending	Annual Pension Cost (APC)	Percentage of APC Contributed	Net Pension Obligation
12/31/2011	$51,348,885	60%	$ 139,822,693
12/31/2012	55,663,357	63%	160,184,013
12/31/2013	54,074,680	81%	170,419,943

APPENDIX A

SUMMARY OF PLAN PROVISIONS

Average Final Monthly Compensation:
Section 22 - 63

Fire: For members who were age 45 and had at least 25 years of service or age 50 with at least 20 years of service as of January 1, 2013, highest average monthly compensation during any consecutive twenty-six (26) pay periods out of the last five years of service as a member of the system for which service credit had been earned. All others use the highest seventy-eight (78) pay periods with the final 130 pay periods of service.

Police: Pensionable pay excludes certain overtime pay. For those hired before January 1, 2010, an adjustment is made to include a career average of overtime pay. For those who were age 45 and had at least twenty years of service as of January 1, 2010, highest average monthly compensation is calculated using the highest consecutive twenty-six (26) pay periods out of the last five years of service as a member of the system for which service credit had been earned. All others use the highest seventy-eight (78) pay periods with the final 130 pay periods of service.

Career Overtime Average (COTA):

All Members: Each hour an employee earns for overtime is computed back to their date of hire or 1991 (whichever is later) and divided by the number of years the employee worked after December 31, 1990. This amount shall be included in the member's pension calculation. COTA is excluded for all Police members hired on or after January 1, 2010 and Fire members hired on or after January 1, 2013.

Member Contributions:
Section 22 – 73(a)
Section 22 - 68

Rates effective January 1, 2014
Police: 15.35% of total monthly salary for police,
Fire: 17.15% of total monthly salary for fire.

City of Omaha Contributions:
Section 22 – 73(b)

Rates effective January 1, 2013
Police: 20.17% of each member's pensionable earnings
Fire: 32.965% of each member's pensionable earnings

In addition, the City shall make contributions of $1,327,600 annually through the year 2028.

Service Retirement Eligibility
Section 22 - 75

Police: After age 55 and 10 years of service or age 45 and 20 years of service. Members hired after January 1, 2010 must be 50 rather than 45. If retiring with less than 30 years of service a 7% reduction is applied for each year prior to age 55.
Fire: Age 55 and 10 years of service or age 50 and 20 years of service. Members hired before 1/1/2013 can also retire at age 45 if they have at least 25 years of service.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

Service Retirement Pension
Section 22 - 76

For Police with at least 20 years of service as of latest contract effective date **and Fire members with at least 15 years of service** as of latest contract effective date, the following schedule applies.

Years of Service	Minimum Age	Percentage of Average Final Monthly Compensation
10 but less than 15	55	20%
15 but less than 20	55	30%
20 but less than 25	45**	55%*
25 years	45	75%

*55% at 20 years of service, plus 2% for each additional six months of service after 20 years and before 25 years.

** The minimum retirement age with less than 25 years is 50 for Fire.

For Police who did not have 20 years of service and Fire who did not have 15 years of service as of the latest contract effective date, the following schedule applies:

Years of Service	Minimum Age	Percentage of Average Final Monthly Compensation
10 but less than 15	55	20%
15 but less than 20	55	30%
20 but less than 25	45***	50%*
25 but less than 30	45	70%**
30 years	45	75%

*50% at 20 years of service, plus 2% for each additional six months of service after 20 years and before 25 years.

**70% at 25 years of service, plus 1% for each additional six months of service after 25 years and before 27 years, with an additional 0.5% 29 and 30 years, for a maximum of 75%.

*** The minimum retirement age with less than 25 years is 50 for Fire.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

For police hired after January 1, 2010, the following schedule applies:

Years of Service	Minimum Age	Percentage of Average Final Monthly Compensation
10 but less than 15	55	20%
15 but less than 20	55	30%
20 but less than 25	50	50%*
25 but less than 30	50	65%**
30 years	50	75%

*50% at 20 years of service, plus 1.5% for each additional six months of service after 20 years and before 25 years. Early retirement reduction applies if less than 30 years of service.

**65% at 25 years of service, plus 1% for each additional six months of service after 25 years and before 30 years. Early retirement reduction applies if less than 30 years of service.

For Fire hired after January 1, 2013, the following schedule applies:

Years of Service	Minimum Age	Percentage of Average Final Monthly Compensation
10 but less than 15	55	20%
15 but less than 20	55	30%
20 but less than 25	50	45%
25 but less than 30	50	55%*
30 years	50	65%

*55% at 25 years of service, plus 2% for each additional year of service after 25 years and before 30 years. Early retirement reduction applies if under age 55, unless the member has 30 years of service.

Cost of Living Adjustment (COLA): The monthly pension shall be increased by the lesser of 3% or $50 ($65 for Fire retirements after June 30, 2007). The increase will be made annually, beginning in the 13th month of retirement.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

Deferred Retirement Option Program (DROP):

Police: A DROP program was instituted with the last contract. After three years, this will be reviewed to determine if it is cost neutral before continuing it. Members may participate in the DROP for three to five years once they reach retirement eligibility with a minimum of 25 years of service (certain current members have a service threshold of 22.5 years). Members continue to make contributions to the system during the DROP period. During the DROP period, the member is credited with the benefits that would have been paid if the member had retired at the start of the DROP period, along with interest at the end of the year. At the end of the DROP period, the member ends employment, receives the DROP account balance, and begins to receive payments as though retirement had occurred at the beginning of the DROP period.

Fire: A DROP program was instituted with the last contract. After three years, this will be reviewed to determine if it is cost neutral before continuing it. Members may participate in the DROP for three to five years once they reach retirement eligibility. Current members who, as of January 1, 2013, are age 50 or older with at least 20 years of service or age 45 with at least 25 years of service are eligible to participate in DROP. All other members will be required to have 25 years of service for eligibility. Members continue to make contributions to the system during the DROP period. During the DROP period, the member is credited with the benefits that would have been paid if the member had retired at the start of the DROP period, along with interest at the end of the year. At the end of the DROP period, the member ends employment, receives the DROP account balance, and begins to receive payments as though retirement had occurred at the beginning of the DROP period.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

Disability Retirement

1. In Line of Duty
Section 22 - 78

A member shall become entitled to the following benefits while permanently disabled.

Years of Service
Less than 20
20 or more

* 55% for Fire members who were age 45 and had at least 25 years of service or age 50 with at least 20 years of service as of latest contract effective date.

2. Not in Line of Duty
Section 22 - 79

A member shall become entitled to the following benefits while permanently disabled.

Years of Service
Up to 10 years
10 but less than 15
15 but less than 20
20 or more

Not payable while full salary continues

Spouse's pension:

1. Death of Active member in Line of Duty:

A monthly pension equal to 49% (52% Fire members who were age 45 and had at least 25 years of service or age 50 with at least 20 years of service as of most recent contract date) of the member's average final monthly compensation is paid to the surviving spouse if death occurs while the active member has less than 25 years of service. A monthly pension equal to 69% (72% Fire members who were age 45 and had at least 25 years of service or age 50 with at least 20 years of service as of most recent contract date) of the member's average final monthly compensation is paid to the surviving spouse if death occurs after the active member has 25 years or more of service.

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

2. Death of Active member Not in Line of Duty:

The following monthly pension is paid to the surviving spouse.

Years of Service at Death
0-3
3-10
11
12
13
14
15
16
17
18
19
20-25
25+

* add 3% to each number for Fire members who were age 45 and had at least 25 years of service or age 50 with at least 20 years of service as of most recent contract date

Benefit terminates upon remarriage of spouse.

3. Death of Member Eligible for Retirement or Death of Retired Member:
Section 22 - 82

75% (90% for Fire) of the pension the member was receiving or was eligible to receive at the time of death. 50% of the pension the member was receiving for Police members hired after January 1, 2010 and Fire members hired after January 1, 2013. Upon spouse's remarriage, all benefits cease.

Children's Pension
Section 22 - 82

Upon the death of an active or retired member, the following benefit will be paid to the surviving children until age 18.

Number of Dependent Children	Percentage of Average Final Monthly Compensation
1	15%
2	30%
3	45%
4 or more	50%

APPENDIX A

SUMMARY OF PLAN PROVISIONS
(continued)

Lump Sum Death Benefits

1. **Active Member without Eligible Dependents:** Section 22 – 84(a)	Accumulated member's contributions, or $500 if greater.
2. **Retired Member without Eligible Dependents:** Section 22 – 84(b)	Accumulated member's contributions, less previous pension payments made, or $500 if greater.
3. **Active Member with Eligible Dependents:** Section 22 – 84(c)	An amount payable immediately, equal to one year's salary computed on the basis of the maximum monthly rate for patrolmen and firefighters, plus the decreased member's accumulated contributions less pension payments to his dependents, payable to the dependent who last ceases to receive pension benefits.
4. **Retired Member with Eligible Dependents:** Section 22 – 84(c)	$1,000 ($5,000 for Fire retirements after June 30, 2005) payable immediately, plus the excess over $1,000 ($5,000 for Fire retirements after June 30, 2005) if any, of the deceased member's accumulated contributions less pension payments to the member and his dependents, payable to the dependent who last ceases to receive pension benefits.

Vesting:

Section 22 - 86

Upon severance of employment by a member with less than 10 years of service and prior to obtaining eligibility under Section 22 – 75, a refund of such member's accumulated contributions.

Section 22 - 86

Upon severance of employment by a member before age 45 with more than 10 years of service and prior to obtaining eligibility under Section 22 – 75, the member may elect, in lieu of receiving a refund of contributions, to receive a monthly pension, according to the table below, commencing at age 55. Such deferred pension shall be based on service credited to the date of severance.

Years of Service	Minimum Age	Percentage of Average Final Monthly Compensation
10 but less than 15	55	20%
15 but less than 20	55	30%
20 but less than 25	50	55%
25 or more	45	75%

For Police members and Fire members with less than 15 years of service as of the latest effective contract date, the schedules shown under service retirement apply as appropriate.

APPENDIX B

ACTUARIAL METHOD AND ASSUMPTIONS

Actuarial Method

Valuations of the plan use the *"entry age-normal"* cost method. Under this actuarial method, the value of future costs attributable to future employment of participants is determined. This is called present value of future normal costs. The following steps indicate how this is determined for benefits expected to be paid upon normal retirement.

1. The expected pension benefit at normal retirement is determined for each participant.

2. A normal cost, as a level percent of pay, is determined for each participant assuming that such level percent is paid from the employee's entry age into employment to his normal retirement. This normal cost is determined so that its accumulated value at normal retirement is sufficient to provide the expected pension benefits.

3. The sum of the normal costs for all participants for one year determines the total normal cost of the plan for one year.

4. The value of future payments of normal cost in future years is determined for each participant based on his years of service to normal retirement age.

5. The sum of the value of future payments of normal cost for all participants determines the present value of future normal costs.

The value of future costs attributable to past employment of participants, which is called the actuarial liability, is equal to the present value of benefits less the present value of future normal costs. The unfunded actuarial liability is equal to the excess of the actuarial liability over assets. The unfunded actuarial liability is funded as a level percent of payroll over a 30-year closed period that began January 1, 2014.

As experience develops with the plan, actuarial gains and actuarial losses result. These actuarial gains and losses indicate the extent to which actual experience is deviating from that expected on the basis of the actuarial assumptions. In each year, as they occur, actuarial gains and losses are recognized in the unfunded actuarial liability as of the valuation date.

APPENDIX B

ACTUARIAL METHOD AND ASSUMPTIONS
(continued)

Interest:	8.00% per year, (net of investment expenses).
Salary Increases:	Merit increases based on service plus a general wage increase.
Service Retirement Age:	Graduated rates based on service.
Mortality:	
Active Members	RP-2000 Employee Table with generational improvements, set forward one year
Service Pensioners and Beneficiaries	RP-2000 Healthy Annuitant Table with generational improvements, set forward five years
Disabled	RP-2000 Disabled Retiree Mortality Table with generational improvements
Disability:	Graduated Rates by age. See table on next page
Percent of Disabilities in Line of Duty:	85%
Medical Expenses for Disabilities in Line of Duty:	5% load on liability for current and future disabled members.
Percent Married at Death or Retirement:	75%
Turnover	Graduated rates by age. See table on next page
Assets:	Actuarial value of assets equal to 1/3 of market value, plus 2/3 of expected value. Actuarial value of assets cannot exceed 120% of Market value of assets.
Load on Active Member liability to reflect final wage adjustments	10% for Fire members who were age 45 and had at least 25 years of service or age 50 with at least 20 years of service as of most recent contract date, 0% for all other Fire members and Police members
COTA Adjustment	Members are assumed to retire with their current COTA
Increase in total annual payroll	4.0%
Assumed annual rate of inflation	3.25%

APPENDIX B

ACTUARIAL METHOD AND ASSUMPTIONS (continued)

SAMPLE RATES

Age on 1/1/2010	Annual Rates: Mortality – Males	Mortality – Females	Disability	Turnover
20	.03%	.02%	.21%	1.41%
30	.05	.03	.24	1.69
40	.10	.07	.42	.63
50	.19	.15	.76	.00
60	.46	.41	1.16	.00

Salary Progression - Police

Years of Service	Inflation	Productivity	Merit & Longevity	Total Increase
1	3.25%	0.75%	9.0%	13.0%
5	3.25%	0.75%	2.2	6.2
10	3.25%	0.75%	2.0	6.0
15	3.25%	0.75%	1.0	5.0
20	3.25%	0.75%	0.5	4.5
25	3.25%	0.75%	0.0	4.0

Salary Progression – Fire

Years of Service	Inflation	Productivity	Merit & Longevity	Total Increase
1	3.25%	0.75%	5.0%	9.0%
5	3.25%	0.75%	4.5	8.5
10	3.25%	0.75%	1.0	5.0
15	3.25%	0.75%	1.0	5.0
20	3.25%	0.75%	0.0	4.0

Service Requirements
Assumed retirement rates are based on the number of years of credited service as follows:

Years of Service	Distribution	Annual Rate
Less than 25	0.0%	0.0%
25	100.0	100.0

If a member was hired after age 37, then it is assumed that member would retire at the later of age 62 or 10 years of service.

MEMBERSHIP DATA FOR VALUATION

The summary of employee characteristics presented below covers the employee group as of January 1, 2014. The schedules at the end of the report show the distribution of the various employee groups by present age along with other pertinent data.

Total number of employees in valuation:*

(a) Active employees	1,391
(b) Deferred vested employees	13
(c) Disabled employees	232
(d) Retired employees, spouses and children receiving benefits	1,284
(e) Total employees in valuation	2,920

Average age of employees in valuation:

(a) Active employees	
Attained Age	40.0
Hire Age	28.4
(b) Deferred vested employees	48.5
(c) Disabled employees	67.0
(d) Retired employees	63.7
(e) Spouses and children receiving benefits	68.3

Active employees eligible for vested benefits as of January 1, 2014:

(a) Employees eligible for deferred vested benefits	703
(b) Employees eligible for early or normal retirement benefits	120
(c) Employees eligible for refund of contributions only	568
(d) Total	1,391

*34 DROP members included in retiree counts

MEMBERSHIP DATA RECONCILIATION

January 1, 2013 to January 1, 2014

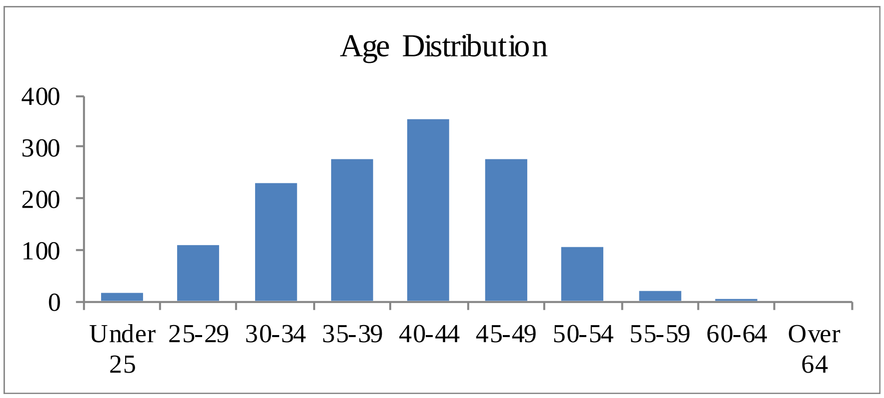
The number of members included in the valuation, as summarized in the table below, is in accordance with the data submitted by the City for eligible employees as of the valuation date.

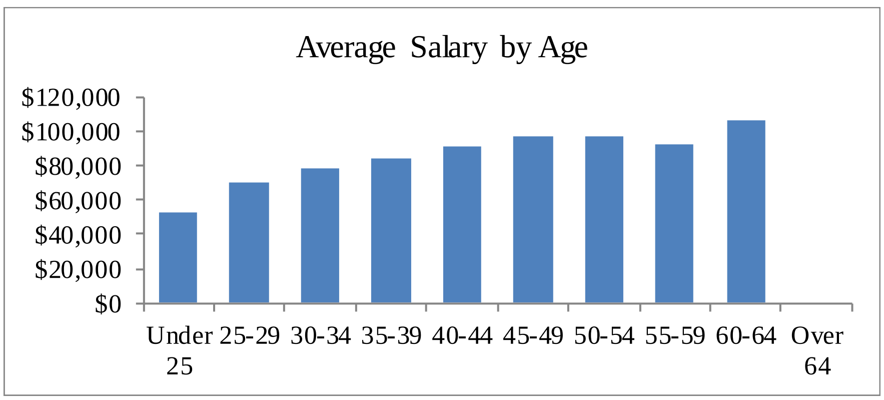
	Active Members	Deferred Vested	Disabled	DROP Participants	Retirees	Beneficiaries	Total
Members as of 1/1/2013	1,411	12	237	12	946	283	2,901
New Members	44	0	0	0	0	0	44
Terminations							
Rehired	1	0	0	0	0	0	1
Refunded	(10)	0	0	0	0	0	(10)
Deferred Vested	(3)	3	0	0	0	0	0
Disabled	(1)	0	1	0	0	0	0
Data Corrections (and Benefits Expired)	0	0	0	0	0	(1)	(1)
Retirements	(28)	(2)	0	0	30	0	0
Alternate Payees (QDRO)	0	0	0	0	0	0	0
Participating in DROP	(22)	0	0	22	0	0	0
Deaths							
With Beneficiary	(1)	0	(2)	0	(8)	16	5
Without Beneficiary	0	0	(4)	0	(7)	(9)	(20)
Total Members 1/1/2014	1,391	13	232	34	961	289	2,920

SCHEDULE I

ACTIVE MEMBERS AS OF JANUARY 1, 2014
Total

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 25	17	1	18	$ 897,621	$ 58,241	$ 955,861
25-29	95	13	108	6,657,469	927,933	7,585,402
30-34	205	26	231	16,054,242	2,002,814	18,057,056
35-39	239	39	278	20,146,347	3,243,895	23,390,242
40-44	308	44	352	27,809,071	4,192,799	32,001,870
45-49	242	36	278	23,492,616	3,479,695	26,972,310
50-54	89	16	105	8,499,766	1,620,916	10,120,682
55-59	19	1	20	1,733,699	116,774	1,850,472
60-64	1	0	1	106,429	0	106,429
Over 64	0	0	0	0	0	0
Total	1,215	176	1,391	$105,397,258	$15,643,066	$121,040,325

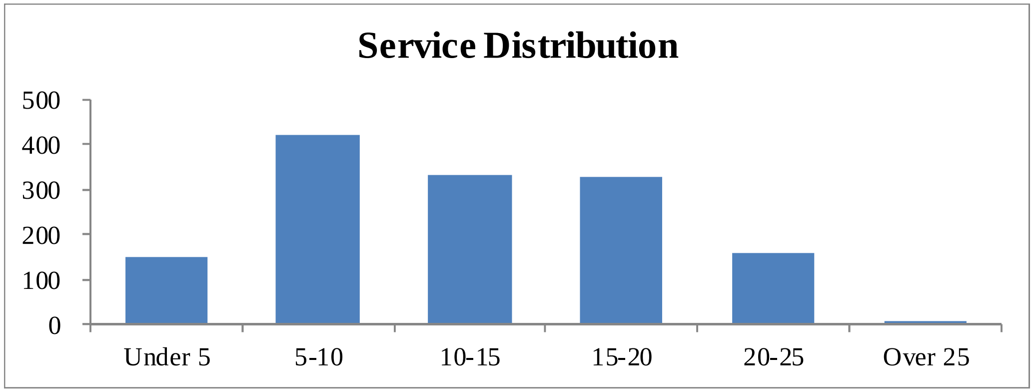




SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2014
Total

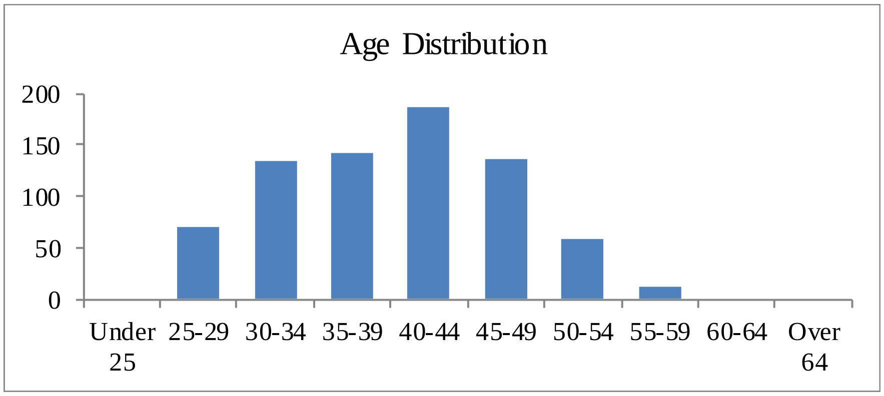
	Service									
Age	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	Total
Under 25	18	0	0	0	0	0	0	0	0	18
25-29	50	58	0	0	0	0	0	0	0	108
30-34	43	173	15	0	0	0	0	0	0	231
35-39	27	106	111	34	0	0	0	0	0	278
40-44	10	60	127	132	23	0	0	0	0	352
45-49	1	13	62	107	93	2	0	0	0	278
50-54	0	6	14	43	37	5	0	0	0	105
55-59	0	3	1	10	5	1	0	0	0	20
60-64	0	0	0	0	1	0	0	0	0	1
Over 64	0	0	0	0	0	0	0	0	0	0
Total	149	419	330	326	159	8	0	0	0	1,391

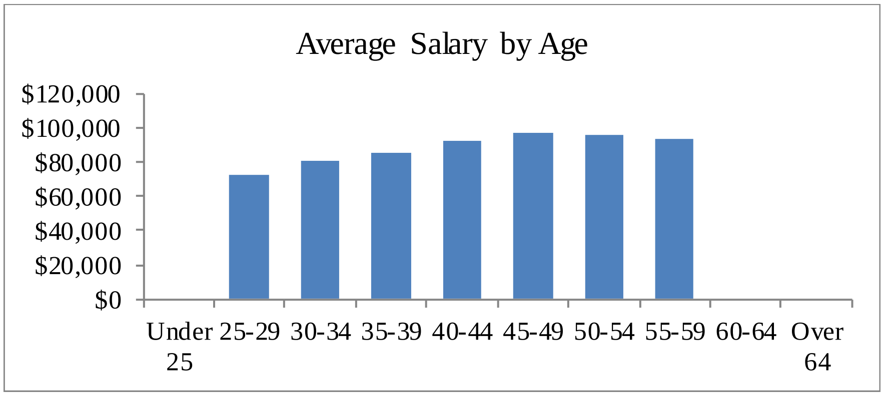


SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2014
Police

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25-29	59	11	70	4,320,528	786,773	5,107,301
30-34	114	20	134	9,205,981	1,565,926	10,771,907
35-39	110	32	142	9,363,226	2,683,906	12,047,132
40-44	150	37	187	13,799,552	3,475,847	17,275,398
45-49	108	29	137	10,398,940	2,843,616	13,242,556
50-54	46	13	59	4,359,387	1,252,484	5,611,871
55-59	12	1	13	1,091,957	116,774	1,208,731
60-64	0	0	0	0	0	0
Over 64	0	0	0	0	0	0
Total	599	143	742	$52,539,570	$12,725,326	$65,264,896

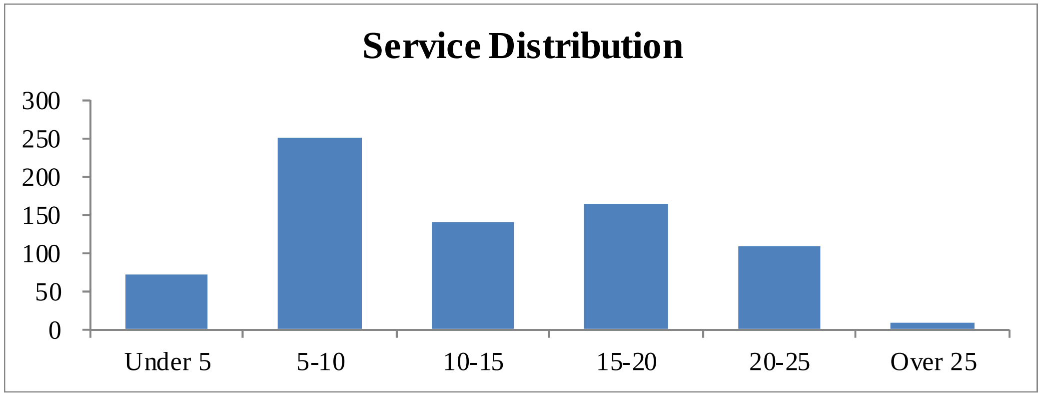




SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2014
Police

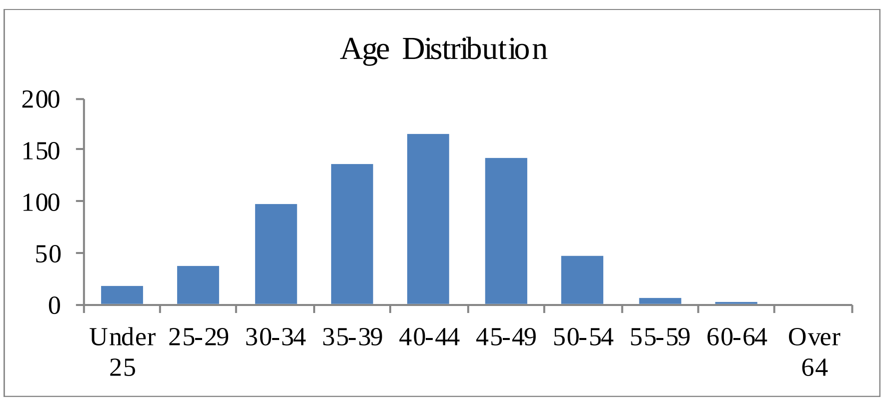
	Service									
Age	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	Total
Under 25	0	0	0	0	0	0	0	0	0	0
25-29	29	41	0	0	0	0	0	0	0	70
30-34	19	106	9	0	0	0	0	0	0	134
35-39	18	57	44	23	0	0	0	0	0	142
40-44	5	34	58	71	19	0	0	0	0	187
45-49	1	7	20	49	58	2	0	0	0	137
50-54	0	3	7	17	27	5	0	0	0	59
55-59	0	2	1	4	5	1	0	0	0	13
60-64	0	0	0	0	0	0	0	0	0	0
Over 64	0	0	0	0	0	0	0	0	0	0
Total	72	250	139	164	109	8	0	0	0	742

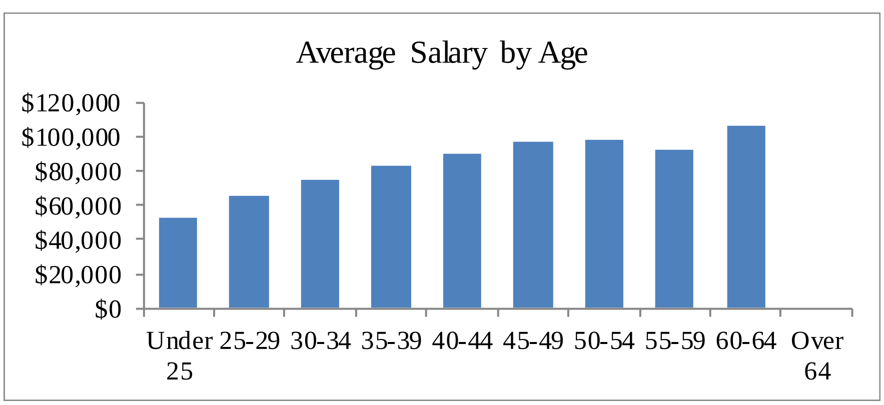


SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2014
Fire

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 25	17	1	18	$ 897,621	$ 58,241	$ 955,861
25-29	36	2	38	2,336,941	141,160	2,478,100
30-34	91	6	97	6,848,261	436,888	7,285,149
35-39	129	7	136	10,783,121	559,989	11,343,110
40-44	158	7	165	14,009,519	716,952	14,726,471
45-49	134	7	141	13,093,676	636,079	13,729,755
50-54	43	3	46	4,140,380	368,432	4,508,811
55-59	7	0	7	641,742	0	641,742
60-64	1	0	1	106,429	0	106,429
Over 64	0	0	0	0	0	0
Total	616	33	649	$52,857,688	$2,917,740	$55,775,429

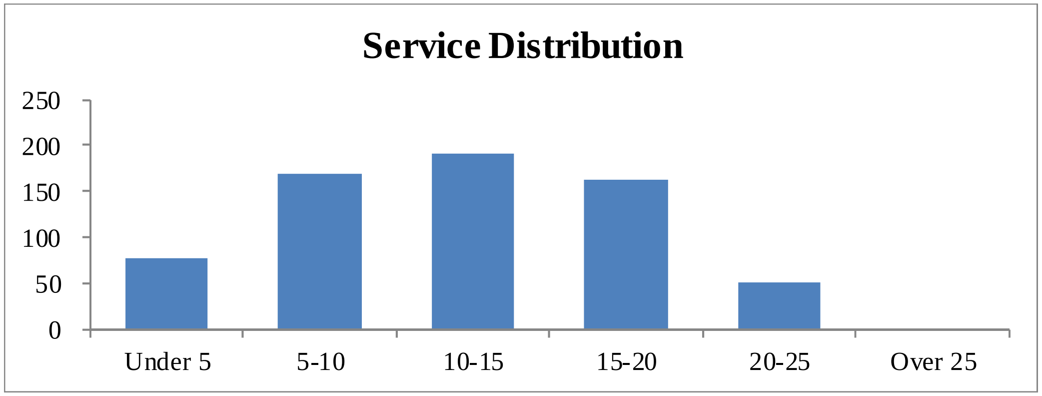




SCHEDULE I (continued)

ACTIVE MEMBERS AS OF JANUARY 1, 2014
Fire

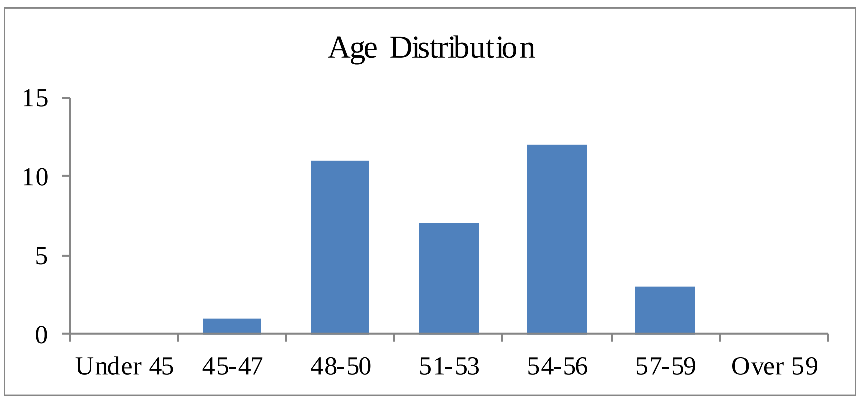
	Service									
Age	Under 5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	Over 40	Total
Under 25	18	0	0	0	0	0	0	0	0	18
25-29	21	17	0	0	0	0	0	0	0	38
30-34	24	67	6	0	0	0	0	0	0	97
35-39	9	49	67	11	0	0	0	0	0	136
40-44	5	26	69	61	4	0	0	0	0	165
45-49	0	6	42	58	35	0	0	0	0	141
50-54	0	3	7	26	10	0	0	0	0	46
55-59	0	1	0	6	0	0	0	0	0	7
60-64	0	0	0	0	1	0	0	0	0	1
Over 64	0	0	0	0	0	0	0	0	0	0
Total	77	169	191	162	50	0	0	0	0	649

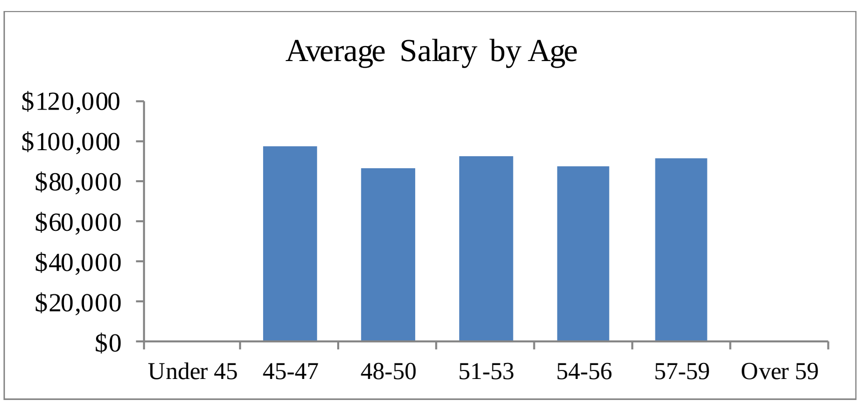


SCHEDULE II

DROP PARTICIPANTS AS OF JANUARY 1, 2014

	Count of Members			Valuation Salaries of Members		
Age	Males	Females	Total	Males	Females	Total
Under 45	0	0	0	$ 0	$ 0	$ 0
45-47	1	0	1	96,929	0	96,929
48-50	11	0	11	945,352	0	945,352
51-53	6	1	7	564,912	78,158	643,070
54-56	11	1	12	973,835	78,141	1,051,976
57-59	3	0	3	274,016	0	274,016
Over 59	0	0	0	0	0	0
Total	32	2	34	$2,855,044	$156,299	$3,011,343

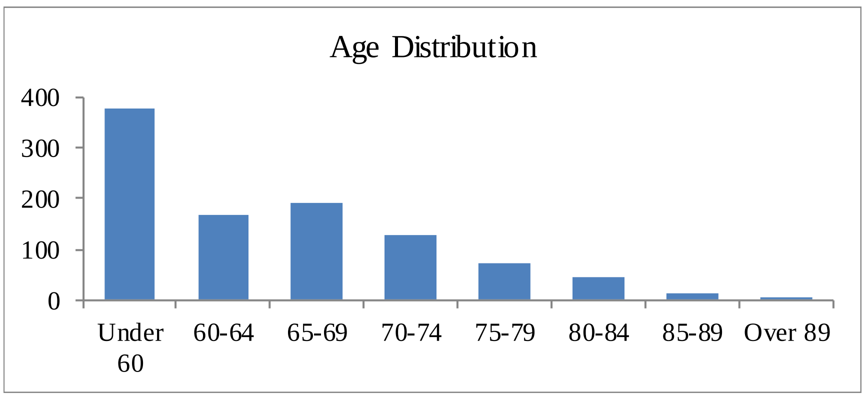


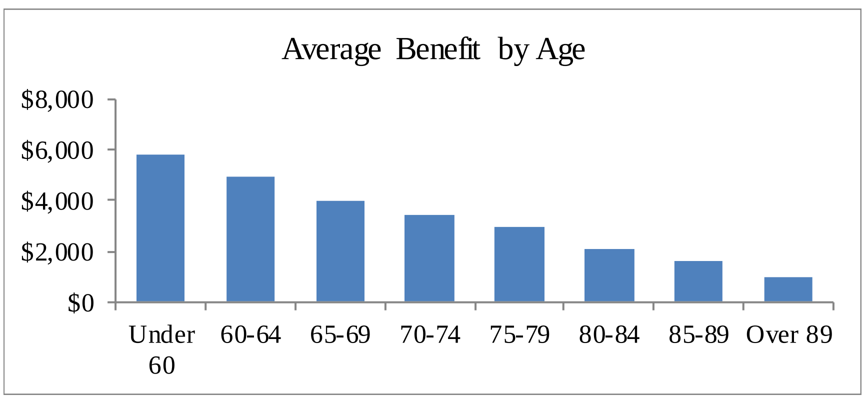


SCHEDULE III

RETIRED MEMBERS AS OF JANUARY 1, 2014

	Count of Retirees			Current Monthly Benefits		
Age	Males	Females	Total	Males	Females	Total
Under 60	336	39	375	$1,986,906	$191,488	$2,178,393
60-64	162	6	168	791,816	28,889	820,704
65-69	186	5	191	742,442	17,413	759,855
70-74	126	1	127	427,085	4,415	431,501
75-79	72	0	72	211,299	0	211,299
80-84	46	0	46	95,953	0	95,953
85-89	12	0	12	18,826	0	18,826
Over 89	4	0	4	4,020	0	4,020
Total	944	51	995	$4,278,347	$242,204	$4,520,551

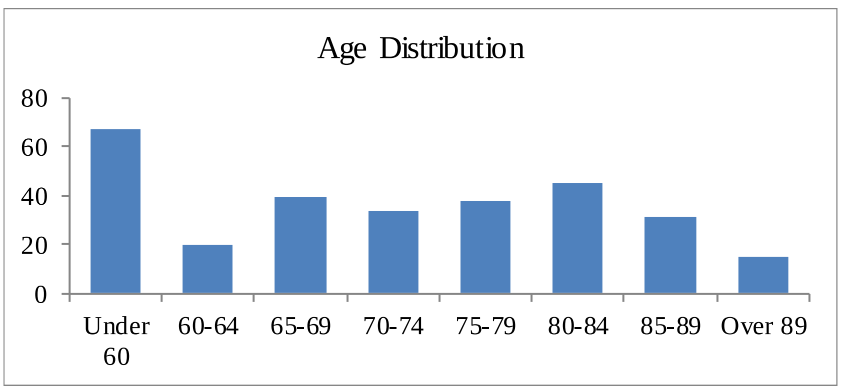


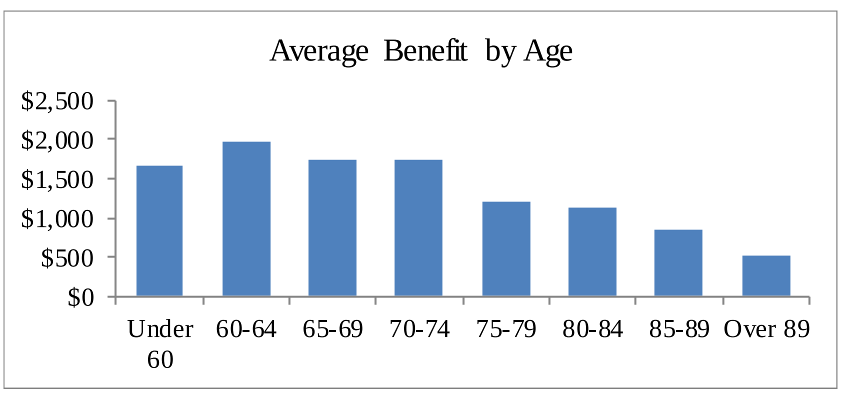


SCHEDULE IV

BENEFICIARIES RECEIVING BENEFITS AS OF JANUARY 1, 2014

	Count of Beneficiaries			Current Monthly Benefits		
Age	Males	Females	Total	Males	Females	Total
Under 60	10	57	67	$11,220	$ 100,759	$ 111,979
60-64	0	20	20	0	39,542	39,542
65-69	0	39	39	0	68,278	68,278
70-74	0	34	34	0	58,936	58,936
75-79	0	38	38	0	46,072	46,072
80-84	0	45	45	0	50,820	50,820
85-89	0	31	31	0	26,664	26,664
Over 89	0	15	15	0	7,814	7,814
Total	10	279	289	$11,220	$398,883	$410,103





SCHEDULE V

DEFERRED VESTED FORMER MEMBERS AS OF JANUARY 1, 2014

	Count of Members			Expected Monthly Benefit		
Age	Males	Females	Total	Males	Females	Total
Under 25	0	0	0	$ 0	$ 0	$ 0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	1	0	1	2,091	0	2,091
40-44	0	0	0	0	0	0
45-49	5	1	6	16,310	5,262	21,573
50-54	6	0	6	23,478	0	23,478
55-59	0	0	0	0	0	0
Over 59	0	0	0	0	0	0
Total	12	1	13	$41,879	$5,262	$47,141

SCHEDULE VI

DISABLED MEMBERS AS OF JANUARY 1, 2014

	Count of Members			Current Monthly Benefits		
Age	Males	Females	Total	Males	Females	Total
Under 30	0	0	0	$ 0	$ 0	$ 0
30-34	0	0	0	0	0	0
35-39	2	1	3	6,120	2,605	8,725
40-44	5	2	7	18,100	5,710	23,810
45-49	12	3	15	36,284	7,156	43,440
50-54	11	5	16	36,236	13,242	49,478
55-59	12	5	17	37,025	12,081	49,106
60-64	14	0	14	56,457	0	56,457
65-69	59	0	59	167,435	0	167,435
70-74	45	0	45	109,369	0	109,369
75-79	23	0	23	52,118	0	52,118
80-84	22	0	22	39,905	0	39,905
85-89	10	0	10	12,012	0	12,012
Over 89	1	0	1	1,251	0	1,251
Total	216	16	232	$572,312	$40,794	$613,106