Policemen's Annuity and Benefit Fund of Chicago

Actuarial Valuation Report for the Year Ending December 31, 2024

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May 16, 2025

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

Subject: Actuarial Valuation Report for the Year Ending December 31, 2024

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 PABF" or "the Fund") as of December 31, 2024. The primary purposes of this actuarial valuation are to determine the statutory contribution for tax levy year 2026 (i.e., payment year 2027) and to measure the funded status of the Fund as of December 31, 2024, based on the statutes in effect as of December 31, 2024. This report also provides the development of the plan year end 2025 Actuarially Determined Contribution ("ADC") as required by GASB Statement Nos. 67 and 68. Other information required under GASB Statement Nos. 67 and 68 is provided in a separate report. The actuarial assumptions and methods used were recommended by the actuary and approved by the Board.

We have prepared the supporting schedules for the actuarial section of the annual comprehensive 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 Actuarially Determined Contributions under GASB Statement Nos. 67 and 68;
- Development of Actuarial Gains and Losses; and
- Summary of Basic Actuarial Values.

This actuarial 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 – The actuarial value of assets is used in the development of the statutory contribution requirements. In each future fiscal year, investment 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 Entry-Age Normal cost method. The objective of this method is to recognize the costs of Fund benefits over the entire career of each member as a level percentage of compensation. 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.

Actuarial Assumptions – The actuarial assumptions have been updated from the prior actuarial valuation and reflect the results of the experience study performed for the five-year period of January 1, 2019 through December 31, 2023, approved by the Board on February 24, 2025. 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, 2024.

The funding objective of the Fund is to provide employer and employee contributions sufficient to provide the benefits of the Fund when due. Pursuant to Public Act ("P.A.") 99-0506, effective May 30, 2016, the funding policy was amended and required City contributions to be 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. The projections are based on an open group, level percent of pay financing and the Entry-Age Normal cost method. This actuarial valuation determines the statutory contribution of **$1,040.3** million (73.1% of projected pay) for tax levy year 2026 (i.e., payment year 2027).

This is a severely underfunded plan. The funded ratio is only **24.6%** (using actuarial value of assets) and the unfunded liability is approximately $13.5 billion as of December 31, 2024. The funded ratio is not projected to even reach 50% funded for another 18 years until 2042. The funded ratio is projected to increase to 47.0% in 2040, 57.0% in 2045, 70.7% in 2050, and 90.0% in 2055. The statutory funding policy generates "back-loaded" City contributions with slow growth in the funded ratio.

The funding policy defined in P.A. 99-0506 significantly defers contributions when compared to the provisions of the prior funding policy defined in P.A. 96-1495. P.A. 99-0506 extended the 90% funding target year from 2040 to 2055. The amount of annual contributions defined under P.A. 99-0506 does not even cover normal cost plus interest on the unfunded liability for the next five years. This means the unfunded liability is actually projected to increase to a high of $14.0 billion in 2029, when contributions are finally sufficient to start reducing the unfunded liability.

Underfunding the Fund creates the risk that the long-term investment return cannot be supported, minimal investment income is available to pay benefits, or worse, that benefit obligations cannot be met from the trust. We do not endorse the statutory funding policy under P.A. 99-0506 because it defers funding for benefits into the future and places a higher burden on future generations of taxpayers.

We understand that P.A. 99-0506 defines the amount of City Contributions to the PABF. Nevertheless, we continue to recommend that the plan sponsor seriously consider making additional contributions (in excess of the statutory requirement) to ensure that there are sufficient assets available in the fund in all years to pay the promised benefits.

We also recommend performing projections which include pessimistic scenarios such as investment return lower than assumed, lower contributions received than expected, higher benefit payments than expected, etc. to more fully understand the impact of less than optimal future expectations. Performing projections will allow the Board to evaluate the sensitivity of the current statutory funding policy. We expect the combined effect of a few pessimistic but plausible scenarios could cause the City's contribution to increase significantly. These projections will likely show how the current back-loaded statutory funding policy provides virtually no margin for future adverse experience.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Appendix 4 of this report. This report includes risk metrics starting on page 15 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this report. Pages 18 to 19 of the report provide the hypothetical Low-Default-Risk Obligation Measure as required by ASOP No. 4.

This actuarial valuation assumes that the City will be able to make future contributions on a timely basis. We did not perform an analysis of the ability of the City to make future contributions. Such an analysis is not within the scope of our assignment. Failure to receive City contributions on a timely basis could jeopardize the sustainability of the Fund.

The funding actuarial valuation results contained in this report were prepared based on the statutes in effect as of December 31, 2024. The projected contributions contained in this report will be used to develop the blended discount rate under GASB Statement Nos. 67 and 68.

The actuarial valuation was based on census data as of December 31, 2024, as provided by the Fund's Staff. We reviewed the census data for reasonableness and consistency. We are not responsible for the accuracy or completeness of the information provided by the Fund's Staff.

This report was prepared using actuarial assumptions, as described in Appendix 4, which were approved by the Board. All actuarial assumptions used in this report are reasonable for the purpose of the actuarial valuation and follow the applicable Actuarial Standards of Practice.

The actuarial 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 actuarial 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, 2024, and fairly presents the actuarial position of the Fund as of December 31, 2024. Based on these items, we certify these results to be true and correct.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation, and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled. We are relying on the GRS actuaries and Internal Software, Training, and Processes Team who developed and maintain the model.

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.

This report was prepared at the request of the Board and is intended for use by the Fund and those designated or approved by the Board. This report may be provided to parties other than the Fund only in its entirety and only with the permission of the Fund. GRS is not responsible for unauthorized use of this report.

Alex Rivera and Francois Pieterse are Members of the American Academy of Actuaries (MAAA) 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,
Gabriel, Roeder, Smith & Company

Alex Rivera

Alex Rivera, FSA, EA, MAAA, FCA
Senior Consultant

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Senior Consultant

Table of Contents

Table of Contents

Appendix 3 (Cont'd)

Table of Contents

Summary of Actuarial Valuation Results

This report sets forth the results of the actuarial valuation of the Policemen's Annuity and Benefit Fund of the City of Chicago ("the PABF" or "the Fund") as of December 31, 2024. This actuarial valuation is based on the funding provisions in effect as of December 31, 2024. The purposes of this actuarial valuation are:

1. To provide the statutory contribution for tax levy year 2026 (i.e., payment year 2027) based on the provisions of Public Act 99-0506.
2. To estimate the projected statutory contributions for tax levy years after 2026 based on the provisions of Public Act 99-0506, for purposes of developing the blended discount rate under GASB Statement Nos. 67 and 68.
3. To develop the actuarially determined contributions (ADC) under GASB Statement Nos. 67 and 68 for plan year 2025.
4. To review the funded status of the Fund as of December 31, 2024, based on the statutes in effect as of the actuarial valuation date.

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

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

Purpose	Actuarial Cost Method	Asset Value
Statutory Funding	Entry-Age Normal	Actuarial (Market-Related) Value of Assets
Fund reporting after 2014 (GASB Statement No. 67 for pension benefits)	Entry-Age Normal	Market Value of Assets
City reporting after 2015 (GASB Statement No. 68 for pension benefits)	Entry-Age Normal	Market Value of Assets

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 actuarial valuation date. The Normal Cost is the portion of the present value associated with pay during the current plan year.

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, with the exception of the investment return assumption.

Comments on Results

P.A. 99-0506, effective as of May 30, 2016, changed the City's contribution policy to a fixed dollar contribution of $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 through 2055 which, along with member contributions and investment earnings, are expected to generate a projected funded ratio of 90% by plan year end 2055.

This actuarial valuation determines the statutory contribution of **$1,040.3** million (**73.1%** of projected pay) for tax levy year 2026 (i.e., payment year 2027). The statutory contribution rate decreased slightly from 73.4% for tax levy year 2025 to 73.1% for tax levy year 2026. The slight decrease in the contribution rate was primary due to the updated actuarial assumptions, based on the latest experience study and favorable demographic experience.

The actuarial assumptions have been updated since the last actuarial valuation as of December 31, 2023. The updated actuarial assumptions are based on an experience study performed for the period January 1, 2019 through December 31, 2023. The Board approved the updated actuarial assumptions on February 24, 2025, and became effective beginning with the December 31, 2024 actuarial valuation.

Under the current statutory funding policy the funded ratio is projected to increase slowly over the next 10 years from **24.6%** in 2024 to 36.2% in 2033. The funded ratio is projected to increase to 47.0% in 2040, 57.0% in 2045, 70.7% in 2050, and 90.0% in 2055. The statutory funding policy generates "back-loaded" City contributions with slow growth in the funded ratio. Underfunding the Fund creates the risk that the long-term investment return cannot be supported, minimal investment income is available to pay benefits, or worse, that benefit obligations cannot be met from the trust.

The calculations in this report were prepared based on the funding policy methods required by Public Act 99-0506. In light of the current funded status of this Retirement Fund, 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 the net normal cost plus the amortization of the unfunded actuarial liability over a reasonable period. For example, contributing the net normal cost plus the amortization of the unfunded actuarial liability on a level dollar basis over a 25-year closed period, in our opinion, would produce a reasonable growth pattern in the funded ratio. Using this basis, the City's Actuarially Determined Contribution ("ADC") for plan year end 2025, net of member contributions, is approximately $1,339.1 million, or **97.3%** of payroll, which compares to the current statutory contribution of $1,042.6 million or **75.7%** of payroll. The ADC is a required disclosure item under GASB Statement Nos. 67 and 68. We recognize that the State Statute governs the funding policy of the Fund. The purpose of these recommendations is to highlight the difference between the Statutory appropriation methodology and an actuarially sound funding policy and to highlight the risks and additional costs of continuing to underfund the Fund.

The City of Chicago made additional contributions above the statutory minimum of $89.5 million during FY 2023, $79.8 million during FY 2024, and $67.4 million during FY 2025. For purposes of developing future statutory contribution requirements, we have assumed no additional City contributions, after the valuation date in our projections.

Effective with Fiscal Year ending December 31, 2014, GASB Statement No. 67 is used for pension plan financial reporting requirements. GASB Statement No. 68 is used for employer financial reporting effective with fiscal year ending December 31, 2015. The discount rate used for GASB Statement Nos. 67 and 68 reporting purposes will be based on a single equivalent discount rate using a combination of 6.75% 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).

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

Based on Fund experience during the year, the total unfunded actuarial accrued liability (using the actuarial value of assets) was approximately $75 million more than expected. The unfunded liability as of December 31, 2024 was $13.53 billion compared to an expected value of $13.45 billion. The key reason for the increase includes changes in actuarial assumptions.

Using the actuarial value of assets produced an unfunded liability of $13.53 billion and a funded ratio of 24.6%. Using the market value of assets produced an unfunded liability of $13.62 billion and a funded ratio 24.1%. Using the book value of assets produced an unfunded liability of $14.23 billion and a funded ratio of 20.7%.

Please note the highlighted area on page 38 showing the age/service distribution for active members. A large portion of the population is at or nearing retirement. In addition, the number of active members has decreased over the past five years. 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 2024 Gain/Loss Analysis explanation on pages 13 and 14 and the gain/loss information in Table 5.

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

Summary of Actuarial Valuation Results

Actuarial Valuation at:	12/31/2023		12/31/2024	
	$ in Millions	% of Proj Pay [1]	$ in Millions	% of Proj Pay [1]
Contribution Levels				
Statutory Contribution [2]	$ 1,042.58	73.38%	$ 1,040.27	73.07%
Tax Levy Year/Payment Year	2025 / 2026		2026 / 2027	
Actuarially Determined Contribution [3]	1,242.01	89.99	1,339.13	97.27
Plan Year	2024		2025	
Funded Status - Actuarial Value [4]				
Actuarial Value of Assets	$ 4,090.21		$ 4,421.16	
Actuarial Liability	17,500.21		17,948.10	
Funded Ratio	23.37%		24.63%	
Funded Status - Market Value				
Market Value of Assets	$ 3,869.93		$ 4,325.46	
Actuarial Liability	17,500.21		17,948.10	
Funded Ratios	22.11%		24.10%	

[1] *For the actuarial valuation as of December 31, 2023, payroll as of the valuation date was $1,340 million and projected payroll was estimated to be $1,380 million in 2024. For the actuarial valuation as of December 31, 2024, payroll as of the valuation date was $1,338 million and projected payroll is estimated to be $1,377 million in 2025.*

[2] *Pursuant to P.A. 99-0506, the fiscal year 2025 tax levy, payable in fiscal year 2026, is equal to $1,042,582,135 and the fiscal year 2026 tax levy, payable in fiscal year 2027, is equal to $1,040,273,100 . The statutory contribution expressed as a percentage of pay is based on projected payroll for the respective tax levy year.*

[3] *The ADC amortization period was changed from 30-year level dollar for plan year 2024 to 25-year closed level dollar for plan year 2025.*

[4] *Also used to determine the Actuarially Determined Contribution under GASB Statement Nos. 67 and 68.*

Five-Year Projection of Statutory Contributions

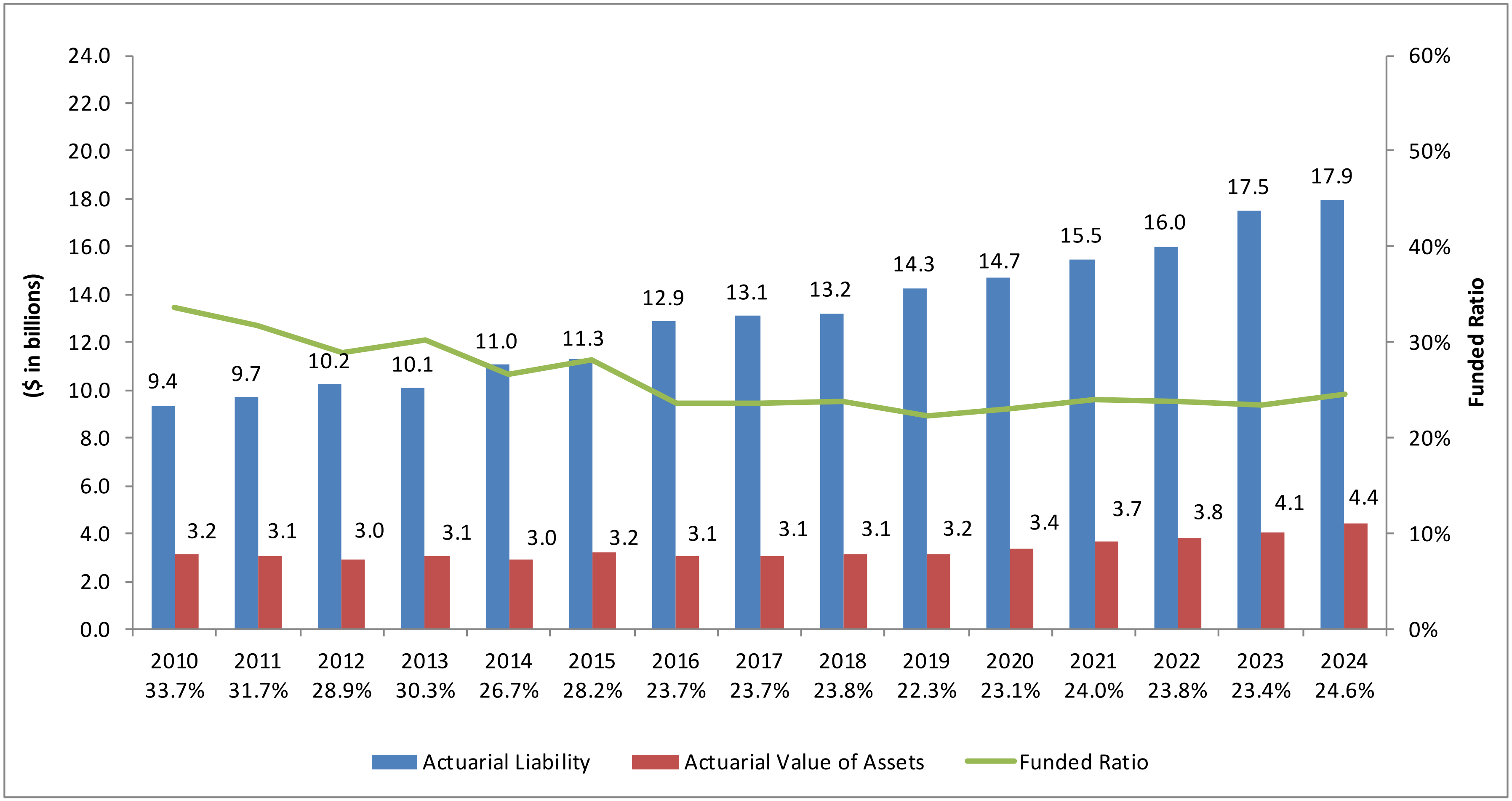
Following is a five-year projection of the statutory contributions based on statutory actuarial calculations.

City Contributions $ in Thousands		
Tax Levy Year	Payment Year	Statutory Contribution
2024	2025	$ 928,842
2025	2026	1,042,582
2026	2027	1,040,273
2027	2028	1,072,909
2028	2029	1,105,644

Statutory Contributions for payment years 2028 and 2029 are estimated amounts and will be updated in subsequent actuarial valuations.

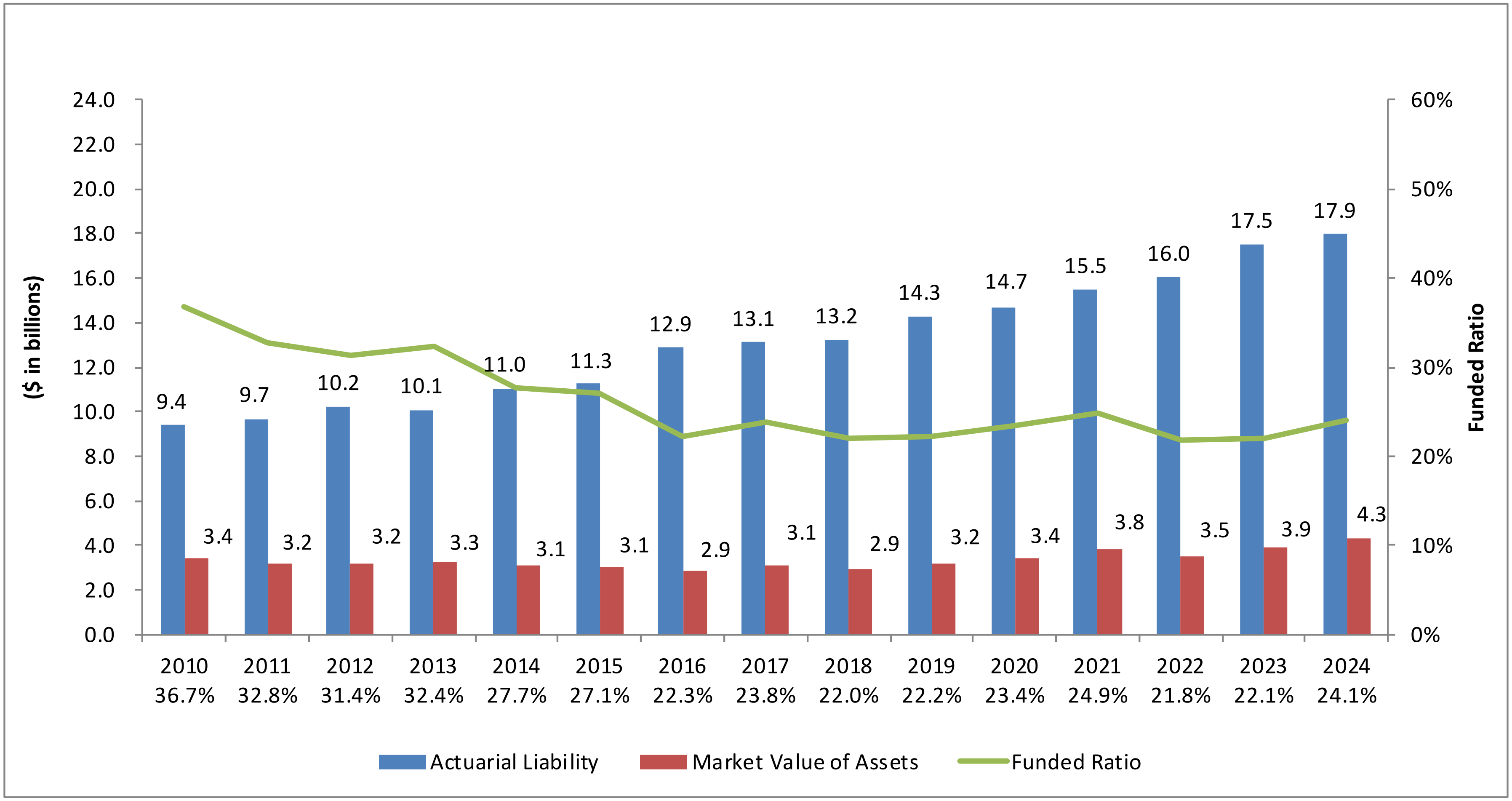
The projected statutory contributions for payment years 2025 and 2026 were determined in the actuarial valuations as of December 31, 2022, and December 31, 2023, respectively. The statutory contribution for payment year 2027 is $1,040.3 million, which is approximately **73.1%** of projected payroll in 2027. After 2027, the projected city contribution is **73.1%** of projected payroll, but will increase as a dollar amount as payroll increases. Full projection results through 2055 are shown in Table 3A. The Statutory contributions set forth in this report represent the contribution amount determined consistent with the State Statute.

Components of Funded Ratio
State Reporting



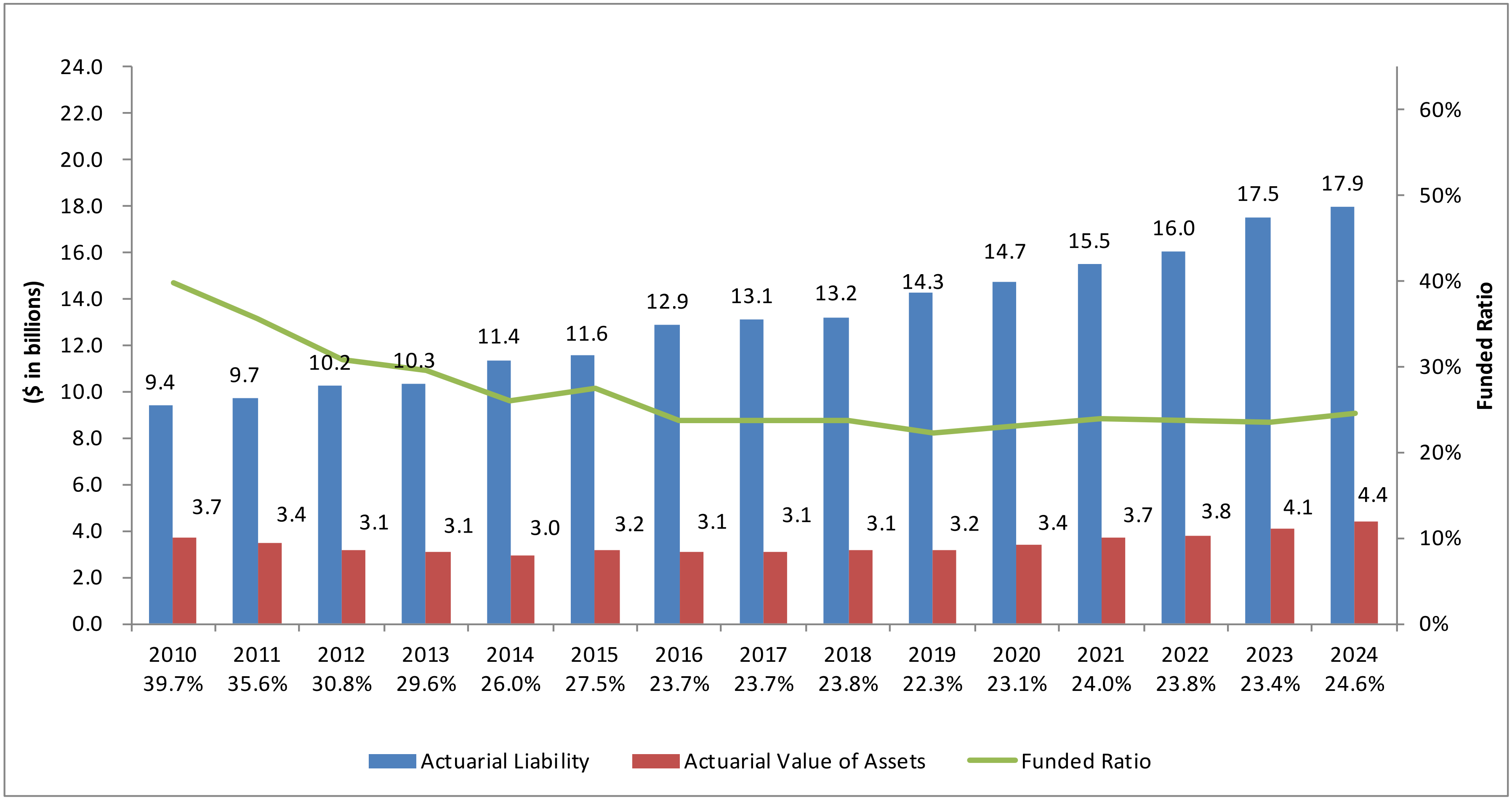
State reporting for 2016 through 2024 uses the Entry-Age Normal cost method. Years 2013 through 2015 used Projected Unit Credit for Actuarial Liabilities. Actuarial Liabilities prior to 2013 also use the Entry-Age Normal cost method. State reporting of assets is based on Actuarial (Market-Related) Value for Assets beginning in 2013 and Book Value of assets prior to 2013.

Components of Funded Ratio
Market Value of Assets



Years 2013 through 2015 used Projected Unit Credit for Actuarial Liabilities and Actuarial Liabilities for 2016 through 2024 and all years prior to 2013 used the Entry-Age Normal cost method. Market Value of Assets used for all years.

Components of Funded Ratio
Based on ADC under GASB Statement Nos. 67 and 68



ADC (under GASB) Actuarial Value of Assets based on five-year smoothing for all years. Actuarial Liabilities uses Entry-Age Normal cost method for all years.

Participants

	December 31, 2023	December 31, 2024
Active Participants		
Number	11,850	11,769
Average Age	41.7	41.8
Average Service	13.8	13.8
Average Annual Salary	$113,055 [1]	$113,647 [2]
Retirees		
Number	11,101	11,155
Average Age	69.5	69.7
Average Monthly Benefit	$6,405	$6,585
Survivors		
Number	3,136	3,115
Average Age	77.4	77.6
Average Monthly Benefit	$2,457	$2,555
Disabilities		
Number	219	223
Average Monthly Benefit	$5,812	$6,080
Children		
Number	306	301
Average Monthly Benefit	$443	$466

[1] *Average annual salary for fiscal year end December 31, 2023, would have been $109,638 without the addition of duty availability pay.*

[2] *Average annual salary for fiscal year end December 31, 2024, would have been $110,118 without the addition of duty availability pay.*

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; 31.9% of the workforce is between the ages of 45 and 54, while 31.9% of all actives have 20 or more years of service. Total participants receiving benefits under the Fund, including retirees, disabilities, survivors, and children increased 0.2% during 2024 from 14,762 to 14,794. The total retiree count increased by 0.5% during 2024. Total expenditures for benefits increased from $987.2 million in 2023 to $1,016.1 million during 2024, or 2.9%. There are more participants receiving benefits under the Fund than active members accruing benefits.

Changes in Provisions of the Fund

The following change to the Municipal Code of Chicago included changes to the Fund Provisions.
Municipal Code of Chicago 2-152-410, Effective December 31, 2023

The maximum age for employment of sworn members of the police department, including a sworn member who is transferred or appointed to a supervisory or administrative position, increased from age 63 to age 65.

This change decreased the actuarial liability as of December 31, 2024, by $18.8 million, and decreased the tax levy 2026 contribution rate by 0.15% of payroll.

The following Public Acts passed in 2024 by the 103rd General Assembly, included changes to the Fund Provisions.

P.A. 103-0692, Effective July 19, 2024

Extends the end date of the presumption period from June 30, 2021, to January 31, 2022, for disabilities to be considered as injured in the line of duty as a result of exposure and contraction of COVID-19.

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

Discussion 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

The actuarial assumptions have been updated since the last actuarial valuation report to reflect the results of the experience study performed for the period January 1, 2019 through December 31, 2023. The Board adopted the new demographic and economic actuarial assumptions on February 24, 2025, to first be used in the December 31, 2024, actuarial valuation.

Following is a summary of the actuarial assumptions adopted by the Board as a result of the most recent experience study:

Economic Assumptions

- **Price inflation**: Maintain the price inflation assumption of 2.25 percent.

- **Retiree Cost-of-Living Adjustment and Increases in the Pay Cap for Pensionable Pay for Participants Hired on and After January 1, 2011**: Maintain the assumed rate of COLA and increases in capped pay of 1.125 percent for participants hired on or after January 1, 2011, based on the price inflation assumption of 2.25 percent.

- **Investment return**: Maintain the nominal investment return assumption of 6.75 percent.

- **General wage inflation and payroll growth assumption**: Maintain a general wage inflation assumption of 1.25 percent above inflation, or 3.50 percent. This assumption serves as the across-the-board portion of salary increases and the rate at which the pay at hire is assumed to increase in future years for projection purposes.

- **Salary increase**: Slightly increase the assumed salary increase rates.

Mortality Assumptions

- Update post-retirement mortality tables to the most recently published national “public sector” mortality tables, the Pub-2010 amount-weighted Safety Healthy Retiree mortality tables. We also assume mortality rates will improve in the future using a fully generational approach, with the most recently published projection scale, MP-2021. These new mortality tables are a move from a single-dimensional age-based table to a two-dimensional table, where the year a person was born also influences their mortality rate.

- Update pre-retirement mortality tables for active employees to the most recently published national “public sector” mortality tables, the Pub-2010 headcount-weighted Safety Employee mortality tables. We also assume mortality rates will improve in the future using a fully generational approach, with the most recently published projection scale, MP-2021.

- Apply scaling factors to the base mortality tables; i.e., Pub-2010 Mortality Tables, to partially reflect observed mortality experience to the extent it is credible.

Other Demographic Assumptions

- **Retirement rates**: An overall increase in retirement rates. Use service-based rates and assume different rates for under 29 years of service than for 29 or more years of service through age 62, with 100 percent retirement at age 65. (Use a rate of less than 100 percent at ages 63 and 64 because the Municipal Code of Chicago 2-152-410 changed the maximum age for employment from age 63 to age 65.)

- **Turnover rates:** Increase the rate of turnover to recognize actual experience, and maintain a pattern of termination rates that grade down to an ultimate rate of 0.7 percent until a member is eligible for retirement.

- **Disability rates**: Maintain the allocation between occupational disease disability, ordinary disability and duty disability and lower age-based rates across all ages.

Actuarial Methods and Policies

- **Cost method**: Continue to use the Entry Age Normal cost method, which is required by State Statute.

- **Amortization method**: The State Statute requires fixed City contributions for payment years 2016 through 2020 and level percentage of pay contributions thereafter, such that the funded ratio reaches 90 percent by the end of 2055. There is no separate amortization of the unfunded accrued liability that leads to a 100 percent funding of the accrued liability. This funding method may not comply with generally accepted actuarial principles for the funding of a retirement fund because the funding method targets 90 percent instead of 100 percent.

- **ADC Amortization period:** The amortization period used to develop the actuarially determined contribution was changed from 30-year open level dollar for plan year 2024 to 25-year closed level dollar for plan year 2025.

- **Asset smoothing method**: The asset smoothing method is also defined by State Statute. Gains and losses, the difference between the actual investment return and expected investment return, are smoothed in over a five-year period at a rate of 20 percent per year.

- **Administrative expenses**: Continue to include administrative expenses as an additional component of the normal cost. Administrative expenses are provided by the PABF’s staff. Future administrative expenses, for projection purposes, are assumed to increase at the assumed rate of inflation.

- **Dependent assumptions**: Maintain the current marriage assumption of 75 percent based on the demographics of the valuation census data over the experience study period. Maintain the age differential between males and females at three years. The male spouse is assumed to be three years older than the female spouse. No dependent assumptions are made for current retirees as actual eligible spouse data is provided.

- **Decrement timing**: Maintain middle-of-year decrement timing.

- **Pay Increase timing**: Maintain beginning-of-year pay increase timing

2024 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, 2023, and December 31, 2024. A discussion by source follows.

Turnover
We reviewed withdrawals in 2024 from the Fund for reasons other than retirement, death, or disability. The ratio of actual withdrawals to expected withdrawals was of 183% (87% more than expected). The overall result is an actuarial loss. Members who were active as of December 31, 2023, and were on leave of absence or whose retirement was pending as of December 31, 2024, are included in this group.

Retirement
There were fewer retirements from active members during 2024 than assumed. The ratio of actual retirements to expected retirements was 98%. The liabilities for the new retirees from active were higher than assumed, resulting in an actuarial loss.

Disability
The number of new disabled participants during 2024 was less than expected. The ratio of actual to expected disability was 53%, resulting in an actuarial gain to the Fund.

Mortality
There were more active member deaths and annuitant deaths than expected during 2024, which resulted in a net actuarial gain to the Fund.

Pay Increase
For continuing active members in the 2023 and 2024 actuarial valuations, average salaries increased by 2.92% based on members' pay rates as of December 31 in each respective year. This was less than the expected increase of 5.49% from the 2023 salary based on the salary increase assumptions. Salary used for the 2024 actuarial valuation also reflects an adjustment to the census data which caused actual salary to be lower than expected. The lower than expected salary increases generated a gain on the actuarial accrued liability of approximately $173.5 million.

Investment Return
During 2024, assets earned 10.72% on a market basis, 3.83% on a book basis, and 5.28% on an actuarial basis, which compares to the 2024 assumed return of 6.75%. The market value rate of return was developed by the Fund's investment consultant, NEPC. The actuarial value and book value returns were estimated by GRS. During the year, the fund experienced a market value asset gain due to investment performance, and an actuarial loss on an actuarial (smoothed) value basis.

Data and Other Sources

There was a small gain on liabilities due to the retiree health subsidy that was offset by actuarial losses in liabilities due to changes in demographic data.

Plan Provision Changes

The change in the maximum age for employment from age 63 to age 65 resulted in a $18.8 million decrease in the unfunded actuarial accrued liabilities of the Fund.

Changes in liabilities for participants impacted by the legislative changes related to duty disability benefits will flow through as a demographic gain or loss in the year the status and/or benefit change in made.

Assumption Changes

The changes to the actuarial assumptions during the plan year ending December 31, 2024, increased the actuarial accrued liability by approximately $150.9 million.

Conclusion

Based on our analysis of the recent experience and expectation of the future, we believe that the actuarial assumptions are reasonable for the purpose of the measurement of the Fund's costs in effect as of December 31, 2024, under the provisions of P.A. 99-0506. Table 5 of Appendix 1 shows a more detailed development of the actuarial gains and losses for the plan year ending December 31, 2024.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the statutory contribution requires the use of actuarial assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the actuarial assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the total required employer contribution that result from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; 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 Fund's funded status); and changes in plan provisions or applicable law. The scope of this actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the Fund's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Asset/Liability mismatch – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the Fund's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. Other demographic risks – members may terminate, retire, or become disabled at times other than assumed, resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The statutory contribution for tax levy year 2026 shown on page 25 should be considered as the minimum contribution that complies with the funding policy governed by statute. The timely receipt of the statutory contribution is critical to support the financial health of the Fund. Users of this report should be aware that contributions made at the statutorily determined amount do not necessarily guarantee benefit security.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	2019	2020	2021	2022	2023	2024
Ratio of the Market Value of Assets to Covered Payroll	2.57	2.88	3.06	2.74	2.89	3.23
Ratio of Actuarial Accrued Liability to Covered Payroll	11.61	12.29	12.29	12.57	13.06	13.42
Ratio of Actives to Retirees, Disabilities, and Beneficiaries	0.97	0.91	0.85	0.81	0.80	0.80
Ratio of Net Cash Flow to Market Value of Assets	-3.56%	0.22%	0.90%	-1.02%	1.73%	2.59%

Ratio of Market Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 5.0 times the payroll, a return on assets 5 percent different than assumed would equal 25 percent of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100 percent is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 13 times the payroll, a change in liability 2 percent other than assumed would equal 26 percent of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, and stress tests.

Low-Default-Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the "Low-Default-Risk Obligation Measure" (LDROM).

What is the LDROM?

The LDROM is a particular measure of the benefits earned (or costs accrued if appropriate under the actuarial cost method used for this purpose) as of the measurement date.

How is the LDROM calculated?

The LDROM is calculated using an immediate gain actuarial cost method, one in which gains and losses become part of the unfunded actuarial accrued liabilities. Examples would be Entry Age Normal Cost, Projected Unit Credit, and Traditional Unit Credit. It is based upon a discount rate or discount rates derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future.

What does the LDROM tell me?

The LDROM gives an approximate measure of the cost as of the measurement date of securing benefits by constructing a hypothetical Low-Default-Risk Bond portfolio, whose cash flows match the pattern of benefits expected to be paid in the future. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa.

Is the LDROM the "right" liability that should be reported?

No single number, including the LDROM, can provide all of the information necessary to understand the financial condition of a pension plan. The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

> The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the "right" liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan's funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**

Comparing the Accrued Liabilities and the LDROM

The LDROM results presented in this report are based on the Entry Age Normal (EAN) actuarial cost method and discount rates based upon the December 2024 (end of month) FTSE Pension Discount Curve (PDC). The PDC is calculated based on a universe of AA rated corporate bonds from the FTSE US Broad Investment-Grade Bond Index (USBIG®) of varying maturities and the yields of the Treasury model curve.

Representative 1-, 5-, 10-, 20-, and 30-year annual spot rates as of December 31, 2024, are 4.57 percent, 4.84 percent, 5.26 percent, 5.72 percent, and 5.55 percent, respectively. Discount rates based on the spot rates were applied to the PABF expected benefit payments to calculate a single equivalent rate of 5.53 percent on a present value of benefits basis.

The funding valuation actuarial accrued liability is based on the EAN actuarial cost method and discount rate (the expected long-term rate of return on assets) of 6.75 percent.

Presented below is a comparison of the statutory funding actuarial accrued liability and the LDROM as of December 31, 2024, for the PABF:

Funding Valuation Actuarial Accrued Liability	$ 17,948,100,639
LDROM	20,696,542,964
Difference	2,748,442,325

The difference between the funding actuarial liability and the LDROM illustrates the potential present value of future contribution savings due to investing in a well-diversified portfolio, consistent with the assumed long-term investment return assumption, instead of a hypothetical low-default-risk bond portfolio.

Since plan assets are actually invested in a well-diversified portfolio, and not a low-default-risk bond portfolio, LDROM does not provide relevant information on the funded status or contribution requirements. Benefit security for members of the plan relies on a combination of the current assets in the plan, the future investment returns generated on those assets, and the promise of future contributions from the plan sponsor.

The LDROM liability contained in this report was provided solely to comply with the requirements of ASOP No. 4 section 3.11 and should not be used for any other purpose. This measure is not appropriate for assessing the need for or amount of future contributions. This measure is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligation.

APPENDIX 1

RESULTS OF ACTUARIAL VALUATION

Table 1A

	December 31, 2023	December 31, 2024
Assets		
Book Value - Beginning of Year	$ 3,335,172,462	$ 3,470,131,637
Income		
Investment Income Net of Expenses	$ 68,194,230	$ 135,048,537
Employer Contributions	942,952,523	1,011,371,037
Employee Contributions	115,161,795	121,412,305
Miscellaneous	109,639	84,714
Subtotal	$ 1,126,418,187	$ 1,267,916,593
Outgo (Refunds, Benefits, & Administration)	$ 991,459,012	$ 1,020,745,821
Book Value - End of Year	$ 3,470,131,637	$ 3,717,302,409
Market Value - End of Year	3,869,934,220	4,325,456,316
Actuarial Value - End of Year	4,090,214,832	4,421,157,545
Member Counts		
Active	11,850	11,769
Retirees	11,101	11,155
Survivors	3,136	3,115
Disabilities	219	223
Inactives	1,162	1,204
Children	306	301
Payroll Data [1]		
Valuation Payroll	$ 1,339,703,857	$ 1,337,506,724
Average Salary	113,055	113,647

[1] *Payroll shown based on annualized pay rate at December 31, and does not include Tier 2 pensionable pay cap.*

Table 1B

Actuarial Values	December 31, 2023	December 31, 2024
Statutory Funding		
Actuarial Liability	$ 17,500,209,765	$ 17,948,100,639
Assets - Actuarial Value	4,090,214,832	4,421,157,545
Unfunded Liability	13,409,994,933	13,526,943,094
Funded Ratio	23.37%	24.63%
Statutory Employer Contribution [1]	$ 928,841,536	$ 1,042,582,135
(Tax Levy Year)	(2024)	(2025)
Book Value Funding		
Actuarial Liability	$ 17,500,209,765	$ 17,948,100,639
Assets - Book Value	3,470,131,637	3,717,302,409
Unfunded Liability	14,030,078,128	14,230,798,230
Funded Ratio	19.83%	20.71%
Termination Values		
Liability [2]	$ 12,989,763,328	$ 13,331,434,951
Assets - Book Value	3,470,131,637	3,717,302,409
Deficiency	9,519,631,691	9,614,132,542
Quick Ratio	26.71%	27.88%
Market Value Funding		
Actuarial Liability	$ 17,500,209,765	$ 17,948,100,639
Assets - Market Value	3,869,934,220	4,325,456,316
Unfunded Liability	13,630,275,545	13,622,644,323
Funded Ratio	22.11%	24.10%
ADC Values		
Actuarial Liability - Entry Age [3]	$ 17,500,209,765	$ 17,948,100,639
Assets - Actuarial Value	4,090,214,832	4,421,157,545
Unfunded Liability [3]	13,409,994,933	13,526,943,094
Funded Ratio	23.37%	24.63%
Actuarially Determined Contribution (ADC)	1,242,009,627	1,339,134,156
(Plan Year End)	(2024)	(2025)

[1] *Pursuant to P.A. 99-0506, the fiscal year 2025 tax levy, payable in fiscal year 2026, is equal to $1,042,582,135 and the fiscal year 2026 tax levy, payable in fiscal year 2027, is estimated to be $1,040,273,100.*

[2] *Includes total liability for inactive and deferred members, and accumulated member contributions.*

[3] *Used to develop the Actuarially Determined Contribution under GASB Statement Nos. 67 and 68.*

Table 1C

Active Accrued Liability and Normal Cost by Tier
As of December 31, 2024

	Tier 1 Members	Tier 2 Members[1]	Total
(1) Count	5,393	6,376	11,769
(2) Payroll[2]	$ 690,158,656	$ 647,348,068	$ 1,337,506,724
(3) Average Payroll[2]	$ 127,973	$ 101,529	$ 113,647
(4) Actuarial Accrued Liability (AAL)	$ 5,492,961,372	$ 757,423,763	$ 6,250,385,135
(5) Total Normal Cost	$ 196,714,179	$ 116,260,939	$ 312,975,118
(6) Total Normal Cost as a Percent of Pay	28.5%	18.0%	23.4%
(7) Estimated Member Contributions[3]	$ 62,276,069	$ 58,415,287	$ 120,691,356
(8) Net Normal Cost	$ 134,438,110	$ 57,845,652	$ 192,283,762
(9) Net Normal Cost as a Percent of Pay	19.5%	8.9%	14.4%

[1]*Members hired on or after January 1, 2011.*

[2]*Payroll shown based on annualized pay rate at December 31, 2024, and does not include Tier 2 pensionable pay cap.*

[3]*Based on expected capped pay for plan year end December 31, 2024.*

Table 2

	Actuarial Present Value (APV) of Projected Benefits As of 12/31/2024	Actuarial Accrued Liability (AAL) As of 12/31/2024		
		Total	Tier 1	Tier 2
(1) Values for Active Members				
(a) Retirement	$ 8,292,459,129	$ 6,094,402,682	$ 5,409,752,860	$ 684,649,822
(b) Termination	167,101,065	20,080,491	767,679	19,312,812
(c) Disability	330,475,905	115,648,797	67,345,488	48,303,309
(d) Death	60,013,654	20,253,165	15,095,345	5,157,820
Total for Actives	$ 8,850,049,753	$ 6,250,385,135	$ 5,492,961,372	$ 757,423,763
(2) Values for Inactive Members				
(a) Retired	$ 10,438,245,044	$ 10,438,245,044	$ 10,437,865,792	$ 379,252
(b) Survivor	794,823,711	794,823,711	794,823,711	0
(c) Disability	315,697,238	315,697,238	288,205,386	27,491,852
(d) Inactive (Deferred Vested/ Terminated Pending Refund)	138,229,211	138,229,211	122,065,616	16,163,595
(e) Children	10,720,300	10,720,300	10,720,300	0
Total for Inactives	$ 11,697,715,504	$ 11,697,715,504	$ 11,653,680,804	$ 44,034,700
(3) Grand Totals	$ 20,547,765,257	$ 17,948,100,639	$ 17,146,642,176	$ 801,458,463
(4) Normal Cost for Active Members	$ 312,975,118			
(5) Actuarial Present Value of Future Compensation	$ 12,818,264,677			

Active members whose tier was not provided in the valuation data are assumed to be in Tier 2.
Inactive members whose tier was not provided in the valuation data are assumed to be in Tier 1.

Development of Statutory Contribution

Table 3A

Actuarial Valuation Projection Results as of December 31, 2024
Discount Rate of 6.75%
($ in Thousands)

Year Ending	Actuarial Accrued Liability	Market Value of Assets	Actuarial Value of Assets	Unfunded Liability	Actuarial Value Funded Ratio [1]	Capped Payroll	Employer Normal Cost	Statutory Contribution [2]	Statutory Contribution as % of Pay	Employee Contributions	Benefit Payments	Admin Expenses
2024	$17,948,101	$ 4,325,456	$4,421,158	$13,526,943	24.63%	$1,337,092	$176,335	$ 1,011,456	75.6%	$121,412	$1,016,120	$ 4,626
2025	18,390,311	4,671,084	4,709,029	13,681,282	25.61%	1,376,680	192,284	1,042,582	75.7%	120,691	1,057,538	4,730
2026	18,834,817	5,014,126	4,966,981	13,867,836	26.37%	1,423,666	186,475	1,040,273	73.1%	128,759	1,086,469	4,836
2027	19,268,580	5,374,852	5,359,160	13,909,419	27.81%	1,468,330	183,850	1,072,909	73.1%	132,787	1,127,311	4,945
2028	19,689,967	5,753,405	5,753,405	13,936,561	29.22%	1,513,130	180,871	1,105,644	73.1%	136,838	1,168,699	5,056
2029	20,096,021	6,142,793	6,142,793	13,953,228	30.57%	1,548,209	176,894	1,131,277	73.1%	139,977	1,210,231	5,170
2030	20,485,896	6,541,768	6,541,768	13,944,128	31.93%	1,579,852	172,699	1,154,398	73.1%	142,821	1,251,067	5,287
2031	20,859,340	6,951,084	6,951,084	13,908,257	33.32%	1,610,121	168,283	1,176,516	73.1%	145,543	1,290,748	5,406
2032	21,216,141	7,372,112	7,372,112	13,844,029	34.75%	1,639,757	163,649	1,198,170	73.1%	148,196	1,329,273	5,527
2033	21,553,708	7,799,802	7,799,802	13,753,906	36.19%	1,662,398	158,307	1,214,714	73.1%	150,201	1,367,860	5,651
2034	21,870,408	8,231,726	8,231,726	13,638,682	37.64%	1,680,933	152,606	1,228,258	73.1%	151,817	1,406,026	5,779
2035	22,165,853	8,667,529	8,667,529	13,498,323	39.10%	1,697,078	146,867	1,240,055	73.1%	153,199	1,442,932	5,909
2036	22,440,355	9,108,314	9,108,314	13,332,041	40.59%	1,712,177	141,294	1,251,087	73.1%	154,458	1,478,189	6,042
2037	22,695,293	9,555,710	9,555,710	13,139,583	42.10%	1,725,637	136,021	1,260,923	73.1%	155,542	1,510,870	6,178
2038	22,932,597	10,012,787	10,012,787	12,919,809	43.66%	1,738,908	131,239	1,270,620	73.1%	156,581	1,540,849	6,317
2039	23,155,051	10,483,451	10,483,451	12,671,600	45.28%	1,752,014	127,039	1,280,196	73.1%	157,593	1,567,537	6,459
2040	23,366,090	10,973,690	10,973,690	12,392,400	46.96%	1,767,243	123,725	1,291,324	73.1%	158,754	1,590,966	6,604
2041	23,568,190	11,488,182	11,488,182	12,080,008	48.74%	1,783,824	121,233	1,303,441	73.1%	159,996	1,612,155	6,753
2042	23,762,269	12,029,929	12,029,929	11,732,341	50.63%	1,801,157	119,402	1,316,105	73.1%	161,330	1,632,624	6,905
2043	23,949,325	12,602,354	12,602,354	11,346,971	52.62%	1,819,350	118,124	1,329,399	73.1%	162,783	1,652,277	7,060
2044	24,130,474	13,209,256	13,209,256	10,921,217	54.74%	1,838,368	117,284	1,343,296	73.1%	164,300	1,670,891	7,219
2045	24,305,695	13,853,522	13,853,522	10,452,173	57.00%	1,858,114	116,768	1,357,724	73.1%	165,854	1,689,501	7,381
2046	24,473,530	14,536,822	14,536,822	9,936,708	59.40%	1,878,516	116,503	1,372,632	73.1%	167,407	1,709,386	7,547
2047	24,633,437	15,262,256	15,262,256	9,371,181	61.96%	1,900,150	116,606	1,388,439	73.1%	169,110	1,729,830	7,717
2048	24,785,413	16,033,481	16,033,481	8,751,933	64.69%	1,922,663	117,042	1,404,890	73.1%	170,902	1,750,180	7,891
2049	24,929,008	16,853,689	16,853,689	8,075,319	67.61%	1,945,599	117,743	1,421,649	73.1%	172,707	1,770,727	8,068
2050	25,064,876	17,727,616	17,727,616	7,337,260	70.73%	1,969,213	118,716	1,438,904	73.1%	174,615	1,790,468	8,250
2051	25,193,361	18,659,760	18,659,760	6,533,601	74.07%	1,993,041	119,818	1,456,315	73.1%	176,490	1,809,467	8,435
2052	25,315,592	19,655,932	19,655,932	5,659,659	77.64%	2,017,483	121,103	1,474,175	73.1%	178,482	1,827,192	8,625
2053	25,433,097	20,722,521	20,722,521	4,710,576	81.48%	2,042,261	122,501	1,492,280	73.1%	180,497	1,843,164	8,819
2054	25,546,951	21,865,816	21,865,816	3,681,134	85.59%	2,067,330	123,958	1,510,598	73.1%	182,491	1,857,825	9,018
2055	25,657,998	23,092,231	23,092,231	2,565,767	90.00%	2,092,799	125,551	1,529,208	73.1%	184,523	1,871,604	9,221

[1] *The funded ratio includes receivable contributions.*

[2] *Contribution receivable to be paid in the following fiscal year. No tax levy loss assumed in development of the Statutory Contribution.*

Table 3B

Key Projection Result Items

	Total
(1) Total Normal Cost for 2026	$ 315,233,683
(2) Actuarial Accrued Liability (AAL) at 12/31/2025 [1]	$ 18,390,310,882
(3) Actuarial Value of Assets at 12/31/2025	$ 4,709,028,551
(4) Unfunded Actuarial Accrued Liability (UAAL) (2-3)	$ 13,681,282,331
(5) Estimated Member Contributions during 2026	$ 128,759,000
(6) Estimated City Contribution for Tax Levy Year 2026	$ 1,040,273,100

[1] *Liabilities were discounted at 6.75% per year.*

Projection of Retiree Health Insurance Premium Subsidy

Table 3C

Projected Retiree Health Insurance Premium Subsidy	
Calendar Year	**$ in Thousands**
2025	$ 2,221
2026	2,315
2027	2,372
2028	2,354
2029	2,307

The present value of projected retiree health insurance premium subsidies as of December 31, 2024, is $23,279,720. This amount is included in the actuarial accrued liability as of December 31, 2024, and the actuarial projections used to develop the statutory contribution requirements.

Development of Actuarially Determined Contribution under GASB Statement Nos. 67 and 68 for 2025

Table 4

	Total
(1) Total Normal Cost for 2025	$ 312,975,118
(2) Actuarial Accrued Liability (AAL) at 12/31/2024	$ 17,948,100,639
(3) Unfunded AAL (UAAL)	
(a) Actuarial Value of Assets at 12/31/2024	$ 4,421,157,545
(b) UAAL (2-3(a))	13,526,943,094
(4) Amortization Payable at Middle of Year [1]	$ 1,098,272,040
(5) Estimated Member Contributions in 2025	$ 120,691,356
(6) Actuarially Determined Contribution (ADC) for 2025	
(a) Interest Adjustment for Semimonthly Payment	48,578,354
(b) Annual Required Contribution (1+4-5+6(a))	$ 1,339,134,156
(c) Annual Required Contribution (Percent of Pay)	97.27%
(7) Estimated City Contribution for Tax Levy Year 2025	
(a) in Dollars	$ 1,042,582,135
(b) as a Percentage of Pay	75.73%
(8) Estimated Deficiency/(Excess) for 2025	
(a) in Dollars (6(b)-7(a))	$ 296,552,021
(b) as a Percentage of Pay	21.54%

[1] *Amortization is over a 25-year closed period as a level dollar amount. Unfunded liability was amortized over a 25-year closed period beginning December 31, 2024. 25 years were remaining in the amortization period as of December 31, 2024.*

Development of Actuarial Gains and Losses for 2024

Table 5

Unfunded Actuarial Accrued Liability - Beginning of 2024			
(1)	Actuarial Accrued Liability - 12/31/2023	$ 17,500,209,765	
(2)	Actuarial Value of Assets - 12/31/2023	4,090,214,832	
(3)	Unfunded Accrued Actuarial Liability - 12/31/2023	$ 13,409,994,933	
Expected Unfunded Actuarial Accrued Liability - End of 2024			
(4)	Normal Cost for 2024	$ 297,746,858	
(5)	Total Contributions for 2024	1,132,868,056	
(6)	Interest on (3), (4), & (5) at Valuation Rates	877,449,539	
(7)	Expected Unfunded Actuarial Accrued Liability - 12/31/2024 ((3)+(4)-(5)+(6))	$ 13,452,323,274	
Deviations From Expected			% of 12/31/23 AAL
(8)	(Gain)/Loss on Investment Return (Smoothed (Actuarial) Value)	$ 65,770,805	0.38%
(9)	(Gain)/Loss from Salary Changes	(173,467,274)	-0.99%
(10)	(Gain)/Loss from Retirement	17,064,770	0.10%
(11)	(Gain)/Loss from Turnover	12,649,508	0.07%
(12)	(Gain)/Loss from Mortality	(24,854,888)	-0.14%
(13)	(Gain)/Loss from Disability	(5,134,720)	-0.03%
(14)	(Gain)/Loss from New Entrants and Rehired Members	6,436,115	0.04%
(15)	(Gain)/Loss Due to Retirees Whose Benefit was Previously Suspended/Inactive	5,359,380	0.03%
(16)	(Gain)/Loss from All Other Sources [1]	38,757,379	0.22%
(17)	Composite Actuarial (Gain)/Loss	**$ (57,418,925)**	**(0.33)%**
(18)	(Gain)/Loss from Actuarial Cost Method Change	$ -	0.00%
(19)	(Gain)/Loss from Provision Changes	$ (18,831,698)	-0.11%
(20)	(Gain)/Loss from Assumption Changes	$ 150,870,443	0.86%
Unfunded Actuarial Accrued Liability - End of 2024			
(21)	Unfunded Accrued Actuarial Liability - 12/31/2024 ((7)+(17)+(18)+(19)+(20))	$ 13,526,943,094	

[1] *Includes difference for Retiree Health Insurance Premium Subsidy.*

History of Recommended Employer Multiples*

Table 6

Year of Report	Statutory Multiple	P.A. 99-0506 Multiple	Normal Cost Plus Interest	Normal Cost Plus Amortization [3]	
				Level $	Level % of Salary
1995	2.00	N/A	3.34	3.49	2.17
1996	2.00	N/A	3.19	3.32	2.10
1997	2.00	N/A	3.10	3.23	2.04
1998 [1,2]	2.00	N/A	3.63	3.77	2.56
1999	2.00	N/A	3.15	3.27	2.24
2000 [1]	2.00	N/A	3.27	3.39	2.32
2001 [2]	2.00	N/A	3.63	3.78	2.56
2002	2.00	N/A	4.62	4.79	3.33
2003 [1,2]	2.00	N/A	4.46	4.63	3.23
2004 [2]	2.00	N/A	4.99	5.18	3.60
2005 [1,2]	2.00	N/A	5.33	5.56	3.85
2006	2.00	N/A	4.95	5.40	3.94
2007	2.00	N/A	4.98	5.43	3.97
2008	2.00	N/A	5.43	5.94	4.30
2009 [1]	2.00	N/A	5.87	6.42	4.61
2010	2.00	N/A	6.19	6.78	4.85
2011	2.00	N/A	5.71	6.26	4.45
2012 [1]	2.00	N/A	6.73	7.43	5.25
2013 [2]	2.00	N/A	6.92	7.60	5.44
2014 [1]	2.00	N/A	7.94	8.88	6.49
2015 [4]	N/A	4.57	7.76	8.68	6.35
2016 [1,2,5]	N/A	4.49	7.89	8.82	6.33
2017 [5]	N/A	5.13	8.49	9.49	6.80
2018 [5]	N/A	5.63	8.45	9.44	6.77
2019 [1,5]	N/A	5.63	8.65	9.81	7.22
2020 [5]	N/A	6.93	8.44	9.58	7.03
2021 [5]	N/A	7.21	8.52	9.68	7.08
2022 [2,5]	N/A	6.11	7.32	8.32	6.08
2023 [2,5]	N/A	7.75	9.69	11.00	8.07
2024 [1,2,5]	N/A	8.40	9.84	11.78	8.99

[1]Change in actuarial assumptions.
[2]Change in benefits.
[3]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 open period. Starting in 2013, OPEB amortizations are over a closed 3-year period as a level percent of pay. Starting in 2024, both pension and OPEB amortizations are over a 25-year closed period.
[4]Funding based on P.A. 96-1495, plan provisions in effect as of December 31, 2015.
[5]Funding based on P.A. 99-0506.
**Based on book value of assets through 2013, then Actuarial Value of assets starting in 2014. Assumes 4% Tax Levy Loss. Statutory contributions determined using the current funding policy shown in table 3A do not include any tax levy loss.*

Table 7

Actuarial Balance Sheet – 6% Basis

December 31, 2024

ASSETS	
Fund Balance	$(66,514,271)
Present Values of Future Contributions:	
Contributions by Members at $30.00 per Year	4,184,239
Annual City Contribution of $224,000	2,654,628
Unfunded Liability	92,572,327
TOTAL ASSETS	**$ 32,896,923**

LIABILITIES	
Present Value of Future Death Benefits (6%, Plan Mortality Basis)	
Active & Disabled Members	$ 2,592,090
Retired Members	30,304,833
TOTAL LIABILITIES	**$ 32,896,923**

Actuarial Accrued Liability Prioritized Solvency Test

Table 8

Valuation Date 12/31	(1) Active and Inactive Member Contribution	(2) Retirees and Beneficiaries	(3) Active and Inactive Members (ER Financed Portion)	Actuarial Value of Assets	Portion (%) of Present Value Covered By Assets (1)	(2)	(3)
2010	$ 1,251,147,487	$ 5,717,654,520	$ 2,406,050,870	$ 3,718,954,539	100.00%	43.16%	0.00%
2011	1,286,345,939	6,041,684,411	2,360,319,555	3,444,690,362	100.00%	35.72%	0.00%
2012 [1]	1,309,825,828	6,475,282,318	2,435,530,363	3,148,929,770	100.00%	28.40%	0.00%
2013 [2]	1,358,193,244	6,594,792,197	2,127,620,103	3,053,881,777	100.00%	25.71%	0.00%
2014 [1]	1,410,544,951	7,159,705,456	2,477,941,780	2,954,318,954	100.00%	21.56%	0.00%
2015	1,484,316,625	7,279,289,531	2,524,630,892	3,186,423,762	100.00%	23.38%	0.00%
2016 [1,2]	1,518,846,208	8,018,211,337	3,319,492,854	3,052,056,555	100.00%	19.12%	0.00%
2017	1,532,514,218	8,344,902,504	3,216,465,846	3,103,989,602	100.00%	18.83%	0.00%
2018	1,602,674,638	8,390,112,363	3,221,871,110	3,145,136,204	100.00%	18.38%	0.00%
2019 [1]	1,634,237,599	8,887,010,483	3,748,521,831	3,179,502,852	100.00%	17.39%	0.00%
2020	1,648,385,618	9,453,458,094	3,601,274,947	3,399,988,145	100.00%	18.53%	0.00%
2021	1,648,593,934	10,052,754,002	3,769,294,678	3,709,382,279	100.00%	20.50%	0.00%
2022 [2]	1,602,508,940	10,666,311,280	3,751,994,628	3,815,014,423	100.00%	20.74%	0.00%
2023 [2]	1,624,888,533	11,253,392,929	4,621,928,303	4,090,214,832	100.00%	21.91%	0.00%
2024 [1,2]	1,660,896,838	11,559,486,293	4,727,717,508	4,421,157,545	100.00%	23.88%	0.00%

[1]*Change in actuarial assumptions.*
[2]*Change in benefits.*

APPENDIX 2

ASSETS OF THE PLAN

Reconciliation of Assets as of December 31, 2024

The book value of the plan assets, net of accounts payable, increased from $3.470 billion as of December 31, 2023, to $3.717 billion as of December 31, 2024. The market value of the plan assets, net of accounts payable, increased from $3.870 billion as of December 31, 2023, to $4.325 billion as of December 31, 2024. Table 9 details the development of asset values during 2024 and Table 10 shows the development of the actuarial value of assets as of December 31, 2024. 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.

Table 9

	2023	2024
1. Market Value of assets beginning of year [1]	$ 3,486,779,785	$ 3,869,934,220
a) Adjustment as of January 1 [3]	-	(1)
2. Income for plan year:		
a) Member contributions	$ 115,161,795	$ 121,412,305
b) City contributions	942,952,523	1,011,371,037
c) Investment income net of expenses [1]	316,389,490	343,399,862
d) Miscellaneous revenue	109,639	84,714
e) Total income	$ 1,374,613,447	$ 1,476,267,918
3. Disbursements for plan year:		
a) Benefit payments		
i) Pension, disability, and death benefit payments	$ 968,786,275	$ 1,002,196,981
ii) Healthcare premium subsidy	1,921,463	2,096,206
b) Refunds	16,490,937	11,826,763
c) Administration	4,260,337	4,625,871
d) Total disbursements	$ 991,459,012	$ 1,020,745,821
4. Market Value of assets end of year [1]	$ 3,869,934,220	$ 4,325,456,316
5. Estimated rate of return during year: [2]		
a) Gross	12.00%	11.04%
b) Net of investment expense (Investment expense of $8,079,813 in 2023 and $8,679,370 in 2024)	11.72%	10.72%

[1]Book value of assets as of December 31, 2023, is $3,470,131,637, Investment income net of expenses used for Book value for plan year 2024 is $135,048,537 and book value as of December 31, 2024, is $3,717,302,409.

[2]Plan year 2023 and 2024 returns were developed by NEPC.

[3]Adjustment for the difference between the end of year market value of assets from the prior year actuarial valuation and the final end of year market value of assets from the prior year. Assets as of December 31, 2023, were updated subsequent to the delivery date of the actuarial valuation report and did not significantly impact the certified contribution rate determined in each actuarial valuation.

Development of Actuarial (Market-Related) Value of Assets as of December 31, 2024

Table 10

Year Ending December 31	2023	2024	2025	2026	2027	2028
Beginning of Year:						
(1) Market Value of Assets	$ 3,486,779,785	$ 3,869,934,220				
(1a) Adjustment as of January 1 [1]	-	(1)				
(2) Actuarial Value of Assets	3,815,014,423	4,090,214,832				
(2a) Adjustment as of January 1 [1]	-	(1)				
End of Year:						
(3) Market Value of Assets	3,869,934,220	4,325,456,316				
(4) Contributions and Disbursements						
(4a) City Contributions & Misc.	943,062,162	1,011,455,751				
(4b) Member Contributions	115,161,795	121,412,305				
(4c) Benefit Payouts & Refunds	(987,198,675)	(1,016,119,950)				
(4d) Administrative Expenses	(4,260,337)	(4,625,871)				
(4e) Net of Contributions and Disbursements	66,764,945	112,122,235				
(5) Total Investment Income =(3)-(1)-(1a)-(4e)	316,389,490	343,399,862				
(6) Projected Rate of Return	6.75%	6.75%				
(7) Projected Investment Income =[(1)+(1a)]x(6)+([1+(6)]^.5-1)x(4e)	$ 237,574,159	$ 264,942,896				
(8) Investment Income in Excess of Projected Income	78,815,331	78,456,966				
(9) Excess Investment Income Recognized This Year (5-year recognition)						
(9a) From This Year	$ 15,763,066	$ 15,691,393				
(9b) From One Year Ago	(116,544,378)	15,763,066	$ 15,691,393			
(9c) From Two Years Ago	27,332,756	(116,544,378)	15,763,066	$ 15,691,393		
(9d) From Three Years Ago	11,634,745	27,332,756	(116,544,378)	15,763,066	$ 15,691,393	
(9e) From Four Years Ago	32,675,116	11,634,746	27,332,757	(116,544,380)	15,763,067	$ 15,691,394
(9f) Total Recognized Investment Gain	(29,138,695)	(46,122,417)	(57,757,162)	(85,089,921)	31,454,460	15,691,394
(10) Change in Actuarial Value of Assets =(4e)+(7)+(9f)	275,200,409	330,942,714				
End of Year:						
(3) Market Value of Assets	**$ 3,869,934,220**	**$ 4,325,456,316**				
(11) Actuarial Value of Assets = (2)+(2a)+(10)	**$ 4,090,214,832**	**$ 4,421,157,545**				
(12) Difference between Market & Actuarial Values	$ (220,280,612)	$ (95,701,229)				
(13) Actuarial Value Rate of Return	5.42%	5.28%				
(14) Estimated Market Value Rate of Return	11.72%	10.72%				

[1] *Adjustment for difference between end of year market value of assets from the actuarial valuation as of December 31, 2023, and beginning of year market value of assets from the actuarial valuation as of December 31, 2024.*

APPENDIX 3

DATA REFLECTING PLAN MEMBERS

Exhibit A
Summary of Changes in Active Participants
For Fiscal Year Ending December 31, 2024

	Male	Female	Total
Number of Active Participants at Beginning of Fiscal Year[2]	**8,856**	**2,994**	**11,850**
Increases:			
Participants Added During Year	347	137	484
Participants Returning From Inactive or Disability Status	36	6	42
Total After Increases	9,239	3,137	12,376
Decreases:			
Terminations During Year	459	148	607
Number of Active Participants at End of Fiscal Year	**8,780**	**2,989**	**11,769**
Total Inactive Participants			1,204
Terminations:			
Withdrawal (With Refunds)[1]	39	9	48
Withdrawal (Without Refunds)	110	42	152
Ordinary Disability Benefit	5	2	7
Occupational Disease Disability Benefit	1	1	2
Duty Disability Benefit	4	2	6
Retirements	289	89	378
Deaths (Occupational)	0	0	0
Deaths (Non-occupational)	11	3	14
Totals	**459**	**148**	**607**

[1] *This total differs from the total of 124 shown in Exhibit D due to the fact that only 48 of the refunds were paid to participants who were considered to be active as of December 31, 2023.*

[2] *Includes four active members reclassified from male to female and four active members reclassified from female to male in the valuation data.*

Exhibit B
Summary of Changes in Annuitants and Beneficiaries
For Fiscal Year Ending December 31, 2024

	Number at Beginning of Year	Additions During Year	Terminations During Year	Number at End of Year
Service Retirement Annuities	11,101	433	379	11,155
Widow Annuities	3,069	195	215	3,049
Children's Annuities	179	22	21	180
Ordinary Disability Benefit (Non-Occupational)	30	10	14	26
Occupational Disease Disability Benefit	17	4	1	20
Duty Disability Benefit (Occupational)	172	16	11	177
Children's Disability Benefit	127	18	24	121
Widows' Compensation Annuities (Service Connected Death)	67	0	1	66
Totals	**14,762**	**698**	**666**	**14,794**
Annual Benefits	**$962,546,034**	**$ 67,078,922**	**$ 34,718,329**	**$994,906,627**

Exhibit C – Part I
Total Lives and Annual Salaries of Active Male Participants
Classified by Age and Years of Service as of December 31, 2024

	Years of Service										
AGE	Under 1 year	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 and over	Total	Annual Salary
Under 20										**0**	
											0
20 to 24	99	131								**230**	
	$ 5,859,062	$ 11,824,923									**$ 17,683,985**
25 to 29	137	564	300							**1,001**	
	$ 8,207,748	$ 52,967,280	$ 32,320,314								**$ 93,495,341**
30 to 34	81	364	844	33						**1,322**	
	$ 5,036,530	$ 34,247,903	$ 91,385,766	$ 3,828,909							**$ 134,499,108**
35 to 39	38	157	597	353	8					**1,153**	
	$ 2,327,852	$ 14,908,849	$ 64,777,038	$ 41,286,744	$ 965,865						**$ 124,266,348**
40 to 44	5	54	284	353	522	134				**1,352**	
	$ 342,038	$ 5,152,668	$ 30,763,289	$ 40,791,918	$ 65,109,216	$ 17,368,205					**$ 159,527,334**
45 to 49			77	160	383	723	137			**1,480**	
			$ 8,429,896	$ 18,234,331	$ 46,587,367	$ 93,637,133	$ 18,676,723				**$ 185,565,450**
50 to 54				39	163	382	772	75		**1,431**	
				$ 4,480,233	$ 19,415,761	$ 48,115,542	$103,006,095	$ 10,433,252			**$ 185,450,883**
55 to 59				2	62	165	298	158	3	**688**	
				$ 231,646	$ 7,296,311	$ 20,366,129	$ 39,149,711	$ 21,689,612	$ 427,356		**$ 89,160,764**
60 to 63						30	48	35	10	**123**	
						$ 3,633,916	$ 6,060,938	$ 4,742,261	$ 1,470,815		**$ 15,907,930**
64 to 65										**0**	
											0
Total Active	**360**	**1,270**	**2,102**	**940**	**1,138**	**1,434**	**1,255**	**268**	**13**	**8,780**	
Annual Salary	**$21,773,229**	**$119,101,622**	**$227,676,304**	**$108,853,781**	**$139,374,521**	**$183,120,924**	**$166,893,468**	**$36,865,125**	**$1,898,171**		**$1,005,557,143**

Annual salary shown based on annualized pay rate at December 31, 2024, and does not include Tier 2 pensionable pay cap.

Exhibit C – Part II
Total Lives and Annual Salaries of Active Female Participants
Classified by Age and Years of Service as of December 31, 2024

	Years of Service										
AGE	**Under 1 year**	**1 to 4**	**5 to 9**	**10 to 14**	**15 to 19**	**20 to 24**	**25 to 29**	**30 to 34**	**35 and over**	**Total**	**Annual Salary**
Under 20										**0**	
											0
20 to 24	34	42								**76**	
	$ 2,000,628	$ 3,759,942									**$ 5,760,570**
25 to 29	48	214	86							**348**	
	$ 2,863,500	$ 20,033,076	$ 9,214,131								**$ 32,110,707**
30 to 34	40	191	295	7						**533**	
	$ 2,353,680	$ 18,032,761	$ 31,884,236	$ 813,541							**$ 53,084,219**
35 to 39	14	107	277	76	1					**475**	
	$ 823,788	$ 10,101,019	$ 29,957,182	$ 9,009,656	$ 113,978						**$ 50,005,622**
40 to 44	2	37	146	98	165	45				**493**	
	$ 165,512	$ 3,548,573	$ 15,789,454	$ 11,412,344	$ 20,438,159	$ 5,819,222					**$ 57,173,265**
45 to 49			47	48	97	178	39			**409**	
			$ 5,069,604	$ 5,590,682	$ 11,783,436	$ 22,838,436	$ 5,378,393				**$ 50,660,552**
50 to 54				26	72	148	174	14		**434**	
				$ 3,009,764	$ 8,551,338	$ 18,563,542	$ 23,046,332	$ 1,869,187			**$ 55,040,164**
55 to 59					31	67	66	18		**182**	
					$ 3,672,924	$ 8,293,615	$ 8,773,923	$ 2,431,931			**$ 23,172,392**
60 to 63						13	17	8	1	**39**	
						$ 1,584,673	$ 2,125,095	$ 1,070,685	$ 161,636		**$ 4,942,089**
64 to 65										**0**	
											0
Total Active	**138**	**591**	**851**	**255**	**366**	**451**	**296**	**40**	**1**	**2,989**	
Annual Salary	**$8,207,108**	**$55,475,370**	**$91,914,608**	**$29,835,988**	**$44,559,835**	**$57,099,488**	**$39,323,743**	**$5,371,803**	**$161,636**		**$331,949,580**

Annual salary shown based on annualized pay rate at December 31, 2024, and does not include Tier 2 pensionable pay cap.

Exhibit C – Part III
Total Lives and Annual Salaries of All Active Participants
Classified by Age and Years of Service as of December 31, 2024

	Years of Service										
AGE	Under 1 year	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 and over	Total	Annual Salary
Under 20										**0**	
											0
20 to 24	133	173								**306**	
	$ 7,859,690	$ 15,584,865									**$ 23,444,555**
25 to 29	185	778	386							**1,349**	
	$ 11,071,248	$ 73,000,355	$ 41,534,445								**$ 125,606,048**
30 to 34	121	555	1,139	40						**1,855**	
	$ 7,390,210	$ 52,280,664	$123,270,003	$ 4,642,451							**$ 187,583,327**
35 to 39	52	264	874	429	9					**1,628**	
	$ 3,151,640	$ 25,009,867	$ 94,734,220	$ 50,296,400	$ 1,079,843						**$ 174,271,970**
40 to 44	7	91	430	451	687	179				**1,845**	
	$ 507,550	$ 8,701,241	$ 46,552,744	$ 52,204,262	$ 85,547,375	$ 23,187,428					**$ 216,700,599**
45 to 49			124	208	480	901	176			**1,889**	
			$ 13,499,500	$ 23,825,013	$ 58,370,804	$ 116,475,569	$ 24,055,116				**$ 236,226,002**
50 to 54				65	235	530	946	89		**1,865**	
				$ 7,489,997	$ 27,967,099	$ 66,679,084	$ 126,052,428	$ 12,302,439			**$ 240,491,047**
55 to 59				2	93	232	364	176	3	**870**	
				$ 231,646	$ 10,969,235	$ 28,659,744	$ 47,923,634	$ 24,121,543	$ 427,356		**$ 112,333,156**
60 to 63						43	65	43	11	**162**	
						$ 5,218,589	$ 8,186,033	$ 5,812,947	$ 1,632,451		**$ 20,850,019**
64 to 65										**0**	
											0
Total Active	**498**	**1,861**	**2,953**	**1,195**	**1,504**	**1,885**	**1,551**	**308**	**14**	**11,769**	
Annual Salary	**$29,980,337**	**$174,576,992**	**$319,590,912**	**$138,689,768**	**$183,934,356**	**$240,220,412**	**$206,217,211**	**$42,236,928**	**$2,059,807**		**$1,337,506,724**

Annual salary shown based on annualized pay rate at December 31, 2024, and does not include Tier 2 pensionable pay cap.
Shaded cells represent active participants that are nearing retirement or already eligible for retirement.

Exhibit D – Part I
Showing Number of Refund Payments Made during Year To Male Employees for Fiscal Year Ending December 31, 2024

Age at Date of Refund	Length of Service at Date of Refund: Under 1 Year	Between 1 and 2	Between 2 and 3	Between 3 and 4	Between 4 and 5	5 and over	Total
Under 20							**0**
20 to 24		1					**1**
25 to 29	2		3		4	9	**18**
30 to 34	1	3	2	2	9	24	**41**
35 to 39	3	3	1		1	19	**27**
40 to 44					1	2	**3**
45 to 49						3	**3**
50 to 54	1					1	**2**
55 to 59							**0**
60 to 63						2	**2**
64 to 65							**0**
Older than 65	1					1	**2**
Totals	**8**	**7**	**6**	**2**	**15**	**61**	**99**

Includes only number of actual refunds paid or accrued during fiscal year reported.
Includes members classified as active as of December 31, 2023, but had benefits suspended as of December 31, 2024.
Includes members previously classified as refunded as of December 31, 2024, who were previously reported as inactive as of December 31, 2023.

Exhibit D – Part II
Showing Number of Refund Payments Made during Year To Female Employees for Fiscal Year Ending December 31, 2024

Age at Date of Refund	Length of Service at Date of Refund Under 1 Year	Between 1 and 2	Between 2 and 3	Between 3 and 4	Between 4 and 5	5 and over	Total
Under 20							**0**
20 to 24			1				**1**
25 to 29	1	2	1	2			**6**
30 to 34					1	4	**5**
35 to 39	1					6	**7**
40 to 44	1					1	**2**
45 to 49				1			**1**
50 to 54	1					1	**2**
55 to 59	1						**1**
60 to 63							**0**
64 to 65							**0**
Older than 65							**0**
Totals	**5**	**2**	**2**	**3**	**1**	**12**	**25**

Includes only number of actual refunds paid or accrued during fiscal year reported.
Includes members classified as active as of December 31, 2023, but had benefits suspended as of December 31, 2024.
Includes members previously classified as refunded as of December 31, 2024, who were previously reported as inactive as of December 31, 2023.

Exhibit E
Showing Statistics on Service Retirement Annuities
Classified by Age as of December 31, 2024

	MALE		FEMALE		TOTAL	
AGE	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
Under 50	3	$ 54,638	3	$ 88,414	**6**	**$ 143,052**
50	32	1,851,302	8	483,577	**40**	**2,334,879**
51	66	4,617,849	17	1,150,702	**83**	**5,768,551**
52	56	3,887,495	16	1,055,047	**72**	**4,942,542**
53	99	6,702,327	23	1,362,082	**122**	**8,064,409**
54	138	10,325,689	42	2,802,562	**180**	**13,128,251**
55	216	16,866,624	57	4,348,175	**273**	**21,214,799**
56	214	17,183,162	86	6,826,102	**300**	**24,009,264**
57	285	23,421,226	63	4,878,839	**348**	**28,300,065**
58	259	20,926,296	93	7,072,291	**352**	**27,998,587**
59	270	22,748,634	85	6,546,314	**355**	**29,294,948**
60	315	26,188,056	108	8,769,395	**423**	**34,957,451**
61	292	24,955,935	99	7,490,334	**391**	**32,446,269**
62	253	20,680,536	108	8,496,037	**361**	**29,176,573**
63	251	20,898,602	108	8,580,085	**359**	**29,478,687**
64	270	22,819,923	106	8,520,340	**376**	**31,340,263**
65	249	20,999,562	103	7,926,905	**352**	**28,926,467**
66	206	17,429,004	121	9,768,570	**327**	**27,197,574**
67	227	18,895,275	126	9,835,844	**353**	**28,731,119**
68	190	15,442,761	108	7,807,003	**298**	**23,249,764**
69	195	16,554,275	81	5,782,233	**276**	**22,336,508**
70	211	18,484,369	89	6,481,269	**300**	**24,965,638**
71	225	18,863,581	81	6,102,951	**306**	**24,966,532**
72	245	20,394,066	91	6,769,985	**336**	**27,164,051**
73	326	28,282,055	82	6,147,909	**408**	**34,429,964**
74	343	29,816,074	97	6,828,312	**440**	**36,644,386**
75	367	30,718,319	66	4,768,884	**433**	**35,487,203**
76	413	34,240,660	84	5,543,394	**497**	**39,784,054**
77	415	34,108,627	55	3,659,431	**470**	**37,768,058**
78	387	30,746,790	33	1,880,438	**420**	**32,627,228**
79	244	18,844,527	30	1,826,539	**274**	**20,671,066**
80	230	17,824,444	31	1,948,080	**261**	**19,772,524**
81	233	17,813,817	28	1,495,848	**261**	**19,309,665**
82	201	14,712,357	15	869,420	**216**	**15,581,777**
83	171	11,767,230	12	793,628	**183**	**12,560,858**
84	136	9,700,613	11	621,976	**147**	**10,322,589**
85 to 89	392	26,063,546	10	617,270	**402**	**26,680,816**
90 to 94	124	7,833,183	0	0	**124**	**7,833,183**
95 to 99	29	1,783,575	0	0	**29**	**1,783,575**
100+	1	64,616	0	0	**1**	**64,616**
Totals	**8,779**	**$705,511,620**	**2,376**	**$175,946,185**	**11,155**	**$881,457,805**

Exhibit F
Showing Statistics on Widow's Annuities
Classified by Age as of December 31, 2024

Age	No.	Annual Payments	Age	No.	Annual Payments
Under 30	0	$ 0	65	36	$ 1,170,136
30	0	0	66	42	1,354,445
31	0	0	67	55	1,832,938
32	2	62,533	68	57	1,846,403
33	0	0	69	58	1,867,923
34	1	27,293	70	91	2,821,724
35	0	0	71	88	3,088,030
36	0	0	72	84	2,716,062
37	0	0	73	113	3,647,092
38	1	24,490	74	115	3,649,585
39	1	26,627	75	139	4,448,469
40	3	81,907	76	143	4,460,506
41	5	128,275	77	148	4,664,967
42	2	59,748	78	166	5,064,691
43	2	79,294	79	119	3,497,128
44	6	166,960	80	103	3,057,145
45	4	120,366	81	125	3,581,733
46	3	86,664	82	141	4,013,556
47	4	123,436	83	109	3,200,934
48	7	249,230	84	91	2,465,941
49	6	192,521	85	89	2,444,622
50	9	334,732	86	104	2,670,101
51	8	269,077	87	78	1,981,812
52	9	266,795	88	89	2,350,856
53	11	330,507	89	53	1,407,023
54	12	468,908	90	57	1,460,165
55	17	483,567	91	47	1,232,702
56	13	389,109	92	54	1,326,244
57	20	605,270	93	42	1,024,436
58	12	379,320	94	39	994,243
59	16	512,834	95	19	505,777
60	19	574,132	96	18	427,378
61	23	772,937	97	16	394,687
62	21	715,252	98	14	341,570
63	26	791,533	99	4	107,075
64	31	968,849	100+	9	212,638
			Total	**3,049**	**$90,622,903**

Exhibit G
Showing Statistics on Miscellaneous Annuities
For Fiscal Year Ending December 31, 2024

	No.	Annual Payments
Children's Annuities	180	$1,537,369
Widows' Compensation Annuities	66	4,873,934
Ordinary Disability Benefits	26	1,463,426
Occupational Disease Disability Benefits	20	1,372,811
Duty Disability Benefits	177	13,433,179
Children's Disability Benefits	121	145,200
Totals	**590**	**$22,825,919**

Exhibit H – Part I
Showing Male Participants Receiving Duty Disability
Classified by Age and Length of Service as of December 31, 2024

	Length of Service as of December 31, 2024													
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total	
ATTAINED AGE	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
Under 30		$ -		$ -		$ -		$ -		$ -		$ -	**0**	**$ -**
30 to 34		-	1	60,399	2	152,791		-		-		-	**3**	**213,190**
35 to 39		-		-	9	625,017		-		-		-	**9**	**625,017**
40 to 44		-	1	61,911	2	159,042	5	361,249	3	256,450		-	**11**	**838,652**
45 to 49		-	1	64,761	6	420,716	5	365,377	3	229,363	2	182,577	**17**	**1,262,794**
50 to 54		-	4	291,274	6	446,699	6	443,677	15	1,150,798	9	826,772	**40**	**3,159,220**
55 to 59		-	2	145,637	1	72,818	5	378,337	8	615,244	9	723,904	**25**	**1,935,940**
60 to 63		-	3	218,455	2	141,377	2	145,637	9	691,428	4	340,198	**20**	**1,537,095**
64 to 65		-		-		-		-		-		-	**0**	**-**
Totals	**0**	**$ -**	**12**	**$ 842,437**	**28**	**$ 2,018,460**	**23**	**$ 1,694,277**	**38**	**$ 2,943,283**	**24**	**$ 2,073,451**	**125**	**$ 9,571,908**

Exhibit H – Part II
Showing Female Participants Receiving Duty Disability
Classified by Age and Length of Service as of December 31, 2024

	Length of Service as of December 31, 2024													
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total	
ATTAINED AGE	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
Under 30		$ -		$ -		$ -		$ -		$ -		$ -	**0**	**$ -**
30 to 34		-		-		-		-		-		-	**0**	**-**
35 to 39		-	1	57,429		-		-		-		-	**1**	**57,429**
40 to 44		-	1	70,838		-	1	80,646	2	198,817		-	**4**	**350,301**
45 to 49		-		-		-	2	145,104	5	374,221	1	54,985	**8**	**574,310**
50 to 54		-	4	280,902	1	72,818	6	426,539	4	324,376	1	80,533	**16**	**1,185,168**
55 to 59		-		-	3	234,680	1	70,838	7	483,775	4	287,795	**15**	**1,077,088**
60 to 63		-	2	145,637	1	72,818	3	252,884	1	72,818	1	72,818	**8**	**616,975**
64 to 65		-		-		-		-		-		-	**0**	**-**
Totals	**0**	**$ -**	**8**	**$ 554,806**	**5**	**$ 380,316**	**13**	**$ 976,011**	**19**	**$ 1,454,007**	**7**	**$ 496,131**	**52**	**$ 3,861,271**

Exhibit I – Part I
Showing Male Participants Receiving Ordinary Disability
Classified by Age and Length of Service as of December 31, 2024

	Length of Service as of December 31, 2024													
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total	
ATTAINED AGE	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
Under 30		$ -		$ -		$ -		$ -		$ -		$ -	**0**	**$ -**
30 to 34		-		-		-		-		-		-	**0**	**-**
35 to 39		-		-		-		-		-		-	**0**	**-**
40 to 44		-		-		-		-		-		-	**0**	**-**
45 to 49		-		-		-		-	2	103,706	4	227,335	**6**	**331,041**
50 to 54		-		-		-		-	1	74,446	7	421,039	**8**	**495,485**
55 to 59		-		-		-		-	1	51,838	2	105,527	**3**	**157,365**
60 to 63		-		-		-		-		-	1	54,985	**1**	**54,985**
64 to 65		-		-		-		-		-		-	**0**	**-**
Totals	**0**	**$ -**	**0**	**$ -**	**0**	**$ -**	**0**	**$ -**	**4**	**$ 229,990**	**14**	**$ 808,886**	**18**	**$ 1,038,876**

Exhibit I – Part II
Showing Female Participants Receiving Ordinary Disability
Classified by Age and Length of Service as of December 31, 2024

	Length of Service as of December 31, 2024													
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total	
ATTAINED AGE	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
Under 30		$ -		$ -		$ -		$ -		$ -		$ -	**0**	**$ -**
30 to 34		-		-		-	1	53,335		-		-	**1**	**53,335**
35 to 39		-		-	1	50,887		-		-		-	**1**	**50,887**
40 to 44		-		-		-	1	51,370	3	161,820		-	**4**	**213,190**
45 to 49		-		-		-		-		-		-	**0**	**-**
50 to 54		-		-		-		-		-	2	107,138	**2**	**107,138**
55 to 59		-		-		-		-		-		-	**0**	**-**
60 to 63		-		-		-		-		-		-	**0**	**-**
64 to 65		-		-		-		-		-		-	**0**	**-**
Totals	**0**	**$ -**	**0**	**$ -**	**1**	**$ 50,887**	**2**	**$ 104,705**	**3**	**$ 161,820**	**2**	**$ 107,138**	**8**	**$ 424,550**

Exhibit J – Part I
Showing Male Participants Receiving Occupational Disease Disability
Classified by Age and Length of Service as of December 31, 2024

	Length of Service as of December 31, 2024													
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total	
ATTAINED AGE	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
Under 30		$ -		$ -		$ -		$ -		$ -		$ -	**0**	**$ -**
30 to 34		-		-		-		-		-		-	**0**	**-**
35 to 39		-		-		-		-		-		-	**0**	**-**
40 to 44		-		-		-		-		-		-	**0**	**-**
45 to 49		-		-		-	1	62,191		-	3	219,320	**4**	**281,511**
50 to 54		-		-		-	1	61,019	1	74,086	3	196,547	**5**	**331,652**
55 to 59		-		-		-		-			3	213,777	**3**	**213,777**
60 to 63		-		-		-		-		-	2	132,403	**2**	**132,403**
64 to 65		-		-		-		-		-		-	**0**	**-**
Totals	**0**	**$ -**	**0**	**$ -**	**0**	**$ -**	**2**	**$ 123,210**	**1**	**$ 74,086**	**11**	**$ 762,047**	**14**	**$ 959,343**

Exhibit J – Part II
Showing Female Participants Receiving Occupational Disease Disability Classified by Age and Length of Service as of December 31, 2024

	Length of Service as of December 31, 2024													
	Under 1 Year		1 to 4		5 to 9		10 to 14		15 to 19		20 & Over		Total	
ATTAINED AGE	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments	No.	Annual Payments
Under 30		$ -		$ -		$ -		$ -		$ -		$ -	**0**	**$ -**
30 to 34		-		-		-		-		-		-	**0**	**-**
35 to 39		-		-		-		-		-		-	**0**	**-**
40 to 44		-		-		-		-		-		-	**0**	**-**
45 to 49		-		-		-		-		-		-	**0**	**-**
50 to 54		-		-		-		-	1	60,267	1	78,887	**2**	**139,154**
55 to 59		-		-		-	1	60,682			1	60,682	**2**	**121,364**
60 to 63		-		-		-		-	1	60,682	1	92,268	**2**	**152,950**
64 to 65		-		-		-		-		-		-	**0**	**-**
Totals	**0**	**$ -**	**0**	**$ -**	**0**	**$ -**	**1**	**$ 60,682**	**2**	**$ 120,949**	**3**	**$ 231,837**	**6**	**$ 413,468**

Exhibit K
History of Average Annual Salaries

Year End	Members in Service	Increase	Current Year Salary	Increase	Average Salary	Increase	CPI Chicago
1995	13,437	2.6 %	$ 622,413,737	3.9 %	$ 46,321	1.3 %	2.2 %
1996	13,475	0.3	654,149,310	5.1	48,545	4.8	3.8
1997	13,435	(0.3)	675,515,532	3.7	50,280	3.6	1.7
1998 [1]	13,586	1.1	736,401,756	9.0	54,203	7.8	1.5
1999	13,829	1.8	755,303,667	2.6	54,617	0.8	2.6
2000	13,858	0.2	759,343,026	0.5	54,795	0.3	4.0
2001	13,889	0.2	763,352,475	0.5	54,961	0.3	0.8
2002	13,720	(1.2)	866,531,789	13.5	63,158	14.9	2.5
2003	13,746	0.2	887,555,791	2.4	64,568	2.2	1.7
2004	13,569	(1.3)	874,301,958	(1.5)	64,434	(0.2)	2.2
2005	13,462	(0.8)	948,973,732	8.5	70,493	9.4	3.6
2006	13,749	2.1	1,012,983,635	6.7	73,677	4.5	0.7
2007	13,748	0.0	1,038,957,026	2.6	75,572	2.6	4.7
2008	13,373	(2.7)	1,023,580,667	(1.5)	76,541	1.3	(0.6)
2009	13,154	(1.6)	1,011,205,359	(1.2)	76,874	0.4	2.5
2010	12,737	(3.2)	1,048,084,301	3.6	82,287	7.0	1.2
2011	12,236	(3.9)	1,034,403,526	(1.3)	84,538	2.7	2.1
2012	12,026	(1.7)	1,015,170,686	(1.9)	84,415	(0.1)	1.7
2013	12,161	1.1	1,015,426,126	0.0	83,499	(1.1)	0.5
2014	12,020	(1.2)	1,074,333,318	5.8	89,379	7.0	1.5
2015	12,061	0.3	1,086,607,979	1.1	90,093	0.8	0.0
2016	12,177	1.0	1,119,526,987	3.0	91,938	2.0	1.9
2017	12,633	3.7	1,150,406,094	2.8	91,064	(1.0)	1.7
2018	13,438	6.4	1,205,324,445	4.8	89,695	(1.5)	1.1
2019	13,353	(0.6)	1,228,986,864	2.0	92,038	2.6	2.2
2020	12,715	(4.8)	1,195,980,486	(2.7)	94,061	2.2	0.9
2021	12,126	(4.6)	1,258,338,033	5.2	103,772	10.3	6.6
2022	11,868	(2.1)	1,274,049,642	1.2	107,352	3.4	5.5
2023	11,850	(0.2)	1,339,703,857	5.2	113,055	5.3	3.3
2024	11,769	(0.7)	1,337,506,724 [2]	(0.2)	113,647	0.5	3.9
Average Increase (Decrease) for the last							
5 years:		**(2.5)%**		**1.7 %**		**4.3 %**	**4.0 %**
10 years:		**(0.2)%**		**2.2 %**		**2.5 %**	**2.7 %**
30 years:		**(0.3)%**		**2.8 %**		**3.1 %**	**2.3 %**

[1] *Pay definition changed to include duty availability pay.*

[2] *Of the $1,337,506,724 current year salary, $41,529,326 is duty availability pay.*

Exhibit L
New Annuities Granted during 2024

	Annuitants	Widows/ Widowers of Deceased Employees[1]	Widows/ Widowers of Deceased Annuitants	Compensation Widows/ Widowers
Number retired/deceased	433	5	190	0
Average age attained	56.0	44.2	74.9	N/A
Average length of service	27.7	N/A	N/A	N/A
Average annual salary [2]	$ 118,544	N/A	N/A	N/A
Average annual final salary	$ 128,333	N/A	N/A	N/A
Total annual annuity	35,868,414	184,151	7,396,159	0
Average annual annuity	82,836	36,830	38,927	0
Total liability	$ 525,755,736	3,740,044	59,922,488	0
[(Based on 3% Comb. and 4% Amer. Exp.)]				
Average liability	$ 1,214,216	748,009	315,382	0
Total investment	$ 183,902	N/A	N/A	N/A
[Employee-paid for tax purposes]				
Average investment [3]	$ 425	N/A	N/A	N/A
Liability/cost	2,858.9	N/A	N/A	N/A
Liability/final pay	$ 9.46	N/A	N/A	N/A

[1] *Not including compensation or supplemental.*

[2] *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.*

[3] *Based on previously-taxed contributions.*

Exhibit M
Retirees and Beneficiaries by Type of Benefit

	ANNUITANTS			DISABILITY				Widow	
Years	Employee	Spouse[1]	Child	Ordinary	Duty	Occup.	Child	Comp.	Total
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
2016	9,603	3,102	186	40	202	33	164	64	13,394
2017	9,899	3,059	185	40	197	31	154	63	13,628
2018	9,930	3,054	190	36	182	29	147	63	13,631
2019	10,078	3,070	201	40	167	25	125	65	13,771
2020	10,283	3,025	198	31	160	22	114	67	13,900
2021	10,601	3,063	189	31	167	20	122	67	14,260
2022	10,952	3,088	189	33	166	20	125	66	14,639
2023	11,101	3,069	179	30	172	17	127	67	14,762
2024	11,155	3,049	180	26	177	20	121	66	14,794

[1] *Includes reversionary.*

Exhibit N
Average Employee Retirement Benefits Payable

Years Ended	Average Annual Benefit	Average Current Age of Retirees	Average Age at Retirement Current Year [1]	Average Years of Benefit Service at Retirement Current Year [1]
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
2016	63,381	69	57.5	26.9
2017	65,615	69	57.5	26.6
2018	67,434	70	57.7	26.6
2019	68,746	70	57.1	26.9
2020	71,202	70	56.9	27.3
2021	72,942	70	56.1	27.0
2022	74,956	69	55.9	26.9
2023	76,857	70	55.7	27.4
2024	79,019	70	56.0	27.7

[1] *Averages for New Annuitants in 2024.*

Exhibit O – Part 1
History of Annuities Employee Annuitants (Male and Female)

Year End	Number of Annuitants	Total Annuities	Average Annuities
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
2016	9,603	608,646,498	63,381
2017	9,899	649,527,055	65,615
2018	9,930	669,615,380	67,434
2019	10,078	692,826,321	68,746
2020	10,283	732,172,481	71,202
2021	10,601	773,262,816	72,942
2022	10,952	820,921,933	74,956
2023	11,101	853,191,495	76,857
2024	11,155	881,457,805	79,019

Exhibit O – Part II
History of Annuities Spouse Annuitants
(Not Including Compensation Widows)

Year End	Number of Annuitants	Total Annuities	Average Annuities
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
2016	3,102	63,731,123	20,545
2017	3,059	67,469,456	22,056
2018	3,054	69,740,449	22,836
2019	3,070	72,798,906	23,713
2020	3,025	73,811,776	24,401
2021	3,063	77,483,784	25,297
2022	3,088	81,684,130	26,452
2023	3,069	87,539,636	28,524
2024	3,049	90,622,903	29,722

Exhibit P
Counts of Retirees and Beneficiaries with Healthcare Coverage Subsidies

Year End	Employee	Spouse [1]	Total
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
2016	8,189	2,079	10,268
2017	0	0	0
2018	0	0	0
2019	0	0	0
2020 [2]	4,328	0	4,328
2021 [2]	4,499	0	4,499
2022 [2]	4,739	0	4,739
2023 [2]	4,921	0	4,921
2024 [2]	5,112	0	5,112

[1] *Includes children.*

[2] *Pursuant to the court order Underwood, et al., v. City of Chicago, et al., PABF provides retiree health insurance premium subsidies to certain eligible annuitants.*

Exhibit Q
Schedule of Retired Members by Types of Benefit and Monthly Benefit Levels

Monthly	Retirement		Disability		Widow [1]		Child		Totals	
Benefit	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Under $100	1								**1**	**0**
$100 to Under $250	5	2					68	65	**73**	**67**
$250 to Under $500	15	8					14	8	**29**	**16**
$500 to Under $750	20	3					33	27	**53**	**30**
$750 to Under $1,000	12	5					33	30	**45**	**35**
$1,000 to Under $2,000	42	46			33	1,212	15	8	**90**	**1,266**
$2,000 to Under $3,000	32	9			45	1,121			**77**	**1,130**
$3,000 to Under $4,000	220	56	1		16	505			**237**	**561**
$4,000 to Under $5,000	919	440	15	12		105			**934**	**557**
$5,000 to Under $6,000	1,572	534	37	20	4	37			**1,613**	**591**
$6,000 to Under $7,000	2,072	490	82	26		15			**2,154**	**531**
$7,000 to Under $8,000	2,389	537	16	7	2	14			**2,407**	**558**
$8,000 to Under $9,000	907	160	3			4			**910**	**164**
$9,000 to Under $10,000	291	42	3	1					**294**	**43**
$10,000 and over	282	44				2			**282**	**46**
Totals:	**8,779**	**2,376**	**157**	**66**	**100**	**3,015**	**163**	**138**	**9,199**	**5,595**

[1] *Includes reversionary.*

Exhibit R
Schedule of Average Benefit Payments for New Annuities Granted during Year

	Years of Service:	0-9	10-14	15-19	20-24	25-29	30-34	>= 35	Total
	Number of Retired Members	0	7	14	105	184	42	11	**363**
2015	Average annual salary used	$0	$34,263	$85,670	$90,037	$100,124	$104,876	$102,529	**$96,001**
	Average Monthly Benefit	$0	$951	$3,334	$4,271	$6,005	$6,555	$6,408	**$5,379**
	Number of Retired Members [1]	1	5	14	124	257	80	12	**493**
2016	Average annual salary used	$50,400	$23,820	$78,131	$91,293	$101,855	$108,887	$109,058	**$98,945**
	Average Monthly Benefit	$1,050	$622	$2,966	$4,292	$6,123	$6,805	$6,816	**$5,634**
	Number of Retired Members	1	2	21	166	258	118	15	**581**
2017	Average annual salary used	$94,501	$19,905	$74,798	$93,477	$98,445	$103,641	$104,267	**$97,099**
	Average Monthly Benefit	$5,709	$630	$2,904	$4,456	$5,735	$6,478	$6,517	**$5,421**
	Number of Retired Members [2]	0	1	15	105	112	95	11	**339**
2018	Average annual salary used	$0	$96,236	$85,713	$95,577	$100,721	$111,692	$130,922	**$102,505**
	Average Monthly Benefit	$0	$2,606	$3,301	$4,569	$5,901	$6,981	$8,183	**$5,740**
	Number of Retired Members [3]	1	5	14	133	204	117	7	**481**
2019	Average annual salary used	$29,649	$27,298	$72,912	$95,939	$104,238	$113,077	$122,510	**$102,493**
	Average Monthly Benefit	$618	$771	$2,935	$4,632	$6,181	$7,067	$7,657	**$5,828**
	Number of Retired Members [4]	0	1	5	126	279	134	8	**553**
2020	Average annual salary used	$0	$15,558	$60,593	$96,945	$106,449	$117,718	$125,965	**$106,718**
	Average Monthly Benefit	$0	$357	$2,361	$4,572	$6,270	$7,357	$7,873	**$6,124**
	Number of Retired Members [5]	0	0	6	187	364	102	8	**667**
2021	Average annual salary used	$0	$0	$54,123	$99,691	$107,104	$112,400	$113,858	**$105,440**
	Average Monthly Benefit	$0	$0	$2,182	$4,737	$6,341	$7,025	$7,116	**$5,968**
	Number of Retired Members [6]	1	0	9	203	319	152	17	**701**
2022	Average annual salary used	$135,900	$0	$37,893	$105,479	$112,317	$118,827	$116,853	**$110,936**
	Average Monthly Benefit	$1,416	$0	$1,372	$5,082	$6,582	$7,427	$7,303	**$6,274**
	Number of Retired Members [7]	3	2	113	251	82	7	0	**458**
2023	Average annual salary used	$26,565	$33,332	$107,487	$116,947	$120,022	$125,641	$0	**$114,339**
	Average Monthly Benefit	$800	$1,111	$5,208	$6,977	$7,501	$7,853	$0	**$6,582**
	Number of Retired Members	2	5	85	241	97	3	0	**433**
2024	Average annual salary used	$30,333	$50,985	$108,617	$121,215	$125,314	$137,725	$0	**$118,544**
	Average Monthly Benefit	$917	$1,897	$5,122	$7,290	$7,832	$8,608	$0	**$6,903**

[1] *Excludes data correction for one retiree previously valued as deceased.*
[2] *Excludes four retirees whose annuities were reinstated after previously being classified as suspended.*
[3] *Excludes one retiree whose annuity was reinstated after previously being suspended.*
[4] *Excludes five retirees whose annuities were reinstated after previously being classified as suspended.*
[5] *Excludes three retirees whose annuities were reinstated after previously being classified as suspended.*
[6] *Excludes nine retirees whose annuities were reinstated after previously being classified as suspended.*
[7] *Excludes one retiree whose annuity was reinstated after previously being classified as suspended.*

Exhibit S
History of Retirees and Beneficiaries
Added to and Removed from Benefit Payroll

Yr.	Added		Removed		End of Year		Average Annual Benefits	Increase to Avg. Benefits
	No.	Annual Benefits.	No.	Annual Benefits	No.	Annual Benefits		
Employee Annuitants (Male and Female)								
2015	363	$ 34,830,781	289	$ 15,450,195	9,385	$ 579,069,731	$ 61,702	2.6%
2016	494	44,891,597	276	15,314,830	9,603	608,646,498	63,381	2.7%
2017	581	56,599,441	285	15,718,884	9,899	649,527,055	65,615	3.5%
2018	343	37,905,119	312	17,816,794	9,930	669,615,380	67,434	2.8%
2019	482	43,818,101	334	20,607,160	10,078	692,826,321	68,746	1.9%
2020	558	61,036,082	353	21,689,922	10,283	732,172,481	71,202	3.6%
2021	670	64,044,843	352	22,954,508	10,601	773,262,816	72,942	2.4%
2022	710	71,533,136	359	23,874,019	10,952	820,921,933	74,956	2.8%
2023	459	53,674,187	310	21,404,625	11,101	853,191,495	76,857	2.5%
2024	433	55,566,676	379	27,300,366	11,155	881,457,805	79,019	2.8%
Widow/Widower Annuitants (Not Including Compensation)[1]								
2015	147	$ 4,022,206	178	$ 2,831,532	3,078	$ 61,439,136	$ 19,961	3.0%
2016	140	4,231,504	116	1,939,517	3,102	63,731,123	20,545	2.9%
2017	158	7,074,268	201	3,335,935	3,059	67,469,456	22,056	7.4%
2018	179	5,804,968	184	3,533,975	3,054	69,740,449	22,836	3.5%
2019	185	6,443,233	169	3,384,776	3,070	72,798,906	23,713	3.8%
2020	143	4,885,497	188	3,872,627	3,025	73,811,776	24,401	2.9%
2021	216	7,479,141	178	3,807,133	3,063	77,483,784	25,297	3.7%
2022	234	8,895,028	209	4,694,682	3,088	81,684,130	26,452	4.6%
2023	132	9,425,218	151	3,569,712	3,069	87,539,636	28,524	7.8%
2024	195	8,563,123	215	5,479,856	3,049	90,622,903	29,722	4.2%

[1] *Not including Compensation Annuitants.*
Amounts shown are based on benefits in effect in that calendar year and have not been adjusted due to updated contracts and/or retroactive pay.

Exhibit T
History of Retirees and Beneficiaries
Total Retirees and Beneficiaries

Year	Annuitants and Beneficiaries Beginning Year	Additions During Year	Terminations During Year	Annuitants and Beneficiaries Year-End	Average Annuitants and Beneficiaries [1]
2015	13,230	588	608	13,210	13,220
2016	13,210	697	513	13,394	13,302
2017	13,394	806	572	13,628	13,511
2018	13,628	585	582	13,631	13,630
2019	13,631	735	595	13,771	13,701
2020	13,771	746	617	13,900	13,836
2021	13,900	952	592	14,260	14,080
2022	14,260	1,030	651	14,639	14,450
2023	14,639	655	532	14,762	14,701
2024	14,762	698	666	14,794	14,778

[1] *Average number of annuitants and beneficiaries at beginning and end of year.*

APPENDIX 4

ACTUARIAL METHODS AND ASSUMPTIONS AS OF DECEMBER 31, 2024

Actuarial Methods and Assumptions as of December 31, 2024

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 and GASB accounting purposes is the Entry-Age Normal actuarial cost method.

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., 25 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 are based on an experience study for the period January 1, 2019 to December 31, 2023, adopted by the Board on February 24, 2025, and became effective December 31, 2024.

Demographic Assumptions

Post-Retirement Mortality

Scaling factors of 119 percent for males, and 102 percent for females of the Pub-2010 Amount-weighted Safety Healthy Retiree Mortality Tables, sex distinct, set forward one-year for males, with generational mortality improvement using MP-2021 2-dimensional mortality improvement scales recently released by the SOA. This assumption provides a margin for mortality improvements.

Disabled Mortality

Scaling factors of 129 percent for males, and 112 percent for females of the Pub-2010 Amount-weighted Safety Healthy Retiree Mortality Tables, sex distinct, set forward one-year for males, with generational mortality improvement using MP-2021 2-dimensional mortality improvement scales recently released by the SOA. This assumption provides a margin for mortality improvements.

Pre-Retirement Mortality

Scaling factors of 100 percent for males, and 100 percent for females of the Pub-2010 Amount-weighted Safety Employee Mortality Tables, sex distinct, with generational mortality improvement using MP-2021 2-dimensional mortality improvement scales recently released by the SOA. This assumption provides a margin for mortality improvements.

We use what is termed "the limited fluctuation credibility procedure" to determine the appropriate scaling factor of the base mortality tables for each gender and each member classification. We used a liability weighted basis. In each case, the partial credibility factor (or "Z-factor") is computed based on the experience of the specific group being studied. This Z-factor is a measure of the credibility of the pertinent group.

The Best Fit is the ratio of actual to expected deaths using the base table. The final scale is then determined as the weighted average of the Best Fit and 100 percent based on the Z-factor. For example, the Z-factor for male retirees is 97 percent, suggesting that the data for this group is 97 percent credible (there were not enough deaths among active members to be completely credible). The Best Fit for this group would be to scale the base tables by 119 percent. The final scale of 119 percent is the credibility-weighted average (119% = 97% x 119% + 3% x 100%). Factors for females are determined similarly.

	Future Life Expectancy (years) in 2024		Future Life Expectancy (years) in 2035	
	Postretirement		Postretirement	
Age	**Male**	**Female**	**Male**	**Female**
35	48.65	53.25	49.70	54.17
40	43.40	47.98	44.44	48.89
45	38.24	42.72	39.26	43.64
50	33.15	37.51	34.14	38.42
55	28.16	32.40	29.11	33.30
60	23.35	27.49	24.27	28.36
65	18.88	22.84	19.71	23.63
70	14.78	18.45	15.48	19.14
75	11.09	14.38	11.65	14.97

Rate of Retirement: The table below shows the assumed rates of retirement.

Attained Age	Under 29 Years of Service Tier 1	Under 29 Years of Service Tier 2	29 or More Years of Service Tier 1	29 or More Years of Service Tier 2
50	0.0550	0.0200	0.0825	0.0200
51	0.0550	0.0200	0.0825	0.0200
52	0.0550	0.0200	0.0825	0.0200
53	0.0550	0.0200	0.0825	0.0200
54	0.0550	0.0300	0.0825	0.0300
55	0.2200	0.2400	0.3300	0.3600
56	0.2500	0.2700	0.3750	0.4050
57	0.2000	0.2200	0.3000	0.3300
58	0.2000	0.2200	0.2500	0.2750
59	0.1900	0.2100	0.2375	0.2625
60	0.2200	0.2400	0.2750	0.3000
61	0.2800	0.3000	0.3500	0.3750
62	0.2800	0.3000	0.3500	0.3750
63	0.7500	0.7500	0.7500	0.7500
64	0.7500	0.7500	0.7500	0.7500
65+	1.0000	1.0000	1.0000	1.0000

Rate of Termination: The table below shows the assumed rates of termination.

Years of Service	Rate
0	0.039
1	0.027
2	0.025
3	0.024
4	0.023
5	0.021
6	0.020
7	0.019
8	0.018
9	0.017
10	0.015
11	0.010
12	0.009
13	0.008
14 +	0.007

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

Attained Age	Rates
20-24	0.0002
25-29	0.0004
30-34	0.0006
35-39	0.0013
40-44	0.0021
45-49	0.0029
50-54	0.0030
55-59	0.0030
60-64	0.0030

Of the participants who become disabled in the future, the following distribution of disability types is assumed:

Duty Disability:	40%
Occupational Disease Disability:	10%
Ordinary Disability:	50%

Economic Assumptions

Investment Return: 6.75 percent per year, compounded annually, net of investment expenses. The 6.75 percent assumption is composed of a 2.25 percent inflation assumption and a 4.50 percent real rate of return assumption.

General Inflation: 2.25 percent per year, compounded annually.

This assumption serves as the basis for the determination of annual increases in pension and the pensionable salary cap for Tier 2 members.

Wage Inflation and Payroll Growth: 3.50 percent per year, compounded annually.

Future Salary Increases: The assumed base rate of individual salary increase is 3.50 percent per year (underlying wage inflation assumption), plus an additional percentage based on the following service scale:

Years of Service*	Base Rates	Wage Inflation	Total Rates
0	0.00%	3.50%	3.50%
1	41.50%	3.50%	45.00%
2	5.00%	3.50%	8.50%
3	4.50%	3.50%	8.00%
4	4.50%	3.50%	8.00%
5	4.50%	3.50%	8.00%
6-9	1.00%	3.50%	4.50%
10	4.50%	3.50%	8.00%
11-14	1.00%	3.50%	4.50%
15	4.50%	3.50%	8.00%
16-19	1.00%	3.50%	4.50%
20	4.50%	3.50%	8.00%
21-24	1.50%	3.50%	5.00%
25	2.50%	3.50%	6.00%
26	1.00%	3.50%	4.50%
27-29	0.50%	3.50%	4.00%
30	2.50%	3.50%	6.00%
31-34	0.50%	3.50%	4.00%
35+	0.00%	3.50%	3.50%

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

Increases above are not applied to the Duty Availability Pay (DAP). DAP is assumed to increase annually using the general inflation assumption of 2.25 percent.

Asset Value: The Actuarial Value of Assets is smoothed by using a five-year phase-in of each year's unexpected investment gains and losses.

Expenses: Statutory funding projections include an explicit administrative expense assumption of $4,625,871 for plan year end December 31, 2024, increased by 2.25 percent per year.

Projection Assumptions

Active Population: Active members who terminate, retire, become disabled, or die during the year are replaced by new entrants such that the number of active members remains level during the projection period based on the most recent actuarial valuation. The number of active members as of the valuation at December 31, 2024 is 11,769.

New Entrant Profile: The entry age of future new entrants, which is summarized below, is based on the profile of current active members hired over the last five years with one or more years of service as of December 31, 2024. These members were hired from January 1, 2020 through December 31, 2023.

Entry Age	Number
Under 20	0
20 to 25	583
25 to 30	655
30 to 35	408
35 to 40	213
40 to 55	2

Approximately 68% of the new entrants are assumed to be male.

New Entrant Pay: Based on the most recent employment contract, new entrants were assumed to earn $58,842 for the plan year ending December 31, 2024, and $61,782 for the plan year ending December 31, 2025. This amount does not include duty availability pay. The new entrant pay for members hired after 2024 is assumed to increase by the wage inflation assumption of 3.50% plus duty availability pay after two years, increased by CPI compounded.

New Entrant Pay Increases: Pay for a specific new entrant is assumed to increase in the future by the wage inflation and the service based increases disclosed in this actuarial valuation.

The projections assume a pay cap of $127,283.01 for plan year 2025, increasing by 1.125% per year after plan year 2025. The annual increase of 1.125% per year is based on 50% of the CPI-U increase which is assumed to be 2.25% per year.

Other Assumptions

Marital Status: It is assumed that 75% of active 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.

Reciprocal Service: No assumption for reciprocal service.

Benefit Service: Exact fractional years of service are used to determine the amount of benefit payable.

Actuarial Methods and Assumptions as of December 31, 2024

Decrement Timing: All decrements are assumed to occur mid-year.

Decrement Relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Decrement Operation: Turnover decrements do not operate after member reaches retirement eligibility for a minimum annuity formula benefit.

Eligibility Testing: Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.

Pay Increase Timing: Beginning of the (fiscal) year.

Tax Levy Loss: No tax levy loss is assumed

Health Insurance Premium Subsidies: Current recipients of the $55 per month for non-Medicare and $21 per month for Medicare health insurance premium subsidy were identified in the data provided by the PABF staff. The subsidies for current recipients are assumed to continue during the recipient's lifetime. The valuation assumes 65 percent of future retirees (i.e., current actives) eligible for the subsidy will receive it in the future.

APPENDIX 5

SUMMARY OF PROVISIONS OF THE FUND AS OF DECEMBER 31, 2024

Summary of Principal Eligibility and Benefit Provisions
As of December 31, 2024

PARTICIPANTS	An employee in the police department of the City of Chicago appointed and sworn or designated by law as a peace officer with the title of policeman, policewoman, chief surgeon, police surgeon, police dog catcher, police kennelman, police matron, and members of the police force of the police department.
SERVICE	In computing service rendered by a police officer, the following periods shall be counted, in addition to all periods during which he performed the duties of his position, as periods of service for annuity purposes only: All periods of (a) vacation; (b) leave of absence with pay; (c) military service; (d) disability for which the police officer receives disability benefit. The calculation of service is based on a day-to-day basis for most purposes. For the purpose of calculating benefits under the Dominant Formula, one year of Service is credited for a year in any portion of which a police officer is compensated.

RETIREMENT

Eligibility

Attainment of age 50 with at least 10 years of service.

For participants who 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 65.

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.

Mandatory Retirement Minimum Annuity

A police officer who is required to withdraw from service due to attainment of mandatory retirement age who has less than 20 years of service credit may elect to receive an annuity equal to 30% of average salary for the first 10 years of service, plus 2% of average salary for each completed year of service in excess of 10, to a maximum of 48% of average salary. This benefit qualifies for post-retirement increases.

Post-Retirement Increase

A retiree 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 maximum increase.

For participants who 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

Beginning with the monthly annuity payment due on January 1, 2016, the fixed and granted monthly annuity payment for any policeman who retired from the service before January 1, 2016, at age 50 or over with 20 or more years of service, and for any policeman who retired from service due to termination of disability and who is entitled to an annuity on January 1, 2016, shall be no less than 125% of the Federal Poverty Level.

For participants who 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 who 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%.

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.

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 65.
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 65 if the police officer had continued in service at the same rank last held in the department.
Death after Retirement	If a police officer retires on or after January 1, 1986, and subsequently dies, the widow's annuity is 40% before 1988 and 50% on and after January 1, 1988, of the retired policeman's annuity at the time of death (without dollar limit).
Maximum Annuity	$500 a month (after discount for age difference) under both the accumulation method and the old formula method. There is no dollar limit on the 30%, 40%, or 50% benefit.
Minimum Annuity	The minimum widow's annuity shall be no less than 150% of the Federal Poverty Level. *For participants who first became members on or after January 1, 2011, widow benefits are equal to 66-2/3% of the officer's earned annuity at the date of death. Automatic increases to the annuity are equal to the lesser of 3.00% and 50% of CPI-U, commencing when the survivor reaches age 60, and applied to the original granted retirement annuity.*

CHILDREN'S ANNUITIES	
Eligibility	Payable at death of the policeman to all unmarried children less than 18 years of age.
Benefit	10% of the annual maximum salary of a first class patrolman during widow (widower) life, 15% otherwise.

Payable Until Age 18. If the child is disabled, benefit is payable for life or as long as such disablement exists.

Family Maximum 60% (non-duty death) or 100% (duty death) of the salary that would ordinarily been paid to the policeman, if he had been in the active discharge of his duties.

Parent's Annuities Eligibility

Payable to a dependent parent at the death of a policeman who is in either active service, or receiving a disability benefit, or on leave of absence, or in receipt of an annuity granted after 20 years of service, or waiting to start receiving an annuity granted for 20 years of service. The benefit is only payable if there are no surviving spouses or children eligible for benefits.

Benefit 18% of the current salary attached to the rank at separation from service.

Payable until Death of the dependent parent.

DUTY DISABILITY BENEFIT

Eligibility Disabling condition incurred in the performance of duty.

Benefit 75% of salary at the time the disability is allowed plus $100.00 per month for each unmarried child less than age 18, (total amount of child's benefits shall not exceed 25% of salary). Beginning January 1, 2000, after seven 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 65 or by operation of law, whichever is later. Salary deductions are contributed by the City.

OCCUPATIONAL DISEASE DISABILITY BENEFIT

Eligibility Heart attack or any disability heart disease after 10 years of service.

Benefit 65% of salary attached to the rank held by the police officer at the time of his or her removal from the police department payroll with a minimum after 10 years of 50% of the current salary attached to the rank. Each natural or legally adopted unmarried child of the officer under the age of 18 is entitled to a benefit of $100 per month. This benefit is not terminated at age 18 if the child is then dependent by reason of physical or mental disability. Salary deductions are contributed by the City.

ORDINARY DISABILITY BENEFIT

Eligibility Disabling condition other than duty or occupational related.

Benefit 50% of salary at the time of injury, payable for a period not more than 25% of service (excluding any previous disability time) rendered prior to injury, nor more than five years. Disability shall cease at age 65. Salary deductions are contributed by the City.

DEATH BENEFIT

Eligibility Payable upon the death of a police officer whose death occurs while in active service; on authorized leave of absence; within 60 days of receipt of salary; while receiving duty or ordinary disability benefit; occurring within 60 days of termination of such benefit; or occurring on retirement while in receipt of annuity and separation was effective after 20 years of service. This benefit is payable to beneficiaries or, if none, to estate.

Benefit

Death in Service:

Age at Death	Benefit
49 and under	$12,000
50-62	$12,000 less $400 for each year by which age at death exceeds 49

Death after Retirement:

Age at Death	Benefit
50 and over	$6,000

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.

Summary of Principal Eligibility and Benefit Provisions
As of December 31, 2024

REFUNDS

Policemen	Without regard to service and under age 50, or with less than 10 years of service and under age 57 at withdrawal: a refund of all salary deductions together with 1.5% simple interest until the date of withdrawal.
For Spouse's Annuity	Upon retirement, an unmarried policeman will receive a refund of contributions for spouse's annuity, accumulated at 3% compounded annually.
Of Remaining Amounts	If at death of a retired policeman the total member contributions paid while active exceed the total retirement benefits paid to date of death, the difference is payable.

CONTRIBUTIONS

Salary Deductions	Employee	7 %	
	Spouse	1½%	
	Annuity Increase	½%	
		9 %	
City Contributions [1]	Employee	9-5/7%	
	Spouse	2%	
	Annuity Increase	½%	Unallocated
		12-3/14%	

[1] *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 was 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.

Under P.A. 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 which, along with member contributions and investment earnings, are expected to generate a projected funded ratio of 90% by plan year end 2055.

"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	½ 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
2017	1.50%	0.75%	0.75%	$112,408.42
2018	2.20%	1.10%	1.10%	$113,644.91
2019	2.30%	1.15%	1.15%	$114,951.83
2020	1.70%	0.85%	0.85%	$115,928.92
2021	1.40%	0.70%	0.70%	$116,740.42
2022	5.40%	2.70%	2.70%	$119,892.41
2023	8.20%	4.10%	3.00%	$123,489.18
2024	3.70%	1.85%	1.85%	$125,773.73
2025	2.40%	1.20%	1.20%	$127,283.01

Health Insurance Premium Subsidies

Pursuant to the court order Underwood, et al. v. City of Chicago, et al., the PABF provides retiree health insurance premium subsidies to certain eligible annuitants.

To be eligible for the PABF paid subsidy, the annuitant must meet the following eligibility requirements to receive partial reimbursement for healthcare costs:

1) Annuitant must have retired on or after August 23, 1989;
2) Annuitant must have been hired prior to April 4, 2003; and
3) Annuitant must have either:
    a) Participated in a group healthcare plan for which the Fund offers to deduct health insurance premiums from monthly annuities in accordance with the 1983 and 1985 amendments to the Illinois Pension Code Statutes (currently either the Blue Cross/Blue Shield plans sponsored by the City of Chicago; the Aetna plans sponsored by the Labor Benefits Association; or the United American Insurance Co. plans sponsored by the Chicago Police Sergeants' Association);
    OR
    b) For the period between January 1, 2017, and December 31, 2019, participated in any health insurance plan and paid their healthcare insurance premiums themselves, either through an account on which the annuitant is named or an account established for the benefit of the annuitant.

Eligible annuitants are entitled to receive a health insurance premium subsidy payable from the PABF for the lifetime of the employee annuitant in the amount of $55 per month if the annuitant is not receiving Medicare benefits or $21 per month if the annuitant is receiving Medicare benefits.

APPENDIX 6

LEGISLATIVE CHANGES 2015 THROUGH 2024

Legislative Changes 2014 through 2024

2015 Session

No legislative changes.

2016 Session

P.A. 99-0506

- Approved and effective May 30, 2016.
- Changes the funding policy.
    - For payment years 2016 through 2020, specifies the amount for the City of Chicago's required annual contribution to the Fund as follows: $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.
    - Beginning in payment year 2021, the City's total required contribution to the Fund shall be an amount that is equal to the normal cost of the fund, plus an amount sufficient to bring the total assets of the fund up to 90% of the total actuarial liabilities of the fund by payment year 2055 (instead of 2040).
- Changes the actuarial cost method to entry age normal.
- Includes provisions for funding from any proceeds received by the City in relation to the operation of a casino within the City.
- Provides a mechanism to enforce funding through a mandamus action.
- Creates a new minimum retirement annuity provision equal to 125% of the federal poverty level for certain persons.

P.A. 99-0905

- Approved and effective November 29, 2016.
- Specifies the manner of calculating the Tier 2 surviving spouse's annuity for Tier 2 policemen who die in service with at least 1 1/2 years of service.
- Specifies the manner of computing duty-death benefits for Tier 2 surviving spouses and provides that Tier 2 duty-death benefits are not payable where the death is the result of an intervening cause.
- Includes provisions for a minimum surviving spouse's annuity equal to 125% of the federal poverty level.
- Increases the Tier 1 automatic annual increase in retirement annuity for persons born after December 31, 1954 but before January 1, 1966.

- Amends the State Mandates Act to require implementation without reimbursement.

2017 Session

P.A. 100-0334

- Approved and effective August 25, 2017.
- States a person otherwise entitled to a survivor benefit and who has been convicted of a felony in connection with the service rendered by the member, is not eligible for such survivor benefit, if such conviction was after the effective date.
- It further states for participants that first become members after the effective date the change is a condition of employment.

2018 Session

P.A. 100-1148

- Approved and effective December 10, 2018.
- Technical correction related to filing copies of the report as required by Section 3.1 of the General Assembly Organizational Act and with the State Government Report Distribution Center for the General Assembly.

2019 Session

P.A. 100-1173

- Approved and effective June 1, 2019.
- Denied service credit applications for safety or investigative work filed between 1992 and 2008 may be reconsidered by the board.

P.A. 100-0387

- Approved and effective August 16, 2019.
- Adds provisions to felony convictions entered on or after January 1, 2019. Also states that applicants of duty or occupational disease disability retirements who are denied benefits and who challenge and prevail may seek litigation expense recovery.

2020 Session

P.A. 101-0633

- Approved and effective June 5, 2020.
- Includes COVID-19 as a cause of eligibility for ordinary death benefits and certain annuities related to death in the line of duty for a policeman who was exposed to and contracted COVID-19 on or after March 9, 2020 and on or before December 31, 2020.

Legislative Changes 2014 through 2024

2021 Session

P.A. 101-0653

- Approved and effective February 26,2021.
- Extended the dates for which COVID-19 is included as a cause of eligibility for certain annuities related to death in the line of duty.

P.A. 102-0125

- Approved and effective July 23, 2021.
- Made changes to provisions concerning credit for service while on a leave of absence from the police department and assigned or detailed to perform safety or investigative work.

2022 Session

P.A. 102-0806

- Approved and effective May 13, 2022.
- Offsets disability and death benefits paid by the pension fund by any compensation as temporary total disability, permanent total disability, a lump sum settlement award, or other payment under the Workers' Compensation Act or the Workers' Occupational Diseases Act as a result of the policeman's secondary employment for any injury resulting in disability.
- Provides that the calculation of compensation received by the policeman or beneficiary shall not take into consideration any benefits received under the Line of Duty Compensation Act.

P.A. 102-0884

- Approved and effective May 13, 2022.
- Beginning January 1, 2023, the minimum widow's annuity changed from 125% of the Federal Poverty Level to 150% of the Federal Poverty Level.

2023 Session

P.A. 103-0002

- Approved and effective May 10, 2023.
- Establishes a presumption that a member who became disabled as a result of exposure to and contraction of COVID-19 from March 9, 2020 to June 30, 2021 was injured in the line of duty and is entitled to receive a duty disability benefit; applied retroactively to March 9, 2020. This presumption does not apply if the member was on a leave of absence from his or her employment or otherwise not required to report for duty for a period of 14 or more consecutive days immediately prior to the date of contraction of COVID-19. A member who had previously been denied a duty disability benefit that would otherwise be entitled to a duty disability benefit under the amendatory Act shall be entitled to a retroactive duty disability benefit.

P.A. 103-0582

- Approved and effective December 8, 2023.
- Grants an annual 3% non-compounded cost-of-living adjustment (COLA) to all Tier 1 Chicago Police retirees who reach age 55 with 20 years of service. Any member born on or after January 1, 1966 and who qualifies for a minimum annuity and has not received an initial increase as of January 1, 2023 is entitled to receive the initial increase on the latest of (1) January 1, 2023, (2) the first anniversary of the date of retirement, or (3) the attainment of age 55.

2024 Session

Municipal Code of Chicago 2-152-410

- Approved and effective December 31, 2023.
- The age of 65 shall be the maximum age for employment of sworn members of the police department, including a sworn member who is transferred or appointed to a supervisory or administrative position.

P.A. 103-0692

- Approved and effective July 19, 2024.
- Extends the end date of the presumption period from June 30, 2021, to January 31, 2022, for disabilities to be considered as injured in the line of duty as a result of exposure and contraction of COVID-19.

APPENDIX 7

GLOSSARY OF TERMS

Glossary of Terms

Actuarial Accrued Liability ("AAL")	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
Actuarial Assumptions	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.
Actuarial Cost Method	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of future Normal Costs and the Actuarial Accrued Liability.
Actuarial Equivalent	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value ("APV")	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
Actuarial Present Value of Future Benefits ("APVFB")	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB Statement No. 67, such as the Funded Ratio and the Actuarially Determined Contribution ("ADC").
Actuarial Value of Assets ("AVA")	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio or contribution requirement.

Glossary of Terms

Actuarially Determined Contribution ("ADC")	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ADC consists of the Employer Normal Cost and Amortization Payment.
Amortization Method	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
Amortization Payment	That portion of the plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
Amortization Period	The period used in calculating the Amortization Payment.
Closed Amortization Period	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example, if the amortization period is initially set at 25 years, it is 24 years at the end of one year, 23 years at the end of two years, etc.
Employer Normal Cost	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Equivalent Single Amortization Period	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
Experience Gain/Loss	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge, which may be larger or smaller than projected. Gains are due to favorable experience; e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, losses are the result of unfavorable experience; i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.

Glossary of Terms

Funded Ratio	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.
GASB	Governmental Accounting Standards Board.
GASB Statement No. 67 and GASB Statement No. 68	These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. GASB Statement No. 68, which replaced GASB Statement No. 27 effective with the fiscal year ending June 30, 2015, sets the accounting rules for the employers that sponsor or contribute to public retirement systems. GASB Statement No. 67, which replaced GASB Statement No. 25 effective with fiscal year ending June 30, 2014, sets the rules for the systems themselves.
Normal Cost	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
Open Amortization Period	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
Unfunded Actuarial Accrued Liability	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
Valuation Date	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.