

City of Philadelphia Municipal Retirement System

**Actuarial Valuation Report
as of July 1, 2024**

Produced by Cheiron

April 2025

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Letter Of Transmittal

April 4, 2025

City of Philadelphia Municipal Retirement System
Two Penn Center Plaza – 16th Floor
Philadelphia, Pennsylvania 19102-1721

Dear Board Members:

At your request, we have performed the July 1, 2024 Actuarial Valuation of the City of Philadelphia Municipal Retirement System (the System).

In preparing our report, we relied on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23. The results of this report are only applicable to the System's contribution for Fiscal Year Ending 2026. Future results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

This report has been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries we meet the Qualification Standards, as defined by the American Academy of Actuaries, to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This actuarial valuation report was prepared exclusively for the City of Philadelphia Municipal Retirement System for the purposes described herein and for the Plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

Finally, in preparation of this report, we have accepted the assumptions and methodologies as adopted by the Board of Pensions and Retirement for the City of Philadelphia Municipal Retirement System.

Sincerely,
Cheiron

A handwritten signature in blue ink that reads "Anu Patel".

Anu Patel, FSA, EA, MAAA
Principal Consulting Actuary

A handwritten signature in blue ink that reads "Brett Warren".

Brett Warren, FSA, EA, MAAA
Consulting Actuary

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION

SECTION I – BOARD SUMMARY

The primary purpose of the actuarial valuation and this report is to disclose the following as of the valuation date:

- The financial condition of the City of Philadelphia Municipal Retirement System (the System),
- Past and expected future trends and risks to the Retirement System’s financial condition,
- The City’s Minimum Municipal Obligation (MMO) representing the required contribution in accordance with Act 205 of Pennsylvania Law for Fiscal Year End (FYE) 2026,
- The Revenue Recognition Policy (RRP) contribution amount requested by the City, and
- The Retirement Board’s Funding Policy recommended City contribution.

Cheiron has issued a separate report containing the information required by the Governmental Accounting Standards Board (GASB) and therefore that accounting information is not included in this valuation report.

In this Section, we present a summary of the principal valuation results. This includes the basis on which the July 1, 2024 valuation was completed and an examination of the current financial condition of the System. In addition, we present a review of the key historical trends followed by the System’s projected financial outlook.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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A. Valuation Basis

The July 1, 2024 valuation results are based on the same actuarial methods and assumptions used in the July 1, 2023 valuation, except for the decrease in the interest rate assumption from 7.35% to 7.30% as of July 1, 2024 as previously adopted by the Board. Furthermore, the Board adopted to decrease the interest rate assumption from 7.30% to 7.25% for the July 1, 2025 actuarial valuation, which is reflected in the projections shown in this report. For a detailed description of the methods and assumptions, refer to Appendix C of this report.

This report was prepared using census data and financial information as of July 1, 2024 and does not reflect any subsequent changes in the membership or the assets. This valuation is based on plan provisions in effect as of July 1, 2024 and does not reflect the impact of any changes in benefits effective after the valuation date.

Since FYE 2018, the City started making contributions based on the alternate funding policy known as the Revenue Recognition Policy (RRP), which calls for contributions in excess of the Minimum Municipal Obligation (MMO). Each year, there are three sources of anticipated *additional revenue* that are received by the System:

- A portion of the sales tax revenue according to the State Legislation,
- Additional tiered member contributions based on salary level for current and future Municipal members, and
- Additional member contributions for current and future members in Plans 87 Police and Fire.

Typically, as additional contributions are received, the following years' MMOs are reduced as a function of the additional assets. However, the objective of the RRP for these additional revenue sources is to dedicate them toward paying down the unfunded liability and not to reduce future City costs. The RRP contributions are similar to the MMO except that the *additional revenue* coming into the System is tracked and accumulated in a notional account which is then deducted from the Actuarial Asset Value used to determine the City's contribution. Therefore, under the RRP the City's contributions do not reflect the additional cash flow into the fund from the sales tax or tiered/additional member contributions.

The MMO is calculated using all assets including *additional revenue* sources for state reporting purposes under Act 205 and represents the Actuarially Determined Contribution (ADC) as required under the Actuarial Standards of Practice (ASOPs) and for purposes of reporting under the Governmental Accounting Standards.

Below we highlight significant results of this valuation:

- ***Financial Performance:*** The return on the market value of assets (MVA) was 8.39% for the year ending June 30, 2024, which was higher than the expected 7.35% assumed rate of return. For funding purposes, the System applies an asset smoothing method to determine the actuarial value of assets (AVA) which phases in actuarial investment gains and losses over ten years. On an actuarial asset value basis, the return as of June 30, 2024 was 6.29% resulting in a net asset loss of \$71.3 million when compared to the 7.35% assumption.

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- The smoothing method also limits the AVA to not be greater than 120% nor less than 80% of the underlying MVA. The ratio of actuarial assets to market assets decreased from 102.3% in the prior year to 100.3% for the current year.
- **Pension Adjustment Fund (PAF):** As defined in the Philadelphia Code the PAF provides for additional benefits to current retirees through the use of excess earnings. Excess earnings are defined as returns in excess of the assumed return rate plus 1.00%. The asset return for the adjusted market value, which is based on five-year smoothing of asset gains and losses (instead of the 10 years for funding) was 7.11%. Because the return is below 8.35% (the assumed prior year rate of return of 7.35% plus 1.00%), there are no additional amounts transferred into the PAF as of June 30, 2024.
- **Unfunded Actuarial Liability (UAL):** The UAL is the excess of the System's actuarial liability (AL) over the AVA. The UAL decreased by \$291.7 million from \$4,842.2 million as of July 1, 2023 to **\$4,550.5 million as of July 1, 2024**. The UAL decreased because the City and member contributions received during the year were higher than the normal cost plus interest on the UAL.
 - The UAL increased by \$100.1 million due to liability losses resulting primarily from higher than expected retirements/disabilities and higher than expected salary increases. The UAL increased by \$71.3 million due to asset return losses based on the smoothed asset value. The UAL increased by \$61.4 million due to the decrease in discount rate. These values are offset by RRP contributions towards paying down the unfunded, differences in benefit accrual rates, and interest on payment timing of \$429.5 million. Additionally, the City made a one-time excess contribution above the RRP amount for this year that decreased the UAL by another \$95.0 million.
- **Funding Ratio:** This is the ratio of the System's AVA to AL. The funding ratio increased from 62.2% as of July 1, 2023 to **65.4% as of July 1, 2024**, due to the underlying growth in the smoothed assets and from actual contributions in excess of the MMO. The funding ratio on the System's MVA to AL increased from 60.8% to 65.2%.
- **Plan Changes:** There were no changes in plan provisions since the July 1, 2023 valuation.
- **Assumption Changes:** The only assumption change for this valuation was the decrease in interest rate from 7.35% to 7.30%, which resulted in an increase in AL of \$61.4 million.
- **Minimum Municipal Obligation (MMO):** The MMO is the required minimum amount the City must contribute under Pennsylvania State Law. The MMO decreased from \$652.9 million for FYE 2025 to **\$651.5 million for FYE 2026**. The expected City contributions based on the RRP are higher than the MMO and each year that the City continues to contribute in excess of the MMO, the MMO is generally expected to decrease assuming the actuarial assumptions are met each year.
- **Revenue Recognition Policy (RRP):** The contribution based on the RRP increased from \$741.5 million for FYE 2025 to **\$759.8 million for FYE 2026**. The balance of the notional account, which is removed from the assets in calculating this contribution, increased from \$598.1 million as of July 1, 2023 to \$770.9 million as of July 1, 2024.

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- ***Contribution under the City's Funding Policy:*** The beginning-of-year contribution under the City's Funding Policy increased from \$748.5 million for FYE 2025 based upon actual FYE 2024 payroll to an estimated **\$758.8 million for FYE 2026**.

Table I-1 summarizes the comparative UAL and fiscal year funding amounts discussed above.

Table I-1 Key Results (\$ thousands)			
Valuation Date	7/1/2024		7/1/2023
Actuarial Liability	\$	13,133,732	\$ 12,821,372
Actuarial Value of Assets	\$	8,583,194	\$ 7,979,199
Unfunded Actuarial Liability/(Surplus)	\$	4,550,538	\$ 4,842,173
Funding Ratio		65.4%	62.2%
		Fiscal Year 2026	Fiscal Year 2025
Minimum Municipal Obligation	\$	651,450	\$ 652,876
Revenue Recognition Policy Contribution	\$	759,777	\$ 741,452
City's Funding Policy Contribution*	\$	758,764	\$ 748,531

*The City's funding policy contribution for FYE 2025 was updated based upon the actual payroll of \$2,118.5 million (provided as pay rates in the data) as of July 1, 2024. In the July 1, 2023 actuarial valuation report, the estimated FYE 2025 payroll was \$2,058.8 million based on July 1, 2023 pay rates and increased with the payroll assumption.

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B. Current Financial Condition

On the following pages, we summarize the key results of the July 1, 2024 valuation and how they compare to the results from the July 1, 2023 valuation.

1. City Membership:

As shown in Table I-2 below, total membership in the Retirement System increased by 1.1% from 2023 to 2024.

Table I-2 Membership Total				
	July 1, 2024	July 1, 2023	% Change	
Actives	27,479	26,646	3.1%	
Terminated Vesteds	665	781	-14.9%	
Disabled	3,730	3,758	-0.7%	
Retirees	22,515	22,409	0.5%	
Beneficiaries	8,615	8,565	0.6%	
DROP	2,102	2,210	-4.9%	
Total City Members	65,106	64,369	1.1%	
Annual Salaries	\$ 2,118,480,484	\$ 1,993,014,337	6.3%	
Average Salary per Active Member	\$ 77,095	\$ 74,796	3.1%	
Annual Retirement Allowances	\$ 872,374,925	\$ 848,128,541	2.9%	
Average Retirement Allowance	\$ 25,025	\$ 24,419	2.5%	

The active participant population increased by 3.1% during the 2023-2024 plan year primarily due to more new hires and rehires than expected. Deferred Retirement Option Plan (DROP) participants decreased 4.9% from 2023 to 2024 as more members retired from DROP than enrolled in DROP. The average salary per active member increased by 3.1% during the plan year. The salary growth combined with the increase in active membership resulted in an increase in total payroll of 6.3% versus the expected 3.3% payroll growth assumption.

Annual retirement allowances increased by 2.9% in aggregate with the average benefits also increasing 2.5%. The total number of participants in pay status (excluding DROP) increased by 0.4%.

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2. City Assets and Liabilities:

Table I-3 presents a comparison between the July 1, 2024 and July 1, 2023 system assets, liabilities, UAL, and funding ratios. The AVA funding ratio increased by 3.2% from 62.2% as of July 1, 2023 to **65.4%** as of July 1, 2024 despite the liability losses, asset losses, and the decrease in the interest rate assumption. This improved funded ratio was primarily due to contributions in excess of the Normal Cost and interest on the UAL. Prior to the change in the interest rate assumption, the funded ratio would have been 65.7%.

Table I-3 Assets and Liabilities (\$ thousands)				
	July 1, 2024	July 1, 2023	% Change	
Actuarial Liabilities by Membership:				
Actives	\$ 4,323,575	\$ 4,174,169	3.6%	
Terminated Vesteds	68,301	84,663	-19.3%	
Disabled	951,145	915,973	3.8%	
Retirees	5,682,538	5,548,737	2.4%	
Beneficiaries	806,504	776,164	3.9%	
DROP	1,291,861	1,312,451	-1.6%	
Non-Vested Refunds	9,808	9,215	6.4%	
Total Actuarial Liability (AL)	\$ 13,133,732	\$ 12,821,372	2.4%	
Market Value of Assets (MVA net of PAF)*	\$ 8,558,440	\$ 7,800,867	9.7%	
Actuarial Value of Assets (AVA net of PAF)*	\$ 8,583,194	\$ 7,979,199	7.6%	
Ratio of Actuarial Assets to Market Assets	100.3%	102.3%	-2.0%	
Unfunded Actuarial Liability	\$ 4,550,538	\$ 4,842,173	-6.0%	
Funding Ratio (AVA ÷ AL)	65.4%	62.2%	3.2%	
Funding Ratio (MVA ÷ AL)	65.2%	60.8%	4.4%	

*The PAF is available for distribution under title §22-311 of the Philadelphia Code. In general, the PAF provides for enhanced benefit distribution to retirees and beneficiaries through the use of excess earnings. For more details on the PAF, see Section III – E

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3. Components of UAL Change between July 1, 2023 and July 1, 2024:

The Retirement System’s unfunded actuarial liability decreased by \$291.6 million from the prior year. Table I-4 presents the specific components of this change in the UAL.

The System experienced a \$71.3 million asset loss based on the AVA and a \$100.1 million liability loss which is attributable to demographic experience. There was also an increase in liability of \$61.4 million due to the change in interest rate assumption. **The higher City contributions under RRP in comparison to MMO resulted in a gain of \$161.1 million and the additional City contribution in excess of the RRP resulted in a further gain of \$95.0 million.** There was a \$0.8 million loss due to the difference in benefit accruals, Quasi contributions, and timing. There was a \$19.5 million gain due to the one year deferral of gains and losses under the MMO funding requirements. When these changes are compared to the expected pay down of \$249.7 million in the UAL as part of the MMO, there is a net decrease in the UAL of \$291.6 million as of July 1, 2024.

Table I-4 Change in Unfunded Actuarial Liability (UAL) (\$ thousands)	
Unfunded Actuarial Liability	
1. UAL as of July 1, 2023	\$ 4,842,173.0
2. UAL as of July 1, 2024	\$ 4,550,537.4
3. Net increase/(decrease) in UAL: 2 - 1	\$ (291,635.6)
Changes in Unfunded Actuarial Liability	
Experience	
4. UAL change due to asset (gain)/loss*	\$ 71,286.3
5. UAL change due to overall liability (gain)/loss	\$ 100,128.9
Contributions	
6. UAL change due to difference in benefit accruals, Quasi contributions, and timing	\$ 783.0
7. UAL change due to one-year delay in MMO contributions	\$ (19,455.8)
8. UAL change due to RRP contributions in excess of the MMO contributions	\$ (161,089.8)
9. UAL change due to additional contributions in excess of the RRP contributions	\$ (95,000.5)
Total (Gain)/Loss Amortization Base	
10. Total UAL change due to gains and losses: sum 4 through 9	\$ (103,347.9)
Plan Changes	
11. UAL change due to plan changes	\$ 0
Assumption Changes	
12. UAL change due to assumption changes	\$ 61,438.2
Total Changes	
13. Total net overall change: 10 + 11 + 12	\$ (41,909.7)
14. UAL change due to benefit accruals and payments, contributions, and interest	<u>(249,725.8)</u>
15. Net increase/(decrease) in UAL: 13 + 14	\$ (291,635.5)

* Includes loss due to PAF transfer, if applicable

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4. Contributions:

Table I-5 below summarizes the City contribution amounts.

Table I-5 Contributions (\$ thousands)				
Fiscal Year Ending in Year:	2026	% of Pay	2025	% of Pay
Minimum Municipal Obligation ¹				
Estimated FY Payroll ²	\$ 2,188,390		\$ 2,058,784	
Normal Cost (with Expenses)	\$ 220,227	10.06%	\$ 209,764	10.19%
Regular Employee Contributions	(94,524)	4.32%	(89,553)	4.35%
Extra Employee Contributions for Funding ³	<u>(34,304)</u>	1.57%	<u>(31,495)</u>	1.53%
City Normal Cost (with expenses)	\$ 91,399	4.18%	\$ 88,717	4.31%
Amortization Payment	<u>560,051</u>	25.59%	<u>564,160</u>	27.40%
Minimum Municipal Obligation	\$ 651,450	29.77%	\$ 652,876	31.71%
Revenue Recognition Policy ⁴				
Estimated FY Payroll ²	\$ 2,188,390		\$ 2,058,784	
Normal Cost (with Expenses)	\$ 220,227	10.06%	\$ 209,764	10.19%
Regular Employee Contributions	(94,524)	4.32%	(89,553)	4.35%
Extra Employee Contributions for Funding ³	<u>(0)</u>	0.00%	<u>(0)</u>	0.00%
City Normal Cost (with expenses)	\$ 125,704	5.74%	\$ 120,211	5.84%
Amortization Payment	<u>634,073</u>	28.97%	<u>621,240</u>	30.18%
Revenue Recognition Policy	\$ 759,777	34.72%	\$ 741,452	36.01%
City's Funding Policy ⁵				
Estimated FY Payroll ²	\$ 2,188,390		\$ 2,118,480 ⁶	
Normal Cost (with Expenses)	\$ 220,227	10.06%	\$ 215,257 ⁷	10.16%
Regular Employee Contributions	(94,524)	4.32%	(93,893) ⁷	4.43%
Extra Employee Contributions for Funding ³	<u>(34,304)</u>	1.57%	<u>(31,495)</u>	1.49%
City Normal Cost (with expenses)	\$ 91,399	4.18%	\$ 89,870	4.24%
Amortization Payment	<u>667,365</u>	30.50%	<u>658,661</u>	31.09%
City's Funding Policy	\$ 758,764	34.67%	\$ 748,531	35.33%

¹ The MMO does not include Quasi-Agency contributions.

² The estimated payroll is based on total uncapped payroll.

³ Additional tier member contributions under Municipal Plans 67, 87, 10, and 16 and extra member contributions for Police and Fire Plans 87 are specifically dedicated to paying down the unfunded liability and are recognized as employee contributions under MMO and Funding Policy but not under the RRP contribution.

⁴ Revenue Recognition Policy (RRP) is based on the calculation of MMO without including accumulated sales tax revenue and additional member contribution amounts.

⁵ Assuming beginning-of-year payment.

⁶ FY 2025 payroll for the City's Funding Policy is the final payroll for the prior year. All other payroll is estimated based upon the prior year's data used for the actuarial valuation.

⁷ FY 2025 normal cost including regular employee contributions for the City's Funding Policy is updated to reflect the final payroll for the prior year.

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The **Minimum Municipal Obligation** for FYE 2026 measured as of the beginning of the year decreased by 1.94% of payroll, from 31.71% to 29.77%. In dollars, the required beginning of year contribution decreased \$1.4 million from \$652.9 million to \$651.5 million. The decrease in the MMO is attributable to the expected City contributions based on the RRP which are higher than the MMO.

The contribution under the **Revenue Recognition Policy** decreased by 1.29% as a percent of payroll, from 36.01% to 34.72% for FYE 2026. The contribution in dollars increased \$18.3 million from \$741.5 million in the prior year to \$759.8 million for FYE 2026. When compared to the MMO, the RRP contribution is higher because accumulated sales tax revenue and additional member contributions are excluded from the assets when determining the RRP contributions.

For Fiscal Year 2026, the **City Funding Policy** contributions decreased by 0.66% of payroll, from 35.33% to 34.67%. In dollars, the contributions under the City's Funding Policy increased \$10.3 million from \$748.5 million to \$758.8 million. All contributions for the City's Funding Policy are provided as of the beginning of the year.

In Section IV of this report, we provide more detail on the development of these contributions.

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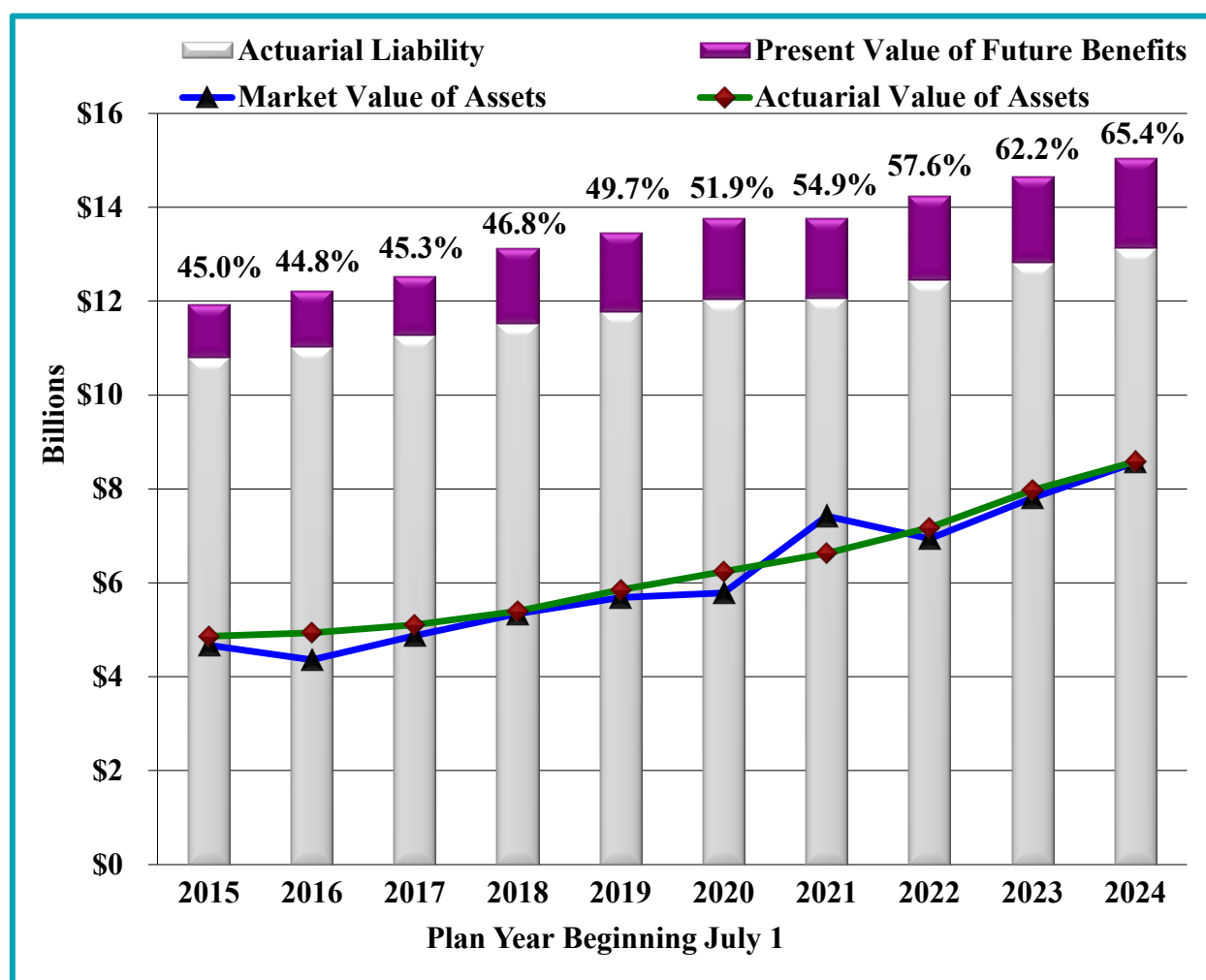
SECTION I – BOARD SUMMARY

C. Historical Trends

Although most of the attention given to the valuation reflects the most recently computed unfunded actuarial liability, funding ratio, and contribution amounts, each valuation is merely a snapshot of the long-term progress of a pension fund. It is important to take a step back from these latest results and view them in the context of the System's recent history and trends expected into the future. Below, we present a series of graphs which display historical trends for key factors in the valuations of the last 10 years.

Here we present the historical trends for the market and actuarial value of assets compared to the actuarial liabilities and present value of future benefits; we also show the progress of the Retirement System's funding ratios which is the ratio of actuarial value of assets over actuarial liability (as shown above each bar) since 2015.

City of Philadelphia Assets* and Liabilities – 2015 to 2024



* Market value of assets includes the PAF, which is not available for funding purposes.

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The System's funding ratio has steadily increased since 2016. It is important to note that the assumed interest rate assumption has been decreasing since 2015 from 7.75% to 7.30% which increases the liabilities but has improved the System's risk profile. During this ten year period the ratio has increased 20.4% despite the regular reductions of the interest rate assumption and the volatility of the markets. In 2024, the funding ratio increased by 3.2%.

The continuous improvement in funding status is driven by contribution levels that are higher than anticipated under MMO and more recently even higher than expected under the RRP. As long as the City adheres to the continued policy of contributing under the RRP and at least the MMO, the improvement in funding status is expected to continue.

Another observation is that prior to 2016 assets had remained relatively flat. This was a function of the negative cash flow as contributions and investment income had to keep pace with benefit payouts and expenses before the absolute value of assets could grow. However, the steps taken by the City and participants in providing additional contributions to the System has reduced this cash flow risk significantly, which has resulted in an increase in assets. In aggregate, market assets have increased approximately \$4.2 billion since 2016.

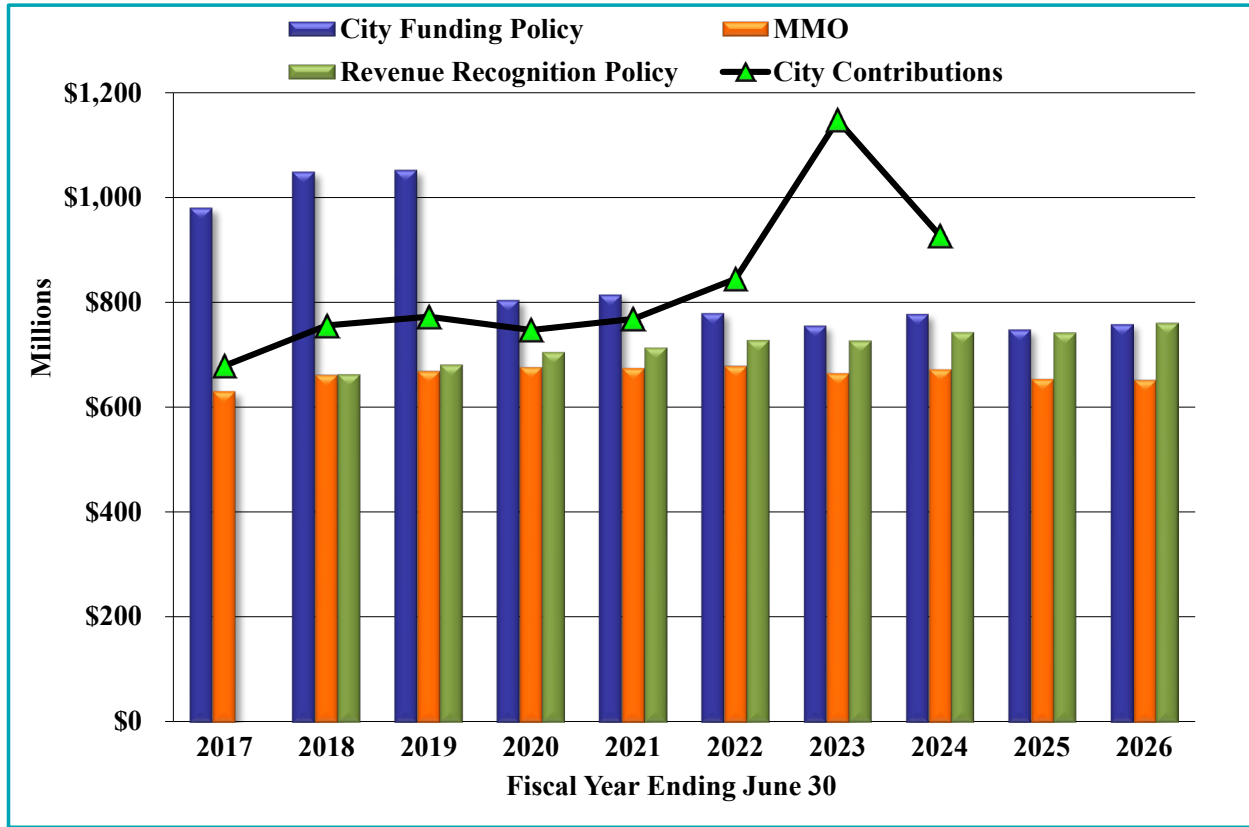
In the chart on the next page, we present historical trends for contributions under the MMO, the RRP (beginning in 2018), the City's Funding Policy, and the actual City contributions made for fiscal years since 2017. Because there is a two-year lag in the determination of the City Funding Policy, MMO, and RRP requirements, we show the contributions to date and the estimated amounts for fiscal years 2025 and 2026. The actual City contributions, shown in the black line, have been higher than the amounts required under the MMO and the RRP (orange and green bars). There is a sharp increase in the actual City contributions for 2023 and 2024 due to the extra contributions made by the City in the amounts of \$329.2 million and \$95.0 million, respectively, in excess of the RRP. The actual City contributions include sales tax revenue amounts (which began in FYE 2016), in the amounts of \$92.1 million in FYE 2023 and \$90.0 million in FYE 2024.

The Funding Policy amounts were higher than the MMO prior to 2020 because of the City's decision to fund based on the MMO for a number of years which slowed the funding progress in maintaining the funding policy and resulted in losses under the funding policy due to contribution amounts being lower than what the policy called for. These losses resulted in the increasing gap between the funding policy amount and the MMO. However, with the full payment of the initial funding policy base in FYE 2019, the funding policy contribution has decreased significantly and is closer to the MMO in subsequent years.

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City of Philadelphia Contributions for Fiscal Years 2017-2026



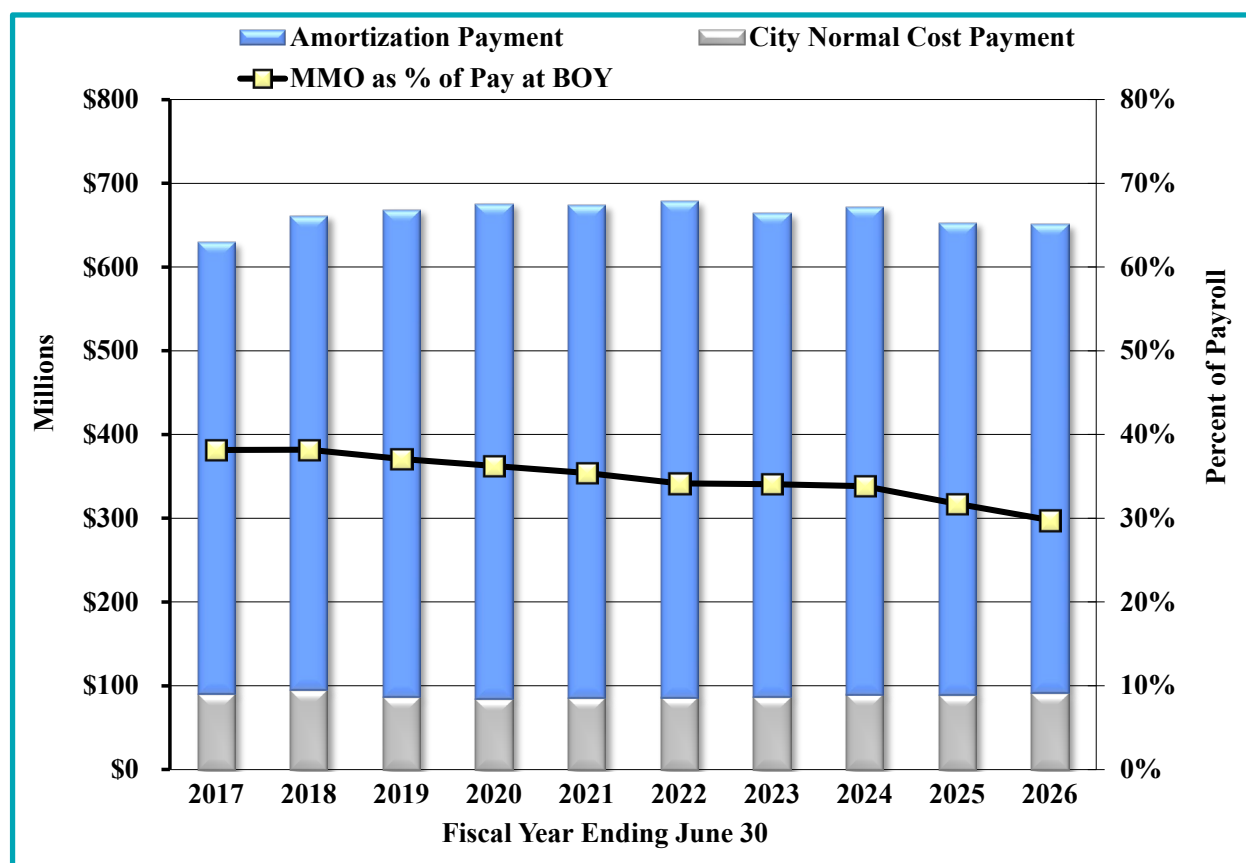
The key trend illustrated in this chart is that from FYE 2017 through FYE 2020 all measures of contributions were increasing due in part to the ten-year smoothing of historical investment losses that resulted in increases in UAL. From FYE 2018 through FYE 2024, the MMO remained relatively flat but has decreased for FYE 2025 and FYE 2026. The RRP (which is higher than the MMO) has increased slowly over this period. The RRP is greater than the MMO by approximately \$88.6 million in FYE 2025 and \$108.3 million in FYE 2026. In future years, as the City continues to pay the RRP, and as tax revenue and tiered/additional member contributions paid in excess of the MMO accumulate, the gap between the MMO and the RRP will continue to grow.

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The chart below shows the historical amortization payments under the MMO and City normal cost payments. The City normal cost payments include an explicit administrative expense assumption. The black line which goes with the axis on the right shows the beginning-of-year MMO (normal cost plus amortization payments only) as a percentage of payroll.

MMO Contributions by Source for Fiscal Years 2017-2026



The amortization payment to pay off the unfunded actuarial liability was \$539 million for FYE 2017 and \$560 million for FYE 2026. Up until FYE 2020, the amortization amounts had increased steadily due to the changes in assumptions that have had a net result of increasing liabilities and continued recognition of the 2008 investment losses. Since FYE 2020, the amortization amount has gradually decreased, primarily due to the actual City contributions being higher than the MMO offsetting the changes in assumptions which increased liabilities.

The total MMO as a percentage of payroll (as shown by the line and on the right-hand axis) was about 38.2% in FYE 2017. It has been steadily decreasing to the current level of approximately 29.8% in FYE 2026 due to the additional RRP contributions in excess of the MMO and in some years even additional contributions in excess of the RRP.

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D. Projected Financial Trends

Our analysis of the City of Philadelphia Municipal Retirement System's projected financial trends is an important part of this valuation. In this section, we present our assessment of the implications of the July 1, 2024 valuation results on the future outlook in terms of benefit security (assets over liabilities) and the City's expected cost progression.

In the charts that follow, we project the Retirement System's assets and liabilities, and the City's contributions. Our illustrations assume the provisions of Act 205 as amended by Act 44 remain in force during the projection period. The projections are based on the assumptions of the July 1, 2024 valuation, which includes the decrease in interest rate assumption from 7.35% to 7.30%. Additionally, the interest rate assumption is further decreased from 7.30% to 7.25% as of July 1, 2025 as adopted by the Board.

All projections also reflect future new hires, based on a stable active population reflecting the replacement of members expected to decrement from the active roles based on the demographic assumptions, that all Municipal groups will participate in the Stacked Hybrid Plan - Plan 16. Stacked plan benefits and contributions are based on pay up to a cap of \$65,000 resulting in lower future costs for this group.

All projections include expected additional funds from sales tax revenue and additional member contributions for current and future Municipal members and members of 1987 Plans Police and Fire. The amounts of expected sales tax were provided to us by the City (as shown in the table on the next page).

The treatment of the sales tax and tiered/additional member contributions varies based on whether or not these amounts are used to reduce future City costs or are dedicated to pay down the unfunded liability. Typically, as additional contributions are received, the following years MMOs are reduced as a function of the additional assets. However, under the RRP, the sales tax revenue and additional member contributions are dedicated to fund the unfunded liability without reducing the City's future contribution obligation. Tier and additional member contributions do not offset the City's portion of the normal cost under RRP. The additional revenue is contributed in addition to the City contributions based on adjusted assets under the RRP. Charts shown based on the RRP funding methodology set these assets aside in a notional account which is deducted from actuarial asset value used in determining the contributions under the RRP. We show three sets of projections for contributions based on 1) the MMO calculated in accordance with Act 205; 2) the RRP and 3) the Funding Policy.

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SECTION I – BOARD SUMMARY

The following chart reflects the expected projected sales tax revenue provided to us by the City for our analysis.

Fiscal Year Ending	2025	2026	2027	2028	2029
Expected Sales Tax	\$ 93,676,769	\$ 102,009,527	\$ 110,602,052	\$ 119,134,279	\$ 127,839,071
Fiscal Year Ending	2030	2031	2032	2033	2034
Expected Sales Tax	\$ 135,259,821	\$ 141,641,317	\$ 148,182,349	\$ 154,886,908	\$ 161,759,081
Fiscal Year Ending	2035	2036	2037	2038	2039
Expected Sales Tax	\$ 168,803,058	\$ 176,023,134	\$ 183,423,713	\$ 191,009,306	\$ 198,784,538
Fiscal Year Ending	2040	2041	2042	2043	2044
Expected Sales Tax	\$ 206,754,152	\$ 206,754,152	\$ 206,754,152	\$ 206,754,152	\$ 206,754,152

The following baseline projections assume all actuarial assumptions are met. We show three sets of projections for each of the three funding policies. For each set of projections, we show two graphs covering the historical period from 2014 to 2024 and the projected period from 2025 to 2044 assuming all assumptions are met.

The top graph shows asset measures (green and blue lines) compared to liabilities (gray bars). At the top of the graph is the progression of the System’s funding ratio which compares the actuarial value of assets (blue lines) to the actuarial liability (gray bars). The bars for the historical period are lighter shaded.

The bottom graph shows the MMO (red bars), expected sales tax revenue (blue bars) and expected tiered and additional member contributions (black bars). The blue line shows the Funding Policy, and the green line shows the expected City contributions under the RRP excluding the sales tax revenue which is shown separately. In comparing the RRP to MMO, the green line should be compared to the top of the red bars. Prior to 2016, the RRP is equal to the MMO. The impact of the additional revenue and member contributions is that MMO decreases each year as actual contributions are in excess of the MMO.

The System’s asset return will never be level from year to year and the System must anticipate the implications of asset return volatility to the funded status and contribution requirements. As a result, in addition to the baseline projections shown in this section, we show stress testing to illustrate the impact of varying returns in Section II –Assessment and Disclosure of Risk of this report. In our opinion, the stress testing analyses shown in Section II meet the requirements of Bill No. 210772 which codified the Board’s practice of annually reviewing stress testing.

In reviewing each of these projections, it is the future trends, not necessarily the current values that are important to observe in consideration of the risks of the System and the potential volatility of future funding ratios and City contribution levels.

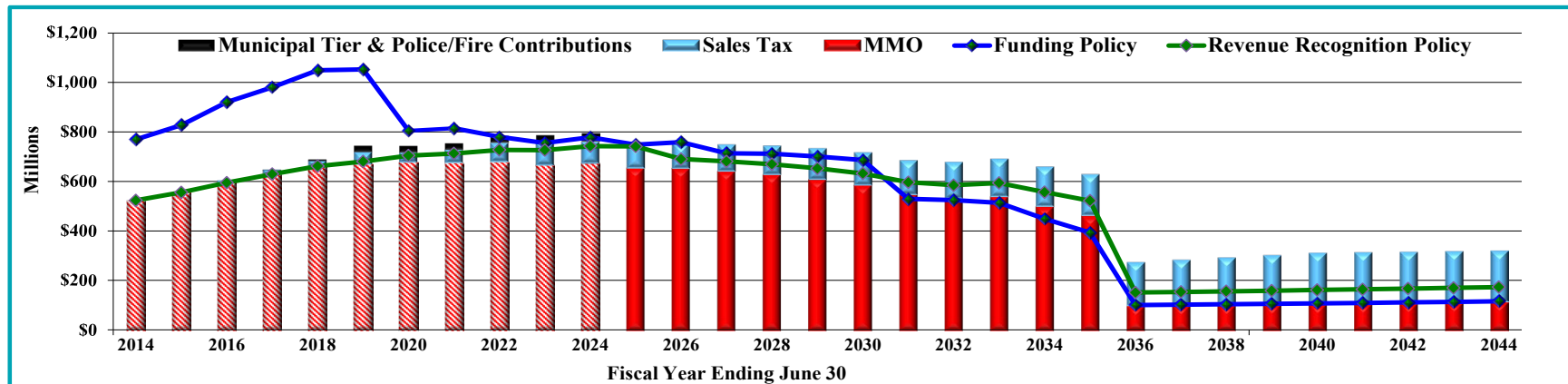
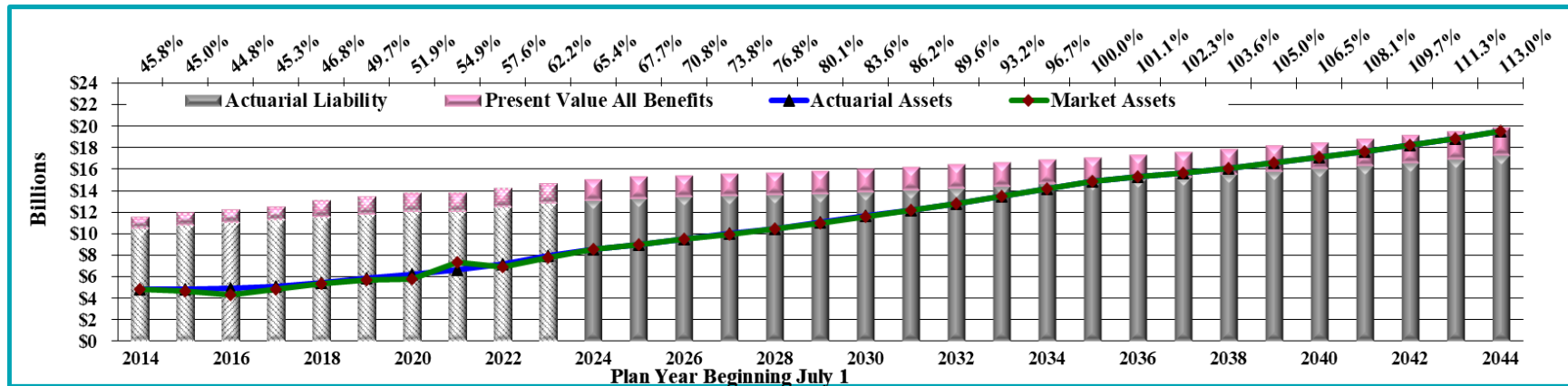
We note that when the System becomes 70% funded or greater, the unfunded liability may be amortized on a rolling 10-year basis. We have not shown the implications of this alternative funding method provided for in Act 205.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION I – BOARD SUMMARY

Baseline Projection Set 1: City Makes Contributions based on MMO

If the City was to contribute based on the MMO, the System is expected to reach 80% by 2029 and 100% funded by 2035. Funding at the MMO level with the current ten-year asset smoothing method and the 2009 thirty-year fresh start amortization method on a level-dollar basis, resulted in a relatively slow improvement of funding for the initial period though FYE 2018.



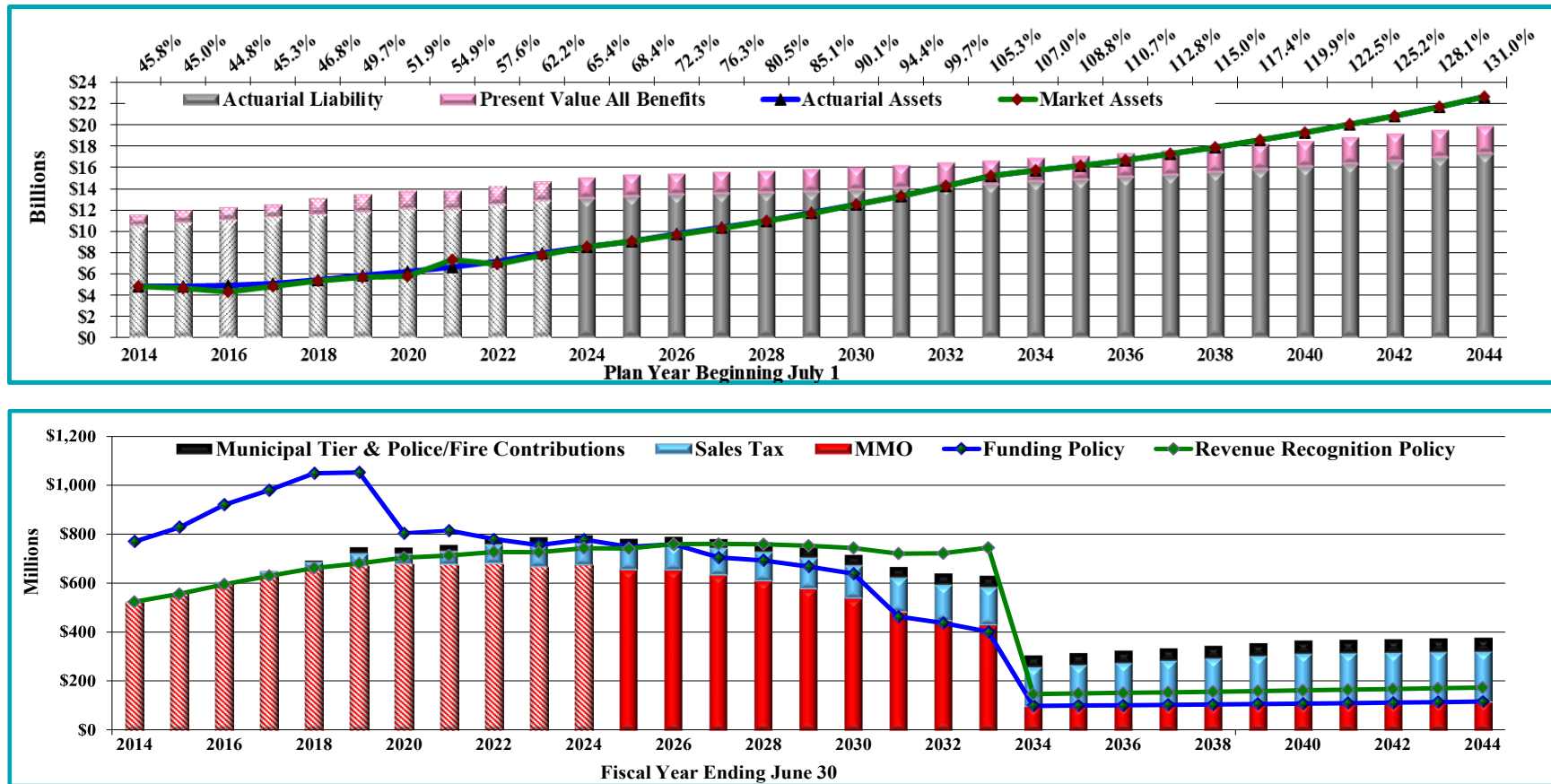
The decrease in FYE 2020 for the City's Funding Policy (blue line) is due to the expected payment in full of the initial unfunded liability.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION I – BOARD SUMMARY

Baseline Projection Set 2: City Makes Contributions based on RRP

This chart illustrates the impact on the funded status when the additional revenue sources are used to pay down the UAL under the RRP as opposed to reducing future costs. The System is projected to be 80% funded by 2028 and 100% funded by 2033, two years earlier than under the MMO projections. By the end of the projection period, the System is expected to be funded at 131.0% compared to 113.0% when MMO contributions are made.



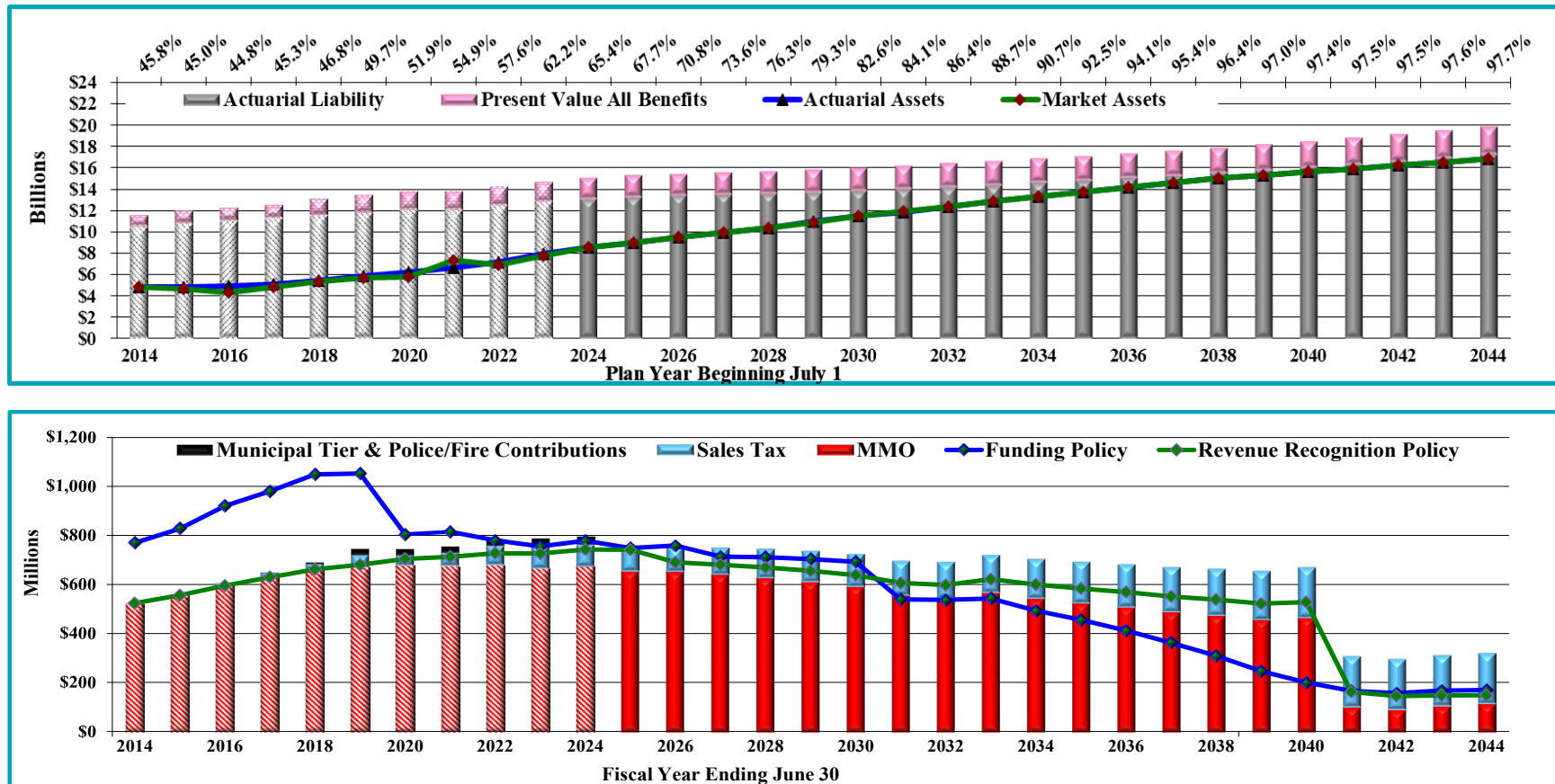
Sales tax revenue and additional member contributions are not included in the green line which shows the RRP contributions. The RRP contribution is higher than the MMO until the System reaches 100% funded in FYE 2034 at which time it drops to the normal cost rate.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION I – BOARD SUMMARY

Baseline Projection Set 3: City Makes Contributions based on the Funding Policy

If the City's Funding Policy is contributed every year going forward, the System is projected to be 80% funded by 2030 and 97.7% funded by 2044. In this projection, we have assumed that the City may use sales tax revenue and additional member contributions to meet the requirements of the Funding Policy. Over time the contributions under the Funding Policy are lower than the RRP, resulting in a lower funded ratio by the end of the projection period.



The funding policy contributions were significantly larger through FYE 2019, and declined more rapidly after the initial funded base was fully amortized in FYE 2020.

SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but actual future experience will undoubtedly be different and may be significantly different. This section of the report is intended to identify the primary risks to the plan, provide some background information about those risks, and provide an assessment of those risks.

Identification of Risks

The fundamental risk to the System is that the contributions needed to pay the benefits become unaffordable. While there are a number of factors that could lead to contribution amounts becoming unaffordable, we believe the primary risks are:

- Investment risk,
- Longevity and other demographic risks,
- Assumption change risk, and
- Contribution risk.

Investment Risk is the potential for investment returns to be different than expected. Lower investment returns than anticipated will increase the unfunded actuarial liability necessitating higher contributions in the future unless there are other gains that offset these investment losses. The potential volatility of future investment returns is determined by the System's asset allocation and the affordability of the investment risk is determined by the amount of assets invested relative to the size of the plan sponsor or other contribution base.

Longevity and other demographic risks are the potential for mortality or other demographic experience to be different than expected. Our mortality assumption has consistently used a mortality improvement scale to project rates past the valuation date to reflect projected improvements in mortality over time. In addition, there is the requirement to measure actual experience against the assumptions every four years. Currently, the System pays out over \$900 million in benefit payments each year which is a cash flow risk as members continue to live longer. Generally, longevity and other demographic risks emerge slowly over time.

Assumption change risk is the potential for the environment to change such that future valuation assumptions are different than the current assumptions. For example, declines in interest rates over the last three decades resulted recently in lower investment returns for fixed income investments, necessitating either a change in investment policy, a reduction in discount rate, or some combination of the two. Assumption change risk is an extension of the other risks identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in environment when the current assumption is no longer reasonable.

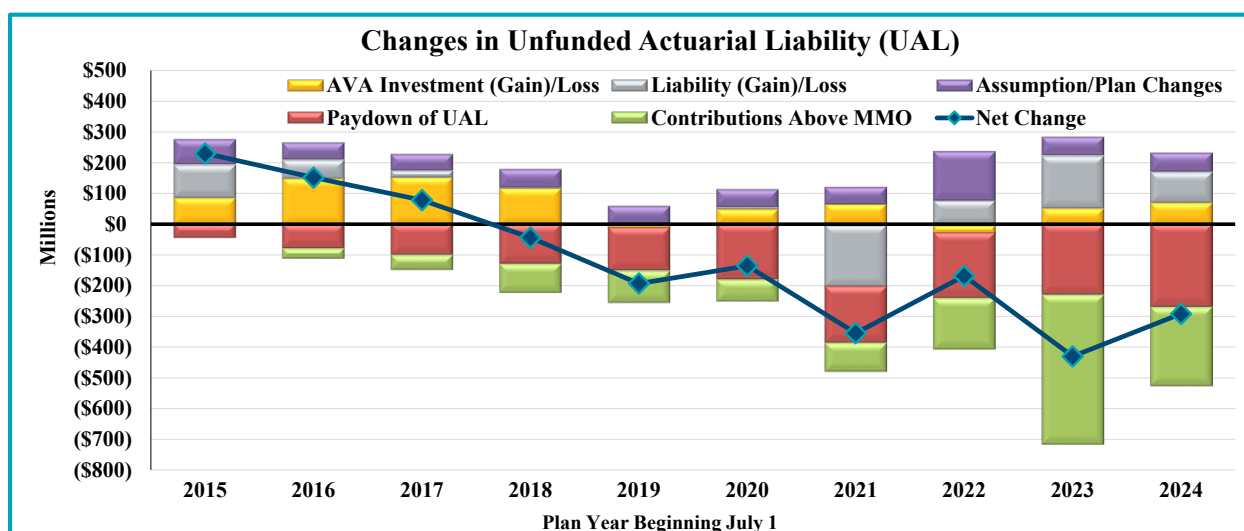
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SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

Contribution risk is the potential for actual future contributions to deviate from expected future contributions. There are different sources of contribution risk ranging from City contributions being made in accordance with the MMO vs. the RRP, to material changes in the contribution base (e.g., sales tax revenue, covered employees, covered payroll, sponsor revenue) that affect the amount of contributions the System can collect.

The chart below shows the components of changes in the Unfunded Actuarial Liability (UAL) for the System over the last 10 years, including investment gains and losses on the Actuarial Value of Assets, liability gains and losses, assumption and benefit changes, paying down of the UAL, and actual City contributions in excess of the MMO. The net UAL change is shown by the dark blue line. Table II-1 below the chart summarizes the changes in the UAL over the last 10 years. These totals support our identification of investment returns, demographic changes, and assumption changes as the primary risks to the System.

Historical Changes in UAL 2015-2024



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
Discount Rate	7.75%	7.70%	7.65%	7.60%	7.55%	7.50%	7.45%	7.40%	7.35%	7.30%	
Source											
AVA Investment (G)/L	\$ 87.0	\$ 148.8	\$ 152.0	\$ 117.0	\$ (10.9)	\$ 50.7	\$ 67.2	\$ (27.1)	\$ 53.0	\$ 71.3	\$ 709.0
Liability (G)/L	107.9	62.1	23.9	3.6	6.4	8.9	(200.7)	79.4	170.3	100.1	361.9
Assumptions/Plan Changes ¹	81.0	54.7	52.4	60.3	56.7	57.1	56.5	158.5	59.8	61.4	698.4
Paydown of UAL ²	(45.7)	(79.5)	(100.9)	(129.7)	(140.8)	(180.3)	(183.1)	(213.0)	(229.5)	(268.4)	(1,570.9)
Contributions above MMO ³	(0.1)	(34.3)	(49.2)	(94.8)	(104.3)	(71.6)	(94.3)	(166.4)	(483.8)	(256.1)	(1,354.9)
Total UAL Change	\$ 230.1	\$ 151.8	\$ 78.2	\$ (43.6)	\$ (192.9)	\$ (135.2)	\$ (354.4)	\$ (168.6)	\$ (430.2)	\$ (291.7)	\$ (1,156.5)

¹ Plan changes include \$3.5 million increase in 2016 and \$1.0 million increase in 2019.

² UAL change due to benefit accruals and payments, MMO contributions, timing, and interest.

³ UAL change due to City contributions in excess of the MMO contributions including sales tax revenue.

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SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

On a smoothed asset basis, the investment gains and losses (gold bars) from 2015 to 2024 include material investment losses driven by the market decline of 2008 and 2009, which was spread over the ten successive years through 2018. Over the 10-year period, investment losses have added approximately \$709.0 million to the UAL.

On the liability side (gray bars), the System has experienced mostly losses, however smaller in magnitude compared to the assets, increasing the UAL by approximately \$361.9 million over the 10-year period.

Assumption and plan changes (purple bars) over the last 10 years have increased the UAL by about \$698.4 million. As a note, the two plan changes during the period occurred in 2016 and 2019 which increased the UAL by about \$3.5 million and \$1.0 million, respectively. The significant assumption changes have included reductions in the discount rate beginning with 7.75% in 2015 decreasing down to 7.30% in 2024, as well as experience studies in 2018 and 2022. Investment return changes reflect a downward revision to the estimate of future investment earnings and ultimately costs will be determined by actual investment earnings. Future expectations of investment returns may continue to decline necessitating further reductions in the discount rate.

In addition, increases in UAL due to the experience studies have been driven by decreasing mortality rates and projecting future improvement. This accounts for members living longer and the longevity risk for the System.

Each year, the UAL is expected to decrease due to paying down of the UAL from the contributions coming into the System. Changes due to paying down the UAL (red bars), related to benefit accruals and payments, MMO contributions, and timing, have decreased the UAL by about \$1,570.9 million over the last 10 years.

Finally, starting in 2016 the City started contributing sales tax and higher amounts under the RRP in comparison to MMO. In addition, the City has made additional contributions in excess of the RRP in many years. Actual contributions in excess of the MMO contributions (green bars) have decreased the UAL by about \$1,354.9 million. In future years, as the tax revenue and tiered/additional member contributions paid in excess of the MMO accumulate, this amount will continue to increase.

Plan Maturity Measures

The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. Before assessing each of these risks, it is important to understand the maturity of the plan compared to other plans and how the maturity has changed over time.

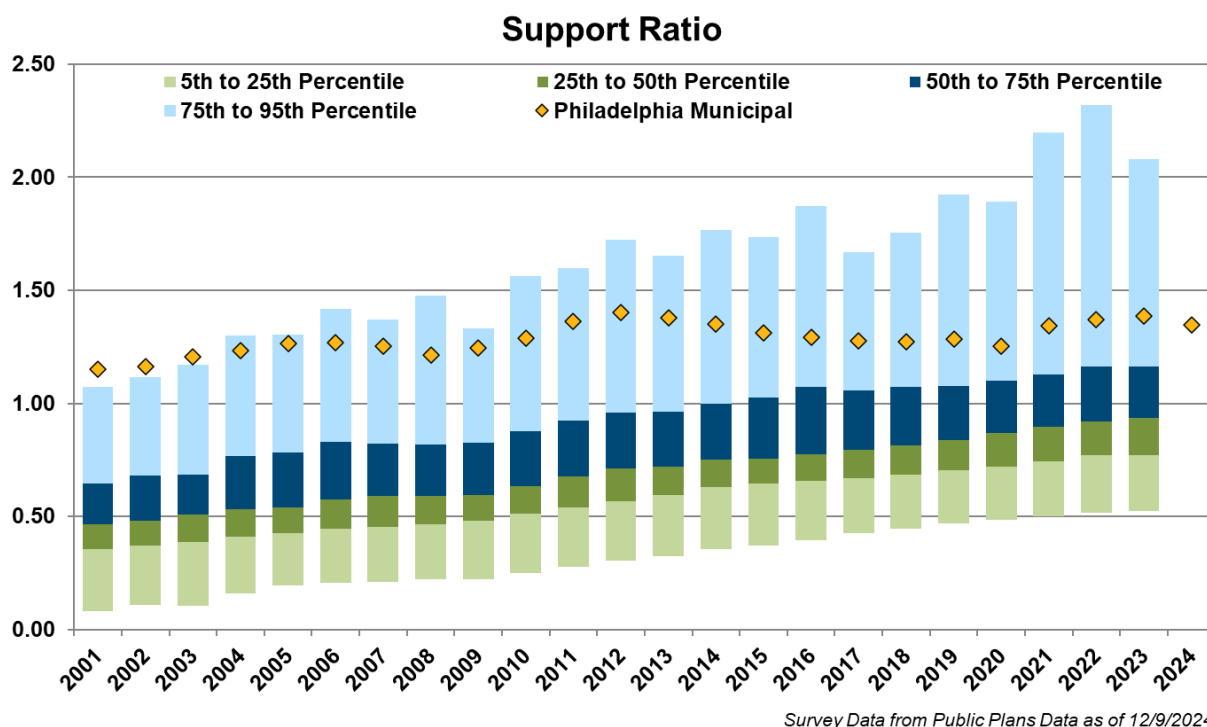
CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

Plan maturity can be measured in a variety of ways, but they all get at one basic dynamic - the larger the plan assets are compared to the contribution or revenue base that supports it; the more sensitive the System will be to risk. The measures below have been selected as the most important in understanding the primary risks identified for the System.

Inactives per Active (Support Ratio)

One simple measure of plan maturity is the ratio of the number of inactive members (those receiving benefits or entitled to a deferred benefit) to the number of active members. We refer to this ratio as the *support ratio*. The revenue base supporting the System is usually proportional to the number of active members, so a relatively high number of inactives compared to actives indicates a larger plan relative to its revenue base as well.



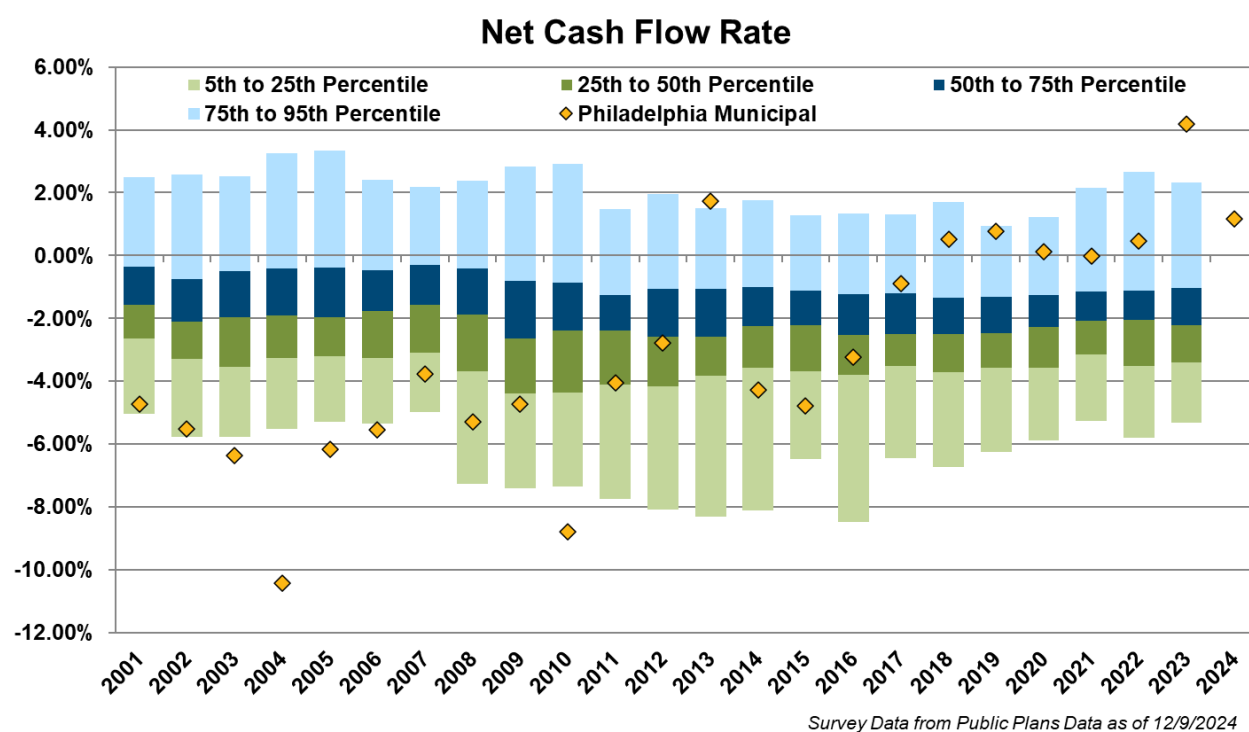
The chart above shows the distribution from the 5th to 95th percentile of support ratios for the plans in the Public Plans Database. The gold diamond shows how the System compares to other plans in the database. What this shows is that the System was already in a relatively mature status in 2001 while the other systems over this historic period grew more mature resulting in the System actually becoming closer to the norm. So as the average support ratio for other public plans has gradually increased over time, the support ratio for the System has generally been decreasing from 2012 to 2020 relative to the other public plans in the database. From 2021 to 2024, the ratio slightly increased due to fewer new hires and a higher number of retirements and terminations.

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SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

Net Cash Flow

The net cash flow of the System as a percentage of the beginning of year assets indicates the sensitivity of the plan to short-term investment returns. Net cash flow is equal to contributions less benefit payments and administrative expenses. Mature plans can have large amounts of benefit payments compared to contributions, particularly if they are well funded. Investment losses in the short-term are compounded by the net withdrawal from the plan leaving a smaller asset base to try to recover from the investment losses. Large negative cash flows can also create liquidity issues.



The chart above shows the distribution from the 5th to 95th percentile of net cash flow for the plans in the Public Plans Database. The gold diamond shows how the System compares to other plans in the database. Up until 2006, the System was consistently below the 5th percentile compared to the database of other public plans in terms of negative cash flow as a percentage of assets. In 2004, the net cash flow decreased down to -10.2% due to a PAF distribution. The decrease in 2010 was a result of the deferred contributions which were subsequently repaid in 2013, causing a positive net cash flow for that year. The steps taken by the City and participants in providing additional contributions to the System has reduced this cash flow risk significantly. The net cash flow has been increasing since 2015. Since 2018 it has generally been positive or close to zero net cash flow which would put the System on the other side of the spectrum, with this factor being a lower source of risk, in the top portion of the 75th to 95th percentile. It is worth noting that in 2023, the net cash flow rate was above positive 4%, ranking substantially higher than other systems due to excess contributions above the RRP.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

Assessing Costs and Risks

The fundamental risk to the System is that the contributions needed to fund the benefits become unaffordable. Assessing this risk, however, is complex because there is no bright line of what is unaffordable and the contribution amounts themselves are affected not just by the experience of the System, but also by the interaction of that experience and decisions by the Board related to assumptions, asset smoothing methods, and amortization periods.

Investment Risk – Deterministic Scenarios for Stress Testing

This section illustrates stress testing of the investment return assumption and is an extension of the baseline results provided in the baseline projections in the Summary section. Under the baseline results, we assumed the 7.30% investment return assumption for the year beginning July 1, 2024 and 7.25% investment return assumption for each year beginning July 1, 2025 and thereafter.

For stress testing purposes, we developed six hypothetical scenarios to illustrate the impact actual investment returns may have on future funded status and contribution rates. The scenarios are balanced between positive and negative scenarios and are based on a normal distribution of one and five year expected returns as shown in the table below using the most recent 10-year capital market assumptions from the System’s investment consultant (geometric return of 7.35%, standard deviation of 9.87%).

Distribution of Expected Average Annual Returns		
Percentile	1 Year	5 Year
5%	-8.9%	0.1%
25%	0.7%	4.4%
50%	7.4%	7.4%
75%	14.0%	10.3%
95%	23.6%	14.6%

The scenarios include: a one-year shock using the 5th and 95th percentile returns for one year; a 5-year moderate scenario using the 25th and 75th percentile returns for five years; and a 5-year significant scenario using the 5th and 95th percentile returns for five years. A two-standard deviation event may seem like a very remote possibility, but the risk actually accumulates from year to year. The table below summarizes the theoretical scenarios.

FYE	Theoretical Scenarios					
	1-Yr Shock		5-Yr Moderate		5-Yr Significant	
	Neg	Pos	Neg	Pos	Neg	Pos
2025	-8.9%	23.6%	4.4%	10.3%	0.1%	14.6%
2026	7.25%	7.25%	4.4%	10.3%	0.1%	14.6%
2027	7.25%	7.25%	4.4%	10.3%	0.1%	14.6%
2028	7.25%	7.25%	4.4%	10.3%	0.1%	14.6%
2029	7.25%	7.25%	4.4%	10.3%	0.1%	14.6%
2030+	7.25%	7.25%	7.25%	7.25%	7.25%	7.25%

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

The charts on the following pages show the projections over the next 20 years under each of these theoretical scenarios assuming the **City makes contributions on the RRP basis**. We show the sales tax revenue and the City's RRP contributions separately. For each scenario, we show two charts.

The top chart shows asset measures (green and blue lines) compared to liabilities (gray bars). At the top of each chart is the progression of the System's funding ratio which compares the actuarial value of assets (blue lines) to the actuarial liability (gray bars).

Under the baseline RRP scenario assuming a 7.30% return for FYE 2025 and 7.25% return thereafter, the System achieved fully funded by 2033. The stress testing of investment return expectations reveals insight from these charts as to how varying investment returns impact the System's funding ratio.

It is worth noting the 10-year asset valuation method has significant influence on the smoothing of assets against market value volatility as well as the funding progress. A single year or a couple of years of lower than expected returns can delay the System from becoming fully funded. While some of these losses are made up through required increased contribution payments, if the System also has negative cash flow the recovery can be slow. Similarly, when returns are higher than expected the investment gains can help mitigate future investment losses due to the asset smoothing.

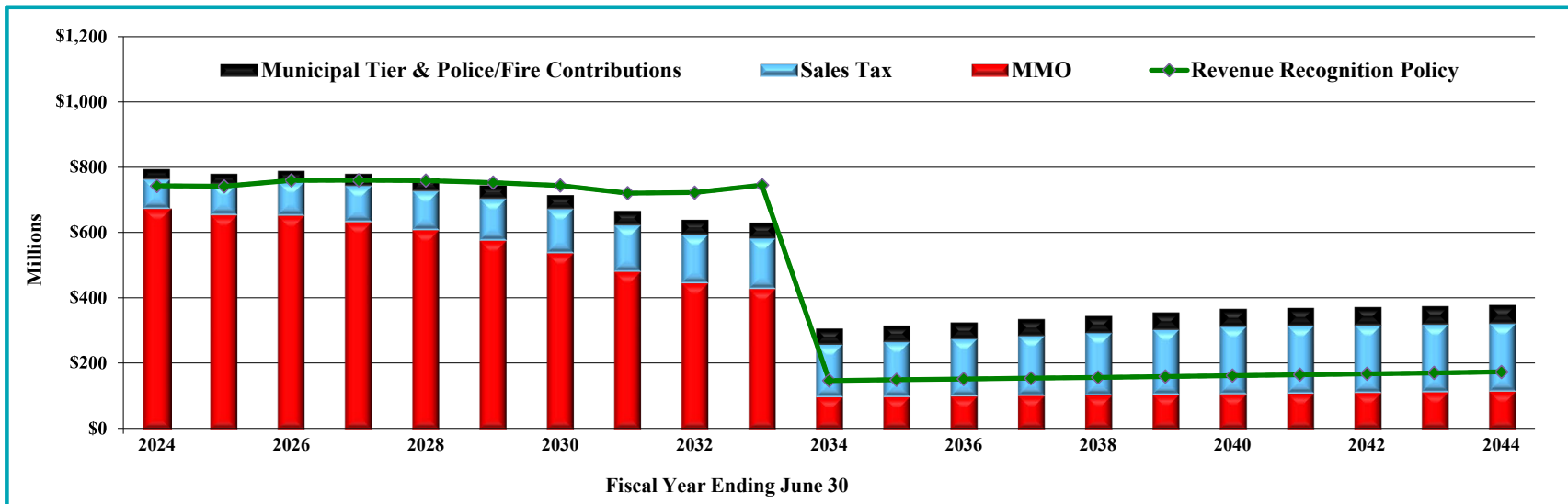
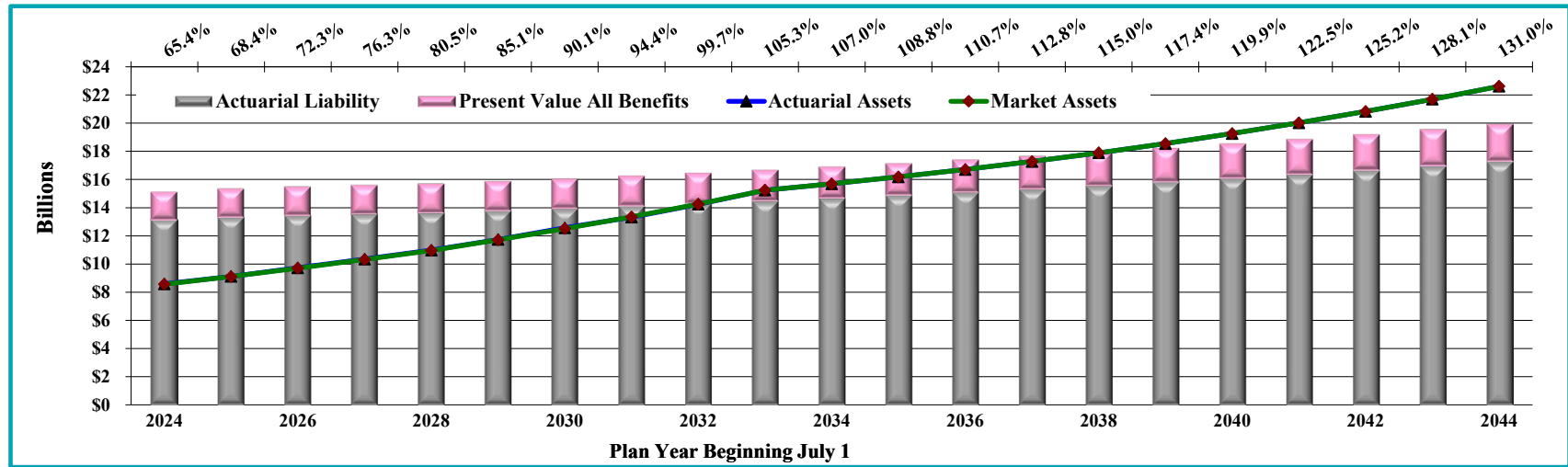
When a mature system pays out more than it receives in a year and returns are below the assumption, the assets that get paid out are no longer in the system during subsequent years of market recovery. So, a system with significant negative cash flow coupled with investment return volatility will grow at a slower rate than the investment return assumption. While the net cash flow had been negative historically, it has been generally positive since 2017 and expected to be around zero in the near future under baseline assumptions mitigating much of this risk.

The bottom chart shows the MMO (red bars), expected sales tax revenue (blue bars) and expected tiered and member contributions (black bars). The green line shows the expected City contributions under the RRP excluding the sales tax revenue so the sales tax revenue and additional member contributions are shown separately. The dashed green line represents the expected RRP under the baseline projections to facilitate the comparison between the particular scenario and the baseline projections assuming all assumptions are met.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

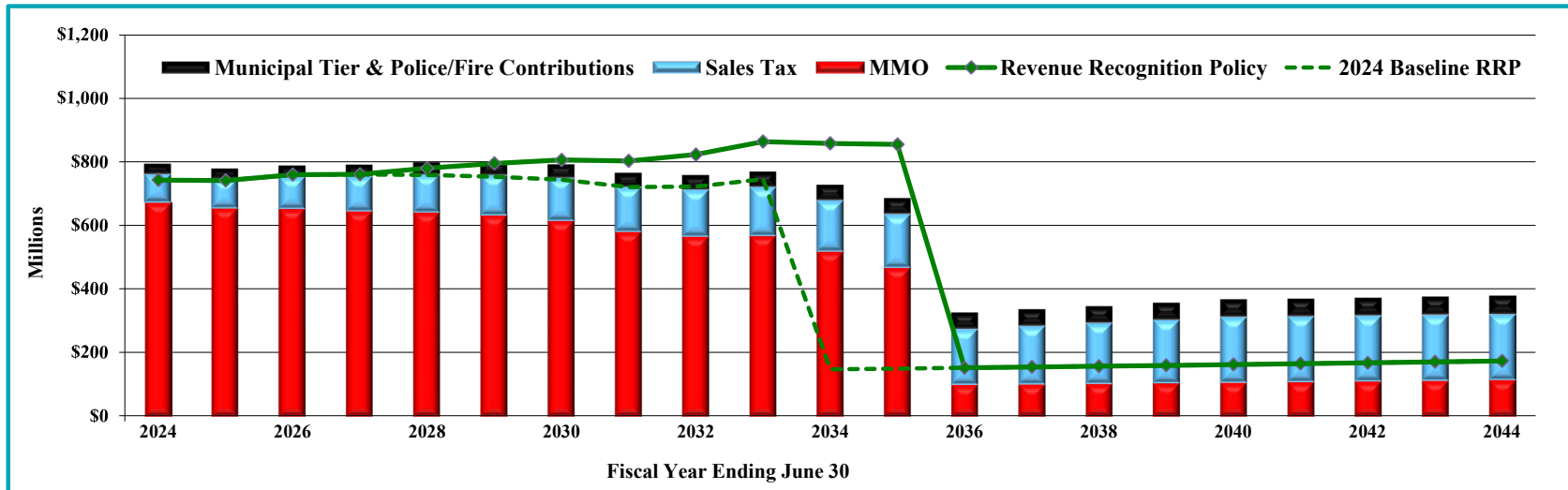
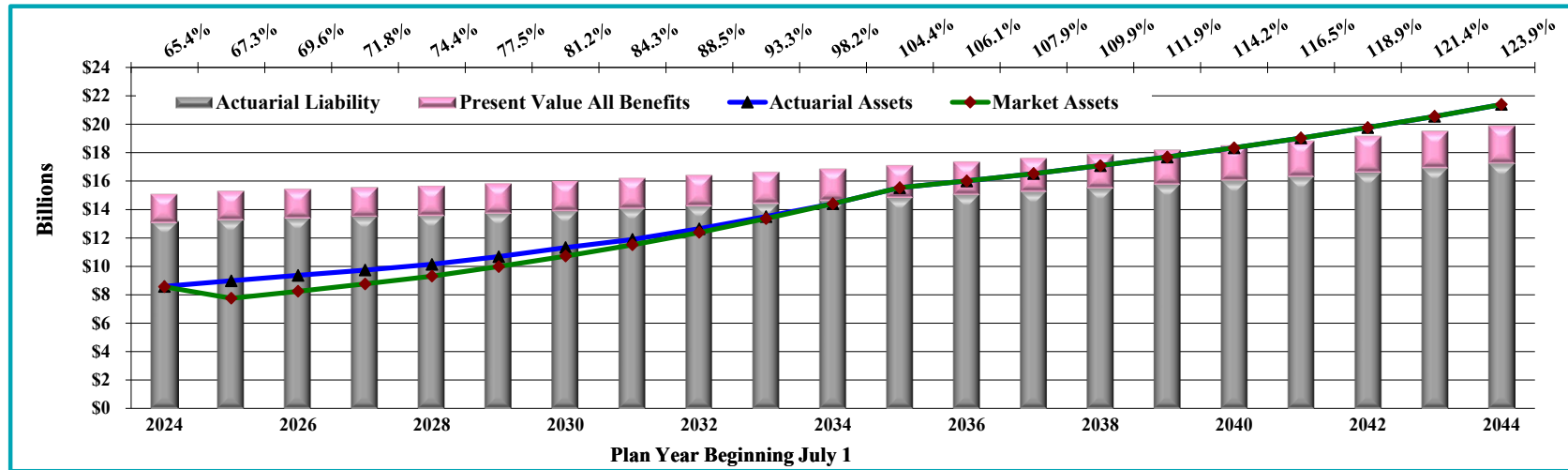
Baseline Scenario: 7.30% return FYE 2025, 7.25% after based on RRP contributions



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION

SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

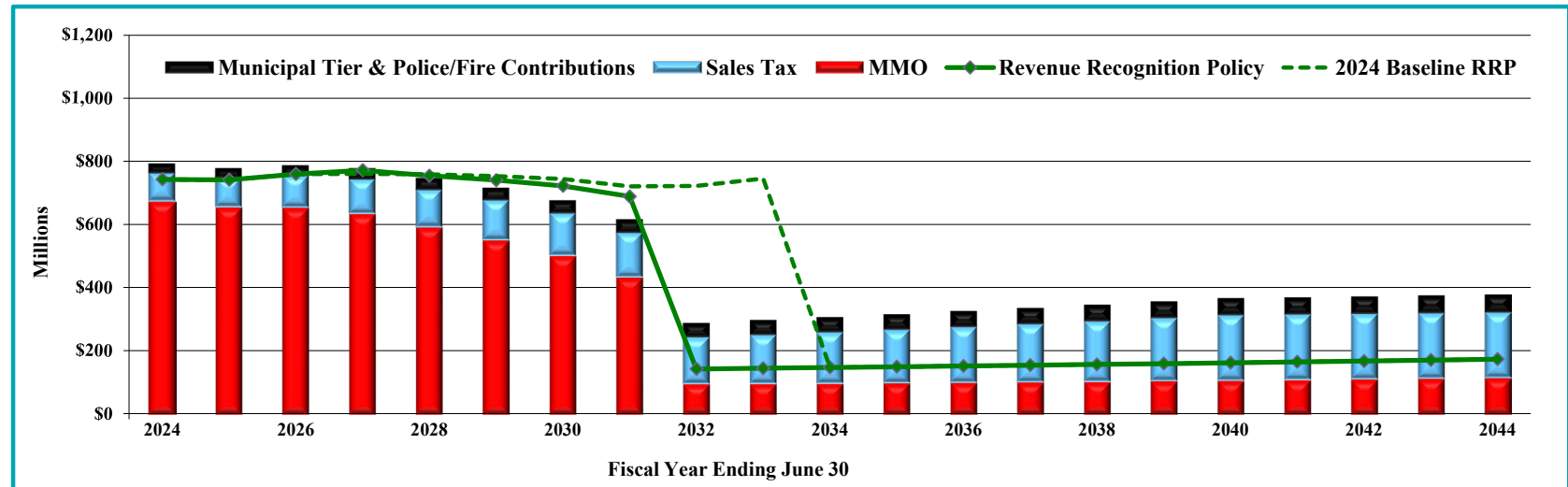
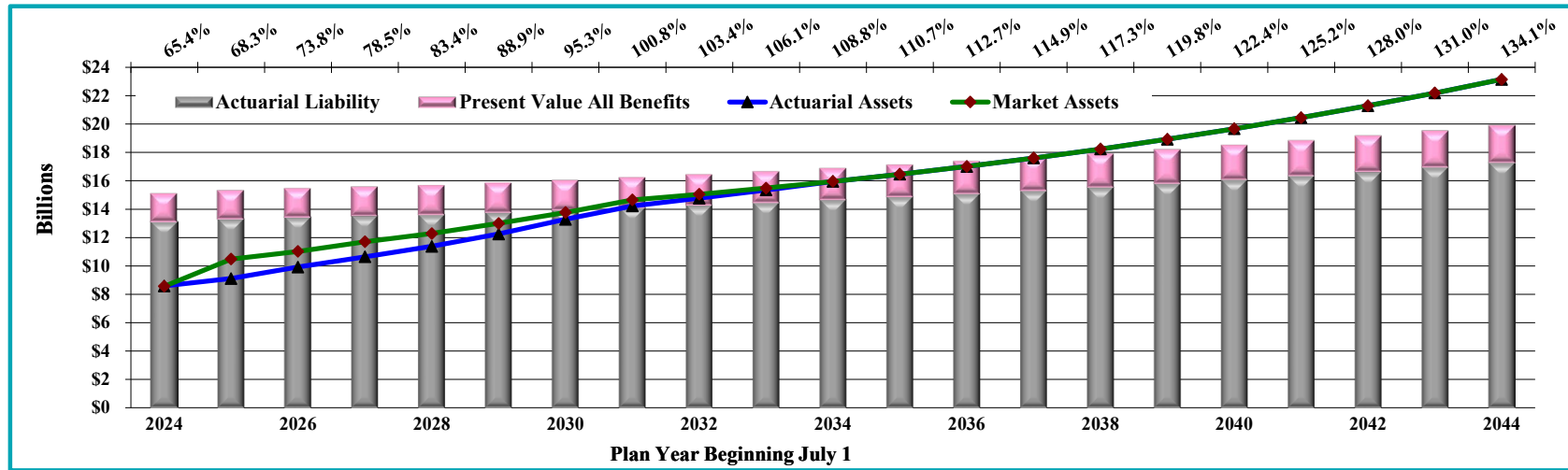
One-Year Negative Shock Scenario: -8.9% return FYE 2025, 7.25% after



**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

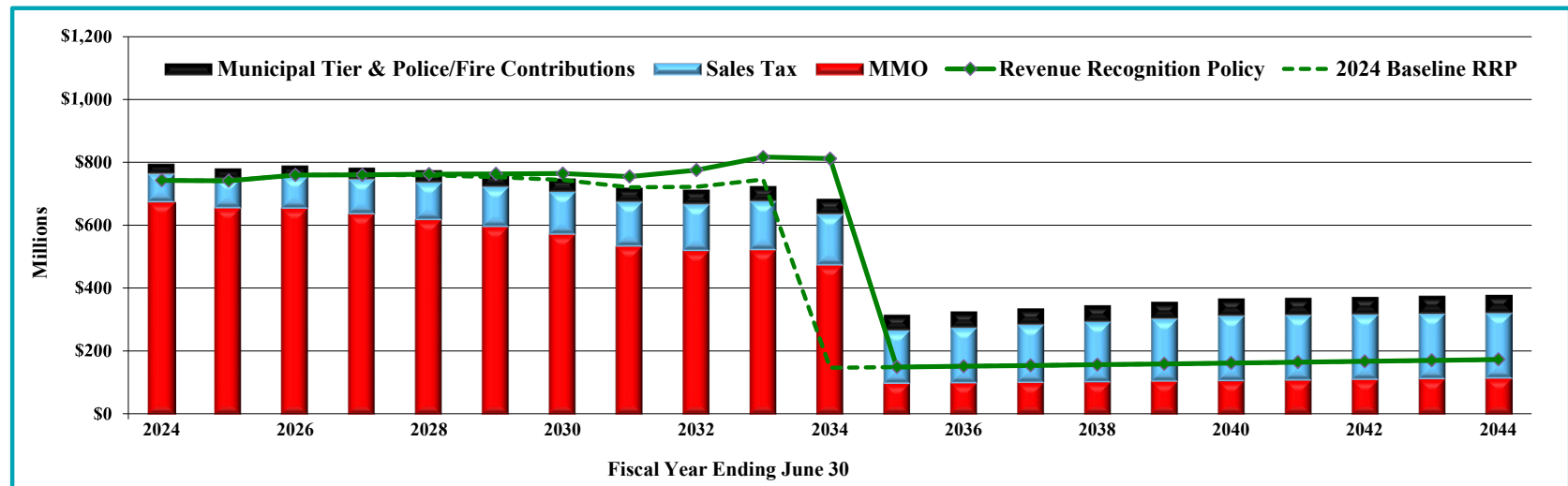
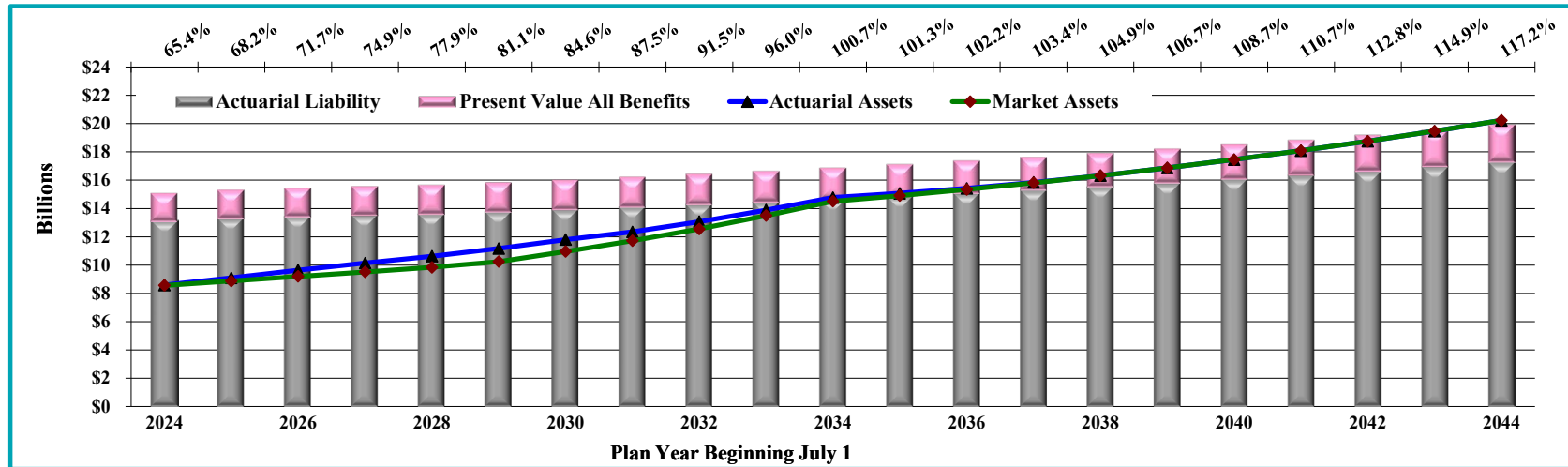
One-Year Positive Shock Scenario: 23.6% return FYE 2025, 7.25% after



**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

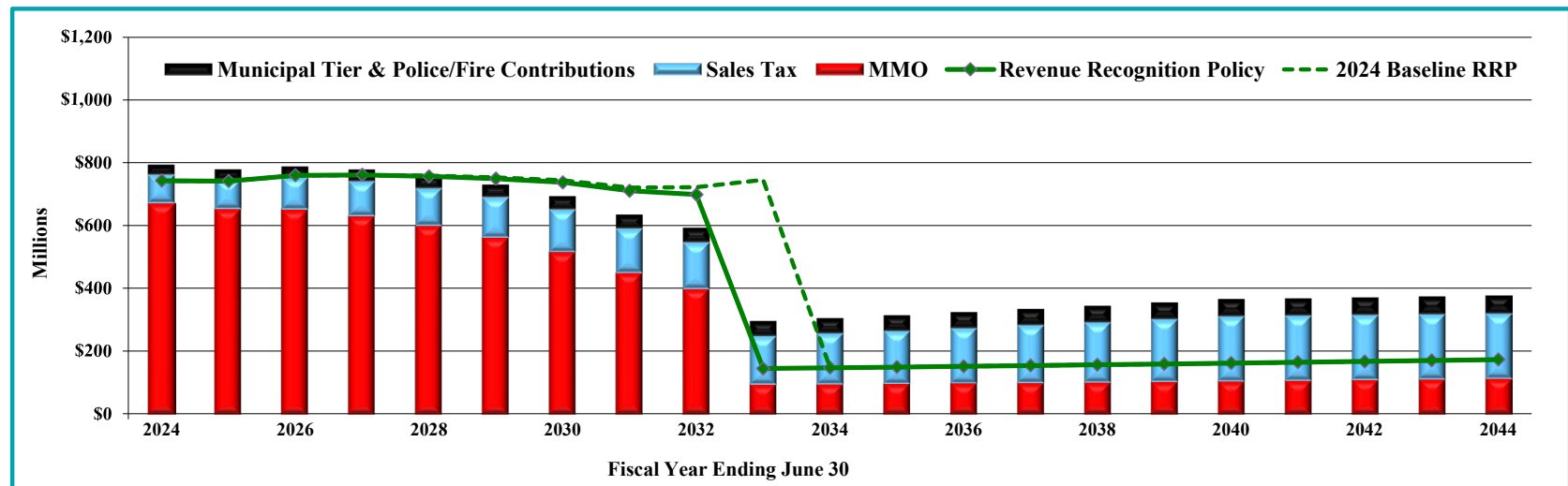
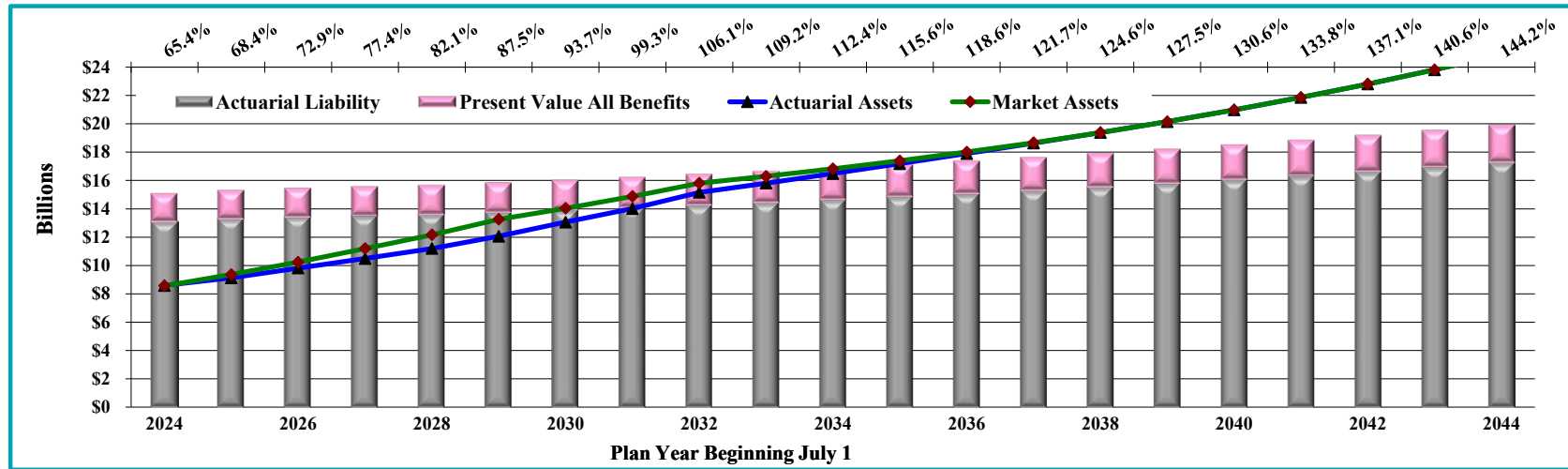
Five-Year Moderate Negative Scenario: 4.4% return FYE 2025-2029, 7.25% after



**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

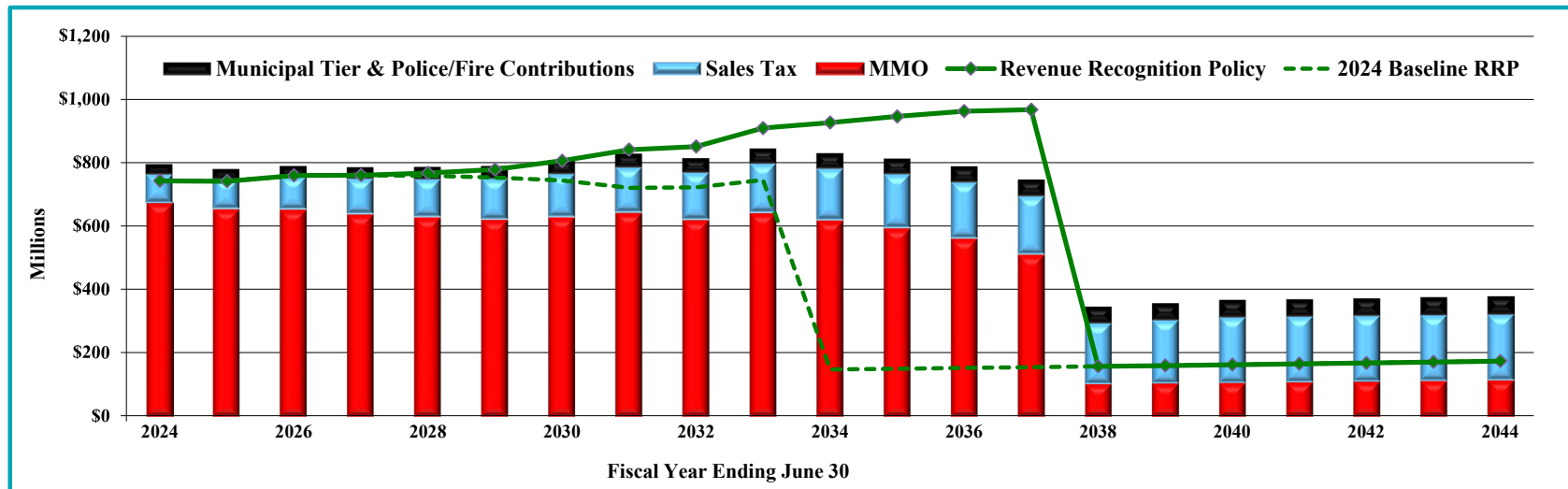
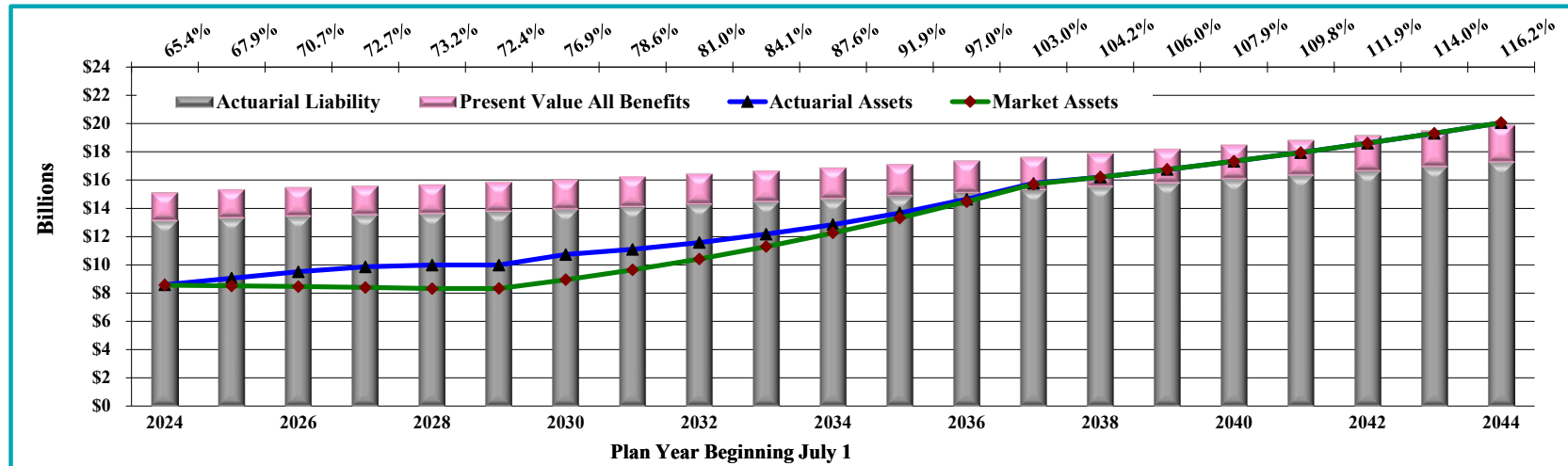
Five-Year Moderate Positive Scenario: 10.3% return FYE 2025-2029, 7.25% after



**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

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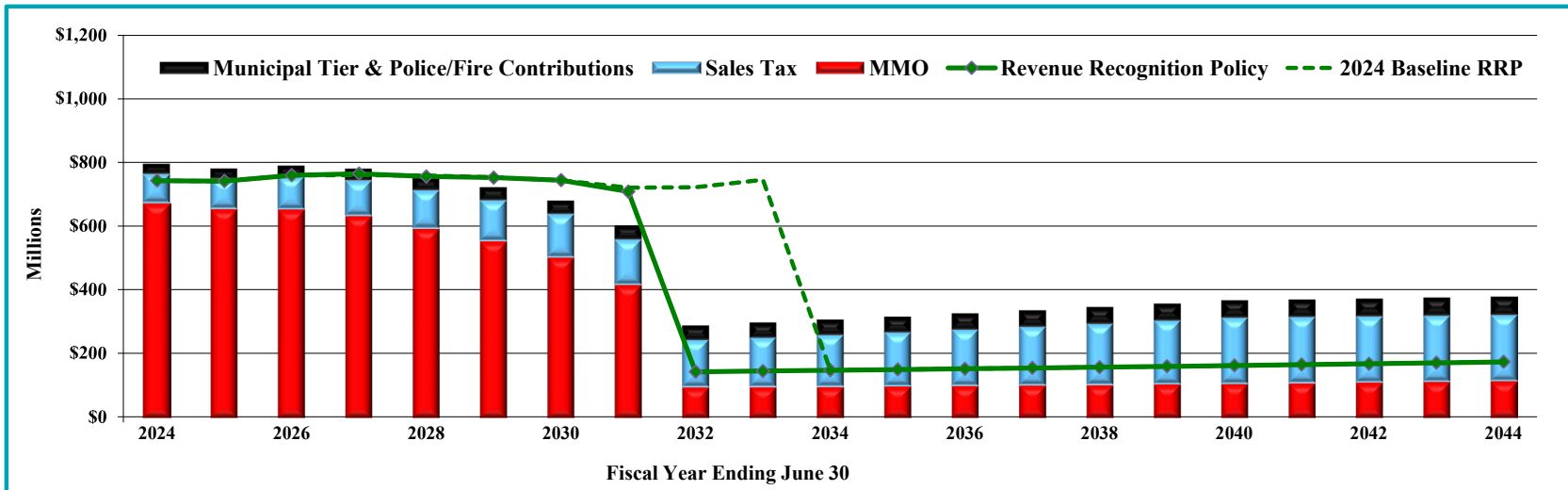
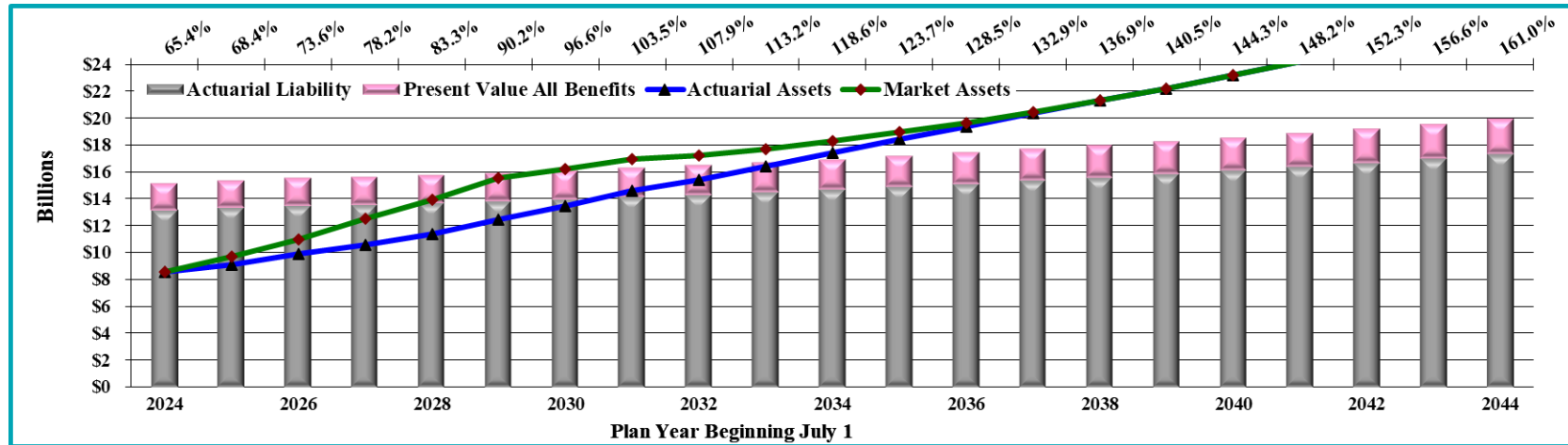
Five-Year Significant Negative Scenario: 0.1% return FYE 2025–2029, 7.25% after



**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

Five-Year Significant Positive Scenario: 14.6% return FYE 2025-2029, 7.25% after



SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

As illustrated in the charts above, varying returns have an impact on the computed City contributions, especially in the later projection years when the System is fully funded. However, the volatility is mitigated for two reasons, the 10-year smoothing of assets and 20-year amortization of experience gains and losses. This illustrates that the future contributions should be anticipated to be higher to adjust for the market volatility. Thus, the market volatility can prolong the period of paying down the unfunded actuarial liability when coupled with the impact of negative cash flows in down markets.

The investment returns used in the projections above were selected solely to illustrate the impact of investment volatility on the pattern of funded status and City contributions. They are not intended to be predictive of actual future contributions or funded status or even to represent a realistic pattern of investment returns.

Stochastic Projections

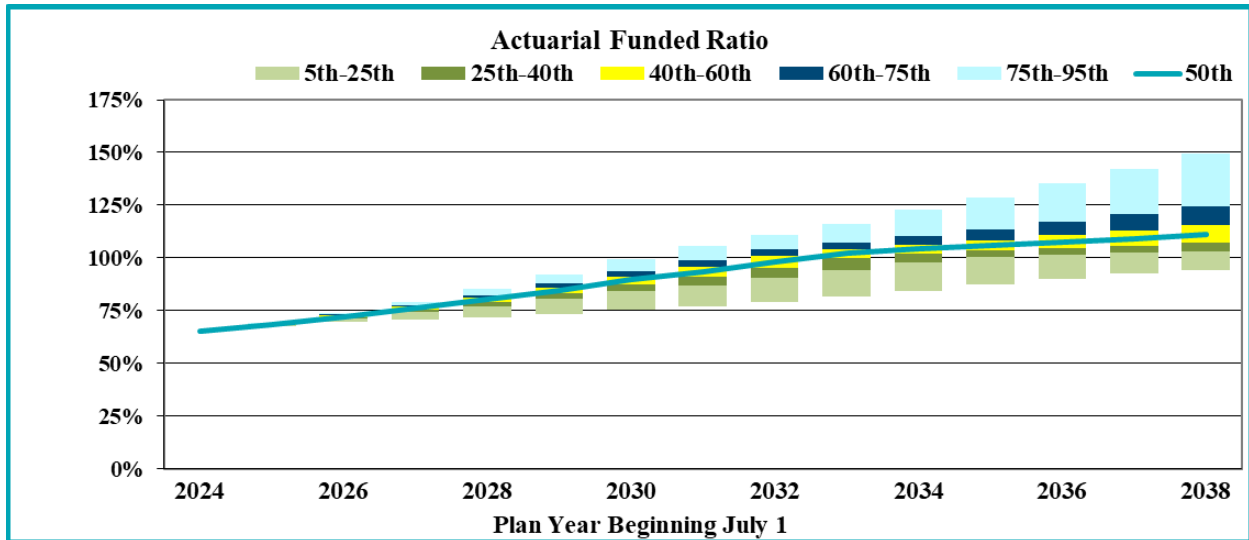
Stochastic Projections are used to provide an alternative view of what the likely future outcomes might be. Instead of a single projection, we use the expected long term average return allowing for the returns for each year to vary according to the expected volatility of asset returns based on the current asset allocation. The returns are determined randomly within anticipated ranges; we then perform 10,000 such projections over a 15-year period and accumulate the results. Accumulating this information allows us to present ranges of likely results.

The charts on the next page show the stochastic projection of the actuarial funded ratio and City contribution amounts under RRP. The blue line represents the most likely or average of the range of outcomes. The colored ranges represent potential results reflecting future asset return volatility (geometric return of 7.35%, standard deviation of 9.87%, as provided by the investment consultant). The yellow bar around the blue line shows there is a 20% probability the actual ratio will fall within the range. The dark green and dark blue bars show that there is a 50% probability the actual results will fall within the ranges (25th-40th and 60th-75th). Finally, the light green and the light blue bars show that there is a 90% chance the actual results will fall within those ranges (5th-25th and 75th-95th). Another way to say this is there is a 10% chance the ratio could be above or below the projected range of ratios shown. There is increasing uncertainty in the actuarial funded ratio and level of City contributions depending on investment returns over time reflected in how broad the range gets.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION

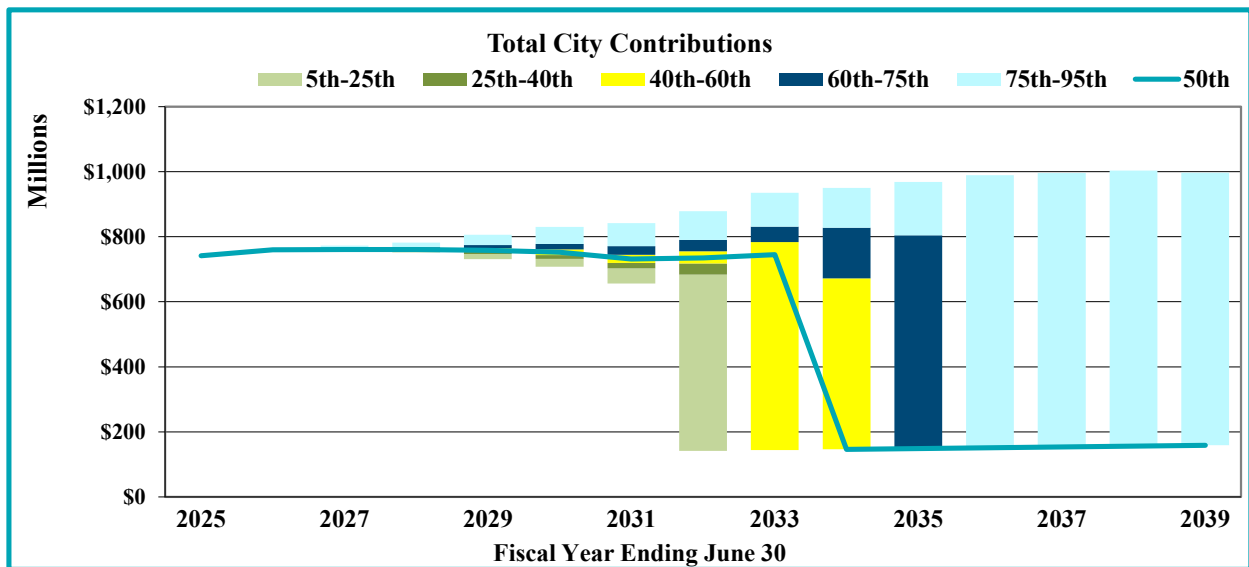
SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

Stochastic Projection of Actuarial Funded Ratio and City Contributions



In the worst scenarios, the System's actuarial funded ratio is over 90% by plan year beginning 2038 based on poor investment returns. In the best scenarios, the System's actuarial funded ratio is almost 150% by 2038.

In a similar process, we show the projected volatility of future City contributions.



In the worst scenarios, the City's contribution amount could be around \$1.0 billion by FYE 2037. In the best scenarios, the City's contribution could drop below \$150 million as early as FYE 2032 which represents the System reaching 100% funded or greater at which time it drops to the normal cost rate. The significant cost reduction shows the potential when there are no more payments to fund the unfunded liability.

SECTION II – ASSESSMENT AND DISCLOSURE OF RISK

Low-Default-Risk Obligation Measure (LDROM)

Effective February 15, 2023, the Actuarial Standards of Practice No. 4 (ASOP 4) requires the disclosure of this liability called the Low-Default-Risk Obligation Measure (LDROM). The System invests in a diversified portfolio to achieve the best possible return at an acceptable level of risk. The lowest investment risk portfolio for a pension plan would be composed entirely of low-default-risk fixed income securities whose cash flows approximately match the cash flow needs of the System. However, such a portfolio would have a lower expected rate of return (5.33% as of July 1, 2024) than the diversified portfolio (7.30%). Low-Default-Risk Obligation Measure (LDROM) represents what the Actuarial Liability would be if the System's assets were invested in such a portfolio. As of July 1, 2024, the LDROM is \$16.00 billion¹ compared to the Actuarial Liability of \$13.13 billion for the System. The \$2.87 billion difference can be viewed as the expected savings from taking on the investment risk of the diversified portfolio. Alternatively, it can be viewed as the potential cost of eliminating the investment risk of the non-fixed income allocations of the diversified portfolio.

If the System were to invest in the LDROM portfolio, the funded ratios would decrease, and contribution requirements would increase for the City. The security of the System's pension benefits relies on the current assets, future investment earnings, and the ability and willingness of the City to make future contributions. If the System were to invest in the LDROM portfolio, it would not change the current assets, but it would likely reduce future investment earnings and increase future City contributions. However, the volatility of future investment earnings and future contributions would be significantly reduced.

¹ Based on a discount rate equal to the June 30, 2024 FTSE Pension Liability Yield Curve of 5.33% (determined as the single equivalent rate by matching Plan cashflows to the yield curve), and all other assumptions and methods as used to calculate the Actuarial Liability.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION III – ASSETS

The Retirement System uses and discloses two different asset measurements for funding, which are presented in this section of the report: market value and actuarial value of assets. The market value represents the value of the assets if they were liquidated on the valuation date and, unless explicitly stated otherwise, this value includes the Pension Adjustment Fund (PAF) which is not available for funding purposes. The actuarial value of assets is a value that smooths annual investment returns over ten years to reduce annual investment volatility and is used in determining contribution levels. This smoothing method also requires that the actuarial value of assets may not be more than 120% or less than 80% of the market value of assets. By definition, the actuarial value of assets does not include the PAF.

On the following pages, we present detailed information on the Retirement System’s assets:

- Disclosure of assets at July 1, 2023 and July 1, 2024,
- Statement of cash flows during the year,
- Actual City and member contributions,
- Development of the actuarial value of assets,
- Apportionment of assets between plans for valuation purposes,
- Development of the Pension Adjustment Fund as of July 1, 2024,
- Development of the actuarial value of assets for Revenue Recognition Policy,
- Disclosure of investment performance for the year, and
- Determination of Asset gain/(loss).

A. Disclosure

The market value of assets represents a “snap-shot” value as of the last day of the fiscal year that provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the value of the investments. Because these fluctuations cause volatility in employer contributions, an actuarial value of assets is developed. Table III-1 on the following page presents the market value by asset class as of July 1, 2023 and July 1, 2024. Table III-2 presents the System’s net cash flows for the plan year beginning July 1, 2023 and ending June 30, 2024. Table III-3 presents Fiscal Year End 2024 contributions received from members of the System and the City as compared to the MMO and RRP.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION III – ASSETS

Table III-1		
Statement of Assets at Market Value*		
	7/1/2024	7/1/2023
<u>Assets</u>		
Cash	\$ 10,889,826	\$ 14,555,738
Investments	8,352,806,382	7,550,776,366
Securities Lending	329,214,263	341,210,327
Accrued Interest and Other Receivables	500,107,856	499,908,220
Due from Other Governmental Units	<u>6,031,693</u>	<u>4,942,719</u>
Total Assets	\$ 9,199,050,019	\$ 8,411,393,371
<u>Liabilities</u>		
Due on Securities Lending	\$ 329,214,263	\$ 341,210,327
Accrued Expenses and Other Liabilities	<u>303,628,202</u>	<u>262,094,309</u>
Total Liabilities	\$ 632,842,465	\$ 603,304,636
Net Assets	\$ 8,566,207,554	\$ 7,808,088,734

* Includes the PAF which is not available for funding purposes.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION III – ASSETS

B. System Cash Flows for the Year July 1, 2023 through July 1, 2024

Table III-2 Changes in Market Values ¹		
Value of Assets – July 1, 2023		\$ 7,808,088,734
<u>Additions</u>		
Contributions:		
Employer Contributions	\$ 948,685,797	
Employee Contributions	127,355,386	
Total Contributions		\$ 1,076,041,183
Investment Income:		
Appreciation in FV of Investments	\$ 438,435,894	
Interest and Dividends	235,103,340	
Total Investment Income	<u>\$ 673,539,234</u>	
Investment Activity Expenses:		
Investment Expenses	<u>(16,311,377)</u>	
Total Investment Activity Expenses	<u>\$ (16,311,377)</u>	
Securities Lending Activities:		
Securities Lending Income	\$ 2,130,368	
Securities Lending Expenses	<u>(425,724)</u>	
Net Income from Securities Lending Activities	<u>\$ 1,704,644</u>	
Miscellaneous Operating Revenues	\$ 25,693	
Net Investment Income		<u>658,958,194</u>
Total Additions		\$ 1,734,999,377
<u>Deductions</u>		
Administrative Expenses	\$ (10,032,817)	
Refunds of Member Contributions	(15,504,194)	
Benefit Payments	(951,286,598)	
PAF Distributions	<u>(56,948)</u>	
Total Deductions		<u>(976,880,557)</u>
<u>Total</u>		
Net Increase (Decrease)		<u>758,118,820</u>
Value of Assets – July 1, 2024		\$ 8,566,207,554

¹ Includes the PAF which is not available for funding purposes

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION III – ASSETS

Table III-3		
Contributions for the Plan Year Ending June 30, 2024		
Actuarially Determined Contribution		
MMO for Fiscal Year 2024	\$	671,689,238
RRP for Fiscal Year 2024	\$	742,763,533
Actual City Contributions		
Cash Received from City during Fiscal Year 2024	\$	743,510,930
State Aid Amount		94,253,070
Sales Tax Revenue		90,015,546
Cash Received from Quasi-Agencies		20,906,251
Total Cash Received from City during Fiscal Year 2024	\$	948,685,797
Actual Member Contributions		
Regular Member Contributions	\$	96,092,352
Tier Member Contributions (Municipal and Elected)		17,479,912
Additional Member Contributions (Police and Fire)		13,783,122
Total Member Contributions Received during Fiscal Year 2024	\$	127,355,386

The City's actual contribution (including the state aid amount) of \$837.8 million includes approximately \$95.0 million paid in excess of the RRP contribution amount for FYE 2024.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION III – ASSETS

C. Actuarial Value of Assets

To determine on-going funding requirements, most pension systems utilize an actuarial value of assets that differs from the market value of assets. The actuarial value of assets represents an asset value based on averaging or smoothing year-to-year market value returns for purposes of reducing contribution volatility. For the City, gains and losses are recognized in equal amounts over a ten-year period. The resulting asset value may not be more or less than 20% of the MVA.

Table III-4 Development of Actuarial Value of Assets as of July 1, 2024					
1. Market Value of Assets as of July 1, 2024				\$	8,566,207,554
2. Pension Adjustment Fund (PAF) as of July 1, 2024 Before Additional Transfers				\$	7,767,537
3. Market Value of Assets Net of Original PAF*				\$	8,558,440,017
4. Deferred Asset Gains/(Losses)					
Fiscal Year	Investment	Percent	Percent	Amount	
<u>Ending</u>	<u>Gains / (Losses)</u>	<u>Recognized</u>	<u>Deferred</u>	<u>Deferred</u>	
2015	\$ (349,020,722)	100%	0%	\$	0
2016	(489,127,035)	90%	10%		(48,912,703)
2017	242,673,428	80%	20%		48,534,686
2018	79,312,820	70%	30%		23,793,846
2019	(92,799,571)	60%	40%		(37,119,828)
2020	(333,977,782)	50%	50%		(166,988,891)
2021	1,218,679,926	40%	60%		731,207,956
2022	(1,012,155,357)	30%	70%		(708,508,750)
2023	59,226,308	20%	80%		47,381,047
2024	95,398,207	10%	90%		85,858,386
Total				\$	(24,754,251)
5. Preliminary Actuarial Value as of July 1, 2024 (5 = 3 - 4)				\$	8,583,194,268
6. Corridor for Actuarial Value					
a. 80% of Market Value Net of PAF				\$	6,846,752,014
b. 120% of Market Value Net of PAF				\$	10,270,128,020
7. Additional PAF Transfer as of July 1, 2024				\$	0
8. Actuarial Value of Assets Net of Final PAF as of July 1, 2024 8 = max((min of 5 or 6b) and 6a), minus 7				\$	8,583,194,268
9. As a percent of Market Value Net of Final PAF					100.3%
10. Market Value of Assets Net of Final PAF				\$	8,558,440,017

* Market value of assets net of original PAF before the determination of the final PAF amount. See section III - E for more details on the development of the total PAF and the additional PAF transfer, if applicable.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION III – ASSETS

D. Apportionment of Actuarial Value of Assets

The asset allocation reflects the actual cash flows for each plan and proportional allocation of investment earnings.

Table III-5 Allocation of Assets for Valuation Purposes Between Plans as of July 1, 2024 (\$ thousands)										
	1967 Plan			1987 Plan				Plan '10	Plan '16	
	Municipal	Police	Fire	Municipal	Elected	Police	Fire	Municipal	Municipal	Total
1. Actuarial Value of Assets as of July 1, 2023	\$ 1,679,721	\$ 577,530	\$ 200,217	\$ 2,505,764	\$ 20,212	\$ 2,164,945	\$ 712,111	\$ 29,329	\$ 89,370	\$ 7,979,199
2. Transactions During Plan Year July 1, 2023 to June 30, 2024										
a. Contributions										
City and Commonwealth Employees	\$ 375,574	\$ 197,086	\$ 83,229	\$ 146,003	\$ 1,796	\$ 79,021	\$ 23,064	\$ 0	\$ 22,007	\$ 927,780
Quasi-Public Agencies	1,838	356	111	45,577	523	34,772	19,054	3,633	21,492	127,355
b. Benefit Payments	15,397	0	0	4,775	0	0	0	49	685	20,906
c. Withdrawals	(417,751)	(201,832)	(80,339)	(127,860)	(2,320)	(99,414)	(21,782)	0	11	(951,287)
d. Administrative Expenses	(685)	(1,402)	(393)	(4,913)	0	(5,878)	(369)	0	(1,865)	(15,504)
e. Net Transactions	(2,674)	(1,193)	(413)	(2,821)	(8)	(1,164)	(484)	(133)	(1,143)	(10,033)
3. Total Fund Balance Prior to Allocation of Investment Income [1. + 2e.]	\$ (28,301)	\$ (6,985)	\$ 2,195	\$ 60,761	\$ (9)	\$ 7,337	\$ 19,483	\$ 3,549	\$ 41,187	\$ 99,217
4. Investment Income During Plan Year July 1, 2023 to June 30, 2024	\$ 1,651,420	\$ 570,545	\$ 202,412	\$ 2,566,525	\$ 20,203	\$ 2,172,282	\$ 731,594	\$ 32,878	\$ 130,557	\$ 8,078,416
5. Preliminary Actuarial Value of Assets as of July 1, 2024 [3. + 4.]	\$ 103,189	\$ 35,650	\$ 12,648	\$ 160,369	\$ 1,262	\$ 135,734	\$ 45,713	\$ 2,054	\$ 8,158	\$ 504,777
6. Allocation of PAF Transfer	\$ 1,754,609	\$ 606,196	\$ 215,060	\$ 2,726,894	\$ 21,466	\$ 2,308,016	\$ 777,308	\$ 34,931	\$ 138,714	\$ 8,583,194
7. Final Actuarial Value of Assets With Corridor as of July 1, 2024	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
8. Final Actuarial Value of Assets Less RRP Additional Revenue Account	\$ 1,754,609	\$ 606,196	\$ 215,060	\$ 2,726,894	\$ 21,466	\$ 2,308,016	\$ 777,308	\$ 34,931	\$ 138,714	\$ 8,583,194
	\$ 1,597,027	\$ 551,753	\$ 195,746	\$ 2,481,991	\$ 19,538	\$ 2,100,733	\$ 707,498	\$ 31,794	\$ 126,256	\$ 7,812,335

Note: Numbers may not add due to rounding

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION III – ASSETS

E. Development of the Pension Adjustment Fund as of July 1, 2024

This table provides the funds available for distribution consideration under title §22-311 of the Philadelphia Code. In general, the Pension Adjustment Fund (PAF) provides for additional benefit distributions to retirees and beneficiaries through the use of excess earnings. This may include a lump-sum bonus payment, monthly pension increases, ad-hoc cost of living adjustments, or other increases determined by the Board. The adjusted market value of assets reflects a five-year smoothing of asset gains and losses, as described in the Philadelphia Code.

Table III-6 Development of the Pension Adjustment Fund as of July 1, 2024		
1. PAF on July 1, 2023	\$	7,221,239
2. PAF Distribution		(56,948)
3. Market Value Asset Return Through June 30, 2024 *		8.39%
4. PAF on July 1, 2024 Before Additional Transfers** = (1) x [1 + (3)] + (2) x {[1+(3)] ^{.50} }	\$	7,767,537
5. Adjusted Market Value of Assets Through June 30, 2024	\$	8,607,711,824
6. Adjusted Market Value of Assets Return Through June 30, 2024 ***		7.11%
7. Return in Excess of Investment Assumption Plus 1.0%, Limited to 5.0% = (6) - [7.35% + 1.00%]		0.00%
8. Additional Transfer as of July 1, 2024 = 50% of (7) x (5)	\$	0
9. Total PAF as of July 1, 2024 = (4) + (8)	\$	7,767,537

* Market Value Asset Return including the PAF

** Calculations are based upon the unrounded percents for items (3) and (7)

*** Asset Return based upon the Adjusted Market Value of Assets using a 5 year smoothing of the gains/losses as outlined in Title 22-311

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION III – ASSETS

F. Actuarial Value of Assets for Revenue Recognition Policy

The System is expected to receive additional revenue from sales tax, tier member contributions and additional Police and Fire member contributions, which is anticipated to be contributed over and above the City's contribution of the MMO. These additional sources of revenue are tracked separately and accumulated in a notional account. For determining the actuarial value of assets for the RRP, the additional revenue account is excluded from the assets. Below is the development of the assets used for the RRP.

Table III-7 Actuarial Value of Assets for Revenue Recognition Policy as of July 1, 2024	
1. Additional Revenue Account on July 1, 2023	\$598,135,288
2. Sales Tax Revenue Received During FYE June 30, 2024	\$90,015,546
3. Tier and Additional Member Contributions Received During FYE June 30, 2024*	31,263,034
4. Market Value Asset Return Through June 30, 2024	8.39%
5. Interest Through June 30, 2024	51,445,195
6. Additional Revenue Account on July 1, 2024 =(1) + (2) + (3) + (5)	\$770,859,063
7. Actuarial Value of Assets on June 30, 2024	\$8,583,194,268
8. Actuarial Value of Assets Net of Additional Revenue on June 30, 2024** =(7) - (6)	\$7,812,335,205

* Tier and additional member contributions are assumed to be received mid-year.

Actual date of receipt is used for sales tax revenue contribution

** Actuarial Value of Assets used in calculation of the RRP contribution is net of accumulated sales tax revenue and tier and additional member contributions

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION III – ASSETS

G. Investment Performance

The market value of assets internal rate of return was 8.39% for the year ending June 30, 2024. This is compared to an assumed return of 7.35% for the same period. This return produced an overall investment gain of \$95.4 million for the year ending June 30, 2024. On an actuarial value of assets basis (net of PAF), the return for FYE 2024 was 6.29%. In the table below, we also provide returns from two broad asset classes for comparison over the last 25 years.

Table III-8					
Annual Rates of Return					
Year Ending <u>June 30,</u>	Investment Return <u>Assumption</u>	Market Value	Actuarial Value	Total Return Standard & Poor's <u>500 Index</u>	Barclays Aggregate Bond Index
2000	9.00%	9.60%	11.10%	7.30%	4.60%
2001	9.00%	-6.00%	8.30%	-14.80%	11.20%
2002	9.00%	-5.80%	3.40%	-18.00%	8.60%
2003	9.00%	1.80%	-2.20%	0.30%	10.40%
2004	9.00%	16.60%	4.60%	19.10%	0.30%
2005	8.75%	9.90%	1.80%	6.31%	6.81%
2006	8.75%	11.30%	6.10%	8.60%	-0.80%
2007	8.75%	16.98%	10.71%	20.60%	6.10%
2008	8.75%	-4.53%	10.13%	-13.10%	7.10%
2009	8.75%	-19.87%	-9.28%	-26.21%	5.98%
2010	8.25%	13.81%	12.89%	14.40%	9.19%
2011	8.15%	19.40%	9.90%	28.13%	3.56%
2012	8.10%	0.18%	2.42%	3.14%	7.30%
2013	7.95%	10.94%	5.08%	17.91%	-0.85%
2014	7.85%	15.70%	4.81%	22.04%	4.36%
2015	7.80%	0.29%	5.80%	5.25%	1.86%
2016	7.75%	-3.17%	4.45%	1.73%	6.00%
2017	7.70%	13.08%	4.40%	15.46%	-0.31%
2018	7.65%	9.01%	5.11%	12.17%	-0.39%
2019	7.60%	5.66%	7.60%	8.22%	7.82%
2020	7.55%	1.53%	6.54%	5.39%	8.65%
2021	7.50%	28.42%	6.28%	38.62%	-0.38%
2022	7.45%	-6.46%	7.68%	-11.92%	-10.27%
2023	7.40%	8.05%	6.49%	17.57%	-0.93%
2024	7.35%	8.39%	6.29%	22.70%	2.61%

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION III – ASSETS

H. Asset Gain/(Loss)

There was a \$95.4 million investment gain on market value of assets when compared to the expected as of July 1, 2024. Table III-9 reconciles the 2024 asset gain (expected versus actual) for the market value of assets both net of the PAF and in total. This investment gain is smoothed over a ten-year period to determine the actuarial value of assets (see Table III – 4). Also provided below is a reconciliation of the PAF.

Table III-9 Calculation of Asset Gain/(Loss)			
	Market Value (Net of PAF)	PAF	Total Market Value
1. Market Value of Assets as of July 1, 2023	\$ 7,800,867,495	\$ 7,221,239	\$ 7,808,088,734
2. Transactions During Plan Year July 1, 2023 to June 30, 2024			
a. Contributions			
City and Commonwealth	\$ 927,779,546	\$ 0	\$ 927,779,546
Employees	127,355,386	0	127,355,386
Quasi-Public Agencies	20,906,251	0	20,906,251
b. Benefit Payments	(951,286,598)	(56,948)	(951,343,546)
c. Withdrawals	(15,504,194)	0	(15,504,194)
d. Administrative Expenses	(10,032,817)	0	(10,032,817)
e. Net Transactions	\$ 99,217,574	\$ (56,948)	\$ 99,160,626
3. Expected Investment Income from July 1, 2023 to June 30, 2024	\$ 562,956,741	\$ 603,246 *	\$ 563,559,987
4. PAF transfer at July 1, 2024	\$ 0	\$ 0	\$ 0
5. Expected Market Value of Assets as of July 1, 2024 [1. + 2.e. + 3. + 4]	\$ 8,463,041,810	\$ 7,767,537	\$ 8,470,809,347
6. Market Value of Assets as of July 1, 2024	\$ 8,558,440,017	\$ 7,767,537	\$ 8,566,207,554
7. Investment Gain/(Loss) [6. - 5.]	\$ 95,398,207	\$ 0	\$ 95,398,207

* The PAF is credited with investment income at the market rate of return earned by plan assets.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

SECTION IV – LIABILITIES

In this section, we present detailed information on liabilities for the City of Philadelphia Municipal Retirement System, including:

- Disclosure of liabilities at July 1, 2023 and July 1, 2024,
- Statement of changes in these liabilities and the unfunded liabilities during the year,
- Development of the normal cost rates by plan, and
- The reconciliation of the changes in the unfunded liability by plan as well as the expected unfunded liability as of July 1, 2025.

Disclosure

Two types of liabilities are calculated and presented in this report. Each type is distinguished by the purpose for which the figures are ultimately used.

- **Present Value of all Future Benefits:** Used for measuring all future obligations, this represents the amount of money needed today to fully fund all benefits both earned as of the valuation date and those to be earned in the future by current plan participants, under the current plan provisions and assumptions.
- **Actuarial Liability:** Used for determining employer contributions and GASB accounting disclosures. This liability is calculated by subtracting the present value of future member contributions and future employer normal cost contributions as determined under the Entry Age Normal Cost (EAN) actuarial funding method from the present value of all future benefits.

These liabilities are for funding purposes and are not appropriate for measuring the cost of settling plan liabilities by purchasing annuities or paying lump sums.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION

SECTION IV – LIABILITIES

Table IV-1 shows the present value of future benefits, actuarial liability, and unfunded actuarial liability as of July 1, 2024, and July 1, 2023, for the Retirement System. The UAL shown in the table below is based on AVA including the additional revenue account balance which is different from the assets used in calculating the RRP contributions.

Table IV-1 Disclosure of Liabilities (\$ thousands)		
	July 1, 2024	July 1, 2023
Present Value of Future Benefits		
Actives	\$ 6,243,960	\$ 6,007,756
Terminated Vesteds	68,301	84,663
Disabled	951,145	915,973
Retirees	5,682,538	5,548,737
Beneficiaries	806,504	776,164
DROP Account plus Deferred Annuities	1,291,861	1,312,451
Non-Vested Refunds	9,808	9,215
Total City PVFB	\$ 15,054,117	\$ 14,654,959
Market Value of Assets (Net of PAF)	(8,558,440)	(7,800,867)
Present Value Future Member Contrib.	(1,252,665)	(1,183,471)
City's Unfunded Future Obligation	\$ 5,243,012	\$ 5,670,621
Actuarial Liability		
Actives	\$ 4,323,575	\$ 4,174,169
Terminated Vesteds	68,301	84,663
Disabled	951,145	915,973
Retirees	5,682,538	5,548,737
Beneficiaries	806,504	776,164
DROP	1,291,861	1,312,451
Non-Vested Refunds	9,808	9,215
Total City AL	\$ 13,133,732	\$ 12,821,372
Actuarial Value of Assets	(8,583,194)	(7,979,199)
Unfunded Actuarial Liability	\$ 4,550,538	\$ 4,842,173

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION

SECTION IV – LIABILITIES

Table IV-2 shows the present value of future benefits, actuarial liability, and unfunded actuarial liability for each Plan in the Retirement System.

Table IV-2 Liabilities Detail as of July 1, 2024 (\$ thousands)										
	1967 Plan			1987 Plan				Plan '10	Plan '16	
	Municipal	Police	Fire	Municipal	Elected	Police	Fire	Municipal	Municipal	Total
Present Value of Future Benefits										
Actives	\$ 161,172	\$ 51,457	\$ 17,325	\$ 2,620,734	\$ 14,717	\$ 2,036,329	\$ 924,135	\$ 55,743	\$ 362,348	\$ 6,243,960
Terminated Vesteds	9,709	0	0	55,040	0	3,401	151	0	0	68,301
Disabled	166,708	133,233	25,321	205,267	0	362,885	52,870	0	4,860	951,145
Retirees	2,632,072	1,128,586	467,045	795,076	17,829	522,861	118,541	0	527	5,682,538
Beneficiaries	354,921	190,821	86,883	85,076	1,619	65,438	21,426	0	321	806,504
DROP	265,847	102,567	30,426	243,861	920	526,132	122,107	0	0	1,291,861
Non-Vested Refunds	1,563	155	639	5,997	10	1,160	285	0	0	9,808
Total PVFB	\$ 3,591,992	\$ 1,606,819	\$ 627,639	\$ 4,011,052	\$ 35,095	\$ 3,518,206	\$ 1,239,517	\$ 55,743	\$ 368,056	\$ 15,054,117
Actuarial Liability										
Actives	\$ 154,488	\$ 48,448	\$ 16,499	\$ 2,066,827	\$ 9,782	\$ 1,329,741	\$ 555,553	\$ 29,905	\$ 112,331	\$ 4,323,575
Terminated Vesteds	9,709	0	0	55,040	0	3,401	151	0	0	68,301
Disabled	166,708	133,233	25,321	205,267	0	362,885	52,870	0	4,860	951,145
Retirees	2,632,072	1,128,586	467,045	795,076	17,829	522,861	118,541	0	527	5,682,538
Beneficiaries	354,921	190,821	86,883	85,076	1,619	65,438	21,426	0	321	806,504
DROP	265,847	102,567	30,426	243,861	920	526,132	122,107	0	0	1,291,861
Non-Vested Refunds	1,563	155	639	5,997	10	1,160	285	0	0	9,808
Total AL	\$ 3,585,308	\$ 1,603,810	\$ 626,813	\$ 3,457,144	\$ 30,160	\$ 2,811,618	\$ 870,935	\$ 29,905	\$ 118,039	\$ 13,133,732
Actuarial Value of Assets	(1,754,609)	(606,196)	(215,060)	(2,726,894)	(21,466)	(2,308,016)	(777,308)	(34,931)	(138,714)	(8,583,194)
Unfunded Actuarial Liability	\$ 1,830,699	\$ 997,614	\$ 411,753	\$ 730,250	\$ 8,694	\$ 503,602	\$ 93,627	\$ (5,026)	\$ (20,674)	\$ 4,550,538
Funding Percent	48.9%	37.8%	34.3%	78.9%	71.2%	82.1%	89.2%	116.8%	117.5%	65.4%

Note: Numbers may not add due to rounding.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION IV – LIABILITIES

Table IV-3 shows the derivation of the City normal cost as a percent of pay for each Plan in the System as of the valuation date. For MMO purposes, the normal cost as a percent of pay for the aggregated uniform, police and fire plans reflects the projected payroll for each plan. The expected employee contributions below include tier and additional Police and Firefighter member contributions.

Table IV-3 Derivation of the Normal Cost as of July 1, 2024 on MMO Basis (\$ thousands)										
	1967 Plan			1987 Plan				Plan '10	Plan '16	
	Municipal	Police	Fire	Municipal	Elected	Police	Fire	Municipal	Municipal	Total
Retirement	\$ 881	\$ 764	\$ 218	\$ 47,165	\$ 465	\$ 47,828	\$ 24,990	\$ 1,905	\$ 20,540	\$ 144,755
Death	51	31	10	2,740	30	2,627	1,381	122	1,320	8,311
Disability	121	137	38	6,783	44	11,079	5,816	466	3,971	28,455
Termination	841	106	31	12,406	167	1,917	813	521	6,635	23,437
Administrative Expenses	2,632	1,178	409	2,826	8	1,219	510	128	1,454	10,364
Total Normal Cost (with Expenses)	\$ 4,526	\$ 2,216	\$ 707	\$ 71,919	\$ 714	\$ 64,670	\$ 33,509	\$ 3,142	\$ 33,920	\$ 215,321
Expected Employee Contributions	\$ 1,492	\$ 365	\$ 122	\$ 44,287	\$ 590	\$ 33,895	\$ 17,380	\$ 2,494	\$ 23,251	\$ 123,876
City Normal Cost	\$ 3,034	\$ 1,851	\$ 585	\$ 27,631	\$ 123	\$ 30,775	\$ 16,129	\$ 648	\$ 10,669	\$ 91,445
Current Annual Payroll	\$ 22,839	\$ 6,076	\$ 2,030	\$ 803,842	\$ 3,937	\$ 460,511	\$ 230,631	\$ 59,561	\$ 529,053	\$ 2,118,480
City Normal Cost as % of Pay, Beginning of Year Payment	13.286%	30.466%	28.816%	3.437%	3.131%	6.683%	6.993%	1.087%	2.017%	4.317%
City Normal Cost as % of Pay, End of Year Payment	14.255%	32.690%	30.919%	3.688%	3.359%	7.171%	7.504%	1.167%	2.164%	4.632%

Note: Numbers may not add due to rounding.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION IV – LIABILITIES

Table IV-4 shows changes in the unfunded actuarial liability from July 1, 2023 to July 1, 2024 due to actuarial experience, assumption changes, and plan changes. The table also shows the development of the expected unfunded actuarial liability from July 1, 2024 to July 1, 2025 based upon the City's Funding Policy, which is used to develop the end of year amortization amounts for the City's Funding Policy in Table V – 10 and in Appendix B. The actuarial experience of each of the plans is calculated based on the plans' actual asset and liability values compared to the expected values.

Table IV-4 Expected Unfunded Actuarial Liability for the Plan Year Ending June 30, 2025 (\$ thousands)										
	1967 Plan			1987 Plan				Plan '10	Plan '16	Total
	Municipal	Police	Fire	Municipal	Elected	Police	Fire	Municipal	Municipal	
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation*	\$ 1,851,893	\$ 1,002,074	\$ 417,641	\$ 662,638	\$ 6,263	\$ 455,100	\$ 74,720	\$ (3,749)	\$ (7,785)	\$ 4,458,795
2. Changes in UAL due to										
a. Actuarial Experience	\$ (33,078)	\$ (9,486)	\$ (7,769)	\$ 47,158	\$ 2,299	\$ 32,866	\$ 13,676	\$ (1,515)	\$ (13,846)	\$ 30,305
b. Assumption Changes	11,884	5,028	1,879	20,454	131	15,635	5,232	238	957	61,438
c. Active Plan Changes	0	0	0	0	0	0	0	0	0	0
d. Inactive Plan Changes	0	0	0	0	0	0	0	0	0	0
e. Subtotal	\$ (21,194)	\$ (4,459)	\$ (5,890)	\$ 67,612	\$ 2,431	\$ 48,501	\$ 18,908	\$ (1,277)	\$ (12,889)	\$ 91,743
3. Actual UAL as of July 1, 2024 [1. + 2e.]	\$ 1,830,699	\$ 997,616	\$ 411,752	\$ 730,250	\$ 8,693	\$ 503,601	\$ 93,627	\$ (5,026)	\$ (20,674)	\$ 4,550,538
4. Expected Changes in UAL from July 1, 2024 to July 1, 2025 due to										
a. Interest on Changes in UAL	\$ (1,547)	\$ (325)	\$ (430)	\$ 4,936	\$ 177	\$ 3,541	\$ 1,380	\$ (93)	\$ (941)	\$ 6,697
b. FY 2025 Amortization Contribution	(175,747)	(91,231)	(38,590)	(46,964)	(822)	(22,368)	(4,512)	72	89	(380,073)
c. Subtotal	\$ (177,294)	\$ (91,557)	\$ (39,020)	\$ (42,029)	\$ (644)	\$ (18,827)	\$ (3,132)	\$ (22)	\$ (852)	\$ (373,376)
5. Expected UAL as of July 1, 2025 [3. + 4c.]	\$ 1,653,405	\$ 906,059	\$ 372,732	\$ 688,221	\$ 8,049	\$ 484,774	\$ 90,495	\$ (5,048)	\$ (21,526)	\$ 4,177,162

* Expected UAL is based upon the City's funding policy
Note: Numbers may not add due to rounding.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION IV – LIABILITIES

Table IV-5 shows a reconciliation of the changes in the Actuarial Liability from July 1, 2023 to July 1, 2024. The components of that change can include:

- Benefits accrued since the last valuation
- Plan amendments changing benefits
- Passage of time which adds interest to the prior liability
- Benefits paid to retirees since the last valuation
- Participants retiring, terminating, or dying at rates different than expected
- A change in actuarial assumptions
- A change in the actuarial funding method

The expected liabilities below were provided in the GASB 67 and 68 report for Measurement Date June 30, 2024.

Table IV-5 Change in Actuarial Liability (\$ thousands)	
Liabilities on July 1, 2023	\$ 12,821,372
Liabilities on July 1, 2024	<u>13,133,732</u>
Liability Increase/(Decrease)	\$ 312,360
Liabilities on July 1, 2023	\$ 12,821,372
Expected Change During the year due to:	
Accrual of Benefits	\$ 195,726
Benefit Payments	(966,791)
Passage of Time	<u>921,857</u>
Total	\$ 150,792
Expected Liabilities on June 30, 2024	\$ 12,972,164
Change Due to:	
Method Change	\$ 0
Plan Amendment	0
Assumption Change	61,438
Liability (Gain)/Loss	<u>100,130</u>
Total	\$ 161,568
Liabilities on July 1, 2024	\$ 13,133,732

SECTION V – CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

In the process of evaluating the financial condition of any pension system, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed based on the funding methods either required by law or adopted by the plan sponsor. For an actuarial funding method to be effective, it should result in a pattern of contributions that is both stable and predictable as well as systematically fund the plan obligations.

The actuarial funding method used to determine the normal cost and the unfunded actuarial liability is the Entry Age Normal (EAN) cost method. The normal cost is based on taking the value, as of entry age into the plan, of each member's projected future benefits. This value is then divided by the value, also at entry age, of each member's expected future salary producing a normal cost rate as a percent of salary that should remain relatively constant over a participant's career. The normal cost rate is multiplied by current salary to determine each member's normal cost which is then all summed to get the total normal cost for all members. Finally, the total normal cost is reduced by the member contribution to produce the employer normal cost. The normal cost also includes an explicit administrative expense assumption to account for anticipated administrative expenses. The unfunded actuarial liability is the difference between the EAN actuarial liability and the actuarial value of assets.

Within this section of the report, three contribution amounts are calculated based on three different sets of funding policies for determining the way the unfunded actuarial liability is funded.

- The first policy is defined in accordance with Act 205 and defines the Minimum Municipal Obligation (MMO), which is the City's minimum required contribution under Pennsylvania State law.
- The second policy is the Revenue Recognition Policy (RRP), which is similar to the MMO calculations except the assets used for determining the contributions exclude the accumulated value of sales tax revenue and tier and additional member contributions received by the System to dedicate these funds to exclusively pay down the Unfunded Liability.
- The third policy is in accordance with the City's Funding Policy implemented in 1984, which predates the Act 205 rules and calls for contributions based on a different amortization schedule for the unfunded actuarial liability.

The actuarially determined contributions (ADC) above are reasonable actuarially determined contributions in accordance with Actuarial Standard of Practice (ASOP) No. 4. The actuarial methods have been selected to balance benefit security, intergenerational equity, and stability of actuarially determined contributions. The selection of the actuarial methods has taken into account the demographics of plan members, the funding goals and objectives of the Board, and the need to accumulate assets to make benefit payments when due. The actuarial methods and assumptions are shown in Appendix C of this report.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION V – CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Under all funding policies there are two components: the normal cost and the amortized unfunded actuarial liability. The amortized unfunded actuarial liability is the amount of the unfunded actuarial liability that is paid each year based upon the given or defined amortization periods. The amortization periods are different under the MMO/RRP and the City's Funding Policy. These amortization periods are outlined in more detail in Appendix C, Section B.

As of July 1, 2010, gains and losses are recognized annually to determine the amortization base used to calculate the MMO, as opposed to biennially. This change is implemented in accordance with section 1002 of Act 205 and has been continued since then to provide greater transparency in the determination of the period and amount of such amounts.

In addition, the MMO, excluding the Pension Obligation Bond (POB), is also provided in this section, as required for reporting purposes under Act 205.

In Table V-1 we provide the employee contribution rates as a percent of pay effective for the plan year starting July 1, 2025. For a complete list of all plan codes by membership class for employee contribution rates, refer to Appendix D of this report.

Table V-1 Employee Contribution Rates for the Plan Year Beginning July 1, 2025				
	Municipal¹	Elected²	Police	Fire
Plan 67	7.00%	N/A	6.00%	6.00%
Plan 87	3.68%	11.89%	6.84%	6.84%
Plan 87- 50% of Aggregate NC ³	4.47%	N/A	N/A	N/A
Plan 87 - Accelerated Vesting ⁴	4.65%	12.53%	N/A	N/A
Plan 87 Prime ⁵	4.68%	12.89%	7.84%	7.84%
Plan '10	2.64%	N/A	7.34%	7.34%
Plan '10 - Accelerated Vesting	4.33%	N/A	N/A	N/A
Plan '16 ⁶	4.15%	N/A	N/A	N/A
Plan '16 - Accelerated Vesting ⁷	4.69%	N/A	N/A	N/A

¹ For Municipal Plan 67 members who participate in the Social Security System, employee contributions are 4.75% of compensation up to the social security wage base and 7% above it.

² The employee contribution rate is based upon the normal cost of \$713,609 under Plan 87 Elected, normal cost of \$406,985 under Plan 87 Municipal and current annual payroll of \$3,936,671.

³ This represents 50% of Aggregate Normal Cost for all members in Plan Y and applies to Deputy Sheriffs hired between 1/1/2012 and 6/20/2018.

⁴ Member rate for Municipal Plan 87 (Y5) members eligible to vest in 5 years, and Elected Officials (L8) eligible to be vested in 8 years, instead of 10 years.

⁵ Plan 87 Prime refers to new hires who have the option to elect Plan '10 but have elected to stay in Plan '87. New hires after 7/1/2017 in Police and Fire Plan 87 Prime pay 8.50% and are not reflected above.

⁶ All Municipal groups (except elected officials) hired after January 1, 2019 participate in Plan '16.

⁷ Member rate for Municipal Plan 16 members eligible to vest in 7 years instead of 10 years.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION V – CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Table V-2a and Table V-2b isolate the contribution requirements for the Quasi Agencies that participate in the System broken out for Municipal Plans 1967, 1987, 2010, and 2016 both under the Funding Policy and MMO. Note the Quasi Agencies consist of the three governmental agencies that currently participate in the System: Philadelphia Housing and Development Corporation (PHDC), Philadelphia Parking Authority (PPA) and Philadelphia Municipal Authority (PMA).

Table V-2a Quasi Agency Funding Rate as a Percent of Payroll (Based on Funding Policy)		
Valuation Date	July 1, 2024	July 1, 2023
Fiscal Year Ending in Year	2026	2025
67 Municipal		
1. Normal Cost Rate	14.255%	10.374%
2. Amortization Rate under the City's Funding Policy	<u>1352.649%</u>	<u>994.711%</u>
3. Total Year-End Rate [1. + 2.]	1366.905%	1005.084%
4. Quarterly adjustment factor	0.97374	0.97356
5. Total, adjusted for Quarterly Payments [3. x 4.]	1331.003%	978.513%
87 Municipal		
1. Normal Cost Rate	3.688%	3.800%
2. Amortization Rate under the City's Funding Policy	<u>12.774%</u>	<u>11.783%</u>
3. Total Year-End Rate [1. + 2.]	16.462%	15.583%
4. Quarterly adjustment factor	0.97374	0.97356
5. Total, adjusted for Quarterly Payments [3. x 4.]	16.030%	15.171%
Plan 10 Municipal		
1. Normal Cost Rate	1.167%	1.255%
2. Amortization Rate under the City's Funding Policy	<u>-0.796%</u>	<u>-0.577%</u>
3. Total Year-End Rate [1. + 2.]	0.371%	0.677%
4. Quarterly adjustment factor	0.97374	0.97356
5. Total, adjusted for Quarterly Payments [3. x 4.]	0.361%	0.659%
Plan 16 Municipal		
1. Normal Cost Rate	2.164%	2.300%
2. Amortization Rate under the City's Funding Policy	<u>-0.374%</u>	<u>-0.163%</u>
3. Total Year-End Rate [1. + 2.]	1.790%	2.137%
4. Quarterly adjustment factor	0.97374	0.97356
5. Total, adjusted for Quarterly Payments [3. x 4.]	1.743%	2.081%

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION V – CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Table V-2b Quasi Agency Funding Rate as a Percent of Payroll (Based on MMO)		
Valuation Date Fiscal Year Ending in Year	July 1, 2024 2026	July 1, 2023 2025
67 Municipal		
1. Normal Cost Rate	14.255%	10.374%
2. Amortization Rate under MMO*	<u>1095.157%</u>	<u>836.607%</u>
3. Total Year-End Rate [1. + 2.]	1109.412%	846.981%
4. Quarterly adjustment factor	0.97374	0.97356
5. Total, adjusted for Quarterly Payments [3. x 4.]	1080.274%	824.589%
87 Municipal		
1. Normal Cost Rate	3.688%	3.800%
2. Amortization Rate under MMO*	<u>12.412%</u>	<u>11.160%</u>
3. Total Year-End Rate [1. + 2.]	16.100%	14.960%
4. Quarterly adjustment factor	0.97374	0.97356
5. Total, adjusted for Quarterly Payments [3. x 4.]	15.677%	14.565%
Plan 10 Municipal		
1. Normal Cost Rate	1.167%	1.255%
2. Amortization Rate under MMO*	<u>-1.153%</u>	<u>-0.812%</u>
3. Total Year-End Rate [1. + 2.]	0.014%	0.443%
4. Quarterly adjustment factor	0.97374	0.97356
5. Total, adjusted for Quarterly Payments [3. x 4.]	0.013%	0.431%
Plan 16 Municipal		
1. Normal Cost Rate	2.164%	2.300%
2. Amortization Rate under MMO*	<u>-0.534%</u>	<u>-0.239%</u>
3. Total Year-End Rate [1. + 2.]	1.630%	2.061%
4. Quarterly adjustment factor	0.97374	0.97356
5. Total, adjusted for Quarterly Payments [3. x 4.]	1.587%	2.006%

* The amortization amounts were derived based on the proportional share of the Unfunded Actuarial Liability.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION V – CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Table V-3a shows the development of the FYE 2026 Minimum Municipal Obligation (MMO) and Table V-3b shows the Revenue Recognition Policy (RRP) for each division. Table V-4 on the following page shows a schedule of amortization payments toward the MMO.

Table V-3a Development of the Minimum Municipal Obligation for Fiscal Year End 2026 (\$ thousands)				
	Non-Uniformed	Police	Fire	Total
Estimated FY 2025-2026 Payroll	\$ 1,466,067	\$ 481,985	\$ 240,339	\$ 2,188,390
Normal Cost % without Expenses	7.406%	13.808%	14.310%	9.574%
Normal Cost without Expenses	\$ 108,576	\$ 66,553	\$ 34,392	\$ 209,521
Amortization Payment	323,926	174,055	62,069	560,051
Administrative Expenses	7,280	2,477	949	10,706
Subtotal	\$ 439,782	\$ 243,085	\$ 97,410	\$ 780,278
Expected Employee Contributions*	(74,960)	(35,660)	(18,208)	(128,828)
Minimum Municipal Obligation	\$ 364,823	\$ 207,424	\$ 79,203	\$ 651,450

* Includes additional expected member contributions from Police and Fire Plans 87 and Tier Contributions from Municipal Plans

Table V-3b Development of the Revenue Recognition Policy for Fiscal Year End 2026 (\$ thousands)				
	Non-Uniformed	Police	Fire	Total
Estimated FY 2025-2026 Payroll	\$ 1,466,067	\$ 481,985	\$ 240,339	\$ 2,188,390
Normal Cost % without Expenses	7.406%	13.808%	14.310%	9.574%
Normal Cost without Expenses	\$ 108,576	\$ 66,553	\$ 34,392	\$ 209,521
Amortization Payment	364,243	199,223	70,607	634,073
Administrative Expenses	7,280	2,477	949	10,706
Subtotal	\$ 480,099	\$ 268,253	\$ 105,948	\$ 854,300
Expected Employee Contributions *	(54,974)	(26,160)	(13,390)	(94,524)
Revenue Recognition Policy	\$ 425,126	\$ 242,093	\$ 92,559	\$ 759,777

* Does not include additional expected member contributions from Police and Fire Plans 87 and Tier Contributions from Municipal Plans

Note: Numbers may not add due to rounding.

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SECTION V – CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

<p style="text-align: center;">Table V-4 Unfunded Liability Payments toward the MMO for Fiscal Year 2026 (\$ thousands)</p>												
Type of Base	Municipal			Police			Fire			Total		
	7/1/2024 Balance	Years Left	FY 2026 Payment	7/1/2024 Balance	Years Left	FY 2026 Payment	7/1/2024 Balance	Years Left	FY 2026 Payment	7/1/2024 Balance	Years Left	FY 2026 Payment
Fresh Start Base est. July 1, 2009	\$ 2,083,794	15	\$ 217,282	\$ 1,172,936	15	\$ 122,305	\$ 454,535	15	\$ 47,395	\$ 3,711,265	15	\$ 386,982
Gain/Loss Base est. July 1, 2010	\$ (27,940)	6	\$ (5,514)	\$ (19,923)	6	\$ (3,932)	\$ (1,491)	6	\$ (294)	\$ (49,354)	6	\$ (9,739)
Assumption Change est. July 1, 2010	\$ 9,097	1	\$ 9,097	\$ 3,650	1	\$ 3,650	\$ 3,331	1	\$ 3,331	\$ 16,079	1	\$ 16,079
Gain/Loss est. July 1, 2011	\$ (60,026)	7	\$ (10,489)	\$ (12,163)	7	\$ (2,125)	\$ (11,961)	7	\$ (2,090)	\$ (84,151)	7	\$ (14,705)
Assumption Change est. July 1, 2011	\$ 4,799	2	\$ 2,484	\$ 2,885	2	\$ 1,493	\$ 973	2	\$ 504	\$ 8,657	2	\$ 4,481
Gain/Loss est. July 1, 2012	\$ 89,253	8	\$ 14,093	\$ 47,206	8	\$ 7,453	\$ 12,225	8	\$ 1,930	\$ 148,684	8	\$ 23,476
Assumption Change est. July 1, 2012	\$ 18,136	3	\$ 6,476	\$ 10,361	3	\$ 3,700	\$ 3,620	3	\$ 1,293	\$ 32,118	3	\$ 11,468
Gain/Loss est. July 1, 2013	\$ 84,050	9	\$ 12,177	\$ 24,483	9	\$ 3,547	\$ (3,455)	9	\$ (501)	\$ 105,077	9	\$ 15,223
Assumption Change est. July 1, 2013	\$ 30,262	4	\$ 8,383	\$ 18,147	4	\$ 5,027	\$ 6,053	4	\$ 1,677	\$ 54,462	4	\$ 15,086
Gain/Loss est. July 1, 2014	\$ 71,544	10	\$ 9,625	\$ 29,300	10	\$ 3,942	\$ 34,006	10	\$ 4,575	\$ 134,850	10	\$ 18,142
Assumption Change est. July 1, 2014	\$ 119,799	5	\$ 27,449	\$ (4,196)	5	\$ (961)	\$ 4,818	5	\$ 1,104	\$ 120,421	5	\$ 27,592
Gain/Loss est. July 1, 2015	\$ 125,374	11	\$ 15,816	\$ 28,467	11	\$ 3,591	\$ 27,431	11	\$ 3,460	\$ 181,272	11	\$ 22,867
Assumption Change est. July 1, 2015	\$ 14,839	6	\$ 2,928	\$ 21,444	6	\$ 4,232	\$ 6,847	6	\$ 1,351	\$ 43,130	6	\$ 8,511
Gain/Loss est. July 1, 2016	\$ 89,509	12	\$ 10,671	\$ 59,166	12	\$ 7,054	\$ 16,461	12	\$ 1,962	\$ 165,136	12	\$ 19,687
Assumption Change est. July 1, 2016	\$ 17,125	7	\$ 2,992	\$ 10,214	7	\$ 1,785	\$ 3,386	7	\$ 592	\$ 30,725	7	\$ 5,369
Gain/Loss est. July 1, 2017	\$ 66,559	13	\$ 7,549	\$ 53,636	13	\$ 6,083	\$ 13,077	13	\$ 1,483	\$ 133,272	13	\$ 15,115
Assumption Change est. July 1, 2017	\$ 19,302	8	\$ 3,048	\$ 11,631	8	\$ 1,837	\$ 3,854	8	\$ 609	\$ 34,787	8	\$ 5,493

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Table V-4 (Continued)												
Unfunded Liability Payments toward the MMO for Fiscal Year 2026												
(\$ thousands)												
Type of Base	Municipal			Police			Fire			Total		
	7/1/2024 Balance	Years Left	FY 2026 Payment	7/1/2024 Balance	Years Left	FY 2026 Payment	7/1/2024 Balance	Years Left	FY 2026 Payment	7/1/2024 Balance	Years Left	FY 2026 Payment
Gain/Loss												
est. July 1, 2018	\$ 13,487	14	\$ 1,463	\$ 21,298	14	\$ 2,311	\$ 7,575	14	\$ 822	\$ 42,360	14	\$ 4,596
Assumption Change												
est. July 1, 2018	\$ 101,870	9	\$ 14,758	\$ (43,563)	9	\$ (6,311)	\$ (14,747)	9	\$ (2,137)	\$ 43,560	9	\$ 6,311
Gain/Loss												
est. July 1, 2019	\$ (69,923)	15	\$ (7,291)	\$ 3,185	15	\$ 332	\$ (1,475)	15	\$ (154)	\$ (68,213)	15	\$ (7,113)
Assumption Change												
est. July 1, 2019	\$ 24,153	10	\$ 3,249	\$ 14,327	10	\$ 1,927	\$ 4,799	10	\$ 646	\$ 43,279	10	\$ 5,823
Plan Change												
est. July 1, 2019	\$ 577	5	\$ 132	\$ 0	5	\$ 0	\$ 0	5	\$ 0	\$ 577	5	\$ 132
Gain/Loss												
est. July 1, 2020	\$ 44,895	16	\$ 4,518	\$ (40,701)	16	\$ (4,096)	\$ (10,821)	16	\$ (1,089)	\$ (6,626)	16	\$ (667)
Assumption Change												
est. July 1, 2020	\$ 26,616	11	\$ 3,358	\$ 15,423	11	\$ 1,946	\$ 5,215	11	\$ 658	\$ 47,255	11	\$ 5,961
Gain/Loss												
est. July 1, 2021	\$ (234,855)	17	\$ (22,887)	\$ 61,310	17	\$ 5,975	\$ (19,855)	17	\$ (1,935)	\$ (193,401)	17	\$ (18,847)
Assumption Change												
est. July 1, 2021	\$ 27,037	12	\$ 3,223	\$ 16,854	12	\$ 2,009	\$ 5,544	12	\$ 661	\$ 49,434	12	\$ 5,894
Gain/Loss												
est. July 1, 2022	\$ (57,907)	18	\$ (5,482)	\$ (28,997)	18	\$ (2,745)	\$ (19,835)	18	\$ (1,878)	\$ (106,739)	18	\$ (10,104)
Assumption Change												
est. July 1, 2022	\$ 84,868	13	\$ 9,625	\$ 53,518	13	\$ 6,070	\$ 7,400	13	\$ 839	\$ 145,786	13	\$ 16,534
Gain/Loss												
est. July 1, 2023	\$ (161,700)	19	\$ (14,910)	\$ (52,423)	19	\$ (4,834)	\$ (34,653)	19	\$ (3,195)	\$ (248,777)	19	\$ (22,940)
Assumption Change												
est. July 1, 2023	\$ 31,488	14	\$ 3,416	\$ 19,470	14	\$ 2,112	\$ 6,564	14	\$ 712	\$ 57,522	14	\$ 6,241
Gain/Loss												
est. July 1, 2024	\$ (75,804)	20	\$ (6,825)	\$ (16,392)	20	\$ (1,476)	\$ (11,152)	20	\$ (1,004)	\$ (103,348)	20	\$ (9,305)
Assumption Change												
est. July 1, 2024	\$ 33,664	15	\$ 3,510	\$ 20,663	15	\$ 2,155	\$ 7,111	15	\$ 741	\$ 61,438	15	\$ 6,406
Total	\$ 2,543,941		\$ 323,926	\$ 1,501,217		\$ 174,055	\$ 505,379		\$ 62,069	\$ 4,550,538		\$ 560,051

Note: Numbers may not add due to rounding.

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Table V-5 (a) – (d) provides more detail by plan on the expected and actual unfunded actuarial liability and the new amortization bases established as of July 1, 2024 for the MMO.

Table V-5a Development of the Fiscal Year 2026 Amortization Payment under MMO Municipal and Elected (\$ thousands)			
	7/1/2024 Outstanding Balance	Remaining Years	FY 2026 Payment
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation	\$ 2,586,081		\$ 327,241
2. Changes in UAL due to			
a. Actuarial Experience	\$ (75,804)	20	\$ (6,825)
b. Assumption Changes	33,664	15	3,510
c. Active Plan Changes	0	10	0
d. Inactive Plan Changes	0	1	0
e. Subtotal	\$ (42,140)		\$ (3,315)
3. Total [1c. + 2e.]	\$ 2,543,941		\$ 323,926

Note: Numbers may not add due to rounding.

Table V-5b Development of the Fiscal Year 2026 Amortization Payment under MMO Police (\$ thousands)			
	7/1/2024 Outstanding Balance	Remaining Years	FY 2026 Payment
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation	\$ 1,496,946		\$ 173,376
2. Changes in UAL due to			
a. Actuarial Experience	\$ (16,392)	20	\$ (1,476)
b. Assumption Changes	20,663	15	2,155
c. Active Plan Changes	0	10	0
d. Inactive Plan Changes	0	1	0
e. Subtotal	\$ 4,271		\$ 679
3. Total [1c. + 2e.]	\$ 1,501,217		\$ 174,055

Note: Numbers may not add due to rounding.

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Table V-5c Development of the Fiscal Year 2026 Amortization Payment under MMO Fire (\$ thousands)			
	7/1/2024 Outstanding Balance	Remaining Years	FY 2026 Payment
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation	\$ 509,420		\$ 62,332
2. Changes in UAL due to			
a. Actuarial Experience	\$ (11,152)	20	\$ (1,004)
b. Assumption Changes	7,111	15	741
c. Active Plan Changes	0	10	0
d. Inactive Plan Changes	0	1	0
e. Subtotal	\$ (4,041)		\$ (263)
3. Total [1c. + 2e.]	\$ 505,379		\$ 62,069

Note: Numbers may not add due to rounding.

Table V-5d Development of the Fiscal Year 2026 Amortization Payment under MMO Total (\$ thousands)			
	7/1/2024 Outstanding Balance	Remaining Years	FY 2026 Payment
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation	\$ 4,592,447		\$ 562,949
2. Changes in UAL due to			
a. Actuarial Experience	\$ (103,348)	20	\$ (9,305)
b. Assumption Changes	61,438	15	6,406
c. Active Plan Changes	0	10	0
d. Inactive Plan Changes	0	1	0
e. Subtotal	\$ (41,910)		\$ (2,898)
3. Total [1c. + 2e.]	\$ 4,550,537		\$ 560,050

Note: Numbers may not add due to rounding.

The tables on the following pages support Exhibit I of the Act 205 filings.

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- Table V-6 is a summary of assets, liabilities, and amortization contributions under the assumption that the Pension Obligation Bond (POB) was never contributed.
- Table V-7 is a schedule of modified amortization payments under the assumption that the proceeds from the POB were never contributed.
- Table V-8a, V-8b, and V-8c are debt service schedules for the POB, allocated for the Municipal, Police, and Fire divisions.
- Tables V-9a and V-9b are statements of receipts and disbursements for each division excluding and including bond issue assets, respectively, excluding the PAF.

Table V-6 Summary of Modified Actuarial Data (\$ thousands)				
	Municipal	Police	Fire	Total
Actuarial Liability	\$ 7,220,556	\$ 4,415,429	\$ 1,497,747	\$ 13,133,732
Market Value of Assets (less POB)	\$ 4,534,081	\$ 2,927,985	\$ 918,039	\$ 8,380,105
Actuarial Value of Assets (less POB)	\$ 4,480,761	\$ 2,797,894	\$ 925,385	\$ 8,204,040
Unfunded Actuarial Liability (AL - AVA)	\$ 2,739,795	\$ 1,617,535	\$ 572,362	\$ 4,929,692
Amortization Contributions				
Total Amortization Amount	\$ 346,112	\$ 187,988	\$ 69,700	\$ 603,800
Remaining Years	11	12	12	12

Note: Numbers may not add due to rounding.

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<p style="text-align: center;">Table V-7 Modified Unfunded Liability Payments toward the MMO for Fiscal Year 2026 (\$ thousands)</p>												
Type of Base	Municipal			Police			Fire			Total		
	7/1/2024 Balance	Remaining Years	FY 2026 Payment	7/1/2024 Balance	Remaining Years	FY 2026 Payment	7/1/2024 Balance	Remaining Years	FY 2026 Payment	7/1/2024 Balance	Remaining Years	FY 2026 Payment
Fresh Start UAL Base est. July 1, 2009	\$ 2,443,569	15	\$ 254,797	\$ 1,323,560	15	\$ 138,011	\$ 560,718	15	\$ 58,467	\$ 4,327,848	15	\$ 451,275
July 1, 2010 Charges												
Experience (Gain)/Loss	\$ (24,746)	6	\$ (4,883)	\$ (17,310)	6	\$ (3,416)	\$ 850	6	\$ 168	\$ (41,206)	6	\$ (8,132)
Assumption Change	9,097	1	9,097	3,650	1	3,650	3,331	1	3,331	16,079	1	16,079
July 1, 2011 Charges												
Experience (Gain)/Loss	\$ (46,963)	7	\$ (8,206)	\$ (4,734)	7	\$ (827)	\$ (6,340)	7	\$ (1,108)	\$ (58,037)	7	\$ (10,141)
Assumption Change	\$ 4,799	2	\$ 2,484	\$ 2,885	2	\$ 1,493	\$ 973	2	\$ 504	\$ 8,657	2	\$ 4,481
July 1, 2012 Charges												
Experience (Gain)/Loss	\$ 89,666	8	\$ 14,158	\$ 49,777	8	\$ 7,859	\$ 12,765	8	\$ 2,015	\$ 152,208	8	\$ 24,033
Assumption Change	\$ 18,136	3	\$ 6,476	\$ 10,361	3	\$ 3,700	\$ 3,620	3	\$ 1,293	\$ 32,118	3	\$ 11,468
July 1, 2013 Charges												
Experience (Gain)/Loss	\$ 90,127	9	\$ 13,057	\$ 30,532	9	\$ 4,423	\$ (2,085)	9	\$ (302)	\$ 118,574	9	\$ 17,178
Assumption Change	\$ 30,262	4	\$ 8,383	\$ 18,147	4	\$ 5,027	\$ 6,053	4	\$ 1,677	\$ 54,462	4	\$ 15,086
July 1, 2014 Charges												
Experience (Gain)/Loss	\$ 71,915	10	\$ 9,675	\$ 32,774	10	\$ 4,409	\$ 33,641	10	\$ 4,526	\$ 138,330	10	\$ 18,611
Assumption Change	\$ 119,799	5	\$ 27,449	\$ (4,196)	5	\$ (961)	\$ 4,818	5	\$ 1,104	\$ 120,421	5	\$ 27,592
July 1, 2015 Charges												
Experience (Gain)/Loss	\$ 122,222	11	\$ 15,418	\$ 31,305	11	\$ 3,949	\$ 26,614	11	\$ 3,357	\$ 180,141	11	\$ 22,724
Assumption Change	\$ 14,839	6	\$ 2,928	\$ 21,444	6	\$ 4,232	\$ 6,847	6	\$ 1,351	\$ 43,130	6	\$ 8,511
July 1, 2016 Charges												
Experience (Gain)/Loss	\$ 70,540	12	\$ 8,410	\$ 59,784	12	\$ 7,127	\$ 9,936	12	\$ 1,185	\$ 140,260	12	\$ 16,722
Assumption Change	\$ 17,125	7	\$ 2,992	\$ 10,214	7	\$ 1,785	\$ 3,386	7	\$ 592	\$ 30,725	7	\$ 5,369
July 1, 2017 Charges												
Experience (Gain)/Loss	\$ 42,827	13	\$ 4,857	\$ 51,827	13	\$ 5,878	\$ 5,049	13	\$ 573	\$ 99,703	13	\$ 11,308
Assumption Change	\$ 19,302	8	\$ 3,048	\$ 11,631	8	\$ 1,837	\$ 3,854	8	\$ 609	\$ 34,787	8	\$ 5,493

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Table V-7 (Continued) Modified Unfunded Liability Payments toward the MMO for Fiscal Year 2026 (\$ thousands)												
Type of Base	Municipal			Police			Fire			Total		
	7/1/2024 Balance	Remaining Years	FY 2026 Payment	7/1/2024 Balance	Remaining Years	FY 2026 Payment	7/1/2024 Balance	Remaining Years	FY 2026 Payment	7/1/2024 Balance	Remaining Years	FY 2026 Payment
July 1, 2018 Charges												
Experience (Gain)/Loss	\$ (10,364)	14	\$ (1,124)	\$ 18,939	14	\$ 2,055	\$ (248)	14	\$ (27)	\$ 8,328	14	\$ 904
Assumption Change	\$ 101,870	9	\$ 14,758	\$ (43,563)	9	\$ (6,311)	\$ (14,747)	9	\$ (2,137)	\$ 43,560	9	\$ 6,311
July 1, 2019 Charges												
Experience (Gain)/Loss	\$ (89,799)	15	\$ (9,364)	\$ (1,564)	15	\$ (163)	\$ (7,872)	15	\$ (821)	\$ (99,235)	15	\$ (10,348)
Assumption Change	\$ 24,153	10	\$ 3,249	\$ 14,327	10	\$ 1,927	\$ 4,799	10	\$ 646	\$ 43,279	10	\$ 5,823
Plan Change	\$ 577	5	\$ 132	\$ 0	5	\$ 0	\$ 0	5	\$ 0	\$ 577	5	\$ 132
July 1, 2020 Charges												
Experience (Gain)/Loss	\$ 27,726	16	\$ 2,790	\$ (48,751)	16	\$ (4,906)	\$ (14,643)	16	\$ (1,473)	\$ (35,667)	16	\$ (3,589)
Assumption Change	\$ 26,616	11	\$ 3,358	\$ 15,423	11	\$ 1,946	\$ 5,215	11	\$ 658	\$ 47,255	11	\$ 5,961
July 1, 2021 Charges												
Experience (Gain)/Loss	\$ (252,511)	17	\$ (24,607)	\$ 52,496	17	\$ 5,116	\$ (23,383)	17	\$ (2,279)	\$ (223,398)	17	\$ (21,770)
Assumption Change	\$ 27,037	12	\$ 3,223	\$ 16,854	12	\$ 2,009	\$ 5,544	12	\$ 661	\$ 49,434	12	\$ 5,894
July 1, 2022 Charges												
Experience (Gain)/Loss	\$ (76,682)	18	\$ (7,259)	\$ (38,126)	18	\$ (3,609)	\$ (23,072)	18	\$ (2,184)	\$ (137,880)	18	\$ (13,052)
Assumption Change	\$ 84,868	13	\$ 9,625	\$ 53,518	13	\$ 6,070	\$ 7,400	13	\$ 839	\$ 145,786	13	\$ 16,534
July 1, 2023 Charges												
Experience (Gain)/Loss	\$ (185,471)	19	\$ (17,102)	\$ (65,820)	19	\$ (6,069)	\$ (39,288)	19	\$ (3,623)	\$ (290,579)	19	\$ (26,794)
Assumption Change	\$ 31,488	14	\$ 3,416	\$ 19,470	14	\$ 2,112	\$ 6,564	14	\$ 712	\$ 57,522	14	\$ 6,241
July 1, 2024 Charges												
Experience (Gain)/Loss	\$ (95,894)	20	\$ (8,634)	\$ (27,983)	20	\$ (2,519)	\$ (15,049)	20	\$ (1,355)	\$ (138,926)	20	\$ (12,508)
Assumption Change	\$ 33,664	15	\$ 3,510	\$ 20,663	15	\$ 2,155	\$ 7,111	15	\$ 741	\$ 61,438	15	\$ 6,406
Total	\$ 2,739,795		\$ 346,112	\$ 1,617,535		\$ 187,988	\$ 572,362		\$ 69,700	\$ 4,929,692		\$ 603,800

Note: Numbers may not add due to rounding.

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Table V-8a				
TOTAL DEBT SERVICE REQUIREMENTS: MUNICIPAL				
Plan Year	Required Principal Payment	Required Interest Payment	Premium or Discount Amortized	Principal Balance at Valuation Date
1999	\$ 0	\$ 7,041,525.30	\$ 0	\$ 727,185,593.15
2000	9,917,857.50	29,825,175.27	0	717,267,735.65
2001	4,567,730.63	29,324,323.46	0	712,700,005.02
2002	0	29,087,715.02	0	712,700,005.02
2003	6,422,403.75	29,087,715.02	0	706,277,601.27
2004	8,884,981.88	28,728,336.25	0	697,392,619.39
2005	15,161,038.13	28,250,550.75	0	682,231,581.26
2006	18,743,737.50	27,403,048.72	0	663,487,843.76
2007	22,526,257.50	26,345,901.92	0	640,961,586.26
2008	26,486,083.13	25,064,157.87	0	614,475,503.13
2009	30,870,879.38	23,543,856.70	0	583,604,623.75
2010	40,000,711.88	21,756,432.78	0	543,603,911.87
2011	45,151,018.13	19,420,391.21	0	498,452,893.74
2012	22,154,721.72	45,234,066.39	0	476,298,172.02
2013	21,786,233.75	48,416,929.37	0	454,511,938.27
2014	20,545,516.84	50,378,126.28	0	433,966,421.43
2015	20,088,811.07	53,652,021.42	0	413,877,610.36
2016	19,364,886.72	56,464,212.02	0	394,512,723.64
2017	18,085,471.62	57,743,627.12	0	376,427,252.02
2018	16,915,332.51	58,913,766.23	0	359,511,919.51
2019	15,787,131.76	60,041,966.99	0	343,724,787.75
2020	14,758,165.41	61,070,933.33	0	328,966,622.34
2021	13,823,708.03	62,005,390.71	0	315,142,914.31
2022	12,919,375.38	62,909,723.36	0	302,223,538.93
2023	12,071,748.11	63,757,350.63	0	290,151,790.82
2024	11,250,110.80	64,578,987.94	0	278,901,680.02
2025	10,560,195.36	65,268,903.38	0	268,341,484.66
2026	17,271,090.90	58,558,007.84	0	251,070,393.76
2027	60,297,984.38	16,196,263.75	0	190,772,409.38
2028	64,125,534.38	12,367,341.75	0	126,646,875.00
2029	126,646,875.00	4,147,685.16	0	0

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Table V-8b					
TOTAL DEBT SERVICE REQUIREMENTS: POLICE					
Plan Year	Required Principal Payment	Required Interest Payment	Premium or Discount Amortized	Principal Balance at Valuation Date	
1999	\$ 0	\$ 3,848,228.76	\$ 0	\$ 397,410,560.15	
2000	5,420,158.68	16,299,607.13	0	391,990,401.47	
2001	2,496,287.61	16,025,889.30	0	389,494,113.86	
2002	0	15,896,581.60	0	389,494,113.86	
2003	3,509,875.74	15,896,581.60	0	385,984,238.12	
2004	4,855,686.99	15,705,644.36	0	381,128,551.13	
2005	8,285,583.09	15,439,067.14	0	372,842,968.04	
2006	10,243,546.20	14,975,903.05	0	362,599,421.84	
2007	12,310,712.28	14,398,167.04	0	350,288,709.56	
2008	14,474,776.77	13,697,687.51	0	335,813,932.79	
2009	16,871,089.83	12,866,835.33	0	318,942,842.96	
2010	21,860,588.91	11,889,999.22	0	297,082,254.05	
2011	24,675,257.01	10,613,340.83	0	272,406,997.04	
2012	12,107,666.12	24,720,643.30	0	260,299,330.92	
2013	11,906,285.60	26,460,093.82	0	248,393,045.32	
2014	11,228,227.61	27,531,897.73	0	237,164,817.71	
2015	10,978,635.63	29,321,097.79	0	226,186,182.08	
2016	10,583,007.35	30,857,974.00	0	215,603,174.73	
2017	9,883,800.61	31,557,180.75	0	205,719,374.12	
2018	9,244,313.74	32,196,667.62	0	196,475,060.38	
2019	8,627,746.39	32,813,234.97	0	187,847,313.99	
2020	8,065,411.14	33,375,570.22	0	179,781,902.85	
2021	7,554,725.51	33,886,255.84	0	172,227,177.34	
2022	7,060,503.20	34,380,478.16	0	165,166,674.14	
2023	6,597,270.66	34,843,710.70	0	158,569,403.48	
2024	6,148,241.77	35,292,739.59	0	152,421,161.71	
2025	5,771,199.53	35,669,781.82	0	146,649,962.18	
2026	9,438,737.48	32,002,243.88	0	137,211,224.70	
2027	32,953,149.75	8,851,339.07	0	104,258,074.95	
2028	35,044,924.95	6,758,814.06	0	69,213,150.00	
2029	69,213,150.00	2,266,730.66	0	0	

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Table V-8c					
TOTAL DEBT SERVICE REQUIREMENTS: FIRE					
Plan Year	Required Principal Payment	Required Interest Payment	Premium or Discount Amortized	Principal Balance at Valuation Date	
1999	\$ 0	\$ 1,620,185.70	\$ 0	\$ 167,318,251.01	
2000	2,282,001.44	6,862,479.41	0	165,036,249.57	
2001	1,050,989.88	6,747,238.34	0	163,985,259.69	
2002	0	6,692,797.06	0	163,985,259.69	
2003	1,477,731.92	6,692,797.06	0	162,507,527.77	
2004	2,044,346.92	6,612,408.45	0	160,463,180.85	
2005	3,488,405.72	6,500,173.80	0	156,974,775.13	
2006	4,312,749.60	6,305,171.92	0	152,662,025.53	
2007	5,183,070.24	6,061,932.84	0	147,478,955.29	
2008	6,094,187.16	5,767,016.15	0	141,384,768.13	
2009	7,103,085.64	5,417,209.80	0	134,281,682.49	
2010	9,203,770.28	5,005,941.15	0	125,077,912.21	
2011	10,388,805.08	4,468,440.96	0	114,689,107.13	
2012	5,097,583.51	10,407,913.67	0	109,591,523.62	
2013	5,012,798.05	11,140,259.13	0	104,578,725.57	
2014	4,727,321.30	11,591,511.24	0	99,851,404.27	
2015	4,622,237.80	12,344,802.31	0	95,229,166.47	
2016	4,455,669.93	12,991,859.70	0	90,773,496.54	
2017	4,161,289.10	13,286,240.52	0	86,612,207.44	
2018	3,892,051.60	13,555,478.02	0	82,720,155.84	
2019	3,632,463.70	13,815,065.92	0	79,087,692.14	
2020	3,395,708.67	14,051,820.95	0	75,691,983.47	
2021	3,180,699.22	14,266,830.40	0	72,511,284.25	
2022	2,972,621.18	14,474,908.45	0	69,538,663.07	
2023	2,777,590.48	14,669,939.14	0	66,761,072.59	
2024	2,588,539.82	14,858,989.80	0	64,172,532.77	
2025	2,429,797.06	15,017,732.56	0	61,742,735.71	
2026	3,973,908.11	13,473,621.52	0	57,768,827.60	
2027	13,873,973.00	3,726,600.95	0	43,894,854.60	
2028	14,754,654.60	2,845,603.67	0	29,140,200.00	
2029	29,140,200.00	954,341.55	0	0	

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION V – CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Table V- 9a provides the receipts and disbursements of assets *excluding* the Bond issue assets and excluding the PAF.

Table V-9a Receipts and Disbursements Excluding Bond Issue Assets				
	Municipal	Police	Fire	Total
Assets as of July 1, 2023	\$ 4,083,824,627	\$ 2,685,446,320	\$ 818,064,809	\$ 7,587,335,755
Receipts				
Employer Contributions	\$ 537,203,212	\$ 264,347,111	\$ 103,945,898	\$ 905,496,221
Employee Contributions	73,062,085	35,128,349	19,164,952	127,355,386
State Aid	55,405,113	28,049,685	10,798,272	94,253,070
Supplemental State Assistance	0	0	0	0
Investment Income				
(includes investment expenses)	346,747,070	225,896,141	69,844,615	642,487,826
Other Receipts	0	0	0	0
Total Receipts	\$ 1,012,417,480	\$ 553,421,286	\$ 203,753,737	\$ 1,769,592,503
Disbursements				
Benefit Payments	\$ 547,919,404	\$ 301,246,609	\$ 102,120,586	\$ 951,286,599
Refund of Contributions	7,462,508	7,279,807	761,879	15,504,194
Administrative Expenses	6,779,309	2,356,665	896,842	10,032,817
PAF Transfer at Year End	0	0	0	0
Other Disbursements	0	0	0	0
Total Disbursements	\$ 562,161,221	\$ 310,883,081	\$ 103,779,307	\$ 976,823,610
Assets as of July 1, 2024	\$ 4,534,080,885	\$ 2,927,984,524	\$ 918,039,239	\$ 8,380,104,648

Note: Numbers may not add due to rounding.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION V – CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Table IV- 9b provides the market value of assets *including* the Bond issue assets and excluding the PAF.

Table V-9b Receipts and Disbursements Including Bond Issue Assets				
	Municipal	Police	Fire	Total
Assets as of July 1, 2023	\$ 4,204,328,359	\$ 2,714,682,789	\$ 881,856,346	\$ 7,800,867,495
Receipts				
Employer Contributions	\$ 510,881,048	\$ 248,057,226	\$ 95,494,454	\$ 854,432,728
Employee Contributions	73,062,085	35,128,349	19,164,952	127,355,386
State Aid	55,405,113	28,049,685	10,798,272	94,253,070
Supplemental State Assistance	0	0	0	0
Investment Income (includes investment expenses)	356,744,810	226,298,415	75,311,724	658,354,949
Other Receipts	0	0	0	0
Total Receipts	\$ 996,093,056	\$ 537,533,675	\$ 200,769,402	\$ 1,734,396,133
Disbursements				
Benefit Payments	\$ 547,919,404	\$ 301,246,609	\$ 102,120,586	\$ 951,286,599
Refund of Contributions	7,462,508	7,279,807	761,879	15,504,194
Administrative Expenses	6,779,309	2,356,665	896,842	10,032,817
PAF Transfer at Year End	0	0	0	0
Other Disbursements	0	0	0	0
Total Disbursements	\$ 562,161,221	\$ 310,883,081	\$ 103,779,307	\$ 976,823,610
Assets as of July 1, 2024	\$ 4,638,260,194	\$ 2,941,333,382	\$ 978,846,441	\$ 8,558,440,017

Note: Numbers may not add due to rounding.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION V – CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Table V – 10 and Table V – 11 provide information on the City’s Funding Policy for FYE 2025 and FYE 2026. The differences between the MMO and the City’s Funding Policy are:

- The City’s Funding Policy amortized the initial July 1, 1985 unfunded actuarial liability over 34 years which has since expired in 2019. Chapter 10 under Act 44 allowed for the amortization of the entire unfunded actuarial liability as of July 1, 2009 to be “fresh started” over a 30-year period for MMO purposes.
- The normal cost portion of the City’s Funding Policy payment is based on actual fiscal year payroll, whereas the MMO is based on the prior year’s estimated payroll for that year.
- Interest does not accumulate on the MMO, as long as the payment is made by the end of the fiscal year. This has the impact of creating systematic losses each year which get offset by assumed interest on contributions received before year-end.
- Both the City’s Funding Policy and the MMO utilize valuation results developed in the previous year (e.g., the July 1, 2024 valuation report will determine FYE 2026 contribution amounts). However, no interest is added to the MMO for this one-year lag. For the Funding Policy, interest is added to the amortized amount to reflect this one-year lag.
- The MMO reflects amortization of prior years’ City contributions above past MMOs as actuarial gains.

Starting with FYE 2007-2008, the MMO recognized actuarial gains and losses every other year, in order to coincide with the filing of the Act 205 forms. Beginning for FYE 2012, gains and losses are recognized annually. The City’s Funding Policy recognizes actuarial gains and losses on an annual basis.

Table V – 10 develops the amortized amounts for the current year under the City’s Funding Policy. For additional details on the amortized amounts by plan, refer to Appendix B.

Table V – 11 provides the estimated FYE 2026 and updated FYE 2025 contribution amount under the City’s Funding Policy. The estimated FYE 2026 contribution will be updated in next year’s actuarial valuation report based upon the July 1, 2025 payroll.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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SECTION V – CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Table V-10 Development of the Fiscal Year 2026 Amortization Payment under the City's Funding Policy					
	Total (\$ thousands)			FY 2026	FY 2026
	7/1/2024	7/1/2025	Remaining	Payment	Payment
	Outstanding	Expected	Years	Beginning-of-Year	End-of-Year
	Balance	Balance			
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation Remaining	\$ 4,458,793	\$ 4,078,720		\$ 657,563	\$ 705,565
2. Changes in UAL due to					
a. Actuarial Experience	\$ 30,305	\$ 32,518	20	\$ 2,928	\$ 3,141
b. Assumption Changes	61,438	65,923	15	6,874	7,376
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 91,743	\$ 98,441		\$ 9,802	\$ 10,517
3. Total [1c. + 2e.]	\$ 4,550,537	\$ 4,177,161		\$ 667,365	\$ 716,083

Table V-11 City's Funding Policy Contributions*				
Fiscal Year	2026	% of Pay	2025	% of Pay
Estimated FY Payroll	\$ 2,188,390		\$ 2,118,480	**
Normal Cost (with Expenses)	\$ 220,227	10.06%	\$ 215,257	10.16%
Employee Contributions	(128,828)	5.89%	(125,387)	5.92%
City Normal Cost	\$ 91,399	4.18%	\$ 89,870	4.24%
Amortization Payment	667,365	30.50%	658,661	31.09%
City's Funding Policy	\$ 758,764	34.67%	\$ 748,531	35.33%

* Assuming beginning-of-year payment.

** FY 2025 Payroll for the City's Funding Policy is the final payroll for the prior year. All other payroll is estimated based upon the prior year's data used for the actuarial valuation.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

The data for this valuation was provided by the Board of Pensions as of July 1, 2024. Cheiron did not audit any of the data. However, we did perform an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23. The following is a list of data charts contained in this section:

- A-1: Active Member Data by Plan
- A-2: Non-Active Member Data, Counts, by Plan
- A-3: Non-Active Member Data, Total Annual Benefits, by Plan
- A-4: Non-Active Member Data, Average Annual Benefits, by Plan
- A-5 through A-24: Age/Service Distribution for Active Participants, Counts and Average Salary for all Plans
- A-25: Reconciliation of Plan Membership
- A-26 through A-30: Age and Benefit Distributions for Non-Active Member Data

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX A – MEMBERSHIP INFORMATION

Table A-1 Active Member Data											
July 1, 2024				July 1, 2023	% Change	July 1, 2024		July 1, 2023	% Change		
<u>1967 Municipal</u>					<u>1987 Elected</u>						
Count	268		382	-29.8%	Count	23		21	9.5%		
Average Age	60.1		59.3	1.3%	Average Age	53.4		55.1	-3.1%		
Average Service	34.5		33.8	2.1%	Average Service	11.4		15.9	-28.2%		
Average Salary	\$	85,221	\$	81,994	3.9%	Average Salary	\$	171,160	\$	166,516	2.8%
Total Annual Salary	\$	22,839,113	\$	31,321,580	-27.1%	Total Annual Salary	\$	3,936,671	\$	3,496,843	12.6%
<u>1967 Police</u>					<u>1987 Police</u>						
Count	49		72	-31.9%	Count	4,715		4,709	0.1%		
Average Age	62.0		60.9	1.9%	Average Age	42.5		42.6	-0.3%		
Average Service	36.6		35.9	2.1%	Average Service	16.2		16.4	-1.4%		
Average Salary	\$	124,005	\$	111,044	11.7%	Average Salary	\$	97,669	\$	95,413	2.4%
Total Annual Salary	\$	6,076,241	\$	7,995,132	-24.0%	Total Annual Salary	\$	460,511,428	\$	449,298,740	2.5%
<u>1967 Fire</u>					<u>1987 Fire</u>						
Count	18		27	-33.3%	Count	2,515		2,494	0.8%		
Average Age	64.4		63.4	1.7%	Average Age	42.4		42.3	0.3%		
Average Service	38.7		37.5	3.2%	Average Service	13.3		13.2	1.0%		
Average Salary	\$	112,767	\$	112,364	0.4%	Average Salary	\$	91,702	\$	88,671	3.4%
Total Annual Salary	\$	2,029,798	\$	3,033,827	-33.1%	Total Annual Salary	\$	230,630,976	\$	221,144,694	4.3%
<u>1987 Municipal</u>					<u>2010 Municipal</u>						
Count	9,978		10,761	-7.3%	Count	802		856	-6.3%		
Average Age	49.4		48.8	1.1%	Average Age	44.6		43.7	2.1%		
Average Service	16.2		15.3	5.8%	Average Service	7.9		7.0	13.9%		
Average Salary	\$	80,561	\$	75,365	6.9%	Average Salary	\$	74,266	\$	70,162	5.8%
Total Annual Salary	\$	803,842,025	\$	811,007,995	-0.9%	Total Annual Salary	\$	59,561,223	\$	60,058,892	-0.8%

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

Table A-1							
Active Member Data (continued)							
	July 1, 2024	July 1, 2023	% Change		July 1, 2024	July 1, 2023	% Change
<u>2016 Municipal</u>				<u>Total City</u>			
Count	9,111	7,324	24.4%	Count	27,479	26,646	3.1%
Average Age	39.4	39.2	0.5%	Average Age	44.2	44.5	-0.6%
Average Service	2.7	2.5	8.3%	Average Service	11.5	11.9	-3.5%
Average Salary	\$ 58,068	\$ 55,387	4.8%	Average Salary	\$ 77,095	\$ 74,796	3.1%
Total Annual Salary	\$ 529,053,009	\$ 405,656,634	30.4%	Total Annual Salary	\$ 2,118,480,484	\$ 1,993,014,337	6.3%

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX A – MEMBERSHIP INFORMATION

Table A-2 Non-Active Member Data Count							
	July 1, 2024	July 1, 2023	% Change		July 1, 2024	July 1, 2023	% Change
<u>Total City</u>				<u>1987 Municipal Plan</u>			
Retired	22,515	22,409	0.5%	Retired	4,772	4,402	8.4%
Disabled	3,730	3,758	-0.7%	Disabled	866	816	6.1%
Beneficiary	8,615	8,565	0.6%	Beneficiary	800	732	9.3%
In Pay Status Total	34,860	34,732	0.4%	In Pay Status Total	6,438	5,950	8.2%
DROP	2,102	2,210	-4.9%	DROP	766	765	0.1%
Deferred Vested	665	781	-14.9%	Deferred Vested	569	622	-8.5%
<u>1967 Municipal Plan</u>				<u>1987 Elected Plan</u>			
Retired	10,489	10,770	-2.6%	Retired	23	22	4.5%
Disabled	1,004	1,064	-5.6%	Disabled	0	0	0.0%
Beneficiary	4,348	4,425	-1.7%	Beneficiary	6	6	0.0%
In Pay Status Total	15,841	16,259	-2.6%	In Pay Status Total	29	28	3.6%
DROP	351	406	-13.5%	DROP	1	0	0.0%
Deferred Vested	75	111	-32.4%	Deferred Vested	0	0	0.0%
<u>1967 Police Plan</u>				<u>1987 Police Plan</u>			
Retired	4,129	4,267	-3.2%	Retired	1,252	1,055	18.7%
Disabled	872	930	-6.2%	Disabled	683	639	6.9%
Beneficiary	2,265	2,271	-0.3%	Beneficiary	277	251	10.4%
In Pay Status Total	7,266	7,468	-2.7%	In Pay Status Total	2,212	1,945	13.7%
DROP	87	111	-21.6%	DROP	713	770	-7.4%
Deferred Vested	0	0	0.0%	Deferred Vested	20	45	-55.6%
<u>1967 Fire Plan</u>				<u>1987 Fire Plan</u>			
Retired	1,529	1,608	-4.9%	Retired	318	284	12.0%
Disabled	184	197	-6.6%	Disabled	107	104	2.9%
Beneficiary	812	789	2.9%	Beneficiary	104	91	14.3%
In Pay Status Total	2,525	2,594	-2.7%	In Pay Status Total	529	479	10.4%
DROP	28	30	-6.7%	DROP	156	128	21.9%
Deferred Vested	0	0	0.0%	Deferred Vested	1	2	-50.0%
<u>2010 Municipal Plan</u>				<u>2016 Municipal Plan</u>			
Retired	0	0	0.0%	Retired	3	1	200.0%
Disabled	0	0	0.0%	Disabled	14	8	75.0%
Beneficiary	0	0	0.0%	Beneficiary	3	0	0.0%
In Pay Status Total	0	0	0.0%	In Pay Status Total	20	9	122.2%
Deferred Vested	0	0	0.0%	Deferred Vested	0	1	-100.0%

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX A – MEMBERSHIP INFORMATION

Table A-3 Non-Active Member Data Total Annual Benefit								
	July 1, 2024	July 1, 2023	% Change		July 1, 2024	July 1, 2023	% Change	
<u>Total City</u>				<u>1987 Municipal Plan</u>				
Retired	\$ 673,401,400	\$ 655,672,819	2.7%	Retired	\$ 86,242,638	\$ 76,287,736	13.0%	
Disabled	99,576,761	96,689,706	3.0%	Disabled	20,077,498	18,124,721	10.8%	
Beneficiary	99,396,764	95,766,016	3.8%	Beneficiary	8,067,863	7,099,282	13.6%	
In Pay Status Total	\$ 872,374,925	\$ 848,128,541	2.9%	In Pay Status Total	\$ 114,387,999	\$ 101,511,739	12.7%	
DROP (pension)	\$ 100,282,177	\$ 103,724,072	-3.3%	DROP (pension)	\$ 20,901,806	\$ 19,938,815	4.8%	
DROP (account balance)	210,398,035	193,248,671	8.9%	DROP (account balance)	33,493,601	30,663,336	9.2%	
Deferred Vested	\$ 8,781,220	\$ 10,648,452	-17.5%	Deferred Vested	\$ 7,425,306	\$ 8,241,524	-9.9%	
<u>1967 Municipal Plan</u>				<u>1987 Elected Plan</u>				
Retired	\$ 322,888,622	\$ 323,867,284	-0.3%	Retired	\$ 2,067,980	\$ 1,660,731	24.5%	
Disabled	20,879,357	21,916,678	-4.7%	Disabled	0	0	0.0%	
Beneficiary	45,590,086	45,261,884	0.7%	Beneficiary	201,791	307,145	-34.3%	
In Pay Status Total	\$ 389,358,065	\$ 391,045,846	-0.4%	In Pay Status Total	\$ 2,269,771	\$ 1,967,876	15.3%	
DROP (pension)	\$ 20,607,588	\$ 22,678,021	-9.1%	DROP (pension)	\$ 100,872	\$ 0	0.0%	
DROP (account balance)	43,507,417	46,724,307	-6.9%	DROP (account balance)	0	0	0.0%	
Deferred Vested	\$ 1,026,733	\$ 1,626,628	-36.9%	Deferred Vested	\$ 0	\$ 0	0.0%	
<u>1967 Police Plan</u>				<u>1987 Police Plan</u>				
Retired	\$ 141,156,298	\$ 142,351,567	-0.8%	Retired	\$ 48,243,332	\$ 38,592,647	25.0%	
Disabled	18,218,169	19,160,384	-4.9%	Disabled	31,407,058	28,618,012	9.7%	
Beneficiary	26,271,243	25,707,870	2.2%	Beneficiary	5,671,902	4,809,390	17.9%	
In Pay Status Total	\$ 185,645,710	\$ 187,219,821	-0.8%	In Pay Status Total	\$ 85,322,292	\$ 72,020,049	18.5%	
DROP (pension)	\$ 7,573,546	\$ 9,728,095	-22.1%	DROP (pension)	\$ 39,009,197	\$ 41,095,856	-5.1%	
DROP (account balance)	23,954,804	26,398,195	-9.3%	DROP (account balance)	88,044,727	72,693,077	21.1%	
Deferred Vested	\$ 0	\$ 0	0.0%	Deferred Vested	\$ 316,393	\$ 705,363	-55.1%	
<u>1967 Fire Plan</u>				<u>1987 Fire Plan</u>				
Retired	\$ 61,273,057	\$ 63,170,574	-3.0%	Retired	\$ 11,477,829	\$ 9,732,411	17.9%	
Disabled	3,825,887	4,062,747	-5.8%	Disabled	4,759,959	4,585,424	3.8%	
Beneficiary	11,642,674	11,000,165	5.8%	Beneficiary	1,922,172	1,580,280	21.6%	
In Pay Status Total	\$ 76,741,618	\$ 78,233,486	-1.9%	In Pay Status Total	\$ 18,159,960	\$ 15,898,115	14.2%	
DROP (pension)	\$ 2,419,776	\$ 2,694,581	-10.2%	DROP (pension)	\$ 9,669,392	\$ 7,588,704	27.4%	
DROP (account balance)	5,368,361	5,222,836	2.8%	DROP (account balance)	16,029,124	11,546,920	38.8%	
Deferred Vested	\$ 0	\$ 0	0.0%	Deferred Vested	\$ 12,788	\$ 41,432	-69.1%	
<u>2010 Municipal Plan</u>				<u>2016 Municipal Plan</u>				
Retired	\$ 0	\$ 0	0.0%	Retired	\$ 51,644	\$ 9,869	423.3%	
Disabled	0	0	0.0%	Disabled	408,833	221,740	84.4%	
Beneficiary	0	0	0.0%	Beneficiary	29,033	0	0.0%	
In Pay Status Total	\$ 0	\$ 0	0.0%	In Pay Status Total	\$ 489,510	\$ 231,609	111.4%	
Deferred Vested	\$ 0	\$ 0	0.0%	Deferred Vested	\$ 0	\$ 33,505	-100.0%	

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APPENDIX A – MEMBERSHIP INFORMATION

Table A-4 Non-Active Member Data Average Annual Benefit								
	July 1, 2024	July 1, 2023	% Change		July 1, 2024	July 1, 2023	% Change	
Total City				1987 Municipal Plan				
Retired	\$ 29,909	\$ 29,259	2.2%	Retired	\$ 18,073	\$ 17,330	4.3%	
Disabled	26,696	25,729	3.8%	Disabled	23,184	22,212	4.4%	
Beneficiary	11,538	11,181	3.2%	Beneficiary	10,085	9,698	4.0%	
In Pay Status Total	\$ 25,025	\$ 24,419	2.5%	In Pay Status Total	\$ 17,768	\$ 17,061	4.1%	
DROP (pension)	\$ 47,708	\$ 46,934	1.6%	DROP (pension)	\$ 27,287	\$ 26,064	4.7%	
DROP (account balance)	100,094	87,443	14.5%	DROP (account balance)	43,725	40,083	9.1%	
Deferred Vested	\$ 13,205	\$ 13,634	-3.2%	Deferred Vested	\$ 13,050	\$ 13,250	-1.5%	
1967 Municipal Plan				1987 Elected Plan				
Retired	\$ 30,784	\$ 30,071	2.4%	Retired	\$ 89,912	\$ 75,488	19.1%	
Disabled	20,796	20,598	1.0%	Disabled	0	0	0.0%	
Beneficiary	10,485	10,229	2.5%	Beneficiary	33,632	51,191	-34.3%	
In Pay Status Total	\$ 24,579	\$ 24,051	2.2%	In Pay Status Total	\$ 78,268	\$ 70,281	11.4%	
DROP (pension)	\$ 58,711	\$ 55,857	5.1%	DROP (pension)	\$ 100,872	\$ 0	0.0%	
DROP (account balance)	123,953	115,084	7.7%	DROP (account balance)	0	0	0.0%	
Deferred Vested	\$ 13,690	\$ 14,654	-6.6%	Deferred Vested	\$ 0	\$ 0	0.0%	
1967 Police Plan				1987 Police Plan				
Retired	\$ 34,187	\$ 33,361	2.5%	Retired	\$ 38,533	\$ 36,581	5.3%	
Disabled	20,892	20,603	1.4%	Disabled	45,984	44,786	2.7%	
Beneficiary	11,599	11,320	2.5%	Beneficiary	20,476	19,161	6.9%	
In Pay Status Total	\$ 25,550	\$ 25,070	1.9%	In Pay Status Total	\$ 38,572	\$ 37,028	4.2%	
DROP (pension)	\$ 87,052	\$ 87,640	-0.7%	DROP (pension)	\$ 54,711	\$ 53,371	2.5%	
DROP (account balance)	275,343	237,822	15.8%	DROP (account balance)	123,485	94,407	30.8%	
Deferred Vested	\$ 0	\$ 0	0.0%	Deferred Vested	\$ 15,820	\$ 15,675	0.9%	
1967 Fire Plan				1987 Fire Plan				
Retired	\$ 40,074	\$ 39,285	2.0%	Retired	\$ 36,094	\$ 34,269	5.3%	
Disabled	20,793	20,623	0.8%	Disabled	44,486	44,091	0.9%	
Beneficiary	14,338	13,942	2.8%	Beneficiary	18,482	17,366	6.4%	
In Pay Status Total	\$ 30,393	\$ 30,159	0.8%	In Pay Status Total	\$ 34,329	\$ 33,190	3.4%	
DROP (pension)	\$ 86,421	\$ 89,819	-3.8%	DROP (pension)	\$ 61,983	\$ 59,287	4.5%	
DROP (account balance)	191,727	174,095	10.1%	DROP (account balance)	102,751	90,210	13.9%	
Deferred Vested	\$ 0	\$ 0	0.0%	Deferred Vested	\$ 12,788	\$ 20,716	-38.3%	
2010 Municipal Plan				2016 Municipal Plan				
Retired	\$ 0	\$ 0	0.0%	Retired	\$ 17,215	\$ 9,869	74.4%	
Disabled	0	0	0.0%	Disabled	29,202	27,718	5.4%	
Beneficiary	0	0	0.0%	Beneficiary	9,678	0	0.0%	
In Pay Status Total	\$ 0	\$ 0	0.0%	In Pay Status Total	\$ 24,476	\$ 25,734	-4.9%	
Deferred Vested	\$ 0	\$ 0	0.0%	Deferred Vested	\$ 0	\$ 33,505	-100.0%	

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX A – MEMBERSHIP INFORMATION

**Table A-5
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Total City**

COUNTS BY AGE/SERVICE

Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	Total
Under 25	374	311	15	0	0	0	0	0	700
25 to 29	628	1,187	350	12	0	0	0	0	2,177
30 to 34	527	1,212	1,587	276	11	0	0	0	3,613
35 to 39	374	905	1,338	915	442	9	0	0	3,983
40 to 44	263	617	834	674	1,006	332	6	0	3,732
45 to 49	210	462	610	453	774	799	326	7	3,641
50 to 54	179	383	540	364	537	697	921	144	3,765
55 to 59	132	322	447	299	454	493	661	426	3,234
60 to 64	67	210	332	186	227	190	245	259	1,716
65 & up	43	138	295	124	103	65	61	89	918
Total	2,797	5,747	6,348	3,303	3,554	2,585	2,220	925	27,479

**Table A-6
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Total City**

AVERAGE SALARY BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	\$ 50,048	\$ 52,350	\$ 58,909	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$	51,261
25 to 29	54,950	63,273	74,764	67,663	0	0	0	0		62,744
30 to 34	54,499	65,455	81,300	83,309	72,345	0	0	0		72,201
35 to 39	55,429	66,119	80,508	88,268	90,983	79,605	0	0		77,826
40 to 44	56,472	64,399	80,428	87,565	91,878	96,565	85,823	0		81,910
45 to 49	55,514	63,831	76,152	82,780	92,305	95,860	100,270	114,581		84,215
50 to 54	52,686	58,867	69,304	81,922	85,130	91,097	97,962	101,615		83,210
55 to 59	52,115	56,582	67,154	78,003	80,153	85,157	91,403	98,877		80,195
60 to 64	43,064	54,132	67,414	73,495	73,032	87,786	83,114	99,873		75,636
65 & up	37,170	52,637	61,140	73,405	67,691	71,719	78,264	89,986		65,815
Total	\$ 53,622	\$ 62,498	\$ 76,431	\$ 83,864	\$ 87,377	\$ 91,368	\$ 94,135	\$ 98,845	\$	77,095

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

**Table A-7
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Municipal (Plan 67)**

COUNTS BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	0
45 to 49	0	0	0	1	0	0	0	0	1
50 to 54	0	0	0	0	0	0	4	30	34
55 to 59	0	0	1	0	1	0	8	101	111
60 to 64	0	0	0	1	1	1	1	71	75
65 & up	0	0	2	0	0	0	3	42	47
Total	0	0	3	2	2	1	16	244	268

**Table A-8
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Municipal (Plan 67)**

AVERAGE SALARY BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	
25 to 29	0	0	0	0	0	0	0	0	0	
30 to 34	0	0	0	0	0	0	0	0	0	
35 to 39	0	0	0	0	0	0	0	0	0	
40 to 44	0	0	0	0	0	0	0	0	0	
45 to 49	0	0	0	73,104	0	0	0	0	73,104	
50 to 54	0	0	0	0	0	0	68,242	92,075	89,271	
55 to 59	0	0	48,988	0	123,644	0	102,554	89,877	90,727	
60 to 64	0	0	0	66,588	75,962	136,340	85,595	80,601	81,162	
65 & up	0	0	62,098	0	0	0	75,407	76,728	76,021	
Total	\$ 0	\$ 0	\$ 57,728	\$ 69,846	\$ 99,803	\$ 136,340	\$ 87,826	\$ 85,185	\$ 85,221	

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

**Table A-9
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Police (Plan 67)**

COUNTS BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	0
45 to 49	0	0	0	0	0	0	0	0	0
50 to 54	0	0	0	0	0	0	0	0	0
55 to 59	0	0	0	0	0	1	0	10	11
60 to 64	0	0	1	0	0	1	1	24	27
65 & up	0	0	0	0	0	0	0	11	11
Total	0	0	1	0	0	2	1	45	49

**Table A-10
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Police (Plan 67)**

AVERAGE SALARY BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	
25 to 29	0	0	0	0	0	0	0	0	0	
30 to 34	0	0	0	0	0	0	0	0	0	
35 to 39	0	0	0	0	0	0	0	0	0	
40 to 44	0	0	0	0	0	0	0	0	0	
45 to 49	0	0	0	0	0	0	0	0	0	
50 to 54	0	0	0	0	0	0	0	0	0	
55 to 59	0	0	0	0	0	96,144	0	107,464	106,435	
60 to 64	0	0	93,546	0	0	115,000	340,000	131,475	137,183	
65 & up	0	0	0	0	0	0	0	109,229	109,229	
Total	\$ 0	\$ 0	\$ 93,546	\$ 0	\$ 0	\$ 105,572	\$ 340,000	\$ 120,701	\$ 124,005	

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

**Table A-11
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Fire (Plan 67)**

COUNTS BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	0	0
45 to 49	0	0	0	0	0	0	0	0	0	0
50 to 54	0	0	0	0	0	0	0	0	0	0
55 to 59	0	0	0	0	0	0	1	1		2
60 to 64	0	0	0	0	0	0	0	8		8
65 & up	0	0	0	0	0	0	0	8		8
Total	0	0	0	0	0	0	1	17		18

**Table A-12
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Fire (Plan 67)**

AVERAGE SALARY BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
25 to 29	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	0	0	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0	0	0	0
45 to 49	0	0	0	0	0	0	0	0	0	0
50 to 54	0	0	0	0	0	0	0	0	0	0
55 to 59	0	0	0	0	0	0	92,997	91,800		92,398
60 to 64	0	0	0	0	0	0	0	113,067		113,067
65 & up	0	0	0	0	0	0	0	117,558		117,558
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 92,997	\$ 113,929		\$ 112,767

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

**Table A-13
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Municipal (Plan 87)**

COUNTS BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	0	2	6	0	0	0	0	0	8
25 to 29	0	7	71	10	0	0	0	0	88
30 to 34	4	14	367	173	10	0	0	0	568
35 to 39	0	23	418	568	182	9	0	0	1,200
40 to 44	3	22	321	460	489	125	5	0	1,425
45 to 49	1	10	247	374	475	380	82	6	1,575
50 to 54	4	18	201	330	379	441	402	45	1,820
55 to 59	1	15	195	288	386	388	422	120	1,815
60 to 64	1	7	146	178	221	165	183	77	978
65 & up	0	6	150	124	101	59	46	15	501
Total	14	124	2,122	2,505	2,243	1,567	1,140	263	9,978

**Table A-14
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Municipal (Plan 87)**

AVERAGE SALARY BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	\$ 0	\$ 40,243	\$ 58,912	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 54,245	
25 to 29	0	60,550	63,878	63,204	0	0	0	0	63,536	
30 to 34	53,442	59,482	76,460	75,735	69,772	0	0	0	75,541	
35 to 39	0	73,040	80,858	83,275	78,070	79,605	0	0	81,420	
40 to 44	65,274	79,320	85,857	83,476	83,506	83,633	83,618	0	83,934	
45 to 49	40,504	46,113	79,947	80,501	88,063	88,136	87,109	118,302	84,781	
50 to 54	61,740	57,948	75,103	79,978	79,926	85,509	88,986	88,808	82,719	
55 to 59	41,058	46,663	71,641	77,035	77,417	81,038	84,521	84,713	79,370	
60 to 64	165,000	53,884	71,404	72,719	72,564	85,456	75,674	93,541	76,788	
65 & up	0	75,652	63,444	73,405	67,105	68,923	72,549	74,098	68,594	
Total	\$ 64,508	\$ 62,881	\$ 76,844	\$ 79,907	\$ 80,499	\$ 84,225	\$ 84,374	\$ 88,159	\$ 80,561	

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

**Table A-15
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Elected (Plan 87)**

COUNTS BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0
35 to 39	1	1	1	1	0	0	0	0	4
40 to 44	0	0	1	0	1	0	0	0	2
45 to 49	0	0	1	0	0	0	0	0	1
50 to 54	0	2	1	2	0	0	1	0	6
55 to 59	0	0	1	2	0	0	0	0	3
60 to 64	0	1	1	1	0	0	0	0	3
65 & up	0	2	0	0	0	0	0	2	4
Total	1	6	6	6	1	0	1	2	23

**Table A-16
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Elected (Plan 87)**

AVERAGE SALARY BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	
25 to 29	0	0	0	0	0	0	0	0	0	
30 to 34	0	0	0	0	0	0	0	0	0	
35 to 39	163,459	160,190	160,190	160,190	0	0	0	0	161,007	
40 to 44	0	0	168,364	0	171,632	0	0	0	169,998	
45 to 49	0	0	171,632	0	0	0	0	0	171,632	
50 to 54	0	164,277	269,708	180,623	0	0	165,033	0	187,423	
55 to 59	0	0	160,190	161,825	0	0	0	0	161,280	
60 to 64	0	160,190	211,495	160,190	0	0	0	0	177,292	
65 & up	0	160,190	0	0	0	0	0	160,190	160,190	
Total	\$ 163,459	\$ 161,552	\$ 190,263	\$ 167,546	\$ 171,632	\$ 0	\$ 165,033	\$ 160,190	\$ 171,160	

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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**Table A-17
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Police (Plan 87)**

COUNTS BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	70	31	0	0	0	0	0	0	101
25 to 29	67	190	108	0	0	0	0	0	365
30 to 34	39	94	520	70	0	0	0	0	723
35 to 39	21	36	219	208	211	0	0	0	695
40 to 44	13	11	75	103	345	178	1	0	726
45 to 49	6	11	42	36	177	323	228	0	823
50 to 54	2	3	16	16	93	159	399	63	751
55 to 59	2	2	5	4	30	58	153	153	407
60 to 64	1	0	0	1	0	15	34	55	106
65 & up	0	0	1	0	0	2	8	7	18
Total	221	378	986	438	856	735	823	278	4,715

**Table A-18
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Police (Plan 87)**

AVERAGE SALARY BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	\$ 64,275	\$ 75,293	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 67,657
25 to 29	64,806	83,613	94,707	0	0	0	0	0	83,443
30 to 34	65,926	84,728	94,663	97,718	0	0	0	0	92,117
35 to 39	68,897	81,791	95,055	98,788	100,571	0	0	0	96,369
40 to 44	66,294	77,061	95,398	98,653	100,622	105,110	96,849	0	99,926
45 to 49	67,190	81,855	95,327	96,067	100,160	103,025	104,790	0	101,657
50 to 54	64,570	77,441	93,332	97,949	99,923	101,039	104,284	113,505	103,249
55 to 59	64,570	87,811	96,341	97,589	95,759	100,687	102,511	112,596	105,162
60 to 64	61,888	0	0	95,209	0	102,889	100,121	112,290	106,420
65 & up	0	0	93,998	0	0	96,302	103,005	100,223	100,678
Total	\$ 65,359	\$ 82,766	\$ 94,825	\$ 98,312	\$ 100,267	\$ 102,895	\$ 103,901	\$ 112,430	\$ 97,669

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

**Table A-19
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Fire (Plan 87)**

COUNTS BY AGE/SERVICE

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	10	17	1	0	0	0	0	0	28
25 to 29	27	79	30	2	0	0	0	0	138
30 to 34	28	124	212	31	1	0	0	0	396
35 to 39	15	72	241	132	48	0	0	0	508
40 to 44	7	27	120	109	170	29	0	0	462
45 to 49	1	14	58	42	122	96	16	1	350
50 to 54	1	7	28	15	65	96	115	6	333
55 to 59	0	2	10	3	37	46	77	41	216
60 to 64	0	0	4	2	5	8	26	24	69
65 & up	0	0	1	0	2	4	4	4	15
Total	89	342	705	336	450	279	238	76	2,515

**Table A-20
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Fire (Plan 87)**

AVERAGE SALARY BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	\$ 60,135	\$ 65,420	\$ 85,456	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 64,248	
25 to 29	59,674	71,857	89,026	89,956	0	0	0	0	73,468	
30 to 34	60,378	75,253	89,131	95,033	98,078	0	0	0	83,237	
35 to 39	57,970	76,032	89,625	93,561	98,750	0	0	0	88,649	
40 to 44	59,826	77,566	88,455	94,624	98,023	99,858	0	0	93,077	
45 to 49	51,576	73,539	88,670	91,917	97,425	102,326	103,305	92,256	95,825	
50 to 54	51,576	74,305	87,971	95,812	94,309	100,443	107,853	120,517	100,213	
55 to 59	0	66,183	87,328	94,271	94,872	100,088	105,873	109,383	102,035	
60 to 64	0	0	84,891	91,432	93,140	98,073	103,257	112,749	103,817	
65 & up	0	0	89,161	0	97,268	100,672	96,651	127,709	105,588	
Total	\$ 59,490	\$ 74,184	\$ 89,042	\$ 93,909	\$ 97,085	\$ 100,907	\$ 106,216	\$ 112,064	\$ 91,702	

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

Table A-21

Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Municipal (Plan 10)

COUNTS BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	0	0	0	0	0	0	0	0	0	
25 to 29	0	0	21	0	0	0	0	0	21	
30 to 34	0	4	153	1	0	0	0	0	158	
35 to 39	0	2	170	5	0	0	0	0	177	
40 to 44	0	2	103	1	0	0	0	0	106	
45 to 49	0	4	76	0	0	0	0	0	80	
50 to 54	0	2	77	1	0	1	0	0	81	
55 to 59	0	0	62	1	0	0	0	0	63	
60 to 64	0	0	62	3	0	0	0	0	65	
65 & up	0	1	50	0	0	0	0	0	51	
Total	0	15	774	12	0	1	0	0	802	

Table A-22

Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Municipal (Plan 10)

AVERAGE SALARY BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	
25 to 29	0	0	65,034	0	0	0	0	0	65,034	
30 to 34	0	76,352	73,170	57,935	0	0	0	0	73,154	
35 to 39	0	51,238	76,668	63,424	0	0	0	0	76,007	
40 to 44	0	81,778	77,865	51,660	0	0	0	0	77,692	
45 to 49	0	96,412	77,413	0	0	0	0	0	78,363	
50 to 54	0	133,129	74,467	61,473	0	77,512	0	0	75,793	
55 to 59	0	0	69,400	53,968	0	0	0	0	69,155	
60 to 64	0	0	69,177	73,750	0	0	0	0	69,388	
65 & up	0	56,788	72,333	0	0	0	0	0	72,028	
Total	\$ 0	\$ 85,342	\$ 74,212	\$ 63,617	\$ 0	\$ 77,512	\$ 0	\$ 0	\$ 74,266	

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

**Table A-23
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Municipal (Plan 16)**

COUNTS BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	294	261	8	0	0	0	0	0	563	
25 to 29	534	911	120	0	0	0	0	0	1,565	
30 to 34	456	976	335	1	0	0	0	0	1,768	
35 to 39	336	771	290	1	1	0	0	0	1,399	
40 to 44	240	555	214	1	1	0	0	0	1,011	
45 to 49	202	423	186	0	0	0	0	0	811	
50 to 54	172	351	217	0	0	0	0	0	740	
55 to 59	129	303	173	1	0	0	0	0	606	
60 to 64	65	202	118	0	0	0	0	0	385	
65 & up	43	129	91	0	0	0	0	0	263	
Total	2,471	4,882	1,752	4	2	0	0	0	9,111	

**Table A-24
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2024 -- Municipal (Plan 16)**

AVERAGE SALARY BY AGE/SERVICE

Age	Service									Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up		
Under 25	\$ 46,318	\$ 48,867	\$ 55,588	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 47,631	
25 to 29	53,474	58,308	61,393	0	0	0	0	0	56,895	
30 to 34	53,169	62,395	64,615	46,760	0	0	0	0	60,427	
35 to 39	53,705	64,171	63,847	89,494	45,334	0	0	0	61,595	
40 to 44	55,732	62,854	63,358	93,118	45,000	0	0	0	61,282	
45 to 49	55,261	63,151	61,852	0	0	0	0	0	60,888	
50 to 54	52,344	57,424	56,997	0	0	0	0	0	56,118	
55 to 59	52,007	56,804	58,850	85,998	0	0	0	0	56,415	
60 to 64	40,898	53,615	59,515	0	0	0	0	0	53,276	
65 & up	37,170	49,867	50,504	0	0	0	0	0	48,012	
Total	\$ 52,193	\$ 59,908	\$ 61,190	\$ 78,842	\$ 45,167	\$ 0	\$ 0	\$ 0	\$ 58,068	

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

Table A-25 Reconciliation of Plan Membership										
	1967 Plan			Plan 87				Plan '10	Plan '16	Total City
	Municipal	Police	Fire	Municipal	Elected	Police	Fire	Municipal	Municipal	
Active										
Active July 1, 2023	382	72	27	10,761	21	4,709	2,494	856	7,324	26,646
New Entrants and Rehires	2	2	0	96	7	314	124	6	2,850	3,401
Refunded Contributions	0	0	0	-64	0	-24	-4	-10	-149	-251
Non-Vested Terminations	0	0	0	-1	0	0	0	0	-5	-6
Terminated Vested	0	0	0	-3	0	0	0	0	0	-3
Became Disabled	-1	0	0	-40	0	-21	-2	0	0	-64
Retired	-46	-12	-6	-192	-3	-75	-17	0	-2	-353
Entered DROP	-66	-13	-2	-214	-1	-81	-50	0	0	-427
Net Other Terminations	-3	0	-1	-365	-1	-107	-30	-50	-907	-1,464
Active July 1, 2024	268	49	18	9,978	23	4,715	2,515	802	9,111	27,479
Retired										
Retired July 1, 2023	10,770	4,267	1,608	4,402	22	1,055	284	0	1	22,409
New Retirees	182	49	13	474	4	214	41	0	2	979
Died with Beneficiary Payable	-103	-91	-41	-20	-1	-3	-3	0	0	-262
Died without Beneficiary Payable	-356	-92	-51	-77	-2	-7	-3	0	0	-588
Net Other Terminations	-4	-4	0	-7	0	-7	-1	0	0	-23
Retired July 1, 2024	10,489	4,129	1,529	4,772	23	1,252	318	0	3	22,515
Beneficiary										
Beneficiary July 1, 2023	4,425	2,271	789	732	6	251	91	0	0	8,565
New Beneficiaries	165	139	63	75	1	30	13	0	3	489
Deaths	-242	-141	-37	-7	-1	-3	0	0	0	-431
Net Other Terminations	0	-4	-3	0	0	-1	0	0	0	-8
Beneficiary July 1, 2024	4,348	2,265	812	800	6	277	104	0	3	8,615

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

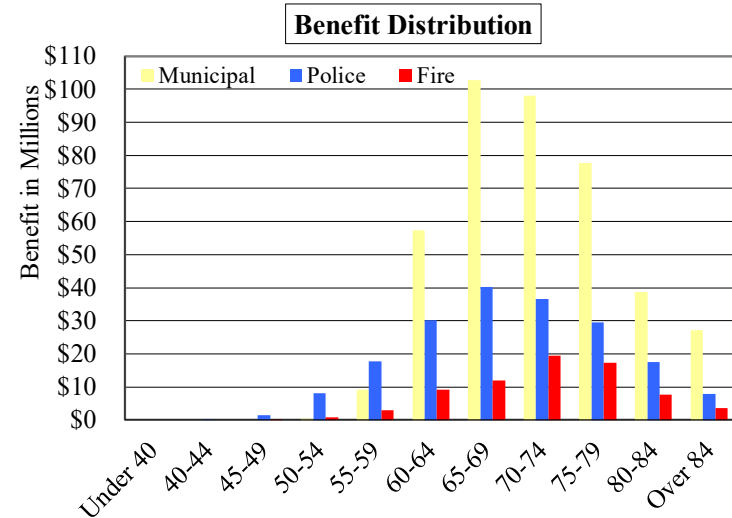
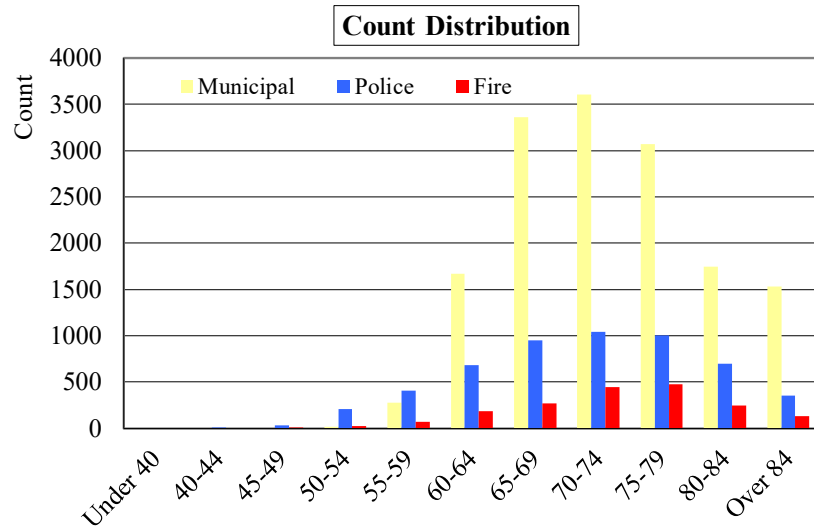
Table A-25 Reconciliation of Plan Membership (continued)										
	1967 Plan			Plan 87				Plan '10	Plan '16	Total City
	Municipal	Police	Fire	Municipal	Elected	Police	Fire	Municipal	Municipal	
Disabled										
Disabled July 1, 2023	1,064	930	197	816	0	639	104	0	8	3,758
New Disabilities	4	2	0	74	0	47	4	0	6	137
Died with Beneficiary Payable	-13	-17	-6	-7	0	0	0	0	0	-43
Died without Beneficiary Payable	-51	-43	-7	-17	0	-3	-1	0	0	-122
Net Other Terminations	0	0	0	0	0	0	0	0	0	0
Disabled July 1, 2024	1,004	872	184	866	0	683	107	0	14	3,730
Terminated Vested										
Terminated Vested July 1, 2023	111	0	0	622	0	45	2	0	1	781
New Vested Terminations	0	0	0	6	0	0	0	0	0	6
Retired	-10	0	0	-28	0	-9	0	0	0	-47
Net Other Terminations	-26	0	0	-31	0	-16	-1	0	-1	-75
Terminated Vested July 1, 2024	75	0	0	569	0	20	1	0	0	665
DROP										
DROP July 1, 2023	406	111	30	765	0	770	128	0	0	2,210
New DROP Participants	68	12	4	216	1	83	50	0	0	434
Retired	-121	-33	-6	-206	0	-122	-20	0	0	-508
Net Other Terminations	-2	-3	0	-9	0	-18	-2	0	0	-34
DROP July 1, 2024	351	87	28	766	1	713	156	0	0	2,102

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX A – MEMBERSHIP INFORMATION

**Table A-26
Age Distribution of Retired Members as of July 1, 2024**

Age	Municipal		Police		Fire	
	Count	Annual Pensions	Count	Annual Pensions	Count	Annual Pensions
Under 40	0	\$ 0	0	\$ 0	0	\$ 0
40-44	0	0	6	117,641	0	0
45-49	0	0	35	1,405,459	5	109,861
50-54	19	349,838	209	8,173,329	24	809,160
55-59	278	9,167,996	407	17,746,562	67	2,857,892
60-64	1,671	57,260,238	679	30,055,683	188	9,074,292
65-69	3,362	102,775,973	949	40,294,330	268	11,865,207
70-74	3,607	97,936,882	1,041	36,581,221	442	19,358,444
75-79	3,069	77,779,282	1,002	29,556,600	474	17,260,469
80-84	1,746	38,732,426	696	17,572,373	248	7,716,610
Over 84	1,535	27,248,249	357	7,896,432	131	3,698,951
Total	15,287	411,250,884	5,381	189,399,630	1,847	72,750,886

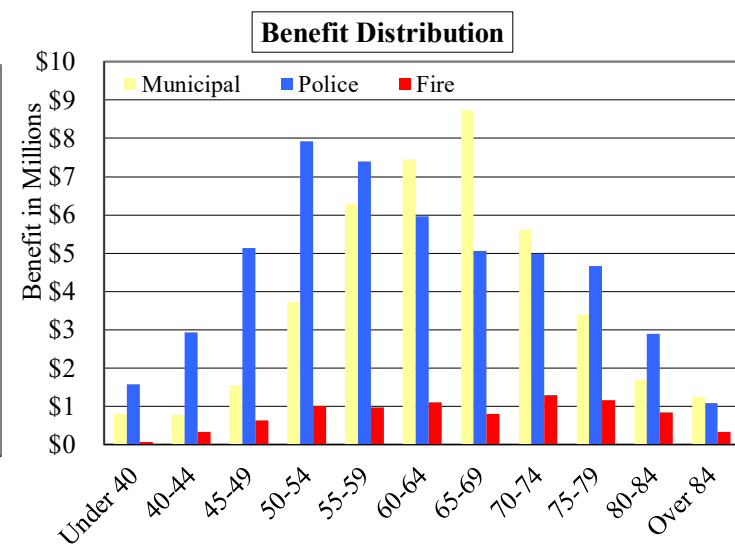
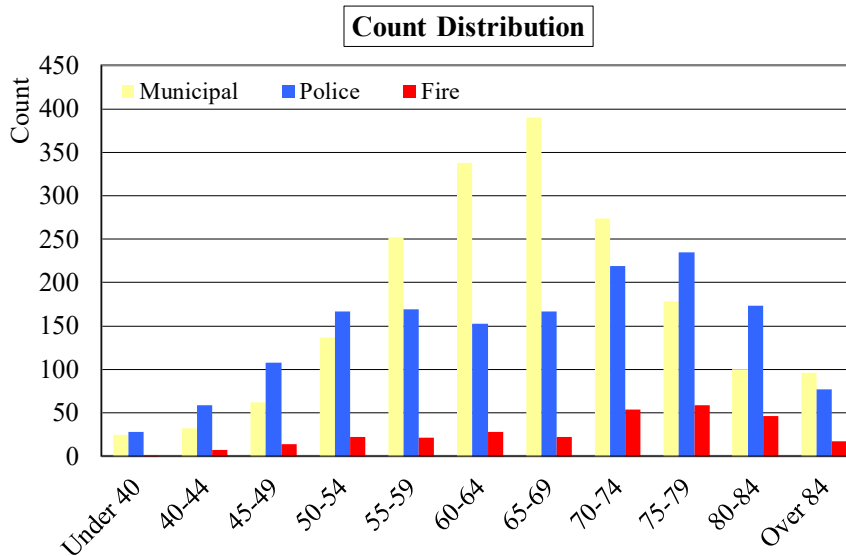


**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX A – MEMBERSHIP INFORMATION

**Table A-27
Age Distribution of Disabled Members as of July 1, 2024**

Age	Municipal		Police		Fire	
	Count	Annual Pensions	Count	Annual Pensions	Count	Annual Pensions
Under 40	25	\$ 803,248	28	\$ 1,581,840	1	\$ 66,030
40-44	32	796,100	59	2,929,846	7	327,110
45-49	62	1,559,024	108	5,142,092	14	630,679
50-54	137	3,721,688	167	7,915,293	22	1,012,512
55-59	252	6,306,626	169	7,393,129	21	984,010
60-64	338	7,459,306	153	5,956,938	28	1,110,914
65-69	390	8,726,922	167	5,059,171	22	808,432
70-74	274	5,618,563	219	4,986,851	54	1,302,182
75-79	178	3,409,892	235	4,671,570	59	1,156,737
80-84	100	1,714,083	173	2,892,051	46	845,102
Over 84	96	1,250,236	77	1,096,446	17	342,138
Total	1,884	41,365,688	1,555	49,625,227	291	8,585,846

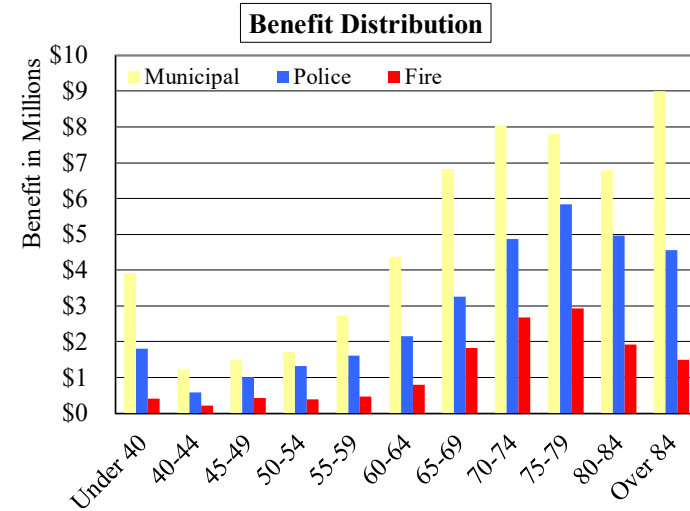
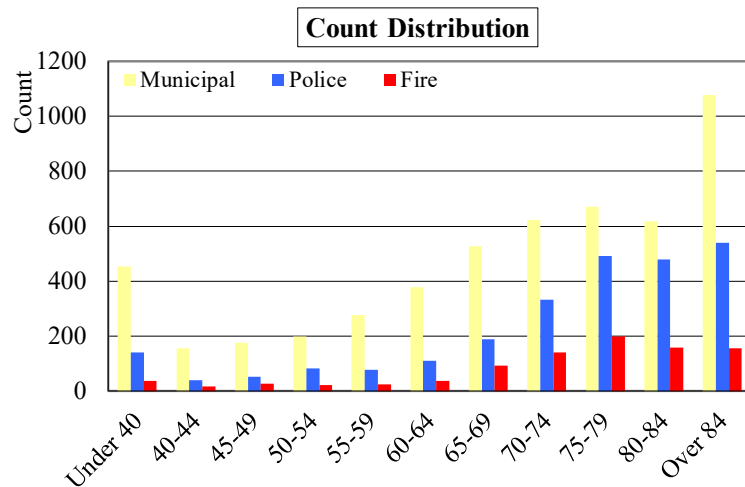


**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A – MEMBERSHIP INFORMATION

**Table A-28
Age Distribution of Beneficiaries as of July 1, 2024**

Age	Municipal		Police		Fire	
	Count	Annual Pensions	Count	Annual Pensions	Count	Annual Pensions
Under 40	455	\$ 3,913,177	141	\$ 1,799,122	37	\$ 417,105
40-44	157	1,229,379	40	576,432	17	222,967
45-49	176	1,484,118	54	1,002,960	28	422,035
50-54	199	1,706,433	84	1,323,029	22	387,230
55-59	276	2,734,470	79	1,616,311	25	467,117
60-64	378	4,357,306	111	2,154,826	38	800,786
65-69	528	6,833,844	190	3,258,323	93	1,829,027
70-74	623	8,036,156	332	4,864,178	142	2,667,061
75-79	671	7,797,936	492	5,845,102	200	2,930,505
80-84	617	6,794,039	479	4,955,106	158	1,926,916
Over 84	1,077	9,001,915	540	4,547,756	156	1,494,097
Total	5,157	53,888,773	2,542	31,943,145	916	13,564,846

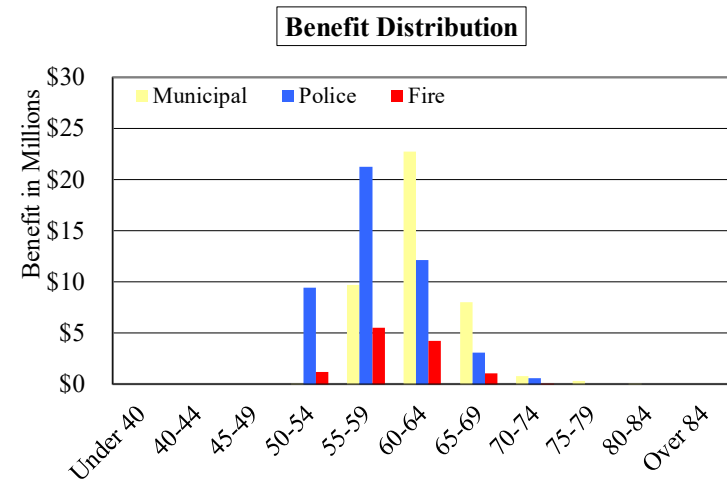
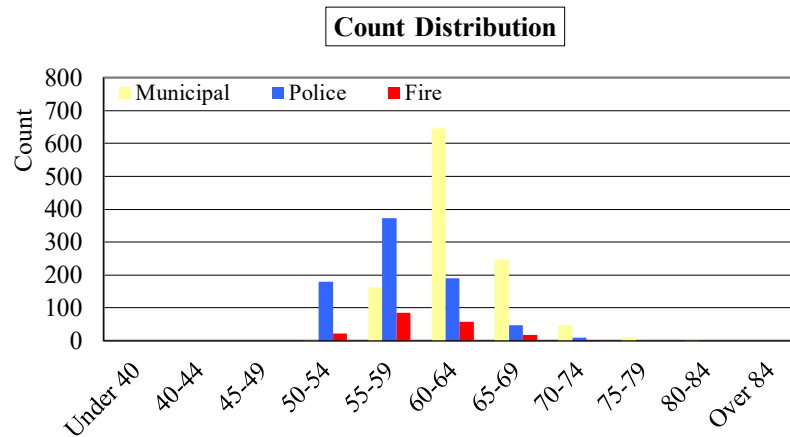


**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX A – MEMBERSHIP INFORMATION

**Table A-29
Age Distribution of DROP Participants as of July 1, 2024**

Age	Municipal		Police		Fire	
	Count	Annual Pensions	Count	Annual Pensions	Count	Annual Pensions
Under 40	0	\$ 0	0	\$ 0	0	\$ 0
40-44	0	0	0	0	0	0
45-49	0	0	0	0	0	0
50-54	1	58,572	179	9,467,872	23	1,207,528
55-59	164	9,696,543	374	21,265,203	86	5,526,926
60-64	646	22,730,450	190	12,138,988	57	4,242,048
65-69	248	7,994,797	48	3,110,707	17	1,066,394
70-74	47	808,675	9	599,973	1	46,272
75-79	11	315,685	0	0	0	0
80-84	1	5,544	0	0	0	0
Over 84	0	0	0	0	0	0
Total	1,118	41,610,266	800	46,582,743	184	12,089,168

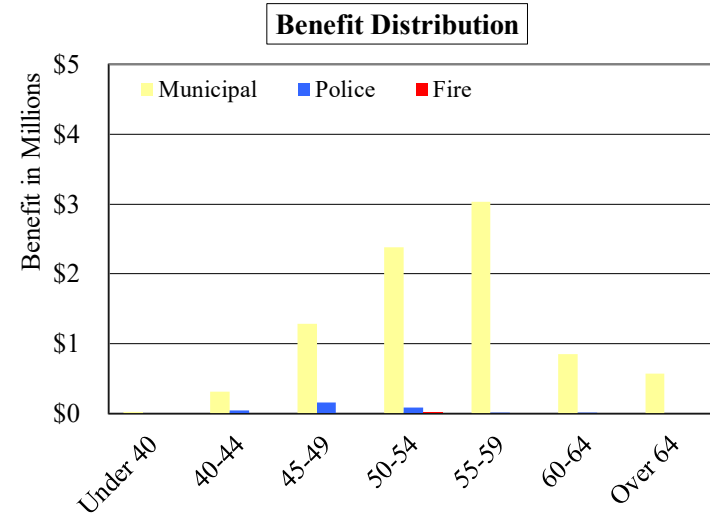
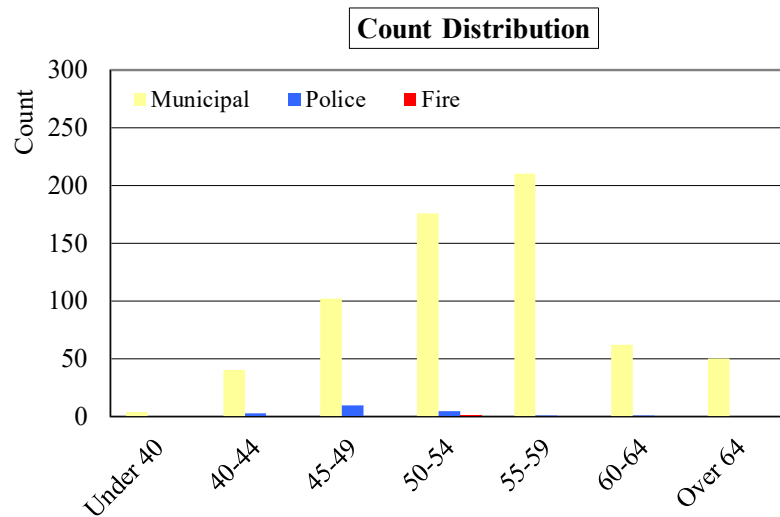


**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX A – MEMBERSHIP INFORMATION

**Table A-30
Age Distribution of Terminated Vested Members as of July 1, 2024**

Age	Municipal		Police		Fire	
	Count	Annual Pensions	Count	Annual Pensions	Count	Annual Pensions
Under 40	4	\$ 21,227	0	\$ 0	0	\$ 0
40-44	40	310,746	3	47,452	0	0
45-49	102	1,286,029	10	160,355	0	0
50-54	176	2,381,384	5	80,802	1	12,788
55-59	210	3,031,040	1	15,291	0	0
60-64	62	846,013	1	12,493	0	0
Over 64	50	575,600	0	0	0	0
Total	644	8,452,039	20	316,393	1	12,788



**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX B – SUPPORTING TABLES FOR CITY’S FUNDING POLICY

Appendix B provides supporting information on the amortization payments under the City’s Funding Policy by each plan.

Table B-1a Development of the Fiscal Year 2026 Amortization Payment under the City's Funding Policy 1967 Plan - Municipal (\$ thousands)					
	7/1/2024	7/1/2025	Remaining	FY 2026 Payment	FY 2026 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation					
a. Remaining	\$ 1,851,893	\$ 1,676,146		\$ 289,781	\$ 310,935
2. Changes in UAL due to					
a. Actuarial Experience	\$ (33,078)	\$ (35,493)	20	\$ (3,196)	\$ (3,429)
b. Assumption Changes	11,884	12,752	15	1,330	1,427
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ (21,194)	\$ (22,741)		\$ (1,866)	\$ (2,002)
3. Total [1c. + 2e.]	\$ 1,830,699	\$ 1,653,405		\$ 287,915	\$ 308,933

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX B – SUPPORTING TABLES FOR CITY’S FUNDING POLICY

Table B-1b Development of the Fiscal Year 2026 Amortization Payment under the City's Funding Policy 1967 Plan - Police (\$ thousands)					
	7/1/2024	7/1/2025	Remaining	FY 2026 Payment	FY 2026 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation					
a. Remaining	\$ 1,002,074	\$ 910,843		\$ 153,199	\$ 164,383
2. Changes in UAL due to					
a. Actuarial Experience	\$ (9,486)	\$ (10,179)	20	\$ (916)	\$ (983)
b. Assumption Changes	5,028	5,395	15	563	604
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ (4,459)	\$ (4,784)		\$ (354)	\$ (380)
3. Total [1c. + 2e.]	\$ 997,616	\$ 906,059		\$ 152,845	\$ 164,003

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX B – SUPPORTING TABLES FOR CITY’S FUNDING POLICY

Table B-1c Development of the Fiscal Year 2026 Amortization Payment under the City's Funding Policy 1967 Plan - Fire (\$ thousands)					
	7/1/2024	7/1/2025	Remaining	FY 2026 Payment	FY 2026 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation					
a. Remaining	\$ 417,641	\$ 379,051		\$ 64,378	\$ 69,078
2. Changes in UAL due to					
a. Actuarial Experience	\$ (7,769)	\$ (8,336)	20	\$ (750)	\$ (805)
b. Assumption Changes	1,879	2,016	15	210	226
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ (5,890)	\$ (6,319)		\$ (540)	\$ (580)
3. Total [1c. + 2e.]	\$ 411,752	\$ 372,732		\$ 63,838	\$ 68,498

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX B – SUPPORTING TABLES FOR CITY’S FUNDING POLICY

Table B-1d Development of the Fiscal Year 2026 Amortization Payment under the City's Funding Policy Plan 87 - Municipal (\$ thousands)					
	7/1/2024	7/1/2025	Remaining	FY 2026 Payment	FY 2026 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation					
a. Remaining	\$ 662,638	\$ 615,673		\$ 88,851	\$ 95,337
2. Changes in UAL due to					
a. Actuarial Experience	\$ 47,158	\$ 50,601	20	\$ 4,556	\$ 4,888
b. Assumption Changes	20,454	21,947	15	2,288	2,456
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 67,612	\$ 72,548		\$ 6,844	\$ 7,344
3. Total [1c. + 2e.]	\$ 730,250	\$ 688,221		\$ 95,695	\$ 102,681

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX B – SUPPORTING TABLES FOR CITY’S FUNDING POLICY

Table B-1e Development of the Fiscal Year 2026 Amortization Payment under the City's Funding Policy Plan 87 - Elected (\$ thousands)					
	7/1/2024	7/1/2025	Remaining	FY 2026 Payment	FY 2026 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation					
a. Remaining	\$ 6,263	\$ 5,441		\$ 1,192	\$ 1,279
2. Changes in UAL due to					
a. Actuarial Experience	\$ 2,299	\$ 2,467	20	\$ 222	\$ 238
b. Assumption Changes	131	141	15	15	16
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 2,431	\$ 2,608		\$ 237	\$ 254
3. Total [1c. + 2e.]	\$ 8,693	\$ 8,049		\$ 1,429	\$ 1,533

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX B – SUPPORTING TABLES FOR CITY’S FUNDING POLICY

Table B-1f Development of the Fiscal Year 2026 Amortization Payment under the City's Funding Policy Plan 87 - Police (\$ thousands)					
	7/1/2024 Outstanding Balance	7/1/2025 Expected Balance	Remaining Years	FY 2026 Payment Beginning-of-Year	FY 2026 Payment End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation					
a. Remaining	\$ 455,100	\$ 432,732		\$ 51,808	\$ 55,590
2. Changes in UAL due to					
a. Actuarial Experience	\$ 32,866	\$ 35,265	20	\$ 3,175	\$ 3,407
b. Assumption Changes	15,635	16,777	15	1,749	1,877
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 48,502	\$ 52,042		\$ 4,924	\$ 5,284
3. Total [1c. + 2e.]	\$ 503,601	\$ 484,774		\$ 56,732	\$ 60,874

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX B – SUPPORTING TABLES FOR CITY’S FUNDING POLICY

Table B-1g Development of the Fiscal Year 2026 Amortization Payment under the City's Funding Policy Plan 87 - Fire (\$ thousands)					
	7/1/2024	7/1/2025	Remaining	FY 2026 Payment	FY 2026 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation					
a. Remaining	\$ 74,720	\$ 70,207		\$ 9,289	\$ 9,967
2. Changes in UAL due to					
a. Actuarial Experience	\$ 13,676	\$ 14,674	20	\$ 1,321	\$ 1,418
b. Assumption Changes	5,232	5,614	15	585	628
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 18,908	\$ 20,288		\$ 1,907	\$ 2,046
3. Total [1c. + 2e.]	\$ 93,627	\$ 90,495		\$ 11,195	\$ 12,012

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX B – SUPPORTING TABLES FOR CITY’S FUNDING POLICY

Table B-1h Development of the Fiscal Year 2026 Amortization Payment under the City's Funding Policy Plan 10 - Municipal (\$ thousands)					
	7/1/2024	7/1/2025	Remaining	FY 2026 Payment	FY 2026 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation					
a. Remaining	\$ (3,749)	\$ (3,678)		\$ (322)	\$ (345)
2. Changes in UAL due to					
a. Actuarial Experience	\$ (1,515)	\$ (1,625)	20	\$ (146)	\$ (157)
b. Assumption Changes	238	255	15	27	29
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ (1,277)	\$ (1,370)		\$ (120)	\$ (128)
3. Total [1c. + 2e.]	\$ (5,026)	\$ (5,048)		\$ (442)	\$ (474)

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX B – SUPPORTING TABLES FOR CITY’S FUNDING POLICY

Table B-1i Development of the Fiscal Year 2026 Amortization Payment under the City's Funding Policy Plan 16 - Municipal (\$ thousands)					
	7/1/2024	7/1/2025	Remaining	FY 2026 Payment	FY 2026 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation					
a. Remaining	\$ (7,785)	\$ (7,696)		\$ (613)	\$ (657)
2. Changes in UAL due to					
a. Actuarial Experience	\$ (13,846)	\$ (14,857)	20	\$ (1,338)	\$ (1,435)
b. Assumption Changes	957	1,027	15	107	115
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ (12,889)	\$ (13,830)		\$ (1,231)	\$ (1,320)
3. Total [1c. + 2e.]	\$ (20,674)	\$ (21,526)		\$ (1,843)	\$ (1,978)

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX B – SUPPORTING TABLES FOR CITY’S FUNDING POLICY

Table B-1j Development of the Fiscal Year 2026 Amortization Payment under the City's Funding Policy Total - All Divisions (\$ thousands)					
	7/1/2024 Outstanding Balance	7/1/2025 Expected Balance	Remaining Years	FY 2026 Payment Beginning-of-Year	FY 2026 Payment End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2024 Based on July 1, 2023 Valuation					
a. Remaining	\$ 4,458,793	\$ 4,078,720		\$ 657,563	\$ 705,565
2. Changes in UAL due to					
a. Actuarial Experience	\$ 30,306	\$ 32,518	20	\$ 2,928	\$ 3,141
b. Assumption Changes	61,438	65,923	15	6,874	7,376
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 91,744	\$ 98,441		\$ 9,802	\$ 10,517
3. Total [1c. + 2e.]	\$ 4,550,537	\$ 4,177,161		\$ 667,365	\$ 716,083

APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Data Assumptions and Practices

In preparing our data, we relied on information supplied by the City of Philadelphia Municipal Retirement System staff. The data was reviewed to ensure that it complies with generally accepted actuarial standards. This information includes, but is not limited to, plan provisions, employee data, and financial information. Our methodology for obtaining the data used for the valuation is based upon the following assumptions and practices:

- We exclude raw active records with dates of hire after the valuation date or dates of termination prior to the valuation date.
- We include terminated vested records in the valuation data, regardless of whether they have enough service for vesting.
- We exclude terminated vested and retired records with values of zero in the benefit field.
- If a participant is found in multiple data files (e.g., both the active and retired data files), based on a match of both employee number and Social Security Number, we identify the record with the most recent status change and keep only that record.
- If a participant is found multiple times in the same data file, based on a match of both employee number and Social Security Number, we keep the record that generates the highest liability in our valuation system, except where one of the records is in the recorded death file in which case we check for a survivor record or delete the record.
- The date of retirement for a terminated vested participant was set to the valuation date, if the given date was earlier.
- If the payment form field for pensioners is missing, we assume that 1967 Plan members receive a 50% J&S annuity with a return of contributions in excess of payments received upon death of the member, and we assume that Plan 87 members receive a life annuity, also with a return of contributions. However, if the pensioner is a beneficiary or survivor, we assume that they receive a life annuity only.
- Records with missing dates of birth have their data filled in based on the average for their plan.
- We assumed that all changes in participant data from last year to this year were valid unless indicated otherwise by System staff.
- DROP participants are assumed to begin payments immediately.
- For Municipal Plan 1967 participants, pay was assumed to be below the Social Security Taxable Wage Base for purposes of determining the aggregate member contribution amount.
- We assumed that any participant who was active last year and missing from this year is now a terminated non-vested participant.
- We assumed that any participant who was inactive last year and missing from this year without a clear reason is now deceased.
- For Municipal Plan active participants, overtime pay used to calculate total valuation pay is based on a 3-year average from the current valuation and two preceding valuations.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. Investment Return Assumption

7.30% compounded annually, net of investment expenses effective as of July 1, 2024.
7.25% compounded annually, net of investment expenses effective as of July 1, 2025 and used in the actuarial projections.

2. Salary Increase Rate

Salary increases are based on Division and age, sample rates shown below.

Age	Municipal and Elected Officials	Uniformed
<20	20.00%	18.00%
20	18.00%	16.50%
25	10.00%	10.00%
30	7.00%	6.25%
35	5.75%	4.50%
40	4.50%	4.00%
45	4.25%	3.75%
50	4.00%	3.50%
55	3.75%	3.25%
60	3.50%	3.00%
65+	3.25%	2.75%

3. Total Annual Payroll Growth

3.30% per year.

4. Administrative Expenses

Annual expected expenses included in this report are \$10,363,900 and assumed to increase by 3.30% per year. This amount is included in the normal cost as an explicit assumption for purposes of determining the contribution amounts.

5. Funding of the Pension Adjustment Fund

To recognize the expense of the benefits payable under the Pension Adjustment Fund, the actuarial liabilities have been increased by 0.54%. This estimate is based on the statistical average expected value of the benefits.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

6. Rates of Termination

Termination rates are based on Division and age, sample rates shown below.

Age	Municipal and Elected Officials	Uniformed
20	0.2500	0.0400
25	0.1500	0.0360
30	0.1000	0.0260
35	0.0775	0.0160
40	0.0650	0.0200
45	0.0400	0.0200
50	0.0400	0.0200
55	0.0600	0.0000
60	0.1000	0.0000

We assume that a vested employee who terminates will elect a pension deferred to service retirement age as long as their age plus years of service at termination are greater than or equal to 55 (45 for police and fire employees in the 1967 Plan). Otherwise, we assume they elect a refund of member contributions.

7. Rates of Disability

Disability rates are based on Division and age and split between gender for Municipal and Elected Officials, sample rates shown below.

Age	Municipal and Elected Officials		Uniformed
	Male	Female	Unisex
20	0.000025	0.000025	0.000025
25	0.000062	0.000025	0.000500
30	0.000500	0.000400	0.001000
35	0.001000	0.000800	0.004000
40	0.001500	0.001300	0.005000
45	0.001900	0.002200	0.005200
50	0.004200	0.004900	0.004000
55	0.006700	0.007100	0.003000
60	0.001000	0.001000	0.001500

*For municipal and elected members, we assume that 65% of all disabilities are ordinary and 35% are service-connected. For police and fire members, we assume that 25% are ordinary and 75% are service-connected.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

8. Rates of Pre-Retirement Mortality

Municipal and Elected Officials: 109% and 126%, for males and females, respectively, of the Pub-2010(B) General Employee Below-Median Table projected from base year of 2010 to 2025 using mortality improvement scale MP-2021.

Uniformed: 118% and 122%, for males and females, respectively, of the Pub-2010(B) Safety Employee Below-Median Table projected from base year of 2010 to 2025 using mortality improvement scale MP-2021.

Experience studies are performed every four years as required by State law which require regular and detailed experience and analysis of the mortality trends such that improvements are addressed incrementally with assumption changes as a result of these studies. This mandatory process allows for periodic recognition of mortality improvements which are sufficient in addressing the potential trend. The most recent experience study was conducted for the period between July 1, 2016 and June 30, 2021.

Age	Municipal and Elected Officials		Uniformed	
	Male	Female	Male	Female
20	0.000459	0.000178	0.000546	0.000238
25	0.000526	0.000185	0.000694	0.000389
30	0.000800	0.000333	0.000916	0.000612
35	0.001143	0.000538	0.001128	0.000851
40	0.001455	0.000717	0.001280	0.000975
45	0.001727	0.000886	0.001425	0.001072
50	0.002246	0.001212	0.001774	0.001349
55	0.003276	0.001904	0.002582	0.001961
60	0.005101	0.003038	0.004159	0.002805
65	0.007369	0.004495	0.006375	0.003528

* For municipal and elected members, we assume that 98.5% of all deaths are ordinary, with 1.5% service-connected. For police and fire members, 92% are assumed to be ordinary and 8% service-connected.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

9. Rates of Post-Retirement Mortality

Municipal and Elected Officials: 109% and 126%, for males and females, respectively, of the Pub-2010(B) General Healthy Annuitant Below-Median Table projected from base year of 2010 to 2025 using mortality improvement scale MP-2021.

Uniformed: 118% and 122%, for males and females, respectively, of the Pub-2010(B) Safety Healthy Annuitant Below-Median Table projected from base year of 2010 to 2025 using mortality improvement scale MP-2021.

Age	Municipal and Elected Officials		Uniformed	
	Male	Female	Male	Female
50	0.007429	0.004756	0.003826	0.001754
55	0.009223	0.005700	0.005497	0.003241
60	0.011855	0.006803	0.008769	0.005895
65	0.014133	0.008222	0.013323	0.009439
70	0.020760	0.012908	0.021031	0.014947
75	0.033034	0.022428	0.034785	0.025666
80	0.056316	0.041032	0.060553	0.046061
85	0.098783	0.077590	0.106886	0.082580
90	0.163564	0.144523	0.182201	0.145491
95	0.239137	0.228763	0.265109	0.224738

10. Rates of Post-Disability Mortality

Municipal and Elected Officials: 108% and 105%, for males and females, respectively, of the Pub-2010 General Disabled Annuitant Table projected from base year of 2010 to 2025 using mortality improvement scale MP-2021.

Uniformed: 135% for males only of the Pub-2010 Safety Disabled Annuitant Table projected from base year of 2010 to 2025 using mortality improvement scale MP-2021.

Age	Municipal and Elected Officials		Uniformed	
	Male	Female	Male	Female
40	0.009685	0.007998	0.003266	0.001986
45	0.012050	0.010102	0.003620	0.002178
50	0.016386	0.013994	0.004505	0.002732
55	0.021442	0.017605	0.006086	0.004437
60	0.027148	0.020804	0.009965	0.007081
65	0.032589	0.022241	0.015872	0.009962
70	0.038468	0.025891	0.023506	0.013871
75	0.048862	0.036004	0.038126	0.020926
80	0.069412	0.056150	0.066101	0.035271

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION

APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

11. Rates of Retirement

Retirement rates are based on Division, age, and Plan. For the 1987, 2010, and 2016 Plans, rates are also split based on service eligibility for reduced and unreduced early retirement benefits.

Rates of Service Retirement - 1967 Plan		
Age	Municipal	Uniformed
45	0.00	0.10
46-52	0.00	0.05
53-54	0.00	0.10
55	0.30	0.15
56	0.20	0.17
57-58	0.30	0.20
59	0.20	0.20
60	0.20	0.25
61	0.20	0.30
62	0.25	0.30
63-64	0.20	0.30
65	0.30	0.30
66-68	0.20	0.30
69	0.30	0.30
70+	1.00	1.00

Rates of Service Retirement - 1987 Plan, 2010 Plan, and 2016 Plan				
Age	Municipal and Elected Officials		Uniformed	
	< 33 Years	33+ Years	< 25 Years	25+ Years
45-49	0.00	0.00	0.005	0.03
50	0.00	0.00	0.06	0.06
51	0.00	0.00	0.05	0.05
52-54	0.01	0.03	0.05	0.05
55	0.02	0.03	0.07	0.07
56-57	0.02	0.03	0.10	0.10
58-59	0.02	0.03	0.12	0.12
60	0.27	0.27	0.12	0.12
61	0.20	0.20	0.12	0.12
62	0.27	0.27	0.30	0.30
63	0.20	0.20	0.30	0.30
64-69	0.25	0.25	0.30	0.30
70+	1.00	1.00	1.00	1.00

Retirements under DROP are included in the rates above.

APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

12. Family Composition Assumptions

70% of active members and 40% of non-active members are assumed to be married for retirees with the 50% J&S with return on contribution form of payment only. Male spouses are assumed to be four-years older than female spouses.

13. Service-connected disability benefit

Service-connected disability benefits are increased by 2.9% to account for the periodic adjustment.

14. Low-Default Risk Obligation Measure (LDROM) Interest Rate

5.33%

15. Disclosures Regarding Models Used

Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies for the intended purpose of calculating liabilities and projected benefit payments. We have examined the reasonableness of the input data and assumptions, reviewed sample calculations for accuracy, reconciled the actuarial gain loss, and find the aggregate results reasonable and appropriate. We are not aware of any material inconsistencies, unreasonable output resulting from the aggregation of assumptions, material limitations or known weaknesses that would affect this actuarial valuation.

The deterministic and stochastic projections are based on our propriety model P-Scan developed by our firm that utilize the results shown in this valuation report. The model is also used to stress test the impact of volatile asset returns over the projection period. The projections assume continuation of the plan provisions and actuarial assumptions in effect as of the valuation date and do not reflect the impact of any changes in benefits or actuarial assumptions that may be adopted after the valuation date. While the assumptions individually are reasonable for the underlying valuation that supports the projections, specifically for projection purposes, they are also considered reasonable in the aggregate.

16. Rationale for Assumptions

The assumptions used in this report reflect the results of an Experience Study performed by Cheiron covering the five-year period from July 1, 2016 through June 30, 2021 and adopted by the Board. More details on the rationale for the demographic and economic assumptions can be found in the Experience Study Report dated April 25, 2022. In compliance with Act 205 Chapter 2, Section 2.01, an experience study is conducted every four years.

The investment return assumption was changed from 7.35% to 7.30% effective with the July 1, 2024 valuation based upon an analysis that included (a) capital market assumptions provided by the investment consultant, (b) the asset allocation of the fund, and (c) investment return assumptions of other public retirement systems.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

The LDROM discount rate of 5.33% is the single equivalent rate determined by matching System cashflows to the June 30, 2024 FTSE Pension Liability Yield Curve.

The combined effect of the assumptions in aggregate is expected to have no significant bias.

17. Changes in Actuarial Assumptions Since Last Valuation

- The interest rate assumption was decreased from 7.35% to 7.30%.
- The administrative expenses assumption was changed from \$9,232,613 to \$10,363,900 to better reflect actual experience.

APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Actuarial Funding Method

The Entry Age Normal actuarial funding method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund the retirement benefits between each member's date of hire and assumed retirement. The actuarial liability is the difference between the present value of future benefits and the present value of future normal cost. The unfunded actuarial liability is the difference between the actuarial liability and the actuarial value of assets.

2. Funding Methods

City's Funding Policy:

The initial July 1, 1985 UAL was amortized over 34 years ending June 30, 2019, with payments increasing at 3.3% per year, the assumed payroll growth. Other changes in the actuarial liability are amortized in level-dollar payments as follows:

- Actuarial gains and losses – 20 years beginning July 1, 2009. Prior to July 1, 2009, gains and losses were amortized over 15 years
- Assumption changes – 15 years beginning July 1, 2010. Prior to July 1, 2010, assumption changes were amortized over 20 years
- Plan changes for active members – 10 years
- Plan changes for inactive members – 1 year
- Plan changes mandated by the State – 20 years

If the System is 70% funded or more, then the amortization periods are the lesser of the average future service and the years outlined above. Tiered and additional Police Officer and Firefighter member contributions offset the City's portion of the normal cost.

MMO:

For the purposes of the MMO under Act 205 reflecting the fresh start amortization schedule, the July 1, 2009 UAL was "fresh started" to be amortized over 30 years ending June 30, 2039. This is a level dollar amortization of the UAL. All future amortization periods will follow the City's Funding Policy as outlined above.

Tier and additional Police Officer and Firefighter member contributions offset the City's portion of the normal cost in accordance with Act 205. Sales tax revenue is contributed in addition to the MMO resulting in gains under the funding method.

APPENDIX C – SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Revenue Recognition Policy:

This calculation is similar to the MMO except that the assets used to determine the unfunded liability do not include the accumulated value of sales tax revenue and tier and additional Police and Fire member contributions received by the System. These sources of income are contributed over and above the City's contribution under RRP. Therefore, under this funding method, the additional revenue amounts are separately tracked and accumulated in a notional account which is then subtracted from the assets before calculating the contribution amounts due under the MMO methodology. We accumulate these amounts in a notional account and deduct them from the Actuarial Asset Value before the RRP is determined. These amounts are accumulated using the market value of asset return.

Tier and additional Police Officer and Firefighter member contributions do not offset the City's portion of the normal cost.

3. Asset Valuation Method

The actuarial value of assets (AVA) is determined using an adjusted market value. Under this method, a preliminary AVA is determined as the market value of assets on the valuation date, minus the existing balance of the Pension Adjustment Fund (PAF) rolled forward at the current year's market rate of return, minus a decreasing fraction (9/10, 8/10, 7/10, etc.) of the investment gains or losses in each of the preceding nine years. Gains and losses prior to FYE June 30, 2008 were smoothed over a five-year period and have now all been fully recognized. The gain or loss for a given year is the difference between the actual investment return (on a market-to-market basis) and the assumed investment return based on the market value of assets at the beginning of the year and actual cash flow. The AVA is adjusted, if necessary, to remain between 80% and 120% of the market value net of the PAF. The final AVA is determined by subtracting the additional transfer amount (if any) to the PAF. The additional transfer amount to the PAF remains to be calculated based on the five-year smoothing method.

4. Changes in Actuarial Methods Since Last Valuation

None

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX D – SUMMARY OF PLAN PROVISIONS – 1967 PLAN

This summary of plan provisions provides an overview of the major provisions of the pension plans used in the actuarial valuation. It is not intended to replace the more precise language of the retirement code, and if there is any difference between the description of the plans herein and the actual text of the retirement code, the retirement code will govern.

1. Participation

Municipal (Plan J):

Full-time employees participate on their date of employment. Temporary employees participate after completing six months of employment. Participation is limited to employees hired before January 8, 1987. District Council 47 (Local 2186 or 2187) and 33 members hired between January 8, 1987 and October 1, 1992 were switched from Plan 87 to 1967 Plan effective on their hire dates, provided such employees contributed the difference between what they paid to the Plan and the amount they would have paid under Plan J.

Uniformed (Plans D and X):

Same as municipal.

2. Credited Service

Municipal (Plan J):

Credited service means the period of employment with the City during which the employee makes contributions to the Retirement System. Certain leaves of absence may also be credited.

Uniformed (Plans D and X):

Same as municipal.

3. Total Compensation

Municipal (Plan J):

Total compensation means the base rate of pay, longevity payments, and overtime received during a 12-month period.

Uniformed (Plans D and X):

Total compensation means the base rate of pay, longevity payments, and stress or premium pay (up to 6% of base pay) received during a 12-month period.

4. Final Compensation

Municipal (Plan J):

Final compensation means whichever is greater: annual base rate of pay at the time of termination or the total compensation received during the 12 months immediately preceding termination, including supplementary compensation received under Civil Service Regulation No. 32.

Uniformed (Plans D and X):

Same as municipal.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX D – SUMMARY OF PLAN PROVISIONS – 1967 PLAN

5. Average Final Compensation

Municipal (Plan J):

Average final compensation means the arithmetic average of the total compensation received during the three calendar or anniversary years that produce the highest average.

Uniformed (Plans D and X):

Average final compensation means the highest of:

- The total compensation received during the 12-month period; or
- The annual base rate of pay, excluding longevity payments, calculated from the final pay period; or
- The arithmetic average of the total compensation received during five calendar years of employment.

6. Employee Contributions

Municipal (Plan J):

Employees who participate in the Social Security System contribute 3¾% of total compensation up to the taxable wage base (\$147,000 in 2022, and \$160,200 in 2023) and 6% of total compensation above the taxable wage base to the Retirement System.

Each employee who does not participate in the Social Security System contributes 6% of his total compensation to the Retirement System.

All employees pay an additional 0.5% of compensation for the period between January 1, 2015 through December 31, 2015, and 1.0% of compensation January 1, 2016 onwards.

Effective January 1, 2019 current employees with annual salary (excluding overtime) in excess of \$45,000 will pay additional tier contributions on their total compensation over their base rates as follows: +0.50% for annual salary between \$45,000-\$55,000; +1.50% for annual salary between \$55,000-\$75,000; +2.00% for annual salary between \$75,000-\$100,000; and +2.75% for annual salary greater than 100,000.

Uniformed (Plans D and X):

6% of total compensation to the Retirement System.

7. Service Retirement

Eligibility

Municipal (Plan J):

Each municipal employee is eligible to retire and receive a service pension at age 55 with one year of service.

Uniformed (Plans D and X):

Each uniformed employee is eligible to retire and receive a service pension at age 45.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2024 ACTUARIAL VALUATION**

APPENDIX D – SUMMARY OF PLAN PROVISIONS – 1967 PLAN

Benefit Amount

Municipal (Plan J):

The service pension equals 2 1/2% of the employee's average final compensation multiplied by credited service to a maximum of 20 years plus 2% of the employee's average final compensation multiplied by credited service above 20, to a maximum of 80% of the employee's average final compensation.

Uniformed (Plans D and X):

The service pension equals 2 1/2% of the employee's average final compensation multiplied by credited service, subject to a maximum of 100% of average final compensation. A minimum of \$1,000 per month is provided for those who retired with 20 or more years of service.

8. Early Retirement

Eligibility

Municipal (Plan J):

Each municipal employee is eligible to retire and receive a reduced service pension at age 52 if he or she has 10 or more years of credited service.

Uniformed (Plans D and X):

Each uniformed employee is eligible to retire and receive a reduced service pension at age 40 if he or she has 10 or more years of credited service.

Benefit Amount

Municipal (Plan J):

The annual amount is calculated the same as service retirement, reduced by 1/2 of 1% for each month the employee is younger than minimum retirement age.

Uniformed (Plans D and X):

Same as municipal.

9. Deferred Vested Retirement

Eligibility

Municipal (Plan J):

A terminating employee who has completed 10 or more years of credited service is eligible for a deferred vested retirement benefit.

Uniformed (Plans D and X):

Same as municipal.

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Benefit Amount

Municipal (Plan J):

The annual deferred vested benefit is determined the same as service pensions, using average final compensation and credited service at termination. This benefit begins at service retirement date. If the member dies before the deferred vested benefit begins, an ordinary death benefit is payable (see Ordinary Death below). As an alternative before benefits begin, a plan member who is terminating employment may ask to have employee contributions returned (without interest) instead of receiving the deferred vested benefit.

Uniformed (Plans D and X):

Same as municipal.

10. Withdrawal Benefit

Municipal (Plan J):

Each employee terminating who has completed less than 10 years of credited service will receive a withdrawal benefit equal to his or her employee contributions (without interest).

Uniformed (Plans D and X):

Same as municipal.

11. Service-Connected Death

Eligibility

Municipal (Plan J):

The beneficiary of each active employee who dies solely from the performance of duties of the employee's position with the City is eligible for an immediate death benefit.

Uniformed (Plans D and X):

Same as municipal.

Benefit Amount

Municipal (Plan J):

The death benefit equals total employee contributions paid to the Retirement System, plus a yearly payment of 60% of the employee's final compensation reduced by any death benefits payable under the Worker's Compensation Act.

This benefit is payable to the spouse until his or her death. Dependent children are entitled to an additional yearly payment of 10% of final compensation for each dependent child (up to two children) until the child reaches age 18. If there is no spouse, or if the spouse dies or remarries, each dependent child (up to three children) is entitled to receive a yearly payment of 25% of final compensation until the child reaches age 18.

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If there are no spouse or dependent children, each dependent parent is entitled to receive a yearly payment of 15% of final compensation for life.

Uniformed (Plans D and X):

Same as municipal.

12. Ordinary Death

Eligibility

Municipal (Plan J):

The beneficiary of an active employee (or a terminated vested employee who did not withdraw employee contributions) who dies after completing 10 years of credited service or reaches age 55 is eligible for an immediate death benefit equal to a yearly pension or a lump sum payment. The beneficiary of an active employee who dies before completing 10 years of credited service and reaches age 55 is eligible for a lump sum payment.

The beneficiary may be any relative by blood or marriage.

Uniformed (Plans D and X):

The beneficiary of any employee who dies while actively employed (or a terminated vested employee who did not withdraw employee contributions) is eligible for a death benefit equal to a yearly pension or a lump sum payment.

The beneficiary may be any relative by blood or marriage.

Annual Pension

Municipal (Plan J):

The annual ordinary death pension, payable for life, is equal to the regular service pension the employee would have received if eligible to retire on the day before he died and had elected Option 2, joint and 100% contingent annuitant (see Survivor Benefits below).

Uniformed (Plans D and X):

The annual ordinary death pension, payable for life, is equal to the regular service pension the employee would have received (based on a minimum of 10 years of service) had the person been eligible to retire on the day before dying and had elected Option 2, joint and 100% contingent annuitant (see Survivor Benefits below).

Lump Sum Payment

Municipal (Plan J):

The lump sum payment is equal to 10% of the deceased employee's average final compensation multiplied by years of credited service to a maximum of 10, plus the deceased employee's contributions to the Retirement System, minus the total amount of the deceased employee's City paid life insurance.

Uniformed (Plans D and X):

Same as municipal.

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13. Service-Connected Disability

Eligibility

Municipal (Plan J):

An active employee found by the Board of Pensions and Retirement to be mentally or physically permanently incapacitated (unable to perform duties) solely as the result of accident or injury during the performance of duties is eligible for an immediate service-connected disability pension.

Uniformed (Plans D and X):

Same as municipal. A minimum of \$1,000 per month is provided for Uniformed members.

Benefit Amount

Municipal (Plan J):

The service-connected disability benefit is equal to the Employee's Retirement System contributions, plus a yearly benefit of 70% of the employee's final compensation, reduced by any disability benefits payable under the Worker's Compensation Act. If he or she withdraws contributions, the benefit is payable for his or her lifetime only.

If the employee leaves employee contributions with the Retirement System, he or she may choose a survivor benefit option (see Survivor Benefit below) and the beneficiary will continue receiving benefit payments after his or her death.

Uniformed (Plans D and X):

Same as municipal.

14. Service-Connected Disability Periodic Adjustment

Eligibility

Municipal (Plan J):

An employee who is receiving a service-connected disability benefit who is totally disabled and does not collect Social Security disability insurance benefits is eligible for a periodic adjustment.

Uniformed (Plans D and X):

Same as municipal, but only applies to police employees.

Benefit Amount

Municipal (Plan J):

The disabled employee's pension will be increased in the eighth year after separation by the percentage raise given in the previous year to active employees in his or her job class. The adjustment will continue each year thereafter until the employee's 65th birthday.

Uniformed (Plans D and X):

Same as municipal.

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15. Ordinary Disability

Eligibility

Municipal (Plan J):

An active employee found by the Board to be mentally or physically permanently incapacitated from the further performance of duties due to an accident or illness not caused by the performance of duties is eligible for an immediate ordinary disability benefit after completing 10 years of credited service.

Uniformed (Plans D and X):

Same as municipal, except that fire employees only need five years of credited service and police employees have no service requirement if the disability is permanent and total. Police employees with permanent and partial disability need 10 years of credited service.

Benefit Amount

Municipal (Plan J):

The annual ordinary disability benefit is equal to the benefit determined under the service pension formula using average final compensation and credited service as of the date of disablement. If the employee is eligible for or receiving workers' compensation, no benefit is payable. Such employee may apply for benefits at retirement age.

Uniformed (Plans D and X):

Same as municipal, except police employees that have no service requirement are credited with a minimum of 10 years of credited service. Same as municipal.

16. Survivor Benefit

Municipal (Plan J):

Service pensions, deferred vested benefits, service-connected disability benefits (if employee contributions are left on deposit), and ordinary disability benefits are payable under five optional forms. Options 1, 2, 3, and 5 provide benefits actuarially equivalent to a lifetime only pension while Option 4 has no reduction.

Option 1 – A benefit is payable to the employee with the provision that upon death, the beneficiary will receive a lump sum equal to the excess, if any, of the employee's contributions over the sum of the payments received.

Option 2 – A reduced benefit payable to the employee with the provision that 100% of the reduced benefit will be paid to the designated beneficiary for life after the death of the employee.

Option 3 – Same as Option 2 except only 50% of the reduced benefit is continued to the designated beneficiary.

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Option 4 – Upon the employee's death, 50% of the benefit will continue to be paid to the surviving spouse for life, provided the employee and spouse were married for two years before retirement and at death. If there is no eligible spouse at the time the employee dies, or the spouse dies before the full amount of the contributions have been returned, 50% of the benefit is continued to dependent children until age 18, or if no dependent children, payments are given to dependent parents for the remainder of their lives. In addition, Option 4 provides for a guaranteed return of employee contributions as described in Option 1 above.

Option 5 – Provides for a partial lump sum of between 6 and 36 monthly payments payable under Options 1, 2, 3 or 4. The remaining monthly benefit is reduced so that the partial lump sum plus the reduced benefit is actuarially equivalent to the original benefit.

Uniformed (Plans D and X):
Same as municipal.

17. Minimum Pension

Municipal (Plan J):

The monthly minimum pension to a pensioner is equal to \$25 multiplied by the pensioner's completed years of credited service, to a 10-year maximum.

Uniformed (Plans D and X):

The monthly minimum pension to pensioners is \$500. The monthly minimum pension to all other pensioners is \$440 providing such pension will increase to \$500 at the time the pensioner reaches age 60.

18. Waiver of Benefit

Municipal (Plan J):

Any employee at service retirement age with less than three but more than one year of credited service may waive the right to receive a monthly benefit and in lieu thereof, receive a lump sum payment of twice his or her employee contributions without interest.

Uniformed (Plans D and X):
Same as municipal.

19. Service-Connected Health Care Benefit

Municipal (Plan J):
Not applicable.

Uniformed (Plans D and X):

If a uniformed employee dies during the performance of duties, a service-connected health care benefit may be payable to the surviving spouse and dependent children. Regular payments will be made of the appropriate cost of maintaining medical, dental, optical, and prescription drug benefits that were in force at the time of the employee's death. Payments to the spouse cease upon remarriage and to the dependent children at age 18 (age 22 if a full-time student) or, if dependent due to physical or mental infirmity, the duration of the infirmity. The health care benefits are not paid from the pension trust assets.

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20. Deferred Retirement Option Plan (DROP)

Municipal (Plan J):

Employees that have ten years of service and have reached two years past the minimum retirement age may elect to participate in the DROP. During this time, their accrued benefit will go into a DROP account and will earn interest at a specified rate. The rate is calculated each year on January 1 and is equal to the lesser of the yield on 1-year treasury bonds and half of the valuation interest rate as of that date. The benefit is calculated as of the date they entered the DROP. At the end of the DROP, the employees' accrued monthly benefit will commence, plus they will receive the accumulated amount of the accrued benefit paid to the DROP, as well as the interest earned on such benefit.

Uniformed (Plans D and X):

Same as municipal except that employees are eligible as soon as they have ten years of service and have reached minimum retirement age.

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1. Participation

Municipal (Plan Y):

Full-time employees participate on their date of employment. Temporary employees participate after completing six months of employment. Participation is limited to employees hired on or after January 8, 1987. Any member of the 1967 Plan may irrevocably elect to participate in Plan 87. All employees hired after their Plan '10 effective date become members of Plan '10 with some groups having the option to elect into Plan 87. Employees first hired or rehired after their Plan 16 effective date become members of Plan 16.

Uniformed (Plans A and B):

Same as municipal except Police employees hired after January 1, 2010 and Fire employees hired on or after October 15, 2010 must make an election to participate in Plan 87.

Elected (Plan L):

Any City employee on or after January 8, 1987, in any general, municipal, or special election, participates in this Plan. Effective November 11, 2014, elected officials become members of Plan '10 upon employment or taking office unless they elect to participate in Plan 87.

2. Credited Service

Municipal (Plan Y):

Credited service means the period of employment with the City during which the employee makes contributions to the Retirement System. Certain leaves of absence may also be credited.

Uniformed (Plans A and B):

Same as municipal.

Elected (Plan L):

Same as municipal.

3. Total Compensation

Municipal (Plan Y):

Total compensation means the base rate of pay, overtime, and longevity payments received during a 12-month period.

Uniformed (Plans A and B):

Total compensation means the base rate of pay, longevity payments, and stress or premium pay (up to 6% of base pay) received during a 12-month period.

Elected (Plan L):

Total compensation means the base rate of pay and longevity payments received during a 12-month period.

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4. Final Compensation

Municipal (Plan Y):

Final compensation means whichever is greater: annual base rate of pay at the time of termination or the total compensation received during the 12 months immediately preceding termination, including supplementary compensation received under Civil Service Regulation No. 32.

Uniformed (Plans A and B):

Same as municipal.

Elected (Plan L):

Same as municipal.

5. Average Final Compensation

Municipal (Plan Y):

Average final compensation means the arithmetic average of the total compensation received during the three calendar or anniversary years producing the highest average.

Uniformed (Plans A and B):

Average final compensation means the arithmetic average of the total compensation received during the two calendar or anniversary years producing the highest average.

Elected (Plan L):

Same as municipal.

6. Employee Contributions

Municipal (Plan Y):

Total employee contributions equal 30% of the gross normal cost for all members in the municipal division. For employees of the Sheriff's Office represented by Lodge 5 of the F.O.P hired after January 1, 2012 and prior to August 20, 2018, who elect to participate in Plan Y employee contributions equal 50% of gross normal cost. Exempt and non-represented employees hired after January 13, 1999 and prior to January 1, 2019 (and current employees as of January 13, 1999 that elect to do so) will contribute an additional amount to become vested in five years instead of ten years. Employees hired after their Plan '10 date who elect the option to participate in Plan 87 prime will pay an additional 1.0% of compensation.

All employees will pay an additional 0.5% of compensation for the period between January 1, 2015 through December 31, 2015 and 1.0% of compensation January 1, 2016 onwards.

Effective January 1, 2019 current employees with annual salary (excluding overtime) in excess of \$45,000 will pay additional tier contributions on their total compensation over their base rates as follows: +0.50% for annual salary between \$45,000-\$55,000; +1.50% for annual salary between \$55,000-\$75,000; +2.00% for annual salary between \$75,000-\$100,000; and +2.75% for annual salary greater than 100,000.

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Uniformed (Plans A and B):

Total employee contributions equal 5% of total compensation, but not less than 30% or greater than 50% of gross normal cost for members in the uniformed division. Police employees hired after January 1, 2010 and Fire Fighters hired after October 15, 2010, who elect to participate in the 1987 Plan, will contribute 6% of total compensation.

Member contributions for current employees are increased by 0.92% effective July 1, 2017 and an additional 0.92% effective July 1, 2018. For new employees hired or rehired on or after July 1, 2017 member contribution rate shall be increased by 2.5% over the current rate of 6%.

Elected (Plan L):

Total employee contributions equal 30% of the gross normal cost for all members in the elected division calculated under the Municipal Plan plus 100% of the gross normal cost that exceeds the cost for the municipal plan. Employees hired after January 13, 1999 (and current employees as of January 13, 1999 that elect to do so) will contribute an additional amount to become vested in the lesser of two-full terms or eight years. Elected officials that are elected into Office after November 14, 2014 pay an additional 1% of compensation to participate in Plan L instead of Plan '10. All employees will also pay an additional 0.5% of compensation for the period between January 1, 2015 through December 31, 2015 and 1.0% of compensation January 1, 2016 onwards.

Effective January 1, 2019 current and future employees with annual salary (excluding overtime) in excess of \$45,000 will pay additional tier contributions on their total compensation over their base rates as follows: +0.50% for annual salary between \$45,000-\$55,000; +1.50% for annual salary between \$55,000-\$75,000; +2.00% for annual salary between \$75,000-\$100,000; and +2.75% for annual salary greater than \$100,000.

7. Service Retirement

Eligibility

Municipal (Plan Y):

Each municipal employee is eligible to retire and receive a service pension at age 60 if he or she has 10 or more years of credited service or, if the employee made additional contributions to become vested in five years, five years of credited service.

Uniformed (Plans A and B):

Each uniformed employee is eligible to retire and receive a service pension upon reaching age 50 and 10 or more years of credited service, or, if the employee made additional contributions to become vested in five years, five years of credited service.

Elected (Plan L):

Each elected official is eligible to retire and receive a service pension at age 55 if he or she has 10 or more years of credited service, or, if the employee made additional contributions to become vested in the lesser or two full terms or eight years, the lesser of two full terms or eight years of credited service.

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Benefit Amount

Municipal (Plan Y):

The service pension equals 2.2% of the employee's average final compensation multiplied by years of credited service to a maximum of 10 years, plus 2% of the employee's average final compensation multiplied by years of service over 10, subject to a maximum of 100% of average final compensation.

Uniformed (Plans A and B):

The service pension equals 2.2% of the employee's average final compensation multiplied by years of credited service to a maximum of 20 years, plus 2% of the employee's average final compensation multiplied by years of credited service over 20, subject to a maximum of 100% of average final compensation.

Elected (Plan L):

The service pension equals 3.5% of the employee's average final compensation multiplied by years of credited service, subject to a maximum of 100% of average final compensation.

8. Early Retirement

Eligibility

Municipal (Plan Y):

Each municipal employee is eligible to retire and receive a reduced service pension at age 52 if he has 10 or more years of credited service. As an alternative, a member is eligible if he or she has at least 33 years of credited service, regardless of age.

Uniformed (Plans A and B):

Each uniformed employee is eligible to retire and receive a reduced service pension at age 40 if he or she has 10 or more years of credited service. Alternatively, a member is eligible if he has at least 25 years of credited service, regardless of age.

Benefit Amount

Municipal (Plan Y):

The annual amount is calculated the same as service retirement, reduced by 1/2 of 1% for each month the employee is younger than minimum retirement age. Benefits are not reduced if the employee has 33 or more years of credited service.

Uniformed (Plans A and B):

The annual amount is calculated the same as service retirement, reduced by 1/2 of 1% for each month the employee is younger than minimum retirement age. Benefits are not reduced if the employee has 25 or more years of credited service.

Elected (Plan L):

The annual amount is calculated the same as service retirement, reduced by 1/2 of 1% for each month the employee is younger than minimum retirement age.

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9. Deferred Vested Retirement

Eligibility

Municipal (Plan Y):

An employee who terminates employment after completing 10 or more years of credited service or, if the employee made additional contributions to become vested in five years, five years of credited service, is eligible for a deferred vested retirement if his or her contributions have not been withdrawn.

Uniformed (Plans A and B):

Same as municipal.

Elected (Plan L):

A person terminating employment and who has completed 10 or more years of credited service, or if the employee made additional contributions to become vested in the lesser of two full terms or eight years, two full terms or eight years of credited service is eligible for a deferred vested retirement benefit provided he or she has not withdrawn contributions.

Benefit

Municipal (Plan Y):

The annual deferred vested benefit is determined the same as service pensions, based on average final compensation and credited service at termination. This benefit begins at the service retirement date. If a member dies before the deferred vested benefit begins, an ordinary death benefit is payable (see Ordinary Death below). As an alternative, the person terminating employment may request at any time before benefits begin a return of employee contributions (without interest) instead of the deferred vested benefit.

Uniformed (Plans A and B):

Same as municipal.

Elected (Plan L):

Same as municipal.

10. Withdrawal Benefit

Eligibility

Municipal (Plan Y):

Each terminating employee who has completed fewer than 10 years of credited service (or, if the employee made additional contributions to become vested in five years, fewer than five years of credited service) will receive a withdrawal benefit equal to employee contributions (without interest).

Uniformed (Plans A and B):

Same as municipal.

Elected (Plan L):

Each terminating employee who completed fewer than 10 years of credited service will receive a withdrawal benefit equal to employee contributions (without interest).

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11. Service Connected Death

Eligibility

Municipal (Plan Y):

The beneficiary of each active employee who dies solely from the performance of duties of the employee's position with the City is eligible for an immediate death benefit.

Uniformed (Plans A and B):

Same as municipal.

Elected (Plan L):

Same as municipal.

Benefit Amount

Municipal (Plan Y):

The death benefit equals the sum of the total employee contributions paid to the Retirement System (without interest), plus a yearly payment of 60% of the employee's final compensation reduced by any death benefits payable under the Workers' Compensation Act. This benefit is payable to the spouse until his or her death or remarriage, whichever occurs first. Dependent children are entitled to an additional 10% of final compensation yearly payment for each dependent child (up to two children) until the child reaches 18. This total benefit shall not exceed 80% of final compensation.

If there is no spouse, or if the spouse dies or remarries, each dependent child (up to three children) is eligible for a yearly payment of 25% of final compensation until the child reaches age 18. If there is no spouse or dependent children, each dependent parent is entitled to a 15% of final compensation yearly payment for life.

Uniformed (Plans A and B):

Same as municipal.

Elected (Plan L):

Same as municipal.

12. Ordinary Death

Eligibility

Municipal (Plan Y):

The beneficiary of an active employee (or a terminated vested employee who did not withdraw his employee contributions) who dies after completing 10 years of credited service (or five years of credited service if additional contributions were made) or who has reached age 60 is eligible for an immediate death benefit equal to an annual pension or a lump sum payment, whichever the beneficiary chooses.

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The beneficiary of an active employee who dies before completing 10 years of credited service (or five years of credited service if additional contributions were made) or reaching age 60 is eligible for a lump sum payment.

The beneficiary may be any relative by blood or marriage.

Uniformed (Plans A and B):

The beneficiary of any employee who dies while actively employed (or a terminated vested employee who did not withdraw employee contributions) is eligible for a death benefit equal to an annual pension or a lump sum payment, whichever the beneficiary chooses.

The beneficiary may be any relative by blood or marriage.

Elected (Plan L):

The beneficiary of an active employee (or a terminated vested employee who did not withdraw contributions) who dies after completing 10 years of credited service or reaching age 55 is eligible for an immediate death benefit equal to an annual pension or a lump sum payment, whichever the beneficiary chooses.

The beneficiary of an active employee who dies before completing 10 years of credited service or reaching age 55 is eligible for a lump sum payment. The beneficiary may be any relative by blood or marriage.

Annual Pension

Municipal (Plan Y):

The annual ordinary death pension, payable for life, is equal to the regular service pension the employee would have received had he or she been eligible to retire on the day before death and had elected Option 2, joint and 100% contingent annuitant (see Survivor Benefits below).

Uniformed (Plans A and B):

The annual ordinary death pension, payable for life, is equal to the regular service pension the employee would have received (based on a minimum of 10 years of service) had he been eligible to retire on the day before death and had elected Option 2, joint and 100% contingent annuitant (see Survivor Benefits below).

Elected (Plan L):

Same as municipal.

Lump Sum Payment

Municipal (Plan Y):

The lump sum payment is equal to the deceased employee's average final compensation multiplied by years of credited service (not to exceed the service in the denominator) and divided by the number of years of credited service needed to become vested, plus the deceased employee's contribution to the Retirement System (without interest) minus the total amount of the deceased employee's life insurance which was paid by the City.

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Uniformed (Plans A and B):
Same as municipal.

Elected (Plan L):
Same as municipal.

13. Service-Connected Disability

Eligibility

Municipal (Plan Y):

An active employee found by the Board of Pensions and Retirement to be mentally or physically permanently incapacitated from any further performance of duties due solely to the result of the performance of duties is eligible for an immediate service-connected disability pension. The application for benefit must be made within one year after termination of employment.

Uniformed (Plans A and B):
Same as municipal.

Elected (Plan L):

An active employee found by the Board of Pensions and Retirement to be mentally or physically permanently incapacitated from any further performance of duties due solely to the result of the performance of duties is eligible for an immediate service-connected disability pension.

Benefit Amount

Municipal (Plan Y):

The service-connected disability benefit is equal to the employee's contributions to the Retirement System, plus a yearly benefit of 70% of the employee's final compensation, reduced by any disability benefits payable under the Worker's Compensation Act.

If he or she withdraws contributions, the benefit is payable for his or her lifetime only. If the employee leaves employee contributions with the Retirement System, he or she may choose a survivor benefit option (see Survivor benefit below) and the beneficiary will continue receiving benefit payments after his or her death.

Uniformed (Plans A and B)
Same as municipal.

Elected (Plan L):
Same as municipal.

14. Service-Connected Disability Periodic Adjustment

Eligibility

Municipal (Plan Y):

An employee who is receiving a service-connected disability benefit who is totally disabled and does not collect Social Security disability insurance benefits is eligible for a periodic adjustment.

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Uniformed (Plans A and B):

Same as municipal, but only applies to police employees.

Elected (Plan L):

Same as municipal.

Benefit Amount

Municipal (Plan Y):

The disabled employee's pension will be increased in the eighth year after separation by the percentage raise given in the previous year to active employees in his or her job class. The adjustment will continue each year until the employee's 65th birthday.

Uniformed (Plans A and B):

Same as municipal.

Elected (Plan L):

Same as municipal.

15. Ordinary Disability

Eligibility

Municipal (Plan Y):

An active employee found by the Board to be mentally or physically permanently incapacitated from the further performance of duties due to an accident or illness not caused by the performance of duties is eligible for an immediate ordinary disability benefit provided he or she has at least 10 years of credited service (or five years of credited service, if additional contributions were made). The application for benefits must be made within one year after termination.

Uniformed (Plans A and B):

Same as municipal, except that fire employees only need five years of credited service and police employees have no service requirement if the disability is permanent and total. Police employees with permanent and partial disability need 10 years of credited service (or five years of credited service, if additional contributions were made).

Elected (Plan L):

An active employee found by the Board to be mentally or physically permanently incapacitated from the further performance of duties due to an accident or illness not caused by the performance of duties is eligible for an immediate ordinary disability benefit provided he or she has completed at least 10 years of credited service, or eight years if additional contributions were made.

Benefit Amount

Municipal (Plan Y):

The annual ordinary disability benefit is equal to the benefit determined under the service pension formula using average final compensation and credited service as of the date of disablement.

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If the employee is eligible for or receiving workers compensation, no benefit is payable. Such employee may apply for benefits at retirement age.

Uniformed (Plans A and B):

Same as municipal, except each eligible employee is automatically credited with a minimum of 10 years of service to calculate the annual benefit.

Elected (Plan L):

The annual ordinary disability benefit is equal to the benefit determined under the service pension formula using average final compensation and credited service as of the date of disablement.

16. Survivor Benefits

Municipal (Plan Y):

Service pensions, deferred vested benefits, service-connected disability benefits, and ordinary disability benefits are payable under five optional forms. Options 2 and 3 provide benefits actuarially equivalent to a lifetime only pension while Option 1 has no reduction.

Option 1 - A benefit is payable to the employee providing on his death, the beneficiary will receive a lump sum equal to the excess, if any, of the employee's contributions over the sum of the payments received.

Option 2 - A reduced benefit payable to the employee with the provision that 100% of the reduced benefit will continue to be paid to the designated beneficiary for life after the death of the employee.

Option 3 - The same as Option 2 except only 50% of the reduced benefit is continued to the designated beneficiary.

Option 5 – Provides for a partial lump sum of between 6 and 36 monthly payments payable under Options 1, 2, 3 or 4. The remaining monthly benefit is reduced so that the partial lump sum plus the reduced benefit is actuarially equivalent to the original benefit.

Uniformed (Plans A and B):

Same as municipal, except that police and fire employees may also elect Option 4:

Option 4 - Upon the employee's death, 50% of the benefit will continue to be paid to the surviving spouse for life, provided the employee and spouse were married for two years before retirement and at death. If there is no eligible spouse at the time the employee dies, or the spouse dies before the full amount of the contributions have been returned, 50% of the benefit is continued to dependent children until age 18, or if no dependent children, payments are given to dependent parents for the remainder of their lives. In addition, Option 4 provides for a guaranteed return of employee contributions as described in Option 1 above.

Elected (Plan L):

Same as municipal.

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17. Service-Connected Health Care Benefit

Eligibility

Municipal (Plan Y):

Not applicable.

Uniformed (Plans A and B):

In the event of the death of a uniformed employee during the performance of his or her duties, a service-connected health care benefit may be payable to the surviving spouse and dependent children. Regular payments will be made of the appropriate cost of maintaining medical, dental, optical and pharmaceutical prescription benefits in force at the time of the employee's death. Payments to the spouse cease upon remarriage and to the dependent children at age 18 (age 22 if a full-time student) or if dependent due to physical or mental infirmity, the duration of the infirmity. The health care benefits are not paid from the pension trust assets.

Elected (Plan L):

Not applicable.

18. Deferred Retirement Option Plan (DROP)

Eligibility

Municipal (Plan Y):

Employees that have 10 years of service and have reached two years after the minimum retirement age may elect to participate in the DROP. During this time, their accrued benefit will go into a DROP account and will earn interest at a specified rate. The rate is calculated each year on January 1 and is equal to the lesser of the yield on 1-year treasury bonds and half of the valuation interest rate as of that date. The benefit is calculated as of the date they entered the DROP. At the end of the DROP, the employees' accrued monthly benefit will commence, plus they will receive the accumulated amount of the accrued benefit paid to the DROP, as well as the interest earned on such benefit.

Uniformed (Plans A and B):

Same as municipal except that employees are eligible as soon as they have ten years of service and have reached minimum retirement age.

Elected (Plan L):

Officials elected to Office after September 18, 2009 are not eligible to participate in the DROP.

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APPENDIX D – SUMMARY OF PLAN PROVISIONS – PLAN ‘10

1. Participation

Municipal:

Municipal employees hired or rehired after the Plan ‘10 effective date (as shown below) become members in Plan ‘10 immediately upon employment. All Municipal employees except Elected Officials hired or rehired after their Plan 16 effective date become members of Plan 16.

Employees of the Sheriffs’ Office or Register of Wills: January 1, 2012

Employees represented by AFSCME, District Council 47: March 5, 2014

Municipal employees in the civil service not represented by a union: May 14, 2014

Employees represented by AFSCME, District Council 33, other than guards: September 2014

Guards represented by DC 33: November 11, 2014

Municipal employees not in the civil service and not represented by a union:
November 11, 2014

Elected Officials: November 11, 2014

All employees except Register of wills and guards represented by DC 33 have the option within 30 days to elect to participate in Plan 87 Municipal.

Uniformed:

Police employees hired or rehired on or after January 1, 2010 and Fire employees hired or rehired on or after October 15, 2010 are members in Plan ‘10 immediately upon employment. Employees have the option within 30 days to elect to participate in Plans A or B.

Existing Plan A, Plan B, and Plan Y participants had the option, for a period of ninety (90) days, to make an irrevocable election to enter the Plan ‘10. Employees who elected do so would have their benefits in the existing pension plan frozen, and their future earnings and service will count only toward benefits under Plan ‘10.

2. Credited Service

Municipal:

Credited service means the period of employment with the City during which the employee makes contributions to the Retirement System. Certain leaves of absence may also be credited.

Uniformed:

Same as municipal.

3. Total Compensation

Municipal:

Total compensation means the base rate of pay, overtime, and longevity payments received during a 12-month period.

Uniformed:

Total compensation means the base rate of pay, longevity payments, and stress or premium pay (up to 6% of base pay) received during a 12-month period.

APPENDIX D – SUMMARY OF PLAN PROVISIONS – PLAN ‘10

4. Final Compensation

Municipal:

Final compensation means whichever is greater: annual base rate of pay at the time of termination or the total compensation received during the 12 months immediately preceding termination, including supplementary compensation received under Civil Service Regulation No. 32.

Uniformed:

Same as municipal.

5. Average Final Compensation

Municipal:

Average final compensation means the arithmetic average of the total compensation received during the five calendar or anniversary years producing the highest average.

Uniformed:

Same as municipal.

6. Employee Contributions

Municipal:

Total employee contributions equal 50% of the gross normal cost for members in the municipal division.

Effective January 1, 2019, current employees with annual salary (excluding overtime) in excess of \$45,000 will pay additional tier contributions on their total compensation over their base rates as follows: +0.50% for annual salary between \$45,000-\$55,000; +1.50% for annual salary between \$55,000-\$75,000; +2.00% for annual salary between \$75,000-\$100,000; and +2.75% for annual salary greater than 100,000.

Uniformed:

Total employee contributions equal 5.5% of total compensation up to twenty years of credited service.

Member contributions for current employees are increased by 0.92% effective July 1, 2017 and an additional 0.92% effective July 1, 2018. For new employees hired or rehired on or after July 1, 2017 employee contributions rate shall be increased by 2.5% over the current rate of 5.5%.

APPENDIX D – SUMMARY OF PLAN PROVISIONS – PLAN ‘10

7. Service Retirement

Eligibility

Municipal:

Each municipal employee is eligible to retire and receive a service pension at age 60 if he or she has 10 or more years of credited service.

Uniformed:

Each uniformed employee is eligible to retire and receive a service pension upon reaching age 50 and 10 or more years of credited service.

Benefit Amount

Municipal:

The service pension equals 1.25% of the employee’s average final compensation multiplied by years of credited service up to a maximum of 20 years.

Uniformed:

The service pension equals 1.75% of the employee’s average final compensation multiplied by years of credited service up to a maximum of 20 years.

8. Early Retirement

Eligibility

Municipal:

Each municipal employee is eligible to retire and receive a reduced service pension at age 52 if he has 10 or more years of credited service. As an alternative, a member is eligible if he or she has at least 33 years of credited service, regardless of age.

Uniformed:

Each uniformed employee is eligible to retire and receive a reduced service pension at age 40 if he or she has 10 or more years of credited service.

Benefit Amount

Municipal:

The annual amount is calculated the same as service retirement, reduced by 1/2 of 1% for each month the employee is younger than minimum retirement age. Benefits are not reduced if the employee has 33 or more years of credited service.

Uniformed:

Same as municipal.

APPENDIX D – SUMMARY OF PLAN PROVISIONS – PLAN ‘10

9. Deferred Vested Retirement

Eligibility

Municipal:

An employee who terminates employment after completing 10 or more years of credited service is eligible for a deferred vested retirement if his or her contributions have not been withdrawn.

Uniformed:

Same as municipal.

Benefit Amount

Municipal:

The annual deferred vested benefit is determined the same as service pensions, based on average final compensation and credited service at termination. This benefit begins at the service retirement date. If a member dies before the deferred vested benefit begins, an ordinary death benefit is payable (see Ordinary Death below). As an alternative, the person terminating employment may request at any time before benefits begin a return of employee contributions (without interest) instead of the deferred vested benefit.

Uniformed:

Same as municipal.

10. Withdrawal Benefit

Eligibility

Municipal:

Each terminating employee who has completed fewer than 10 years of credited service will receive a withdrawal benefit equal to employee contributions (without interest).

Uniformed:

Same as municipal.

11. Service Connected Death

Eligibility

Municipal:

The beneficiary of each active employee who dies solely from the performance of duties of the employee's position with the City is eligible for an immediate death benefit.

Uniformed:

Same as municipal.

APPENDIX D – SUMMARY OF PLAN PROVISIONS – PLAN ‘10

Benefit Amount

Municipal:

The death benefit equals the sum of the total employee contributions paid to the Retirement System (without interest), plus a yearly payment of 60% of the employee's final compensation reduced by any death benefits payable under the Workers' Compensation Act. This benefit is payable to the spouse until his or her death or remarriage, whichever occurs first. Dependent children are entitled to an additional 10% of final compensation yearly payment for each dependent child (up to two children) until the child reaches 18. This total benefit shall not exceed 80% of final compensation.

If there is no spouse, or if the spouse dies or remarries, each dependent child (up to three children) is eligible for a yearly payment of 25% of final compensation until the child reaches age 18. If there is no spouse or dependent children, each dependent parent is entitled to a 15% of final compensation yearly payment for life.

Uniformed:

Same as municipal.

12. Ordinary Death

Eligibility

Municipal:

The beneficiary of an active employee (or a terminated vested employee who did not withdraw his employee contributions) who dies after completing 10 years of credited service or who has reached age 60 is eligible for an immediate death benefit equal to an annual pension or a lump sum payment, whichever the beneficiary chooses.

The beneficiary of an active employee who dies before completing 10 years of credited service or reaching age 60 is eligible for a lump sum payment.

The beneficiary may be any relative by blood or marriage.

Uniformed:

The beneficiary of any employee who dies while actively employed (or a terminated vested employee who did not withdraw employee contributions) is eligible for a death benefit equal to an annual pension or a lump sum payment, whichever the beneficiary chooses.

The beneficiary may be any relative by blood or marriage.

Annual Pension

Municipal:

The annual ordinary death pension, payable for life, is equal to the regular service pension the employee would have received had he or she been eligible to retire on the day before death and had elected Option 2, joint and 100% contingent annuitant (see Survivor Benefits below).

APPENDIX D – SUMMARY OF PLAN PROVISIONS – PLAN ‘10

Uniformed:

The annual ordinary death pension, payable for life, is equal to the regular service pension the employee would have received (based on a minimum of 10 years of service) had he been eligible to retire on the day before death and had elected Option 2, joint and 100% contingent annuitant (see Survivor Benefits below).

Lump Sum Payment

Municipal:

The lump sum payment is equal to the deceased employee's average final compensation multiplied by years of credited service (not to exceed the service in the denominator) and divided by the number of years of credited service needed to become vested, plus the deceased employee's contribution to the Retirement System (without interest) minus the total amount of the deceased employee's life insurance which was paid by the City.

Uniformed:

Same as municipal.

13. Service-Connected Disability

Eligibility

Municipal:

An active employee found by the Board of Pensions and Retirement to be mentally or physically permanently incapacitated from any further performance of duties due solely to the result of the performance of duties is eligible for an immediate service-connected disability pension. The application for benefit must be made within one year after termination of employment.

Uniformed:

Same as municipal.

Benefit Amount

Municipal:

The service-connected disability benefit is equal to the employee's contributions to the Retirement System, plus a yearly benefit of 70% of the employee's final compensation, reduced by any disability benefits payable under the Worker's Compensation Act.

If he or she withdraws contributions, the benefit is payable for his or her lifetime only.

If the employee leaves employee contributions with the Retirement System, he or she may choose a survivor benefit option (see Survivor benefit below) and the beneficiary will continue receiving benefit payments after his or her death.

Uniformed:

Same as municipal.

APPENDIX D – SUMMARY OF PLAN PROVISIONS – PLAN ‘10

14. Service-Connected Disability Periodic Adjustment

Eligibility

Municipal:

An employee who is receiving a service-connected disability benefit who is totally disabled and does not collect Social Security disability insurance benefits is eligible for a periodic adjustment.

Uniformed:

Same as municipal, but only applies to police employees.

Benefit Amount

Municipal:

The disabled employee's pension will be increased in the eighth year after separation by the percentage raise given in the previous year to active employees in his or her job class. The adjustment will continue each year until the employee's 65th birthday.

Uniformed:

Same as municipal.

15. Ordinary Disability

Eligibility

Municipal:

An active employee found by the Board to be mentally or physically permanently incapacitated from the further performance of duties due to an accident or illness not caused by the performance of duties is eligible for an immediate ordinary disability benefit provided he or she has at least 10 years of credited service. The application for benefits must be made within one year after termination.

Uniformed:

Same as municipal, except that fire employees only need five years of credited service and police employees have no service requirement if the disability is permanent and total. Police employees with permanent and partial disability need 10 years of credited service.

Benefit Amount

Municipal:

The annual ordinary disability benefit is equal to the benefit determined under the service pension formula using average final compensation and credited service as of the date of disablement.

If the employee is eligible for or receiving workers compensation, no benefit is payable. Such employee may apply for benefits at retirement age.

Uniformed (Plans A and B):

Same as municipal, except each eligible employee is automatically credited with a minimum of 10 years of service to calculate the annual benefit.

APPENDIX D – SUMMARY OF PLAN PROVISIONS – PLAN ‘10

16. Survivor Benefits

Eligibility

Municipal:

Service pensions, deferred vested benefits, service-connected disability benefits, and ordinary disability benefits are payable under five optional forms. Options 2 and 3 provide benefits actuarially equivalent to a lifetime only pension while Option 1 has no reduction.

Option 1 - A benefit is payable to the employee providing on his death, the beneficiary will receive a lump sum equal to the excess, if any, of the employee's contributions over the sum of the payments received.

Option 2 - A reduced benefit payable to the employee with the provision that 100% of the reduced benefit will continue to be paid to the designated beneficiary for life after the death of the employee.

Option 3 - The same as Option 2 except only 50% of the reduced benefit is continued to the designated beneficiary.

Option 5 – Provides for a partial lump sum of between 6 and 36 monthly payments payable under Options 1, 2, 3 or 4. The remaining monthly benefit is reduced so that the partial lump sum plus the reduced benefit is actuarially equivalent to the original benefit.

Uniformed:

Same as municipal, except that police and fire employees may also elect Option 4:

Option 4 - Upon the employee's death, 50% of the benefit will continue to be paid to the surviving spouse for life, provided the employee and spouse were married for two years before retirement and at death. If there is no eligible spouse at the time the employee dies, or the spouse dies before the full amount of the contributions have been returned, 50% of the benefit is continued to dependent children until age 18, or if no dependent children, payments are given to dependent parents for the remainder of their lives. In addition, Option 4 provides for a guaranteed return of employee contributions as described in Option 1 above.

17. Service-Connected Health Care Benefit

Eligibility

Municipal:

Not applicable.

Uniformed:

In the event of the death of a uniformed employee during the performance of his or her duties, a service-connected health care benefit may be payable to the surviving spouse and dependent children. Regular payments will be made of the appropriate cost of maintaining medical, dental, optical and pharmaceutical prescription benefits in force at the time of the employee's death. Payments to the spouse cease upon remarriage and to the dependent children at age 18 (age 22 if a full-time student) or if dependent due to physical or mental infirmity, the duration of the infirmity. The health care benefits are not paid from the pension trust assets.

APPENDIX D – SUMMARY OF PLAN PROVISIONS – PLAN ‘10

18. Deferred Retirement Option Plan (DROP)

Eligibility

Municipal:

Employees that have 10 years of service and have reached two years after the minimum retirement age may elect to participate in the DROP. During this time, their accrued benefit will go into a DROP account and will earn interest at a specified rate. The rate is calculated each year on January 1 and is equal to the lesser of the yield on 1-year treasury bonds and half of the valuation interest rate as of that date. The benefit is calculated as of the date they entered the DROP. At the end of the DROP, the employees' accrued monthly benefit will commence, plus they will receive the accumulated amount of the accrued benefit paid to the DROP, as well as the interest earned on such benefit.

Uniformed:

Same as municipal except that employees are eligible as soon as they have ten years of service and have reached minimum retirement age.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX D – SUMMARY OF PLAN PROVISIONS – PLAN ‘16

Employees in all Municipal groups (except elected officials) hired or rehired on or after the Plan 16 effective date (as shown below) are required to participate in the new Stacked Hybrid Plan – Plan 16.

Employees of the Sheriffs’ Office or Register of Wills: June 21, 2018

Employees represented by AFSCME, District Council 33: August 20, 2016

Employees represented by AFSCME, District Council 47: January 1, 2019

Municipal employees not represented by a union: January 1, 2019

Plan 16 benefits are similar to Plan 87, except that the average final compensation used in calculating benefits is limited by the Stacked Hybrid Cap of \$65,000. For DC 33 Plan 16 members, effective January 1, 2019 the Stacked Hybrid Cap was increased from \$50,000 to \$65,000.

Member contributions for Plan 16 members will also be based on compensation capped at \$65,000. Additionally, employees with annual salary (excluding overtime) in excess of \$45,000 will pay additional tier contributions on their total compensation over their base rates as follows: +0.50% for annual salary between \$45,000-\$55,000 and +1.50% for annual salary between \$55,000-\$65,000.

Municipal employee members of Plan 16 who are both not in the civil service and not represented by a union will contribute an additional amount to become vested in seven years instead of ten years.

Plan 16 members will have the option to participate in the Deferred Compensation Plan (DC Plan). For members whose benefits are capped under the retirement plan, the City will match 50% of the members’ contribution up to a maximum of 1.5% of the member’s annual compensation.

Summary of Plan Changes

None.

SUMMARY OF LEGISLATIVE CHANGES

The following table summarizes member contribution rates by Plan and by bargaining group where applicable. This information has been provided by the Staff and has been applied where effective as of the valuation date. The methodology to determine the employee contributions for accelerated vesting schedules follows the City code and has been reviewed by the Retirement Board.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX D – SUMMARY OF PLAN PROVISIONS – MEMBER CONTRIBUTIONS

Member Contribution Rates by Membership Class				Effective 7/1/2025	
Plan 67	No SSA Coverage	Plan D (Police)		6.00%	
		Plan X (Fire)		6.00%	
		Plan J-(OHCD)		6.00%	Add on for Tier
Plan J1 (Non Repts; Exempts)		7.00%	Add on for Tier		
Plan J2 (DC 47, DC 33 and OHCD)		7.00%	Add on for Tier		
SSA	Plan J3 (Non Repts-Exempts: excluding Auditing (<i>Controller</i>) Department who are not in Civil Service)		4.75%	Add on for Tier	
	Plan J4 (DC 47, DC 33)		4.75%	Add on for Tier	
	Plan J6 (Non Civil Service-Auditing Dept EE)		4.75%	Add on for Tier	
Plan 87	Plan A (Fire)		6.84%		
	Plan B (Police)		6.84%		
	Plan L (Elected)		11.89%	Add on for Tier	
	Plan Y		3.68%	Add on for Tier	
	Plan Y (Deputy Sheriffs and Register of Wills)		3.68%	Add on for Tier	
	Plan Y5		4.65%	Add on for Tier	
	Plan L8		12.53%	Add on for Tier	
	Plan Y2 (Non Repts-Exempts:excl Auditing EEs)		3.68%	Add on for Tier	
	Plan Y3 (DC 47, DC 33 and OHCD)		3.68%	Add on for Tier	
	Plan Y4 (Exempts-Auditing/ <i>Controller</i> Dept Ees		3.68%	Add on for Tier	
Plan 87 Prime Opted out of Plan 10	Plan Y1 (Deputy Sheriff)		50% of Agregate Normal Cost of all members in Plan Y	4.47%	Add on for Tier
	DOH>=1/1/2012 and < 6/20/2018				
	Plan Y4 (Non Repts) DOH>=5/14/2014		+1%	4.68%	Add on for Tier
	Plan Y6 (DC 47) DOH>=3/5/2014		+1%	4.68%	Add on for Tier
	Plan Y9 (DC33-excluding Guards and OHCD)		+1%	4.68%	Add on for Tier
	DOH>=9/9/2014				
	Plan Y12 (DC33: Guards) DOH>= 9/9/2014 and < 11/14/2014		+1%	4.68%	Add on for Tier
	Plan Y11 (Exempts) DOH>=11/14/2014		+1%	4.68%	Add on for Tier
	Plan Y5.1 (5 yr vesting-Exempts)		+1%	5.65%	Add on for Tier
	DOH>=11/14/2014				
	Plan L1 (Elected) DOH>=11/14/2014		+1%	12.89%	Add on for Tier
	Plan L8.1 (Elected) DOH>=11/14/2014		+1%	13.53%	Add on for Tier
	Plan B6 (Police) DOH>=1/1/2010 and < 7/1/2017		+1.84%	7.84%	
	Plan B6 (Police) DOH>=7/1/2017		+2.50%	8.50%	
Plan 10	Plan A6 (Fire) DOH>=10/15/2010 and < 7/1/2017		+1.84%	7.84%	
	Plan A6 (Fire) DOH>=7/1/2017		+2.50%	8.50%	
	Plan B10 (Police) DOH< 7/1/2017		+1.84%	7.34%	
	Plan B10 (Police) DOH>=7/1/2017		+2.50%	8.00%	
	Plan A10 (Fire) DOH< 7/1/2017		+1.84%	7.34%	
	Plan A10 (Fire) DOH>=7/1/2017		+2.50%	8.00%	
	Plan Y10				
	Deputy Sheriff DOH >=1/1/2012 and < 6/20/2018		50% of Normal Cost for members of Plan 10	2.64%	Add on for Tier
	Register of Wills-MANDATORY DOH >=1/1/2012 and < 6/20/2018			2.64%	Add on for Tier
	DC33-Guards-MANDATORY DOH>=11/14/2014 and < 8/19/2016			2.64%	Add on for Tier
DC 33 DOH < 8/19/2016					
Non-Reps, DC 47		2.64%		Add on for Tier	
Elected		2.64%		Add on for Tier	
Plan 16	Exempts (5 yr vesting-Exempts)			4.33%	Add on for Tier
	Plan S16				
	Deputy Sheriffs and Register of Wills DOH >= 6/21/2018		Pensionable Earnings up to \$65,000	4.15%	Add on for Tier
	DC 33 DOH >= 8/20/2016			4.15%	Add on for Tier
	Non-Reps, DC 47 DOH >= 1/1/2019			4.15%	Add on for Tier
Exempts (7 yr vesting-Exempts) DOH >= 1/1/2019		4.69%		Add on for Tier	

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX E – BASELINE PROJECTIONS BASED ON RRP

The following charts show the 20-year projections under the baseline scenario if the City contributes based on the RRP as shown on page 26 of the report. The first graph shows projections of the actuarial liability, assets (actuarial and market), and funded ratios. The second graph shows the expected amounts of MMO and RRP contributions. Table E-1 shows the 5-year projection of RRP contributions, sales tax contributions, actuarial value of assets, actuarial liability, and funded ratio.

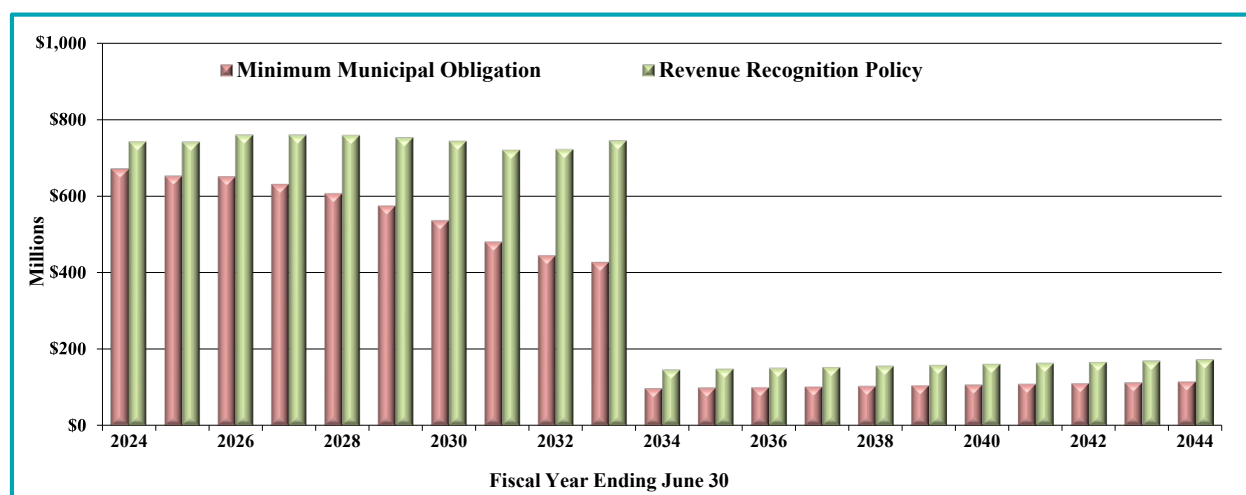
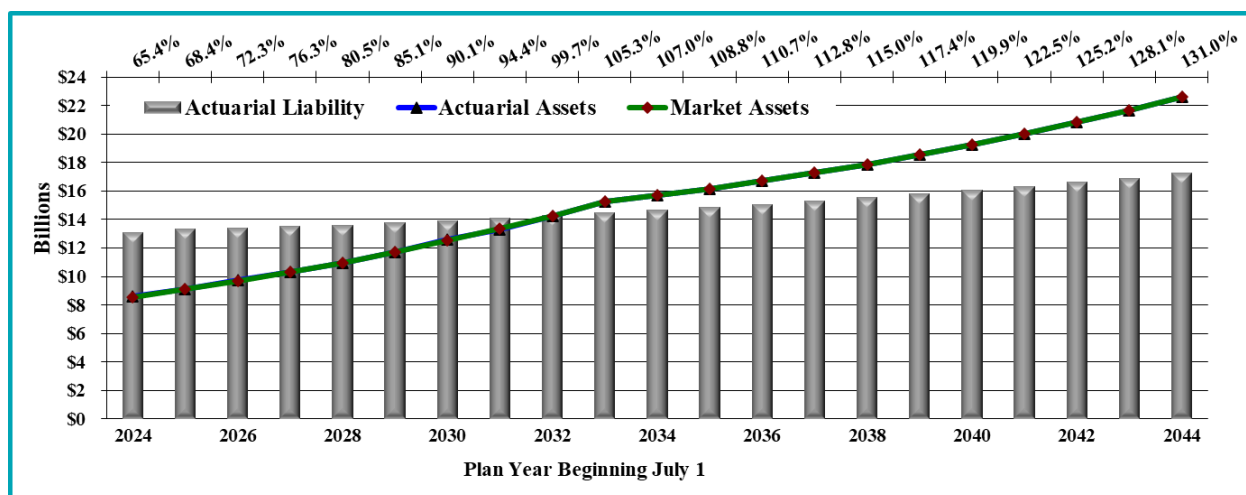


Table E-1 (\$ millions)

Fiscal Year End	RRP Contributions	Sales Tax Contributions	Actuarial Value of Assets	Actuarial Liability	Unfunded Actuarial Liability	Funded Ratio
2025	\$ 741.5	\$ 93.7	\$ 8,583.2	\$ 13,133.7	\$ 4,550.5	65.4%
2026	759.8	102.0	9,113.6	13,332.1	4,218.5	68.4%
2027	760.1	110.6	9,729.8	13,451.1	3,721.3	72.3%
2028	758.9	119.1	10,346.4	13,552.3	3,205.9	76.3%
2029	753.0	127.8	10,979.9	13,634.2	2,654.4	80.5%
2030	743.7	135.3	11,733.1	13,784.2	2,051.1	85.1%

APPENDIX F – GLOSSARY OF TERMS

1. Actuarial Liability

The Actuarial Liability is the difference between the present value of all future system benefits and the present value of total future normal costs. This is also referred to by some actuaries as the “accrued liability” or “actuarial accrued liability.”

2. Actuarial Assumptions

Estimates of future experience with respect to rates of mortality, disability, turnover, retirement rate or rates of investment income and salary increases. Actuarial assumptions (rates of mortality, disability, turnover, and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

3. Accrued Service

Service credited under the System which was rendered before the date of the actuarial valuation.

4. Actuarial Equivalent

A single amount or series of amounts of equal actuarial value to another single amount or series of amounts computed on the basis of appropriate actuarial assumptions.

5. Actuarial Funding Method

A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of a retirement system benefit between future normal cost and actuarial accrued liability. Sometimes this is referred to as the “actuarial cost method.”

6. Actuarial Gain/(Loss)

The difference between actual experience and actuarial assumption anticipated experience during the period between two actuarial valuation dates.

7. Actuarial Present Value

The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

APPENDIX F – GLOSSARY OF TERMS

8. Adjusted Market Value of Assets

An asset value reflecting a five-year smoothing of asset gains and losses, as described in the Philadelphia Municipal Code Title 22-311.

9. Amortization

This term represents the paying off an interest-discounted amount with periodic payments of interest and principal—as opposed to paying off with a lump sum payment.

10. Normal Cost

The actuarial present value of retirement system benefits allocated to the current year by the actuarial funding method.

11. Unfunded Actuarial Liability (UAL)

The difference between actuarial liability and valuation assets. This is sometimes referred to as “unfunded actuarial accrued liability.”

Most retirement systems have unfunded actuarial liabilities. They typically arise each time new benefits are added, and each time experience gains/losses are realized.

The existence of unfunded actuarial accrued liability is not in itself an indicator of poor funding. Also, unfunded actuarial liabilities do not represent a debt that is payable today. What is important is the ability of the plan sponsor to contribute the annual amortized cost to fund down the unfunded actuarial liability and the trend in unfunded actuarial liability amount.