

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
ACTUARIAL VALUATION REPORT FOR THE YEAR ENDING  
DECEMBER 31, 2015



June 10, 2016

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, 2015**

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, 2015. This actuarial valuation has been performed to measure the funded status of the Fund and to determine the contribution levels for 2016, based on the statutes in effect as of December 31, 2015. In addition, it includes disclosure information required under GASB Statements No. 43 and 45 for the fiscal year ending December 31, 2015. Disclosure information required under GASB Statements Nos. 67 and 68 is provided in a separate report. 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 Statements No. 43 and 45. 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. 43 and 45;
- Development of Actuarial Gains and Losses; and
- 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 based on the statutes in effect as of December 31, 2015; and
- Notes to Required Supplementary Information.

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. 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** – All actuarial assumptions remain unchanged from the prior valuation and 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. 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 and statutes in effect as of December 31, 2015.

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.

Please note that the PA 96-1495 funding policy was changed by PA 99-0506, effective as of May 30, 2016. The funding policy defined in PA 99-0506 significantly defers contributions when compared to the provisions of PA 96-1495. The new funding policy requires fixed City contributions for payment years 2016 to 2020, and level percent of pay contributions for years 2021 to 2055 that, along with member contributions and investment income, are projected to produce a funded ratio of 90% by 2055.

The funding valuation results contained in this report were prepared based on the statutes in effect as of December 31, 2015, and will be used solely to comply with the financial reporting requirements under GASB Statements No. 56, 67 and 68. The contributions contained in this report will be used to develop the blended discount rate under GASB Statements No. 67 and 68. The statutory funding amounts contained in this report are no longer valid as of May 30, 2016.

We strongly recommend that a formal liquidity and asset allocation study be performed as soon as practical and that GRS prepare statutory funding and accounting impact statements of PA 99-0506 using updated economic assumptions approved by the Board.

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. To the best of our knowledge, this actuarial statement is complete and accurate based on the statutes in effect as of December 31, 2015, and fairly presents the actuarial position of the Fund as of December 31, 2015, for purposes of complying with the financial reporting requirements under GASB Statements No. 56, 67 and 68. The statutory funding amounts contained in this report are no longer valid as of May 30, 2016. Based on these items, we certify these results to be true and correct.

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.

Actuarial 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.

Alex Rivera and Lance J. 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, FSA, EA, MAAA, FCA  
Senior Consultant



Lance J. Weiss, EA, MAAA, FCA  
Senior Consultant

# ADDITIONAL DISCLOSURES

## PUBLIC ACT 99-0506

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Public Act 99-0506 became law on May 30, 2016, and changes the City of Chicago's required contribution to the Policemen's Annuity and Benefit Fund of Chicago ("PABF").

The law in effect prior to May 30, 2016, Public Act 96-1495, required that the City of Chicago (the "City") make level percent of pay contributions for plan years 2015 through 2040 that along with member contributions and investment earnings would generate a projected funded ratio of 90% by plan year end 2040.

Under PA 99-0506, City contributions are equal to \$420 million in payment year 2016, \$464 million in payment year 2017, \$500 million in payment year 2018, \$557 million in payment year 2019 and \$579 million in payment year 2020. For payment years after 2020, the City is required to make level percent of pay contributions for plan years 2020 through 2055 that along with member contributions and investment earnings are expected to generate a projected funded ratio of 90% by plan year end 2055.

We understand the Plan auditor and City auditor have requested that GRS reflect paragraphs 8 and 10 of GASB Statement No. 56 for purposes of financial reporting of the PABF at plan year end December 31, 2015. That is, the auditors have requested that the December 31, 2015, valuations for GASB Statements No. 67 and 68 purposes be performed based on the provisions of Public Act 96-1495, but with disclosure of the impact of PA 99-0506.

As a result, the funding valuation results contained in this report were prepared based on the statutes in effect as of December 31, 2015, and will be used solely to comply with the financial reporting requirements under GASB Statements No. 56, 67 and 68. The contributions contained in this report will be used to develop the blended discount rate under GASB Statements No. 67 and 68. The statutory funding amounts contained in this report are no longer valid as of May 30, 2016.

We strongly recommend that a formal liquidity and asset allocation study be performed as soon as practical and that GRS prepare statutory funding and accounting impact statements of PA 99-0506 using updated economic assumptions approved by the Board.

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# POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO

## SUMMARY OF VALUATION RESULTS

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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, 2015. This valuation is based on the provisions of PA 96-1495. However, effective May 30, 2016, PA 99-0506 replaced PA 96-1495 and the provisions of PA 96-1495 no longer apply. The purposes of this valuation are:

1. To develop statutory contributions based on the provisions of Public Act 96-1495, for purposes of developing the blended discount rate under GASB #67 and #68.
2. To develop the actuarially determined contributions (ADC) under GASB #67 and #68 and the annual required contribution ("ARC") under GASB #43.
3. To develop the annual OPEB costs under GASB #45.
4. To review the funded status of the Fund, based on the statutes in effect as of December 31, 2015.

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.

<b>PURPOSE</b>	<b>ACTUARIAL METHOD</b>	<b>ASSET VALUE</b>
Statutory Funding	Projected Unit Credit	Actuarial (Market-Related) Value of Assets
Fund and City reporting after 1996 (GASB #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)**

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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.

The calculations in this report were prepared based on the funding policy methods required by Public Act 96-1495. In light of the current funded status of this Retirement System, we do not endorse this funding policy because the Statutory funding policy defers funding for benefits into the future and places a higher burden on future generations of taxpayers.

We recommend a funding policy that contributes normal cost plus closed period amortization as a level percentage of payroll for paying off 100% of the current unfunded accrued liability (i.e., the amortization period declines by one year with each actuarial valuation) such that the funded ratio is projected to be 100 percent funded after 15 to 20 years. For example, a 20-year closed amortization period methodology, at the actuarial valuation as of December 31, 2015, pays off the unfunded accrued liability in full by the end of the 20-year period in 2035. The current Statutory contribution does not comply with this recommendation. Underfunding the System creates the risk that ultimately benefit obligations cannot be met from the trust, and will require a greater amount of funding from other City resources. In addition, continually underfunding the System reduces the investment return and ultimately increases the contribution requirement, thereby creating a more expensive plan.

The actuarially determined contributions (ADC) under GASB #67 and #68 for the year ending December 31, 2016, is \$785.7 million, which is 72.3% of payroll. This amount compares with an ADC of \$563.3 million or 52.4% of payroll for the year ending December 31, 2015. The amortization period was changed from a 30-year level percent to a 30-year level dollar basis. These amounts are for pension benefits only and are net of employee contributions of \$100.0 million for fiscal year 2016 and \$98.8 million for fiscal year 2015.

GASB #43 requires the calculation of a separate annual required contribution for Other Postemployment Benefits ("OPEB"). The ARC for fiscal year 2016 is based on this actuarial valuation as of December 31, 2015. The OPEB ARC for the fiscal year ending December 31, 2016, is \$ 9.5 million, which is 0.9% of payroll. This amount compares with an OPEB ARC of \$9.6 million or 0.9% of payroll for the year ending December 31, 2015.

## **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**

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

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

	<b>Pension ADC</b>	<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.

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 replaces GASB #25 for pension plan financial reporting requirements. GASB #68 replaced 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 less than the expected value. The key factors impacting the actuarial liability gain of \$109 million include: salary gain of \$95 million, demographic and new entrants net gains of \$31 million, and other losses of \$17 million. New contracts were finalized prior to December 31, 2014, and retroactive benefit payments and adjustments are expected to continue for the period beginning July 1, 2012, through the day the contracts are finalized. Our calculations estimated the benefit increases for those participants where the retroactive adjustments have not yet been made.

## **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**

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

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The unfunded liability, under the methods used to develop the statutory contributions, decreased from an expected value of \$8.21 billion to \$8.10 billion. The key reasons for the decrease include favorable investment performance (on actuarial value of assets) and favorable demographic experience.

Using the market value of assets produced an unfunded liability of \$8.2 billion and a funded ratio 27.1%. Using the book value of assets produced an unfunded liability of \$8.4 billion and a funded ratio of 26.0%. Using the actuarial value of assets produced an unfunded liability of \$8.1 billion and a funded ratio of 28.2%.

There was a loss on invested assets due to an approximate return of (0.2)% on market value compared with the assumed return of 7.50%.

Please note the highlighted area on page 30 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.

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

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

Valuation at:	12/31/2014		12/31/2015	
	\$ in Millions	% of Pay	\$ in Millions	% of Pay <sup>1</sup>
<b>Contribution Levels</b>				
Statutory Contribution (Tax Levy Year)	\$ 675.83 (2016)	59.51%	\$ 705.69 (2017)	61.45%
Actuarially Determined Contribution <sup>2,3</sup> (Plan Year)	572.98 (2015)	53.33	795.16 (2016)	73.18
<b>Funded Status - Actuarial Value</b>				
Actuarial Value of Assets	\$ 2,954.32	274.99%	\$ 3,186.42	293.24%
Actuarial Liability	11,048.19	1,028.38	11,288.24	1,038.85
Funded Ratio	26.74%	N/A	28.23%	N/A
<b>Funded Status - Market Value</b>				
Market Value of Assets	\$ 3,062.01	285.01%	\$ 3,058.95	281.51%
Actuarial Liability	11,048.19	1,028.38	11,288.24	1,038.85
Funded Ratios	27.72%	N/A	27.10%	N/A
<b>Funded Status - ADC Value</b>				
Actuarial Value of Assets	\$ 2,954.32	274.99%	\$ 3,186.42	293.24%
Actuarial Liability - Entry Age <sup>4</sup>	11,353.56	1,056.80	11,597.79	1,067.34
Funded Ratios	26.02%	N/A	27.47%	N/A

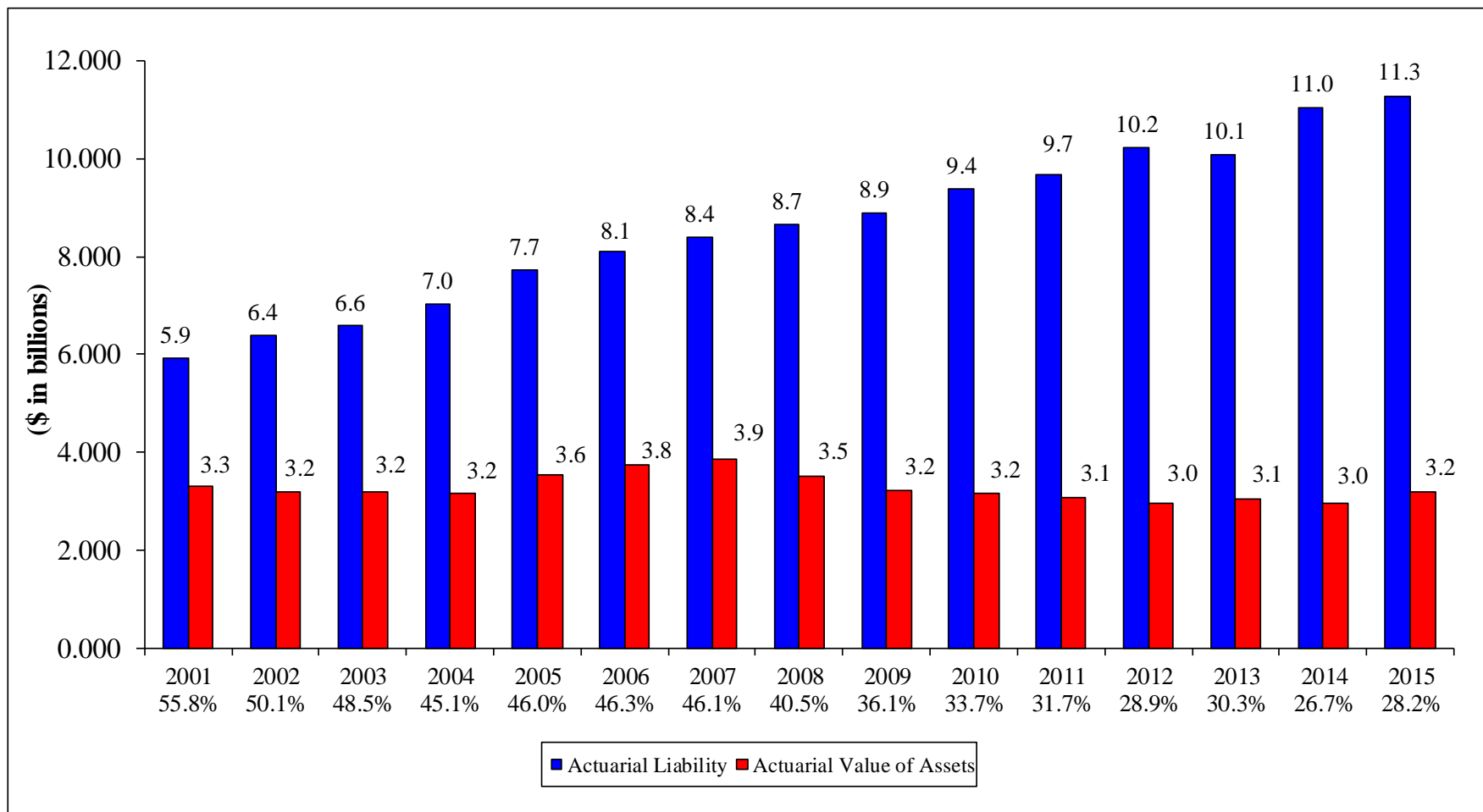
<sup>1</sup> Payroll was \$1,074 million in 2014 and \$1,087 million in 2015.

<sup>2</sup> The actuarially determined contribution for the plan year ending December 31, 2016, will be used to determine the plan sponsor's expense under GASB Statement No. 45 for the fiscal year ending December 31, 2016.

<sup>3</sup> For fiscal year ending December 31, 2015, the Annual Required Contribution (ARC) under GASB Statements No. 27, 43 and 45 was determined based on a 30-year open level percent amortization policy for pension benefits and a two-year closed level dollar amortization policy for OPEB benefits. The ARC is no longer applicable to the current accounting requirements for pension benefits found under GASB Statements No. 67 and 68, which requires the disclosure of the Actuarially Determined Contributions (ADC). The ADC for fiscal year December 31, 2016, was based on a 30-year open level dollar amortization policy for pension benefits and includes the ARC under GASB Statements No. 43 and 45 for OPEB benefits, which was based on a one-year closed level dollar amortization policy.

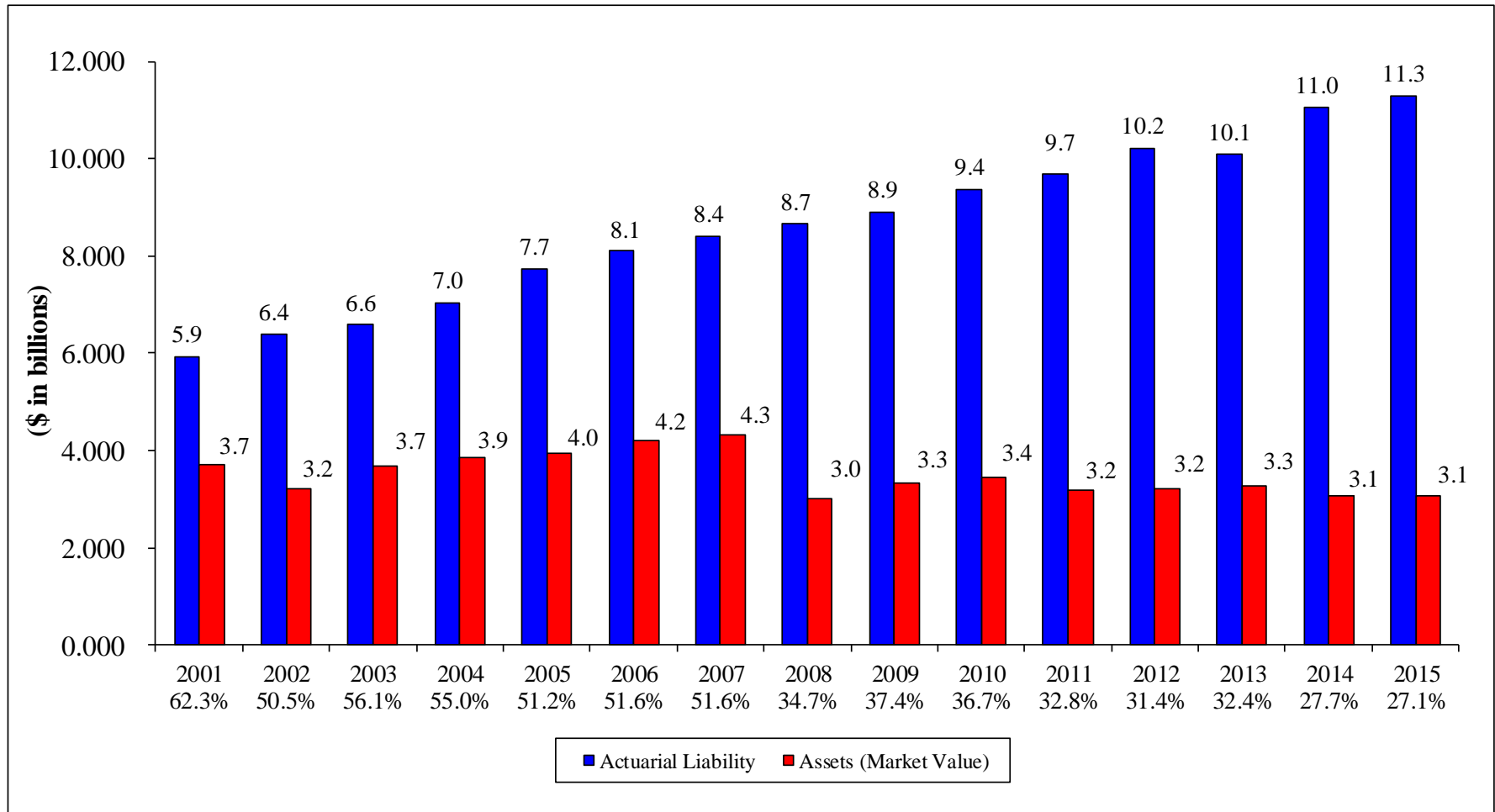
<sup>4</sup> Used to determine Actuarially Determined Contribution under GASB Statements No. 67 and 68.

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



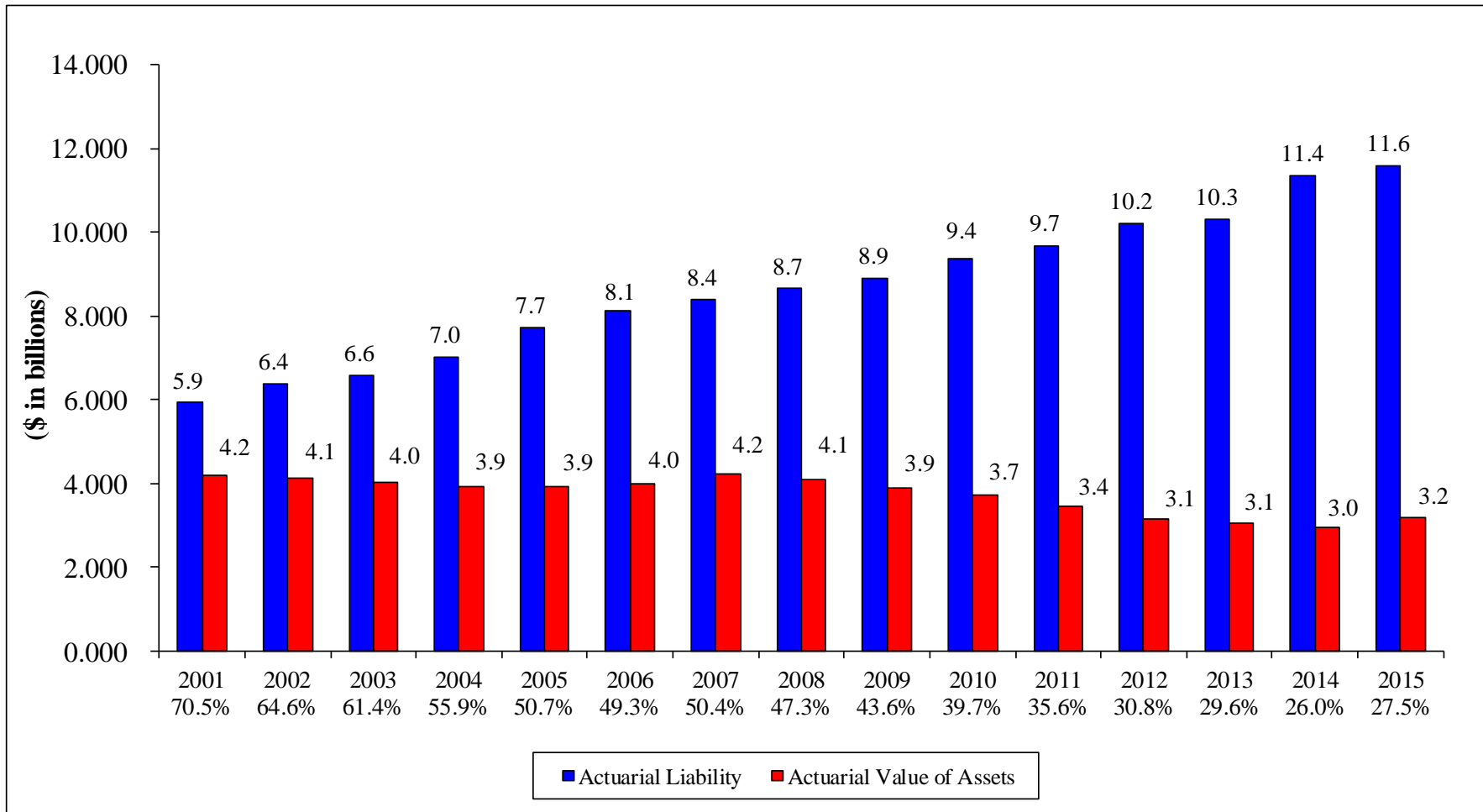
<sup>1</sup> State reporting for years after 2013 uses Projected Unit Credit for Actuarial Liabilities and Actuarial (Market-Related) Value for Assets. Prior to 2013, the Entry-Age Normal cost method was used for Actuarial Liabilities and Book Value was used for Assets.

**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  
BASED ON ADC UNDER GASB #67/ #68 AND ARC UNDER GASB #43/#45**



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

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**Participants**

	<u>December 31, 2014</u>	<u>December 31, 2015</u>
<b>Active Participants</b>		
Number	12,020	12,061
Average Age	43.7	43.8
Average Service	15.2	15.4
Average Annual Salary	\$89,379 <sup>1,3</sup>	\$90,093 <sup>2</sup>
<b>Retirees</b>		
Number	9,311	9,385
Average Age	69.0	69.3
Average Monthly Benefit	\$5,009	\$5,142
<b>Survivors</b>		
Number	3,175	3,143
Average Age	75.7	75.9
Average Monthly Benefit	\$1,691	\$1,741

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; 38.3% of the workforce is between the ages of 45 and 54, while 31.8% have 20 or more years of service. Total participants receiving benefits under the Fund, including retirees, disabilities, survivors and children decreased 0.15% during 2015 from 13,230 to 13,210. The total retiree count increased by 0.8% during 2015. Total expenditures for benefits increased from \$664.3 million in 2014 to \$686.2 million during 2015, or 3.29%.

**Changes in Provisions of the Fund**

As of December 31, 2015, there have been no changes made to the provisions of the fund since the prior valuation.

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<sup>1</sup> Average annual salary would have been \$86,240 without the addition of duty availability pay.

<sup>2</sup> Average annual salary would have been \$86,799 without the addition of duty availability pay.

<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)**

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### **Analysis of Actuarial Assumptions**

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

There were no changes to the Actuarial Assumptions during the plan year ending December 31, 2015.

### **2015 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, 2014, and December 31, 2015. Our analysis by source follows.

#### **Turnover**

We reviewed all exits in 2015 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 109% (9% more than expected). The overall result is a small actuarial loss.

#### **Retirement**

The number of retirements during 2015 was less than expected. The ratio of actual retirements to expected retirements was 97%, resulting in an actuarial loss to the plan.

#### **Disability**

The number of new disabled participants during 2015 was less than expected. The ratio of actual to expected disability was 72%, resulting in a gain to the plan.

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

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**Mortality**

There were more active member deaths and more annuitant deaths than expected during 2015, which resulted in a net actuarial gain to the fund.

**Pay Increase**

The average salary for continuing active members in the 2014 and 2015 valuations increased by 3.7%. This was less than the expected increase of 4.9% from the 2014 salary. The smaller than expected salary increases resulted in an actuarial gain to the fund.

**Investment Return**

During 2015, assets earned (0.2)% on a market basis, 7.1% on a book basis and 7.8% on an actuarial basis which compares to the 2015 assumed return of 7.50%. During the year, the fund experienced a significant market value asset loss due to investment performance, and a small actuarial gain on an actuarial (smoothed) value basis.

**Data and Other Sources**

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

**Conclusion**

Overall, we believe that the assumptions are reasonable for the purpose of the measurement of the System's costs in effect as of December 31, 2015, under the provisions of PA 96-1495. Table 5 of Appendix 1 shows a more detailed development of the actuarial gains and losses for the plan year ending December 31, 2015.

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## **APPENDIX 1**

### RESULTS OF ACTUARIAL VALUATION

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**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SUMMARY**

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**Table 1A**

	December 31,	
	2014	2015
<b><u>Assets</u></b>		
Book Value - Beginning of Year	\$ 2,912,852,576	\$ 2,737,727,266
<b><u>Income</u></b>		
Investment Income Net of Expenses	\$ 209,962,215	\$ 195,271,172
Employer Contributions	187,074,950	582,277,634
Employee Contributions	95,675,538	107,626,311
Miscellaneous	740,305	3,091,545
Subtotal	\$ 493,453,008	\$ 888,266,662
 <b><u>Outgo (Refunds, Benefits, &amp; Administration)</u></b>	 \$ 668,578,318	 \$ 690,726,980
 Book Value - End of Year	 \$ 2,737,727,266	 \$ 2,935,266,948
Market Value - End of Year	3,062,014,322	3,058,949,037
Actuarial Value - End of Year	2,954,318,954	3,186,423,762
 <b><u>Member Counts</u></b>		
Active	12,020	12,061
Retirees	9,311	9,385
Survivors	3,175	3,143
Disabilities	343	306
Inactives	630	637
Children	401	376
 <b><u>Payroll Data</u></b>		
Valuation Payroll	\$ 1,074,333,318	\$ 1,086,607,979
Average Salary	89,379	90,093

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

**Table 1B**

<u>ACTUARIAL VALUES</u>	<u>December 31,</u>	
	<u>2014</u>	<u>2015</u>
<u>Statutory Funding</u>		
Actuarial Liability	\$ 11,048,192,187	\$ 11,288,237,048
Assets - Actuarial Value	2,954,318,954	3,186,423,762
Unfunded Liability	8,093,873,233	8,101,813,286
Funded Ratio	26.74%	28.23%
Statutory Employer Contribution (Tax Levy Year)	\$ 675,825,755 (2016)	\$ 705,688,155 (2017)
<u>Book Value Funding</u>		
Actuarial Liability	\$ 11,048,192,187	\$ 11,288,237,048
Assets - Book Value	2,737,727,266	2,935,266,948
Unfunded Liability	8,310,464,921	8,352,970,100
Funded Ratio	24.78%	26.00%
<u>Termination Values</u>		
Liability	\$ 8,598,307,626	\$ 8,799,318,917
Deficiency	5,860,580,360	5,864,051,969
Quick Ratio	31.84%	33.36%
<u>Market Value Funding</u>		
Actuarial Liability	\$ 11,048,192,187	\$ 11,288,237,048
Assets - Market Value	3,062,014,322	3,058,949,037
Unfunded Liability	7,986,177,865	8,229,288,011
Funded Ratio	27.72%	27.10%
<u>ADC Values</u>		
Actuarial Liability - Entry Age <sup>2</sup>	\$ 11,353,561,136	\$ 11,597,793,117
Assets - Actuarial Value	2,954,318,954	3,186,423,762
Unfunded Liability <sup>2</sup>	8,399,242,182	8,411,369,355
Funded Ratio	26.02%	27.47%
Actuarially Determined Contribution (ADC) <sup>1</sup> (Plan Year End)	572,979,645 (2015)	795,164,039 (2016)

<sup>1</sup>Actuarial Liabilities for Statutory Funding and Market Value Funding are calculated using the Projected Unit Credit cost method. For fiscal year ending December 31, 2015, the Annual Required Contribution (ARC) under GASB Statements No. 27, 43 and 45 was determined based on a 30-year open level percent amortization policy for pension benefits and a two-year closed level dollar amortization policy for OPEB benefits. The ARC is no longer applicable to the current accounting requirements for pension benefits found under GASB Statements Nos. 67 and 68, which requires the disclosure of the Actuarially Determined Contribution (ADC). The ADC for fiscal year December 31, 2016, was based on a 30-year level dollar amortization policy for pension benefits and includes the ARC under GASB Statements No. 43 and 45 for OPEB benefits, which was based on a one-year closed level dollar amortization policy.

<sup>2</sup>Used to determine the Actuarially Determined Contribution under GASB Statements Nos. 67 and 68.

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

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**Table 1C**

**Active Accrued Liability and Normal Cost by Tier**  
**Includes Pension and Healthcare**  
**As of December 31, 2015**

	<u>Tier 1 Members</u>	<u>Tier 2 Members<sup>2</sup></u>	<u>Total</u>
(1) Count	10,328	1,733	12,061
(2) Payroll	\$ 969,382,337	\$ 117,225,642	\$ 1,086,607,979
(3) Average Payroll	\$ 93,860	\$ 67,643	\$ 90,093
(4) Actuarial Accrued Liability (AAL) <sup>1</sup>	\$ 3,929,886,483	\$ 35,585,598	\$ 3,965,472,081
(5) Total Normal Cost <sup>1</sup>	\$ 201,656,086	\$ 16,156,133	\$ 217,812,219
(6) Total Normal Cost as a Percent of Pay	20.8%	13.8%	20.0%
(7) Estimated Member Contributions	\$ 89,175,028	\$ 10,798,296	\$ 99,973,324
(8) Net Normal Cost <sup>1</sup>	\$ 112,481,058	\$ 5,357,837	\$ 117,838,895
(9) Net Normal Cost as a Percent of Pay	11.6%	4.6%	10.8%

<sup>1</sup>The normal cost and liabilities are based on the projected unit credit cost method and a discount rate of 7.50% for pension benefits and 4.5% for healthcare benefits.

<sup>2</sup>Members hired on or after January 1, 2011.



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

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**Table 2**

	<b>APV of Projected Benefits As of 12/31/ 2015</b>	<b>Actuarial Accrued Liability (AAL) As of 12/31/ 2015</b>
<u>(1) Values for Active Members</u>		
(a) Retirement	\$5,583,136,017	\$3,607,825,902
(b) Termination	83,028,729	52,684,432
(c) Disability	421,465,640	270,897,654
(d) Death	53,466,572	34,064,093
Total for Actives	\$6,141,096,958	\$3,965,472,081
<u>(2) Values for Inactive Members</u>		
(a) Retired	6,451,076,954	6,451,076,954
(b) Survivor	539,924,513	539,924,513
(c) Disability	278,902,061	278,902,061
(d) Inactive (Deferred Vested)	43,475,436	43,475,436
(e) Children	9,386,003	9,386,003
Total for Inactives	7,322,764,967	7,322,764,967
<u>(3) Grand Totals</u>	<u>\$13,463,861,925</u>	<u>\$11,288,237,048</u>
<u>(4) Normal Cost for Active Members</u>	\$ 217,812,219	
<u>(5) Actuarial Present Value of Future Compensation</u>	\$11,112,481,409	

*Results include health income supplement of \$9,342 in normal cost, \$9,246,515 in actuarial accrued liability and \$9,255,090 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, 2015													
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
2015	\$11,288,237	\$3,058,949	\$3,186,424	\$ 8,101,813	28.23%	\$1,086,608	\$1,086,608	\$108,775	\$585,369	53.9%	\$107,626	\$686,218	\$4,509
2016	11,651,188	3,334,608	3,462,185	8,189,003	29.72%	1,114,355	1,114,325	117,839	675,826	60.6%	99,973	691,683	4,644
2017	12,026,452	3,648,563	3,753,892	8,272,559	31.21%	1,149,097	1,148,328	112,624	705,688	61.5%	110,188	711,885	4,783
2018	12,402,232	3,974,665	4,021,679	8,380,553	32.43%	1,180,618	1,178,959	114,255	724,512	61.5%	113,260	743,408	4,927
2019	12,776,293	4,311,223	4,311,223	8,465,069	33.74%	1,213,001	1,208,152	115,568	742,452	61.5%	116,150	776,607	5,074
2020	13,146,875	4,658,820	4,658,820	8,488,056	35.44%	1,247,880	1,238,902	116,453	761,349	61.5%	119,146	811,043	5,227
2021	13,513,232	5,018,530	5,018,530	8,494,702	37.14%	1,283,557	1,270,423	117,071	780,720	61.5%	122,176	845,709	5,383
2022	13,874,756	5,391,625	5,391,625	8,483,132	38.86%	1,320,114	1,302,479	117,373	800,419	61.5%	125,279	880,401	5,545
2023	14,229,524	5,778,293	5,778,293	8,451,231	40.61%	1,357,361	1,334,919	117,187	820,354	61.5%	128,450	916,164	5,711
2024	14,575,296	6,178,455	6,178,455	8,396,840	42.39%	1,395,156	1,367,586	116,531	840,430	61.5%	131,627	953,117	5,883
2025	14,909,025	6,591,842	6,591,842	8,317,183	44.21%	1,434,149	1,400,647	115,075	860,747	61.5%	134,920	991,647	6,059
2026	15,228,119	7,019,602	7,019,602	8,208,518	46.10%	1,475,028	1,435,509	112,918	882,170	61.5%	138,285	1,031,157	6,241
2027	15,530,957	7,463,248	7,463,248	8,067,708	48.05%	1,517,611	1,471,417	110,441	904,237	61.5%	141,671	1,070,861	6,428
2028	15,817,197	7,924,578	7,924,578	7,892,620	50.10%	1,563,427	1,507,044	108,045	926,132	61.5%	144,971	1,109,711	6,621
2029	16,087,792	8,408,118	8,408,118	7,679,675	52.26%	1,611,512	1,544,598	105,808	949,209	61.5%	148,376	1,146,718	6,820
2030	16,343,436	8,919,185	8,919,185	7,424,251	54.57%	1,662,540	1,584,924	103,459	973,991	61.5%	152,120	1,182,158	7,024
2031	16,585,418	9,464,564	9,464,564	7,120,853	57.07%	1,717,428	1,629,285	101,222	1,001,253	61.5%	156,152	1,215,688	7,235
2032	16,814,560	10,049,092	10,049,092	6,765,468	59.76%	1,773,721	1,674,589	99,080	1,029,094	61.5%	160,361	1,247,719	7,452
2033	17,031,840	10,678,283	10,678,283	6,353,558	62.70%	1,833,717	1,721,283	97,118	1,057,789	61.5%	164,643	1,278,142	7,675
2034	17,239,121	11,356,028	11,356,028	5,883,093	65.87%	1,895,662	1,765,539	95,809	1,084,986	61.5%	168,646	1,306,296	7,906
2035	17,439,492	12,083,766	12,083,766	5,355,726	69.29%	1,961,548	1,802,003	95,712	1,107,394	61.5%	171,900	1,331,228	8,143
2036	17,635,625	12,861,837	12,861,837	4,773,787	72.93%	2,030,864	1,829,712	96,857	1,124,422	61.5%	174,365	1,353,552	8,387
2037	17,830,244	13,695,543	13,695,543	4,134,701	76.81%	2,102,967	1,855,875	98,624	1,140,501	61.5%	176,636	1,373,386	8,639
2038	18,025,614	14,589,888	14,589,888	3,435,726	80.94%	2,178,635	1,880,336	100,871	1,155,532	61.5%	178,788	1,391,301	8,898
2039	18,223,675	15,550,503	15,550,503	2,673,171	85.33%	2,256,626	1,904,319	103,603	1,170,271	61.5%	180,836	1,407,795	9,165
2040	18,425,777	16,583,063	16,583,063	1,842,714	90.00%	2,337,747	1,928,091	106,627	1,184,880	61.5%	182,880	1,423,478	9,440
2041	18,633,730	16,770,357	16,770,357	1,863,373	90.00%	2,423,313	1,952,193	110,124	275,889	14.1%	184,858	1,438,131	9,723

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

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

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**Table 3b**

	<u>Pension</u>	<u>Health Ins. Supplement<sup>2</sup></u>	<u>Total</u>
<u>(1) Total Normal Cost for 2017</u>	\$ 222,811,731	\$ 0	\$ 222,811,731
<u>(2) Actuarial Accrued Liability (AAL) at 12/31/2016<sup>1</sup></u>	\$ 11,651,187,545	\$ 0	\$ 11,651,187,545
<u>(3) Unfunded AAL (UAAL)</u>			
(a) Actuarial Value of Assets at 12/31/2016	\$ 3,462,184,857	\$ 0	\$ 3,462,184,857
(b) UAAL (2-3(a))	8,189,002,688	0	8,189,002,688
<u>(4) Estimated Member Contributions during 2017</u>	\$ 110,188,000	\$ 0	\$ 110,188,000
<u>(5) Estimated City Contribution for Tax Levy Year 2017</u>	\$705,688,155	\$ 0	\$ 705,688,155

<sup>1</sup> Pension liabilities were discounted at 7.50% per year.

<sup>2</sup> Health insurance supplemental benefits are expected to expire December 31, 2016, and therefore no contribution is required for fiscal year 2017.

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**DEVELOPMENT OF ACTUARIALLY DETERMINED CONTRIBUTION UNDER**  
**GASB #67/ #68 AND ARC UNDER GASB #43/#45 FOR 2016<sup>1</sup>**

**Table 4**

	<u>Pension</u>	<u>Health Ins. Supplement</u>	<u>Total</u>
<u>(1) Total Normal Cost for 2016</u>	\$ 191,330,347	\$ 0	\$ 191,330,347
<u>(2) Actuarial Accrued Liability (AAL) at 12/31/2015<sup>2</sup></u>	\$ 11,588,538,027	\$ 9,255,090	\$ 11,597,793,117
<u>(3) Unfunded AAL (UAAL)</u>			
(a) Actuarial Value of Assets at 12/31/2015	\$ 3,186,423,762	\$ 0	\$ 3,186,423,762
(b) UAAL (2-3(a))	8,402,114,265	9,255,090	8,411,369,355
<u>(4) Amortization Payable at Beginning of Year<sup>3</sup></u>	\$ 661,783,626	\$ 9,255,090	\$ 671,038,716
<u>(5) Estimated Member Contributions</u>	\$ 99,973,324	\$ 0	\$ 99,973,324
<u>(6) Actuarially Determined Contribution (ADC) for 2016</u>			
(a) Interest Adjustment for Semimonthly Payment	32,554,435	213,865	32,768,300
(b) Annual Required Contribution (1 + 4 - 5 + 6(a))	\$ 785,695,084	\$ 9,468,955	\$ 795,164,039
(c) Annual Required Contribution (Percent of Pay)	72.31%	0.87%	73.18%
<u>(7) Estimated City Contribution for 2016</u>	\$ 666,631,334	\$ 9,194,421 <sup>4</sup>	\$ 675,825,755
<u>(8) Estimated Deficiency/(Excess) for 2016</u>			
(a) in Dollars (6(b)-7)	\$ 119,063,750	\$ 274,534	\$ 119,338,284
(b) as a Percentage of Pay	10.96%	0.03%	10.98%

<sup>1</sup> Pension liabilities were discounted at 7.50% per year and OPEB liabilities were 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 closed period as a level dollar amount for pension benefits and a 1-year closed period as a level dollar amount for OPEB benefits.

<sup>4</sup> Represents expected health insurance supplemental benefits for fiscal year 2016.

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**DEVELOPMENT OF ACTUARIAL GAINS AND LOSSES FOR 2015**

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**Table 5**

UNFUNDED ACTUARIAL ACCRUED LIABILITY - BEGINNING OF 2015

(1) Actuarial Accrued Liability - 12/31/2014	\$11,048,192,187
(2) Actuarial Value of Assets - 12/31/2014	2,954,318,954
(3) Unfunded Accrued Actuarial Liability - 12/31/2014	\$8,093,873,233

EXPECTED UNFUNDED ACTUARIAL ACCRUED LIABILITY - END OF 2015

(4) Normal Cost for 2015	\$ 216,401,490
(5) Total Contributions for 2015	692,995,490
(6) Interest on (3), (4), & (5) at Valuation Rates	597,327,968
(7) Expected Unfunded Actuarial Accrued Liability - 12/31/2015	\$8,214,607,201
((3)+(4)-(5)+(6))	

DEVIATIONS FROM EXPECTED

(8) (Gain)/Loss on Investment Return (Smoothed (Actuarial) Value)	\$ (3,504,313)
(9) (Gain)/Loss from Salary Changes	(95,392,067)
(10) (Gain)/Loss from Retirement	15,669,449
(11) (Gain)/Loss from Turnover	1,402,142
(12) (Gain)/Loss from Mortality	(37,362,315)
(13) (Gain)/Loss from Disability	(8,557,476)
(14) (Gain)/Loss from New Entrants and Rehired Members	(2,265,995)
(15) (Gain)/Loss from All Other Sources	17,216,660
(16) Composite Actuarial (Gain)/Loss	<b>(\$112,793,915)</b>
(17) (Gain)/Loss as a percentage of Expected UAAL (16)/(7)	<b>(1.4)%</b>
(18) (Gain)/Loss from Assumption Changes	\$0

UNFUNDED ACTUARIAL ACCRUED LIABILITY - END OF 2015

(19) Unfunded Accrued Actuarial Liability - 12/31/2015	\$8,101,813,286
((7)+(16)+(18))	

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

**Table 6**

<b>Year of Report</b>	<b>Statutory Multiple</b>	<b>Normal Cost Plus Interest</b>	<b>Normal Cost Plus Amortization<sup>4</sup></b>	
			<b>Level \$</b>	<b>Level % of Salary</b>
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 <sup>1,2</sup>	2.00	3.63	3.77	2.56
1999	2.00	3.15	3.27	2.24
2000 <sup>1</sup>	2.00	3.27	3.39	2.32
2001 <sup>2</sup>	2.00	3.63	3.78	2.56
2002	2.00	4.62	4.79	3.33
2003 <sup>1,2</sup>	2.00	4.46	4.63	3.23
2004 <sup>2</sup>	2.00	4.99	5.18	3.60
2005 <sup>1,2</sup>	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 <sup>1</sup>	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 <sup>1</sup>	2.00	6.73	7.43	5.25
2013 <sup>2</sup>	2.00	6.92	7.60	5.44
2014 <sup>1</sup>	2.00	7.94	8.88	6.49
2015 <sup>5</sup>	N/A	7.76	8.68	6.35

<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.

<sup>5</sup>Funding based on P.A. 96-1495

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

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

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**Table 7**

Actuarial Balance Sheet – 6% Basis

December 31, 2015

**ASSETS**

Fund Balance	(30,193,540)
Present Values of Future Contributions:	
Contributions by Members at \$30.00 a Year	4,301,371
Annual City Contribution of \$224,000	2,662,872
Unfunded Liability	56,907,896
<b>TOTAL ASSETS</b>	<b>\$ 33,678,599</b>

**LIABILITIES**

Present Value of Future Death Benefits (6%, 83 GAM)	
Active & Disabled Members	6,493,134
Retired Members	27,185,465
<b>TOTAL LIABILITIES</b>	<b>\$ 33,678,599</b>

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

**Table 8**

Valuation Date 12/31	(1)	(2)	(3)	Actuarial Value of Assets	Portion (%) of Present Value Covered By Assets		
	Active and Inactive Member Contribution	Retirees and Beneficiaries	Active and Inactive Members (ER Financed Portion)		(1)	(2)	(3)
2001 <sup>2</sup>	\$ 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 <sup>1,2</sup>	893,425,839	3,856,262,804	1,831,744,607	4,039,695,590	100.00%	81.59%	0.00%
2004 <sup>2</sup>	910,480,098	4,313,531,046	1,810,260,330	3,933,031,342	100.00%	70.07%	0.00%
2005 <sup>1,2</sup>	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 <sup>1</sup>	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 <sup>1</sup>	1,309,825,828	6,475,282,318	2,435,530,363	3,148,929,770	100.00%	28.40%	0.00%
2013 <sup>2</sup>	1,358,193,244	6,594,792,197	2,127,620,103	3,053,881,777	100.00%	25.71%	0.00%
2014 <sup>1</sup>	1,410,544,951	7,159,705,456	2,477,941,780	2,954,318,954	100.00%	21.56%	0.00%
2015	1,484,316,625	7,279,289,531	2,524,630,892	3,186,423,762	100.00%	23.38%	0.00%

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

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



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## **APPENDIX 2**

### **ASSETS OF THE PLAN**

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

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The book value of the plan assets, net of accounts payable, increased from \$2.738 billion as of December 31, 2014, to \$2.935 billion as of December 31, 2015. The market value of the plan assets, net of accounts payable, decreased from \$3.062 billion as of December 31, 2014, to \$3.059 billion as of December 31, 2015. Table 9 details the development of asset values during 2015 and Table 10 shows the development of the actuarial value of assets as of December 31, 2015. In each future fiscal year, investment gains and losses will be phased in over a five-year period to determine the actuarial value of assets.

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**RECONCILIATION OF ASSETS AS OF DECEMBER 31, 2015**

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**Table 9**

	<b>Market Value</b>	<b>Book Value</b>
1. Value of assets as of 12/31/2014	\$3,062,014,322	\$2,737,727,266
2. Income for plan year:		
a) Member contributions	\$ 107,626,311	\$ 107,626,311
b) City contributions	582,277,634	582,277,634
c) Investment income net of expenses	(5,333,795)	195,271,172
d) Miscellaneous revenue	3,091,545	3,091,545
e) Total income	\$ 687,661,695	\$ 888,266,662
3. Disbursements for plan year:		
a) Benefit payments		
i) Pension, disability and death benefit payments	\$ 668,950,080	\$ 668,950,080
ii) Healthcare premiums	9,441,534	9,441,534
b) Refunds	7,826,847	7,826,847
c) Administration	4,508,519	4,508,519
d) Total disbursements	\$ 690,726,980	\$ 690,726,980
4. Value of assets as of 12/31/2015	\$3,058,949,037	\$2,935,266,948
5. Estimated rate of return in 2015: <sup>1</sup>		
a) Gross	0.13%	7.48%
b) Net of investment expense (Investment expense of \$9,313,790)	-0.17%	7.13%

<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, 2015**

**Table 10**

Year Ending December 31	2014	2015	2016	2017	2018	2019
Beginning of Year:						
(1) Market Value of Assets	\$3,265,200,554	\$3,062,014,322				
(2) Actuarial Value of Assets	3,053,881,777	2,954,318,954				
End of Year:						
(3) Market Value of Assets	3,062,014,322	3,058,949,037				
(4) Contributions and Disbursements						
(4a) City Contributions & Misc.	187,815,255	585,369,179				
(4b) Member Contributions	95,675,538	107,626,311				
(4c) Benefit Payouts & Refunds	(664,337,693)	(686,218,461)				
(4d) Administrative Expenses	(4,240,625)	(4,508,519)				
(4e) Net of Contributions and Disbursements	(385,087,525)	2,268,510				
(5) Total Investment Income						
=(3)-(1)-(4e)	181,901,293	(5,333,795)				
(6) Projected Rate of Return	7.75%	7.50%				
(7) Projected Investment Income						
=(1)x(6)+([1+(6)] <sup>5</sup> -1)x(4e)	238,409,329	229,734,605				
(8) Investment Income in Excess of Projected Income	(56,508,036)	(235,068,400)				
(9) Excess Investment Income Recognized						
This Year (5-year recognition)						
(9a) From This Year	(\$11,301,607)	(\$47,013,680)				
(9b) From One Year Ago	36,067,836	(11,301,607)	(\$47,013,680)			
(9c) From Two Years Ago	22,349,144	36,067,836	(11,301,607)	(\$47,013,680)		
(9d) From Three Years Ago	0	22,349,144	36,067,836	(11,301,607)	(\$47,013,680)	
(9e) From Four Years Ago	0	0	22,349,145	36,067,836	(11,301,608)	(\$47,013,680)
(9f) Total Recognized Investment Gain	47,115,373	101,693	101,694	(22,247,451)	(58,315,288)	(47,013,680)
(10) Change in Actuarial Value of Assets						
=(4e)+(7)+(9f)	(99,562,823)	232,104,808				
End of Year:						
(3) Market Value of Assets	<b>\$3,062,014,322</b>	<b>\$3,058,949,037</b>				
(11) Actuarial Value of Assets = (2)+(10)	<b>\$2,954,318,954</b>	<b>\$3,186,423,762</b>				

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## **APPENDIX 3**

### **DATA REFLECTING PLAN MEMBERS**

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**EXHIBIT A**  
**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SUMMARY OF CHANGES IN ACTIVE PARTICIPANTS**  
**FOR FISCAL YEAR ENDING DECEMBER 31, 2015**

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Number of Participants at Beginning of Fiscal Year <sup>2</sup>	<b>9,272</b>	<b>2,748</b>	<b>12,020</b>
Increases:			
Participants Added During Year	341	94	435
Participants Returning From Inactive or Disability Status	45	14	59
Totals	9,658	2,856	12,514
Decreases:			
Terminations During Year	327	126	453
Number of Participants at End of Fiscal Year	<b>9,331</b>	<b>2,730</b>	<b>12,061</b>
Total Inactive Participants			637
<u>Terminations:</u>			
Withdrawal (With Refunds) <sup>1</sup>	15	2	17
Withdrawal (Without Refunds)	63	18	81
Ordinary Disability Benefit	11	6	17
Occupational Disease Disability Benefit	5	0	5
Duty Disability Benefit	5	1	6
Retirements	215	99	314
Deaths (Occupational)	0	0	0
Deaths (Non-occupational)	13	0	13
<b>Totals</b>	<b>327</b>	<b>126</b>	<b>453</b>

<sup>1</sup> This total differs from the total of 52 shown in Exhibit D due to the fact that only 17 of the refunds were paid to participants who were considered to be active as of December 31, 2014.

<sup>2</sup> Includes four active members reclassified from male to female and fifteen 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, 2015**

	<b>Number at Beginning of Year</b>	<b>Additions During Year</b>	<b>Terminations During Year</b>	<b>Number at End of Year</b>
Service Retirement Annuities	9,311	363	289	9,385
Widow Annuities	3,109	147	178	3,078
Children's Annuities	197	20	19	198
Ordinary Disability Benefit (Non-Occupational)	48	21	28	41
Occupational Disease Disability Benefit	36	7	8	35
Duty Disability Benefit (Occupational)	259	13	42	230
Children's Disability Benefit	204	17	43	178
Widows' Compensation Annuities (Service Connected Death)	66	0	1	65
Totals	<b>13,230</b>	<b>588</b>	<b>608</b>	<b>13,210</b>
Annual Benefits	<b>\$ 644,211,045</b>	<b>\$ 41,894,763</b>	<b>\$ 22,433,771</b>	<b>\$ 663,672,037</b>

**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, 2015**

AGE	Years of Service									Total	Annual Salary
	Under 1 year	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 and over		
Under 20										0	\$ 0
20 to 24	84 3,881,304	18 1,248,588								102	5,129,892
25 to 29	152 7,023,312	346 25,580,520								498	32,603,832
30 to 34	76 3,511,656	438 33,019,230	469 39,578,586	117 10,244,442						1,100	86,353,914
35 to 39	28 1,293,762	188 14,178,540	347 29,275,278	765 67,393,902	220 20,576,604					1,548	132,718,086
40 to 44	1 46,206	47 3,565,512	163 13,775,448	436 38,188,926	882 82,945,014	144 14,288,802				1,673	152,809,908
45 to 49		2 157,038	60 5,049,312	259 22,736,244	701 65,279,010	1,004 100,286,036	79 8,573,000			2,105	202,080,640
50 to 54				83 7,297,794	261 23,968,248	578 56,456,784	512 55,043,658	13 1,538,260		1,447	144,304,743
55 to 59				5 435,180	123 11,211,864	205 19,805,898	249 26,127,190	80 9,309,130		662	66,889,262
60 to 63				2 174,072	39 3,533,178	52 5,047,008	69 7,036,542	25 2,802,164	9 1,063,750	196	19,656,714
<b>Total Active</b>	<b>341</b>	<b>1,039</b>	<b>1,039</b>	<b>1,667</b>	<b>2,226</b>	<b>1,983</b>	<b>909</b>	<b>118</b>	<b>9</b>	<b>9,331</b>	
<b>Annual Salary</b>	<b>\$15,756,240</b>	<b>\$77,749,428</b>	<b>\$87,678,624</b>	<b>\$146,470,560</b>	<b>\$207,513,918</b>	<b>\$195,884,528</b>	<b>\$96,780,389</b>	<b>\$13,649,554</b>	<b>\$ 1,063,750</b>		<b>\$ 842,546,991</b>



**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, 2015**

AGE	Years of Service									Total	Annual Salary
	Under 1 year	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 and over		
Under 20	1 46,206									1	\$ 46,206
20 to 24	10 462,060	11 763,026								21	1,225,086
25 to 29	54 2,495,124	56 4,172,016								110	6,667,140
30 to 34	15 693,090	110 8,238,444	137 11,555,640	30 2,625,066						292	23,112,240
35 to 39	11 508,266	57 4,292,580	98 8,270,562	208 18,321,870	42 3,950,268					416	35,343,546
40 to 44	3 138,618	31 2,363,610	69 5,816,580	155 13,576,878	229 21,248,952	31 3,097,116				518	46,241,754
45 to 49			28 2,357,544	114 9,965,100	205 18,896,730	245 24,073,978	13 1,387,872			605	56,681,224
50 to 54				37 3,227,172	105 9,572,244	173 16,743,510	142 14,864,016	5 551,496		462	44,958,438
55 to 59				2 174,072	76 6,915,672	91 8,771,322	73 7,622,496	17 1,830,480		259	25,314,042
60 to 63				2 174,072	14 1,294,710	20 1,893,126	8 838,356		2 271,048	46	4,471,312
<b>Total Active</b>		<b>265</b>	<b>332</b>	<b>548</b>	<b>671</b>	<b>560</b>	<b>236</b>	<b>22</b>	<b>2</b>	<b>2,730</b>	
<b>Annual Salary</b>		<b>\$19,829,676</b>	<b>\$28,000,326</b>	<b>\$48,064,230</b>	<b>\$61,878,576</b>	<b>\$54,579,052</b>	<b>\$24,712,740</b>	<b>\$2,381,976</b>	<b>\$ 271,048</b>		<b>\$ 244,060,988</b>

**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, 2015**

AGE	Years of Service									Total	Annual Salary
	Under 1 year	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 and over		
Under 20	1 46,206									1	\$ 46,206
20 to 24	94 4,343,364	29 2,011,614								123	6,354,978
25 to 29	206 9,518,436	402 29,752,536								608	39,270,972
30 to 34	91 4,204,746	548 41,257,674	606 51,134,226	147 12,869,508						1,392	109,466,154
35 to 39	39 1,802,028	245 18,471,120	445 37,545,840	973 85,715,772	262 24,526,872					1,964	168,061,632
40 to 44	4 184,824	78 5,929,122	232 19,592,028	591 51,765,804	1,111 104,193,966	175 17,385,918				2,191	199,051,662
45 to 49		2 157,038	88 7,406,856	373 32,701,344	906 84,175,740	1,249 124,360,014	92 9,960,872			2,710	258,761,864
50 to 54				120 10,524,966	366 33,540,492	751 73,200,294	654 69,907,674	18 2,089,756		1,909	189,263,181
55 to 59				7 609,252	199 18,127,536	296 28,577,220	322 33,749,686	97 11,139,610		921	92,203,304
60 to 63				4 348,144	53 4,827,888	72 6,940,134	77 7,874,898	25 2,802,164	11 1,334,798	242	24,128,026
<b>Total Active</b>	<b>435</b>	<b>1,304</b>	<b>1,371</b>	<b>2,215</b>	<b>2,897</b>	<b>2,543</b>	<b>1,145</b>	<b>140</b>	<b>11</b>	<b>12,061</b>	
<b>Annual Salary</b>	<b>\$20,099,604</b>	<b>\$97,579,104</b>	<b>\$115,678,950</b>	<b>\$194,534,790</b>	<b>\$269,392,494</b>	<b>\$250,463,580</b>	<b>\$121,493,129</b>	<b>\$16,031,530</b>	<b>\$ 1,334,798</b>		<b>\$ 1,086,607,979</b>

**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, 2015**

Age at Date of Refund	Length of Service at Date of Refund						Total
	Under 1 Year	Between 1 and 2	Between 2 and 3	Between 3 and 4	Between 4 and 5	5 and over	
Under 20							<b>0</b>
20 to 24	1						<b>1</b>
25 to 29		2	2				<b>4</b>
30 to 34	2	2	1			12	<b>17</b>
35 to 39	2	1		1		7	<b>11</b>
40 to 44	2	2				5	<b>9</b>
45 to 49	1					2	<b>3</b>
50 to 54							<b>0</b>
55 to 59		1					<b>1</b>
60 to 63							<b>0</b>
<b>Totals</b>	<b>8</b>	<b>8</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>26</b>	<b>46</b>

*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, 2015**

Age at Date of Refund	Length of Service at Date of Refund						Total
	Under 1 Year	Between 1 and 2	Between 2 and 3	Between 3 and 4	Between 4 and 5	5 and over	
Under 20							0
20 to 24							0
25 to 29		1					1
30 to 34						1	1
35 to 39						1	1
40 to 44		1					1
45 to 49						1	1
50 to 54	1						1
55 to 59							0
60 to 63							0
<b>Totals</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>6</b>

*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, 2015**

AGE	MALE		FEMALE		TOTAL	
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
UNDER 50	5	\$ 63,000	3	\$ 37,800	8	\$ 100,800
50	12	686,712	11	615,433	23	1,302,145
51	38	2,309,949	22	1,258,494	60	3,568,443
52	45	2,747,697	20	1,039,967	65	3,787,664
53	38	2,357,241	26	1,431,916	64	3,789,157
54	41	2,297,379	23	1,273,223	64	3,570,602
55	85	5,560,284	30	1,975,524	115	7,535,808
56	105	6,595,586	54	3,127,753	159	9,723,339
57	92	5,849,599	71	4,209,492	163	10,059,091
58	128	7,948,333	74	4,332,539	202	12,280,872
59	104	6,321,277	73	3,931,354	177	10,252,631
60	136	8,656,074	57	2,996,037	193	11,652,111
61	183	13,089,695	76	4,474,525	259	17,564,220
62	208	14,355,037	79	4,809,360	287	19,164,397
63	285	18,982,707	99	5,927,251	384	24,909,958
64	394	27,510,688	98	5,889,547	492	33,400,235
65	434	30,826,056	107	6,258,476	541	37,084,532
66	461	31,196,130	80	4,616,199	541	35,812,329
67	497	34,018,392	104	5,777,936	601	39,796,328
68	561	38,101,325	72	4,088,185	633	42,189,510
69	521	34,279,785	45	2,074,619	566	36,354,404
70	331	21,421,749	35	1,765,684	366	23,187,433
71	336	21,607,621	39	2,063,952	375	23,671,573
72	369	23,155,216	37	1,687,750	406	24,842,966
73	322	19,716,155	23	1,076,172	345	20,792,327
74	283	16,542,396	16	872,649	299	17,415,045
75	229	13,521,137	14	702,567	243	14,223,704
76	212	12,200,352	2	45,143	214	12,245,495
77	207	11,739,185	3	179,293	210	11,918,478
78	151	8,133,067	5	243,897	156	8,376,964
79	134	7,232,740	5	291,543	139	7,524,283
80	120	6,567,138	1	42,861	121	6,609,999
81	99	5,344,446	0	0	99	5,344,446
82	109	5,733,514	0	0	109	5,733,514
83	121	6,211,889	0	0	121	6,211,889
84	101	5,485,310	0	0	101	5,485,310
85 to 89	351	16,522,978	0	0	351	16,522,978
90 to 94	123	4,762,554	0	0	123	4,762,554
95 to 99	7	213,277	0	0	7	213,277
100+	3	88,920	0	0	3	88,920
<b>Totals</b>	<b>7,981</b>	<b>\$499,952,590</b>	<b>1,404</b>	<b>\$79,117,141</b>	<b>9,385</b>	<b>\$579,069,731</b>

**EXHIBIT F**  
**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SHOWING STATISTICS ON WIDOW'S ANNUITIES**  
**CLASSIFIED BY AGE AS OF DECEMBER 31, 2015**

Age	No.	Annual Payments	Age	No.	Annual Payments
Under 30	1	\$ 23,578	65	63	\$ 1,492,700
30	0	0	66	82	1,794,303
31	1	29,068	67	91	2,223,356
32	1	20,479	68	94	2,098,512
33	1	20,953	69	102	2,274,718
34	0	0	70	89	1,900,772
35	0	0	71	81	1,798,099
36	1	19,399	72	108	2,366,150
37	0	0	73	111	2,354,384
38	2	50,519	74	88	1,967,694
39	0	0	75	86	1,798,511
40	3	62,088	76	92	1,897,759
41	3	98,422	77	121	2,259,472
42	2	40,828	78	116	2,243,703
43	5	105,930	79	112	2,239,556
44	6	120,722	80	97	1,851,019
45	8	199,231	81	87	1,691,826
46	9	174,990	82	92	1,780,281
47	5	108,428	83	94	1,691,875
48	9	189,307	84	105	1,851,177
49	4	90,960	85	102	1,799,129
50	11	245,220	86	83	1,445,281
51	10	228,037	87	80	1,302,195
52	14	325,375	88	86	1,454,395
53	8	201,843	89	82	1,314,167
54	14	296,898	90	57	841,712
55	19	431,464	91	47	717,873
56	17	349,723	92	46	687,050
57	22	495,385	93	30	444,597
58	24	507,928	94	29	388,669
59	28	686,975	95	31	410,700
60	31	762,365	96	10	137,953
61	52	1,251,937	97	12	154,267
62	44	1,168,664	98	9	108,000
63	42	1,030,965	99	5	60,000
64	53	1,163,600	100+	8	96,000
			<b>Total</b>	<b>3,078</b>	<b>\$61,439,136</b>

**EXHIBIT G**  
**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SHOWING STATISTICS ON MISCELLANEOUS ANNUITIES**  
**FOR FISCAL YEAR ENDING DECEMBER 31, 2015**

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	<u>No.</u>	<u>Annual Payments</u>
Children's Annuities	198	\$1,355,124
Widows' Compensation Annuities	65	4,212,049
Ordinary Disability Benefits	41	1,811,546
Occupational Disease Disability Benefits	35	1,970,048
Duty Disability Benefits	230	13,583,003
Children's Disability Benefits	178	231,400
<b>Totals</b>	<b>747</b>	<b>\$23,163,170</b>

**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, 2015**

Length of Service as of December 31, 2015														
ATTAINED AGE	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total	
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
UNDER 30													0	\$ 0
30 to 34			1	57,537	1	63,149							2	120,686
35 to 39			1	48,467	6	330,040	4	251,112					11	629,619
40 to 44			4	211,486	6	322,269	9	537,104	4	273,603		-	23	1,344,462
45 to 49			3	155,736	5	276,412	11	645,018	13	793,909	2	132,633	34	2,003,708
50 to 54			4	230,369	5	276,016	6	339,532	12	764,080	6	391,946	33	2,001,943
55 to 59			2	105,743	1	53,964	9	517,082	6	378,420	11	665,610	29	1,720,819
60 to 63			3	159,214	1	55,390	4	222,052	6	357,185	5	285,952	19	1,079,793
<b>Totals</b>	<b>0</b>	<b>\$0</b>	<b>18</b>	<b>\$ 968,552</b>	<b>25</b>	<b>\$1,377,240</b>	<b>43</b>	<b>\$2,511,900</b>	<b>41</b>	<b>\$2,567,197</b>	<b>24</b>	<b>\$1,476,141</b>	<b>151</b>	<b>\$ 8,901,030</b>



**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, 2015**

Length of Service as of December 31, 2015														
ATTAINED AGE	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total	
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
UNDER 30													0	\$ 0
30 to 34													0	0
35 to 39			1	50,170			1	63,286					2	113,456
40 to 44			4	205,531	1	51,912	4	247,173	1	76,923		-	10	581,539
45 to 49			1	53,964	2	112,946	3	168,897	6	376,155	3	189,758	15	901,720
50 to 54			2	107,302	5	281,849	7	409,994	4	231,586	4	280,062	22	1,310,793
55 to 59					4	232,288	5	280,500	7	417,558	4	268,451	20	1,198,797
60 to 63			1	53,831	1	53,831	6	333,202	1	65,567	1	69,237	10	575,668
<b>Totals</b>	<b>0</b>	<b>\$0</b>	<b>9</b>	<b>\$470,798</b>	<b>13</b>	<b>\$732,826</b>	<b>26</b>	<b>\$1,503,052</b>	<b>19</b>	<b>\$1,167,789</b>	<b>12</b>	<b>\$807,508</b>	<b>79</b>	<b>\$ 4,681,973</b>

**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, 2015**

Length of Service as of December 31, 2015														
ATTAINED AGE	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total Annual Payments	
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments		
UNDER 30													0	\$ 0
30 to 34					2	83,799							2	83,799
35 to 39							1	43,518					1	43,518
40 to 44					1	40,817	1	44,541			1	44,541	3	129,899
45 to 49							2	81,232	2	85,076	4	189,749	8	356,057
50 to 54									2	85,461	1	45,155	3	130,616
55 to 59											4	181,520	4	181,520
60 to 63													0	0
<b>Totals</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>3</b>	<b>\$124,616</b>	<b>4</b>	<b>\$169,291</b>	<b>4</b>	<b>\$170,537</b>	<b>10</b>	<b>\$460,965</b>	<b>21</b>	<b>\$ 925,409</b>

**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, 2015**

Length of Service as of December 31, 2015														
ATTAINED AGE	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total	
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
UNDER 30													0	\$ 0
30 to 34													0	0
35 to 39					1	40,817							1	40,817
40 to 44							1	43,104					1	43,104
45 to 49					1	42,099			2	88,142	5	232,976	8	363,217
50 to 54									2	85,573	3	134,918	5	220,491
55 to 59									2	84,751	2	89,216	4	173,967
60 to 63									1	44,541		-	1	44,541
<b>Totals</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>2</b>	<b>\$82,916</b>	<b>1</b>	<b>\$43,104</b>	<b>7</b>	<b>\$303,007</b>	<b>10</b>	<b>\$457,110</b>	<b>20</b>	<b>\$ 886,137</b>

**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, 2015**

Length of Service as of December 31, 2015														
ATTAINED AGE	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total	
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
UNDER 30													0	\$ 0
30 to 34													0	0
35 to 39													0	0
40 to 44							1	61,019					1	61,019
45 to 49													0	0
50 to 54							1	53,523	2	105,817	6	378,777	9	538,117
55 to 59									4	201,043	8	485,159	12	686,202
60 to 63							1	46,569	1	54,639	3	165,453	5	266,661
<b>Totals</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>3</b>	<b>\$161,111</b>	<b>7</b>	<b>\$361,499</b>	<b>17</b>	<b>\$1,029,389</b>	<b>27</b>	<b>\$ 1,551,999</b>

**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, 2015**

Length of Service as of December 31, 2015														
ATTAINED AGE	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total	
	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
UNDER 30													0	\$ 0
30 to 34													0	0
35 to 39													0	0
40 to 44									1	60,267			1	60,267
45 to 49							1	44,859			1	56,609	2	101,468
50 to 54							1	46,158	1	47,868	2	116,130	4	210,156
55 to 59													0	0
60 to 63									1	46,158			1	46,158
<b>Totals</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>0</b>	<b>\$0</b>	<b>2</b>	<b>\$91,017</b>	<b>3</b>	<b>\$154,293</b>	<b>3</b>	<b>\$172,739</b>	<b>8</b>	<b>\$ 418,049</b>

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

<b>Year End</b>	<b>Members in Service</b>	<b>Increase</b>	<b>Current Year Salary</b>	<b>Increase</b>	<b>Average Salary</b>	<b>Increase</b>	<b>Actuarial Assumptions</b>	<b>CPI Chicago</b>
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>1</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>2</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	1.5
2015	12,061	0.3	1,086,607,979	1.1	90,093	0.8	4.80 <sup>3</sup>	0.0
<b>Average Increase (Decrease) for the last 5 years:</b>		<b>(1.1)%</b>		<b>0.7 %</b>		<b>1.9 %</b>		<b>1.1 %</b>

<sup>1</sup> Figures do not include retroactive raise.

<sup>2</sup> Pay definition changed to include duty availability pay. Of the \$1,086,607,979 current year salary, \$39,722,819 is duty availability pay.

<sup>3</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 2015**

	Annuitants	Widows/ Widowers of Deceased Employees <sup>1</sup>	Widows/ Widowers of Deceased Annuitants	Compensation Widows/ Widowers
Number retired/deceased	363	6	141	0
Average age attained	57.5	45.6	73.3	0.0
Average length of service	26.5	N/A	N/A	N/A
Average annual salary <sup>2</sup>	\$ 96,275	N/A	N/A	N/A
Average annual final salary	\$ 99,883	N/A	N/A	N/A
Total annual annuity	23,470,526	153,059	3,887,099	0
Average annual annuity	64,657	25,509	27,568	0
Total liability [(Based on 3% Comb. and 4% Amer. Exp.)]	\$ 344,982,022	2,870,295	34,230,477	0
Average liability	\$ 950,364	478,383	242,769	0
Total investment [Employee-paid for tax purposes]	\$ 140,750	N/A	N/A	N/A
Average investment <sup>3</sup>	\$ 388	N/A	N/A	N/A
Liability/cost	2,451.0	N/A	N/A	N/A
Liability/final pay	\$ 9.51	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 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**

Years	ANNUITANTS			DISABILITY				Widow Comp.	Total
	Employee	Spouse <sup>1</sup>	Child	Ordinary	Duty	Occup.	Child <sup>2</sup>		
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
2015	9,385	3,078	198	41	230	35	178	65	13,210

<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**

<b>Years Ended</b>	<b>Average Annual Benefit</b>	<b>Average Current Age of Retirees</b>	<b>Average Age at Retirement Current Year *</b>	<b>Average Years of Benefit Service at Retirement Current Year *</b>
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
2015	61,702	69	57.5	26.5

\* Averages for New Annuitants in 2015.

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

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<b>Year End</b>	<b>Number of Annuitants</b>	<b>Total Annuities</b>	<b>Average Annuities</b>
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
2015	9,385	579,069,731	61,702

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

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Year End	Number of Annuitants	Total Annuities	Average Annuities
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
2015	3,078	61,439,136	19,961

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

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<b>Year End</b>	<b>Employee</b>	<b>Spouse<sup>1</sup></b>	<b>Total</b>
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
2015	8,278	2,127	10,405

<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**

Years	Retirement		Disability		Widow <sup>1</sup>		Child		Totals	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Under \$100	6								6	0
\$100 to under \$250	10	3					105	95	115	98
\$250 to under \$500	22	8					27	24	49	32
\$500 to under \$750	20	3					42	46	62	49
\$750 to under \$1,000	4	4					17	12	21	16
\$1,000 to under \$2,000	80	38			38	2,172	7	1	125	2,211
\$2,000 to under \$3,000	312	32	1		12	743			325	775
\$3,000 to under \$4,000	1,038	363	29	25		96			1,067	484
\$4,000 to under \$5,000	1,862	414	96	49		32			1,958	495
\$5,000 to under \$6,000	2,614	328	66	30	3	38			2,683	396
\$6,000 to under \$7,000	1,325	151	6	3		4			1,331	158
\$7,000 to under \$8,000	416	33	1			2			417	35
\$8,000 to under \$9,000	144	9				1			144	10
\$9,000 to under \$10,000	50	11				1			50	12
\$10,000 and over	78	7				1			78	8
<b>Totals:</b>	<b>7,981</b>	<b>1,404</b>	<b>199</b>	<b>107</b>	<b>53</b>	<b>3,090</b>	<b>198</b>	<b>178</b>	<b>8,431</b>	<b>4,779</b>

<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 2015**

Years of Service:	0-9	10-14	15-19	20-24	25-29	30-34	>= 35	Total
2010								
Number of Retired Members	0	1	13	105	161	140	131	<b>551</b>
Average annual salary used	\$0	\$81,122	\$70,339	\$80,639	\$88,735	\$91,739	\$92,194	<b>\$88,330</b>
Average Monthly Benefit	\$0	\$2,535	\$2,667	\$3,837	\$5,385	\$5,734	\$5,762	<b>\$5,199</b>
2011								
Number of Retired Members	1	8	16	95	175	103	102	<b>500</b>
Average annual salary used	\$18,730	\$76,848	\$70,140	\$82,778	\$92,829	\$93,780	\$98,280	<b>\$91,097</b>
Average Monthly Benefit	\$390	\$2,158	\$2,728	\$3,949	\$5,497	\$5,861	\$6,142	<b>\$5,257</b>
2012								
Number of Retired Members	0	9	22	123	217	88	80	<b>539</b>
Average annual salary used	\$0	\$72,245	\$65,305	\$85,175	\$92,825	\$94,854	\$98,415	<b>\$90,773</b>
Average Monthly Benefit	\$0	\$2,066	\$2,511	\$4,002	\$5,408	\$5,928	\$6,151	<b>\$5,108</b>
2013								
Number of Retired Members	0	6	20	118	161	62	34	<b>401</b>
Average annual salary used	\$0	\$62,730	\$75,088	\$86,979	\$94,193	\$99,759	\$102,980	<b>\$92,252</b>
Average Monthly Benefit	\$0	\$1,809	\$2,857	\$4,164	\$5,427	\$6,235	\$6,436	<b>\$5,084</b>
2014								
Number of Retired Members	0	4	18	122	180	44	24	<b>392</b>
Average annual salary used	\$0	\$64,795	\$72,985	\$87,586	\$95,372	\$94,991	\$104,035	<b>\$92,097</b>
Average Monthly Benefit	\$0	\$1,907	\$2,815	\$4,230	\$5,746	\$6,052	\$6,634	<b>\$5,189</b>
2015								
Number of Retired Members	0	7	14	105	184	42	11	<b>363</b>
Average annual salary used	\$0	\$34,263	\$85,670	\$90,037	\$100,124	\$104,876	\$102,529	<b>\$96,001</b>
Average Monthly Benefit	\$0	\$951	\$3,334	\$4,271	\$6,005	\$6,555	\$6,408	<b>\$5,379</b>

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

Yr.	Added to Payroll		Removed from Payroll		Payroll End of Year		Average Annual Benefits	Increase to Avg. Benefits
	No.	Annual Benefits.	No.	Annual Benefits	No.	Annual Benefits		
<b>Employee Annuitants (Male and Female)</b>								
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%
2015	363	34,830,781	289	15,450,195	9,385	579,069,731	61,702	2.6%
<b>Widow/Widower Annuitants (Not Including Compensation) <sup>1</sup></b>								
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%
2015	147	4,022,206	178	2,831,532	3,078	61,439,136	19,961	3.0%

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

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## **APPENDIX 4**

ACTUARIAL METHODS AND ASSUMPTIONS AS OF  
DECEMBER 31, 2015

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**POLICEMEN’S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**ACTUARIAL METHODS AND ASSUMPTIONS AS OF DECEMBER 31, 2015**

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**I. ACTUARIAL COST METHOD**

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

Under the Projected Unit Credit Cost Method, 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: **Pre-Retirement mortality rates:** Sex distinct Retirement Plans 2014 Total Employee mortality table weighted 85% for males and 115% for females.

**Post-Retirement Healthy mortality rates:** 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.

**ACTUARIAL METHODS AND ASSUMPTIONS  
AS OF DECEMBER 31, 2015 (CONT'D)**

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

<u>ATTAINED AGE</u>	<u>RATE</u>
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 provisions of the Fund. The rates assumed are as follows:

For members hired before January 1, 2011:

<u>ATTAINED AGE</u>	<u>RATE<sup>1</sup></u>
50	.05
51	.05
52	.05
53	.05
54	.05
55	.19
56	.19
57	.19
58	.25
59	.25
60	.25
61	.30
62	.30
63	1.00

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

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
**AS OF DECEMBER 31, 2015 (CONT'D)**

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For members hired on or after January 1, 2011:

<u>ATTAINED AGE</u>	<u>RATE</u> <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

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

Turnover Rates:                      The following sample rates exemplify the table:

<u>YEARS OF SERVICE</u>	<u>RATE</u>
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.

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
**AS OF DECEMBER 31, 2015 (CONT'D)**

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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 *	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, 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 male spouse is assumed to be three years older than the female spouse. No assumption is made about other dependents.

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
**AS OF DECEMBER 31, 2015 (CONT'D)**

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**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 and all annuitants less than age 65 will not 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 PA 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, 2015 is 12,061.

**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, 2015. These members were hired from January 1, 2011, through December 31, 2014.

Entry Age	Number
20 to 25	79
25 to 30	696
30 to 35	364
35 to 40	162
40 to 45	4

- (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 \$46,668 for the plan year ending December 31, 2015. This amount does not include duty availability pay. The new entrant pay for members hired after 2015 is assumed to increase by the wage inflation assumption of 3.75% plus duty availability pay after 3 years, increased by CPI compounded.

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**ACTUARIAL METHODS AND ASSUMPTIONS**  
**AS OF DECEMBER 31, 2015 (CONT'D)**

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- (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 \$111,572 for plan year 2015, increasing by 1.5% per year after plan year 2015. 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 \$4,509,000 for plan year end December 31, 2015, increased by 3.0% per year.

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## **APPENDIX 5**

SUMMARY OF PROVISIONS OF THE FUND AS OF  
DECEMBER 31, 2015

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**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SUMMARY OF PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS**  
**AS OF DECEMBER 31, 2015**

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***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.

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***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.

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***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, 2015 (CONT'D)**

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***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.

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***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%.*

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SUMMARY OF PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS**  
**AS OF DECEMBER 31, 2015 (CONT'D)**

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***Reversionary 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.

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***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.

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SUMMARY OF PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS**  
**AS OF DECEMBER 31, 2015 (CONT'D)**

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***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.*

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***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 be 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.

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***DUTY DISABILITY BENEFIT***

***Eligibility*** Disabling condition incurred in the performance of duty.

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SUMMARY OF PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS**  
**AS OF DECEMBER 31, 2015 (CONT'D)**

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**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.

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**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.

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**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.

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**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.

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SUMMARY OF PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS**  
**AS OF DECEMBER 31, 2015 (CONT'D)**

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**Benefit**

**Death in Service:**

<b>AGE AT DEATH</b>	<b>BENEFIT</b>
49 and under	\$12,000
50-62	\$12,000 less \$400 for each year by which age at death exceeds 49

**Death after Retirement:**

<b>AGE AT DEATH</b>	<b>BENEFIT</b>
50 and over	\$6,000

If death results from injury incurred in performance of duty before retirement on annuity, the benefit payable is \$12,000 regardless of the attained age.

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**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.

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**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.

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**CONTRIBUTIONS**

**Salary Deductions**

Employee	7 %
Spouse	1½%
Annuity Increase	½%
	9 %

**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SUMMARY OF PRINCIPAL ELIGIBILITY AND BENEFIT PROVISIONS**  
**AS OF DECEMBER 31, 2015 (CONT'D)**

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<i>City Contributions</i> <sup>1</sup>	Employee	9-5/7%	
	Spouse	2%	
	Annuity Increase	1/2%	Unallocated
		12-3/14%	

<sup>1</sup> Credited to Participant's Accumulation Annuity and Widow'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 employee contributions were "picked up" by the employer. The W-2 salary is therefore reduced by the amount of contribution. For pension purposes the salary remains unchanged. Income tax will be paid when a refund or annuity is received. For the purpose of benefits, refunds or contributions, these contributions will be treated as employee contributions.

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

Year Ending	CPI-U	1/2 CPI-U	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
2016	0.00%	0.00%	0.00%	\$111,571.63

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## **APPENDIX 6**

### **LEGISLATIVE CHANGES 1979 THROUGH 2015**

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# **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2015**

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## **1979 Session**

### ***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 2015 (CONT'D)**

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### ***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.

## **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2015 (CONT'D)**

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### **1984 Session**

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 2015 (CONT'D)**

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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.

# **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2015 (CONT'D)**

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## **1992 Session**

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 2015 (CONT'D)**

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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, 2015. 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.

# **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2015 (CONT'D)**

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## **2001 Session**

### **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.

# **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2015 (CONT'D)**

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## **2003 Session**

### ***SB 1701***

- Effective July 1, 2003.
- The healthcare benefits were increased to \$85 per month for non-Medicare eligible participants and \$55 per month for Medicare eligible participants for the period from July 1, 2003, through June 30, 2008. Thereafter, the benefits are increased from \$85 to \$95 and \$55 to \$65 for the period July 1, 2008, to June 30, 2013.
- The healthcare benefits referred to above are not and shall not be construed to be pension or retirement benefits for the purposes of Section 5 of Article XIII of the Illinois Constitution of 1970.

## **2004 Session**

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

- Effective January 16, 2004.
- 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.

## **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2015 (CONT'D)**

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### ***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.



# **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2015 (CONT'D)**

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## **2009 Session**

### ***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.

## **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2015 (CONT'D)**

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### **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.

## **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2015 (CONT'D)**

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### **2011 Session**

#### ***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.

## **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2015 (CONT'D)**

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### ***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.

## **POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO LEGISLATIVE CHANGES 1979 THROUGH 2015 (CONT'D)**

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### **2013 Session**

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

- Approved and effective June 28, 2013.
- Changes the duration of health insurance supplement payments to eligible employee annuitants to “Beginning July 1, 2008 and until such time as the city no longer provides a health care plan for such annuitants or December 31, 2016, whichever comes first.”

#### ***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.

### **2015 Session**

No legislative changes.

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**APPENDIX 7**

**ADDITIONAL EXHIBITS – GASB DISCLOSURES**

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**EXHIBIT A-1 (CONT'D)**  
**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**GASB #43 AND #45 DISCLOSURES**

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Prior to fiscal year ending December 31, 2014, the accounting policies of the City of Chicago relative to its retirement funds were based on the terms of GASB Statements Nos. 25 and 27. Effective with fiscal year ending December 31, 2014, GASB Statement No. 67 replaced GASB Statement No. 25 for pension plan financial reporting. Effective with fiscal year ending December 31, 2015, GASB Statement No. 68 replaced GASB Statement No. 27 for employer financial reporting. A separate report containing the information required under GASB Statements Nos. 67 and 68 has been provided to the Fund. GASB has issued Statement No. 43 – Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans and Statement No. 45 – Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions. GASB Statements Nos. 43 and 45 pertain to postretirement benefits other than pensions.

This report includes the following exhibits with information required to be reported under GASB Statements Nos. 43 and 45. **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 #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-3:** 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-4:** Supplementary Information for GASB #43

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

**Exhibit A-5:** Annual OPEB Cost and Contributions Made for GASB #45 for 2015

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-6:** 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 #43**

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<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) Entry Age (b)</b>	<b>Unfunded AAL (UAAL) (b - a)</b>	<b>Funded Ratio (a/b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Covered Payroll ((b - a) / c)</b>
12/31/2005	\$ 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%
12/31/2015	0	9,255,090	9,255,090	0.00%	1,086,607,979	0.85%



**EXHIBIT A-3**  
**POLICEMEN’S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SCHEDULE OF EMPLOYER CONTRIBUTIONS FOR GASB #43**

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<b>For Year Ending December 31</b>	<b>Annual Required Contribution</b>	<b>Actual Employer Contribution</b>	<b>Percentage Contributed</b>
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	9,441,534	98.02%
2016	9,468,955	TBD	TBD

**EXHIBIT A-4**  
**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**SUPPLEMENTARY INFORMATION FOR GASB #43**

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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:

<b>Valuation Date</b>	December 31, 2015
<b>Actuarial Cost Method</b>	Entry Age Normal
<b>Actuarial Value of Assets</b>	No assets (Pay-as-you-go)
<b>Amortization Method</b>	Level percent
<b>Remaining Amortization Period</b>	2 year closed - period for FY 2015.
<b>Actuarial Assumptions:</b>	
<b>OPEB Investment Rate of Return</b>	4.50%
<b>General Inflation</b>	3.00%
<b>Projected Salary Increases</b>	3.75% per year, plus additional percentage related to service.
<b>Healthcare Cost Trend Rate</b>	0.00% <sup>1</sup>

	<b>2014</b>	<b>2015</b>
Payable to Retirees, Beneficiaries, and Inactives	\$ 17,517,865	\$ 8,800,257
Current Employees:		
Accumulated Employee Contributions Including Statutory Interest	-	-
Payable to Vested and Non-Vested Employees	1,244,260	454,833
Total Actuarial Accrued Liability	\$ 18,762,125	\$ 9,255,090
Net Plan Actuarial Assets	-	-
Unfunded AAL (assets in excess of AAL)	\$ 18,762,125	\$ 9,255,090
Percent Funded	0.00%	0.00%
Unfunded AAL as Percent of Payroll	1.75%	0.85%
Payroll	\$ 1,074,333,318	\$ 1,086,607,979

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

**EXHIBIT A-5**  
**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**ANNUAL OPEB COST AND CONTRIBUTIONS**  
**MADE FOR GASB #45 FOR 2015**

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**Contribution Rates**

City	Pay-as-you-go
Plan Members	None

**Annual OPEB Cost for 2015**

Annual Required Contribution (ARC)	\$ 9,632,405
Interest on Net OPEB Obligation	390,794
Adjustment to ARC	<u>(4,357,793)</u>
Total	\$ 5,665,406

**Contributions Made in 2015**

\$ 9,441,534

**Net OPEB Obligation (NOO):**

NOO at 12/31/2014	\$ 8,684,310
Increase/(Decrease) in NOO	<u>(3,776,128)</u>
NOO at 12/31/2015	\$ 4,908,182

**EXHIBIT A-6**  
**POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO**  
**OPEB COST SUMMARY FOR GASB #45**

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<b>Year Ended December 31</b>	<b>Annual OPEB Cost</b>	<b>% of Annual OPEB Cost Contributed</b>	<b>Net OPEB Obligation</b>
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
2015	5,665,406	166.65	4,908,182