

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO** ACTUARIAL VALUATION REPORT FOR THE YEAR ENDING DECEMBER 31, 2014



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April 28, 2015

Board of Trustees Policemen's Annuity and Benefit Fund City of Chicago 221 North LaSalle Street, Suite 1626 Chicago, IL 60601-1404

#### Subject: Actuarial Valuation Report for the Year Ending December 31, 2014

Dear Members of the Board:

At your request, we have performed an actuarial valuation of the Policemen's Annuity and Benefit Fund of Chicago ("the Fund") as of December 31, 2014. This valuation has been performed to measure the funded status of the Fund and to determine the contribution levels for 2015. In addition, it includes disclosure information required under GASB Statement No. 27, Statement No. 43 and Statement No. 45 for the fiscal year ending December 31, 2014. 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 GASB Statement No. 27 and GASB Statement No. 43. These actuarial valuations of the Fund are performed annually.

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

- Summary of Actuarial Valuation Methods and Assumptions
- Schedule of Active Member Data
- Retirements and Beneficiaries Added to and Removed from Rolls
- Prioritized Solvency (Termination) Test
- Development of Annual Required Contributions under GASB Statements No. 27 and No. 45
- Development of Actuarial Gains and Losses
- Summary of Basic Actuarial Values

We have also provided the following schedules in the financial section of the report:

- Schedule of Funding Progress
- Development of Statutory Contributions Requirements
- Notes to Required Supplementary Information

Board of Trustees Policemen's Annuity and Benefit Fund of Chicago Page 2

This valuation is based upon:

**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.

Asset Values – Actuarial value of assets are used to develop actuarial results for the determination of statutory contribution requirements as well as for financial reporting under GASB Statement No. 27. In each future fiscal year, gains and losses will be phased in over a five year period.

Actuarial Method – The actuarial method utilized by the Fund, as required by Statute, is the Projected Unit Credit cost method. The objective of this method is to uniformly amortize the 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 method utilized for all GASB reporting purposes is the Entry-Age Normal method.

Actuarial Assumptions – The actuarial assumptions, including reducing the investment return assumption from 7.75% to 7.50%, have been changed since the last report. These changes reflect the results of the experience study performed for the period of January 1, 2009 through December 31, 2013, approved by the Board on March 16, 2015, and first effective with this valuation. The assumptions used are set forth in Appendix 4: Actuarial Methods and Assumptions of the Valuation Report.

**Plan Provisions** – The actuarial valuation is based on plan provisions in effect as of December 31, 2014.

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% 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 2016.

The valuation is based on the statutes in effect as of December 31, 2014, and does not consider any pending legislative changes as of the release date of the report. Upon Board approval, GRS may reissue the report or provide a supplemental report to reflect substantive statutory changes.

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.

Board of Trustees Policemen's Annuity and Benefit Fund of Chicago Page 3

To the best of our knowledge this report is complete and accurate and was prepared in accordance with (1) standards of practice promulgated by the Actuarial Standards Board and (2) the statutory requirements. The actuarial assumptions used for the valuation produce results which, in the aggregate, are reasonable. Alex Rivera and Lance Weiss are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. The signing actuaries are independent of the plan sponsor.

Respectfully yours,

alex Rivera

Alex Rivera, F.S.A., E.A., M.A.A.A. Senior Consultant

Larey wien

Lance Weiss, E.A., M.A.A.A., F.C.A. Senior Consultant

# ADDITIONAL DISCLOSURES REQUIRED BY ACTUARIAL STANDARDS OF PRACTICE

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, 2014, 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. 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.

Summary of Valuation Results						
Appendix 1	<b>Results of Actuarial Valuation</b>					
Table 1	Summary	11				
Table 2	Summary of Basic Actuarial Values	14				
Table 3a	Actuarial Valuation Projection Results and Development of Statutory Contribution for 2015 (State Basis)	15				
Table 3b	Statutory Contribution for 2015 (State Basis)	16				
Table 4	Development of Annual Required Contribution under GASB #27 and GASB #43 for 2015	17				
Table 5	Development of Actuarial Gains and Losses for 2014	18				
Table 6	History of Recommended Employer Multiples	19				
Table 7	Ordinary Death Benefit Reserve	20				
Table 8	Actuarial Accrued Liability Prioritized Solvency Test	21				
Appendix 2	Assets of the Plan	22				
Table 9	Reconciliation of Assets as of December 31, 2014	23				
Table 10	Development of Actuarial (Market-Related) Value of Assets as of December 31, 2014	24				
Appendix 3	Data Reflecting Plan Members					
Exhibit A	Summary of Changes in Active Participants for Fiscal Year Ending December 31, 2014	25				
Exhibit B	Summary of Changes in Annuitants and Beneficiaries for Fiscal Year Ending December 31, 2014	26				
Exhibit C	Total Lives and Annual Salaries Classified by Age and Years of Service as of December 31, 2014					
	Part I Active Male Participants	27				
	Part II Active Female Participants	28				

# TABLE OF CONTENTS (CONT'D)

### Appendix 3 (Cont'd)

	Part III	All Active Participants	29				
Exhibit D	Showing Number of Refund Payments Made During Fiscal Year Ending December 31, 2014						
	Part I	Male Employees	30				
	Part II	Female Employees	31				
Exhibit E	-	tics on Service Retirement Annuities Classified ecember 31, 2014	32				
Exhibit F	Showing Statis of December 3	tics on Widow's Annuities Classified by Age as 1, 2014	33				
Exhibit G	Showing Statis Ending Decem	tics on Miscellaneous Annuities for Fiscal Year ber 31, 2014	34				
Exhibit H	U	ipants Receiving Duty Disability Classified by h of Service as of December 31, 2014					
	Part I	Male	35				
	Part II	Female	36				
Exhibit I	-	ipants Receiving Ordinary Disability Classified ngth of Service as of December 31, 2014					
	Part I	Male	37				
	Part II	Female	38				
Exhibit J	U	ipants Receiving Occupational Disease sified by Age and Length of Service as of 2014					
	Part I	Male	39				
	Part II	Female	40				
Exhibit K	History of Ave	rage Annual Salaries	41				
Exhibit L	New Annuities	Granted During 2014	42				
Exhibit M	Retirees and Be	eneficiaries by Type of Benefit	43				

# TABLE OF CONTENTS (CONT'D)

### Appendix 3 (Cont'd)

Exhibit N	Average Employee Retirement Benefits Payable						
Exhibit O	History of Ann	uities					
	Part I Emplo	yee Annuitants (Male and Female)	45				
	Part II Spouse Widows)	e Annuitants (not including compensation	46				
Exhibit P	Counts of Retin Coverage Subs	rees and Beneficiaries with Healthcare idies	47				
Exhibit Q		Schedule of Retired Members by Types of Benefit and Monthly Benefit Levels					
Exhibit R	Schedule of Average Benefit Payments for New Annuities Granted during 2014						
Exhibit S	History of Retirees and Beneficiaries Added to and Removed from Benefit Payroll						
	Hom Benefit F	ayion					
Appendix 4		hods and Assumptions as of December 31, 2014	51				
Appendix 4 Appendix 5	Actuarial Met		51				
	Actuarial Met Summary of P	hods and Assumptions as of December 31, 2014 Provisions of the Fund as of December 31, 2014 rincipal Eligibility and Benefit Provisions as of	51 57				
	Actuarial Met Summary of P Summary of Pr December 31, 2	hods and Assumptions as of December 31, 2014 Provisions of the Fund as of December 31, 2014 rincipal Eligibility and Benefit Provisions as of					
Appendix 5	Actuarial Met Summary of P Summary of Pr December 31, 2 Legislative Ch	hods and Assumptions as of December 31, 2014 Provisions of the Fund as of December 31, 2014 Fincipal Eligibility and Benefit Provisions as of 2014	57				
Appendix 5 Appendix 6	Actuarial Met Summary of P Summary of Pr December 31, 2 Legislative Ch Additional Ext	hods and Assumptions as of December 31, 2014 Provisions of the Fund as of December 31, 2014 Fincipal Eligibility and Benefit Provisions as of 2014 anges 1979 through 2014	57				
Appendix 5 Appendix 6	Actuarial Met Summary of P Summary of Pr December 31, 2 Legislative Ch Additional Ext	hods and Assumptions as of December 31, 2014 Provisions of the Fund as of December 31, 2014 Fincipal Eligibility and Benefit Provisions as of 2014 anges 1979 through 2014 hibits – GASB Disclosures	57 64				
Appendix 5 Appendix 6	Actuarial Met Summary of P Summary of Pr December 31, 2 Legislative Ch Additional Ex Exhibit A-1	hods and Assumptions as of December 31, 2014 Provisions of the Fund as of December 31, 2014 cincipal Eligibility and Benefit Provisions as of 2014 anges 1979 through 2014 hibits – GASB Disclosures GASB #27, #43, and #45 Disclosures	57 64 78				

# TABLE OF CONTENTS (CONT'D)

### Appendix 7 (Cont'd)

Exhibit A-5	Annual Pension Cost and Contributions Made for GASB #27	84
Exhibit A-6	Pension Cost Summary for GASB #27	85
Exhibit A-7	Development of Net Pension Obligation (NPO) for GASB #27	86
Exhibit A-8	Schedule of Funding Progress for GASB #43	89
Exhibit A-9	Schedule of Employer Contributions for GASB #43	90
Exhibit A-10	Supplementary Information for GASB #43	91
Exhibit A-11	Annual OPEB Cost And Contributions Made For GASB #45 for 2014	92
Exhibit A-12	OPEB Cost Summary for GASB #45	93

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY OF VALUATION RESULTS

This report sets forth the results of the actuarial valuation of the Policemen's Annuity and Benefit Fund of the City of Chicago ("Fund") as of December 31, 2014. The purposes of this valuation are:

- 1. To develop actuarially determined contributions for 2015, applicable to tax levy year 2016, based on the provisions of Public Act 96-1495.
- 2. To develop the annual required contributions (ARC) under GASB #27 and GASB #43.
- 3. To develop the annual pension and OPEB costs under GASB #27 and GASB #45.
- 4. To review the funded status of the Fund.

The funded status, in basic terms, is a comparison of Fund liabilities to Fund assets expressed as either 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.

PURPOSE	ACTUARIAL METHOD	ASSET VALUE
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 Projected Unit Credit Cost Method, each participant's projected benefit is allocated in proportion to service as of the valuation date. The Actuarial Accrued Liability is the present value of the portion of benefits allocated for periods of service as of the valuation date. The Normal Cost is the present value of the benefits allocated for service during the current plan year.

Under the Entry Age Normal Cost Method, each participant's projected benefit is allocated on a level percent of pay basis from entry age to assumed exit age. The Actuarial Accrued Liability is the portion of the present value associated with pay prior to the valuation date. The Normal Cost is the portion of the present value associated with pay during the current plan year.

### POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY OF VALUATION RESULTS (CONT'D)

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 all three 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% 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, 2016, is \$675.8 million (59.5% of covered payroll). The 2016 statutory funding contribution of \$675.8 million compares with \$592.9 million for 2015, which was the first year based on the Public Act 96-1495 statutory funding requirement.

The annual required contribution (ARC) under GASB #27 for the year ending December 31, 2015, is \$563.3 million, which is 52.4% of payroll. This amount compares with an ARC of \$491.7 million or 48.4% of payroll for the year ending December 31, 2014. These amounts are for pension benefits only and are net of employee contributions of \$98.8 million for fiscal year 2015 and \$93.6 million for fiscal year 2014.

GASB #43 requires the calculation of a separate ARC for Other Postemployment Benefits (OPEB). The ARC for fiscal year 2015 is based on this actuarial valuation as of December 31, 2014. The OPEB ARC for the fiscal year ending December 31, 2015, is \$ 9.6 million, which is 0.9% of payroll. This amount compares with an OPEB ARC of \$ 9.7 million or 1.0% of payroll for the year ending December 31, 2014.

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.

	Pension ARC	<b>OPEB ARC</b>
Investment Return	7.50% per year	4.5% per year
Assets	5-year smoothed market	No assets (Pay-as-you-go)

GASB #43 requires the investment return assumption (or "discount rate") used to value OPEB liabilities to be based on the estimated long-term yield of the investments expected to be used to finance the payment of benefits. The investment return assumption of 4.5% 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 prefund or pay the health insurance supplement.

### POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY OF VALUATION RESULTS (CONT'D)

P. A. 98-0043, effective June 28, 2013, terminates the retiree healthcare subsidy paid from 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, as of December 31, 2013.

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 be based on a single equivalent discount rate using a combination of; 7.50% 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 municipal bond rate for the portion of the projected benefits after assets are depleted. The municipal bond rate is based on a yield or index rate for 20-year, tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). We believe the liability based on the GASB single equivalent discount rate will become an important liability for users of the Fund's financial information.

Due to the single equivalent discount rate and shorter amortization periods required under GASB #67 and #68, the unfunded liabilities and pension expense will be much higher and more volatile than under the current standards. The measurements required under GASB Statement #67 are provided in a separate report.

Total actuarial liabilities (pension and OPEB) increased by approximately \$109 million more than the expected value. The key factors impacting the actuarial liability loss of \$109 million include: salary loss of \$85 million, demographic and new entrants net losses of less than \$1 million, and other losses of \$25 million. The actuarial liability also increased by \$553 million due to changing the economic and demographic actuarial assumptions. New contracts were finalized prior to December 31, 2014, and retroactive benefit payments and adjustments are expected for the period beginning July 1, 2012, through the day the contracts are finalized. Our calculations estimated the benefit increases due to the retroactive adjustments.

The unfunded liability, under the methods used to develop the statutory contributions, increased from \$7.03 billion to \$8.09 billion and the funded ratio decreased from 30.29% to 26.74%. The key reasons for the increase include a change in actuarial assumptions, unfavorable investment performance and unfavorable demographic experience.

Using the market value of assets produced an unfunded liability of \$8.0 billion and a funded ratio 27.7%. Using the book value of assets produced an unfunded liability of \$8.3 billion and a funded ratio of 24.8%. Using the actuarial value of assets produced an unfunded liability of \$8.1 billion and a funded ratio of 26.7%.

There was a loss on invested assets due to an approximate return of 5.9% on market value compared with the assumed return of 7.75%.

The total ARC for pension and OPEB for 2014 was \$501.4 million compared to actual contributions of \$187.8 million. This difference has increased over the last ten years and the impact can be seen in the

GASB #27 Net Pension Obligation (NPO). The NPO has increased from \$697.0 million at December 31, 2003, to \$3,077.7 million as of December 31, 2014.

Please note the highlighted area on page 29 showing the age/service distribution for active members. A large portion of the population is at or nearing retirement. We should continue to monitor this as the ratio of actives to retirees has been steadily declining, which can ultimately have a large impact on contribution requirements. A more thorough examination of these and other factors can be found in the Analysis of Actuarial Assumptions explanation and the gain/loss information in Table 5.

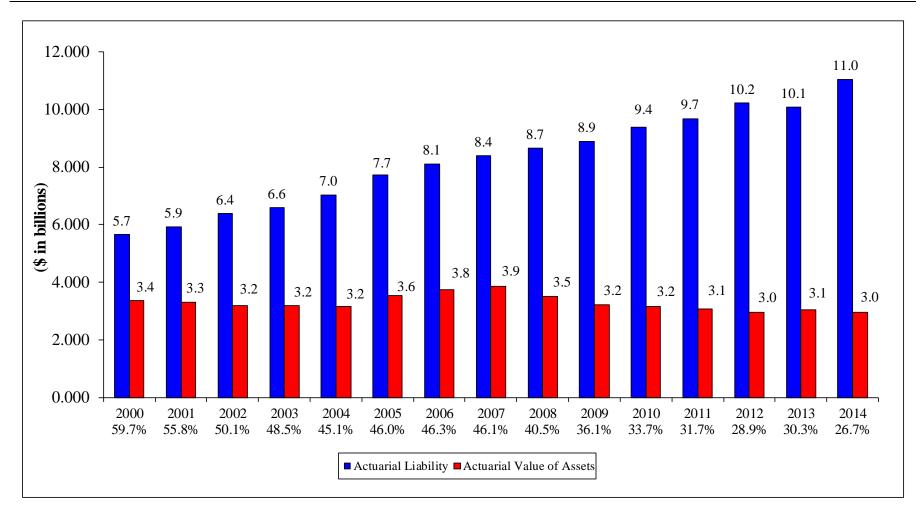
Valuation at: 12/31/2013 12/31/2014 % of Pav<sup>1</sup> \$ in Millions % of Pav \$ in Millions **Contribution Levels Statutory Contribution** \$ 592.86 54.59% \$ 675.83 59.51% (Tax Levy Year) (2015)(2016)GASB Annual Required Contribution<sup>2</sup> 501.37 49.38 572.98 53.33 (Plan Year) (2014)(2015)Funded Status - Market-Related Value Market-Related Value of Assets \$ 3,053.88 2,954.32 300.75% \$ 274.99% Actuarial Liability 10,080.61 992.75 11,048.19 1.028.38 Funded Ratio 30.29% N/A 26.74% N/A Funded Status - Market Value Market Value of Assets 3.265.20 \$ 321.56% \$ 3.062.01 285.01% Actuarial Liability 10,080.61 992.75 11.048.19 1.028.38 **Funded Ratios** 32.39% N/A 27.72% N/A Funded Status - GASB #27 and #43 Market-Related Value of Assets \$ 3.053.88 300.75% \$ 2,954.32 274.99% Actuarial Liability - Entry Age 10,310.71 1,015.41 11,353.56 1,056.80 **Funded Ratios** 29.62% N/A 26.02% N/A

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

<sup>1</sup> *Payroll was \$1,015 million in 2013 and \$1,074 million in 2014.* 

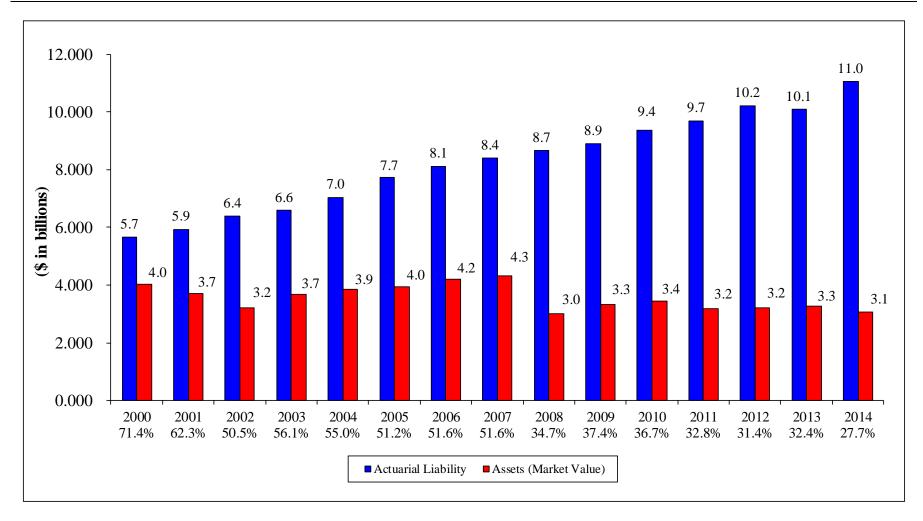
<sup>2</sup> For the following fiscal year net of employee contributions. ARC includes both pension and healthcare benefits.

# POLICEMEN'S ANNUITY AND BENEFIT FUND SUMMARY OF VALUATION RESULTS (CONT'D) COMPONENTS OF FUNDED RATIO STATE REPORTING

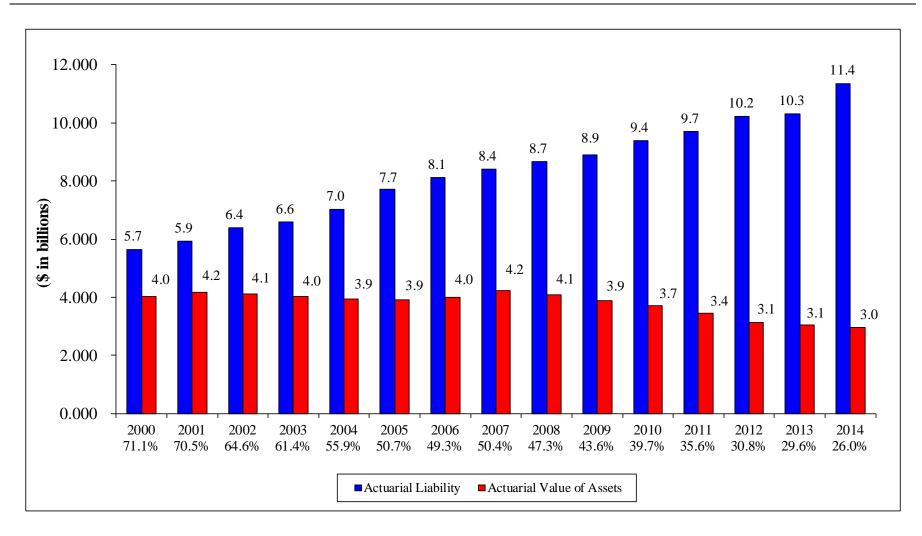


<sup>1</sup> State reporting for years after 2013 uses Projected Unit Credit for Actuarial Liabilities and Actuarial (Market-Related) Value for Assets. Prior to 2013, the Entry-Age Normal cost method was used for Actuarial Liabilities and Book Value was used for Assets.

# POLICEMEN'S ANNUITY AND BENEFIT FUND SUMMARY OF VALUATION RESULTS (CONT'D) COMPONENTS OF FUNDED RATIO BASED ON MARKET VALUE



# POLICEMEN'S ANNUITY AND BENEFIT FUND SUMMARY OF VALUATION RESULTS (CONT'D) COMPONENTS OF FUNDED RATIO GASB #27 #43



### **Participants**

	December 31, 2013	December 31, 2014
Active Participants		
Number	12,161	12,020
Average Age	43.4	43.7
Average Service	14.9	15.2
Average Annual Salary	\$83,499 <sup>1</sup>	\$89,379 <sup>2,3</sup>
Retirees		
Number	9,194	9,311
Average Age	68.8	69.0
Average Monthly Benefit	\$4,880	\$5,009
Survivors		
Number	3,196	3,175
Average Age	75.3	75.7
Average Monthly Benefit	\$1,656	\$1,691

The major characteristics of the Fund participants are summarized as follows:

A large portion of the active participant population is nearing or is eligible for retirement; 36.7% of the workforce is between the ages of 45 and 54, while 28.7% have 20 or more years of service. Total participants receiving benefits under the Fund, including retirees, disabilities, survivors and children increased 0.54% during 2014 from 13,159 to 13,230. The total retiree count increased by 1.3% during 2014. Total expenditures for benefits increased from \$641.9 million in 2013 to \$664.3 million during 2014, or 3.49%.

### **Changes in Provisions of the Fund**

There have been no changes made to the provisions of the fund since the prior valuation.

<sup>&</sup>lt;sup>1</sup>Average annual salary would have been \$80,429 without the addition of duty availability pay.

<sup>&</sup>lt;sup>2</sup> Average annual salary would have been \$86,240 without the addition of duty availability pay.

<sup>&</sup>lt;sup>3</sup>Average annual salary as of December 31, 2014, includes retroactive pay adjustments.

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY OF VALUATION RESULTS (CONT'D)

### **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 run 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, disability incidence and post-retirement mortality. The most significant economic assumptions are: pay increases, investment return and inflation. Other actuarial assumptions include: active mortality and percent married.

### **Changes in Actuarial Assumptions**

The valuation as of December 31, 2014, reflects the results of the experience review of the economic and demographic assumptions for the period from January 1, 2009, through December 31, 2013. The change in assumptions increased actuarial liabilities by \$553.5 million or 5.3% of total liabilities.

Adjustments were made to the assumption set, including:

- Decreasing the Investment Return Rate Economic Assumption from 7.75% to 7.50%.
- Decreasing the salary inflation assumption from 4.0% to 3.75%.
- Shifting retirement rates to slightly older ages.
- Slightly decreasing termination rates.
- Slightly increasing disability rates, and assuming more members receive duty disability benefits.
- Modifying the initial five-year service-based component of the salary scale and implementing the service-based increase at 30 years of service.
- Changing the pre-retirement mortality rates to Retirement Plans 2014 Total Employee mortality table weighted 85% for males and 115% for females.
- Changing the post-retirement healthy mortality rates to Retirement Plans 2014 Healthy Annuitant mortality table weighted 108% for males and 97% for females.
- Changing the disability mortality table to the Retirement Plans 2014 Healthy Annuitant mortality table weighted 115% for males and 115% for females.

### 2014 Gain/Loss Analysis

We performed a gain/loss analysis of the major factors which contributed to the change in the unfunded actuarial liability between December 31, 2013 and December 31, 2014. Our analysis by source follows.

### Turnover

We reviewed all exits in 2014 from the Fund for reasons other than retirement, death or disability for members with less than 20 years of service. The ratio of actual withdrawals to expected withdrawals was 115% (15% more than expected). The overall result is an actuarial loss.

### Retirement

The number of retirements during 2014 was more than expected. The ratio of actual retirements to expected retirements was 108%, resulting in an actuarial loss to the plan.

### Disability

The number of new disabled participants during 2014 was less than expected. The ratio of actual to expected disability was 71%, resulting in a gain to the plan.

### Mortality

There were fewer active member deaths and more annuitant deaths than expected during 2014, which resulted in a net actuarial gain to the fund.

### **Pay Increase**

The average salary for continuing active members in the 2013 and 2014 valuations increased by 9.9%. This was more than 1.8 times the expected increase of 5.4% from the 2013 salary. The greater than expected salary increases resulted in an actuarial loss to the fund.

### **Investment Return**

During 2014, assets earned 5.9% on a market basis, 7.7% on a book basis and 10.0% on an actuarial basis which compares favorably to the 2013 assumed return of 7.75%. Overall, the fund experienced an actuarial loss due to investment performance, on a market basis and book value basis, and an actuarial gain on an actuarial (smoothed) value basis, during the year.

### **Data and Other Sources**

There were small actuarial gains in liabilities due to data corrections and other sources.

### Conclusion

Overall, we believe that the updated assumptions are expected to improve the measurement of the System's costs. Table 5 of Appendix 1 shows a more detailed development of the actuarial gains and losses for the plan year ending December 31, 2014.

# **APPENDIX 1** RESULTS OF ACTUARIAL VALUATION

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY

### Table 1A

	December 31,			
	2013	2014		
Assets				
Book Value - Beginning of Year	\$ 2,952,874,317	\$ 2,912,852,576		
Income	· · · · · · · ·	1 7- 7- 7		
Investment Income Net of Expenses	\$ 323,504,550	\$ 209,962,215		
Employer Contributions	188,889,240	187,074,950		
Employee Contributions	93,328,944	95,675,538		
Miscellaneous	479,329	740,305		
Subtotal	\$ 606,202,063	\$ 493,453,008		
Outgo (Refunds, Benefits, & Administration)	\$ 646,223,804	\$ 668,578,318		
Book Value - End of Year	\$ 2,912,852,576	\$ 2,737,727,266		
Market Value - End of Year	3,265,200,554	3,062,014,322		
Actuarial Value - End of Year	3,053,881,777	2,954,318,954		
<u>Member Counts</u>				
Active	12,161	12,020		
Retirees	9,194	9,311		
Survivors	3,196	3,175		
Disabilities	350	343		
Inactives	654	630		
Children	419	401		
Payroll Data				
Valuation Payroll	\$ 1,015,426,128	\$ 1,074,333,318		
Average Salary	83,499	89,379		

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY (CONT'D)

	December 31,					
	2013	2014				
ACTUARIAL VALUES						
Statutory Funding						
Actuarial Liability	\$ 10,080,605,544	\$ 11,048,192,187				
Assets - Actuarial Value	3,053,881,777	2,954,318,954				
Unfunded Liability	7,026,723,767	8,093,873,233				
Funded Ratio	30.29%	26.74%				
Statutory Employer Contribution	\$ 592,863,325	\$ 675,825,755				
(Tax Levy Year)	(2015)	(2016)				
Book Value Funding						
Actuarial Liability	\$ 10,080,605,544	\$ 11,048,192,187				
Assets - Book Value	2,912,852,576	2,737,727,266				
Unfunded Liability	7,167,752,968	8,310,464,921				
Funded Ratio	28.90%	24.78%				
Termination Values						
Liability	\$ 7,988,229,559	\$ 8,598,307,626				
Deficiency	5,075,376,983	5,860,580,360				
Quick Ratio	36.46%	31.84%				
Market Value Funding						
Actuarial Liability	\$ 10,080,605,544	\$ 11,048,192,187				
Assets - Market Value	3,265,200,554	3,062,014,322				
Unfunded Liability	6,815,404,990	7,986,177,865				
Funded Ratio	32.39%	27.72%				
GASB #27 and #43 Values						
Actuarial Liability - Entry Age	\$ 10,310,714,280	\$ 11,353,561,136				
Assets - Actuarial Value	3,053,881,777	2,954,318,954				
Unfunded Liability	7,256,832,503	8,399,242,182				
		26.020/				
Funded Ratio	29.62%	26.02%				
Funded Ratio Annual Required Contribution (ARC) <sup>1</sup>	29.62% 501,374,829	26.02% 572,979,645				

### Table 1B

<sup>1</sup>Disclosures under GASB#27 and GASB#43 show Actuarial Accrued Liability separately for Pensions and OPEB.

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY (CONT'D)

### Table 1C

### Active Accrued Liability and Normal Cost by Tier Includes Pension and Healthcare

	Tier 1 Members		Tier 2 Members <sup>2</sup>			Total
(1) Count		10,702		1,318		12,020
(2) Payroll	\$	987,678,630	\$	86,654,688	\$	1,074,333,318
(3) Average Payroll	\$	92,289	\$	65,747	\$	89,379
(4) Actuarial Accrued Liability (AAL) <sup>1</sup>	\$ .	3,835,096,887	\$	19,895,521	\$ 3	3,854,992,408
(5) Total Normal Cost <sup>1</sup>	\$	204,206,538	\$	12,194,952	\$	216,401,490
(6) Total Normal Cost as a Percent of Pay		20.7%		14.1%		20.1%
(7) Estimated Member Contributions	\$	90,863,505	\$	7,983,346	\$	98,846,851
(8) Net Normal Cost <sup>1</sup>	\$	113,343,033	\$	4,211,606	\$	117,554,639
(9) Net Normal Cost as a Percent of Pay		11.5%		4.9%		10.9%

<sup>1</sup>The normal cost and liabilities for healthcare are based on a discount rate of 4.5%. <sup>2</sup>Members hired on or after January 1, 2011.

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY OF BASIC ACTUARIAL VALUES

### Table 2

	APV of Projected Benefits	Actuarial Accrued Liability (AAL)
(1) Values for Active Members		
(a) Retirement	\$5,506,168,508	\$3,496,361,782
(b) Termination	82,890,342	52,956,203
(c) Disability	425,758,401	272,349,968
(d) Death	52,672,776	33,324,455
Total for Actives	\$6,067,490,027	\$3,854,992,408
(2) Values for Inactive Members		
(a) Retired	6,321,184,495	6,321,184,495
(b) Survivor	535,659,874	535,659,874
(c) Disability	293,414,812	293,414,812
(d) Inactive (Deferred Vested)	33,494,323	33,494,323
(e) Children	9,446,275	9,446,275
Total for Inactives	7,193,199,779	7,193,199,779
(3) Grand Totals	\$13,260,689,806	\$11,048,192,187
(4) Normal Cost for Active Members	\$ 216,401,490	
(5) Actuarial Present Value of Future Compensation	\$11,162,110,583	

Results include health income supplement of \$34,043 in normal cost, \$18,721,604 in actuarial accrued liability and \$18,762,125 in present value of projected benefits. Results are based on projected unit credit cost method and a discount rate of 7.50% for pension benefits and 4.5% for healthcare benefits.

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO DEVELOPMENT OF STATUTORY CONTRIBUTION<sup>1</sup> (CONT'D)

### Table 3a

	Actuarial Valuation Projection Results as of December 31, 2014 Discount Rate of 7.50% (\$ in Thousands)												
Year Ending	Actuarial Accrued Liability	Market Value of Assets	Actuarial Value of Assets	Unfunded Liability	Actuarial Value Funded Ratio	Uncapped Payroll	Capped Payroll	Employer Normal Cost	Statutory Contribution <sup>1</sup>	Statutory Contribution as % of Pay	Employee Contributions	Benefit Payments	Admin Expenses
2014	\$11,048,192	\$3,062,014	\$2,954,319	\$ 8,093,873	26.74%	\$1,074,333	\$1,074,333	\$102,783	\$187,815	17.5%	\$95,676	\$ 664,338	\$4,241
2015	11,411,836	3,278,525	3,217,945	8,193,891	28.20%	1,105,015	1,103,004	117,555	592,863	53.7%	98,847	672,045	4,368
2016	11,781,145	3,572,979	3,559,514	8,221,630	30.21%	1,140,513	1,135,668	112,825	675,826	59.5%	108,984	698,456	4,499
2017	12,163,551	3,889,364	3,900,666	8,262,885	32.07%	1,176,070	1,168,097	115,259	695,124	59.5%	112,072	718,627	4,634
2018	12,548,773	4,219,011	4,219,011	8,329,761	33.62%	1,209,741	1,199,498	117,286	713,810	59.5%	115,248	749,424	4,773
2019	12,933,725	4,560,317	4,560,317	8,373,408	35.26%	1,243,822	1,230,400	118,837	732,200	59.5%	118,335	782,358	4,916
2020	13,316,644	4,914,566	4,914,566	8,402,079	36.91%	1,280,166	1,263,824	119,776	752,090	59.5%	121,611	816,535	5,064
2021	13,696,272	5,281,951	5,281,951	8,414,322	38.56%	1,316,660	1,297,289	120,401	772,004	59.5%	124,859	851,423	5,215
2022	14,071,381	5,663,586	5,663,586	8,407,795	40.25%	1,354,432	1,331,889	120,613	792,595	59.5%	128,219	886,947	5,372
2023	14,439,986	6,059,763	6,059,763	8,380,222	41.97%	1,393,013	1,367,070	120,320	813,531	59.5%	131,654	923,612	5,533
2024	14,799,878	6,470,260	6,470,260	8,329,618	43.72%	1,432,430	1,402,197	119,608	834,435	59.5%	135,062	961,472	5,699
2025	15,148,088	6,895,984	6,895,984	8,252,104	45.52%	1,473,464	1,439,218	117,929	856,465	59.5%	138,741	1,000,849	5,870
2026	15,481,802	7,337,188	7,337,188	8,144,614	47.39%	1,515,480	1,476,960	115,653	878,925	59.5%	142,385	1,041,435	6,046
2027	15,799,359	7,795,756	7,795,756	8,003,603	49.34%	1,559,599	1,516,216	112,991	902,286	59.5%	146,096	1,082,246	6,228
2028	16,100,434	8,273,986	8,273,986	7,826,448	51.39%	1,606,981	1,555,790	110,384	925,836	59.5%	149,758	1,122,208	6,414
2029	16,385,906	8,777,064	8,777,064	7,608,841	53.56%	1,656,647	1,598,197	107,846	951,072	59.5%	153,621	1,160,409	6,607
2030	16,656,508	9,311,291	9,311,291	7,345,217	55.90%	1,709,742	1,644,580	105,100	978,674	59.5%	157,931	1,197,023	6,805
2031	16,913,448	9,882,460	9,882,460	7,030,988	58.43%	1,765,596	1,693,409	102,599	1,007,732	59.5%	162,389	1,231,803	7,009
2032	17,157,541	10,492,841	10,492,841	6,664,699	61.16%	1,823,469	1,739,181	100,558	1,034,971	59.5%	166,641	1,265,072	7,219
2033	17,389,628	11,140,748	11,140,748	6,248,880	64.07%	1,885,078	1,776,087	99,653	1,056,933	59.5%	169,999	1,296,851	7,436
2034	17,611,490	11,825,203	11,825,203	5,786,287	67.14%	1,948,842	1,804,142	99,986	1,073,628	59.5%	172,470	1,326,409	7,659
2035	17,826,154	12,551,460	12,551,460	5,274,694	70.41%	2,016,950	1,830,899	100,888	1,089,551	59.5%	174,805	1,352,756	7,889
2036	18,036,195	13,323,888	13,323,888	4,712,307	73.87%	2,087,409	1,855,526	102,371	1,104,206	59.5%	176,979	1,376,535	8,125
2037	18,244,281	14,148,326	14,148,326	4,095,955	77.55%	2,161,295	1,879,936	104,348	1,118,732	59.5%	179,074	1,397,837	8,369
2038	18,452,509	15,030,205	15,030,205	3,422,303	81.45%	2,238,804	1,903,770	106,665	1,132,916	59.5%	181,165	1,417,321	8,620
2039	18,662,552	15,974,830	15,974,830	2,687,722	85.60%	2,318,724	1,927,251	109,409	1,146,889	59.5%	183,166	1,435,553	8,879
2040	18,875,443	16,987,488	16,987,488	1,887,955	90.00%	2,402,303	1,950,660	112,401	1,160,820	59.5%	185,169	1,453,178	9,145
2041	19,092,934	17,183,641	17,183,641	1,909,293	90.00%	2,489,496	1,974,674	115,847	284,063	14.4%	187,127	1,469,745	9,420

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

The Policemen's Annuity and Benefit Fund of Chicago Actuarial Valuation Report as of December 31, 2014

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO DEVELOPMENT OF STATUTORY CONTRIBUTION<sup>1</sup> (CONT'D)

### Table 3b

	 Health Ins. Pension Supplement			Total	
(1) Total Normal Cost for 2016	\$ 221,800,051	\$	8,897	\$	221,808,948
(2) Actuarial Accrued Liability (AAL) at 12/31/2015 <sup>1</sup>	\$ 11,402,041,654	\$	9,794,476	\$1	1,411,836,130
(3) Unfunded AAL (UAAL)					
<ul><li>(a) Actuarial Value of Assets at 12/31/2015</li><li>(b) UAAL (2-3(a))</li></ul>	\$ 3,217,944,759 8,184,096,895	\$	0 9,794,476		3,217,944,759 8,193,891,371
(4) Estimated Member Contributions during 2016	\$ 108,984,000	\$	0	\$	108,984,000
(5) Estimated City Contribution for Tax Levy Year 2016	\$666,173,977	\$	9,651,778 <sup>2</sup>	\$	675,825,755

<sup>1</sup> Pension liabilities were discounted at 7.50% per year, and OPEB liabilities discounted at 4.5% per year. <sup>2</sup> Represents expected health insurance supplemental benefits for fiscal year 2016.

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO **DEVELOPMENT OF ANNUAL REQUIRED** CONTRIBUTION UNDER GASB #27 AND GASB #43 FOR 2015<sup>1</sup>

### Table 4

	Pension	Total	
(1) Total Normal Cost for 2015	\$ 191,762,167	Supplement \$ 0	\$ 191,762,167
(2) Actuarial Accrued Liability (AAL) at $12/31/2014^2$	\$11,334,799,011	\$ 18,762,125	\$11,353,561,136
<ul> <li>(3) Unfunded AAL (UAAL)</li> <li>(a) Actuarial Value of Assets at 12/31/2014</li> <li>(b) UAAL (2-3(a))</li> </ul>	\$ 2,954,318,954 8,380,480,057	\$	\$ 2,954,318,954 8,399,242,182
(4) Amortization Payable at Beginning of Year $^3$	\$ 446,091,714	\$ 9,414,848	\$ 455,506,562
(5) Estimated Member Contributions	\$ 98,846,851	\$ 0	\$ 98,846,851
<ul> <li>(6) Annual Required Contribution (ARC) for 2015</li> <li>(a) Interest Adjustment for Semimonthly Payment</li> <li>(b) Annual Required Contribution (1 + 4 - 5 + 6(a))</li> <li>(c) Annual Required Contribution (Percent of Pay)</li> </ul>	24,340,210 \$ 563,347,240 52.44%	217,557 \$ 9,632,405 0.90%	24,557,767 \$ 572,979,645 53.33%
(7) Estimated City Contribution for 2015	\$ 583,368,718	\$ 9,494,282 <sup>4</sup>	\$ 592,863,000
<ul> <li>(8) Estimated Deficiency/(Excess) for 2015</li> <li>(a) in Dollars (6(b)-7)</li> <li>(b) as a Percentage of Pay</li> </ul>	<u>\$ (20,021,478)</u> (1.86%)	\$ 138,123 0.01%	\$ (19,883,355) (1.85%)

<sup>1</sup> Pension liabilities were discounted at 7.50% per year, and OPEB liabilities discounted at 4.5% per year. <sup>2</sup> Actuarial Accrued Liabilities calculated using the Entry-Age Normal cost method.

<sup>3</sup>Amortization is over a 30-year period as a level percent of pay for pension benefits, and a 2-year period as a level percent of pay for OPEB benefits.

<sup>4</sup> Represents expected health insurance supplemental benefits for fiscal year 2015.

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO DEVELOPMENT OF ACTUARIAL GAINS AND LOSSES FOR 2014

### Table 5

#### UNFUNDED ACTUARIAL ACCRUED LIABILITY - BEGINNING OF 2014

01110		011
(1)	Actuarial Accrued Liability - 12/31/2013	\$10,080,605,544
(2)	Actuarial Value of Assets - 12/31/2013	3,053,881,777
(3)	Unfunded Accrued Actuarial Liability - 12/31/2013	\$7,026,723,767
EXPE	CTED UNFUNDED ACTUARIAL ACCRUED LIABILITY - END	<u>OF 2014</u>
(4)	Normal Cost for 2014	\$ 198,458,616
(5)	Total Contributions for 2014	283,490,793
(6)	Interest on (3), (4), & (5) at Valuation Rates	548,402,853
(7)	Expected Unfunded Actuarial Accrued Liability - 12/31/2014	\$7,490,094,443
	((3)+(4)-(5)+(6))	
DEVL	ATIONS FROM EXPECTED	
(8)	(Gain)/Loss on Investment Return (Smoothed (Actuarial) Value)	\$ (59,090,695)
(9)	(Gain)/Loss from Salary Changes	84,817,360
(10)	(Gain)/Loss from Retirement	17,201,006
(11)	(Gain)/Loss from Turnover	1,418,528
(12)	(Gain)/Loss from Mortality	(11,637,721)
(13)	(Gain)/Loss from Disability	(6,115,514)
(14)	(Gain)/Loss from New Entrants	(904,397)
(15)	(Gain)/Loss from All Other Sources	24,633,482
(16)	Composite Actuarial (Gain)/Loss	\$50,322,049
(17)	(Gain)/Loss as a percentage of Expected UAAL (16)/(7)	0.7%
(18)	(Gain)/Loss from Assumption Changes	\$553,456,741
<u>UNFU</u> (19)	NDED ACTUARIAL ACCRUED LIABILITY - END OF 2014 Unfunded Accrued Actuarial Liability - 12/31/2014	\$8,093,873,233
(1))	((7)+(16)+(18))	ψ0,075,075,255

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO **HISTORY OF RECOMMENDED EMPLOYER MULTIPLES \***

Table 6

		I able u		
				al Cost
			Plus Amo	ortization <sup>4</sup>
Year of	Statutory	Normal Cost		Level %
Report	Multiple	Plus Interest	Level \$	of Salary
1985 <sup>1,2</sup>	2.00	4.50	4.70	3.48
1986 <sup>1</sup>	2.00	4.15	4.31	3.18
1987 <sup>1</sup>	2.00	4.13	4.29	3.16
1988	2.00	4.16	4.32	3.18
1989 <sup>1,2</sup>	2.00	3.79	3.91	2.85
1990 <sup>3</sup>	2.00	3.58	3.68	2.73
1991	2.00	3.80	3.91	2.98
1992 <sup>1</sup>	2.00	3.23	3.36	2.11
1993	2.00	3.23	3.37	2.10
1994	2.00	3.05	3.18	1.98
1995	2.00	3.34	3.49	2.17
1996	2.00	3.19	3.32	2.10
1997	2.00	3.10	3.23	2.04
1998 1,2	2.00	3.63	3.77	2.56
1999	2.00	3.15	3.27	2.24
$2000^{-1}$	2.00	3.27	3.39	2.32
2001 2	2.00	3.63	3.78	2.56
2002	2.00	4.62	4.79	3.33
2003 1,2	2.00	4.46	4.63	3.23
2004 2	2.00	4.99	5.18	3.60
2005 1,2	2.00	5.33	5.56	3.85
2006	2.00	4.95	5.40	3.94
2007	2.00	4.98	5.43	3.97
2008	2.00	5.43	5.94	4.30
$2009^{-1}$	2.00	5.87	6.42	4.61
2010	2.00	6.19	6.78	4.85
2011	2.00	5.71	6.26	4.45
2012 1	2.00	6.73	7.43	5.25
2013 <sup>2</sup>	2.00	6.92	7.60	5.44
2014 1	2.00	7.94	8.88	6.49

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

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

<sup>3</sup>*Change in actuary.* 

<sup>4</sup>Prior to 2005, amortizations were over a 40-year period. In 2005, pension unfunded liability was amortized over a 40-year period and OPEB liability over a 30-year period. Starting in 2006, both pension and OPEB amortizations are over a 30-year period. Starting in 2013, OPEB amortizations are over a closed 3-year period as a level percent of pay.

\*Based on book value of assets through 2013, then Actuarial Value of assets starting in 2014.

The Policemen's Annuity and Benefit Fund of Chicago Actuarial Valuation Report as of December 31, 2014

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO ORDINARY DEATH BENEFIT RESERVE

### Table 7

Actuarial Balance Sheet – 6% Basis

December 31, 2014

#### ASSETS

Fund Balance	(27,235,320)
Present Values of Future Contributions:	
Contributions by Members at \$30.00 a Year	4,306,398
Annual City Contribution of \$224,000	2,675,078
Unfunded Liability	53,590,385
TOTAL ASSETS	\$ 33,336,541

#### LIABILITIES

TOTAL LIABILITIES	\$ 33,336,541
Retired Members	26,758,837
Active & Disabled Members	6,577,704
Present Value of Future Death Benefits (6%, 83 GAM)	

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO ACTUARIAL ACCRUED LIABILITY PRIORITIZED SOLVENCY TEST

Valuation	(1) Active and Inactive	(2) Retirees	(3) Active and Inactive	Actuarial	Portion (%)	of Present Va	alue Covered
Date	Member	and	Members (ER	Value of		By Assets	
12/31	Contribution	Beneficiaries	<b>Financed Portion</b> )	Assets	(1)	(2)	(3)
$2000^{-1}$	\$ 818,382,556	\$ 3,228,954,418	\$ 1,604,693,684	\$4,019,467,561	100.00%	99.14%	0.00%
2001 2	803,453,930	3,463,944,097	1,665,112,602	4,183,796,025	100.00%	97.59%	0.00%
2002	846,622,627	3,769,125,439	1,769,097,893	4,124,579,960	100.00%	86.97%	0.00%
2003 1,2	893,425,839	3,856,262,804	1,831,744,607	4,039,695,590	100.00%	81.59%	0.00%
2004 2	910,480,098	4,313,531,046	1,810,260,330	3,933,031,342	100.00%	70.07%	0.00%
2005 1,2	950,764,942	4,677,632,909	2,094,339,296	3,914,431,654	100.00%	63.36%	0.00%
2006	1,016,217,810	4,858,554,051	2,241,771,313	3,997,990,919	100.00%	61.37%	0.00%
2007	1,082,742,927	5,006,931,293	2,309,718,259	4,231,681,817	100.00%	62.89%	0.00%
2008	1,144,380,257	5,208,199,833	2,299,966,099	4,093,719,894	100.00%	56.63%	0.00%
2009 1	1,217,645,647	5,391,373,730	2,291,882,108	3,884,978,241	100.00%	49.47%	0.00%
2010	1,251,147,487	5,717,654,520	2,406,050,870	3,718,954,539	100.00%	43.16%	0.00%
2011	1,286,345,939	6,041,684,411	2,360,319,555	3,444,690,362	100.00%	35.72%	0.00%
2012 1	1,309,825,828	6,475,282,318	2,435,530,363	3,148,929,770	100.00%	28.40%	0.00%
2013 2	1,358,193,244	6,594,792,197	2,127,620,103	3,053,881,777	100.00%	25.71%	0.00%
2014 1	1,410,544,951	7,159,705,456	2,477,941,780	2,954,318,954	100.00%	21.56%	0.00%

### Table 8

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

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

# APPENDIX 2 ASSETS OF THE PLAN

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO ASSETS OF THE PLAN

The book value of the plan assets, net of accounts payable, decreased from \$2.913 billion as of December 31, 2013, to \$2.738 billion as of December 31, 2014. The market value of the plan assets, net of accounts payable, decreased from \$3.265 billion as of December 31, 2013, to \$3.062 billion as of December 31, 2014. Table 9 details the development of asset values during 2014 and Table 10 shows the development of the actuarial value of assets as of December 31, 2014. In each future fiscal year, gains and losses will be phased in over a five year period.

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO RECONCILIATION OF ASSETS AS OF DECEMBER 31, 2014

### Table 9

	-	Market Value	Book Value
1. Value of assets as of $12/31/2$	2013	\$3,265,200,554	\$2,912,852,576
2. Income for plan year:			
a) Member contributions		\$ 95,675,538	\$ 95,675,538
b) City contributions		187,074,950	187,074,950
c) Investment income net	of expenses	181,901,293	209,962,215
d) Miscellaneous revenue		740,305	740,305
e) Total income		\$ 465,392,086	\$ 493,453,008
3. Disbursements for plan year	•		
a) Benefit payments			
i) Pension, disability	and death benefit payments	\$ 645,688,934	\$ 645,688,934
ii) Healthcare premiu	ims	9,657,123	9,657,123
b) Refunds		8,991,636	8,991,636
c) Administration	-	4,240,625	4,240,625
d) Total disbursements		\$ 668,578,318	\$ 668,578,318
4. Value of assets as of $12/31/2$	2014	\$3,062,014,322	\$2,737,727,266
5. Estimated rate of return in 2	014: 1		
a) Gross		6.25%	8.09%
b) Net of investment expe (Investment expense of		5.91%	7.71%

<sup>1</sup>Method used for calculating rate of return does not reflect specific timing of income and outflows. It is also based on total assets, not invested assets.

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO DEVELOPMENT OF ACTUARIAL (MARKET-RELATED) VALUE OF ASSETS AS OF DECEMBER 31, 2014

Table 10					
Year Ending December 31	2014	2015	2016	2017	2018
Beginning of Year:					
(1) Market Value of Assets	\$3,265,200,554				
(2) Actuarial Value of Assets	3,053,881,777				
End of Year:					
(3) Market Value of Assets	3,062,014,322				
(4) Contributions and Disbursements					
(4a) City Contributions & Misc.	187,815,255				
(4b) Member Contributions	95,675,538				
(4c) Benefit Payouts & Refunds	(664,337,693)				
(4d) Administrative Expenses	(4,240,625)				
(4e) Net of Contributions and Disbursements	(385,087,525)				
(5) Total Investment Income					
=(3)-(1)-(4e)	181,901,293				
(6) Projected Rate of Return	7.75%				
(7) Projected Investment Income					
$=(1)x(6)+([1+(6)]^{.5-1})x(4e)$	238,409,329				
(8) Investment Income in					
Excess of Projected Income	(56,508,036)				
(9) Excess Investment Income Recognized					
This Year (5-year recognition)					
(9a) From This Year	(\$11,301,607)				
(9b) From One Year Ago	36,067,836	(\$11,301,607)			
(9c) From Two Years Ago	22,349,144	36,067,836	(\$11,301,607)		
(9d) From Three Years Ago	0	22,349,144	36,067,836	(\$11,301,607)	
(9e) From Four Years Ago	0	0	22,349,145	36,067,836	(\$11,301,608)
(9f) Total Recognized Investment Gain	47,115,373	47,115,373	47,115,374	24,766,229	(11,301,608)
(10) Change in Actuarial Value of Assets					
=(4e)+(7)+(9f)	(99,562,823)				
End of Year:					
(3) Market Value of Assets	\$3,062,014,322				
(11) Actuarial Value of Assets = (2)+(10)	\$2,954,318,954				

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**APPENDIX 3** DATA REFLECTING PLAN MEMBERS

#### EXHIBIT A

## POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY OF CHANGES IN ACTIVE PARTICIPANTS FOR FISCAL YEAR ENDING DECEMBER 31, 2014

_	Male	Female	Total
Number of Participants at Beginning of Fiscal Year <sup>2</sup>	9,328	2,833	12,161
Increases: Participants Added During Year Participants Returning From Inactive or Disability Status_	239 24	66 9	305 <u>33</u>
Totals	9,591	2,908	12,499
Decreases: Terminations During Year	330	149	479
Number of Participants at End of Fiscal Year	9,261	2,759	12,020
Total Inactive Participants			630
Terminations:			
Withdrawal (With Refunds) <sup>1</sup>	22	4	26
Withdrawal (Without Refunds)	60	22	82
Ordinary Disability Benefit	9	9	18
Occupational Disease Disability Benefit	2	1	3
Duty Disability Benefit	4	2	6
Retirements	220	108	328
Deaths (Occupational)	0	0	0
Deaths (Non-occupational)	13	3	16
Totals	330	149	479

<sup>1</sup> This total differs from the total of 70 shown in Exhibit D due to the fact that only 26 of the refunds were paid to participants who were considered to be active as of December 31, 2013.

<sup>2</sup> Includes five active members reclassified from male to female and four active members reclassified from female to male.

#### EXHIBIT B

## POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY OF CHANGES IN ANNUITANTS AND BENEFICIARIES FOR FISCAL YEAR ENDING DECEMBER 31, 2014

-	Number at Beginning of Year	Additions During Year	Terminations During Year	Number at End of Year
Service Retirement Annuities	9,194	392	275	9,311
Widow Annuities	3,130	128	149	3,109
Children's Annuities	206	17	26	197
Ordinary Disability Benefit (Non-Occupational)	46	22	20	48
Occupational Disease Disability Benefit	35	4	3	36
Duty Disability Benefit (Occupational)	269	15	25	259
Children's Disability Benefit	213	18	27	204
Widows' Compensation Annuities (Service Connected Death)	66	0	0	66
Totals	13,159	596	525	13,230
Annual Benefits	\$622,189,283	\$ 40,659,334	\$ 18,637,572	\$644,211,045

#### EXHIBIT C – PART I POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO TOTAL LIVES AND ANNUAL SALARIES OF ACTIVE MALE PARTICIPANTS CLASSIFIED BY AGE AND YEARS OF SERVICE AS OF DECEMBER 31, 2014

					Years of S	ervice					
AGE	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	Total	Annual Salary
Under 20										0	
										\$	0
20 to 24	41									41	
	1,875,750										1,875,750
25 to 29	115	352	8							475	
	5,261,250	25,348,734	667,200								31,277,184
30 to 34	56	392	567	146						1,161	
	2,562,000	28,774,728	47,336,772	12,632,748							91,306,248
35 to 39	25	160	412	792	154					1,543	
	1,143,750	11,719,728	34,371,600	69,542,388	14,324,940						131,102,406
40 to 44	2	42	186	496	996	158	1			1,881	
	91,500	3,185,934	15,504,756	43,249,698	92,723,478	15,984,476	109,284				170,849,126
45 to 49		1		275	703	860	53			1,964	
		75,990	6,011,646	23,987,220	65,141,412	85,146,894	5,696,896				186,060,058
50 to 54			1	93	297	533	458	17		1,399	
			83,400	8,042,088	27,056,538	51,878,190	48,645,324	1,959,910			137,665,449
55 to 59				22	121	190	265	31	3	632	
				1,913,232	10,901,070	18,144,678	27,786,386	3,617,968	333,660		62,696,994
60 to 63				4	36	50	40	27	8	165	
				344,832	3,241,866	4,749,648	4,065,064	2,965,304	884,626		16,251,340
<b>Total Active</b>	239	947	1,246	1,828	2,307	1,791	817	75	11	9,261	
Annual Salary	\$10,934,250	\$69,105,114	\$103,975,374	\$159,712,206	\$213,389,304	\$175,903,886	\$86,302,953	\$8,543,182	\$ 1,218,286	\$	829,084,555

#### EXHIBIT C – PART II POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO TOTAL LIVES AND ANNUAL SALARIES OF ACTIVE FEMALE PARTICIPANTS CLASSIFIED BY AGE AND YEARS OF SERVICE AS OF DECEMBER 31, 2014

					Years of Se	rvice					
AGE	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	Total	Annual Sal ary
Under 20										0 \$	0
20 to 24	12 549,000									12	549,000
25 to 29	21 960,750	63 4,508,526	1 83,400							85	5,552,670
30 to 34	21 960,750	101 7,413,468	182 15,198,990	45 3,893,208						349	27,466,416
35 to 39	11 503,250	45 3,334,284	106 8,848,476	194 17,078,940	45 4,139,508					401	33,904,458
40 to 44	1 45,750	28 2,070,480	84 7,010,256	178 15,459,114	253 23,362,668	33 3,231,060				577	51,179,328
45 to 49			34 2,835,600	106 9,203,034	189 17,230,074	225 22,102,166	10 1,006,782			564	52,377,65
50 to 54				38 3,286,800	135 12,204,798	164 15,800,694	138 14,217,990	4 488,442		479	45,998,724
55 to 59			1 83,400	14 1,223,568	79 7,139,004	77 7,462,050	61 6,433,376	8 860,740		240	23,202,138
60 to 63				2 172,416	15 1,358,910	23 2,199,930	9 929,838	3 357,274		52	5,018,368
Total Active		237	408	577	716	522	218	15	-	2,759	
Annual Salary		\$17,326,758	\$34,060,122	\$50,317,080	\$65,434,962	\$50,795,900	\$22,587,986	\$1,706,456	\$ 0	\$	245,248,764

## EXHIBIT C – PART III POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO TOTAL LIVES AND ANNUAL SALARIES OF ALL ACTIVE PARTICIPANTS CLASSIFIED BY AGE AND YEARS OF SERVICE AS OF DECEMBER 31, 2014

					Years of Se	ervice					
AGE	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	Total	Annual Salary
Under 20										0	
											\$
20 to 24	53 2,424,750									53	2,424,
25 to 29	136 6,222,000	415 29,857,260	9 750,600							560	36,829
30 to 34	77 3,522,750	493 36,188,196	749 62,535,762	191 16,525,956						1,510	118,772
35 to 39	36 1,647,000	205 15,054,012	518 43,220,076	986 86,621,328	199 18,464,448					1,944	165,006
40 to 44	3 137,250	70 5,256,414	270 22,515,012	674 58,708,812	1,249 116,086,146	191 19,215,536	1 109,284			2,458	222,028,
45 to 49		1 75,990	106 8,847,246	381 33,190,254	892 82,371,486	1,085 107,249,060	63 6,703,678			2,528	238,437
50 to 54			1 83,400	131 11,328,888	432 39,261,336	697 67,678,884	596 62,863,314	21 2,448,352		1,878	183,664
55 to 59			1 83,400	36 3,136,800	200 18,040,074	267 25,606,728	326 34,219,762	39 4,478,708	3 333,660	872	85,899
60 to 63				6 517,248	51 4,600,776	73 6,949,578	49 4,994,902	30 3,322,578	8 884,626		21,269
otal Active	305	1,184	1,654	2,405	3,023	2,313	1,035	90	11	12,020	
nual Salary	\$13,953,750	¢96 121 972	\$138,035,496	¢210.020.296	¢270 024 266	¢226 600 786	¢100 000 030	\$10,249,638	\$ 1,218,286		\$ 1,074,333

#### EXHIBIT D – PART I POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SHOWING NUMBER OF REFUND PAYMENTS MADE DURING YEAR TO MALE EMPLOYEES FOR FISCAL YEAR ENDING DECEMBER 31, 2014

		L	ength of Se	rvice at Dat	e of Refund		
Age at Date of Refund	Under 1 Year	Between 1 and 2	Between 2 and 3	Between 3 and 4	Between 4 and 5	5 and over	Total
Under 20							0
20 to 24							0
25 to 29	1	3				4	8
30 to 34	1	3				18	22
35 to 39	1	1			1	8	11
40 to 44	1	2		1		5	9
45 to 49						5	5
50 to 54						1	1
55 to 59							0
60 to 63						1	1
Totals	4	9	0	1	1	42	57

Includes only number of actual refunds paid or accrued during fiscal year reported.

#### EXHIBIT D – PART II POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SHOWING NUMBER OF REFUND PAYMENTS MADE DURING YEAR TO FEMALE EMPLOYEES FOR FISCAL YEAR ENDING DECEMBER 31, 2014

		L	ength of Se	rvice at Dat	e of Refund		
Age at Date of Refund	Under 1 Year	Between 1 and 2	Between 2 and 3	Between 3 and 4	Between 4 and 5	5 and over	Total
Under 20							0
20 to 24							0
25 to 29		1					1
30 to 34	1					2	3
35 to 39	4					3	7
40 to 44						1	1
45 to 49						1	1
50 to 54							0
55 to 59							0
60 to 63							0
Totals	5	1	0	0	0	7	13

Includes only number of actual refunds paid or accrued during fiscal year reported.

#### EXHIBIT E POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SHOWING STATISTICS ON SERVICE RETIREMENT ANNUITIES CLASSIFIED BY AGE AS OF DECEMBER 31, 2014

		MALE		FEMALE		TOTAL
		Annual		Annual		Annual
AGE	No.	Payments	No.	Payments	No.	Payments
UNDER 50	6	\$ 118,178	5	\$ 159,702	11	\$ 277,880
50	18	1,003,242	11	579,800	29	1,583,042
51	34	2,064,032	16	851,237	50	2,915,269
52	33	1,943,660	22	1,254,025	55	3,197,68
53	37	1,996,274	22	1,227,027	59	3,223,30
54	43	2,573,347	13	799,741	56	3,373,08
55	75	4,487,049	41	2,292,785	116	6,779,834
56	78	4,883,122	57	3,292,373	135	8,175,49
57	118	7,205,778	70	4,027,560	188	11,233,33
58	98	5,927,779	70	3,767,872	168	9,695,65
59	126	7,831,736	56	2,850,610	182	10,682,34
60	174	12,125,593	75	4,285,832	249	16,411,42
61	197	13,264,729	71	4,222,100	268	17,486,82
62	238	15,742,842	79	4,653,120	317	20,395,96
63	394	26,807,014	97	5,693,581	491	32,500,59
64	444	30,725,406	107	6,095,063	551	36,820,469
65	470	31,017,982	80	4,498,591	550	35,516,57
66	508	33,920,639	107	5,833,053	615	39,753,692
67	570	37,692,267	72	3,991,671	642	41,683,93
68	529	33,980,579	45	2,028,142	574	36,008,72
69	329	21,447,310	35	1,725,987	374	23,173,29
09 70	339	21,447,510	40	2,077,160	374	23,965,36
70 71	349		40 37			
71 72	378	23,162,211	23	1,651,550	415 360	24,813,76
		20,212,820		1,053,186		21,266,00
73	297	16,906,644	16	854,265	313	17,760,90
74 75	238	13,762,820	15	735,662	253	14,498,482
75	220	12,392,461	2	44,320	222	12,436,78
76	213	11,862,489	3	175,506	216	12,037,99
77	157	8,318,421	6	305,550	163	8,623,97
78 70	140	7,400,182	5	285,984	145	7,686,16
79	124	6,682,305	1	42,057	125	6,724,362
80	105	5,545,900	0	0	105	5,545,90
81	120	6,221,417	0	0	120	6,221,41
82	137	6,982,022	0	0	137	6,982,02
83	108	5,656,139	0	0	108	5,656,13
84	114	5,497,553	0	0	114	5,497,55
85 to 89	329	14,826,868	0	0	329	14,826,868
90 to 94	107	3,959,141	0	0	107	3,959,14
95 to 99	6	209,356	1	764	7	210,12
100+	3	87,761	0	0	3	87,76
otals	8,011	\$488,333,269	1,300	\$71,355,876	9,311	\$559,689,14

#### EXHIBIT F

## POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SHOWING STATISTICS ON WIDOW'S ANNUITIES CLASSIFIED BY AGE AS OF DECEMBER 31, 2014

		Annual			Annual
Age	No.	Payments	Age	No.	Payments
Under 30	1	\$ 23,578	65	80	\$ 1,736,955
30	1	29,068	66	81	1,891,451
31	1	20,479	67	88	1,938,404
32	1	20,953	68	98	2,151,157
33	0	0	69	87	1,845,483
34	0	0	70	80	1,766,822
35	1	19,399	71	103	2,177,665
36	0	0	72	109	2,292,690
37	0	0	73	87	1,875,545
38	0	0	74	87	1,819,338
39	3	62,088	75	90	1,821,576
40	3	98,422	76	118	2,157,857
41	2	40,828	77	115	2,207,769
42	5	105,930	78	107	2,078,115
43	6	120,722	79	95	1,792,980
44	4	84,114	80	85	1,602,854
45	9	174,990	81	97	1,862,637
46	5	108,428	82	96	1,729,024
47	8	157,426	83	107	1,823,439
48	3	57,023	84	106	1,832,817
49	10	231,588	85	85	1,487,097
50	9	202,778	86	84	1,360,649
51	13	313,375	87	91	1,503,563
52	7	172,868	88	90	1,415,545
53	13	272,664	89	70	1,013,099
54	19	431,464	90	49	729,397
55	15	289,117	91	56	818,309
56	21	464,280	92	39	579,754
57	24	502,855	93	40	532,568
58	28	688,439	94	37	482,700
59	30	710,506	95	14	185,953
60	50	1,197,036	96	19	252,556
61	39	995,709	97	12	144,000
62	40	960,725	98	6	72,000
63	50	1,065,172	99	10	120,000
64	62	1,428,670	100+	8	96,000
			Total	3,109	\$60,248,462

## EXHIBIT G POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SHOWING STATISTICS ON MISCELLANEOUS ANNUITIES FOR FISCAL YEAR ENDING DECEMBER 31, 2014

	No.	Annual Payments
Children's Annuities	197	\$1,293,297
Widows' Compensation Annuities	66	4,186,169
Ordinary Disability Benefits	48	2,011,992
Occupational Disease Disability Benefits	36	1,928,842
Duty Disability Benefits	259	14,582,015
Children's Disability Benefits	204	271,123
Totals	810	\$24,273,438

#### EXHIBIT H – PART I POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SHOWING MALE PARTICIPANTS RECEIVING DUTY DISABILITY CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2014

					I	ength of Serv	ice as	of December	31, 20	014				
	Un	der 1 Year		1 to 4		5 to 9		10 to 14		15 to 19	2	0 & Over		Total
ATTAINED		Annual		Annual		Annual		Annual		Annual		Annual		Annual
AGE	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments
UNDER 30													0	\$0
30 to 34													0	-
35 to 39			1	45,223	7	383,325	6	365,849					14	794,397
40 to 44			4	193,738	8	383,339	10	566,537	10	604,571	1	62,780	33	1,810,965
45 to 49			4	208,274	5	253,345	8	456,025	10	610,628	1	62,210	28	1,590,482
50 to 54			4	199,105	4	202,796	10	542,663	11	654,916	7	420,743	36	2,020,223
55 to 59			3	148,547	1	52,383	12	664,918	9	547,344	13	781,961	38	2,195,153
60 to 63			3	147,235	3	156,841	2	103,356	6	339,097	7	416,295	21	1,162,824
Totals	0	\$0	19	\$ 942,122	28	\$1,432,029	48	\$2,699,348	46	\$2,756,556	29	\$1,743,989	170	\$ 9,574,044

#### EXHIBIT H – PART II POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SHOWING FEMALE PARTICIPANTS RECEIVING DUTY DISABILITY CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2014

					L	ength of Serv	ice as	of December	31, 20	)14				
	Un	der 1 Year		1 to 4		5 to 9		10 to 14		15 to 19 20		0 & Over	-	Total
ATTAINED		Annual		Annual		Annual		Annual		Annual		Annual		Annual
AGE	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments
UNDER 30													0	\$ 0
30 to 34			1	46,807									1	46,807
35 to 39			1	46,807	2	113,273	2	121,848					5	281,928
40 to 44			4	195,634	2	96,931	4	235,230	2	137,302			12	665,097
45 to 49			1	48,434	3	170,387	3	158,914	5	301,581	3	173,852	15	853,168
50 to 54			3	148,882	4	202,144	7	391,375	5	301,337	4	267,655	23	1,311,393
55 to 59					5	268,401	8	427,423	7	404,685	3	198,891	23	1,299,400
60 to 63			2	97,031	1	50,224	4	205,305	1	65,567	2	132,051	10	550,178
Totals	0	\$0	12	\$583,595	17	\$901,360	28	\$1,540,095	20	\$1,210,472	12	\$772,449	89	\$ 5,007,971

#### EXHIBIT I – PART I POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SHOWING MALE PARTICIPANTS RECEIVING ORDINARY DISABILITY CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2014

	Length of Service as of December 31, 2014													
	Un	der 1 Year		1 to 4		5 to 9		10 to 14		15 to 19	2	0 & Over		Total
ATTAINED		Annual		Annual		Annual		Annual		Annual		Annual		Annual
AGE	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments
UNDER 30													0	\$
30 to 34					1	39,296							1	39,29
35 to 39					3	116,944							3	116,944
40 to 44					3	117,888	3	120,238	1	41,473			7	279,59
45 to 49							3	121,848	3	125,268			6	247,110
50 to 54							1	40,129	2	82,113	2	88,497	5	210,73
55 to 59											1	44,675	1	44,67
60 to 63											1	49,357	1	49,35'
Totals	0	\$0	0	\$0	7	\$274,128	7	\$282,215	6	\$248,854	4	\$182,529	24	\$ 987,72

#### EXHIBIT I– PART II POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SHOWING FEMALE PARTICIPANTS RECEIVING ORDINARY DISABILITY CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2014

Length of Service as of December 31, 2014														
	Un	der 1 Year		1 to 4		5 to 9	-	10 to 14		15 to 19	2	0 & Over	_	Total
ITAINED		Annual		Annual	Annual Annua		Annual Annu		Annual		Annual		Annual	
AGE	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments
NDER 30													0	\$ 0
30 to 34													0	0
35 to 39					2	78,592							2	78,592
40 to 44													0	0
45 to 49									1	41,972	4	182,789	5	224,761
50 to 54							1	40,616	3	125,417	6	256,768	10	422,801
55 to 59									3	125,916	3	130,224	6	256,140
60 to 63									1	41,972			1	41,972
Totals	0	\$0	0	\$0	2	\$78,592	1	\$40,616	8	\$335,277	13	\$569,781	24	\$ 1,024,266

## EXHIBIT J – PART I POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SHOWING MALE PARTICIPANTS RECEIVING OCCUPATIONAL DISEASE DISABILITY CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2014

	Length of Service as of December 31, 2014													
	Un	der 1 Year		1 to 4		5 to 9		10 to 14		15 to 19	2	0 & Over		Total
ATTAINED		Annual		Annual		Annual		Annual		Annual		Annual		Annual
AGE	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	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									2	104,768	5	291,620	7	396,388
55 to 59									4	201,043	8	471,393	12	672,436
60 to 63							2	84,918	3	157,204	4	209,621	9	451,743
Totals	0	\$0	0	\$0	0	\$0	2	\$84,918	9	\$463,015	17	\$972,634	28	\$ 1,520,567

#### EXHIBIT J– PART II POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SHOWING FEMALE PARTICIPANTS RECEIVING OCCUPATIONAL DISEASE DISABILITY CLASSIFIED BY AGE AND LENGTH OF SERVICE AS OF DECEMBER 31, 2014

	Length of Service as of December 31, 2014													
	Une	der 1 Year		1 to 4		5 to 9		10 to 14		15 to 19	20	0 & Over		Total
ATTAINED		Annual		Annual		Annual		Annual		Annual		Annual		Annual
AGE	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payments	No.	Payment
UNDER 30													0	\$
30 to 34													0	
35 to 39													0	
40 to 44									1	71,953			1	71,95
45 to 49							1	42,635			1	54,409	2	97,04
50 to 54							1	41,853	1	45,026	1	56,502	3	143,38
55 to 59									1	43,065			1	43,06
60 to 63									1	52,832			1	52,83
Totals	0	\$0	0	\$0	0	\$0	2	\$84,488	4	\$212,876	2	\$110,911	8	\$ 408,27

#### **EXHIBIT K** POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO **HISTORY OF AVERAGE ANNUAL SALARIES**

Year	Members		Current Year		Average		Actuarial	CPI
End	in Service	Increase	Salary	Increase	Salary	Increase	Assumptions	Chicago
1985 <sup>1</sup>	12,096	(0.1)%	\$ 395,295,432	6.6 %	\$ 32,680	6.8 %	6.00	3.8
1986	12,578	4.0	431,883,240	9.3	34,336	5.1	6.00	2.0
1987	12,602	0.2	443,122,728	2.6	35,163	2.4	6.00	4.1
1988 <sup>2</sup>	12,495	(0.8)	443,669,520	0.1	35,508	1.0	6.00	3.9
1989	12,060	(3.5)	437,121,504	(1.5)	36,246	2.1	6.00	5.1
1990	12,039	(0.2)	471,544,173	7.9	39,168	8.1	6.00	5.5
1991	12,513	3.9	520,015,930	10.3	41,558	6.1	6.00	3.0
1992	12,570	0.5	538,404,098	3.5	42,832	3.1	5.80	3.3
1993	12,591	0.2	561,156,282	4.2	44,568	4.1	5.80	2.3
1994	13,095	4.0	599,073,276	6.8	45,748	2.6	5.80	2.9
1995	13,437	2.6	622,413,737	3.9	46,321	1.3	5.80	2.2
1996	13,475	0.3	654,149,310	5.1	48,545	4.8	5.80	3.8
1997	13,435	(0.3)	675,515,532	3.7	50,280	3.6	5.80	1.7
1998 <sup>3</sup>	13,586	1.1	736,401,756	9.0	54,203	7.8	5.50	1.5
1999	13,829	1.8	755,303,667	2.6	54,617	0.8	5.50	2.6
2000	13,858	0.2	759,343,026	0.5	54,795	0.3	5.50	4.0
2001	13,889	0.2	763,352,475	0.5	54,961	0.3	5.50	0.8
2002	13,720	(1.2)	866,531,789	13.5	63,158	14.9	5.50	2.5
2003	13,746	0.2	887,555,791	2.4	64,568	2.2	5.50	1.7
2004	13,569	(1.3)	874,301,958	(1.5)	64,434	(0.2)	5.50	2.2
2005	13,462	(0.8)	948,973,732	8.5	70,493	9.4	5.50	3.6
2006	13,749	2.1	1,012,983,635	6.7	73,677	4.5	5.50	0.7
2007	13,748	0.0	1,038,957,026	2.6	75,572	2.6	5.50	4.7
2008	13,373	(2.7)	1,023,580,667	(1.5)	76,541	1.3	5.50	(0.6)
2009	13,154	(1.6)	1,011,205,359	(1.2)	76,874	0.4	5.50	2.5
2010	12,737	(3.2)	1,048,084,301	3.6	82,287	7.0	5.50	1.2
2011	12,236	(3.9)	1,034,403,526	(1.3)	84,538	2.7	5.50	2.1
2012	12,026	(1.7)	1,015,170,686	(1.9)	84,415	(0.1)	5.50	1.7
2013	12,161	1.1	1,015,426,126	0.0	83,499	(1.1)	5.50	0.5
2014	12,020	(1.2)	1,074,333,318	5.8	89,379	7.0	4.80 4	1.5
Average I	ncrease				,			
(Decrease last 5 year		(1.8)%		1.2 %		3.1 %		1.4 %

<sup>1</sup> Members in service does not include those age 63 and over who are still working.

<sup>2</sup> Figures do not include retroactive raise.

<sup>3</sup> Pay definition changed to include duty availability pay. Of the \$1,074,333,318 current year salary, \$37,730,861 is duty availability pay. <sup>4</sup> See Appendix 4 for a complete description of the current assumptions.

#### **EXHIBIT L**

## POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO NEW ANNUITIES GRANTED DURING 2014

	Annuitants	Widows/ Widowers of Deceased Employees <sup>1</sup>	Widows/ Widowers of Deceased Annuitants	Compensation Widows/ Widowers
Number retired/deceased	392	6	122	0
Average age attained	57.6	51.0	72.8	0.0
Average length of service	26.2	N/A	N/A	N/A
Average annual salary <sup>2</sup>	\$ 92,097	N/A	N/A	N/A
Average annual final salary	\$ 94,221	N/A	N/A	N/A
Total annual annuity	24,410,396	187,425	3,273,043	0
Average annual annuity	62,271	31,237	26,828	0
Total liability	\$ 356,930,079	3,084,412	29,793,901	0
[(Based on 3% Comb. and 4%				
Amer. Exp.)]				
Average liability	\$ 910,536	514,069	244,212	0
Total investment	\$ 345,404	N/A	N/A	N/A
[Employee-paid for tax purposes]				
Average investment <sup>3</sup>	\$ 881	N/A	N/A	N/A
Liability/cost	1,033.4	N/A	N/A	N/A
Liability/final pay	\$ 9.66	N/A	N/A	N/A

<sup>1</sup> Not including compensation or supplemental.

<sup>2</sup> Average annual salary is 4 out of 10 years for members hired before January 1, 2011, and 8 out of 10 years for members hired before January 1, 2011, and 8 out of 10 years

for members hired on or after January 1, 2011. <sup>3</sup>Based on previously-taxed contributions.

#### EXHIBIT M

## POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO **RETIREES AND BENEFICIARIES BY TYPE OF BENEFIT**

	AN	NUITANTS			DISA	BILITY		Widow	
Years	Employee	Spouse <sup>1</sup>	Child	Ordinary	Duty	Occup.	Child <sup>2</sup>	Comp.	Total
1985	3,861	3,234	406	95	126			70	7,792
1986	4,212	3,145	380	78	144			69	8,028
1987	4,467	3,100	354	66	156			75	8,218
1988	4,595	3,184	350	63	167			78	8,437
1989	4,772	3,202	335	58	179			71	8,617
1990	4,936	3,214	335	51	187			66	8,789
1991	5,033	3,137	329	75	192			68	8,834
1992	5,109	3,129	310	83	204			66	8,901
1993	5,195	3,151	294	59	211		160	66	9,136
1994	5,309	3,123	281	51	221		159	64	9,208
1995	5,510	3,133	254	51	231	1	144	60	9,384
1996	5,714	3,120	252	67	256	12	158	59	9,638
1997	5,945	3,104	240	59	270	36	130	59	9,843
1998	6,241	3,093	228	56	279	57	150	57	10,161
1999	6,520	3,118	249	57	291	76	150	58	10,519
2000	6,876	3,107	267	48	274	87	149	59	10,867
2001	7,192	3,114	255	52	265	95	143	59	11,175
2002	7,392	3,092	235	38	289	103	150	59	11,358
2003	7,498	3,083	247	29	285	97	139	63	11,441
2004	7,815	3,133	249	44	287	85	130	65	11,808
2005	8,026	3,107	247	35	298	82	139	65	11,999
2006	8,083	3,093	255	39	291	69	132	64	12,026
2007	8,155	3,137	242	52	284	65	136	64	12,135
2008	8,210	3,148	237	39	286	58	139	66	12,183
2009	8,227	3,111	232	44	284	52	138	66	12,154
2010	8,495	3,079	222	37	284	40	155	69	12,381
2011	8,763	3,091	214	43	270	36	176	70	12,663
2012	9,035	3,122	214	47	263	36	180	69	12,966
2013	9,194	3,130	206	46	269	35	213	66	13,159
2014	9,311	3,109	197	48	259	36	204	66	13,230

<sup>1</sup> Includes reversionary.
 <sup>2</sup> Children's Disability Benefit not tracked before 1993.

#### EXHIBIT N POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO AVERAGE EMPLOYEE RETIREMENT BENEFITS PAYABLE

Years Ended	Average Annual Benefit	Average Current Age of Retirees	Average Age at Retirement Current Year <sup>*</sup>	Average Years of Benefit Service at Retirement Current Year <sup>*</sup>
1985	\$ 13,070	68	58.7	30.2
1986	15,033	67	57.7	30.0
1987	16,257	67	58.1	30.1
1988	17,855	67	58.8	30.9
1989	19,315	67	58.6	30.7
1990	21,120	68	58.9	30.2
1991	21,782	68	58.4	30.8
1992	23,128	68	57.7	30.3
1993	24,724	68	56.9	29.6
1994	25,636	68	55.7	29.5
1995	26,996	67	55.3	29.2
1996	28,412	67	55.5	29.8
1997	29,867	67	55.0	29.3
1998	31,682	66	54.6	30.0
1999	33,220	66	54.8	29.9
2000	34,880	66	56.3	31.6
2001	36,428	66	56.4	29.8
2002	38,199	66	55.6	29.4
2003	38,998	66	57.1	30.2
2004	41,914	66	57.5	30.4
2005	43,930	67	57.3	30.6
2006	45,680	67	58.0	29.6
2007	47,392	67	58.1	29.3
2008	49,239	68	58.3	29.4
2009	50,799	68	59.2	28.6
2010	53,060	68	59.1	28.1
2011	55,104	68	59.5	27.4
2012	56,896	69	58.7	26.7
2013	58,556	69	58.2	26.1
2014	60,111	69	57.6	26.2

\* Averages for New Annuitants in 2014.

### EXHIBIT O – PART I POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO HISTORY OF ANNUITIES EMPLOYEE ANNUITANTS (MALE AND FEMALE)

Year End	Number of Annuitants	Total Annuities	Average Annuities
1985	3,861	\$ 50,464,782	\$ 13,070
1986	4,212	63,319,877	15,033
1987	4,467	72,621,701	16,257
1988	4,595	82,044,371	17,855
1989	4,772	92,170,354	19,315
1990	4,936	104,221,349	21,114
1991	5,033	109,629,175	21,782
1992	5,109	118,162,135	23,128
1993	5,195	128,443,550	24,724
1994	5,309	136,102,089	25,636
1995	5,510	148,748,836	26,996
1996	5,714	162,343,898	28,412
1997	5,945	177,557,655	29,867
1998	6,241	197,728,489	31,682
1999	6,520	216,593,933	33,220
2000	6,876	239,833,436	34,880
2001	7,192	261,991,891	36,428
2002	7,392	282,368,164	38,199
2003	7,498	292,407,321	38,998
2004	7,815	327,560,253	41,914
2005	8,026	352,579,199	43,930
2006	8,083	369,228,619	45,680
2007	8,155	386,485,701	47,392
2008	8,210	404,254,060	49,239
2009	8,227	417,924,766	50,799
2010	8,495	450,742,884	53,060
2011	8,763	482,875,300	55,104
2012	9,035	514,053,838	56,896
2013	9,194	538,368,228	58,556
2014	9,311	559,689,145	60,111

#### EXHIBIT O – PART II POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO HISTORY OF ANNUITIES SPOUSE ANNUITANTS (NOT INCLUDING COMPENSATION WIDOWS)

Year End	Number of Annuitants	Total Annuities	Average Annuities
1985	3,164	\$ 10,339,504	\$ 3,228
1986	3,145	12,770,159	4,060
1987	3,100	12,959,691	4,180
1988	3,184	13,701,678	4,303
1989	3,202	16,304,771	5,092
1990	3,214	16,779,894	5,221
1991	3,137	17,342,488	5,528
1992	3,129	20,773,699	6,639
1993	3,151	24,711,076	7,842
1994	3,123	28,041,269	8,979
1995	3,133	28,792,959	9,190
1996	3,120	30,778,518	9,865
1997	3,104	31,492,268	10,146
1998	3,093	32,285,743	10,438
1999	3,118	36,134,606	11,589
2000	3,107	37,022,962	11,916
2001	3,114	38,316,493	12,305
2002	3,092	40,086,748	12,965
2003	3,083	39,924,324	12,950
2004	3,133	44,609,535	14,239
2005	3,107	47,658,776	15,339
2006	3,093	49,187,928	15,903
2007	3,137	51,646,225	16,464
2008	3,148	53,489,665	16,992
2009	3,111	53,381,986	17,159
2010	3,079	53,621,501	17,415
2011	3,091	55,323,666	17,898
2012	3,122	57,650,477	18,466
2013	3,130	59,360,519	18,965
2014	3,109	60,248,462	19,379

#### EXHIBIT P POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO COUNTS OF RETIREES AND BENEFICIARIES WITH HEALTHCARE COVERAGE SUBSIDIES

Year End	Employee	Spouse <sup>1</sup>	Total
2006	7,552	2,104	9,656
2007	7,637	2,253	9,890
2008	7,731	2,286	10,017
2009	7,763	2,285	10,048
2010	7,878	2,240	10,118
2011	8,111	2,257	10,368
2012	8,458	2,280	10,738
2013	8,539	2,270	10,809
2014	8,450	2,226	10,676

<sup>1</sup> Includes children.

### EXHIBIT Q

#### POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SCHEDULE OF RETIRED MEMBERS BY TYPES OF BENEFIT AND MONTHLY BENEFIT LEVELS

	Retii	rement	Disa	bility	Wi	dow <sup>1</sup>	C	hild	То	tals
Years	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Under \$100	6	1							6	1
\$100 to under \$250	11	3					126	98	137	101
\$250 to under \$500	21	8					32	28	53	36
\$500 to under \$750	20	2					34	48	54	50
\$750 to under \$1,000	4	4					23	12	27	16
\$1,000 to under \$2,000	99	36			41	2,273			140	2,309
\$2,000 to under \$3,000	355	40	3		8	691			366	731
\$3,000 to under \$4,000	1,160	358	38	34		81			1,198	473
\$4,000 to under \$5,000	1,984	388	119	55		32			2,103	475
\$5,000 to under \$6,000	2,661	290	57	30	3	37			2,721	357
\$6,000 to under \$7,000	1,163	123	5	2		4			1,168	129
\$7,000 to under \$8,000	312	24				2			312	26
\$8,000 to under \$9,000	101	8				1			101	9
\$9,000 to under \$10,000	53	9				1			53	10
\$10,000 and over	61	6				1			61	7
Totals:	8,011	1,300	222	121	52	3,123	215	186	8,500	4,730

<sup>1</sup> Includes reversionary.

#### EXHIBIT R

#### POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SCHEDULE OF AVERAGE BENEFIT PAYMENTS FOR NEW ANNUITIES GRANTED DURING 2014

	Years of Service:	0-9	10-14	15-19	20-24	25-29	30-34	>= 35	Total
	Number of Retired Members	0	1	13	105	161	140	131	551
2010	Average annual salary used	\$0	\$81,122	\$70,339	\$80,639	\$88,735	\$91,739	\$92,194	\$88,330
	Average Monthly Benefit	\$0	\$2,535	\$2,667	\$3,837	\$5,385	\$5,734	\$5,762	\$5,199
	Number of Retired Members	1	8	16	95	175	103	102	500
2011	Average annual salary used	\$18,730	\$76,848	\$70,140	\$82,778	\$92,829	\$93,780	\$98,280	\$91,097
	Average Monthly Benefit	\$390	\$2,158	\$2,728	\$3,949	\$5,497	\$5,861	\$6,142	\$5,257
	Number of Retired Members	0	9	22	123	217	88	80	539
2012	Average annual salary used	\$0	\$72,245	\$65,305	\$85,175	\$92,825	\$94,854	\$98,415	\$90,773
	Average Monthly Benefit	\$0	\$2,066	\$2,511	\$4,002	\$5,408	\$5,928	\$6,151	\$5,108
	Number of Retired Members	0	6	20	118	161	62	34	401
2013	Average annual salary used	\$0	\$62,730	\$75,088	\$86,979	\$94,193	\$99,759	\$102,980	\$92,252
	Average Monthly Benefit	\$0	\$1,809	\$2,857	\$4,164	\$5,427	\$6,235	\$6,436	\$5,084
	Number of Retired Members	0	4	18	122	180	44	24	392
2014		\$0	\$64,795	\$72,985	\$87,586	\$95,372	\$94,991	\$104,035	\$92,097
	Average Monthly Benefit	\$0	\$1,907	\$2,815	\$4,230	\$5,746	\$6,052	\$6,634	\$5,189

#### EXHIBIT S POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO HISTORY OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM BENEFIT PAYROLL

	Added to Payroll		Removed from Payroll		Payroll End of Year		Average Annual	Increase to Avg.
Yr.	No.	Annual Benefits.	No.	Annual Benefits	No.	Annual Benefits	Benefits	Benefits
	<b>Employee Annuitants (Male and Female)</b>							
2010	551	\$ 44,873,260	283	\$ 12,055,142	8,495	\$ 450,742,884	\$ 53,060	4.5%
2011	500	42,603,517	232	10,471,101	8,763	482,875,300	55,104	3.9%
2012	539	43,830,960	267	12,652,422	9,035	514,053,838	56,896	3.3%
2013	401	36,004,890	242	11,690,500	9,194	538,368,228	58,556	2.9%
2014	392	34,915,092	275	13,594,175	9,311	559,689,145	60,111	2.7%
	Widow/Widower Annuitants (Not Including Compensation) <sup>1</sup>							
2010	145	\$ 2,838,113	177	\$ 2,598,598	3,079	\$ 53,621,501	\$ 17,415	1.5%
2011	144	3,709,829	132	2,007,664	3,091	55,323,666	17,898	2.8%
2012	174	4,436,964	143	2,110,153	3,122	57,650,477	18,466	3.2%
2013	157	3,969,877	149	2,259,835	3,130	59,360,519	18,965	2.7%
2014	128	3,403,918	149	2,515,975	3,109	60,248,462	19,379	2.2%

<sup>1</sup>Not including Compensation Annuitants.

## **APPENDIX 4**

ACTUARIAL METHODS AND ASSUMPTIONS AS OF DECEMBER 31, 2014

#### 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, each participant's projected benefit is allocated in proportion to service as of the valuation date. The Actuarial Accrued Liability is the present value of the portion of benefits allocated for periods of service as of the valuation date. The Normal Cost is the present value of the benefits allocated for service during the current plan year.

Under the Entry Age Normal Cost Method, each participant's projected benefit is allocated on a level percent of pay basis from entry age to assumed exit age. The Actuarial Accrued Liability is the portion of the present value associated with pay prior to the valuation date. The Normal Cost is the portion of the present value associated with pay during the current plan year.

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. The total contribution developed under this method is the sum of the Normal Cost and the payment toward the UAAL.

#### II. CURRENT ACTUARIAL ASSUMPTIONS

The current actuarial assumptions were adopted and became effective December 31, 2014, and were based on an experience study for the period January 1, 2009, to December 31, 2013.

#### A. Demographic Assumptions

Mortality:	<b>Pre-Retirement mortality rates:</b> Sex distinct Retirement Plans 2014 Total Employee mortality table weighted 85% for males and 115% for females.		
	<b>Post-Retirement Healthy mortality rates:</b> Sex distinct Retirement Plans 2014 Healthy Annuitant mortality table weighted 108% for males and 97% for females. When compared to observed experience, the recommended rates include a 23% margin for future mortality improvements.		
Disabled Mortality:	Sex distinct Retirement Plans 2014 Healthy Annuitant mortality table weighted 115% for males and 115% for females.		

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

ATTAINED AGE	RATE
22	.0003
27	.0007
32	.0007
37	.0020
42	.0030
47	.0040
52	.0050
57	.0060
62	.0060

The assumed distribution of disability types is assumed to be as follows:

Duty Disability	55%
Occupational Disease Disability	10%
Ordinary Disability	35%

Rate of Retirement:Rates at which members are assumed to retire under the<br/>provisions of the Fund. The rates assumed are as follows:<br/>For members hired before January 1, 2011:

RATE <sup>1</sup>
.05
.05
.05
.05
.05
.19
.19
.19
.25
.25
.25
.30
.30
1.00

<sup>1</sup> Only for members eligible for a formula annuity.

ATTAINED AGE	RATE <sup>1</sup>
50	.02
51	.02
52	.02
53	.02
54	.03
55	.21
56	.21
57	.21
58	.27
59	.27
60	.25
61	.30
62	.30
63	1.00

For members hired on or after January 1, 2011:

<sup>1</sup> Only for members eligible for a formula annuity.

Turnover Rates:

The following sample rates exemplify the table:

YEARS OF SERVICE	RATE
0	0.030
1	0.028
2	0.020
3	0.015
4-5	0.010
6-10	0.009
11	0.008
12	0.007
13-24	0.006

#### **B.** Economic Assumptions

Investment Return Rate:	7.50% per annum for pensions effective as of December 31,
	2014 and 4.50% for OPEB effective as of December 31, 2005.

General Inflation: The 7.50% Investment Return Rate assumption contains a 3.00% inflation assumption and a 4.50% real rate of return assumption for pension.

Future Salary Increases: Assumed rates of individual salary increase at 3.75% per year, plus an additional percentage based on the following service scale:

COMPLETED YEARS OF	
SERVICE <sup>*</sup>	SCALE
1	0.3625
2	0.0325
3	0.0325
4	0.0325
5	0.0225
6-9	0.0000
10	0.0225
11-14	0.0000
15	0.0225
16-19	0.0000
20	0.0225
21-24	0.0000
25	0.0225
26-29	0.0000
30	0.0225
Over 30	0.0000

\* Includes increases at 12 and 18 months of service.

Asset Value: For Book-value of Assets, bonds are at amortized value and stocks are at cost.

For statutory funding and GASB #25 and #27 reporting, the actuarial value of assets is smoothed by recognizing each year's difference between actual and expected investment return at the rate of 20% per year over a five-year period.

The actuarial value of assets was marked to the market value as of January 1, 2012, and is smoothed by using a five-year phase-in of each year's unexpected investment gains and losses.

#### C. Other Assumptions

Marital Status:It is assumed that 85% of members have an eligible spouse. The<br/>male spouse is assumed to be three years older than the female<br/>spouse. No assumption is made about other dependents.

Group Health Insurance: Due to P. A. 98-0043 effective June 28, 2013, it is assumed for valuation purposes that the health insurance supplement in effect prior to June 30, 2013, will end on December 31, 2016, for all employee annuitants (and their future surviving spouses). The amount of the Plan paid health insurance from July 1, 2008, until June 30, 2016, is \$95.00 per month for each annuitant (employees and surviving spouses) not qualified to receive Medicare benefits, and \$65.00 if qualified. It is assumed that all annuitants age 65 and older will be eligible for Medicare. Future widows of retirees are assumed to be eligible for Medicare, as well as widow annuitants that are currently receiving a health insurance supplement.

The projections under the provisions of P.A. 96-1495 were based on the following assumptions and methods:

# **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, 2014 is 12,020.

#### New Entrant Profile:

(1) 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, 2014. These members were hired from January 1, 2010, through December 31, 2013.

Entry Age	Number
20 to 25	21
25 to 30	669
30 to 35	338
35 to 40	156
40 to 45	3

- (2) Approximately 80% of the new entrants are assumed to be male.
- (3) Based on the most recent employment contract, new entrants were assumed to earn \$46,206 for the plan year ending December 31, 2014. This amount includes pay provided for duty availability pay. The new entrant pay for members hired after 2014 is assumed to increase by the wage inflation assumption of 3.75%.

- (4) Pay for a specific new entrant is assumed to increase in the future by the wage inflation and the service based increases disclosed in this actuarial valuation.
- (5) The projections assume a pay cap of \$110,631 for plan year 2014, increasing by 1.5% per year after plan year 2014. The annual increase of 1.5% per year is based on 50% of the CPI-U increase which is assumed to be 3.0% per year.
- Administrative Expenses: Statutory funding projections include an explicit administrative expense assumption of \$4,241,000 for plan year end December 31, 2014, increased by 3.0% per year.

# **APPENDIX 5**

SUMMARY OF PROVISIONS OF THE FUND AS OF DECEMBER 31, 2014

#### POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY OF PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS AS OF DECEMBER 31, 2014

PARTICIPANTS	An employee in the police department of the City of Chicago appointed and sworn or designated by law as a peace officer with the title of policeman, policewoman, chief surgeon, police surgeon, police dog catcher, police kennelman, police matron and members of the police force of the police department.	
SERVICE	In computing service rendered by a police officer, the following periods shall be counted, in addition to all periods during which he performed the duties of his position, as periods of service for annuity purposes only: All periods of (a) vacation; (b) leave of absence with pay; (c) military service; (d) disability for which the police officer receives disability benefit. The calculation of service is based on a day-to-day basis for most purposes. For the purpose of calculating benefits under the Dominant Formula, one-year of Service is credited for a year in any portion of which a police officer is compensated.	
RETIREMENT		
Eligibility	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	Effective in plan year 2003, retirement is mandatory for a participant who has attained age 63.	
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, the employee is entitled to an annuity based on all sums accumulated.	
Formula Minimum Annuity	While there are several alternative formulas available with 20 or more years of service, the Dominant Formula is 50% of highest average salary (including duty availability pay) in 48 consecutive months within the last 10 years of service plus 2.5% for each year or fraction of service over 20 years, limited to 75% of average salary.	

#### POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUMMARY OF PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS AS OF DECEMBER 31, 2014 (CONT'D)

Mandatory Retirement Minimum Annuity	A police officer who is required to withdraw from service due to attainment of mandatory retirement age who has less than 20 years of service credit may elect to receive an annuity equal to 30% of average salary for the first 10 years of service, plus 2% of average salary for each completed year of service in excess of 10, to a maximum of 48% of average salary. This benefit qualifies for post retirement increases.
Post-Retirement Increase	A retiree born before January 1, 1955, with at least 20 years of service or receiving a mandatory retirement minimum annuity, receives an increase of 3% of the original annuity, starting on the first of the month following the first anniversary of his retirement or the first of the month following attainment of age 55, whichever is later, and shall not be subject to a 30% maximum increase. For retirees born after January 1, 1955, automatic increases are 1.5% of the original annuity, commencing at age 60, or the first anniversary of retirement, if later, to a maximum of 30%.
	For participants that first became members on or after January 1, 2011, increases are equal to the lesser of 3.00% and 50% of CPI-U of the original benefit, commencing at age 60.
Minimum Annuity	The benefit of any retiree who retired from the service before January 1, 1986, at age 50 or over with at least 20 years of service, or due to termination of disability is not less than \$1,050 per month.
	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% of the final average salary for each fraction of service. Maximum is 75% 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% 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% 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%.

<b>Reversionary</b> Annuity	A member, prior to retirement, may elect to reduce his own annuity, and
	provide a reversionary annuity, to begin upon the officer's death, for the officer's spouse.

#### SURVIVOR INCOME BENEFITS PAYABLE ON DEATH

Death in Service (Non- Duty):	Generally, a money-purchase benefit is provided, based on total salary deductions and City contributions. However, if a policeman dies in service after December 31, 1985, with at least 1.5 years of service, the widow's annuity is the greater of (a) 30% of the annual maximum salary attached to the classified civil service position of a first class patrolman at the time of his death (without dollar limit) or (b) 50% of the benefit accrued by the policeman at date of death.
	The lifetime benefit is payable until death.
Death in Service (Duty Related)	
Compensation Annuity	75% of the member's salary attached to the civil service position that would ordinarily have been paid to such member as though in active discharge of his duties at the time of death payable until the date the policeman would have attained age 63.
Supplemental Annuity	Payable for life and is equal to the difference between the money purchase annuity for the spouse and an amount equal to 75% of the annual salary (including all salary increases and longevity raises) the police officer would have been receiving when he attained age 63 if the police officer had continued in service at the same rank last held in the department.
Death after Retirement	If a police officer retires on or after January 1, 1986, and subsequently dies, the widow's annuity is 40% before 1988 and 50% on and after January 1, 1988 of the retired policeman's annuity at the time of death (without dollar limit).
Maximum Annuity	\$500 a month (after discount for age difference) under both the accumulation method and the old formula method. There is no dollar limit on the 30%, 40% or 50% benefit.

Minimum Annuity	Any spouse is entitled to a minimum annuity of \$1,000 a month.	
	For participants that first became members on or after January 1, 2011, widow benefits are equal to 66-2/3% of the officer's earned annuity at the date of death. Automatic increases to the annuity are equal to the lesser of 3.00% and 50% of CPI-U, commencing when the survivor reaches age 60, and applied to the original granted retirement annuity.	
CHILDREN'S ANNUITIES		
Eligibility	Payable at death of the policeman to all unmarried children less than 18 years of age.	
Benefit	10% of the annual maximum salary of a first class patrolman during widow (widower) life, 15% otherwise.	
Payable Until	Age 18. If the child is disabled, benefit is payable for life or as long as such disablement exists.	
Family Maximum	60% (non-duty death) or 100% (duty death) of the salary that would ordinarily been paid to the policeman, if he had been in the active discharge of his duties.	
Parent's Annuities		
Eligibility	Payable to a dependent parent at the death of a policeman who is in either active service, or receiving a disability benefit, or on leave of absence, or in receipt of an annuity granted after 20 years of service, or waiting to start receiving an annuity granted for 20 years of service. The benefit is only payable if there are no surviving spouses or children eligible for benefits.	
Benefit	18% of the current salary attached to the rank at separation from service.	
Payable until	Death of the dependent parent.	

### DUTY DISABILITY BENEFIT

Eligibil	lity
----------	------

Disabling condition incurred in the performance of duty.

Benefit 75% of salary at the time the disability is allowed plus \$100.00 per month for each unmarried child less than age 18, (total amount of child's benefits shall not exceed 25% of salary). Beginning January 1, 2000, after 7 years of payment, the benefit shall not be less than 60% of the current salary attached to the rank held by the policemen at the time of disability. Payable to employee's age 63 or by operation of law, whichever is later. Salary deductions are contributed by the City.

#### OCCUPATIONAL DISEASE DISABILITY BENEFIT

*Eligibility* Heart attack or any disability heart disease after 10 years of service. *Benefit* 65% of salary attached to the rank held by the police officer at the time of his or her removal from the police department payroll with a minimum after 10 years of 50% of the current salary attached to the rank. Each

natural or legally adopted unmarried child of the officer under the age of 18 is entitled to a benefit of \$100 per month. This benefit is not terminated at age 18 if the child is then dependent by reason of physical or mental disability. Salary deductions are contributed by the City.

#### ORDINARY DISABILITY BENEFIT

Eligibility Disabling condition other than duty or occupational related.
 Benefit 50% of salary at the time of injury, payable for a period not more than 25% of service (excluding any previous disability time) rendered prior to injury, nor more than 5 years. Disability shall cease at age 63. Salary deductions are contributed by the City.

#### DEATH BENEFIT

Eligibility

Payable upon the death of a police officer whose death occurs while in active service; on authorized leave of absence; within 60 days of receipt of salary; while 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 20 years of service. This benefit is payable to beneficiaries or, if none, to estate.

#### Benefit

Death in Service:	AGE AT DEATH	BENEFIT	
	49 and under 50-62	\$12,000 \$12,000 less \$400 for each year by which age at death exceeds 49	
Death after Retirement:	AGE AT DEATH	BENEFIT	
	50 and over	\$6,000	
		injury incurred in performance of duty before the benefit payable is \$12,000 regardless of the	
GROUP HEALTH HOSPITAL AND SURGICAL INSURANCE PROGRAM	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 through December 31, 2016.		
REFUNDS			
Policemen	Without regard to service and under age 50, or with less than 10 years of service and under age 57 at withdrawal: a refund of all salary deductions together with 1.5% simple interest until the date of withdrawal.		
For Spouse's Annuity	Upon retirement an unmarried policeman will receive a refund of contributions for spouse's annuity, accumulated at 3% compounded annually.		
Of Remaining Amounts	If at death of a retired policeman the total member contributions paid while active exceed the total retirement benefits paid to date of death, the difference is payable.		
CONTRIBUTIONS			
Salary Deductions	Employee	7 %	
	Spouse	11/2%	
	Annuity Increas	$\frac{1/2\%}{9\%}$	
		7 70	

City Contributions <sup>1</sup>	Employee Spouse Annuity Increase	9-5/7% 2% ½% 12-3/14%	Unallocated	
	<sup>1</sup> Credited to Participant's Accumulation	n Annuity and Wido	w's Annuity Account	
	In addition to the above contributions, a contribution is made to support the Death Benefit. Policemen contribute \$2.50 per month. City contributes a total of \$224,000 for all policemen.			
	Prior to 2015, the total City contribution is generated by a tax equal to double the contributions by the policemen to the Fund two years prior to the year of the tax levy.			
	Starting in tax levy year 2015, employer contributions combined with member contributions and other fund revenue must be equal to the amount, as a level percentage of payroll, that is sufficient to produce 90% funding by the end of fiscal year 2040.			
''PICK UP'' OF EMPLOYEE SALARY DEDUCTIONS	Beginning January 1, 1982, the er by the employer. The W-2 salary contribution. For pension pur Income tax will be paid when a purpose of benefits, refunds or co treated as employee contributions.	y is therefore rec poses the salar refund or annui pontributions, the	luced by the amount of y remains unchanged. ty is received. For the	

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

Year Ending	CPI-U	<sup>1</sup> /2 <b>CPI-U</b>	COLA	Maximum Annual Pensionable Earnings
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
2015	1.70%	0.85%	0.85%	\$111,571.63

# **APPENDIX 6** LEGISLATIVE CHANGES 1979 THROUGH 2014

#### HB 2128

Refund repayment provided at least 3 years of service after reentry, surviving spouse may pay in the case of death of the employee.

#### HB 2012

Under IRS Code Section 414(h), employer may pick up the employee contributions for all compensation earned after December 31, 1981 by a reduction in the cash salary or an offset to a future salary increase or by a combination of both.

#### HB 2160

Duty disability benefit based on the salary when the benefit is payable in the case of a disabled policeman who returns to active service for a period of at least 2 years.

#### 1980 Session

#### 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.

#### SB 1126

Duty disability benefits based on salary at time disability is allowed; salary for policeman on leave of absence; definition of heart attack.

#### HB 291

Minimum survivor's annuity from \$200 to \$250.

#### Spring 1982 Session

#### SB 740

Minimum employee annuity from \$350 to \$400 effective July 1, 1982, for policemen who retired before September 1, 1976.

### POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2014 (CONT'D)

#### SB 1127

3% post-retirement increase for employees born before January 1, 1930, without 30% maximum, effective January 1, 1983.

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 1147

Actuarial reporting to Insurance Department and Pension Laws Commission. Actuarial statements prepared by a qualified actuary for plan years ending after December 31, 1984, including actuarial present value of credited projected benefits.

#### SB 1579

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

#### Spring 1983 Session

#### SB 22

Delegation of investment authority restrictions.

#### HB 514

10% prudent person investment category.

#### HB 1412

Heart attack; need not result from an injury.

#### HB 1413

Wrongful death of a police officer bars benefit.

#### HB 1414

50/20 50%, plus 2% minimum formula; if retire in 1984 qualify with 52 and 22; in 1985, 51 and 21; in 1986 and after, 50 and 20.

#### HB 2003

Reversionary annuity. Securities lending.

#### **City Ordinance**

Changes compulsory retirement from 63 to 70.

#### **1984** Court Decision

Kaner case awarding widow compensation annuity 75% of the salary attached to the civil service position that would have ordinarily have been paid to him as though he were in active discharge of his duties for widows of policemen who died a duty death after January 1, 1970.

Illinois Public Employees' Pension Laws Commission abolished.

#### 1985 Session

#### HB 1529

30% (of maximum first class patrolman salary) widow's benefit for death in service, with 1.5 years of service, eliminated the excess spouse refund.

40% (of policeman annuity at the time of death) widow's benefit for death after retirement (for retirements after January 1, 1986 only).

Death benefit increase: retirees \$2,250 to \$6,000, actives \$12,000 before 50 graded down to \$6,000.

Minimum widow pension from \$250 to \$325 under certain conditions.

3% increase for the closed group receiving 2%.

Widow compensation annuity for duty deaths after September 17, 1969.

#### 1986 Session

#### HB 2630

Expands the widow compensation annuity category to include duty deaths after January 1, 1940.

#### 1987 Session

#### HB 2715

Beginning January 1, 1988, 50% of employees' annuity at death for widows (present and future) whose spouse retired on or after January 1, 1986.

3% annual increase for life to all employee annuitants (present and future) born before 1940 instead of 1930.

#### 1988 Session

No legislative changes.

#### 1989 Session

#### SB 95

Signed August 23, 1989. 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, 1995, until December 31, 1997, the amounts are \$75 and \$45, respectively. Widows will now be supplemented also. The City will be required to pay 50% of the aggregated cost of health care claims for the retired group under all health

### POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2014 (CONT'D)

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 1997 for the retired group.

\$150 to \$200 minimum widow's benefit. Beginning January 1, 1990, minimum widow's annuity shall be \$400.

Transfer of credits to IMRF for a County Sheriff upon application and payment by the Fund.

#### HB 332

Signed August 23, 1989, age discrimination changes. Removed the age 63 limitations in determining benefits for money purchase employee and widow annuities, disability benefits and refunds. The change requires contributions (deductions from salary) and concurrent City contributions from January 1, 1988, until withdrawal but not for the period between the attainment of age 63 and January 1, 1988.

Allow transfer credits and creditable service under any other pension fund if police officer has 10 years of service and payment before January 1, 1990.

Provides for a transfer of credits to the Municipal Fund or State Fund of any police officer with at least 10 years of service.

#### 1990 Session

#### SB 1951

Allows policemen to withdraw at age under 50 with at least 20 years of service to receive benefit based on minimum formula commencing at age 50.

Widows of active policemen receive benefit not less than 50% of annuity payable to the policeman had he retired on the date of death.

Compensation and supplemental widows' annuities do not cease upon remarriage.

#### 1991 Session

#### HB 969

Increases the minimum monthly benefit to retirees who had at least 20 years of service prior to January 1, 1992 to \$650.

Increases the minimum monthly widow's annuity payable upon death after January 1, 1992 of:

- An active policeman with at least 10 years of service, or
- A policeman who had at least 20 years of service at withdrawal from the Fund to \$500.

No legislative changes.

#### 1993 Session

#### SB 1650

Increases the minimum monthly benefit to retirees who had at least 20 years of service prior to January 1, 1995 to \$750, and after January 1, 1995 to \$850.

Increases the minimum monthly widow's annuity payable upon death after January 1, 1995 of:

- An active policeman with at least 10 years of service; or
- A policeman who had at least 20 years of service at withdrawal from the Fund to \$600, and after January 1, 1995 to \$700.

#### 1994 Session

No legislative changes.

#### 1995 Session

#### SB 99

Beginning January 1, 1996, supplemental annuity changed to the difference between the annuity for the widow and an amount equal to 50% of the annual salary (including all salary increases and longevity raises) the policeman would have been receiving when he attained age 63 if the policeman had continued in service at the same rank (whether career service or exempt) that he last held in the police department.

Beginning January 1, 1996, duty disability minimum benefit is stated such that after 10 years of payment the benefit shall not be less than 50% of the current salary attached to the rank held by the policeman at the time of removal from police department payroll.

An occupational disease disability benefit has been added for any policeman with at least 10 years of service who suffers a heart attack or any other disability heart disease. The benefit shall be 65% of salary attached to the rank held by the officer at the time of his or her removal from the police department payroll, with a minimum after 10 years of 50% of the current salary attached to the rank. Each natural or legally adopted unmarried child of the officer under age 18 is entitled to a benefit of \$50 per month. This benefit is not terminated at age 18 if child is then dependent by reason of a physical or mental disability.

Beginning January 1, 1996, the age of the commencement of automatic increases in annuities has been lowered to age 55 for policemen born on or after January 1, 1940, but before January 1, 1945. Any policemen born before January 1, 1945, who qualifies for a minimum annuity and retires after September 1, 1967, not receiving the initial increases before January 1, 1996, will receive the initial increase on (1) January 1, 1996, (2) the first anniversary of the date of retirement, or (3) attainment of age 55, whichever occurs last.

### POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2014 (CONT'D)

Beginning January 1, 1996, the minimum monthly widow's annuity payable upon death increases to \$700.00 for all widow's not previously eligible for the minimum.

#### 1996 Session

#### SB 1456

Effective August 9, 1996, a parent's annuity equal to 18% of the current salary attached to the rank at separation from service will be provided to each of the natural parents of a police officer who dies under certain conditions. Those conditions include: death in active service, while receiving a disability benefit, during leave of absences or after 20 years of service and eligible or receiving an annuity. The benefit is payable only if there are no surviving spouse or children eligible for benefits.

#### 1997 Session

#### PA 90-551

Effective December 12, 1997, the law was amended to include on prospective basis duty availability in the definition of salary. The law also allows policemen who retired or were at least age 50 and had at least 20 years of service between July 1, 1994, and December 31, 1997, to count duty availability pay in the calculation of final average salary. In order for this to happen, the policemen must elect to do so and must contribute the employee contributions (9%) without interest from the duty availability pay that is to be considered in the final average salary calculation.

Effective June 27, 1997, PA 90-0031 was enacted. This law extends the hospitalization plan through June 30, 2002, for annuitants and their eligible dependents.

Effective July 1, 1997, PA 89-643 was amended. This provision extended the parent's annuity eligibility to apply to dependent parents of police officers who died prior to August 9, 1996.

#### 1998 Session

#### PA 90-0766

Effective August 16, 1998, this law increased the minimum monthly widow's annuity payable from \$700.00 to \$800.00 effective January 1, 2014. This law also increased the earnings limit maximum for those receiving disability benefits such that the sum of the disability benefit and outside compensation may be up to 150% of the rate of salary which the participant would be receiving if working in his regularly appointed civil service position as a policeman.

#### 2000 Session

In 2000 the City of Chicago has enacted mandatory retirement for Policemen upon attainment of age 63.

#### PA92-0052

Effective July 12, 2001.

Beginning on January 1, 2000, the minimum duty disability after 7 years of payment shall be 60% of the current salary attached to the rank held by the policeman at the time of removal from police department payroll. If the Board finds that the disability permanently renders the policeman totally disabled for any service of a remunerative character, the minimum disability benefit shall be 75% of the current salary attached to the rank held by the policeman at the time of removal from payroll.

The child's benefit for both duty disability and occupational disease disability was increased to \$100 per month.

The law removed the earnings limit of 150% of regular salary to be eligible to receive disability benefits.

With effect from January 1, 2000, the age of the commencement of the automatic 3% increases in annuities has been lowered to age 55 for policemen born on or after January 1, 1945, but before January 1, 1950. Any policeman born before January 1, 1950, who qualifies for a minimum annuity and retires after September 1, 1967, not receiving the initial increase before January 1, 2000, will receive the initial increase at the latest of (1) January 1, 2000, (2) the first anniversary of the date of retirement, or (3) attainment of age 55.

#### 2002 Session

#### HB 5168

- Effective June 28, 2002.
- A police officer who is required to withdraw from service due to attainment of mandatory retirement age and who has less than 20 years of service credit, may elect to receive an annuity equal to 30% of average salary for the first 10 years of service, plus 2% of average salary for each completed year of service in excess of 10, to a maximum of 48% of average salary. This benefit qualifies for post-retirement increases.
- The supplemental annuity payable to the widow of an officer on account of a duty-related death is increased to the difference between the money purchase annuity for the spouse and 75% (previously 50%) of the annual salary the police officer would have been receiving when he attained age 63 if the police officer had continued in service at the same rank last held in the department.
- The pension fund subsidy for retiree health insurance was extended through June 30, 2003. For annuitants (other than child annuitants) taking the employer-provided plan, 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.

#### 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.
- The minimum annuity formula accrual rate for service after 20 years was increased from 2.0% to 2.5% with total benefits limited to 75% of final average pay.
- The minimum benefit for age-service retirements 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.

#### 2005 Session

#### PA 94-0624

- Effective August 18, 2005.
- Beginning January 1, 2000, removes the limitation for maintaining benefits for non-civil service positions when assigned within three years of retirement for non-civil service positions with the title of Captain.

#### HB 1009

• Effective January 1, 2005, any policeman born after January 1, 1950, but before January 1, 1955 shall receive a benefit increase of 3% compounded annually. Any policeman born before January 1, 1955, who qualifies for a minimum annuity and retires after September 1, 1967, not receiving the initial increase before January 1, 2005, will receive the initial increase at the latest of (1) January 1, 2005, (2) the first anniversary of the date of retirement, or (3) attainment of age 55.

### 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 under Section 1-110.5 of the pension code that they have not loaned to, invested in or otherwise transferred any of the pension fund assets to a forbidden entity.

### SB 1446

- Approved August 22, 2005.
- Provides for various changes in provisions and procedures concerning Qualified Illinois Domestic Relations Orders. Allows for alternate payee's benefit to be based on a percentage of employee's benefit. Effective July 1, 2006.

#### 2006 Session

No legislative changes.

### 2007 Session

#### PA 95-0279

- Effective 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 6 months prior to the policeman's death.

### PA 95-0504

- Effective August 28, 2007.
- Beginning on the effective date, a widow's annuity shall no longer be subject to termination or suspension due to remarriage. Any widow's annuities previously terminated or suspended due to remarriage shall be resumed upon application, but the resumption shall not be retroactive.
- At the discretion of the Board, a widow's annuity may be granted to a widow who was denied a benefit for having been married less than one year at the time of the member's death.
- Removes age limitation on child's annuity for children who are so physically or mentally handicapped as to be unable to support themselves.

#### 2008 Session

No legislative changes.

#### P.A. 95 -1036

- Effective February 17, 2009.
- For purposes of tax levy, contributions by the policeman to the Fund shall not include payments made by a policeman to establish credit under Section 5-214.2.
- An officer with prior service credit under article 3,7,9,10,13,14,15 Funds may transfer up to 10 years of service in 6 month increments provided the transfer of service results in no increase to the unfunded actuarial accrued liability of the Fund.

#### PA 96-0006

- Effective April 3, 2009.
- The Illinois Governmental Ethics Act.

### P.A. 96-285

- Effective August 11, 2009.
- Extends PA 95-1036 service purchase eligibility to include members of article 8 Funds and law enforcement officers with any agency of the United States Government.

#### P.A. 96-727

- Effective August 25, 2009.
- Allows an officer with at least 10 years of PABF service to transfer up to 48 months of eligible service as a County Correctional Officer. The officer is required to pay to the Fund the difference between contributions transferred by the County on behalf of the officer and the amount of employee and employer contributions that would have been contributed had the officer been a member of this Fund plus interest at the actuarially assumed rate.

### P.A. 96 -745

- Effective August 25, 2009.
- Transfer of service to Article 14 (State Employees' Retirement System) now includes investigators for the Office of the Attorney General and investigators for
- The Department of Revenue. Interest on the repayment of refund is changed from 6% to the actuarially assumed rate.

### 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.

### 2010 Session

### P.A. 96-1260

- Effective July 23, 2010.
- A policeman may purchase benefit service for all periods of service in the military before beginning service as an active policeman. The total amount of such service shall not exceed 2 years.

### 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 ending after March 30, 2011, the actuarial value of assets is based on a five-year smoothing of investment gains and losses incurred in fiscal years ending after March 30, 2011. 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 PABF. The withheld funds are limited to 33% of total State grants to the City in FY 2016, 67% in FY 2017, and 100% 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%, subject to a maximum of 75%. Employees may retire at age 50 with 10 years of service with the annuity based on accrual rate of 2.5%, reduced by one half of one percent per month for retirement prior to age 55, subject to a maximum of 75%. 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% and 50% of CPI-U. COLA is equal to the lesser of 3.0% and 50% of CPI-U, commencing at age 60, with no 30% cap, applied to the original granted retirement annuity. Widow benefits are 66-2/3% of the policemen's earned annuity at the date of death. Widow COLA is equal to the lesser of 3.0% and 50% of CPI-U, commencing when the survivor reached age 60, and applied to the original granted retirement annuity.

#### P.A. 97-326 (HB 1872)

- Effective August 12, 2011.
- A policeman may transfer up to 10 years of credible service to a fund covered under Article 3. PABF will pay the Article 3 fund an amount consisting of (1) the amounts credited to the applicant through employee contributions, plus accumulated interest plus (2) an amount representing municipality contributions equal to the amount determined in (1) plus (3) any interest paid to PABF in order to reinstate credits and credible service.
- A policeman may reinstate credits and credible service that was terminated upon receipt of a refund, by paying the Fund the amount of the refund plus interest thereon at the actuarially assumed rate, compounded annually, from the date of the refund to the date of the payment.

#### P.A. 97-344 (HB 3376)

- Effective August 12, 2011.
- Makes changes concerning annual increases to the monthly annuities of persons who first become a policeman on or after January 1, 2011 and deletes repetitive language concerning annual increases in survivor's annuities for Tier 2.

#### 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.
  - 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.

#### P.A. 97-813

- Effective July 13, 2012.
- Clarifies provisions of widow's annuity.

#### **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."

#### **P.A. 98-0433 (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 fund sponsor through close-end funds."

#### 2014 Session

No legislative changes.

# APPENDIX 7 Additional exhibits – Gasb disclosures

# EXHIBIT A-1 POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO GASB #27, #43 AND #45 DISCLOSURES

The Governmental Accounting Standards Board (GASB) adopted Statement #25, changing the way in which governmental retirement systems must report financial information. GASB #25 and GASB #27 are effective for Fund and City reporting in 1997.

The GASB also issued Statements #43 and #45, changing the way in which governmental retirement systems and governmental employers report financial information for other postemployment benefits (OPEB). GASB #43 is effective for the fund in fiscal year 2006 and GASB #45 is effective for the City in fiscal year 2007.

This report includes the following exhibits with information required to be reported under GASB #27, #43 and #45. Effective with fiscal year ending December 31, 2014, GASB #67—Financial Reporting for Pension Plans is replacing GASB #25 for pension plan financial reporting requirements. GASB #68—Accounting and Financial Reporting for Pensions is replacing GASB #27 for employer financial reporting effective with fiscal year ending December 31, 2015. Therefore, the information presented in this report is based on the current GASB #27 requirements. Pension plan financial reporting under GASB #67 will be provided in a separate report. This information is subject to review by the Fund's auditor. Please let us know if the Fund's auditor recommends any changes.

Exhibit A-2: Schedule of Funding Progress for GASB #27

This exhibit shows a 15-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 #27

This exhibit shows the Annual Required Contribution (ARC) as computed under GASB #25 and the percent of this amount actually received. This exhibit shows a 16-year history.

Exhibit A-4: Supplementary Information for GASB #27

This exhibit has certain information required in the notes to the Fund's 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 has a 15-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 (CONT'D) POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO GASB #27, #43 AND #45 DISCLOSURES

#### Exhibit A-7: Development of Net Pension Obligation (NPO) for GASB #27

This exhibit documents the 28-year summary of the calculation of the net pension obligations under GASB #27.

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

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 compares the Annual Required Contribution (ARC) as computed under GASB #43 with the amount actually received.

Exhibit A-10: Supplementary Information for GASB #43

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

Exhibit A-11: Annual OPEB Cost and Contributions Made for GASB #45 for 2014

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. The exhibit also includes the dollar amount of contributions made.

Exhibit A-12: Pension Cost Summary for GASB #45

This exhibit has a six-year summary of annual OPEB cost; percentage of annual OPEB cost contributed that year and NOO at the end of the year.

# EXHIBIT A-2 POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SCHEDULE OF FUNDING PROGRESS FOR GASB #27

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b) <sup>1</sup>	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
12/31/2000	\$ 4,019,467,561	\$ 5,652,030,658	\$ 1,632,563,097	71.12%	\$ 759,343,026	215.00%
12/31/2001	4,183,796,025	5,932,510,629	1,748,714,604	70.52%	763,352,475	229.08%
12/31/2002	4,124,579,960	6,384,845,959	2,260,265,999	64.60%	866,531,789	260.84%
12/31/2003	4,039,695,590	6,581,433,250	2,541,737,660	61.38%	887,555,791	286.37%
12/31/2004	3,933,031,342	7,034,271,474	3,101,240,132	55.91%	874,301,958	354.71%
12/31/2005	3,914,431,654	7,722,737,147	3,808,305,493	50.69%	948,973,732	401.31%
12/31/2006	3,997,990,919	7,939,561,277	3,941,570,358	50.36%	1,012,983,634	389.11%
12/31/2007	4,231,681,817	8,220,352,638	3,988,670,821	51.48%	1,038,957,026	383.91%
12/31/2008	4,093,719,894	8,482,574,033	4,388,854,139	48.26%	1,023,580,667	428.77%
12/31/2009	3,884,978,241	8,736,101,666	4,851,123,425	44.47%	1,011,205,359	479.74%
12/31/2010	3,718,954,539	9,210,056,428	5,491,101,889	40.38%	1,048,084,301	523.92%
12/31/2011	3,444,690,362	9,522,395,036	6,077,704,674	36.17%	1,034,403,526	587.56%
12/31/2012	3,148,929,770	10,051,827,391	6,902,897,621	31.33%	1,015,170,686	679.97%
12/31/2013	3,053,881,777	10,282,338,599	7,228,456,822	29.70%	1,015,426,128	711.86%
12/31/2014	2,954,318,954	11,334,799,011	8,380,480,057	26.06%	1,074,333,318	780.06%

<sup>1</sup> Actuarial liability excludes OPEB benefits as of December 31, 2006.

### EXHIBIT A-3

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SCHEDULE OF EMPLOYER CONTRIBUTIONS FOR GASB #27

For Year Ending December 31	Annual Required Contribution	Actual Employer Contribution	Percentage Contributed
2000	\$125,129,864	\$139,481,871	111.47%
2001	123,201,657	139,675,766	113.37%
2002	130,237,405	141,989,027	109.02%
2003	181,545,562	140,807,354	77.56%
2004	203,757,534	135,744,173	66.62%
2005	238,423,459	178,278,371	74.77%
2006 <sup>1</sup>	262,657,025	150,717,705	57.38%
2007	312,726,608	170,598,268	54.55%
2008	318,234,870	172,835,805	54.31%
2009	339,488,187	172,043,784	50.68%
2010	363,624,570	174,500,507	47.99%
2011	402,751,961	174,034,600	43.21%
2012	431,010,173	197,885,552	45.91%
2013	474,177,604	179,521,259	37.86%
2014	491,651,208	178,158,132	36.24%
2015 <sup>2</sup>	563,347,240	TBD	TBD

<sup>1</sup> Starting with fiscal year 2006, GASB #25 disclosure includes pension benefits only. The retiree healthcare supplement will be recognized under GASB #43 disclosure.

<sup>2</sup> ARC for year ending December 31, 2015, will be used for GASB #27 reporting purposes.

# EXHIBIT A-4 Policemen's Annuity and Benefit Fund of Chicago Supplementary Information for GASB #/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, 2014
Actuarial Cost Method	Entry Age Normal
Actuarial Value of Assets	5-year smoothed market
Amortization Method	Level percent open
<b>Remaining Amortization Period</b>	30 years open
Actuarial Assumptions:	
Pension Investment Rate of Return	7.50%, December 31, 2014
General Inflation	3.00%
Projected Salary Increases	3.75% per year, plus additional percentage related to service.
Cost-of-Living Allowance	<ul> <li>For members hired before January 1, 2011: 3.00% (1.50% for retirees born after January 1, 1955)</li> <li>For members hired on or after January 1, 2011: <sup>1</sup>/<sub>2</sub> CPI, max 3.00%; assumed rate of 1.5%</li> </ul>

	<b>2013</b> <sup>1</sup>	<b>2014</b> <sup>1</sup>
Payable to Retirees, Beneficiaries, and Inactives	\$ 6,613,949,117	\$ 7,175,681,914
Current Employees:		
Accumulated Employee Contributions Including		
Statutory Interest	1,358,193,244	1,410,544,951
Payable to Vested and Non-Vested Employees	2,310,196,238	2,748,572,146
Total Actuarial Accrued Liability	\$10,282,338,599	\$11,334,799,011
Net Plan Actuarial Assets	3,053,881,777	2,954,318,954
Unfunded AAL (assets in excess of AAL)	\$ 7,228,456,822	\$ 8,380,480,057
Percent Funded	29.70%	26.06%
Unfunded AAL as Percent of Payroll	711.86%	780.06%
Payroll	\$ 1,015,426,128	\$ 1,074,333,318
<sup>1</sup> Evaluados lighilitias for ratiras healthears subsidy		

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

<sup>1</sup> Includes miscellaneous revenue.

### EXHIBIT A-5 POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO ANNUAL PENSION COST AND CONTRIBUTIONS MADE FOR GASB #27

#### **Contribution Rates**

City

The funding policy requires that future employer contributions, employee contributions and other fund income is sufficient to produce 90% 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.

Plan Members	9.0%
Annual Pension Cost for 2014	
Annual Required Contribution (ARC)	\$491,651,208
Interest on Net Pension Obligation	209,449,454
Adjustment to ARC	(147,857,641)
Total	\$553,243,021
Contributions Made in 2014	\$178,158,132
Net Pension Obligation (NPO):	
NPO at 12/31/2013	\$2,702,573,606
Increase/(Decrease) in NPO	375,084,889
NPO at 12/31/2014	\$3,077,658,495
Pension Liability at Transition (January 1, 1997)	\$566,107,984

<sup>1</sup> Includes miscellaneous revenue.

# EXHIBIT A-6 POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO PENSION COST SUMMARY FOR GASB #27

Year Ended December 31	Annual Pension Cost	% of Annual Pension Cost Contributed	Net Pension Obligation
2000	\$145,174,269	96.08%	\$623,280,517
2001	143,430,813	97.38	627,035,564
2002	150,588,435	94.29	635,634,972
2003	202,175,694	69.65	697,003,312
2004	226,379,433	59.96	787,638,572
2005	263,987,011	67.53	873,347,212
2006	302,556,587	52.47	1,017,144,522
2007 1	338,508,467	50.40	1,185,054,721
2008	348,272,798	49.63	1,360,491,714
2009	373,972,967	46.00	1,562,420,897
2010	403,227,708	43.28	1,791,148,098
2011	448,152,714	38.83	2,065,266,212
2012	483,359,077	40.94	2,350,739,737
2013	531,355,128	33.79	2,702,573,606
2014	553,243,021	32.20	3,077,658,495

<sup>1</sup> Annual pension cost for fiscal years on and after 2007 excludes OPEB which are recognized in GASB 45 accounting.

### **EXHIBIT A-7**

# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO DEVELOPMENT OF NET PENSION OBLIGATION (NPO) FOR GASB #27 PRIOR TO JANUARY 1, 1997

Year Ending December 31:	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Assumptions and Method										
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									
Actuarially Determined Contribu	tion (ADC)									
Normal Cost	\$ 88,600,984	\$90,317,357	\$90,506,052	\$79,153,328	\$67,782,578	\$78,695,560	\$66,329,000	\$68,617,000	\$72,637,000	\$76,463,000
Interest on Unfunded	89,867,346	92,162,828	93,180,094	88,948,163	110,558,088	126,460,879	120,691,562	132,733,871	144,248,034	<u>150,876,00</u> 9
Total ADC	\$178,468,330	\$182,480,185	\$183,686,146	\$168,101,491	\$178,340,666	\$205,156,439	\$187,020,562	\$201,350,871	\$216,885,034	\$227,339,009
Interest on NPO	-	5,194,794	10,671,277	16,254,357	19,887,447	23,818,783	29,389,826	32,880,844	36,612,931	40,614,169
Adjustment to ADC	-	(4,758,157)	(11,443,199)	(17,430,139)	(21,421,034)	(25,657,792)	(31,714,118)	(35,473,365)	(39,495,803)	<u>(43,810,31</u> 9
Annual Pension Cost	\$178,468,330	\$182,916,822	\$182,914,224	\$166,925,709	\$176,807,079	\$203,317,430	\$184,696,270	\$198,758,350	\$214,002,162	\$224,142,859
Net Pension Obligations (NPC	))									
NPO at Beginning of Year	\$-	\$69,263,914	\$142,283,691	\$203,179,467	\$248,593,093	\$297,734,789	\$367,372,826	\$411,010,553	\$457,661,636	\$507,677,114
Annual Pension Cost	178,468,330	182,916,822	182,914,224	166,925,709	176,807,079	203,317,430	184,696,270	198,758,350	214,002,162	224,142,859
Total Contributions	(109,204,416)	(109,897,045)	(122,018,448)	(121,512,083)	(127,665,383)	(133,679,393)	(141,058,542)	(152,107,267)	(163,986,684)	<u>(165,711,99</u> (
NPO at End of Year	\$ 69,263,914	\$142,283,691	\$203,179,467	\$248,593,093	\$297,734,789	\$367,372,826	\$411,010,553	\$457,661,636	\$507,677,114	\$566,107,984

# EXHIBIT A-7 (CONT'D) POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO DEVELOPMENT OF NET PENSION OBLIGATION (NPO) FOR GASB #27 AFTER JANUARY 1, 1997

Year Ending December 31: Assumptions and Method	1997	1998	1999	2000	2001	2002	2003	2004	2005
Interest Rate	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Salary Scale	4.5%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Amortization Period (years)	40	40	40	40	40	40	40	40	40
Cost Method	EAN								
Annual Pension Cost Annual Required Contribution (ARC) Interest on Net Pension Obligation Adjustment to ARC Total	\$107,607,525 45,288,639 (25,053,818) \$127,842,346	\$105,484,624 46,767,096 (27,793,719) \$124,458,001	\$133,535,979 47,214,343 (28,059,518) \$152,690,804	\$125,129,864 49,407,050 (29,362,645) \$145,174,269	\$123,201,657 49,862,441 (29,633,285) \$143,430,813	\$130,237,405 50,162,845 (29,811,815) \$150,588,435	\$181,545,562 50,850,798 (30,220,666) \$202,175,694	\$203,757,534 55,760,265 (33,138,366) \$226,379,433	\$238,423,459 63,011,086 (37,447,534) \$263,987,011
Net Pension Obligations (NPO)									
NPO at Beginning of Year	\$566,107,984	\$584,588,700	\$590,179,285	\$617,588,119	\$623,280,517	\$627,035,564	\$635,634,972	\$697,003,312	\$787,638,572
Annual Pension Cost	127,842,346	124,458,001	152,690,804	145,174,269	143,430,813	150,588,435	202,175,694	226,379,433	263,987,011
Total Contributions	(109,361,629)	(118,867,416)	(125,281,970)	(139,481,871)	(139,675,766)	(141,989,027)	(140,807,354)	(135,744,173)	(178,278,371)
NPO at End of Year	\$584,588,700	\$590,179,285	\$617,588,119	\$623,280,517	\$627,035,564	\$635,634,972	\$697,003,312	\$787,638,572	\$873,347,212

# EXHIBIT A-7 (CONT'D) POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO **DEVELOPMENT OF NET PENSION OBLIGATION (NPO) FOR GASB #27 AFTER JANUARY 1, 1997**

Year Ending December 31: Assumptions and Method	2006	2007	2008	2009	2010	2011	2012	2013	2014
Interest Rate	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	7.75%	7.75% 1
Salary Scale	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Amortization Period (years)	40	30	30	30	30	30	30	30	30 <sup>2</sup>
Cost Method	EAN								
Annual Pension Cost Annual Required Contribution (ARC)	\$273,733,047	\$312,726,608	\$318,234,870	\$339,488,187	\$363,624,570	\$402,751,961	\$431,010,173	\$474,177,604	\$491,651,208
Interest on Net Pension Obligation	69,867,777	81,371,562	94,804,378	108,839,337	124,993,672	143,291,848	165,221,297	182,182,330	209,449,454
Adjustment to ARC	(41,044,237)	(55,589,703)	(64,766,450)	(74,354,557)	(85,390,534)	(97,891,095)	(112,872,393)	(125,004,806)	(147,857,641)
Total	\$302,556,587	\$338,508,467	\$348,272,798	\$373,972,967	\$403,227,708	\$448,152,714	\$483,359,077	\$531,355,128	\$553,243,021
Net Pension Obligations (NPO)									
NPO at Beginning of Year	\$873,347,212	\$1,017,144,522	\$1,185,054,721	\$1,360,491,714	\$1,562,420,897	\$1,791,148,098	\$2,065,266,212	\$2,350,739,737	\$2,702,573,606
Annual Pension Cost	302,556,587	338,508,467	348,272,798	373,972,967	403,227,708	448,152,714	483,359,077	531,355,128	553,243,021 <sup>3</sup>
Total Contributions	(158,759,277)	(170,598,268)	(172,835,805)	(172,043,784)	(174,500,507)	(174,034,600)	(197,885,552)	(179,521,259)	(178,158,132)
NPO at End of Year	\$1,017,144,522	\$1,185,054,721	\$1,360,491,714	\$1,562,420,897	\$1,791,148,098	\$2,065,266,212	\$2,350,739,737	\$2,702,573,606	\$3,077,658,495

<sup>1</sup> 7.75% for Pension, beginning with fiscal year 2013 and 4.5% for OPEB, beginning with fiscal year 2006.

7.50% for Pension and 3.75% for salary scale beginning with fiscal year 2015.
 <sup>2</sup> 40 years for Pension and 30 years for OPEB for fiscal year 2006.
 <sup>3</sup> Annual Pension Cost for fiscal years on and after 2007 excludes OPEB which are recognized in GASB 45 accounting.

# EXHIBIT A-8 POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO 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)
12/31/2005	\$	0	\$ 176,117,539	\$ 176,117,539	0.00%	\$ 948,973,732	18.56%
12/31/2006		0	176,981,897	176,981,897	0.00%	1,012,983,634	17.47%
12/31/2007		0	179,039,841	179,039,841	0.00%	1,038,957,026	17.23%
12/31/2008		0	169,972,156	169,972,156	0.00%	1,023,580,667	16.61%
12/31/2009		0	164,799,819	164,799,819	0.00%	1,011,205,359	16.30%
12/31/2010		0	164,796,449	164,796,449	0.00%	1,048,084,301	15.72%
12/31/2011		0	165,954,869	165,954,869	0.00%	1,034,403,526	16.04%
12/31/2012		0	168,811,118	168,811,118	0.00%	1,015,170,686	16.63%
12/31/2013		0	28,375,681	28,375,681	0.00%	1,015,426,128	2.79%
12/31/2014		0	18,762,125	18,762,125	0.00%	1,074,333,318	1.75%

# EXHIBIT A-9 POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SCHEDULE OF EMPLOYER CONTRIBUTIONS FOR GASB #43

For Year Ending December 31	Annual Required Contribution	Actual Employer Contribution	Percentage Contributed
2006	\$11,076,022	\$8,041,573	72.60%
2007	11,220,081	8,107,708	72.26%
2008	11,348,959	8,850,186	77.98%
2009	11,810,766	9,266,431	78.46%
2010	10,659,006	9,354,163	87.76%
2011	10,538,116	9,591,394	91.02%
2012	10,473,478	9,765,686	93.24%
2013	10,429,882	9,847,310	94.41%
2014	9,723,621	9,657,123	99.32%
2015	9,632,405	TBD	TBD

# EXHIBIT A-10 POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO SUPPLEMENTARY INFORMATION FOR GASB #43

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	Dec	ember 31, 2014	1		
Actuarial Cost Method	Entr	ry Age Normal			
Actuarial Value of Assets	Noa	assets (Pay-as-	you-go	)	
Amortization Method	Lev	el percent			
<b>Remaining Amortization Period</b>	3 year closed - period for FY 2014 and beyond.				
Actuarial Assumptions:					
<b>OPEB</b> Investment Rate of Return	4.50	)%			
General Inflation	3.00%				
Projected Salary Increases	3.75% per year, plus additional percentage related to service.				
Healthcare Cost Trend Rate	0.00	<b>)%</b> <sup>1</sup>			
		2013		2014	
Payable to Retirees, Beneficiaries, and Inactives Current Employees: Accumulated Employee Contributions Including	\$	25,926,180	\$	17,517,865	
Statutory Interest Payable to Vested and Non-Vested Employees		- 2,449,501		- 1,244,260	
Total Actuarial Accrued Liability Net Plan Actuarial Assets	\$	28,375,681	\$	18,762,125	
Unfunded AAL (assets in excess of AAL) Percent Funded Unfunded AAL as Percent of Payroll	\$	28,375,681 0.00% 2.79%	\$	18,762,125 0.00% 1.75%	

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

Payroll

\$ 1,015,426,128 \$ 1,074,333,318

# EXHIBIT A-11 POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO ANNUAL OPEB COST AND CONTRIBUTIONS MADE FOR GASB #45 For 2014

City Plan MembersPay-as-you-go NoneAnnual OPEB Cost for 2014Annual Required Contribution (ARC)\$ 9,723,621 546,767Interest on Net OPEB Obligation546,767 (4,079,333) \$ 6,191,055Adjustment to ARC Total(4,079,333) \$ 6,191,055Contributions Made in 2014\$ 9,657,123Net OPEB Obligation (NOO): NOO at 12/31/2013\$ 12,150,378	Contribution Rates				
Annual OPEB Cost for 2014\$ 9,723,621Annual Required Contribution (ARC)\$ 9,723,621Interest on Net OPEB Obligation546,767Adjustment to ARC(4,079,333)Total\$ 6,191,055Sector State of the sector	City	Pay	••••		
Annual Required Contribution (ARC) Interest on Net OPEB Obligation Adjustment to ARC Total\$ 9,723,621 546,767 (4,079,333) \$ 6,191,055Contributions Made in 2014\$ 9,657,123Net OPEB Obligation (NOO):\$ 1000000000000000000000000000000000000	Plan Members	No			
Interest on Net OPEB Obligation       546,767         Adjustment to ARC       (4,079,333)         Total       \$ 6,191,055         Contributions Made in 2014       \$ 9,657,123         Net OPEB Obligation (NOO):       \$ 1000000000000000000000000000000000000	Annual OPEB Cost for 2014				
Adjustment to ARC       (4,079,333)         Total       \$ 6,191,055         Contributions Made in 2014       \$ 9,657,123         Net OPEB Obligation (NOO):       \$	Annual Required Contribution (ARC)	\$	9,723,621		
Total       \$ 6,191,055         Contributions Made in 2014       \$ 9,657,123         Net OPEB Obligation (NOO):	Interest on Net OPEB Obligation		546,767		
Contributions Made in 2014\$ 9,657,123Net OPEB Obligation (NOO):	Adjustment to ARC		(4,079,333)		
Net OPEB Obligation (NOO):	Total	\$	6,191,055		
	Contributions Made in 2014	\$	9,657,123		
NOO at 12/31/2013 \$ 12,150,378	Net OPEB Obligation (NOO):				
	NOO at 12/31/2013	\$	12,150,378		
Increase/(Decrease) in NOO (3,466,068)	Increase/(Decrease) in NOO		(3,466,068)		
NOO at 12/31/2014 \$ 8,684,310	NOO at 12/31/2014	\$	8,684,310		

# EXHIBIT A-12 POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO OPEB COST SUMMARY FOR GASB #45

Year Ended December 31	Annual OPEB Cost	% of Annual OPEB Cost Contributed	Net OPEB Obligation
2009	\$11,863,201	78.11%	\$8,236,851
2010	10,735,582	87.13	9,618,270
2011	10,627,535	90.25	10,654,411
2012	10,572,529	92.37	11,461,254
2013	10,536,434	93.46	12,150,378
2014	6,191,055	155.99	8,684,310