

**FIREMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
ACTUARIAL VALUATION REPORT FOR THE YEAR ENDING  
DECEMBER 31, 2013

May 19, 2014

Retirement Board of the  
Firemen's Annuity and Benefit Fund of Chicago  
20 South Clark Street, Suite 1400  
Chicago, IL 60603-1899

## Actuarial Certification

Dear Members of the Board:

At your request, we have performed an actuarial valuation for the Firemen's Annuity and Benefit Fund of Chicago ("the Fund") as of December 31, 2013. This valuation has been performed to measure the funding status of the Fund and determine the contribution for 2014. In addition, it includes disclosure information required under GASB Statement No. 25, Statement No. 27, Statement No. 43 and Statement No. 45. The assumptions and methods used were recommended by the actuary and approved by the Board and meet the parameters set for the disclosure presented in the financial section by Government Accounting Standards Board (GASB) Statement Nos. 25 and 43. These actuarial valuations of the Fund are performed annually.

We have provided supporting schedules for the actuarial section of the comprehensive annual financial report, including:

- Schedule of Active Member Data
- Retirements and Beneficiaries Added to and Removed from Rolls
- Solvency (Termination) Test
- Analysis of Financial Experience

We have also provided the following schedules in the financial sections of the report.

- Schedule of Funding Progress
- Schedule of Employer Contributions

This valuation is based upon:

- a) **Data relative to the members of the Fund** – Data for active members and persons receiving benefits from the fund was provided by the Fund's staff. We have tested this data for reasonableness.

- b) **Asset Values** – The values of assets of the Fund were provided by the Fund's staff. The assets provided by the Fund are still in draft form pending finalization of alternative investment balances. The Fund and their auditor do not anticipate a material change in the asset value. The actuarial value of assets was used to develop actuarial results for the State-reporting basis, as well as for GASB Statement No. 25 and Statement No. 27. In each fiscal year, gains and losses will be phased in over a five year period.
- c) **Actuarial Method** – The actuarial method utilized by the Fund is the Projected Unit Credit cost method. The objective of this method is to uniformly amortize costs of Fund benefits over the entire career of each member. Any Unfunded Actuarial Accrued Liability (UAAL) under this method is separately financed. All actuarial gains and losses under this method are reflected in the UAAL. The actuarial cost method utilized for all GASB reporting purposes remains Entry-Age Normal.
- d) **Actuarial Assumptions** – The actuarial assumptions remain unchanged from the prior valuation. The assumptions used are set forth in Appendix 4: Actuarial Methods and Assumptions of the Valuation Report.
- e) **Plan Provisions** – The liabilities reflect the plan provisions in effect as of December 31, 2013.

Public Act 96-1495, effective as of January 1, 2011, requires that the City finance plan benefits on an actuarial basis commencing with tax levy year 2015. The funding policy requires that future employer contributions, employee contributions and other fund income is sufficient to produce 90 percent funding by fiscal year end 2040. The projections are based on an open group, level percent of pay financing, and the Projected Unit Credit cost method. This valuation report contains the projected funding requirements under the Public Act 96-1495 and the applicable contributions for tax levy year 2015.

The valuation results set forth in this report are based on the data and actuarial techniques described above, and upon the provisions of the Fund as of the valuation date. Based on these items, we certify these results to be true and correct.

This report should not be relied on for any purpose other than the purpose stated.

To the best of our knowledge this report is complete and accurate and was conducted in accordance with standards of practice promulgated by the Actuarial Standards Board and in compliance with the statutory requirements. The actuarial assumptions used for the valuation produce results which, in the aggregate, are reasonable. This valuation was produced under the supervision of a member of the American Academy of Actuaries with significant experience in valuing public employee retirement systems. The signing actuaries are independent of the plan sponsor.

Gabriel, Roeder, Smith and Company



Alex Rivera, FSA, EA, MAAA  
Senior Consultant



Lance J. Weiss, EA, MAAA  
Senior Consultant

## **ADDITIONAL DISCLOSURES REQUIRED BY ACTUARIAL STANDARDS OF PRACTICE**

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To the best of our knowledge, this actuarial statement is complete and accurate, fairly presents the actuarial position of the Fund as of December 31, 2013, and has been prepared in accordance with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

Valuations do not affect the ultimate cost of the Plan, only the timing of contributions into the Plan. Plan funding occurs over time. Contribution shortfalls (the difference between the actual contributions and the annual required contributions) remain the responsibility of the Plan sponsor and can be made in later years. If the contribution levels over a period of years are lower or higher than necessary, it is normal and expected practice for adjustments to be made to future contribution levels to take account of this variance, with a view to funding the plan over time.

This report should not be relied on for any purpose other than the purpose stated.

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## SUMMARY OF VALUATION RESULTS

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This report sets forth the results of the actuarial valuation of the Firemen's Annuity and Benefit Fund of Chicago ("Fund") as of December 31, 2013. The purposes of this valuation are:

1. To develop actuarially determined contributions for 2014, applicable to tax levy year 2015, based on the provisions of Public Act 96-1495.
2. To develop the annual required contributions (ARC) under GASB #25 and GASB #43.
3. To develop the annual pension cost under GASB #27 and the annual OPEB cost under GASB #45.
4. To review the funding status of the Fund.

The funding status, in basic terms, is a comparison of the Fund's liabilities to assets expressed as either an unfunded liability or as a ratio of assets to liabilities. This comparison can be measured in various ways. Fund liabilities are dependent on the actuarial assumptions and actuarial cost method. Fund assets can be measured at market value, book value or some variation to smooth the fluctuations that invariably occur from year to year.

Funded status is measured differently for statutory funding and for Fund and City financial reports. The following chart shows how funded status is determined for each purpose.

<b>Purpose</b>	<b>Actuarial Method</b>	<b>Asset Value</b>
Statutory Funding	Projected Unit Credit	Actuarial (Market-Related) Value of Assets
Fund and City reporting after 1996 (GASB #25, #27, #43, and #45)	Entry-Age Normal	Actuarial (Market-Related) Value of Assets
Fund reporting after 2014 (GASB #67 for pension benefits)	Entry-Age Normal	Market Value of Assets
City reporting after 2015 (GASB #68 for pension benefits)	Entry-Age Normal	Market Value of Assets

Under the Entry-Age Normal Actuarial Cost Method, each participant's benefits are assumed to be funded by annual installments, equal to a level percentage of compensation, payable from date of participation to assumed retirement. The total "Normal Cost" is the sum of the current year's annual installments determined for all active participants. The "Actuarial Accrued Liability" is the excess of the discounted value of projected benefits for all participants (both active and retired) over the discounted value of Normal Costs determined for future years of service.

Under the Projected Unit Credit Actuarial Cost Method, the projected pension at retirement age is first calculated and the value thereof at the individual member's current or attained age is determined. The normal cost for the member for the current year is equal to the value so determined divided by the member's projected service at retirement. The normal cost for the plan for the year is the sum of the individual normal costs. The "Actuarial Accrued Liability" at any point in time is the value of the projected pensions at that time less the value of future normal costs.

## SUMMARY OF VALUATION RESULTS (CONT'D)

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State statute requires that the Projected Unit Credit cost method be used for funding and, effective with GASB #67 in 2014, and GASB # 68 in 2015, financial reporting under GASB requires the use of the Entry-Age Normal cost method

The actuarial (market-related) value of assets is determined from market value with investment gains and losses smoothed over a five-year period. The actuarial assumptions used to determine the liabilities are the same in both measures.

### Comments on Results

Public Act 96-1495, effective as of January 1, 2011, requires that the City finance plan benefits on an actuarial basis commencing with tax levy year 2015. The funding policy requires that future employer contributions, employee contributions and other fund income is sufficient to produce 90 percent funding by fiscal year end 2040. The projections are based on an open group, level percent of pay financing, and the Projected Unit Credit cost method. This valuation report contains the projected funding requirements under the provisions of Public Act 96-1495.

For Statutory funding purposes, the contribution for the tax levy year ending December 31, 2015, is \$246.1 million (59.1 percent of the covered payroll). The 2015 statutory funding contribution of \$246.1 million compares with \$112.2 million for 2014, which was based on the 2.26 multiple of employee contributions statutory funding requirement applicable to the Fund prior to Public Act 96-1495.

The annual required contribution (ARC) under GASB #25 for the year ending December 31, 2014, is \$304.3 million, which is for pension benefits only. This amount is net of estimated employee contributions of \$38.9 million.

GASB #43 requires the calculation of a separate ARC for Other Postemployment Benefits (OPEB). The OPEB ARC for the fiscal year ending December 31, 2014, is \$2.7 million.

Because of the requirements of GASB #43, there are some differences between the calculation of the ARC for pension benefits and the ARC for OPEB. These differences are summarized below.

	<u>Pension ARC</u>	<u>OPEB ARC</u>
<b>Investment Return</b>	8.00% per year	4.50% per year
<b>Assets</b>	5-year smoothed market	No assets (Pay-as-you-go)

GASB #43 requires that the investment return assumption (or “discount rate”) used to value OPEB liabilities be based on the estimated long-term yield on the investments expected to be used to finance the payment of benefits. The investment return assumption of 4.50 percent reflects the fact that OPEB liabilities are considered to be funded on a pay-as-you-go basis. That is, the health insurance supplement is financed with current contributions, and no separate healthcare account exists to pay the health insurance supplement.

Beginning with the actuarial valuation as of December 31, 2006, GASB # 25 requires the use of at most a 30-year amortization period to determine the pension ARC, which is used for the OPEB ARC. P.A. 98-0043, effective June 28, 2013, terminates the retiree healthcare subsidy paid from

## SUMMARY OF VALUATION RESULTS (CONT'D)

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the Fund after December 31, 2016. Consequently the amortization period used to calculate the fiscal year 2014 GASB #43 ARC was changed to a three year closed period.

Effective with Fiscal Year Ending December 31, 2014, GASB #67 is replacing GASB #25 for pension plan financial reporting requirements. GASB #68 is replacing GASB #27 for employer financial reporting effective with fiscal year ending December 31, 2015.

The discount rate used for GASB #67 and #68 reporting purposes will produce a blended or average discount rate based on 8.00 percent for the projected benefits for all current members that can be paid from current assets and projected investment return, future employee contributions from current members, and future employer contributions attributable to current members, and a 20-year high quality general obligation bond index (for example 4.00 percent) for the portion of the projected benefits after assets are depleted.

Due to the potential blended discount rate and shorter amortization periods required under GASB #67 and #68, the net pension liabilities and pension expense will likely be much higher and more volatile than under the current standards. A measurement of the blended discount rate, net pension liability and pension expense is to be performed as of December 31, 2014.

Based on the Actuarial Value of Assets, the Unfunded Actuarial Liability increased from \$3.07 billion to \$3.10 billion during the year. The funded ratio decreased from 24.43 percent to 24.24 percent.

Based on the Market Value of Assets, the Unfunded Actuarial Liability decreased from \$3.03 billion to \$2.97 billion, and the funded ratio increased from 25.39 percent to 27.31 percent.

There were five major gain/loss items to the unfunded actuarial accrued liability:

- The employer cost in excess of actual contributions generated a loss of approximately \$169.2 million.
- The investment gain/loss on the actuarial value generated an overall gain of \$57.7 million. The amount is based on the actuarial value of assets before the change in actuarial value of assets described below.
- Pay increases less than expected resulted in a gain of \$41.1 million.
- Changes to the healthcare supplement provided to retirees through Public Act 98-0043 created a gain of \$37.4 million.
- Public Act 96-1495 generated a gain of \$47.2 million due to a change in the cost method from Entry Age Normal to Projected Unit Credit, and a loss of \$28.8 million due to a change in the asset smoothing method which retroactively marked the actuarial value of assets to the market value of assets as of December 31, 2011.

A more thorough examination of these and other factors can be found in the Reconciliation of Unfunded Liability gain/loss calculation of Table 3.

A summary of the primary results of this valuation is shown in the following table.

## SUMMARY OF VALUATION RESULTS (CONT'D)

	December 31, 2012		December 31, 2013	
	\$ in Millions	% of Pay <sup>1</sup>	\$ in Millions	% of Pay <sup>1</sup>
<b>Contribution Levels</b>				
Statutory Contribution (Tax Levy Year)	\$ 112.2 (2014)	26.77 %	\$ 246.1 (2015)	59.10 %
GASB Annual Required Contribution <sup>2, 3</sup> (Plan Year)	299.1 (2013)	71.39	307.0 (2014)	73.71
<b>Funding Status -- Actuarial Value</b>				
Actuarial Value of Assets	\$ 993.3	237.08	\$ 991.2	237.99
Actuarial Liability	4,066.3	970.57	4,089.2	981.82
Funding Ratios	24.43%	N/A	24.24%	N/A
<b>Funding Status -- Market Value</b>				
Market Value of Assets	\$ 1,032.4	246.42	\$ 1,116.7	268.12
Actuarial Liability	4,066.3	970.57	4,089.2	981.82
Funding Ratios	25.39%	N/A	27.31%	N/A
<b>Funding Status -- GASB # 25 and #43</b>				
Actuarial Value of Assets	\$ 993.3	237.08	\$ 991.2	237.99
Actuarial Liability - Entry Age	4,066.3	970.57	4,136.4	993.16
Funding Ratios	24.43%	N/A	23.96%	N/A

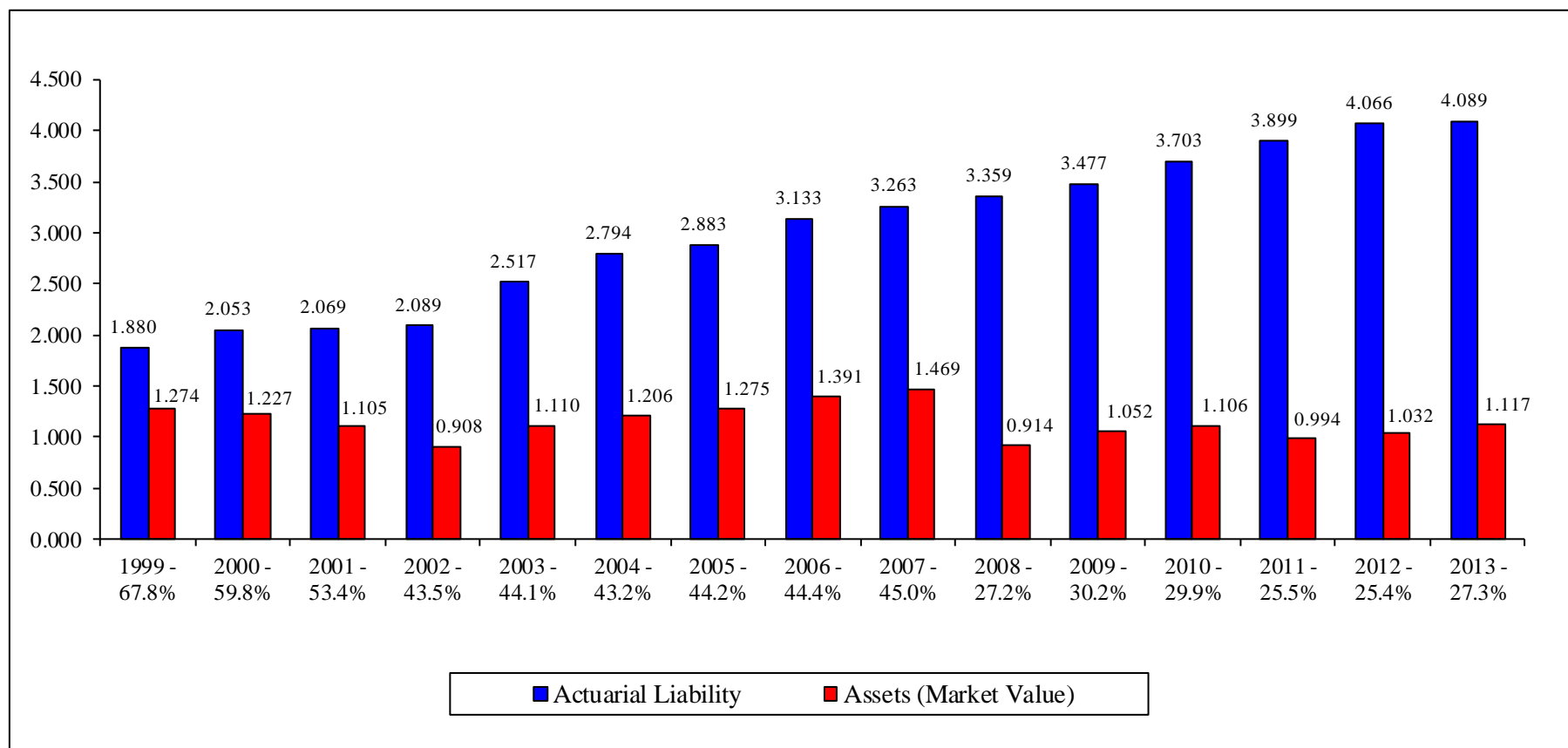
<sup>1</sup>Payroll for 2012 was \$419 million and for 2013 was \$416.5 million.

<sup>2</sup>The annual required contribution for the plan year ending December 31, 2014 will be used to determine the plan sponsor's expense under GASB #27 and GASB # 45 for the fiscal year ending December 31, 2014.

<sup>3</sup>For the following fiscal year net of employee contributions. ARC includes both pension and healthcare benefits under GASB # 25 and GASB # 43.

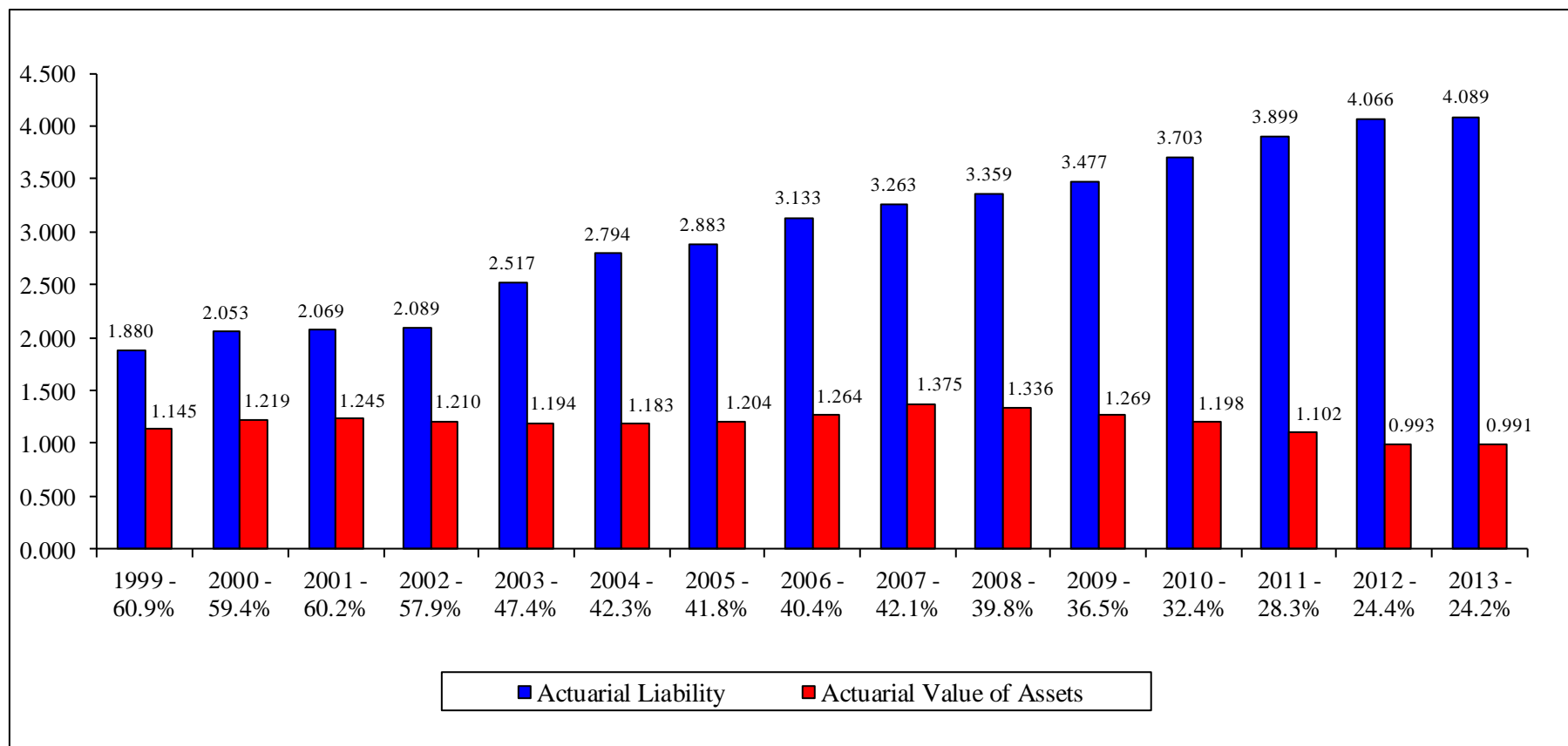
## SUMMARY OF VALUATION RESULTS (CONT'D)

### COMPONENTS OF FUNDING RATIO BASED ON MARKET VALUE (\$ IN BILLIONS)



## SUMMARY OF VALUATION RESULTS (CONT'D)

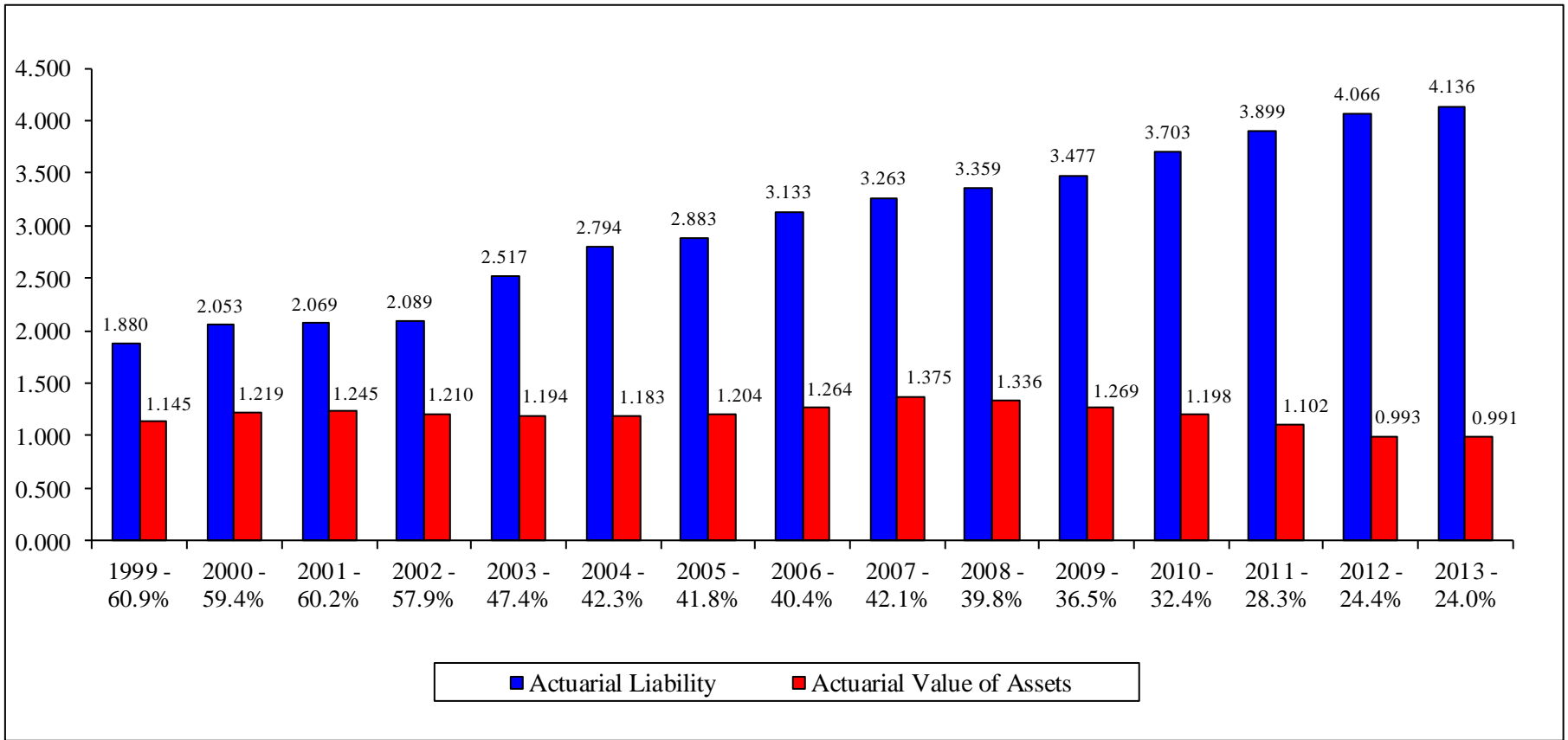
### COMPONENTS OF FUNDING RATIO BASED ON ACTUARIAL VALUE (\$ IN BILLIONS)



*State reporting for 2013 uses Projected Unit Credit for Actuarial Liability. Prior to 2013, the Entry Age Normal cost method was used for Actuarial Liability.*

**SUMMARY OF VALUATION RESULTS (CONT'D)**

**COMPONENTS OF FUNDING RATIO  
BASED ON GASB #25/#43  
(\$ IN BILLIONS)**



## SUMMARY OF VALUATION RESULTS (CONT'D)

### Participants

The major characteristics of the data on the members of the Fund are summarized as follows:

	<u>December 31, 2012</u>	<u>December 31, 2013</u>
<b>Active Participants<sup>1</sup></b>		
Number	4,740	4,685
Average Age	46.1	46.3
Average Service	16.3	16.4
Average Annual Salary	\$88,389	\$88,899
<b>Retirees</b>		
Number	2,821	2,883
Average Age	70.4	70.1
Average Monthly Benefit	\$ 5,405	\$ 5,607
<b>Survivors<sup>2</sup></b>		
Number	1,359	1,342
Average Age	77.3	77.5
Average Monthly Benefit	\$ 1,913	\$ 1,977

<sup>1</sup> Includes four participants on ordinary disability who continue to accrue benefit service as of December 31, 2012 and two participants on ordinary disability who continue to accrue benefit service as of December 31, 2013.

<sup>2</sup> Includes one parent annuitant.

Total participants receiving benefits under the Fund, including disability, widow and children, increased 0.6 percent during 2013 from 4,613 to 4,642. Total expenditures for these benefits increased from \$231.2 million in 2012 to \$249.6 million during 2013, or 8.0 percent.

### Changes in Provisions of the Fund

**The following Public Acts were passed in 2013 by the 98th General Assembly that made changes to the Fund Provisions.**

P. A. 98-0043, Sec. 5-167.5 effective June 28, 2013

Payments to city (Health care) extends healthcare benefits from July 1, 2013 to December 31, 2016, or until such time as the city no longer provides a health care plan for such annuitants. Our valuation assumes payments will end on December 31, 2016.

P. A. 98-0433, effective August 16, 2013

Allows for an additional exception to the current selection process for obtaining investment services and does not directly impact the liabilities of the Fund as of the valuation date.

A detailed description of the provisions in the Public Acts passed in 2013 can be found in the Historical Information section in Appendix 6 of this report.



## SUMMARY OF VALUATION RESULTS (CONT'D)

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### **Analysis of Actuarial Assumptions**

Actuarial assumptions are used to project future demographic and economic expectations for purposes of valuing the liabilities of the plan. The assumptions should reflect current patterns. However, their primary orientation is the long-term outlook for each factor affecting the valuation. Thus, while actual experience will fluctuate over the short run, actuarial assumptions are chosen in an attempt to model the future long-term experience.

There are two general types of actuarial assumptions:

1. Demographic Assumptions – reflect the flow of participants into and out of a retirement system, and
2. Economic Assumptions – reflect the effect of the economic climate on a retirement system.

Demographic assumptions can be readily studied over recent plan experience. Economic assumptions can be studied against recent experience; however, future experience is more likely to be a result of outside factors than of plan specifics. The most significant demographic assumptions are: active turnover, retirement and post-retirement mortality. The most significant economic assumptions are: pay increases, investment return and inflation. Other actuarial assumptions include: disability incidence, active mortality and percent married.

### **Changes in Actuarial Assumptions & Methods**

The valuation as of December 31, 2013, is based on the same assumptions as the prior valuation. The assumptions used reflect the results of the experience study performed for the period from January 1, 2003, through December 31, 2010 and were first effective with the valuation as of December 31, 2011.

The cost method used for calculating the statutory contribution was changed from Entry Age Normal to the Projected Unit Credit Cost Method in accordance with P.A. 96-1495. The objective of the Projected Unit Credit cost method is to uniformly amortize the costs of Fund benefits over the entire career of each member. Any UAAL under this method is separately financed. All actuarial gains and losses under this method are reflected in the UAAL. The actuarial cost method utilized for all GASB reporting purposes continues to use Entry Age Normal.

### **Asset Valuation Method**

The method used to develop the Fund's Actuarial Value of Assets is as follows: In years when Fund assets earn above 8.0 percent (i.e., experience gain) or below 8.0 percent (i.e., experience loss) the gain (or loss) will be gradually recognized over five years. This approach both smoothes the Fund's level of actuarially determined contribution and insures the Fund's assets will track the market value of assets.

In accordance with P.A.96-1495, the actuarial value of assets was retroactively marked to the market value of assets as of December 31, 2011. Gains and losses for each year ending after December 31, 2011, are smoothed over a five year period.

## SUMMARY OF VALUATION RESULTS (CONT'D)

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### **2013 Experience Analysis**

#### **Investment Return**

The Fund had an investment gain in 2013 of \$112.2 million relative to the 8.0 percent expected rate of return on a market value basis. The gain on the Actuarial (Market-Related) Value of Assets relative to the 8.0 percent expected rate of return was \$57.7 million.

#### **Pay Increase**

The current salary increase assumption consists of a 4.25 percent base increase with an additional service-based increase. For the current continuing actives in both 2012 and 2013, the average salary increase was approximately 2.3 percent. This was 2.9 percentage points below our aggregate assumption of 5.2 percent resulting in an actuarial gain of approximately \$41.1 million, or 1.0 percent of total liabilities.

#### **Other**

The combination of retirements, disablements, and deaths resulted in a net actuarial loss of \$10.8 million. Gains and losses from all other sources, including new hires and data corrections, resulted in a net gain of \$0.3 million.

#### **Conclusion**

Overall, we believe the current set of assumptions is reasonable. Table 3 of Appendix 1 shows a more detailed development of the actuarial gains and losses for the plan years ending December 31, 2012, and December 31, 2013.

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## **APPENDIX 1**

### RESULTS OF ACTUARIAL VALUATION

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**TABLE 1**  
**SUMMARY**

	<u>December 31,</u> <u>2012</u>	<u>December 31,</u> <u>2013</u>
<b><u>Assets</u></b>		
Market Value - Beginning of Year	\$ 993,773,549	\$ 1,032,422,798
<b><u>Income</u></b>		
Investment Income Net of Expenses	\$ 135,203,228	\$ 190,535,526
Employer Contributions	84,144,328	106,219,800
Employee Contributions	53,272,730	42,520,218
Miscellaneous	7,519	(59,725)
Subtotal	<u>\$ 272,627,805</u>	<u>\$ 339,215,819</u>
 <b><u>Outgo (Refunds, Benefits, &amp; Administration)</u></b>	 <u>\$ 237,423,988</u>	 <u>\$ 254,933,760</u>
 Market Value - End of Year	 \$ 1,032,422,798	 \$ 1,116,704,857
Actuarial Value - End of Year	993,283,741	991,213,282
Book Value - End of Year	931,236,150	940,658,464
 <b><u>Members</u></b>		
Active	4,740	4,685
Retirees	2,821	2,883
Survivors <sup>2</sup>	1,359	1,342
Disabilities	348	332
Children	83	83
 <b><u>Payroll Data</u></b>		
Valuation Payroll <sup>1</sup>	\$ 418,964,763	\$ 416,491,784
Average Salary	88,389	88,899

<sup>1</sup> The valuation payroll includes compensation for two ordinary disability participants. They continue to accrue benefit service and hence additional liability while on ordinary disability.

<sup>2</sup> Includes Widow, Compensation and Parent Annuitants.

**TABLE 1 (CONT'D)**  
**SUMMARY**

	<u>December 31,</u> <u>2012</u>	<u>December 31,</u> <u>2013</u>
<b><u>Actuarial Values</u></b>		
<b><u>Statutory Funding</u></b>		
Actuarial Liability <sup>1</sup>	\$4,066,343,811	\$4,089,205,839
Assets - Actuarial Value	993,283,741	991,213,282
Unfunded Liability	3,073,060,070	3,097,992,557
Funded Ratio	24.43%	24.24%
Statutory Employer Contribution (Tax Levy Year)	112,169,000 (2014)	246,132,481 (2015)
<b><u>Termination Values</u></b>		
Liability	\$3,104,417,765	\$3,196,389,528
Deficiency	2,111,134,024	2,205,176,246
Quick Ratio	32.00%	31.01%
<b><u>Market Values</u></b>		
Actuarial Liability <sup>1</sup>	\$4,066,343,811	\$4,089,205,839
Assets - Market Value	1,032,422,798	1,116,704,857
Unfunded Liability	3,033,921,013	2,972,500,982
Funded Ratio	25.39%	27.31%
<b><u>GASB #25 and #43 Values</u></b>		
Actuarial Liability - Entry Age	\$4,066,343,811	\$4,136,426,376
Assets - Actuarial Value	993,283,741	991,213,282
Unfunded Liability	3,073,060,070	3,145,213,094
Funded Ratio	24.43%	23.96%
Annual Required Contribution (ARC) <sup>2</sup> (Plan Year End)	299,091,592 (2013)	307,004,917 (2014)

<sup>1</sup>For 2013, Actuarial Liabilities for Statutory Funding and Market Value Funding are calculated using the Projected Unit Credit cost method. 2012 numbers were based on Entry-Age Normal cost method.

<sup>2</sup>Disclosures under GASB#25 and GASB#43 show Actuarial Accrued Liability separately for Pension and OPEB.

**TABLE 2A**  
**DEVELOPMENT OF STATUTORY CONTRIBUTION**

Actuarial Valuation Projection Results as of December 31, 2013 Discount Rate of 8.00% (\$ in Thousands)													
Year	Actuarial	Market	Actuarial	Unfunded	Actuarial Value	Uncapped	Capped	Employer	Statutory	Statutory	Employee	Benefit	Admin
Ending	Accrued	Value of	Value of	Liability	Funded Ratio	Payroll	Payroll	Normal Cost	Contribution <sup>1</sup>	as % of Pay	Contributions	Payments	Expenses
	Liability	Assets	Assets										
2013	\$4,089,206	\$1,116,705	\$991,213	\$ 3,097,993	24.24%	\$416,492	\$416,492	\$31,075	\$106,220	25.5%	\$42,520	\$ 249,609	\$3,115
2014	4,225,089	1,075,899	984,758	3,240,331	23.31%	428,836	428,836	39,653	112,169	26.2%	38,945	264,414	3,209
2015	4,360,451	1,151,244	1,094,455	3,265,997	25.10%	441,528	441,528	39,106	246,132	55.7%	41,204	275,413	3,305
2016	4,493,997	1,228,083	1,205,644	3,288,353	26.83%	454,209	454,209	39,543	253,201	55.7%	42,424	287,418	3,404
2017	4,627,415	1,308,900	1,308,900	3,318,515	28.29%	467,167	467,167	39,869	260,425	55.7%	43,663	297,308	3,506
2018	4,756,606	1,390,934	1,390,934	3,365,672	29.24%	481,308	481,308	40,034	268,308	55.7%	44,967	310,831	3,611
2019	4,880,732	1,474,650	1,474,650	3,406,082	30.21%	496,429	496,429	40,020	276,737	55.7%	46,369	324,598	3,720
2020	4,999,515	1,560,688	1,560,688	3,438,827	31.22%	512,049	512,049	39,929	285,445	55.7%	47,824	338,186	3,831
2021	5,113,491	1,650,085	1,650,085	3,463,406	32.27%	527,603	527,603	39,891	294,115	55.7%	49,286	350,925	3,946
2022	5,222,832	1,744,194	1,744,194	3,478,638	33.40%	544,229	544,229	39,872	303,384	55.7%	50,789	363,211	4,065
2023	5,327,614	1,845,044	1,845,044	3,482,570	34.63%	563,036	563,036	39,900	313,868	55.7%	52,427	375,163	4,186
2024	5,427,336	1,953,846	1,953,846	3,473,490	36.00%	582,662	582,662	39,569	324,809	55.7%	54,245	387,065	4,312
2025	5,522,162	2,072,117	2,072,117	3,450,045	37.52%	602,946	602,943	39,258	336,114	55.7%	56,119	398,511	4,441
2026	5,612,668	2,201,689	2,201,689	3,410,979	39.23%	623,714	623,700	39,052	347,685	55.7%	58,014	409,186	4,575
2027	5,698,370	2,345,817	2,345,817	3,352,553	41.17%	646,779	644,673	39,067	359,377	55.7%	59,992	417,789	4,712
2028	5,778,147	2,506,373	2,506,373	3,271,774	43.38%	672,796	664,275	39,156	370,304	55.7%	62,010	425,043	4,853
2029	5,852,755	2,683,046	2,683,046	3,169,709	45.84%	700,509	680,437	39,257	379,314	55.7%	63,821	431,877	4,999
2030	5,923,952	2,875,431	2,875,431	3,048,520	48.54%	729,167	694,862	39,226	387,355	55.7%	65,295	439,108	5,149
2031	5,990,906	3,082,710	3,082,710	2,908,196	51.46%	757,527	706,487	38,895	393,836	55.7%	66,591	446,709	5,303
2032	6,053,664	3,305,508	3,305,508	2,748,156	54.60%	787,755	717,142	38,876	399,775	55.7%	67,677	454,140	5,462
2033	6,112,722	3,545,346	3,545,346	2,567,376	58.00%	820,319	727,776	38,868	405,703	55.7%	68,689	461,215	5,626
2034	6,169,734	3,804,297	3,804,297	2,365,437	61.66%	854,374	736,608	39,029	410,627	55.7%	69,636	466,609	5,795
2035	6,226,073	4,084,259	4,084,259	2,141,814	65.60%	890,196	744,834	39,570	415,213	55.7%	70,419	471,167	5,969
2036	6,282,292	4,386,722	4,386,722	1,895,571	69.83%	927,646	751,931	40,175	419,169	55.7%	71,151	475,273	6,148
2037	6,340,833	4,715,323	4,715,323	1,625,510	74.36%	967,963	759,777	41,226	423,542	55.7%	71,793	477,900	6,332
2038	6,403,348	5,073,492	5,073,492	1,329,856	79.23%	1,010,647	768,080	42,279	428,171	55.7%	72,510	479,545	6,522
2039	6,471,937	5,464,928	5,464,928	1,007,009	84.44%	1,055,587	776,663	43,539	432,956	55.7%	73,246	480,067	6,718
2040	6,546,019	5,891,417	5,891,417	654,602	90.00%	1,102,565	785,842	45,033	438,072	55.7%	74,018	481,766	6,920
2041	6,625,200	5,962,680	5,962,680	662,520	90.00%	1,150,627	794,870	46,228	34,296	4.3%	74,862	484,057	7,127

<sup>1</sup> Contribution receivable to be paid in the following year. The funded ratio includes receivable contribution.

<sup>2</sup> Plan year end December 31, 2013, employer contribution from financial statement. Plan Year end December 31, 2014, employer contribution provided by FABF.

**TABLE 2B**  
**DEVELOPMENT OF STATUTORY CONTRIBUTION (CONT'D)**

	<u>Pension</u>	<u>Health Ins. Supplement</u>	<u>Total</u>
(1) Normal Cost for 2015	\$ 80,303,310	\$ 7,202	\$ 80,310,512
(2) Actuarial Accrued Liability (AAL) at 12/31/2014 <sup>1</sup>	\$ 4,219,757,891	\$ 5,331,509	\$ 4,225,089,400
(3) Unfunded AAL (UAAL)			
(a) Actuarial Value of Assets at 12/31/2014	\$ 984,758,421	\$ -	\$ 984,758,421
(b) UAAL [2-3(a)]	\$ 3,234,999,471	\$ 5,331,509	\$ 3,240,330,979
(4) Estimated Member Contributions during 2015	\$ 41,204,330	\$ -	\$ 41,204,330
(5) Estimated City Contribution for Tax Levy Year 2015	\$ 243,392,711	\$ 2,739,770 <sup>2</sup>	\$ 246,132,481

<sup>1</sup> Pension liabilities were discounted at 8.0% per year, and OPEB liabilities were discounted at 4.5% per year, liabilities are based on the Projected Unit cost method.

<sup>2</sup> Represents expected health insurance supplemental benefits for fiscal year 2015.

**TABLE 2C**  
**DEVELOPMENT OF ANNUAL REQUIRED**  
**CONTRIBUTION UNDER GASB #25 AND GASB #43 FOR 2014<sup>1</sup>**

	<b>Pension</b>	<b>Health Ins. Supplement</b>	<b>Total</b>
(1) Normal Cost for 2014	\$ 71,752,493	\$ 40	\$ 71,752,533
(2) Actuarial Accrued Liability (AAL) at 12/31/2013 <sup>1</sup>	\$ 4,128,734,543	\$ 7,691,833	\$ 4,136,426,376
(3) Unfunded AAL (UAAL)			
(a) Actuarial Value of Assets at 12/31/2013	\$ 991,213,282	\$ -	\$ 991,213,282
(b) UAAL [2-3(a)]	\$ 3,137,521,261	\$ 7,691,833	\$ 3,145,213,094
(4) Amortization (Level \$) Payable at Beginning of Year <sup>2</sup>	\$ 258,053,667	\$ 2,677,592	\$ 260,731,259
(5) Actuarially Determined Contribution			
(a) Interest Adjustment for Semimonthly Payment	\$ 13,403,877	\$ 61,874	\$ 13,465,751
(b) Total Contribution [1+4+5(a)]; but not less than zero	\$ 343,210,037	\$ 2,739,506	\$ 345,949,543
(c) Total Contribution (Percent of Pay)	82.40%	0.66%	83.06%
(6) Estimated Member Contributions	\$ 38,944,626	\$ -	\$ 38,944,626
(7) Annual Required Contribution (ARC) for 2014			
(a) Annual Required Contribution [5(b)-6]	\$ 304,265,411	\$ 2,739,506	\$ 307,004,917
(b) Annual Required Contribution (Percent of Pay)	73.05%	0.66%	73.71%
(8) Estimated City Contribution for 2014	\$ 109,528,112	\$ 2,640,888 <sup>3</sup>	\$ 112,169,000
(9) City Contribution Deficiency/(Excess) for 2014			
(a) in Dollars [(7(a)-8)]	\$ 194,737,299	\$ 98,618	\$ 194,835,917
(b) as a Percentage of Pay	46.76%	0.02%	46.78%
(10) Combined City/Member Contributions Deficiency/(Excess) for 2014			
(a) in Dollars [5(b)-6-8]	\$ 194,737,299	\$ 98,618	\$ 194,835,917
(b) as a Percentage of Pay	46.76%	0.02%	46.78%

<sup>1</sup> Pension liabilities were discounted at 8.0% per year, and OPEB liabilities were discounted at 4.5% per year. Based on Entry-Age Normal cost method.

<sup>2</sup> Pension UAAL is amortized over a 30-year period and healthcare UAAL is amortized over a three-year period.

<sup>3</sup> Represents expected health insurance supplemental benefits for 2014.



**TABLE 3**  
**RECONCILIATION OF UNFUNDED LIABILITY**

	<u>2012</u>	<u>2013</u>
<u>(1) Unfunded Actuarial Accrued Liability - Beginning of Year</u>	\$2,797,157,362	\$3,073,060,070
(2) Gains (Losses) During the Year Attributable to:		
Employer Cost in Excess of Contributions	(168,392,809)	(169,164,612)
Gain (Loss) on Investment Return	(99,980,377)	57,704,415
Gain (Loss) from Salary Changes	34,030,459	41,117,087
Gain (Loss) from Demographic Assumptions	(30,886,665)	(10,752,584)
Gain (Loss) from All Other Sources	<u>924,343</u>	<u>336,024</u>
Total Actuarial Gain (Loss)	\$ (264,305,049)	\$ (80,759,670)
Gain (Loss) from Lewis Lawsuit <sup>1</sup>	\$ (11,597,659)	\$ -
Gain (Loss) from Plan Provision Changes <sup>2</sup>	\$ -	\$ 37,422,377
Gain (Loss) from P.A. 96-1495		
Gain (Loss) from Asset Change	\$ -	\$ (28,815,731)
Gain (Loss) from Funding Method Change	\$ -	\$ 47,220,537
Total Actuarial Gain (Loss)	<u>\$ (275,902,708)</u>	<u>\$ (24,932,487)</u>
<u>(3) Unfunded Actuarial Accrued Liability - End of Year (1)-(2)</u>	\$3,073,060,070	\$3,097,992,557

<sup>1</sup> Loss from Lewis Lawsuit recognized in 2012, the first year when members were active in the plan.

<sup>2</sup> Elimination of healthcare supplement after December 31, 2016.

**TABLE 4A**  
**SUMMARY OF BASIC ACTUARIAL VALUES**

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	<b>APV of Projected Benefits</b>	<b>Actuarial Accrued Liability (AAL)<sup>1</sup></b>
<u>(1) Values for Active Members</u>	\$2,307,617,893	\$1,553,878,632
<u>(2) Values for Inactive Members</u>		
(a) Retired	1,987,241,165	1,987,241,165
(b) Spouse Annuitants	178,073,039	178,073,039
(c) Compensation Widows	61,258,426	61,258,426
(d) Ordinary Disability	812,786	812,786
(e) Occupational Disease Disability	101,822,619	101,822,619
(f) Duty Disability	190,774,534	190,774,534
(g) Inactive (Deferred Vested)	8,335,930	8,335,930
(h) Children	6,920,030	6,920,030
(i) Parent Annuitants	88,678	88,678
Total for Inactives	\$2,535,327,207	\$2,535,327,207
<u>(3) Grand Totals</u>	\$4,842,945,100	\$4,089,205,839
<u>(4) Normal Cost for Active Members</u>	\$ 78,597,318	
<u>(5) Actuarial Present Value of Future Compensation</u>	\$4,099,386,609	

<sup>1</sup>Actuarial accrued liabilities and normal cost for active members, based on the Projected Unit Credit cost method.

**TABLE 4B**  
**ACTIVE ACCRUED LIABILITY AND NORMAL COST BY TIER**  
**INCLUDES PENSION AND HEALTHCARE**

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	<u>Tier 1 Members</u>	<u>Tier 2 Members</u>	<u>Total</u>
(1) Active Members	4,514	171	4,685
(2) Payroll	\$ 407,299,250	\$ 9,192,534	\$ 416,491,784
(3) Average Payroll	\$ 90,230	\$ 53,758	\$ 88,899
(4) Active Actuarial Accrued Liability (AAL) <sup>1</sup>	\$ 1,553,002,271	\$ 876,361	\$ 1,553,878,632
(5) Normal Cost	\$ 76,959,948	\$ 1,637,370	\$ 78,597,318
(6) Normal Cost as a Percent of Pay	18.9%	17.8%	18.9%
(7) Estimated Member Contributions	\$ 38,083,038	\$ 861,588	\$ 38,944,626
(8) Net Normal Cost	\$ 38,876,910	\$ 775,782	\$ 39,652,692
(9) Net Normal Cost as a Percent of Pay	9.5%	8.4%	9.5%

<sup>1</sup> The normal cost and liabilities for healthcare are based on a discount rate of 4.5%.

**TABLE 5**  
**HISTORY OF RECOMMENDED EMPLOYER MULTIPLES**

<b>Year of Report</b>	<b>Statutory Multiple</b>	<b>Normal Cost Plus Interest</b>	<b>Normal Cost Plus Amortization<sup>6</sup></b>	
			<b>Level \$</b>	<b>Level % of Salary</b>
1986 <sup>1</sup>	2.26	4.70	4.86	3.71
1987 <sup>1</sup>	2.26	4.39	4.54	3.47
1988	2.26	4.53	4.68	3.58
1989 <sup>1,2</sup>	2.26	4.39	4.52	3.41
1990 <sup>1,2</sup>	2.26	4.41	4.55	3.43
1991	2.26	4.55	4.69	3.53
1992 <sup>2</sup>	2.26	4.75	4.89	3.69
1993 <sup>2</sup>	2.26	4.89	5.03	3.81
1994 <sup>1,2</sup>	2.26	4.92	5.09	3.71
1995 <sup>2</sup>	2.26	5.16	5.33	3.78
1996	2.26	5.02	5.19	3.78
1997 <sup>1,2,3</sup>	2.26	3.95	4.08	3.00
1998 <sup>2,4</sup>	2.26	4.31	4.22	2.91
1999	2.26	3.56	3.49	2.41
2000 <sup>1</sup>	2.26	4.39	4.30	2.99
2001 <sup>4</sup>	2.26	4.61	4.44	3.12
2002	2.26	4.07	4.19	2.93
2003 <sup>1,2</sup>	2.26	4.90	5.08	3.18
2004 <sup>2,5</sup>	2.26	4.99	5.19	3.22
2005 <sup>1,7</sup>	2.26	4.35	4.54	3.09
2006	2.26	5.14	5.61	4.05
2007 <sup>5</sup>	2.26	4.93	5.39	3.89
2008	2.26	5.24	5.72	4.13
2009	2.26	5.70	6.24	4.47
2010	2.26	6.35	6.94	4.98
2011 <sup>1</sup>	2.26	6.81	7.47	5.30
2012	2.26	5.94	6.52	4.60
2013 <sup>2</sup>	2.26	5.90	6.45	4.53

<sup>1</sup> Change in actuarial assumptions.

<sup>2</sup> Change in benefits.

<sup>3</sup> Change in asset valuation method to GASB.

<sup>4</sup> Change in actuary.

<sup>5</sup> To reflect long term funding requirements, we have excluded \$10,182,825 and \$3,229,938 from the 2003 and 2006 employee contributions in the calculation of the respective recommended multiples. This amount is employee contributions for the retroactive pay increases.

<sup>6</sup> Prior to 2005, 40-year amortization used. In 2005, OPEB based on 30-year amortization and pension on 40-year amortization. In 2006, 30-year amortization used for both pension and OPEB.

<sup>7</sup> There was a significant decrease in the multiple from 2004 to 2005. This change is primarily due to the significant increase in employee contributions.

**TABLE 6**  
**ORDINARY DEATH BENEFIT RESERVE**

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**ASSETS**

Fund Balance	\$ (15,545,191)
Present Values of Future Contributions:	
Contributions by Members at \$30.00 a Year	1,400,615
Annual City Contribution of \$142,000	1,415,065
Unfunded Liability	27,579,603
<b>TOTAL ASSETS</b>	<b>\$ 14,850,092</b>

**LIABILITIES**

Present Value of Future Death Benefits (3%, Plan Mortality Basis)	
Active Members	3,184,216
Retired Members	11,665,876
<b>TOTAL LIABILITIES</b>	<b>\$ 14,850,092</b>

*Note: Benefits are also included in the accrued liability and valued using the actuarial assumptions.*

**TABLE 7**  
**SUMMARY OF RESERVES**

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	<u>2012</u>	<u>2013</u>
Prior Service Annuity Reserve	\$ 1,725,238,142	\$ 1,807,719,302
City Contribution Reserve	762,458,771	780,689,058
Annuity Payment Reserve	840,330,236	890,307,515
Salary Deduction Reserve	629,088,540	643,844,287
Death Benefit Reserve	(14,403,025)	(15,545,191)
Ordinary Disability Reserve	301,100	343,150
Supplementary Payment Reserve	151,057	88,099
Gift Reserve	5,649,180	6,573,690
Reserve (Deficit)	<u>(2,916,391,203)</u>	<u>(2,997,315,053)</u>
Total Net Assets for Pension Benefits (Market Value)	\$ 1,032,422,798	\$ 1,116,704,857

**TABLE 8**  
**ACTUARIAL ACCRUED LIABILITY**  
**PRIORITIZED SOLVENCY TEST**

Valuation Date 12/31	(1)	(2)	(3)	Actuarial Value of Assets	Portion (%) of Present Value Covered by Assets		
	Active Member Contributions	Retirees and Beneficiaries	Active Members (ER Financed Portion)		(1)	(2)	(3)
1994	\$231,721,857	\$ 820,223,870	\$388,977,064	\$ 712,992,314	100.00%	58.68%	0.00%
1995 <sup>b</sup>	284,613,679	890,790,702	356,835,156	787,000,898	100.00%	56.40%	0.00%
1996	302,854,182	928,790,813	344,144,574	845,432,187	100.00%	58.42%	0.00%
1997 <sup>a,b</sup>	320,757,406	992,967,015	326,296,251	978,313,319	100.00%	66.22%	0.00%
1998 <sup>b,c</sup>	335,026,373	1,075,922,284	372,620,521	1,066,891,190	100.00%	68.02%	0.00%
1999	357,739,707	1,146,375,517	375,551,644	1,145,215,019	100.00%	68.69%	0.00%
2000 <sup>a</sup>	354,336,276	1,279,911,268	419,092,931	1,219,486,962	100.00%	67.59%	0.00%
2001 <sup>c</sup>	379,067,821	1,294,672,267	394,977,813	1,245,129,955	100.00%	66.89%	0.00%
2002	394,531,369	1,329,341,162	364,833,686	1,209,768,204	100.00%	61.33%	0.00%
2003 <sup>a,b</sup>	422,940,367	1,458,548,217	635,779,523	1,194,007,767	100.00%	52.87%	0.00%
2004 <sup>b</sup>	443,541,204	1,588,594,240	761,388,911	1,182,578,954	100.00%	46.52%	0.00%
2005 <sup>a</sup>	467,820,652	1,686,377,622	728,737,443	1,203,654,052	100.00%	43.63%	0.00%
2006	501,048,807	1,766,921,009	865,171,711	1,264,497,434	100.00%	43.21%	0.00%
2007	530,027,472	1,859,630,135	873,313,282	1,374,960,353	100.00%	45.44%	0.00%
2008	563,953,942	1,891,673,504	902,950,885	1,335,695,474	100.00%	40.80%	0.00%
2009	581,786,867	2,004,957,552	890,026,376	1,269,231,178	100.00%	34.29%	0.00%
2010	614,377,840	2,069,533,040	1,019,336,955	1,198,113,789	100.00%	28.21%	0.00%
2011 <sup>a</sup>	637,938,254	2,261,555,896	999,405,074	1,101,741,862	100.00%	20.51%	0.00%
2012	644,629,930	2,459,787,835	961,926,046	993,283,741	100.00%	14.17%	0.00%
2013 <sup>a,b</sup>	661,062,321	2,535,327,207	892,816,311	991,213,282	100.00%	13.02%	0.00%

<sup>a</sup> Change in actuarial assumptions or methods.

<sup>b</sup> Change in benefits.

<sup>c</sup> Change in actuary.

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## **APPENDIX 2**

### ASSETS OF THE PLAN

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## ASSETS OF THE PLAN

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The book value of the plan assets, net of accounts payable, increased from \$931 million as of December 31, 2012, to \$941 million as of December 31, 2013. The market value of the plan assets increased from \$1,032 million as of December 31, 2012, to \$1,117 million as of December 31, 2013. Table 9 details the reconciliation of asset values during 2013 and Table 10 shows the development of the actuarial value of assets as of December 31, 2013.

**TABLE 9**  
**RECONCILIATION OF ASSET VALUES**  
**AS OF DECEMBER 31, 2013**

	<u>Market Value</u>	<u>Book Value</u>
1. Value of assets as of 12/31/2012	\$ 1,032,422,798	\$ 931,236,150
2. Income for plan year:		
a) Member contributions	\$ 42,520,218	\$ 42,520,218
b) City contributions	106,219,800	106,219,800
c) Investment income net of expenses	190,535,526	115,675,781
d) Miscellaneous revenue	(59,725)	(59,725)
e) Total income	<u>\$ 339,215,819</u>	<u>\$ 264,356,074</u>
3. Disbursements for plan year:		
a) Benefit payments		
i) Pension	\$ 247,057,741	\$ 247,057,741
ii) OPEB	2,550,785	2,550,785
iii) Total	<u>249,608,526</u>	<u>249,608,526</u>
b) Refunds	2,210,116	2,210,116
c) Administration	3,115,118	3,115,118
d) Total disbursements	<u>\$ 254,933,760</u>	<u>\$ 254,933,760</u>
4. Value of assets as of 12/31/2013	\$ 1,116,704,857	\$ 940,658,464
5. Approximate rate of return in 2013:		
a) Gross (Investment expense of \$6,472,791 )	20.12%	13.91%
b) Net of investment expense	19.46%	13.17%

Method used for calculating approximate rate of return does not reflect specific timing of income and outflows. It is also based on total assets, not invested assets.

The assets provided by the Fund are still in draft form pending finalization of alternative investment balances. The Fund and their auditor do not anticipate a material change in the asset value.

**TABLE 10**  
**DEVELOPMENT OF ACTUARIAL (MARKET-RELATED)**  
**VALUE OF ASSETS**  
**AS OF DECEMBER 31, 2013**

**1. Expected Return on Market Value of Assets**

- a) Market value of assets as of 12/31/2012 \$ 1,032,422,798  
b) Actual income and disbursements in year ending 12/31/2013 weighted for timing

Item	Amount	Weight for Timing	Weighted Amount
i) Member contributions	\$ 42,520,218	50.0%	\$ 21,260,109
ii) City contributions	106,219,800	50.0%	53,109,900
iii) Miscellaneous revenue	(59,725)	50.0%	(29,863)
iv) Benefit payments	(249,608,526)	50.0%	(124,804,263)
v) Refunds	(2,210,116)	50.0%	(1,105,058)
vi) Administration	(3,115,118)	50.0%	(1,557,559)
vii) Total	\$ (106,253,467)		\$ (53,126,734)

- c) Market value of assets adjusted for actual income and disbursements [(a) + (b)(vii)] \$ 979,296,064  
d) Assumed rate of return on plan assets for the year 8.00%  
e) Expected return [(c) \* (d)] \$ 78,343,685

**2. Actual Return on Market Value of Assets for Year Ending 12/31/2013**

- a) Market value of assets as of 12/31/2012 \$ 1,032,422,798  
b) Income (less investment income) for year ending 12/31/2013 148,680,293  
c) Disbursements paid in year ending 12/31/2013 254,933,760  
d) Market value of assets as of 12/31/2013 1,116,704,857  
e) Actual return [(d) + (c) - (b) - (a)] 190,535,526

**3. Investment Gain/(Loss) for Year Ending 12/31/2013 [2(e) - 1(e)]**

\$ 112,191,841

**4. Actuarial Value of Assets as of 12/31/2013**

- a) Market value of assets as of 12/31/2013 \$ 1,116,704,857  
b) Deferred investment gains and (losses) for last 5 years

Plan Year	Gain/(Loss)	Percent Deferred	Deferred Amount
i) 2009	\$ -	0.00%	\$ -
ii) 2010	-	0.00%	-
iii) 2011	-	0.00%	-
iv) 2012	59,563,503	60.00%	35,738,102
v) 2013	112,191,841	80.00%	89,753,473
vi) Total	\$ 171,755,344		\$ 125,491,575

- c) Actuarial Value of Assets \$ 991,213,282

The calculated value is determined by adjusting the market value of assets to reflect the investment gains and losses (the difference between the actual investment return and the expected investment return) during each of the last 5 years at the rate of 20% per year.

**TABLE 10B**  
**DEVELOPMENT OF ACTUARIAL (MARKET-RELATED)**  
**VALUE OF ASSETS**  
**AS OF DECEMBER 31, 2012**

---

**1. Expected Return on Market Value of Assets**

a) Market value of assets as of 12/31/2011	\$ 993,773,549
b) Actual income and disbursements in year ending 12/31/2012 weighted for timing	

Item	Amount	Weight for Timing	Weighted Amount
i) Member contributions	\$ 56,718,162	50.0%	\$ 28,359,081
ii) City contributions	84,144,328	50.0%	42,072,164
iii) Miscellaneous revenue	7,519	50.0%	3,760
iv) Benefit payments	(231,208,176)	50.0%	(115,604,088)
v) Refunds	(2,631,674)	50.0%	(1,315,837)
vi) Administration	(3,584,138)	50.0%	(1,792,069)
vii) Total	\$ (96,553,979)		\$ (48,276,989)

c) Market value of assets adjusted for actual income and disbursements [(a) + (b)(vii)]	\$ 945,496,560
d) Assumed rate of return on plan assets for the year	8.00%
e) Expected return [(c) * (d)]	\$ 75,639,725

**2. Actual Return on Market Value of Assets for Year Ending 12/31/2012**

a) Market value of assets as of 12/31/2011	\$ 993,773,549
b) Income (less investment income) for year ending 12/31/2012	140,870,009
c) Disbursements paid in year ending 12/31/2012	237,423,988
d) Market value of assets as of 12/31/2012	1,032,422,798
e) Actual return [(d) + (c) - (b) - (a)]	135,203,228

**3. Investment Gain/(Loss) for Year Ending 12/31/2012 [2(e) - 1(e)]** \$ 59,563,503

**4. Actuarial Value of Assets as of 12/31/2012**

a) Market value of assets as of 12/31/2012	\$ 1,032,422,798
b) Deferred investment gains and (losses) for last 5 years	

Plan Year	Gain/(Loss)	Percent Deferred	Deferred Amount
i) 2008	\$ -	0.00%	\$ -
ii) 2009	-	20.00%	-
iii) 2010	-	40.00%	-
iv) 2011	-	60.00%	-
v) 2012	59,563,503	80.00%	47,650,802
vi) Total	\$ 59,563,503		\$ 47,650,802

c) Actuarial Value of Assets	\$ 984,771,996
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*The actuarial value of assets were marked to market as of January 1, 2012, in accordance with the provisions of Public-Act 96-1495.*

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## **APPENDIX 3**

### DATA REFLECTING PLAN MEMBERS

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**EXHIBIT A**  
**SUMMARY OF CHANGES IN ACTIVE PARTICIPANTS**  
**FOR FISCAL YEAR ENDING DECEMBER 31, 2013**

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Number of Participants at Beginning of Fiscal Year	4,422	316	4,738
Increases:			
Participants Added During Year	108	18	126
Participants Returning From Inactive or Disability Status	<u>4</u>	<u>0</u>	<u>4</u>
Totals	4,534	334	4,868
Decreases:			
Terminations During Year	<u>179</u>	<u>6</u>	<u>185</u>
Number of Participants at End of Fiscal Year	4,355	328	4,683
Total Inactive Participants	45	12	57
<u>Terminations:</u>			
Withdrawal (With Refunds) <sup>1</sup>	4	0	4
Withdrawal (Without Refunds)	6	1	7
Ordinary Disability Benefit	1	0	1
Occupational Disease Disability Benefit	12	0	12
Duty Disability Benefit	14	0	14
Retirements	139	5	144
Deaths (Occupational)	0	0	0
Deaths (Non-occupational)	<u>3</u>	<u>0</u>	<u>3</u>
<b>Totals</b>	<b>179</b>	<b>6</b>	<b>185</b>

<sup>1</sup>This total differs from the total of 9 shown in Exhibit D due to the fact that only 4 of the refunds were paid to participants who were considered to be active as of December 31, 2012.

**EXHIBIT B**  
**SUMMARY OF CHANGES IN ANNUITANTS AND BENEFICIARIES**  
**FOR FISCAL YEAR ENDING DECEMBER 31, 2013**

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	<u>Number at Beginning of Year</u>	<u>Additions During Year</u>	<u>Terminations During Year</u>	<u>Number at End of Year</u>
Service Retirement Annuities	2,821	187	125	2,883
Widow Annuities	1,260	71	89	1,242
Children's Annuities	83	6	6	83
Parent Annuities	1	0	0	1
Ordinary Disability Benefit (Non-Occupational)	2	1	1	2
Occupational Disease Disability Benefit	116	12	16	112
Duty Disability Benefit (Occupational)	232	15	27	220
Widows' Compensation Annuities (Service Connected Death)	98	2	1	99
Totals	<u>4,613</u>	<u>294</u>	<u>265</u>	<u>4,642</u>

**EXHIBIT C**  
**PART I – TOTAL LIVES AND ANNUAL SALARIES OF ACTIVE MALE PARTICIPANTS**  
**CLASSIFIED BY AGE AND YEARS OF SERVICE AS OF DECEMBER 31, 2013**

AGE	Years of Service									Total	Annual Salary
	Under 1 year	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 and over		
Under 20										0	\$ 0
20 to 24										0	0
25 to 29	41	70	41							152	10,608,810
	2,070,090	5,290,236	3,248,484								
30 to 34	49	154	133	1						337	24,708,090
	2,474,010	11,492,136	10,651,206	90,738							
35 to 39	18	91	177	161	58					505	40,711,890
	908,820	6,810,348	14,055,948	13,633,320	5,303,454						
40 to 44		31	211	334	250	4				830	69,710,568
		2,302,686	16,611,438	27,861,936	22,559,034	375,474					
45 to 49		3	158	217	179	151	143			851	76,271,820
		220,248	12,412,512	18,028,410	15,742,080	14,821,758	15,046,812				
50 to 54			69	107	181	236	301	59		953	91,269,606
			5,417,964	8,861,568	15,742,698	22,784,418	31,505,574	6,957,384			
55 to 59			14	28	66	92	150	233	31	614	63,192,552
			1,089,120	2,282,394	5,713,386	8,604,342	15,167,736	26,426,490	3,909,084		
60 to 64			5	6	18	15	20	36	12	112	11,050,032
			400,764	490,374	1,544,988	1,390,524	1,972,674	3,838,368	1,412,340		
65 and over						1				1	112,206
						112,206					
W/O DOB										0	0
<b>Total Active</b>	<b>108</b>	<b>349</b>	<b>808</b>	<b>854</b>	<b>752</b>	<b>499</b>	<b>614</b>	<b>328</b>	<b>43</b>	<b>4,355</b>	
<b>Annual Salary<sup>1</sup></b>	<b>\$5,452,920</b>	<b>\$26,115,654</b>	<b>\$63,887,436</b>	<b>\$71,248,740</b>	<b>\$66,605,640</b>	<b>\$48,088,722</b>	<b>\$63,692,796</b>	<b>\$37,222,242</b>	<b>\$5,321,424</b>		<b>\$ 387,635,574</b>

<sup>1</sup> The number of participants and annual salary listed includes information on active participants only. Hence, information on the 1 male ordinary disability participant, who continues to earn benefit service, is not included in this exhibit.



**EXHIBIT C**  
**PART II – TOTAL LIVES AND ANNUAL SALARIES OF ACTIVE FEMALE PARTICIPANTS**  
**CLASSIFIED BY AGE AND YEARS OF SERVICE AS OF DECEMBER 31, 2013**

AGE	Years of Service									Total	Annual Salary
	Under 1 year	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 and over		
Under 20										0	\$ 0
20 to 24										0	0
25 to 29	8	5	1							14	830,916
	403,920	351,624	75,372								
30 to 34	8	22	9	2						41	2,787,330
	403,920	1,500,204	715,494	167,712							
35 to 39	2	13	17	20						52	4,147,140
	100,980	922,518	1,342,302	1,781,340							
40 to 44		2	14	20	9					45	3,795,258
		140,130	1,088,526	1,722,390	844,212						
45 to 49			8	15	16	21	9			69	6,434,400
			633,180	1,283,232	1,470,156	2,020,836	1,026,996				
50 to 54			3	9	8	17	27	2		66	6,609,060
			239,952	808,890	695,670	1,654,326	2,983,638	226,584			
55 to 59			1	4	6	10	11	3		35	3,427,248
			75,372	328,710	525,900	983,280	1,101,990	411,996			
60 to 64						3	2		1	6	657,582
						274,134	257,046		126,402		
65 and over										0	0
W/O DOB										0	0
<b>Total Active</b>	<b>18</b>	<b>42</b>	<b>53</b>	<b>70</b>	<b>39</b>	<b>51</b>	<b>49</b>	<b>5</b>	<b>1</b>	<b>328</b>	
<b>Annual Salary</b>	<b>\$908,820</b>	<b>\$2,914,476</b>	<b>\$4,170,198</b>	<b>\$6,092,274</b>	<b>\$3,535,938</b>	<b>\$4,932,576</b>	<b>\$5,369,670</b>	<b>\$638,580</b>	<b>\$126,402</b>		<b>\$ 28,688,934</b>

<sup>1</sup> The number of participants and annual salary listed includes information on active participants only. Hence, information on the 1 female ordinary disability participant, who continues to earn benefit service, is not included in this exhibit.

**EXHIBIT C**  
**PART III – TOTAL LIVES AND ANNUAL SALARIES OF ALL ACTIVE PARTICIPANTS**  
**CLASSIFIED BY AGE AND YEARS OF SERVICE AS OF DECEMBER 31, 2013**

AGE	Years of Service									Total	Annual Salary
	Under 1 year	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 and over		
Under 20										0	\$ 0
20 to 24										0	0
25 to 29	49 2,474,010	75 5,641,860	42 3,323,856							166	11,439,726
30 to 34	57 2,877,930	176 12,992,340	142 11,366,700	3 258,450						378	27,495,420
35 to 39	20 1,009,800	104 7,732,866	194 15,398,250	181 15,414,660	58 5,303,454					557	44,859,030
40 to 44		33 2,442,816	225 17,699,964	354 29,584,326	259 23,403,246	4 375,474				875	73,505,826
45 to 49		3 220,248	166 13,045,692	232 19,311,642	195 17,212,236	172 16,842,594	152 16,073,808			920	82,706,220
50 to 54			72 5,657,916	116 9,670,458	189 16,438,368	253 24,438,744	328 34,489,212	61 7,183,968		1,019	97,878,666
55 to 59			15 1,164,492	32 2,611,104	72 6,239,286	102 9,587,622	161 16,269,726	236 26,838,486	31 3,909,084	649	66,619,800
60 to 64			5 400,764	6 490,374	18 1,544,988	18 1,664,658	22 2,229,720	36 3,838,368	13 1,538,742	118	11,707,614
65 and over						1 112,206				1	112,206
W/O DOB										0	0
<b>Total Active</b>	<b>126</b>	<b>391</b>	<b>861</b>	<b>924</b>	<b>791</b>	<b>550</b>	<b>663</b>	<b>333</b>	<b>44</b>	<b>4,683</b>	
<b>Annual Salary<sup>1</sup></b>	<b>\$6,361,740</b>	<b>\$29,030,130</b>	<b>\$68,057,634</b>	<b>\$77,341,014</b>	<b>\$70,141,578</b>	<b>\$53,021,298</b>	<b>\$69,062,466</b>	<b>\$37,860,822</b>	<b>\$5,447,826</b>		<b>\$ 416,324,508</b>

<sup>1</sup> The number of participants and annual salary listed includes information on active participants only. Hence, information on the 2 ordinary disability participants, who continue to earn benefit service, is not included in this exhibit.

**EXHIBIT D – PART I  
NUMBER OF REFUND PAYMENTS MADE  
DURING YEAR TO MALE EMPLOYEES  
FOR FISCAL YEAR ENDING DECEMBER 31, 2013 <sup>1</sup>**

Age at Date of Refund	Length of Service at Date of Refund						Total
	Under 1 Year	Between 1 and 2	Between 2 and 3	Between 3 and 4	Between 4 and 5	5 and over	
Without Record							0
Under 20							0
20 to 24							0
25 to 29		1					1
30 to 34					1		1
35 to 39						1	1
40 to 44						2	2
45 to 49						1	1
50 to 54							0
55 to 59						1	1
60 & over							0
<b>Totals</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>7</b>

<sup>1</sup> Includes only the actual number of refunds paid or accrued during fiscal year reported.

**EXHIBIT D – PART II**  
**NUMBER OF REFUND PAYMENTS MADE**  
**DURING YEAR TO FEMALE EMPLOYEES**  
**FOR FISCAL YEAR ENDING DECEMBER 31, 2013 <sup>1</sup>**

Age at Date of Refund	Length of Service at Date of Refund						Total
	Under 1 Year	Between 1 and 2	Between 2 and 3	Between 3 and 4	Between 4 and 5	5 and over	
Without Record							0
Under 20							0
20 to 24							0
25 to 29							0
30 to 34						1	1
35 to 39						1	1
40 to 44							0
45 to 49							0
50 to 54							0
55 to 59							0
60 & over							0
<b>Totals</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>

<sup>1</sup> Includes only the actual number of refunds paid or accrued during fiscal year reported.

**EXHIBIT E**  
**STATISTICS ON SERVICE RETIREMENT ANNUITIES**  
**CLASSIFIED BY AGE AS OF DECEMBER 31, 2013**

AGE	MALE		FEMALE		TOTAL	
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
UNDER 50	2	\$ 12,595	0	\$ 0	2	\$ 12,595
50	7	351,492	1	5,700	8	357,192
51	4	236,359	1	10,259	5	246,618
52	11	593,495	1	53,514	12	647,009
53	8	349,242	0	0	8	349,242
54	14	957,197	2	62,835	16	1,020,032
55	51	3,250,988	3	189,402	54	3,440,390
56	76	5,512,535	3	210,466	79	5,723,001
57	90	6,345,274	5	391,573	95	6,736,847
58	77	5,604,291	9	579,540	86	6,183,831
59	117	9,354,787	7	349,185	124	9,703,972
60	116	8,546,381	1	72,747	117	8,619,128
61	116	8,424,872	3	167,910	119	8,592,782
62	104	7,814,670	1	5,700	105	7,820,370
63	115	8,409,166	4	257,184	119	8,666,350
64	93	6,800,038	3	190,742	96	6,990,780
65	74	5,299,143	0	0	74	5,299,143
66	96	7,313,993	3	215,442	99	7,529,435
67	107	8,131,709	1	50,799	108	8,182,508
68	73	5,358,267	1	62,794	74	5,421,061
69	71	4,996,985	2	98,344	73	5,095,329
70	91	6,543,168	1	61,920	92	6,605,088
71	127	9,494,083	2	105,657	129	9,599,740
72	113	8,042,010	0	0	113	8,042,010
73	115	7,540,392	0	0	115	7,540,392
74	66	4,513,308	1	86,781	67	4,600,089
75	66	4,291,097	0	0	66	4,291,097
76	54	3,384,254	1	54,241	55	3,438,495
77	90	5,781,340	0	0	90	5,781,340
78	65	4,205,858	0	0	65	4,205,858
79	61	4,264,717	0	0	61	4,264,717
80	67	4,173,042	0	0	67	4,173,042
81	67	4,250,981	0	0	67	4,250,981
82	80	4,554,546	0	0	80	4,554,546
83	68	3,605,880	0	0	68	3,605,880
84	61	3,042,620	0	0	61	3,042,620
85	43	2,134,757	0	0	43	2,134,757
86	41	1,890,708	0	0	41	1,890,708
87	42	1,960,544	0	0	42	1,960,544
88	24	1,053,234	0	0	24	1,053,234
89	29	1,098,904	0	0	29	1,098,904
90	9	303,399	0	0	9	303,399
91	10	360,166	0	0	10	360,166
92	7	267,606	0	0	7	267,606
93	2	84,974	0	0	2	84,974
94	2	53,755	0	0	2	53,755
95+	5	142,902	0	0	5	142,902
<b>Totals</b>	<b>2,827</b>	<b>\$190,701,724</b>	<b>56</b>	<b>\$3,282,735</b>	<b>2,883</b>	<b>\$193,984,459</b>

**EXHIBIT F**  
**STATISTICS ON WIDOW'S ANNUITIES**  
**CLASSIFIED BY AGE AS OF DECEMBER 31, 2013**

Age	No. <sup>1</sup>	Annual Payments	Age	No. <sup>1</sup>	Annual Payments
Under 30	0	\$ 0	63	23	\$ 501,697
30	0	0	64	8	182,334
31	0	0	65	16	385,817
32	0	0	66	23	580,794
33	0	0	67	21	552,159
34	0	0	68	19	478,518
35	0	0	69	24	596,927
36	1	20,275	70	30	729,357
37	0	0	71	39	1,037,368
38	0	0	72	34	822,545
39	1	20,888	73	32	858,752
40	1	25,183	74	39	879,553
41	0	0	75	43	1,065,873
42	1	13,675	76	36	841,394
43	0	0	77	49	1,039,611
44	0	0	78	45	967,721
45	0	0	79	39	838,599
46	2	39,566	80	49	975,623
47	3	54,237	81	52	1,017,566
48	1	24,884	82	52	957,633
49	7	175,939	83	61	1,079,223
50	7	140,934	84	62	1,025,311
51	7	157,239	85	47	757,316
52	9	193,493	86	42	728,830
53	4	104,742	87	46	714,297
54	4	115,380	88	30	484,334
55	9	167,002	89	32	494,155
56	9	186,584	90	26	419,164
57	9	203,138	91	22	296,841
58	8	198,215	92	22	285,946
59	11	303,182	93	10	141,363
60	10	241,977	94	9	110,043
61	9	251,792	95+	38	512,119
62	9	241,472			
			<b>Total</b>	<b>1,242</b>	<b>\$25,238,580</b>

<sup>1</sup>Excludes Parent Annuitants and Compensation Annuitants.

**EXHIBIT G**  
**STATISTICS ON MISCELLANEOUS ANNUITIES**  
**FOR FISCAL YEAR ENDING DECEMBER 31, 2013**

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	<u>No.</u>	<u>Annual Payments</u>
Children's Annuities	83	876,845
Widows' Compensation Annuities	99	6,583,715
Ordinary Disability Benefits	2	83,638
Occupational Disease Disability Benefits	112	6,948,193
Duty Disability Benefits	220	13,083,416
Parent Annuities	<u>1</u>	<u>13,567</u>
<b>Totals</b>	<b>517</b>	<b>\$27,589,374</b>

**EXHIBIT H – PART I**  
**MALE PARTICIPANTS RECEIVING DUTY DISABILITY**  
**CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2013**

ATTAINED AGE	Length of Service as of December 31, 2013												Total	
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		No.	Annual Payments
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments		
UNDER 30													0	\$ 0
30 to 34													0	0
35 to 39					2	115,750							2	115,750
40 to 44			1	43,911	3	160,703	1	61,644					5	266,258
45 to 49			1	40,415	2	114,234	6	332,210	2	134,277	5	362,508	16	983,644
50 to 54			4	140,082	6	252,722	8	404,694	11	656,935	14	966,733	43	2,421,166
55 to 59			2	67,779	3	119,718	8	366,267	7	352,905	54	3,899,420	74	4,806,089
60 & over			1	35,874	5	198,240	7	286,100	4	218,286	29	2,005,187	46	2,743,687
<b>Totals</b>	<b>0</b>	<b>\$ 0</b>	<b>9</b>	<b>\$ 328,061</b>	<b>21</b>	<b>\$ 961,367</b>	<b>30</b>	<b>\$ 1,450,915</b>	<b>24</b>	<b>\$ 1,362,403</b>	<b>102</b>	<b>\$ 7,233,848</b>	<b>186</b>	<b>\$ 11,336,594</b>

**EXHIBIT H – PART II**  
**FEMALE PARTICIPANTS RECEIVING DUTY DISABILITY**  
**CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2013**

ATTAINED AGE	Length of Service as of December 31, 2013												Total	
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		No.	Annual Payments
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments		
UNDER 30													0	\$ 0
30 to 34													0	0
35 to 39													0	0
40 to 44													0	0
45 to 49			1	35,874			3	155,072	1	59,235	1	84,090	6	334,271
50 to 54			2	75,312	2	90,423	2	106,041	4	218,963	1	76,971	11	567,710
55 to 59					3	131,118	3	121,385	2	127,815	1	97,216	9	477,534
60 & over					2	78,522	3	128,204	1	60,379	2	100,202	8	367,307
<b>Totals</b>	<b>0</b>	<b>\$ 0</b>	<b>3</b>	<b>\$ 111,186</b>	<b>7</b>	<b>\$ 300,063</b>	<b>11</b>	<b>\$ 510,702</b>	<b>8</b>	<b>\$ 466,392</b>	<b>5</b>	<b>\$ 358,479</b>	<b>34</b>	<b>\$ 1,746,822</b>



**EXHIBIT I – PART I**  
**MALE PARTICIPANTS RECEIVING ORDINARY DISABILITY**  
**CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2013**

ATTAINED AGE	Length of Service as of December 31, 2013												Total Annual Payments		
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over				
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	
UNDER 30													0	\$ 0	
30 to 34													0	0	
35 to 39													0	0	
40 to 44													0	0	
45 to 49									1	44,109		1	39,529	2	83,638
50 to 54													0	0	
55 to 59													0	0	
60 & over													0	0	
<b>Totals</b>	<b>0</b>	<b>\$ 0</b>	<b>0</b>	<b>\$ 0</b>	<b>0</b>	<b>\$ 0</b>		<b>\$ 0</b>	<b>1</b>	<b>\$ 44,109</b>	<b>1</b>	<b>\$ 39,529</b>	<b>2</b>	<b>\$ 83,638</b>	

**EXHIBIT I – PART II**  
**FEMALE PARTICIPANTS RECEIVING ORDINARY DISABILITY**  
**CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2013**

ATTAINED AGE	Length of Service as of December 31, 2013												Total Annual Payments	
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over			
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
UNDER 30													0	\$ 0
30 to 34													0	0
35 to 39													0	0
40 to 44													0	0
45 to 49													0	0
50 to 54													0	0
55 to 59													0	0
60 & over													0	0
<b>Totals</b>	<b>0</b>	<b>\$ 0</b>	<b>0</b>	<b>\$ 0</b>	<b>0</b>	<b>\$ 0</b>		<b>\$ 0</b>	<b>0</b>	<b>\$ 0</b>	<b>0</b>	<b>\$ 0</b>	<b>0</b>	<b>\$ 0</b>

**EXHIBIT J – PART I**  
**MALE PARTICIPANTS RECEIVING OCCUPATIONAL DISEASE DISABILITY**  
**CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2013**

ATTAINED AGE	Length of Service as of December 31, 2013												Total		
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over				
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	
UNDER 30													0	\$ 0	
30 to 34													0	0	
35 to 39													0	0	
40 to 44													0	0	
45 to 49	2	109,969					1	57,715				1	50,723	4	218,407
50 to 54	9	592,858					3	139,629	3	155,537	6	366,398	21	1,254,422	
55 to 59	8	597,864					3	130,310	2	107,708	37	2,353,717	50	3,189,599	
60 & over	2	130,671					1	39,006	1	51,229	25	1,539,058	29	1,759,964	
<b>Totals</b>	<b>21</b>	<b>\$ 1,431,362</b>	<b>0</b>	<b>\$ 0</b>	<b>0</b>	<b>\$ 0</b>	<b>8</b>	<b>\$ 366,660</b>	<b>6</b>	<b>\$ 314,474</b>	<b>69</b>	<b>\$ 4,309,896</b>	<b>104</b>	<b>\$ 6,422,392</b>	

**EXHIBIT J – PART II**  
**FEMALE PARTICIPANTS RECEIVING OCCUPATIONAL DISEASE DISABILITY**  
**CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2013**

ATTAINED AGE	Length of Service as of December 31, 2013												Total	
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over			
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
UNDER 30													0	\$ 0
30 to 34													0	0
35 to 39													0	0
40 to 44													0	0
45 to 49							1	41,761					1	41,761
50 to 54	2	122,608											2	122,608
55 to 59	1	84,254									1	76,387	2	160,641
60 & over					1	42,446					2	158,345	3	200,791
<b>Totals</b>	<b>3</b>	<b>\$ 206,862</b>	<b>0</b>	<b>\$ 0</b>	<b>1</b>	<b>\$ 42,446</b>	<b>1</b>	<b>\$ 41,761</b>		<b>\$ 0</b>	<b>3</b>	<b>\$ 234,732</b>	<b>8</b>	<b>\$ 525,801</b>

**EXHIBIT K**  
**HISTORY OF AVERAGE ANNUAL SALARIES**

Year End	Members in Service <sup>1</sup>	Current Year			Average		Actuarial Assumptions	CPI Chicago
		Increase	Salary	Increase	Salary	Increase		
1984	5,147	(2.8)%	\$ 160,434,312	(1.4)%	\$ 31,170	1.4 %	6.0%	3.8 %
1985	5,047	(1.9)%	157,426,898	(1.9)%	31,192	0.1 %	6.0%	3.8 %
1986	5,103	1.1 %	176,451,816	12.1 %	34,578	10.9 %	6.0%	2.1 %
1987	5,183	1.6 %	186,840,432	5.9 %	36,049	4.3 %	6.0%	4.1 %
1988	5,233	1.0 %	188,093,568	0.7 %	35,944	(0.3)%	6.0%	3.9 %
1989	5,231	0.0 %	194,241,480	3.3 %	37,133	3.3 %	6.0%	5.0 %
1990	5,337	2.0 %	211,869,720	9.1 %	39,698	6.9 %	6.0%	5.4 %
1991	5,323	(0.3)%	227,649,000	7.4 %	42,767	7.7 %	6.0%	4.0 %
1992	5,204	(2.2)%	223,578,000	(1.8)%	42,963	0.5 %	6.0%	3.0 %
1993	5,124	(1.5)%	221,600,136	(0.9)%	43,247	0.7 %	6.0%	3.0 %
1993 <sup>2</sup>	4,710	(8.1)%	202,080,072	(8.8)%	42,904	(0.8)%	6.0%	3.0 %
1994	4,753	0.9 %	226,703,496	12.2 %	47,697	11.2 %	6.0%	2.2 %
1995	4,678	(1.6)%	228,604,584	0.8 %	48,868	2.5 %	6.0%	3.2 %
1996	4,806	2.7 %	233,033,832	1.9 %	48,488	(0.8)%	6.0%	2.7 %
1997	4,856	1.0 %	234,726,936	0.7 %	48,338	(0.3)%	5.0%	2.7 %
1998	4,783	(1.5)%	262,248,978	11.7 %	54,829	13.4 %	5.0%	1.5 %
1999	4,855	1.5 %	271,335,540	3.5 %	55,888	1.9 %	5.0%	2.6 %
2000	4,878	0.5 %	275,106,756	1.4 %	56,397	0.9 %	5.0%	4.0 %
2001	4,930	1.1 %	277,964,912	1.0 %	56,382	0.0 %	5.0%	0.8 %
2002	4,910	(0.4)%	277,053,144	(0.3)%	56,426	0.1 %	5.0%	2.5 %
2003	4,909	0.0 %	335,170,501	21.0 %	68,277	21.0 %	5.0%	1.7 %
2004	4,856	(1.1)%	334,423,753	(0.2)%	68,868	0.9 %	5.0%	2.2 %
2005	4,999	2.9 %	341,252,492	2.0 %	68,264	(0.9)%	5.0%	3.6 %
2006	5,078	1.6 %	387,442,074	13.5 %	76,298	11.8 %	5.0%	0.7 %
2007	4,938	(2.8)%	388,881,954	0.4 %	78,753	3.2 %	5.0%	4.7 %
2008	5,037	2.0 %	396,181,778	1.9 %	78,654	(0.1)%	5.0%	(0.6)%
2009	5,137	2.0 %	400,912,173	1.2 %	78,044	(0.8)%	5.0%	2.5 %
2010	5,052	(1.7)%	400,404,320	(0.1)%	79,257	1.6 %	5.0%	1.2 %
2011	4,842	(4.2)%	425,385,354	6.2 %	87,853	10.8 %	5.0%	2.1 %
2012	4,740	(2.1)%	418,964,763	(1.5)%	88,389	0.6 %	5.0%	1.7 %
2013 <sup>3</sup>	4,685	(1.2)%	416,491,784	(0.6)%	88,899	0.6 %	5.0%	0.5 %
<b>Average Increase (Decrease) for the last 5 years:</b>		<b>(1.4)%</b>		<b>1.0 %</b>		<b>2.6 %</b>		<b>1.6 %</b>

<sup>1</sup> Includes those members who were on disability through 1993.

<sup>2</sup> Restated without disabilities for comparison. Percent increases (decreases) are based on change from with disabilities in 1993 to without disabilities in 1994.

<sup>3</sup> Average annual increase in average salary 1983-2013, is about 3.6% compounded. The average annual increase in the Chicago CPI for the same period is about 2.7% compounded.

**EXHIBIT L**  
**NEW ANNUITIES GRANTED DURING 2013**

	<b>Annuitants</b>	<b>Widows/ Widowers of Deceased Employees<sup>2</sup></b>	<b>Widows/ Widowers of Deceased Annuitants</b>	<b>Compensation Widows/ Widowers<sup>3</sup></b>
Number retired/deceased	187	1	70	2
Average age attained [Employee]	57.6	58.0	77.9	58.0
Average length of service	30.2	33.3	49.0	31.4
Average spouse age	56.0	51.3	73.8	56.9
Average annual salary [4 out of 10]	\$ 102,301	N/A	N/A	N/A
Average annual final salary	\$ 103,764	N/A	N/A	N/A
Total annual annuity	\$ 13,802,184	33,420	1,999,515	130,986
Average annual annuity	\$ 73,808	33,420	28,565	65,493
Total statutory liability	\$ 228,337,929	558,845	17,639,026	2,682,220
Average liability	\$ 1,221,058	558,845	251,986	1,341,110
Total investment [Employee-paid for tax purposes]	\$ 26,967,862	N/A	N/A	N/A
Average investment <sup>1</sup>	\$ 144,213	N/A	N/A	N/A
Liability/cost	8.47	N/A	N/A	N/A
Liability/final pay	11.77	N/A	N/A	N/A

<sup>1</sup> Based on previously taxed contributions.

<sup>2</sup> Not including compensation or supplemental.

<sup>3</sup> Does not include transfers from supplemental widows.

**EXHIBIT M**  
**RETIREES AND BENEFICIARIES BY TYPE OF BENEFIT**

Years	ANNUITANTS						DISABILITY			Widow/ Widower Comp.	Total
	Employee	Disability Pensioner	Spouse	Supplemental Widow(er)	Child	Parent	Ordinary	Duty	Occup.		
1984	1,813	3	1,228	79	129	2	6	199	198	44	3,701
1985	1,884	2	1,224	77	129	2	6	211	191	49	3,775
1986	2,025	1	1,233	75	126	2	5	226	158	56	3,907
1987	2,080	1	1,236	87	121	2	7	233	143	46	3,956
1988	2,180	1	1,245	83	115	2	9	216	117	43	4,011
1989	2,235	1	1,237	68	108	1	8	235	122	55	4,070
1990	2,242	0	1,248	67	106	1	11	253	133	51	4,112
1991	2,226	0	1,264	65	121	1	14	267	143	49	4,150
1992	2,261	0	1,277	68	113	1	11	286	147	40	4,204
1993	2,257	0	1,291	69	114	1	10	274	140	35	4,191
1994	2,207	0	1,316	66	114	2	6	284	142	36	4,173
1995	2,248	0	1,332	62	110	1	8	297	144	40	4,242
1996	2,257	0	1,328	61	110	1	8	292	169	44	4,270
1997	2,235	0	1,348	60	111	1	11	296	194	46	4,302
1998	2,251	0	1,360	56	125	2	8	295	197	49	4,343
1999	2,351	0	1,450	56	139	2	5	295	203	49	4,550
2000	2,538	0	1,440	51	132	2	6	257	139	49	4,614
2001 <sup>1</sup>	2,422	0	1,330	0	116	2	2	262	147	89	4,370
2002	2,411	0	1,330	0	121	1	2	257	144	85	4,351
2003	2,412	0	1,322	0	119	1	3	249	121	82	4,309
2004	2,441	0	1,352	0	114	1	7	244	113	81	4,353
2005	2,442	0	1,330	0	111	1	7	254	107	105	4,357
2006	2,459	0	1,322	0	110	1	6	257	113	114	4,382
2007	2,488	0	1,300	0	105	1	4	266	114	113	4,391
2008	2,471	0	1,306	0	98	1	4	269	124	108	4,381
2009	2,556	0	1,292	0	89	1	4	262	121	107	4,432
2010	2,577	0	1,261	0	83	1	4	259	124	100	4,409
2011	2,665	0	1,253	0	85	1	4	249	121	100	4,478
2012	2,821	0	1,260	0	83	1	2	232	116	98	4,613
2013	2,883	0	1,242	0	83	1	2	220	112	99	4,642

<sup>1</sup> In 2001 all Supplemental Widows were moved into the Compensation Widows Group.

**EXHIBIT N**  
**AVERAGE EMPLOYEE RETIREMENT BENEFITS PAYABLE**

<b>Years Ended</b>	<b>Average Annual Benefit</b>	<b>Average Current Age of Retirees</b>	<b>Average Annual Benefit at Retirement Current Year</b>	<b>Average Age at Retirement Current Year</b>	<b>Average Years of Service at Retirement Current Year</b>
1984	\$ 13,012	68	\$ 21,401	59.4	30.5
1985	14,243	68	22,897	59.1	30.4
1986	15,635	68	24,826	58.6	29.8
1987	16,833	68	26,342	59.1	30.4
1988	18,476	68	28,166	61.4	31.1
1989	19,732	68	29,967	60.4	31.1
1990	20,853	68	30,038	60.3	30.9
1991	21,942	69	30,983	60.0	31.4
1992	23,503	69	32,758	59.9	31.3
1993	25,031	69	34,267	61.6	31.7
1994	26,262	70	34,391	59.8	31.2
1995	27,935	70	38,872	60.3	32.1
1996	29,304	70	40,406	60.4	32.0
1997	30,787	70	41,543	59.8	31.6
1998	32,503	71	43,905	60.1	32.1
1999	34,067	71	44,001	60.4	31.4
2000	36,458	71	48,534	63.5	34.2
2001	38,048	71	45,768	60.2	30.9
2002	40,052	71	45,346	59.7	30.8
2003	42,131	71	50,943	60.2	31.7
2004	45,675	71	59,608	60.0	32.1
2005	47,917	71	59,117	59.2	31.4
2006	50,171	71	61,172	57.7	30.1
2007	52,446	71	64,076	58.1	30.0
2008	54,492	71	61,577	57.4	29.6
2009	57,023	71	67,310	57.8	30.3
2010	59,133	71	67,386	59.0	29.7
2011	61,879	71	70,893	58.5	29.4
2012	64,860	70	75,675	58.5	30.4
2013	67,286	70	73,808	57.6	30.2

**EXHIBIT O – PART I**  
**HISTORY OF ANNUITIES 1983-2013**  
**EMPLOYEE ANNUITANTS (MALE AND FEMALE)**

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<b>Year End</b>	<b>Number of Annuitants</b>	<b>Total Annuities</b>	<b>Average Annuities</b>
1984	1,816	\$ 23,648,174	\$ 13,022
1985	1,886	26,863,056	14,243
1986	2,026	31,676,856	15,635
1987	2,081	35,030,176	16,833
1988	2,181	40,296,025	18,476
1989	2,235	44,101,893	19,732
1990	2,242	46,752,084	20,853
1991	2,226	48,843,715	21,942
1992	2,261	53,140,074	23,503
1993	2,257	56,495,862	25,031
1994	2,207	57,960,522	26,262
1995	2,248	62,797,419	27,935
1996	2,257	66,139,690	29,304
1997	2,235	68,808,890	30,787
1998	2,251	73,163,601	32,503
1999	2,351	80,090,897	34,067
2000	2,538	92,529,624	36,458
2001	2,422	92,152,832	38,048
2002	2,411	96,565,842	40,052
2003	2,412	101,620,962	42,131
2004	2,441	111,491,737	45,675
2005	2,442	117,014,053	47,917
2006	2,459	123,371,713	50,171
2007	2,488	130,485,435	52,446
2008	2,471	134,649,295	54,492
2009	2,556	145,751,375	57,023
2010	2,577	152,385,721	59,133
2011	2,665	164,908,801	61,879
2012	2,821	182,970,558	64,860
2013	2,883	193,984,459	67,286

**EXHIBIT O – PART II**  
**HISTORY OF ANNUITIES 1983-2013**  
**WIDOW/WIDOWER ANNUITANTS**  
**(INCLUDING PARENT BUT NOT COMPENSATION ANNUITANTS)**

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<b>Year End</b>	<b>Number of Annuitants</b>	<b>Total Annuities</b>	<b>Average Annuities</b>
1984	1,309	\$ 5,203,409	\$ 3,975
1985	1,303	5,328,940	4,090
1986	1,310	5,843,911	4,461
1987	1,325	6,273,158	4,734
1988	1,330	6,617,019	4,975
1989	1,319	7,743,932	5,871
1990	1,316	8,031,199	6,103
1991	1,330	9,316,132	7,005
1992	1,346	10,774,709	8,005
1993	1,361	12,121,722	8,906
1994	1,384	13,680,765	9,885
1995	1,395	14,495,633	10,391
1996	1,389	14,709,232	10,590
1997	1,409	15,397,832	10,928
1998	1,418	15,969,975	11,262
1999	1,508	18,136,173	12,027
2000	1,493	18,352,906	12,293
2001	1,332	16,516,021	12,399
2002	1,331	17,006,519	12,777
2003	1,323	17,490,584	13,220
2004	1,353	19,297,527	14,263
2005	1,331	20,481,794	15,388
2006	1,323	21,123,202	15,966
2007	1,301	21,290,764	16,365
2008	1,307	22,164,269	16,958
2009	1,293	22,652,897	17,520
2010	1,262	22,832,364	18,092
2011	1,254	23,449,616	18,700
2012	1,261	24,681,837	19,573
2013	1,243	25,252,147	20,315



**EXHIBIT P**  
**HISTORY OF RETIREES AND BENEFICIARIES**  
**ADDED TO AND REMOVED FROM BENEFIT PAYROLL**

Yr.	Added to Payroll		Removed from Payroll		Payroll End of Year		Average Annual Benefits	Increase to Avg. Benefits
	No.	Annual Benefits.	No.	Annual Benefits	No.	Annual Benefits		
<b>Employee Annuitants (Male and Female)</b>								
1999	118	\$5,192,157	18	\$245,975	2,351	\$80,090,897	\$34,067	4.8%
2000	265	12,861,578	78	2,413,778	2,538	92,529,624	36,458	7.0
2001	114	5,171,784	230	5,548,576	2,422	92,152,832	38,048	4.4
2002	107	4,851,988	118	438,978	2,411	96,565,842	40,052	5.3
2003	134	6,826,357	133	1,771,237	2,412	101,620,962	42,131	5.2
2004	147	14,053,559	118	4,182,784	2,441	111,491,737	45,675	8.4
2005	126	10,248,119	125	4,725,803	2,442	117,014,053	47,917	4.9
2006	123	10,689,546	106	4,331,886	2,459	123,371,713	50,171	4.7
2007	126	11,168,192	97	4,054,470	2,488	130,485,435	52,446	4.5
2008	109	9,696,869	126	5,533,009	2,471	134,649,295	54,492	3.9
2009	185	15,610,755	100	4,508,675	2,556	145,751,375	57,023	4.6
2010	117	11,242,038	96	4,607,692	2,577	152,385,721	59,133	3.7
2011	197	18,074,820	109	5,551,740	2,665	164,908,801	61,879	4.6
2012	275	24,560,716	119	6,498,959	2,821	182,970,558	64,860	4.8
2013	187	17,780,058	125	6,766,157	2,883	193,984,459	67,286	3.7
<b>Widow/Widower Annuitants (Not Including Compensation)</b>								
1999	90	\$1,268,687	0	\$0	1,508	\$18,136,173	\$12,027	6.8%
2000	70	1,204,364	85	987,631	1,493	18,352,906	12,293	2.2
2001	127	1,865,460	288	3,702,345	1,332	16,516,021	12,399	0.9
2002	73	1,316,617	74	826,119	1,331	17,006,519	12,777	3.0
2003	87	1,475,058	95	990,993	1,323	17,490,584	13,220	3.5
2004	92	2,595,350	62	788,407	1,353	19,297,527	14,263	7.9
2005	94	2,596,899	116	1,412,632	1,331	20,481,794	15,388	7.9
2006	84	1,964,568	92	1,323,160	1,323	21,123,202	15,966	3.8
2007 <sup>1</sup>	59	1,341,091	81	1,173,529	1,301	21,290,764	16,365	2.5
2008 <sup>1</sup>	77	1,796,751	71	923,246	1,307	22,164,269	16,958	3.6
2009 <sup>1</sup>	66	1,605,852	80	1,117,224	1,293	22,652,897	17,520	3.3
2010 <sup>1</sup>	55	1,404,275	86	1,224,808	1,262	22,832,364	18,092	3.3
2011 <sup>1</sup>	62	1,661,849	70	1,044,597	1,254	23,449,616	18,700	3.4
2012 <sup>1</sup>	79	2,361,949	72	1,129,728	1,261	24,681,837	19,573	4.7
2013 <sup>1</sup>	71	2,032,935	89	1,462,625	1,243	25,252,147	20,315	3.8

<sup>1</sup> Including Parent Annuitants but not Compensation Annuitants.

**EXHIBIT Q**  
**NUMBER OF RETIREES AND BENEFICIARIES RECEIVING HEALTHCARE**  
**BENEFITS BY STATUS**

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Year	Number of		
	Employee	Beneficiary <sup>1</sup>	Total
2006	2,095	1,021	3,116
2007	2,152	1,006	3,158
2008	2,133	1,017	3,150
2009	2,159	1,031	3,190
2010	2,148	1,006	3,154
2011	2,149	1,004	3,153
2012	2,133	1,002	3,135
2013	2,056	983	3,039

<sup>1</sup> Includes children.

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## **APPENDIX 4**

ACTUARIAL METHODS AND ASSUMPTIONS AS OF  
DECEMBER 31, 2013

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# ACTUARIAL METHODS AND ASSUMPTIONS AS OF DECEMBER 31, 2013

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## I. ACTUARIAL COST METHOD

An Actuarial Cost Method is a set of techniques used by the actuary to develop contribution levels under a retirement plan. The Actuarial Cost Method used in this valuation for statutory funding and State reporting purposes is the Projected Unit Credit cost method. The Actuarial Cost Method used for GASB accounting purposes is the Entry-Age Normal cost method.

Under the Projected Unit Credit cost method, the projected pension at retirement age is first calculated and the value thereof at the individual member's current or attained age is determined. The normal cost for the member for the current year is equal to the value so determined divided by the member's projected service at retirement. The normal cost for the plan for the year is the sum of the individual normal costs.

The actuarial liability at any point in time is the value of the projected pensions at that time less the value of future normal costs.

Under the Entry-Age Normal Actuarial Cost Method, each participant's benefits are assumed to be funded by annual installments, equal to a level percentage of compensation, payable from date of participation to assumed retirement. The total "Normal Cost" is the sum of the current year's annual installments determined for all active participants. The "Actuarial Accrued Liability" is the excess of the value of projected benefits for all participants (both active and retired) over the discounted value of Normal Costs determined for future years of service.

To the extent that current assets and future Normal Costs do not support participants' expected future benefits, an Unfunded Actuarial Accrued Liability ("UAAL") develops. The UAAL is generally amortized over a fixed period of time (e.g. 30 years) from the date incurred. At a minimum, interest on UAAL should be funded. The total contribution developed under this method is the sum of the Normal Cost and the payment toward the UAAL. The Minimum Actuarially Determined Contribution contains only an interest payment on the UAAL.

## II. CURRENT ACTUARIAL ASSUMPTIONS

The current actuarial assumptions were adopted and became effective for the December 31, 2011 valuation, and were based on an experience study for the period January 1, 2003, to December 31, 2010.

### A. *Demographic Assumptions*

Mortality: RP-2000 Combined Healthy Mortality Table, sex distinct. The mortality table used is a static table and provides an estimated margin of 15 percent for future mortality improvements as of the experience study performed as of December 31, 2011.

Disabled Mortality: RP-2000 Combined Healthy Mortality Table, sex distinct, set forward six years.

**ACTUARIAL METHODS AND ASSUMPTIONS  
AS OF DECEMBER 31, 2013 (CONT'D)**

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Pre-Retirement Mortality: Pre-retirement mortality is 80 percent of the post-retirement rates.

Rates of Disability: Rate at which members are assumed to become disabled under the provisions of the Fund. The rates assumed are as follows:

<u>Attained Age</u>	<u>Rates</u>
20-24	0.0008
25-29	0.0010
30-34	0.0020
35-39	0.0020
40-44	0.0028
45-49	0.0054
50-54	0.0140
55-59	0.0265
60-63	0.0300

Of the participants who become disabled, 50 percent are assumed to be duty disability, 45 percent are assumed to be occupational disease disability and 5 percent are assumed to be ordinary disability.

Rate of Retirement: The tables below show the assumed rates of retirement.

For members hired before January 1, 2011:

<u>Attained Age</u>	<u>Firefighters Rates</u>	<u>Paramedic Rates</u>
50	0.02	0.03
51	0.03	0.03
52	0.03	0.04
53	0.04	0.05
54	0.04	0.06
55	0.05	0.07
56	0.06	0.07
57	0.07	0.07
58	0.07	0.07
59	0.07	0.07
60	0.25	0.20
61	0.30	0.20
62	0.45	0.30
63	1.00	0.30
64		0.40
65		1.00

**ACTUARIAL METHODS AND ASSUMPTIONS  
AS OF DECEMBER 31, 2013 (CONT'D)**

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For members hired on or after January 1, 2011:

<b>Attained Age</b>	<b>Firefighters Rates</b>	<b>Paramedic Rates</b>
50	0.01	0.01
51	0.01	0.01
52	0.01	0.01
53	0.01	0.01
54	0.01	0.01
55	0.07	0.07
56	0.07	0.07
57	0.07	0.07
58	0.07	0.07
59	0.07	0.07
60	0.25	0.20
61	0.30	0.20
62	0.45	0.30
63	1.00	0.30
64		0.40
65		1.00

Rate of Termination:           The following sample rates exemplify the table:

<b>Years of Service</b>	<b>Rate</b>
1	0.020
5	0.006
10	0.006
15	0.005
20	0.005
25	0.005
30	0.000

**ACTUARIAL METHODS AND ASSUMPTIONS  
AS OF DECEMBER 31, 2013 (CONT'D)**

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**B. Economic Assumptions**

Investment Return Rate: 8.00 percent per annum for pensions and 4.50 percent for OPEB. OPEB rate effective as of December 31, 2005.

General Inflation: 3.00 percent per annum.

Future Salary Increases: Assumed rates of individual salary increase at 4.25 percent per year, plus an additional percentage based on the following service scale:

<u>Years of Service</u>	<u>Rates</u>
0	21.25%
1	5.25%
2	5.25%
3	5.00%
4	5.00%
5-9	0.00%
10	3.50%
11-14	0.00%
15	3.50%
16-19	0.00%
20	4.00%
21-24	0.00%
25	3.20%
26-29	0.00%
30	1.50%
Over 30	0.00%

Asset Value: For State reporting, the actuarial value of assets is smoothed by using a five-year average market value.

For GASB #25 and #27, the actuarial value of assets is smoothed by using a five-year average market value.

**C. Other Assumptions**

Marital Status: It is assumed that 85 percent of members have an eligible spouse. The male spouse is assumed to be four years older than the female spouse. No assumption is made about other dependents.

**ACTUARIAL METHODS AND ASSUMPTIONS  
AS OF DECEMBER 31, 2013 (CONT'D)**

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Group Health Insurance: It is assumed for valuation purposes that the current health insurance supplement will continue through December 31, 2016 for all employee annuitants (and their future widows). The amount of the Fund-paid health insurance after June 30, 2008 is \$95.00 per month for each annuitant (employees and widows) not qualified to receive Medicare benefits and \$65.00 if qualified. It is assumed that all annuitants age 65 and over will be eligible for Medicare and all annuitants less than age 65 will not be eligible for Medicare. Future widows of retirees are assumed to be eligible for Medicare at age 65, as well as widow annuitants that are currently receiving a health insurance supplement.

Only retirees, beneficiaries and children who the Fund has indicated have Fund paid insurance are valued with this benefit.

Required Ultimate Multiple: The actuarial requirements (adjusted for tax levy loss) less expected employee contributions divided by the actual employee contributions made in the second prior year.

***D. Projection Assumptions***

Active Population: Active members who terminate, retire, become disabled or die during the year are replaced by new entrants such that the number of active members remains level during the projection period based on the most recent actuarial valuation. The number of active members as of the valuation at December 31, 2013 is 4,685.

New Entrant Profile: The entry age of future new entrants, which is summarized below, is based on the profile of current active members hired over the last five years with one or more years of service as of December 31, 2013. These members were hired from January 1, 2009 through December 31, 2012. The group hired due to the Lewis Settlement was excluded from the development of the new entrant profile.

Entry Age	Number
Less than 25	57
25 to 30	154
30 to 35	119
35 to 40	42
40 to 45	5
45 and Over	0

Approximately 89 percent of the new entrants are assumed to be male.



**ACTUARIAL METHODS AND ASSUMPTIONS  
AS OF DECEMBER 31, 2013 (CONT'D)**

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New Entrant Pay: Based on the most recent employment contract, new entrants were assumed to earn \$50,490 for the plan year ending December 31, 2014. The new entrant pay for members hired after 2014 is assumed to increase by the wage inflation assumption of 4.25 percent.

New Entrant Pay Increases: Pay for a specific new entrant is assumed to increase in the future by the wage inflation and the service based increases disclosed in the economic assumptions section of this report.

The projections assume a pay cap of \$109,971.43 for plan year 2013, and a pay cap of \$110,631.26 for pan year 2014, increasing by 1.5 percent per year after plan year 2014. The annual increase of 1.5 percent per year is based on 50 percent of the CPI-U increase which is assumed to be 3.0 percent per year.

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**APPENDIX 5**

SUMMARY OF PROVISIONS OF THE FUND AS OF  
DECEMBER 31, 2013

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**SUMMARY OF  
PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS  
AS OF DECEMBER 31, 2013**

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**PARTICIPANTS**

Person employed by the City of Chicago in its fire service as firefighter, fire paramedic, fire engineer, marine engineer or fire pilot, whose duty it is to participate in the work of controlling and extinguishing fire at the location of any such fire, whether or not he is assigned to fire service other than the actual extinguishing of fire.

**SERVICE**

In computing service, the following periods shall be counted:

All periods of active service, vacation, leave of absence with whole or part pay, military service, periods of disability for which he receives disability benefit and leave of absence without pay to perform the duties of a member of the General Assembly prior to January 9, 1997. It is computed on a day to day basis. Employees may purchase the 1980-strike time and periods of suspension less than one year. Employees may purchase, with 4 percent interest, periods of employment of the Chicago Fire Department from 1970 until the employee entered this fund.

**RETIREMENT ANNUITY**

***Eligibility***

For participants that first became members before January 1, 2011, attainment of age 50 with at least 10 years of service.

*For participants that first became members on or after January 1, 2011, attainment of age 55 with at least 10 years of service. Participants may retire at attainment of age 50 with 10 years of service with a reduced benefit.*

***Mandatory***

Retirement is mandatory for a participant who has attained age 63, except for emergency medical technicians.

***Accumulation Annuity***

At age 50 or more, with 10 or more years of service, the employee is entitled to an annuity based on the sums accumulated for age and service annuity plus 1/10 of the sum accumulated from the contributions by the City for the age and service annuity for each completed year of service after the first 10 years. At age 50 or more with 20 or more years or at age 63, the employee is entitled to an annuity based on all sums accumulated to his or her credit. The maximum is 75 percent of highest salary.

***Minimum Formula Annuity***

If the employee has 20 or more years of service (the annuity will begin no earlier than age 50), he or she is entitled to the following annuity: 50 percent plus 2.5 percent of the final average salary for each year or fraction of service over twenty years. Maximum is 75 percent of the final average salary.

**SUMMARY OF  
PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS  
AS OF DECEMBER 31, 2013 (CONT'D)**

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***Retirement at Age 63 with Less than 20 Years of Service<sup>1</sup>***

An employee who reaches compulsory retirement age with less than 20 years but greater than 10 years of service shall be entitled to a minimum annuity equal to 30 percent of final average salary for the first 10 years of service plus an additional 2 percent for each year in excess of 10, not to exceed 50 percent of final average salary.

***Minimum Annuity***

The minimum monthly annuity is \$1,050 if the firefighter retired at age 50 or over with at least 20 years of service.

*For participants that first became members on or after January 1, 2011, the member is entitled to an annuity based on an accrual rate of 2.5 percent of the final average salary for each fraction of service. Maximum is 75 percent of the final average salary. Final average salary is calculated using salary from the eight highest consecutive years within the last 10 years of service prior to retirement. Pensionable salary is limited to \$106,800 in 2011, increased by the lesser of 3 percent and one-half of the annual unadjusted percentage increase in the Consumer Price Index-U (but not less than zero) as measured in the preceding 12-month period ending with the September preceding the November 1, which is the date that the new amount will be calculated and made available to the pension funds.*

*For participants that first became members on or after January 1, 2011, who retire after age 50 but before age 55 is attained, the member is entitled to an annuity based on an accrual rate of 2.5 percent of the final average salary for each fraction of service, reduced by one half of one percent per month for retirement prior to age 55, subject to a maximum benefit of 75 percent.*

***Automatic Increase in Annuity***

If an employee qualifies for a minimum formula annuity, 1.5 percent of the original annuity, starting on the first of the month one year after retirement or the first of the month following attainment of age 60 (age 55 if born before January 1, 1955, effective January 16, 2004), whichever is later, with a maximum of 30 percent (20 years). Such increases shall be 3 percent for firefighters born before January 1, 1955, (effective January 16, 2004) and such firefighters shall not be subject to the 30 percent maximum increase.

*For participants that first became members on or after January 1, 2011, increases are equal to the lesser of 3.00 percent and 50 percent of CPI-U of the original benefit, commencing at age 60.*

**WIDOW/WIDOWER ANNUITY**

Payable until remarriage if widow/widower remarries before age 60, except Compensation and Supplemental Annuities. If the annuity is suspended because the widow/widower remarries before age 60, annuity payments will be resumed if the subsequent marriage ends. Any widow/widower's annuity, which was suspended on account of remarriage prior to December 31, 1989, will be resumed, if subsequent marriage ends, the later of July 14, 1995, or when the marriage ended. Beginning January 16, 2004, widows retain their rights to benefits after remarriage at any age.

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<sup>1</sup> Between January 1994 and December 2000, benefits have been administered as if there were no compulsory retirement age. Beginning December 2000 benefits have been administered as if age 63 is the compulsory retirement age for non-EMT participants and there is no compulsory retirement age for EMT participants.

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**SUMMARY OF  
PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS  
AS OF DECEMBER 31, 2013 (CONT'D)**

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Benefits are not available to a widow of a fireman who received a refund of contributions for widow's benefits, unless the refund is repaid with 4 percent interest per year.

***Death in Service (Non-Duty)***

- (1) If the firefighter dies with at least 1.5 years of service, 30 percent of the salary attached to the rank of a first class firefighter in the classified career service at the time of the firefighter's death; or,
- (2) 50 percent of the annuity the deceased firefighter would have received if he had retired just prior to the date of death; or,
- (3) Money purchase based on the total salary deductions and City contributions for age and service annuity and widow/widower's annuity.
- (4) The widow of an active fireman with 10 or more years of service will receive no less than 50 percent of the benefit that the active fireman would have received had they attained age 50 and 20 years of service.

***Death In Service (Duty Related)***

***Compensation Annuity<sup>2</sup>***

The annuity paid to the spouse equals 75 percent of the firefighter's salary attached to his civil service position at the time of his death. This amount increases as the salary of the position increases. This benefit is payable until the year in which the firefighter would have reached the compulsory retirement age.

***Death In Service (Duty Disability)***

***Compensation Annuity***

The annuity paid to the spouse of a member who dies in receipt of duty disability benefits equals 75 percent of the firefighter's salary attached to his civil service position at the time of his death. This amount increases as the salary of the position increases.

***Death after Retirement***

- (1) If the firefighter dies after retirement, the annuity is 50 percent of the retirement annuity that the deceased firefighter was receiving at the time of his or her death; or,
- (2) Money purchase based on the sums accumulated for the spouse annuity plus 10 percent of the accumulated City contributions for each year of service from 10 to 20 years, and full accumulated City contributions after 20 years of service.

***Maximum Annuity***

No maximum dollar amount.

***Minimum Annuity***

The minimum monthly annuity for any widow/widower is \$1,000.

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<sup>2</sup> Between January 1994 and December 2000, benefits have been administered as if there were no compulsory retirement age. Beginning December 2000 benefits have been administered as if age 63 is the compulsory retirement age for non-EMT participants and there is no compulsory retirement age for EMT participants.

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**SUMMARY OF  
PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS  
AS OF DECEMBER 31, 2013 (CONT'D)**

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*For participants that first became members on or after January 1, 2011, widow benefits are equal to 66-2/3 percent of the firemen's earned annuity at the date of death. Automatic increases to the annuity are equal to the lesser of 3.00 percent and 50 percent of CPI-U, commencing when the survivor reaches age 60, and applied to the original granted retirement annuity.*

**CHILD ANNUITY**

Upon the death of the firefighter, unmarried children less than age 18 (except where child is so physically or mentally handicapped as to be unable to support himself) are eligible to receive an annuity. The amount of annuity payable for a child is 10 percent of the current annual maximum salary of a first class firefighter while a widow/widower survives; 15 percent when no widow/widower survives.

**FAMILY MAXIMUM**

The total annuities for widow/widower and children cannot exceed 60 percent for non-duty death, or 100 percent for duty death, of the current maximum annual salary of a first class firefighter.

**PARENT ANNUITY**

Parent's annuity is provided for each surviving parent of a firefighter who dies prior to separation from service, or while out of service with at least 20 years; provided there is no widow/widower or child and that the deceased firefighter was contributing to their support. The benefit is an amount equal to 18 percent of the current annual salary attached to the classified position held by the firefighter at the time of death.

**DISABILITIES**

***Duty Disability Benefit***<sup>3</sup>

Injury incurred in the performance of duty. The amount of the benefit is 75 percent of salary at the time the disability is allowed payable to employee's compulsory retirement age plus \$30 per month for each unmarried child less than age 18 (except where the child is so physically or mentally handicapped as to be unable to support him/herself), but the total amount of child benefits shall not exceed 25 percent of salary. Effective January 1, 1994, the minimum benefit, if the employee has been on disability at least 10 years, is 50 percent of current salary at the rank held by the employee when he was removed from the Department payroll. Salary deductions are contributed by the City. There are no age or service requirements for retirement on money purchase annuity and receiving full contributions.

***Occupational Disease Disability***<sup>3</sup>

A firefighter who has 10 or more years of service and is unable to perform his or her duties by reason of heart disease, tuberculosis or any disease of the lungs or respiratory tract, resulting solely from his or her service as a firefighter. Occupational disease also includes disabling cancer of the type which may be caused by exposure to heat, radiation or a known carcinogen as defined by the International Agency for Research on Cancer. The amount of the benefit is 65 percent of salary at the time of the employee's removal from the Department payroll payable to compulsory retirement

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<sup>3</sup> Between January 1994 and December 2000, benefits have been administered as if there were no compulsory retirement age. Beginning December 2000 benefits have been administered as if age 63 is the compulsory retirement age for non-EMT participants and there is no compulsory retirement age for EMT participants.

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**SUMMARY OF  
PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS  
AS OF DECEMBER 31, 2013 (CONT'D)**

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age plus \$30 a month for each unmarried child less than age 18 (except where the child is so physically or mentally handicapped as to be unable to support him/ herself), but the total amount of child's benefits shall not exceed 25 percent of salary. Effective January 1, 1994 the minimum benefit, if the employee has been on disability at least 10 years, is 50 percent of current salary at the rank held by the employee when he or she was removed from Department payroll. Salary deductions are contributed by the City. There are no age or service requirements for retirement on money purchase annuity and receiving full contributions.

***Ordinary Disability Benefit***

Cause other than the performance of an act of duty, payable after 30 days for a period equal to 50 percent of total service (not including any previous O.D. time), but not to exceed 5 years. The disability benefit is 50 percent of salary at time of disability less pension deductions. When the disabled firefighter becomes eligible for the minimum formula annuity, the disability benefit shall cease, and he or she shall thereafter receive an annuity; however, there are no age or service requirements to retire on money purchase from disability prior to qualification for the minimum formula annuity if the disability then terminates.

**DEATH BENEFIT**

In active service, on an authorized leave of absence, if death occurs within 60 days of receipt of salary, receiving duty or ordinary disability benefit, occurring within 60 days of termination of such benefit, or occurring on retirement while in receipt of annuity and separation was effective after age 50 and application was made within 60 days from separation; payable to written beneficiaries or, if none, to estate.

<u>Age</u>	<u>Death in Service After July 1, 1983</u>	<u>Death After Retirement After July 1, 1983</u>
49 and under	\$12,000	\$6,000
50	11,600	6,000
51	11,200	6,000
52	10,800	6,000
53	10,400	6,000
54	10,000	6,000
55	9,600	6,000
56	9,200	6,000
57	8,800	6,000
58	8,400	6,000
59	8,000	6,000
60	7,600	6,000
61	7,200	6,000
62	6,800	6,000
63	6,400	6,000
64 and over	6,000	6,000

**SUMMARY OF  
PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS  
AS OF DECEMBER 31, 2013 (CONT'D)**

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**GROUP HEALTH HOSPITAL AND SURGICAL INSURANCE PREMIUMS**

The pension fund shall provide payments in the amount of \$95 per month for non-Medicare eligible city annuitants and \$65 per month for Medicare eligible city annuitants from July 1, 2008, through June 30, 2013.

**REFUNDS**

***To Firefighters***

Of entire amount (excluding ordinary disability pension deductions) with interest at 4 percent if entered before June 30, 1953, and 3 percent otherwise, before age 50, or before age 57 and less than 10 years of service. A firefighter who receives a refund and who subsequently reenters the service shall not receive, nor his or her widow/widower or parents, any annuity benefit or pension unless the refund is repaid with 4 percent interest. Repayment must be made within two years after reentry.

**FOR WIDOW/WIDOWER ANNUITY**

If the Firefighter is not married when he retires on annuity, he or she will receive a refund of all his or her contributions, with interest, for spouse's annuity.

**REFUNDS OF REMAINING AMOUNTS**

If amounts contributed by a Firefighter (with interest) are not paid out to him or her, in the form of a refund or annuity, or his or her widow/widower in the form of annuity, the remaining amounts (with interest) shall be paid out to his or her heirs, or to administrator of estate, for burial expense. If there are children under age 18, amount necessary to pay children annuities will not be refunded. There will be no refund paid to a widow/widower whose annuity is suspended because of remarriage.

**DEDUCTIONS AND CONTRIBUTIONS**

	<u>Deductions</u>	<u>City Contributions<sup>1</sup></u>
Employee	7.125%	8.500%
Spouse	1.500%	2.000%
Ordinary Disability	0.125%	0.000%
Annuity Increase	<u>0.375%</u>	<u>0.000%</u>
	9.125%	10.500%

<sup>1</sup> *Credited to participant's Accumulation Annuity and Widow's Annuity accounts*

The city shall levy a tax annually at a rate on the dollar of the assessed valuation of all taxable property that will produce an amount not to exceed the total amount of contributions by the firefighters to the Fund made in the calendar year two years prior multiplied by 2.26 for 1982 and each year thereafter, plus \$142,000 for the Ordinary Death Benefit.

Beginning in tax levy year 2015, employer contributions combined with member contributions and other Fund revenue must equal the amount, as a level percentage of payroll, that is sufficient to produce 90% funding by the end of fiscal year 2040.



**SUMMARY OF  
PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS  
AS OF DECEMBER 31, 2013 (CONT'D)**

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**DEATH BENEFIT**

Employees contribute \$2.50 per month at the same time and with the same frequency as other deductions (with each payment of salary).

**TAX SHELTER OF EMPLOYEE SALARY DEDUCTIONS**

Beginning January 1, 1982, employee contributions were designated for income tax purposes to be made by the employer. The W-2 salary is therefore reduced by the amount of contribution. For pension purposes the salary remains unchanged. Income tax will be paid when a refund or annuity is received. For the purpose of benefits, refunds or financing, these contributions will be treated as employee contributions.

**COMPULSORY RETIREMENT AGE**

Effective January 1, 1994, the federal law (ADEA) allowing compulsory retirement at age 63 lapsed. As such, duty disability and occupational disease disability benefits and widow/widower compensation benefits may be "open ended," i.e., without limiting age.

Effective December 2000 the City of Chicago enacted a compulsory retirement age of 63 for non-EMT participants. As such, all disability benefits for non-EMT participants cease at age 63 and become payable as retiree benefits.

**COMPENSATION WIDOWS**

Beginning January 1, 2001, mandatory retirement will have no impact on Widow benefits. Therefore, effective with the December 31, 2001, valuation, all Supplemental Widows have been re-classified as Compensation Widows. The classification of Supplemental Widows has been discontinued.

**SALARY CAP AND COLA DEVELOPMENT FOR MEMBERS HIRED ON OR AFTER  
JANUARY 1, 2011**

<b>Year Ending</b>	<b>CPI-U</b>	<b>½ CPI-U</b>	<b>COLA</b>	<b>Maximum Annual Pensionable Earnings</b>
2011			3.00%	\$ 106,800.00
2012	3.90%	1.95%	1.95%	108,882.60
2013	2.00%	1.00%	1.00%	109,971.43
2014	1.20%	0.60%	0.60%	110,631.26

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**APPENDIX 6**

LEGISLATIVE CHANGES 1968 THROUGH 2013

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# LEGISLATIVE CHANGES 1968 THROUGH 2013

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## 1968 to 1979 Sessions

- Compensation widow/widower annuities changed from \$300 to 75 percent of salary;
- Supplemental widow/widower annuities became 40 percent of salary;
- 5-year average salary became 4 years;
- Minimum employee annuities increased from \$200 in stages;
- Minimum widow/widower annuities increased from \$100 in stages;
- Children's annuities changed from \$40/\$60 to 10%/15% of salary of first class firefighter;
- Parent annuities increased to 18 percent of salary of first class firefighter;
- Lump sum benefits were increases; and
- The deduction from salary increased from 1 percent to 1.5 percent of salary for the spouse annuity.

## 1979 Session

### ***SB 854***

Recall of elective members of the Board of Trustees.

### ***HB 291***

Authorizes investment in Time Deposits of Certificate of Deposit.

### ***HB 2012***

Employer may pick up, under IRS Code Section 414(h), the employee contributions for all compensation earned after December 31, 1980, by a reduction in the cash salary, an offset to a future salary increase or by a combination of both.

## 1980 Session

Transfer of credit to the General Assembly System.

### ***HB 3635***

Reversed all changes made by HB 2012 and put the pick up section as a new paragraph. They are treated as employee contributions for all purposes including refunds and determination of the tax levy.

## 1981 Session

### ***SB 21***

Actuarial Reporting Standards.

### ***SB 851***

Authorizes investments in conventional mortgage pass-through securities.

### ***SB 879***

Financial statement required by Department of Insurance within 6 months and actuarial statement within 9 months. \$100 penalty per day if late.

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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### ***HB 291***

Increase minimum survivor's annuity from \$200 to \$250.

### **Spring 1982 Session**

#### ***SB 740***

Three percent post-retirement increase for employees born before January 1, 1930. All increases begin at age 60 instead of age 63 effective July 1, 1982.

#### ***SB 1127***

Group health hospital and surgical insurance premium \$55 for annuitant not qualified to receive Medicare; \$21 if annuitant is qualified, effective January 1, 1983.

#### ***SB 1579***

Expanded fiduciary standards, prohibited transactions, civil action may be brought by Attorney General or by a participant. List of permitted investments moved to general section of the statute.

#### ***HB 2361***

Election by mail ballot.

### **Spring 1983 Session**

#### ***SB 22***

Delegation of investment authority restrictions.

#### ***SB 1147***

Minimum reporting and actuarial information for 1984.

#### ***HB 366, SB 288***

Changes fiduciary standards: party in interest definition; reasonable care of co-fiduciary; eliminates civil action.

#### ***HB 377***

Cancer as occupational disability.

#### ***HB 380***

Paramedics as members July 1, 1983.

#### ***HB 455***

Bill of Rights.

#### ***HB 483***

Temporary position defined.

#### ***HB 514***

10 percent prudent person investment category.

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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### **HB 755**

Change in lump sum death benefit: \$6,000 if retired, \$12,000 if active and under age 50, reduced by \$400 each year age 50 or older.

### **HB 758**

Vote by mail.

50/20 2 percent minimum annuity formula (52/22 in 1984; 51/21 in 1985; 50/20 in 1986 and after).

30 percent salary of first class firefighter; widow/widower of active employee with 1.5 years of service effective June 30, 1984.

50 percent of retirement pension being paid (includes increases); widow/widower of retiree effective June 30, 1984.

### **City Ordinance**

Change in lump sum death benefit: \$6,000 if retired, \$12,000 if active and under age 50, reduced by \$400 each year age 50 or older.

Changes compulsory retirement from 63 to 70.

### **1984 Session**

Direct deposit.

Illinois Public Employees' Pension Laws Commission abolished.

### **1985 Session**

#### **HB 164**

Occupational disability benefits from 50 percent to 65 percent of salary for new disabilities.

Survivors' annuity for death in service 50 percent of the firefighter's annuity as if the deceased firefighter had retired just prior to the date of death.

Removes alcoholism and venereal disease prohibition against paying ordinary disability.

Removes adoption before age 50 requirement for child's benefit.

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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### 1986 Session

#### ***HB 2630***

Removes the age 18 limitation for handicapped children of duty and occupational disease disability recipients.

Provides for waiver of annual physical examination for disability recipients if firefighter is permanently disabled and unable to ever return to service.

### 1987 Session

None.

### 1988 Session—City Ordinance

Compulsory retirement changed to age 63.

### 1989 Session

#### ***HB 332***

\$325 minimum widow/widower annuity effective January 1, 1988.

#### ***SB 95***

Changed the amount of fund paid health insurance “supplement” from January 1, 1988, until December 31, 1992, to \$65 per month for each annuitant not qualified to receive Medicare benefits (and \$35 if qualified) and from January 1, 1993, until December 31, 1997, the amounts are \$75 and \$45, respectively. Widow/widowers will now be eligible for supplement. The City will be required to pay 50 percent of the aggregate cost of health care claims for the retired group under all health care plans offered by the City. A procedure was established for the City to determine, with the help of an independent actuary, the aggregate cost of claims and premiums for each calendar year from 1989 through 1998 for the retired group.

\$475 minimum employee annuity effective January 1, 1990.

Compensation and Supplemental annuitants may remarry after 1989 without loss of benefits.

Employee refunds must be repaid at 4 percent before the later of 2 years after the date of reentry or January 1, 1992.

Three percent postretirement increase beginning January 1, 1990, for employees born after December 31, 1929, and before January 1, 1940.

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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Employee may purchase periods of suspension (not to exceed a total of 1 year of service) and 1980 strike time (not to exceed 23 days). Paramedic who transferred from the pension fund established under Article 8 of this Code to this Fund by operation of Public Act 83-780 may purchase Article 8 service at 4 percent annual compound interest rate prior to January 1, 1992, if the employee received a refund from the Article 8 fund.

### **1990 Session**

#### ***SB 136***

Amends Chapter 120, Paragraph 671 of the Revenue Act to provide for a separate listing on the tax bill of the dollar amount of tax due from the person assessed, which is allocable to a tax levied under the Illinois Pension Code, or any other tax levied by a municipality or township for public pension or retirement purposes. Effective January 1, 1990.

#### ***SB 1951***

Signed January 14, 1991. Service credit will be given for any periods prior to January 14, 1993 that an active firefighter who is a member of the General Assembly is absent to perform his legislative duties. No payment is required for this service credit. The current salary of the rank would be used for average salary for annuity purposes.

Any firefighter who had service as a paramedic in the Municipal Fund and received a refund of contributions could receive credit for the service in the Fire Fund by making written application to the Board by January 1, 1992, and paying for the service.

Beginning December 31, 1990, any firefighter with at least 20 years of service may withdraw from the service at any age and receive an annuity calculated under Section 6-128 beginning at age 50 if under that age at withdrawal.

Beginning January 1, 1990, the minimum widow/widower annuity is \$400 per month for all those receiving a widow/widower annuity on January 14, 1991 and for future widow/widowers of employees who retired at age 50 or over with at least 20 years of service.

If a widow/widower remarries after December 31, 1989, after attaining age 60, the annuity will continue without interruption. If the annuity is suspended because of remarriage before attaining age 60, annuity payments will be resumed if the subsequent marriage ends.

If any widow/widower receives a widow/widower annuity from the Fire Fund and after December 31, 1989, marries a firefighter in the Fund, his/her first widow/widower annuity will be canceled if she accepts any payment of a second widow/widower's annuity after he dies.

Beginning January 14, 1991, any city officer can transfer his Fire service to the Municipal Fund.

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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### **1991 Session**

None.

### **1992 Session**

#### ***HB 969***

Approved March 26, 1992. Beginning January 1992, the minimum retirement annuity (requires retirement at age 50 or over with at least 20 years of service) was increased to \$650 per month and the minimum widow/widower annuity was increased to \$500 for those receiving annuity and those who will be eligible in the future (requires retirement or death in service at age 50 or over with at least 20 years of service).

#### ***SB 1650***

Approved January 25, 1993.

The minimum retirement annuity (requires retirement at age 50 with at least 20 years of service) was increased to \$750 per month on January 1, 1993, and \$850 per month on January 1, 1994.

The minimum widow/widower annuity (requires retirement or death in service at age 50 or over with at least 20 years of service) was increased to \$600 per month on January 1, 1993, and \$700 per month on January 1, 1994, for those eligible present and future widow/widowers.

Service credit will be given for any periods in General Assembly prior to January 9, 1997 (instead of January 14, 1993).

The annuitant may waive all or any portion of his annuity.

### **1993 Session**

#### ***SB 358***

Approved January 10, 1994. Beginning January 1, 1994, minimum Duty and Occupational Disease Disabilities have been established, if the employee has been on the disability for 10 years: 50 percent of current salary of rank at removal from Department payroll.

#### ***ADEA***

Effective January 1, 1994, the federal law (ADEA) allowing compulsory retirement at age 63 lapsed. As such, duty disability and occupational disease disability benefits and widow/widower compensation benefits may be "open ended"; i.e., without limiting age.

### **1994 Session**

None.



## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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### 1995 Session

#### ***SB 114***

Approved July 14, 1995.

The minimum widow/widower annuity was increased to \$700 per month for anyone entitled to receive a widow/widower annuity.

A widow/widower's annuity that was previously terminated because of remarriage before December 31, 1989, will be resumed upon proper application if the subsequent marriage has ended.

Employees have until 2 years after the date of reentry or January 1, 2000, to repay a refund.

For employee annuitants born before January 1, 1945, the 3 percent postretirement increase begins at age 55.

The provisions relating to purchase of credit for certain periods of service as a paramedic or other fire department employee were changed.

The City is authorized to substitute funds obtained from borrowings and other sources for a portion of its authorized tax levy for pension purposes.

The amount of earnings that may be taken into account by any retirement system is limited to the maximum dollar limitation specified in Section 401(a)(17) of the Internal Revenue Code, except for persons who became participants before 1996.

The Fund is authorized to make certain involuntary distributions required by Section 401(a)(9) of the Internal Revenue Code.

#### ***SB 424***

Approved July 7, 1995.

The Pension Laws Commission was created as a legislative support services agency.

### 1996 Session

#### ***SBJPA***

On August 20, 1996 the Small Business Job Protection Act was signed by President Clinton.

Treatment of governmental plans under Code Section 415:

Rule limiting annual benefit to 100 percent of the average of the highest 3-year compensation no longer applies.

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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Excess benefit plans are permitted to provide participants with benefits in excess of the Code Section 415 limits.

Early retirement reduction does not apply to certain survivor and disability benefits.

The definition of compensation now includes elective deferrals.

Taxation of distributions:

\$5,000 death benefit exclusion was repealed for deaths after August 20, 1996.

Five-year averaging for lump sum distributions was repealed effective January 1, 2000.

Annuity payments will be taxed according to a simplified general rule, which uses investment and age as of annuity starting date for annuities, which start on or after November 19, 1996.

### **1997 Session**

#### ***HB 313***

Signed June 27, 1997.

Coverage in the City group health insurance is extended through June 30, 2002, with some modification in plans offered. Pension fund supplement remains \$45 and \$75 for Medicare eligible and non-Medicare eligible annuitants respectively.

### **1998 Union Contract Cost of Living Increases**

The following salary increases are scheduled:

1.5 percent effective July 1, 1995.

1.5 percent effective January 1, 1996.

1.5 percent effective July 1, 1996.

3.5 percent effective January 1, 1997.

3.75 percent effective January 1, 1998.

2.25 percent effective January 1, 1999.

### **1998 Session**

The minimum widow/widower annuity (requires retirement or death in service at age fifty or over with at least twenty years of service) was increased to \$800 per month on January 1, 1999, for those eligible present and future widow/widowers.

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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### **1999 Session**

None.

### **2000 Session**

In 2000 the City of Chicago enacted mandatory retirement for all firefighters, except for emergency medical technicians, upon attainment of age 63.

### **2001 Session**

None.

### **2002 Session**

#### ***HB 5168***

Effective June 28, 2002

The pension fund subsidy for retiree health insurance was extended through June 30, 2003 (other than child annuitants). The subsidy is \$75 per month if the annuitant is not eligible for Medicare and \$45 per month if the annuitant is eligible for Medicare.

### **2003 Session**

#### ***SB 1701***

Effective July 1, 2003.

The healthcare benefits were increased to \$85 per month for non-Medicare eligible participants and \$55 per month for Medicare eligible participants for the period from July 1, 2003, through June 30, 2008. Thereafter, the benefits are increased from \$85 to \$95 and \$55 to \$65 for the period July 1, 2008, to June 30, 2013.

The healthcare benefits referred to above are not and shall not be construed to be pension or retirement benefits for the purposes of Section 5 of Article XIII of the Illinois Constitution of 1970.

### **2004 Session**

#### ***PA 93-0654***

Effective January 16, 2004

Changes to the definition of salary used for benefit calculation

- For members born before 1955, who hold an exempt position above career service rank, salary means the actual salary attached to the exempt rank position.
- Salary as an ambulance commander shall be included. Employee contributions must be made retroactively before January 1, 2006. Beneficiaries may also make the contributions.
- Additional compensation for being licensed as an EMT shall be included.
- Duty availability pay shall be included. Employee contributions must be made retroactively before January 1, 2006. Beneficiaries may also make the contributions.

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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### *PA 93-0654(continued)*

An employee who reaches the compulsory retirement age with greater than 10 years of service, but less than 20 is now entitled to an annuity of 30 percent of average salary for the first 10 years of service plus an additional two percent for each year in excess of 10, not to exceed 50 percent.

The minimum annuity formula accrual rate for service after 20 years was increased from 2.0 percent to 2.5 percent with total benefits limited to 75 percent of final average pay.

The minimum benefit for retirements at age 50 with 20 years of service was increased to \$950 per month during 2004 and \$1,050 per month thereafter.

The minimum widow annuity was increased to \$900 per month during 2004 and \$1,000 per month thereafter.

The widow of an active fireman with 10 or more years of service will receive no less than 50 percent of the benefit the active firemen would have received had he attained age 50 and 20 years of service.

A widow who was married to a deceased fireman before the fireman began to receive a retirement annuity and for at least one year preceding the fireman's death is entitled to a widow's benefit. Any refunded contributions must be repaid with four percent interest.

A widow's benefit will continue following remarriage. Those annuities previously terminated will resume.

Members born prior to January 1, 1955, are entitled to a three percent simple COLA commencing at the later of age 55 or the first anniversary of retirement. Members born on or after January 1, 1955, are entitled to a 1.5 percent COLA commencing at the later of age 60 or the first anniversary of retirement limited to 30 percent. Previously the cutoff date was January 1, 1945.

Former city contributions for paramedics will be transferred to this fund with 11 percent interest and credited to the individual fireman if he or she pays for prior service as a paramedic in full.

### **Bertucci court opinion**

Effective June 29, 2004

For members who die while receiving duty disability payments, the widow's benefit is now 75 percent of the member's salary attached to his civil service position. The benefit increases as the salary attached to this position increases. Previously the widow's benefit was 50 percent of the member's benefit.

### **PA 93-0917 (HB 378)**

Effective August 12, 2004

Changes the widow eligibility conditions by expanding widow benefits that were previously limited by marriage conditions after withdrawal or disability. Benefits cannot be reinstated or granted earlier than January 16, 2004.

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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### *PA 93-0917(continued)*

A fireman who accumulated service under the Municipal Employees' Annuity and Benefit Fund of Chicago, who terminated and received a refund, may purchase such service credit until January 1, 2005. Those firemen that retired after January 16, 2004, but before the effective date of this act may still purchase service before January 1, 2005, and have their benefit recalculated. Employer contributions with interest, for such service, will be transferred from the Municipal Employees' Annuity and Benefit Fund to the Firemen's Annuity and Benefit Fund.

### **2005 Session**

#### **SB 23**

Approved June 27, 2005

Prohibits the investment or deposit from the retirement system or pension fund to certain entities doing business in or with the government of the Republic of the Sudan. Fund managing companies must certify that, as required under Section 1-110.5 of the pension code, they have not loaned to, invested in or otherwise transferred any of the pension fund assets to a forbidden entity.

### **2006 Session**

None.

### **2007 Session**

#### *PA 95-0279*

Beginning January 1, 2008, removes restriction that a child be born or legally adopted before withdrawal from service for a child's annuity. Removes restriction requiring that adoption proceedings must have been initiated one year prior to the fireman's death.

### **2008 Session**

None.

### **2009 Session**

#### *PA 95-1036*

Effective February 17, 2009

Allows a terminally ill fireman to apply for disability while still an active member.

#### *PA 96-0006*

Effective April 3, 2009

The Illinois Governmental Ethics Act.

#### *PA 96-260*

Effective August 11, 2009

A fireman may purchase up to 24 months of service credit attributed to service in the armed forces of the United States prior to employment as a firefighter by making contributions to the Fund equal

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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to (i) employee contributions during the period served, (ii) employer normal costs during the period served, and (iii) compound interest at the actuarially assumed rate from date of membership in the Fund until date of payment.

### **PA 96-727**

Effective August 25, 2009

Extends the repayment of refund for reinstated service to January 1, 2011, with interest calculated at the actuarially assumed rate.

Allows a fireman to transfer eligible service with the Article 8 Fund – the Municipal Employees' Annuity and Benefit Fund of Chicago. The fireman is required to pay to the Fund an amount equal to (i) employee contributions during the period served, (ii) employer normal costs during the period served, and (iii) compound interest at the actuarially assumed rate from date of membership in the Fund until date of payment. This amount is offset by contributions transferred from the Article 8 Fund. Written application must be made by January 1, 2010.

Allows a fireman who was an employee of the Chicago Fire Department but did not participate in the pension fund to establish this service with the Fund. The fireman is required to pay to the Fund an amount equal to (i) employee contributions during the period served, (ii) employer normal costs during the period served, and (iii) compound interest at the actuarially assumed rate from date of membership in the Fund until date of payment. Written application must be made by January 1, 2010.

Allows a fireman to transfer up to 10 years of eligible service with an Article 4 Fund – “Downstate Fund.” The fireman is required to pay to the Fund an amount such that the transfer results in no additional unfunded actuarial accrued liability for the Fund based on the assumptions and methods used in the most recent actuarial valuation. Contributions transferred from the Downstate Fund are used to offset the required payment from the fireman.

Allows the Fund to recover damages from a third party responsible for the death or disability payable from the Fund.

### **PA 96-753**

Effective August 25, 2009.

Encourages the public pension funds, and any State entity investing on behalf of the public pension funds, to promote the economy of Illinois through the use of economic opportunity investments.

Instructs the fund's investment advisors to utilize investment strategies designed to ensure that all securities transactions are executed in such a manner that the total explicit and implicit costs and total proceeds in every transaction are the most favorable under the circumstances.

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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### 2010 Session

#### **PA 96-1466**

Effective August 20, 2010.

Members entering the Fund after on or after January 1, 2011 shall not be given service credit in this Fund for any period of time in which the member was in receipt of retirement benefits from any annuity and benefit funds in operation in the city.

#### **PA 96-1495 (HB 3538)**

Effective January 1, 2011.

Changes the financing for the Fund. Assets are marked to market at March 30, 2011. For fiscal years after March 30, 2011, actuarial value of assets is used based on five-year smoothing. The City levies a new tax starting in FY2015. Each year, employer contributions combined with member contributions and other fund revenue must be equal to the amount that is sufficient to produce 90% funding by the end of fiscal year 2040. The projections are based on an open group projection and level percent of pay financing and actuarial liabilities are based on the projected unit credit cost method. If the City does not make the statutorily required contributions, then the State, starting in FY 2016, could withhold State grants to the City, and directly deposit the withheld funds into the FABF. The withheld funds are limited to 33 percent of total State grants to the City in FY 2016, 67 percent in FY 2017, and 100 percent on and after FY 2018.

Changes benefits for members hired on or after January 1, 2011. For these employees the minimum retirement eligibility is at age 55 with 10 years of service with the annuity based on an accrual rate of 2.5 percent, subject to a maximum of 75 percent. Employees may retire at age 50 with 10 years of service with the annuity based on accrual rate of 2.5 percent, reduced by one half of one percent per month for retirement prior to age 55, subject to a maximum of 75 percent. The final average salary is based on 96 consecutive months within the last 120 months. Annual salary is capped at \$106,800, indexed annually at the lesser of 3.0 percent and fifty percent of CPI-U. COLA is equal to the lesser of 3.0 percent and 50 percent of CPI-U, commencing at age 60, with no 30% cap, applied to the original granted retirement annuity. Widow benefits are 66-2/3 percent of the firemen's earned annuity at the date of death. Widow COLA is equal to the lesser of 3.0 percent and 50 percent of CPI-U, commencing when the survivor reached age 60, and applied to the original granted retirement annuity.

### 2011 Session

#### **P.A. 97-530 (SB 1672)**

Effective August 23, 2011

Requires all pension funds and retirement systems subject to the Code to comply with the federal Heroes Earnings Assistance and Relief Tax Act of 2008.

#### **P.A. 97-609 (SB 1831)**

Effective August 26, 2011

Applies to those members hired on or after January 1, 2012.

Provides that if a new hire is receiving a retirement annuity or pension and accepts a contractual position to provide services to a governmental entity from which he or she has retired, then that person's annuity or pension will be suspended during that contractual service.

## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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Makes it a Class A misdemeanor for a pensioner who is seeking contractual employment to fail to notify certain persons about his or her retirement status before accepting an employment contract.

***P.A. 97-504 (HB 1670)***

Approved August 23, 2011

Amends the Open Meetings Act.

Requires each elected or appointed member of a public body subject to this Act who is such a member on the effective date of the amendatory Act to successfully complete the electronic training curriculum developed and administered by the Public Access Counselor.

Requires those members to complete the training not later than one year after the effective date of the amendatory Act.

Requires each elected or appointed member of a public body subject to the Act who becomes such a member after the effective date of the amendatory Act to successfully complete the electronic training curriculum developed and administered by the Public Access Counselor.

Requires those members to complete the training not later than the 90th day after the date the member either (i) takes the oath of office, if the member is required to take an oath of office to assume the person's duties as a member of the public body or (ii) otherwise assumes responsibilities as a member of the public body, if the member is not required to take an oath of office to assume the person's duties as a member of the governmental body.

Requires each member who successfully completes the curriculum to file a copy of the certificate of completion with the public body.

Provides that the failure of one or more members of a public body to complete the training required by this Section does not affect the validity of an action taken by the public body.

Provides that an elected or appointed member of a public body subject to this Act who has successfully completed the required training and filed a copy of the certificate of completion with the public body is not required to subsequently complete that training.

### **2012 Session**

***P.A. 97-0651***

Approved and effective January 5, 2012.

Requires any reasonable suspicion of fraud against the Fund to be reported to the State's Attorney for investigation.

Changes provisions for Union Leaves of Absence.

### **2013 Session**

***P.A. 98-0043 (SB 1584)***

Approved and effective June 28, 2013.

Changes the duration of health insurance supplement payments to eligible employee annuitants to "Beginning July 1, 2008 and until such time as the city no longer provides a health care plan for such annuitants or December 31, 2016, whichever comes first."



## LEGISLATIVE CHANGES 1968 THROUGH 2013 (CONT'D)

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***P.A. 98-0443 (HB 2620)***

Approved and effective August 16, 2013.

Allows for an additional exception to the RFP process for obtaining investment services for “contracts for follow-on funds with the same sponsor through close-end funds.”

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**APPENDIX 7**

ADDITIONAL EXHIBITS – GASB DISCLOSURES

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## **EXHIBIT A-1**

### **GASB NOS. 25, 27, 43 AND 45 DISCLOSURES**

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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 Pensions by State and Local Governmental Employers. Under GASB #25 and #27, systems select one actuarial method from several acceptable alternatives, and report all information on this one basis. GASB has issued Statement No. 43 – Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans and Statement No. 45 – Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions. GASB #43 and #45 pertain to postretirement benefits other than pensions and are similar to GASB #25 and #27.

This report includes the following exhibits with information required to be reported under GASB #25, #27, #43 and #45.

GASB has released GASB #67 and GASB #68 which replace Statements #25 and #27 and significantly change the calculations of the unfunded liability, annual pension expense and employer's balance sheet liability. However, GASB #67 is first effective with fiscal year ending December 31, 2014, and GASB #68 is first effective with fiscal year ending December 31, 2015. Therefore, the information presented in this report is based on the current GASB #25 and #27 requirements. **This information is presented in draft form for review. Please let us know if there are any changes so that we may maintain consistency with the financial statements.**

#### ***Exhibit A-2: Schedule of Funding Progress for GASB #25***

This exhibit shows a six-year history of funding progress. The funding progress is a comparison of Actuarial Value of Assets with the Actuarial Accrued Liability (AAL), and a comparison of the unfunded AAL (UAAL) with compensation.

#### ***Exhibit A-3: Schedule of Employer Contributions for GASB #25***

This exhibit shows the Annual Required Contribution (ARC) as computed under GASB #25 and the percent of this amount actually received. This exhibit includes a 17-year history.

#### ***Exhibits A-4: Supplementary Information for GASB #25 and #27***

This exhibit has certain information required in the notes to the Fund financial reports.

#### ***Exhibit A-5: Annual Pension Cost and Contributions Made for GASB #27***

This exhibit shows the components of annual pension cost (ARC, interest on the Net Pension Obligation (NPO), and the adjustment to the ARC), increase or decrease in the NPO and the NPO at the end of the year. The exhibit also includes the dollar amount of contributions made.

#### ***Exhibit A-6: Pension Cost Summary for GASB #27***

This exhibit shows a 16-year summary of annual pension cost, percentage of annual pension cost contributed that year and NPO at the end of the year.

**EXHIBIT A-1**  
**GASB NOS. 25, 27, 43 AND 45 DISCLOSURES (CONT'D)**

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***Exhibit A-7: Development of Net Pension Obligation (NPO) at January 1, 1997 for GASB #27***

This exhibit documents the calculation of the pension liability at transition in accordance with GASB #27.

***Exhibit A-8: Schedule of Funding Progress for GASB #43***

This exhibit shows a six-year history of funding progress. The funding progress is a comparison of Actuarial Value of Assets with the Actuarial Accrued Liability (AAL), and a comparison of the unfunded AAL (UAAL) with compensation.

***Exhibit A-9: Schedule of Employer Contributions for GASB #43***

This exhibit shows the Annual Required Contribution (ARC) as computed under GASB #43 and the percent of this amount actually received. This exhibit includes a six-year history.

***Exhibit A-10: Supplementary Information for GASB #43 and #45***

This exhibit has certain information required in the notes to the Fund and City financial reports.

***Exhibit A-11: History of Annual OPEB Cost and Contributions Made for GASB #45***

This exhibit shows a summary of annual OPEB cost, percentage of annual OPEB cost contributed that year and NOO at the end of the year.

***Exhibit A-12: OPEB Cost Summary for GASB #45***

This exhibit shows the components of annual OPEB cost (ARC, interest on the Net OPEB Obligation (NOO), and the adjustment to the ARC), increase or decrease in the NOO, and the NOO at the end of the year for year 2013. The exhibit also includes the dollar amount of City contributions made to pay current year health insurance supplement benefits.

**EXHIBIT A-2**  
**SCHEDULE OF FUNDING PROGRESS**  
**FOR GASB #25**

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) Entry Age<sup>1</sup> (b)</b>	<b>Unfunded AAL (UAAL) (b - a)</b>	<b>Funded Ratio (a/b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll ((b - a) / c)</b>
12/31/2013	\$ 991,213,282	\$ 4,128,734,543	\$ 3,137,521,261	24.01 %	\$ 416,491,784	753.32 %
12/31/2012	993,283,741	4,020,137,920	3,026,854,179	24.71	418,964,763	722.46
12/31/2011	1,101,741,862	3,851,918,889	2,750,177,027	28.60	425,385,354	646.51
12/31/2010	1,198,113,789	3,655,025,957	2,456,912,168	32.78	400,404,320	613.61
12/31/2009	1,269,231,178	3,428,838,267	2,159,607,089	37.02	400,912,173	538.67
12/31/2008	1,335,695,474	3,311,268,993	1,975,573,519	40.34	396,181,778	498.65

<sup>1</sup> Actuarial accrued liability excludes OPEB benefits on and after December 31, 2006.

**EXHIBIT A-3**  
**SCHEDULE OF EMPLOYER CONTRIBUTIONS**  
**FOR GASB #25**

<b>For Year Ending December 31</b>	<b>Annual Required Contribution</b>	<b>Actual Employer Contribution</b>	<b>Percentage Contributed</b>
2014	\$304,265,411	TBD	TBD
2013	294,877,895	\$ 103,669,015	35.16%
2012	271,505,718	81,521,883	30.03%
2011	250,056,273	82,869,839	33.14%
2010	218,388,037	80,947,311	37.07%
2009	203,866,919	89,211,671	43.76%
2008	189,940,561	81,257,754	42.78%
2007	188,201,379	72,022,810	38.27%
2006 <sup>1</sup>	160,246,525	76,763,308	47.90%
2005	161,696,388	90,128,915	55.74%
2004	134,762,334	55,532,454	41.21%
2003	111,079,054	60,234,206	54.23%
2002	105,106,367	59,452,787	56.56%
2001	104,014,168	60,399,909	58.07%
2000	90,530,458	65,928,675	72.82%
1999	87,959,556	53,410,352	60.72%
1998	78,020,603	48,397,527	62.03%
1997	86,981,231	54,921,536	63.14%

<sup>1</sup> Starting with fiscal year 2006, GASB #25 disclosure includes pension benefits only. The retiree healthcare supplement is recognized under GASB #43 disclosure. For fiscal year 2014, the pension GASB #25 ARC is \$304,265,411 and the OPEB GASB #43 ARC is \$2,739,506.

**EXHIBIT A-4**  
**SUPPLEMENTARY INFORMATION FOR**  
**GASB #25 AND #27**

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	December 31, 2013
Actuarial Cost Method	Entry Age Normal
Actuarial Value of Assets	5-year smoothed market
Amortization Method	Level dollar
Remaining Amortization Period	30 years
Actuarial Assumptions:	
Pension Investment Rate of Return	8.0%
OPEB Investment Rate of Return	4.5%
Projected Salary Increases	4.25% per year, plus an additional percentage related to service and promotion
Post-retirement Increases	1.5% simple interest for 20 years for members born in or after 1955 3% simple interest for life for members born before 1955

**Actuarial Accrued Liability (AAL)**

	2012 <sup>1</sup>	2013 <sup>1</sup>
Payable to Retirees and Beneficiaries	\$ 2,432,836,725	\$ 2,528,553,949
Current Employees:		
Accumulated Employee Contributions Including		
Statutory Interest	644,629,930	661,062,321
Payable to Vested and Non-Vested Employees	942,671,265	939,118,273
Total Actuarial Accrued Liability	\$ 4,020,137,920	\$ 4,128,734,543
Net Plan Actuarial Assets	993,283,741	991,213,282
Unfunded AAL (assets in excess of AAL)	\$ 3,026,854,179	\$ 3,137,521,261
Percent Funded	24.71%	24.01%
Unfunded AAL as Percent of Payroll	722.46%	753.32%
Payroll	\$ 418,964,763	\$ 416,491,784

<sup>1</sup>Excludes liabilities for retiree healthcare subsidy.

**EXHIBIT A-5**  
**ANNUAL PENSION COST AND CONTRIBUTIONS**  
**MADE FOR GASB #27**

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<b>Contribution rates</b>	
City	Proceeds from a tax levy not more than an amount equal to the total amount of contributions by the employees to the Fund made in the calendar year two years prior to the year for which the annual applicable tax is levied, multiplied by 2.26.
Plan members	9.125%
<b>Annual Pension Cost FY 2013</b>	
Annual Required Contribution (ARC)	\$ 294,877,895
Interest on Net Pension Obligation	135,734,283
Adjustment to ARC	<u>(139,547,777)</u>
Total	\$ 291,064,401
<b>Contributions Made FY 2013</b>	\$ 103,669,015
<b>Net Pension Obligation (NPO) FYE 2013</b>	
NPO, Beginning of Year	\$ 1,696,678,536
Increase/(Decrease) in NPO	<u>187,395,386</u>
NPO, End of Year	\$ 1,884,073,923



**EXHIBIT A-6  
PENSION COST SUMMARY  
FOR GASB #27**

<b>Year Ended December 31</b>	<b>Annual Pension Cost</b>	<b>% of Annual Pension Cost Contributed</b>	<b>Net Pension Obligation</b>
2013	\$291,064,401	35.62%	\$1,884,073,923
2012	268,111,607	30.41%	1,696,678,536
2011	247,031,134	33.55%	1,510,088,812
2010	215,665,695	37.53%	1,345,927,517
2009	201,396,727	44.30%	1,211,209,132
2008	187,709,633	43.29%	1,099,024,077
2007	186,227,139	38.67%	992,572,198
2006	166,575,057	47.41%	878,367,869
2005	163,383,756	55.16%	790,764,195
2004	136,259,855	40.75%	717,509,354
2003	112,453,771	53.56%	636,781,953
2002	106,370,746	55.89%	584,562,388
2001	105,173,254	57.43%	537,644,429
2000	91,629,104	71.95%	492,871,084
1999	88,974,566	60.03%	467,170,655
1998	78,963,730	61.29%	431,606,441
1997	86,732,136	63.37%	401,040,238

**EXHIBIT A-7**  
**DEVELOPMENT OF NET PENSION OBLIGATION (NPO) AT JANUARY 1, 1997 FOR GASB #27**

<b>Year Ending December 31:</b>	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
<b>Assumptions and Method</b>										
Interest Rate	7.5%	7.5%	7.5%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Amortization Period (years)	40	40	40	40	40	40	40	40	40	40
Cost Method	EAN	EAN	EAN	EAN	EAN	EAN	EAN	EAN	EAN	EAN
<b>Annual Pension Cost</b>										
Actuarially Determined Contribution (ADC)										
Normal Cost	\$44,023,556	\$44,652,516	\$45,746,453	\$43,184,329	\$47,236,555	\$51,515,900	\$52,304,610	\$53,235,963	\$48,144,514	\$49,878,875
40 Year Amortization	39,898,154	39,352,208	40,223,713	42,067,968	46,890,387	51,539,966	50,994,199	50,104,234	58,739,960	60,136,652
Total ADC	\$83,921,710	\$84,004,724	\$85,970,166	\$85,252,297	\$94,126,942	\$103,055,866	\$103,298,809	\$103,340,197	\$106,884,474	\$110,015,527
Interest on NPO	-	2,769,886	5,550,082	8,059,065	10,439,561	13,342,202	16,836,891	20,063,899	23,224,933	26,163,631
Adjustment to ADC	-	(2,827,639)	(5,596,880)	(8,127,020)	(10,527,588)	(13,454,705)	(16,978,861)	(20,233,079)	(23,420,768)	(26,384,245)
Annual Pension Cost	\$83,921,710	\$83,946,971	\$85,923,368	\$85,184,342	\$94,038,915	\$102,943,363	\$103,156,839	\$103,171,017	\$106,688,639	\$109,794,913
<b>Contributions for Year</b>										
Employer Contributions	\$29,562,500	\$34,339,139	\$37,016,865	\$36,478,751	\$36,504,134	\$38,448,497	\$42,036,863	\$42,727,953	\$41,616,542	\$43,527,172
Employee Contributions	17,427,400	17,163,621	17,544,210	18,949,395	21,251,755	20,811,264	20,782,382	20,930,122	28,338,382	24,045,799
Total Contributions	\$46,989,900	\$51,502,760	\$54,561,075	\$55,428,146	\$57,755,889	\$59,259,761	\$62,819,245	\$63,658,075	\$69,954,924	\$67,572,971
<b>Net Pension Obligations (NPO)</b>										
NPO at Beginning of Year	\$0	\$36,931,810	\$69,376,021	\$100,738,313	\$130,494,509	\$166,777,535	\$210,461,137	\$250,798,731	\$290,311,673	\$327,045,388
Annual Pension Cost	83,921,710	83,946,971	85,923,368	85,184,342	94,038,915	102,943,363	103,156,839	103,171,017	106,688,639	109,794,913
Total Contributions	(46,989,900)	(51,502,760)	(54,561,075)	(55,428,146)	(57,755,889)	(59,259,761)	(62,819,245)	(63,658,075)	(69,954,924)	(67,572,971)
NPO at End of Year	\$36,931,810	\$69,376,021	\$100,738,313	\$130,494,509	\$166,777,535	\$210,461,137	\$250,798,731	\$290,311,673	\$327,045,388	\$369,267,330

**EXHIBIT A-8**  
**SCHEDULE OF FUNDING PROGRESS**  
**FOR GASB #43**

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
12/31/2013	\$ 0	\$ 7,691,833	\$ 7,691,833	0.00 %	\$ 416,491,784	1.85 %
12/31/2012	0	46,205,891	46,205,891	0.00 %	418,964,763	11.03 %
12/31/2011	0	46,980,335	46,980,335	0.00 %	425,385,354	11.04
12/31/2010	0	48,221,878	48,221,878	0.00 %	400,404,320	12.04
12/31/2009	0	47,932,528	47,932,528	0.00 %	400,912,173	11.96
12/31/2008	0	47,309,338	47,309,338	0.00 %	396,181,778	11.94

**EXHIBIT A-9**  
**SCHEDULE OF EMPLOYER CONTRIBUTIONS**  
**FOR GASB #43**

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<b>For Year Ending December 31</b>	<b>Annual Required Contribution</b>	<b>Actual Employer Contribution</b>	<b>Percentage Contributed</b>
2014	\$ 2,739,506	TBD	TBD
2013	4,213,697	\$ 2,550,785	60.54%
2012	4,275,669	2,622,445	61.33%
2011	4,469,292	2,628,163	58.80%
2010	4,427,729	2,644,290	59.72%
2009	4,370,229	2,645,135	60.53%
2008	4,307,852	2,486,950	57.73%

**EXHIBIT A-10**  
**SUPPLEMENTARY INFORMATION FOR**  
**GASB #43 AND GASB #45**

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	December 31, 2013
Actuarial Cost Method	Entry Age Normal
Actuarial Value of Assets	No assets (Pay-as-you-go)
Amortization Method	Level dollar
Remaining Amortization Period	3 year closed
Actuarial Assumptions:	
Healthcare Investment Rate of Return	4.5%
OPEB Investment Rate of Return	4.5%
Projected Salary Increases	4.25% per year, plus an additional percentage related to service and promotion
Healthcare Cost Trend Rate	0.0% <sup>1</sup>

**Actuarial Accrued Liability (AAL)**

	2012	2013
Payable to Retirees and Beneficiaries	\$ 26,951,110	\$ 6,811,315
Current Employees:		
Accumulated Employee Contributions Including Statutory Interest	-	-
Payable to Vested and Non-Vested Employees	19,254,781	880,518
Total Actuarial Accrued Liability	\$ 46,205,891	\$ 7,691,833
Net Plan Actuarial Assets	-	-
Unfunded AAL (assets in excess of AAL)	\$ 46,205,891	\$ 7,691,833
Percent Funded	0.00%	0.00%
Unfunded AAL as Percent of Payroll	11.03%	1.85%
Payroll	\$ 418,964,763	\$ 416,491,784

<sup>1</sup> Trend not applicable - fixed dollar subsidy.

**EXHIBIT A-11**  
**HISTORY OF ANNUAL OPEB COST AND CONTRIBUTIONS**  
**MADE FOR GASB #45**

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<b>Year Ended December 31</b>	<b>Annual OPEB Cost</b>	<b>% of Annual OPEB Cost Contributed</b>	<b>Net OPEB Obligation</b>
2013	\$ 4,070,979	62.66%	\$ 11,901,341
2012	4,154,005	63.13%	10,381,147
2011	4,371,598	60.12%	8,849,587
2010	4,353,533	60.74%	7,106,152

**EXHIBIT A-12**  
**OPEB COST SUMMARY FOR GASB #45**

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<b>Contribution Rates</b>	
City	Pay-as-you-go
Plan Members	None
<b>Annual OPEB Cost for 2013</b>	
Annual Required Contribution (ARC)	\$ 4,213,697
Interest on Net OPEB Obligation	467,152
Adjustment to ARC	<u>(609,870)</u>
Total	\$ 4,070,979
<b>Contributions Made in 2013</b>	\$ 2,550,785
<b>Net OPEB Obligation (NOO):</b>	
NOO at 12/31/2012	\$ 10,381,147
Increase/(Decrease) in NOO	<u>1,520,194</u>
NOO at 12/31/2013	\$ 11,901,341