



**City of Philadelphia
Municipal Retirement System**

**Actuarial Valuation Report
as of July 1, 2013**

Produced by **Cheiron**

April 2014

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LETTER OF TRANSMITTAL

April 03, 2014

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

Dear Board Members:

At your request, we have performed the July 1, 2013 actuarial valuation of the City of Philadelphia Municipal Retirement 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 #23. The results of this report are only applicable to the System's contribution for Fiscal Year Ending 2015, and rely on future plan experience conforming to the underlying assumptions. To the extent that actual plan experience deviates from the underlying assumptions, the future results will vary accordingly.

To the best of our knowledge, this report has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. 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 solely for the City of Philadelphia Municipal Retirement System for the purposes described herein, except that the plan auditor may rely on this report solely for the purpose of completing an audit related to the matters herein. This actuarial valuation report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.



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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



Kenneth A. Kent, FSA, FCA, EA, MAAA
Principal Consulting Actuary



Anu Patel, FSA, EA, MAAA
Consulting Actuary

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**SECTION I
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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,
- Past trends and expected future trends and risks to the Retirement System's financial condition,
- The City's required contribution for Fiscal Year End (FYE) 2015,
- The Retirement Board's Funding Policy recommended City contribution, and
- Information required by the Governmental Accounting Standards Board (GASB).

In this Section, we present a summary of the principal valuation results. This includes the basis upon which the July 1, 2013 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.

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A. Valuation Basis

The June 30, 2013 valuation results are based on the same methods used in the June 30, 2012 valuation as outlined in the report reflecting the amendments made under Act 44 to the Act 205 funding requirements through the addition of Chapter 10. This report was prepared using census data and financial information as of July 1, 2013 and does not reflect any subsequent changes in the membership or the assets.

The valuation results reflect the Board's decision to

- decrease the interest rate from 7.95% to 7.85% as of July 1, 2013, and
- apply a liability load of 0.54% to the actuarial liability to account for funding of benefits payable under the Pension Adjustment Fund (PAF).

Below we highlight significant outcomes of this valuation. Table I-1 summarizes these results:

- ***Financial performance:*** The return on assets for the year ending June 30, 2013 was favorable when benchmarked against the assumed 7.95% return. Our calculation of performance results in a return of 10.94%. However with the 10 year smoothing of assets applied in the calculation of the actuarial asset value, the 2008 and 2009 investment losses still dominated the results. On an actuarial asset value basis the return of June 30, 2013 is 5.08%.
- ***Unfunded Actuarial Liability (UAL):*** The UAL is the excess of the System's actuarial liability (AL) over the actuarial value of assets (AVA). The UAL increased from \$5.083 billion as of July 1, 2012 to **\$5.327 billion as of July 1, 2013** reflecting the net of asset losses and liability losses from July 1, 2012 through June 30, 2013 in addition to changes in actuarial assumptions as of July 1, 2013. The experience loss represents \$167.5 million increase in the UAL. This is comprised of a \$39.3 million liability loss attributable to losses from new entrants with past service and mortality losses from retirees living longer than expected while offset in part by salary growth slower than expected and \$127.7 million asset loss. There was also an increase in UAL due to actuarial assumptions changes of \$143.1 million.
- ***Funding Ratio:*** This is the ratio of the System's AVA to AL. The funding ratio decreased from 48.1% as of July 1, 2012 to **47.4% as of July 1, 2013** mainly due to the asset losses and changes in actuarial assumptions. While this ratio may appear to reflect lack of progress in funding at the same time the Systems risk profile is being improved by including funding for the PAF and lowering of the discount rate.
- ***Minimum Municipal Obligation (MMO):*** The MMO is the required minimum amount the City must contribute under Pennsylvania State law **before application of amendments** specific to the System. The MMO increased from \$523.4 million for FYE 2014 to **\$556.0 million for FYE 2015**.

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- **Deferred Contribution Payment:** The deferred MMO amounts as permitted under Act 44 totaling \$230 million and all interest on these amounts were fully paid by the City during the Plan Year ending June 30, 2013.
- **Annual Act 205 Reporting:** Under Section 1002 of Act 205, the City is required to provide annual reports to the Pennsylvania Employee Retirement Commission (PERC). Therefore the MMO determination reflects annually determined experience gains and losses as opposed to biennially.
- **Contribution under the City’s Funding Policy:** The beginning-of-year contribution under the City’s Funding Policy increased from \$769.0 million for FYE 2013 based upon actual FYE 2013 payroll to an estimated **\$826.9 million for FYE 2014**.

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

Table I-1 Key Results (\$ thousands)			
Valuation Date		7/1/2013	7/1/2012
Unfunded Actuarial Liability	\$	5,326,895	\$ 5,083,059
Funding Ratio		47.4%	48.1%
		Fiscal Year 2015	Fiscal Year 2014
Minimum Municipal Obligation	\$	556,030	\$ 523,368
City's Funding Policy Contribution*	\$	826,847	\$ 769,040

*The City’s funding policy contribution for FYE Fiscal Year 2014 was updated based upon the actual payroll of \$1,429.7 million (provided as pay rates in the data) as of July 1, 2013, used to estimate the beginning of year FYE 2014 payroll. In the July 1, 2012 actuarial valuation report, the estimated FYE 2014 payroll was \$1,417.5 million based upon July 1, 2012 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, 2013 valuation and how they compare to the results from the July 1, 2012 valuation.

1. City Membership:

As shown in Table I-2 below, total membership in the Retirement System increased by 0.7% from 2012 to 2013.

Table I-2				
Membership Total				
	July 1, 2013	July 1, 2012	% Change	
Actives	26,788	26,306	1.8%	
Terminated Vesteds	1,281	1,289	-0.6%	
Disabled	4,152	4,169	-0.4%	
Retirees	21,696	21,314	1.8%	
Beneficiaries	8,614	8,621	-0.1%	
DROP	2,427	2,786	-12.9%	
Total City Members	64,958	64,485	0.7%	
Annual Salaries	\$ 1,429,723,436	\$ 1,372,174,460	4.2%	
Average Salary per Active Member	\$ 53,372	\$ 52,162	2.3%	
Annual Retirement Allowances	\$ 676,634,789	\$ 646,916,633	4.6%	
Average Retirement Allowance	\$ 19,634	\$ 18,969	3.5%	

The active participant population increased by 1.8% during the 2012 to 2013 plan year. DROP participants decreased about 12.9% from 2012 to 2013 as members reached the end of their 4-year DROP participation period. The average salary per active member increased by 2.3% during the plan year, which is lower than assumed by the salary scale assumption. The result of higher active membership slightly offset by lower salary growth produced a total payroll growth higher than expected of 4.2% versus the expected 3.3% payroll growth assumption from last year.

Annual retirement allowances continued to increase, growing by 4.6% this year and reflects a 3.5% increase in the average benefits provided and an increase in participants in pay status of 1.0%.

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2. City Assets and Liabilities:

Table I-3 presents a comparison between the July 1, 2013 and July 1, 2012 System assets, liabilities, UAL, and funding ratios. The Funding Ratio decreased from 48.1% as of July 1, 2012 to **47.4%** as of July 1, 2013 due to the asset losses, liability losses and changes in actuarial assumptions. Prior to the assumption changes the funded ratio would have remained at 48.1%.

The July 1, 2012 market value of assets (MVA) includes \$230 million in deferred contributions in accordance with the requirements of Act 44.

Table I-3 Assets and Liabilities (\$ thousands)				
	July 1, 2013	July 1, 2012	% Change	
Actuarial Liabilities by Membership:				
Actives	\$ 3,171,233	\$ 2,946,588	7.6%	
Terminated Vesteds	117,083	116,813	0.2%	
Disabled	720,597	699,033	3.1%	
Retirees	4,441,281	4,187,990	6.0%	
Beneficiaries	571,413	550,868	3.7%	
DROP	1,098,426	1,292,585	-15.0%	
Non-Vested Refunds	6,123	5,975	2.5%	
Total Actuarial Liability	\$ 10,126,156	\$ 9,799,852	3.3%	
Market Value of Assets (net of PAF)*	\$ 4,444,127	\$ 4,151,828	7.0%	
Actuarial Value of Assets (net of PAF)*	\$ 4,799,261	\$ 4,716,793	1.7%	
Delta Actuarial to Market Assets	\$ 355,134	\$ 564,965	-37.1%	
Unfunded Actuarial Liability	\$ 5,326,895	\$ 5,083,059	4.8%	
Funding Ratio	47.4%	48.1%	-0.7%	

*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 II – E

The market asset value (net of the Pension Adjustment Fund (PAF)) average return was 10.9% compared to the 7.95% assumption for the previous year. For the actuarial value of assets, the experience gains and losses are smoothed over future years, which yielded a rate of return of 5.1%.

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3. Components of UAL Change between July 1, 2012 and July 1, 2013:

The Retirement System's unfunded actuarial liability increased by \$243.8 million, from \$5,083.1 million as of July 1, 2012 to \$5,326.9 million as of July 1, 2013. Table I-4 presents the specific components of this change in the UAL.

The System experienced a \$127.7 million asset loss based upon the actuarial value of assets and a \$39.3 million liability loss which is attributable to demographic experience. There was also an additional liability of \$143.1 million recognized due to the changes in assumptions (decrease in interest rate from 7.95% to 7.85% and prefunding for the PAF). Actual FYE 2013 contributions when compared to the expected MMO created a \$23.6 million gain because of higher contributions. This is offset with a \$24.0 million loss due to the one year deferral of gains and losses under the MMO funding requirements. When these changes are compared to the expected paydown of the UAL as part of the MMO there is a net increase in the UAL of \$243.8 over what is expected as of July 1, 2013.

Table I-4	
Change in Unfunded Actuarial Liability (UAL)	
(\$ millions)	
Experience	
1. UAL change due to asset (gain)/loss	\$ 127.7
2. UAL change due to overall liability (gain)/loss	\$ 39.3
Contributions	
3. UAL change due to difference in benefit accruals, MMO contributions, and timing	\$ (23.6)
4. UAL change due to one-year delay in MMO contributions	\$ 24.0
Total (Gain)/Loss Amortization Base	
5. Total UAL change due to gains and losses: sum 1 through 4	\$ 167.4
Assumption Changes	
6. UAL change due to assumption changes	\$ 143.1
Total	
7. Total net overall change: 5 + 6	\$ 310.5
8. UAL change due to benefit accruals, benefit payments and interest accumulation	(66.7)
9. Net increase/(decrease) in UAL: 7 + 8	\$ 243.8

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4. Contributions:

Table I-5 on the next page summarizes the alternative City contribution amounts. The contribution under the **City's Funding Policy** for FYE 2014 was originally estimated to be \$769.2 million based upon estimated FYE 2014 payroll. Using updated payroll, the FYE 2014 contribution is \$769.0 million. For Fiscal Year 2015, the funding policy contributions increased by 2.20% of payroll, from 53.79% to 55.99%. In dollar terms, the contributions under the City's Funding Policy increased from \$769.0 million to \$826.8 million, a \$57.8 million increase. Along with changes in assumptions and experience, the increase in the funding policy is attributable to experience losses for each year the policy amount is not contributed. The FYE 2015 contributions under the City's Funding Policy will be updated next year based on actual payroll. All contributions for the City's Funding Policy are provided as of the beginning of the year.

The **Minimum Municipal Obligation** for FYE 2015 measured as of the beginning of the year increased by 0.73% of payroll, from 36.92% to 37.65%. In dollar terms, the required beginning of year contribution increased from \$523.4 million to \$556.0 million, a \$32.6 million increase.

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

Table I-5 Contributions (\$ thousands)				
Fiscal Year Ending in Year:	2015	% of Pay	2014	% of Pay
City's Funding Policy¹				
Estimated FY Payroll	\$ 1,476,904		\$ 1,429,723 ²	
Normal Cost (with Expenses)	\$ 141,507	9.58%	\$ 134,981	9.44%
Employee Contributions	<u>(49,266)</u>	3.34%	<u>(47,859)</u>	3.35%
City Normal Cost	\$ 92,241	6.25%	\$ 87,121	6.09%
Amortization Payment	<u>734,606</u>	49.74%	<u>681,919</u>	47.70%
City's Funding Policy	\$ 826,847	55.99%	\$ 769,040	53.79%
Minimum Municipal Obligation ³				
Estimated FY Payroll	\$ 1,476,904		\$ 1,417,456	
Normal Cost (with Expenses)	\$ 141,507	9.58%	\$ 134,705	9.50%
Employee Contributions	<u>(49,266)</u>	3.34%	<u>(47,449)</u>	3.35%
City Normal Cost	\$ 92,241	6.25%	\$ 87,256	6.16%
Amortization Payment	<u>463,789</u>	31.40%	<u>436,112</u>	30.77%
Minimum Municipal Obligation	\$ 556,030	37.65%	\$ 523,368	36.92%

¹Assuming beginning-of-year payment.

²FYE 2014 Payroll for the City's Funding Policy is based upon the 7/1/2013 pay rates and will be finalized when the FYE 2014 payroll is available. All other payroll is estimated based upon the prior year's data used for the actuarial valuation.

³The MMO does not include Quasi-Agency contributions.

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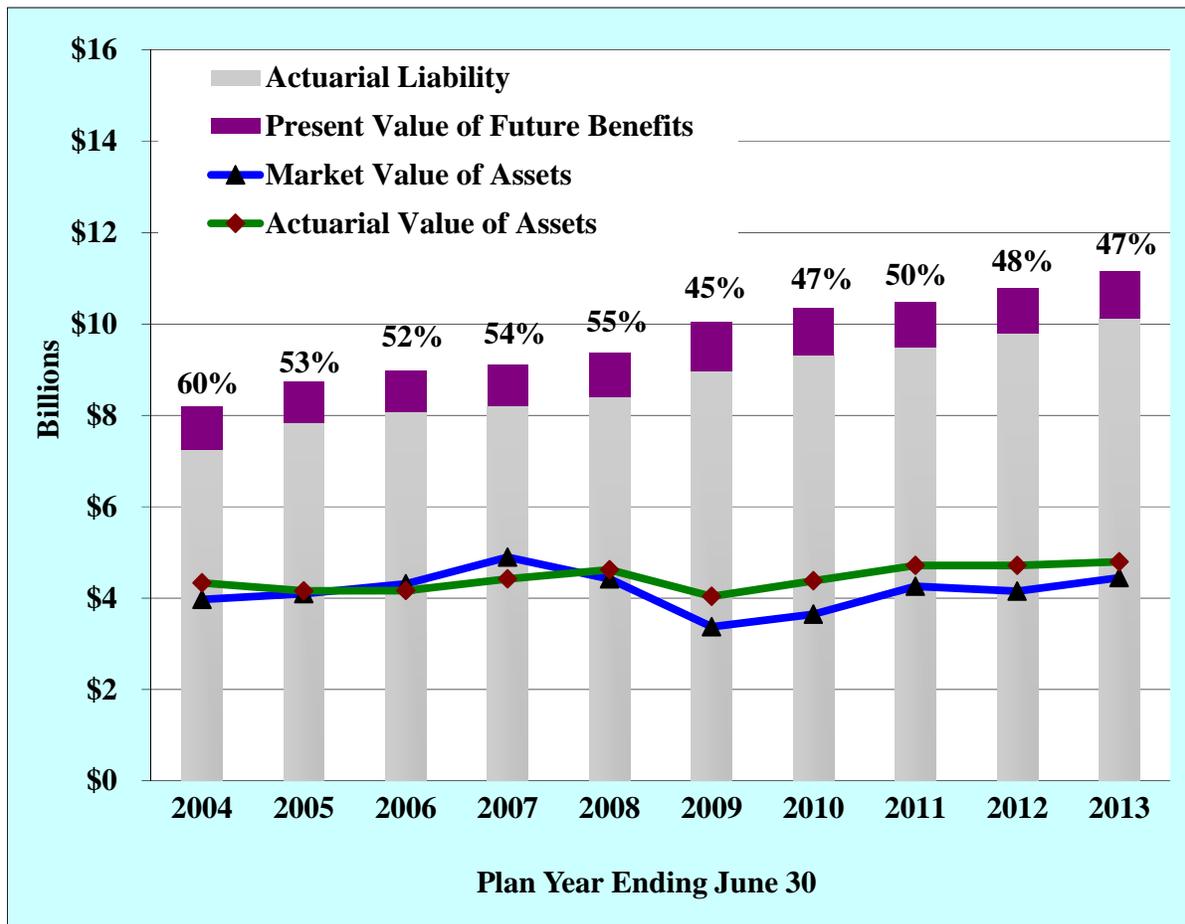
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C. Historical Trends

Although most of the attention given to the valuation reflects the most recently computed unfunded actuarial liability, funding ratio, and contribution amounts, it is important to remember that each valuation is merely a snapshot of the long-term progress of a pension fund. It is equally important to judge a current year's valuation result relative to historical trends, as well as trends expected into the future.

In the chart below, 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 (provided above each bar) since 2004.

City of Philadelphia Assets* and Liabilities – 2004 to 2013



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

The System's funding ratio has declined significantly since 2004. In 2009, the funding ratio declined by 10% due to the investment losses during the year and the change in the actuarial liability interest rate assumption. In 2011, the funding ratio increased by 3% due to strong investment returns, which was partially offset by the increased actuarial liability due to the

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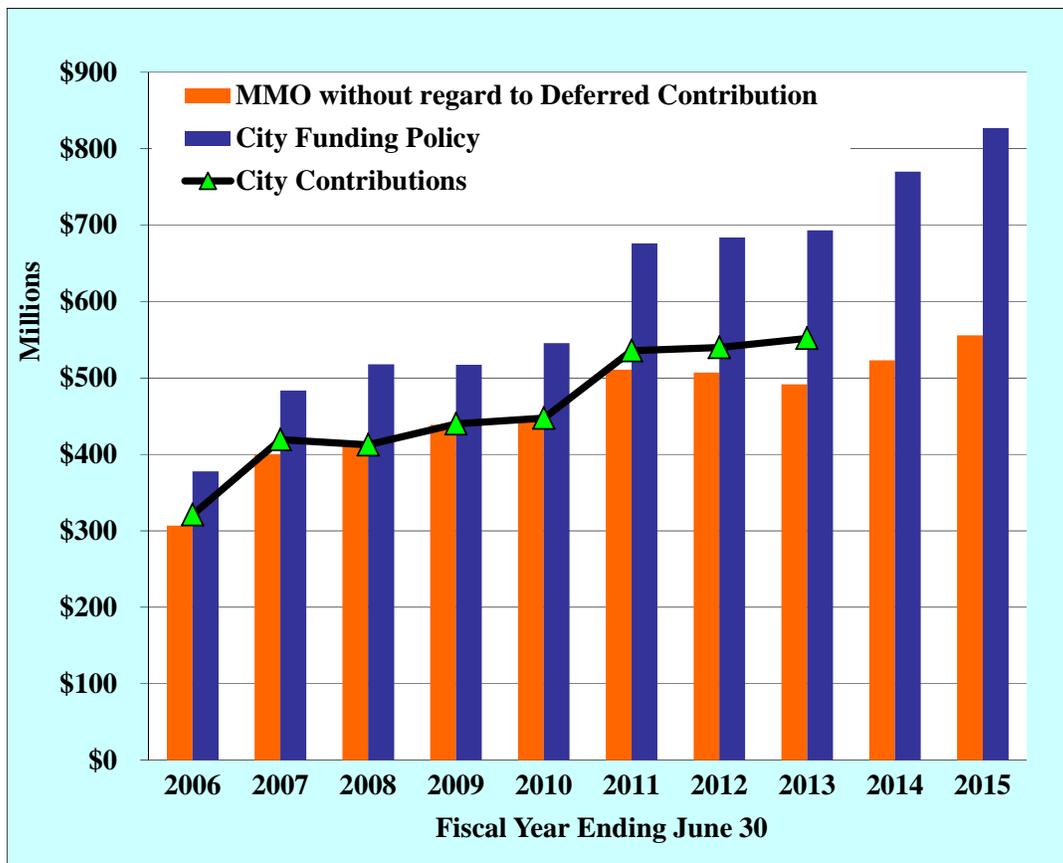
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assumption changes. In particular, the assumed interest rate assumption has been decreased during this period from 9.00% to 7.85%. In each of 2012 the funding ratio decreased by 2% due to lower than expected investment returns and additional changes in assumptions and in 2013 the funding ratio decreased by 1% due to asset losses and further changes in assumptions to reduce future risks and reflect lower interest rates resulting in an increased actuarial liability.

This historic trend emphasizing the relatively low funded status highlights the potential risk of running out of assets to pay benefits. However, as long as the City adheres to the continued policy of contributing at least the Minimum Municipal Obligation this risk will be avoided.

In this next chart, we present historical trends for the Minimum Municipal Obligation (MMO), the contribution under the City's Funding Policy, and the actual contribution made for fiscal years since 2005. Because there is a two-year lag in the determination of the City Funding Policy and MMO requirements, we show the contributions to date and the estimated amounts for fiscal years 2014 and 2015. The FYE 2010 and 2011 City contributions include the \$150 million and \$80 million deferred contributions which have been paid during FYE 2013. The deferred contributions are subsequently included in the asset value and treated as if they are short-term investments and therefore not reflected in the actual City contributions received during FYE 2013.

City of Philadelphia Contributions for Fiscal Years 2006-2015



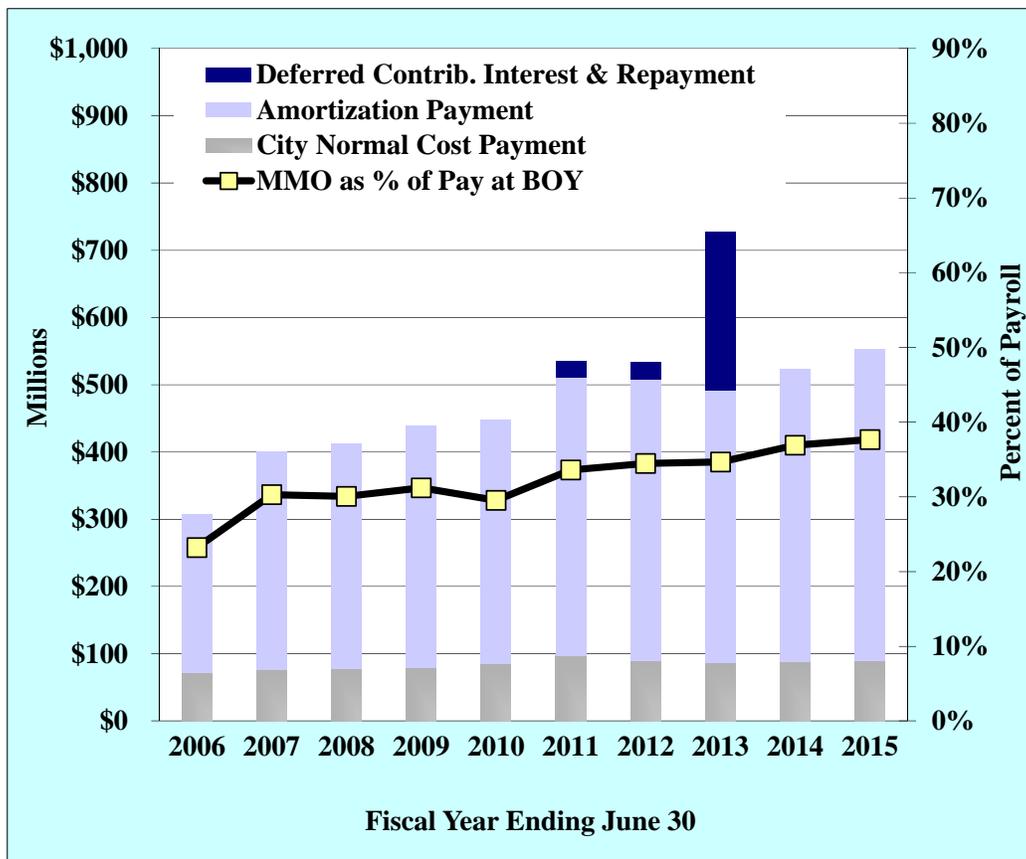
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The key trend illustrated in this chart is the rapid escalation in all three measures starting in FYE 2006 due in part to investment losses and the City’s decision to move from the funding policy to the MMO. This has slowed the funding progress in maintaining the funding policy and has resulted in losses under the funding policy due to contribution amounts being lower than what the policy calls for. These losses result in the increasing gap between the funding policy amount and the MMO. In addition, the MMO and City’s Funding Policy amounts for FYE 2011 increased significantly mainly due to the investment losses and changes in assumptions.

The chart below shows historical amortization payments, City normal cost payments, and the deferred contribution interest and principal repayment. Also shown is the beginning-of-year MMO (normal cost plus amortization payments only, not including the deferred contributions) as a percentage of payroll based on the values in the legend on the right versus the line graph. For example in 2014 and 2015, the City cost is expected to be about 37% and 38% of payroll respectively.

MMO Contributions by Source for Fiscal Years 2006-2015



The chart illustrates that the City normal cost payment has increased gradually over the period shown. The amortization payment to pay off the unfunded actuarial liability has increased from just under \$236 million for FYE 2006 to just under \$464 million for FYE 2015. In 2011, the amortized payment increased by \$50 million due to investment losses and the decrease in the

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interest rate assumption, which were then mitigated by the 30 year fresh start of the unfunded liability. For FYE 2014 and FYE 2015 the amortization amounts have increased steadily due to the changes in assumptions that have had a net result of increase in liabilities.

The total City cost (normal cost plus amortization payments) as a percentage of payroll (as shown by the line and on the right hand axis) increased rapidly from about 23% in 2006 to about 30% in 2007, remained relatively steady for 4 years through 2010, and then increasing again as the investment losses of FYE 2008 and 2009 get recognized over time to the current level of 38% in FYE 2015.

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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, 2013 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 as a percent of payroll. Unless otherwise noted we assume the MMO contributions are made each year. Our illustrations assume the provisions of Act 205 as amended by Act 44 remain in force during the projection period.

The projections are provided on two different asset return assumption bases:

- 1) Assuming the new 7.85% return assumption each and every year, and
- 2) Assuming returns shown in the table below. These are rates of return which vary each year, but over the projection period equal on average the assumed 7.85% return. We do this because the City’s 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.

Fiscal Year Beginning	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Return	3.5%	7.5%	15.5%	5.0%	10.0%	10.5%	7.6%	5.3%	0.0%	-4.5%
Fiscal Year Beginning	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Return	-0.5%	7.0%	6.5%	6.0%	11.5%	15.0%	19.5%	15.5%	11.0%	7.0%

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

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Projection Set 1: Assets and Liabilities

The two charts below show asset measures (green and blue lines) compared to liabilities (grey and pink bars). At the top of each chart is the progression of the System's funding ratio which compares the actuarial value of assets (green lines) to the actuarial liability (grey bars). The projections demonstrate a number of issues. Funding at the MMO level with the current ten year asset smoothing method and the 2009, 30 year fresh start amortization method on a level dollar basis, will result in a very slow improvement of funding while the full impact of the 2008/2009 investment losses are fully realized. This is also a reflection of the negative cash flow of the System discussed below. The alternative return expectations reveal insight from these two charts as to how varying investment returns impact the System's funding ratio. In both projections, the 10 year asset smoothing method has significant influence on the smoothing of assets against market value volatility as well as the relatively slow funding progress. What should be apparent is while achieving the same average return over the projection period, when returns actually vary the funded ratio is below the projection of consistent 7.85% returns each year – this demonstrates the risk of negative cash flow.

Chart 1: Projection of Assets and Liabilities, 7.85% return each year and City makes contributions based on MMO

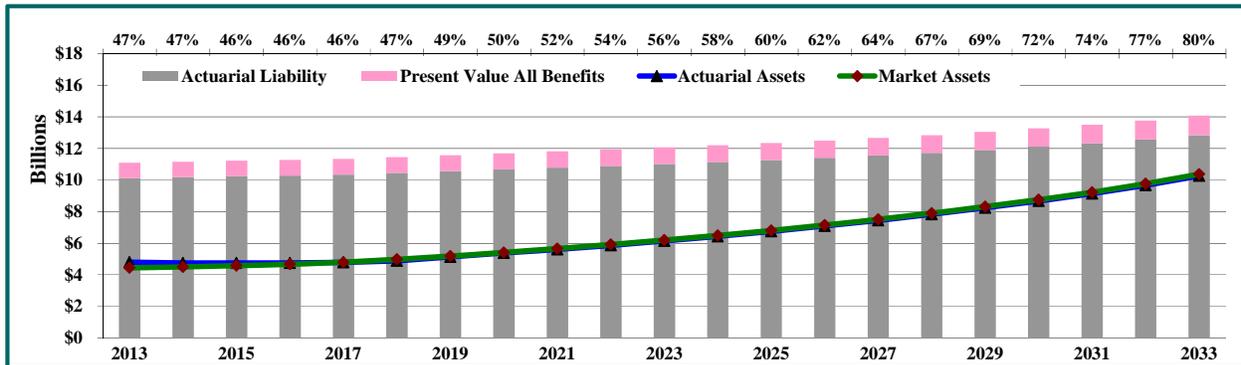
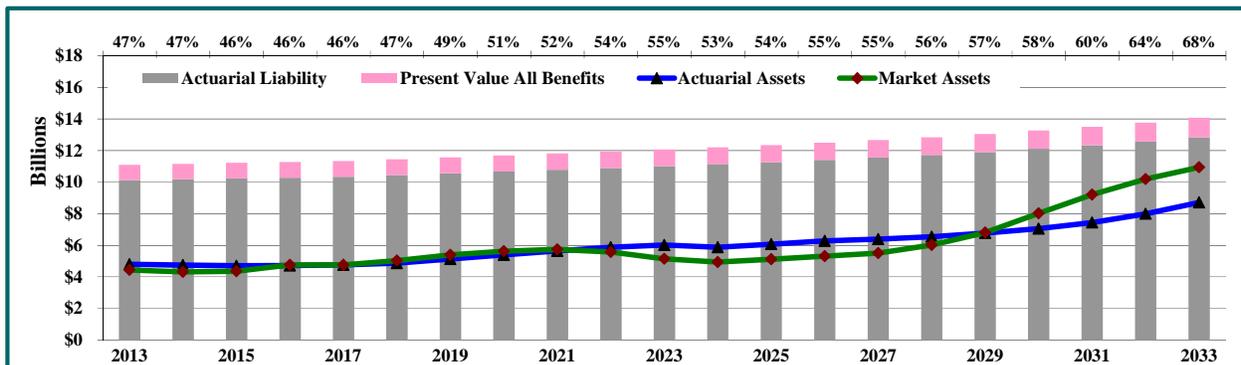


Chart 2: Projection of Assets and Liabilities, varying returns averaging 7.85% and City makes contributions based on MMO



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

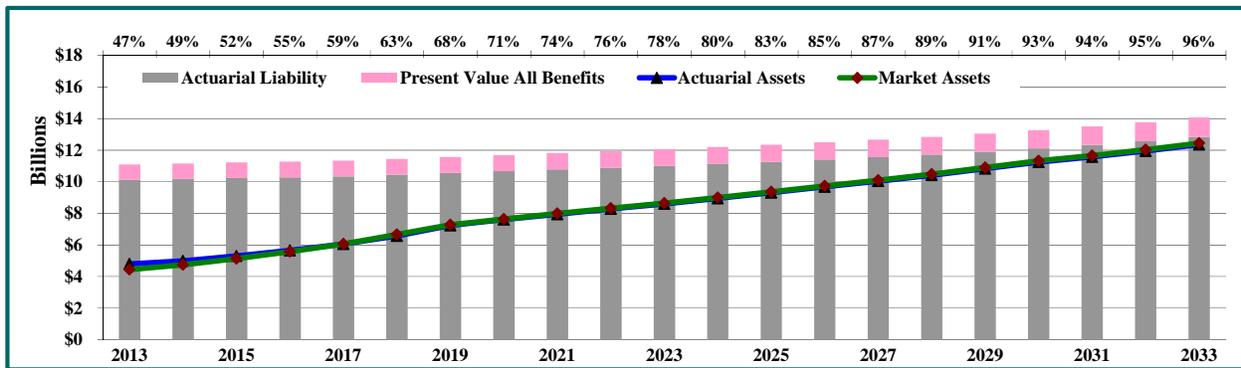
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Chart 2 demonstrates that if the fund can achieve a long-term return rate of 7.85%, the funding ratio can be adversely impacted by volatile returns year by year. This component of funding risk is driven by negative cash flows (where benefit payments and expenses are greater than contributions). When a mature fund 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 fund during subsequent years of market recovery. So a fund with significant negative cash flow coupled with investment return volatility will grow at a slower rate than the investment return assumption.

It is also important to consider the fact that as long as the System is significantly underfunded, the financial burden on the City will remain relatively high, and the only reason both of these projections show gradual improvement is because the contributions will be adjusted to cover any cost volatility to comply with MMO requirements under Act 205.

Chart 3: Projection of Assets and Liabilities, 7.85% return each year, and the City makes contributions based on the City’s Funding Policy



In the above scenario, where the City’s Funding Policy is contributed every year, the System reaches a funded ratio of 96% at the end of the projection period. Also, for the entire period the funding ratio is higher than the ratio achieved each year if the MMO contributions are made, because of the higher assumed contributions. These higher funded levels are a result of significantly higher contribution levels as can be seen in the next section where we project the contribution amounts in support of these funding graphs.

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Chart 4: Projection of Assets and Liabilities, if the City makes contributions based on the Funding Policy, varying returns averaging 7.85%

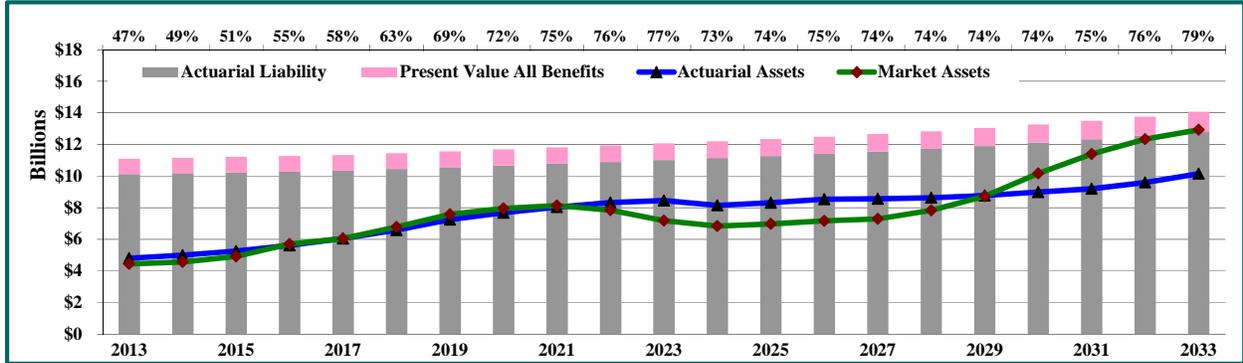


Chart 4 demonstrates that even if the return is achieved on average, because of negative cash flows the funded ratio could be materially less than long-term expectations might imply.

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Projection Set 2: Projected City Contribution Rate

The chart below shows that the City’s composite contribution rate under the MMO decreases very gradually over the projection period ending at about 25% of payroll by 2033. The unfunded actuarial liability is not paid off during this projection period; thus the projected contributions never revert to the normal cost rate. The decrease in 2019 for the City’s Funding Policy rate is due to the payment in full of the initial unfunded liability. This projection assumes all actuarial assumptions are met, including the 7.85% anticipated investment return assumption, and the MMO contributions are made each year.

Chart 5: Projection of City Contributions, 7.85% return each year and the City makes contributions based on the MMO

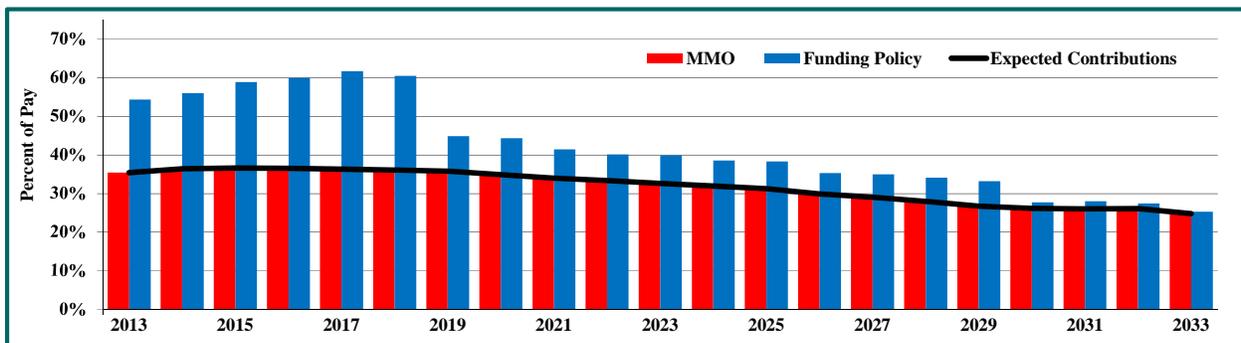
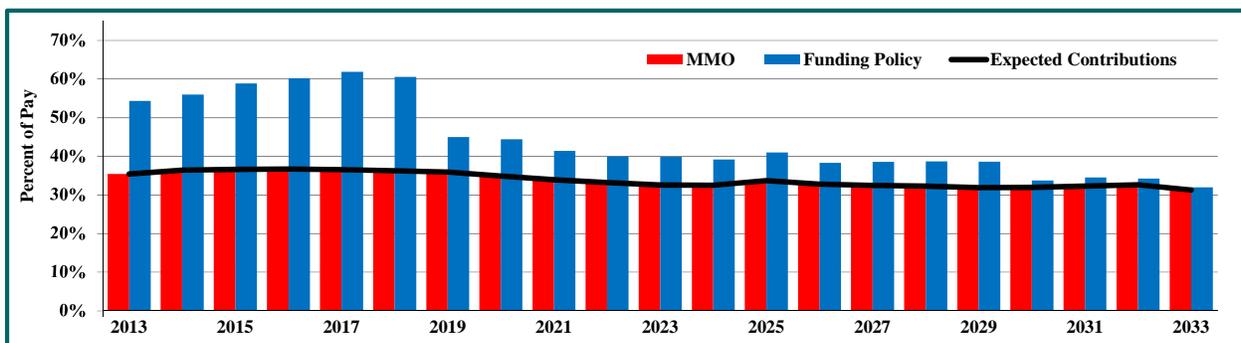


Chart 6: Projection of City Contributions, varying returns averaging 7.85% and the City makes contributions based on the MMO



As shown above, varying returns have an impact on the computed City contribution rate, especially in the later projection years. 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 when coupled with the impact of negative cash flows in down markets.

SECTION I
 BOARD SUMMARY

Chart 7: Projection of City Contributions, 7.85% return each year, and the City makes contributions based on the City’s Funding Policy

This chart shows the expected future contribution if the City’s Funding Policy contributions are made each year. Because under this scenario significantly larger contributions are assumed to be made each year up front, projected contributions are expected to decline dramatically when the initial funded base is expected to be paid off in 2018 when compared to Chart 5.

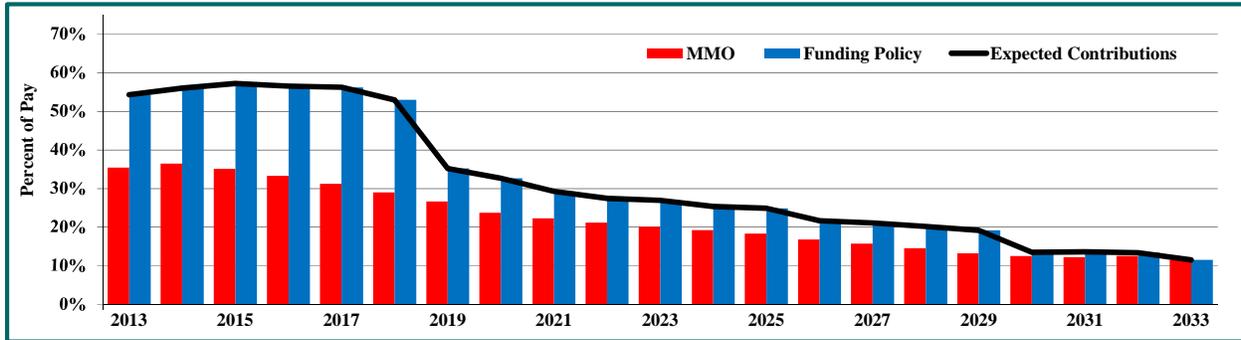
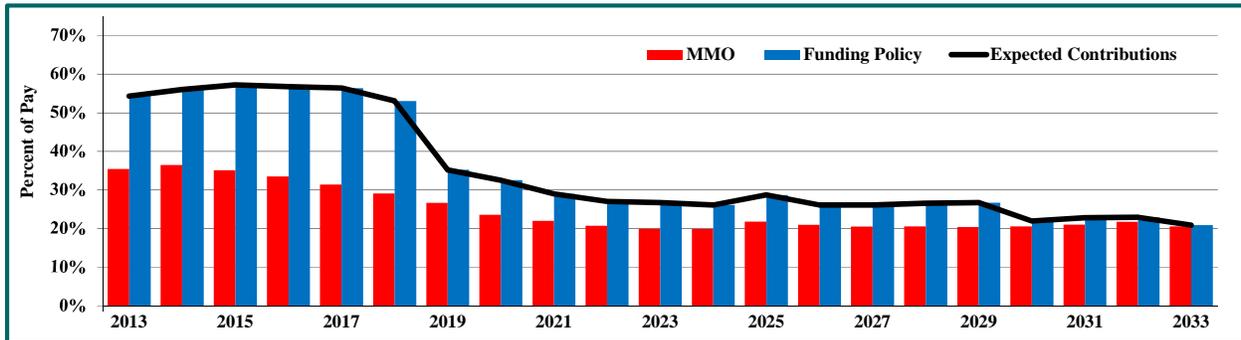


Chart 8: Projection of City Contributions, varying returns averaging 7.85% and the City makes contributions based on the City’s Funding Policy

Chart 8 is similar to Chart 7, illustrating again the smoothing expectation on a City Funding Policy level when the annual return rates vary from year to year.



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 because of the potential length of the projected period it will take before the System reaches this level of funding.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**SECTION II
ASSETS**

The Retirement System uses and discloses two different asset measurements 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 smoothes annual investment returns over ten years beginning in 2008 (five years before 2008) to reduce annual investment volatility and is used in determining contribution levels. By definition, the actuarial value of assets does not include the PAF.

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

- Disclosure of assets at July 1, 2012 and July 1, 2013,
- Statement of cash flows during the year,
- 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, 2013, and
- Disclosure of investment performance for the year.

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 would cause volatility in employer contributions, an actuarial value of assets is developed. Table II-1 below presents the market value by asset class as of July 1, 2012 and July 1, 2013. Table II-2 presents the System’s net cash flows for the plan year beginning July 1, 2012 and ending June 30, 2013. Table II-3 presents Fiscal 2013 City contributions.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

**SECTION II
ASSETS**

**Table II-1
Statement of Assets at Market Value¹**

	7/1/2013	7/1/2012
<u>Assets</u>		
Cash	\$ 200,682,000	\$ 202,479,449
Investments	4,238,153,000	3,716,592,996
Securities Lending	614,267,000	407,007,573
Due from Brokers and Other Receivables	182,597,553	264,214,407
Due from Other Governmental Units	<u>3,133,447</u>	<u>2,441,845</u>
Total Assets	\$ 5,238,833,000	\$ 4,592,736,270
<u>Liabilities</u>		
Due on Securities Lending	\$ 614,742,000	\$ 407,007,573
Due to Brokers and Other Liabilities	<u>178,867,000</u>	<u>262,911,910</u>
Total Liabilities	\$ 793,609,000	\$ 669,919,483
Net Assets	\$ 4,445,224,000	\$ 3,922,816,787
Deferred Contributions for each FYE	<u>0</u>	<u>230,000,001</u>
Net Assets with Deferred Contributions	\$ 4,445,224,000	\$ 4,152,816,788

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

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

SECTION II
ASSETS

B. System Cash Flows for the Year July 1, 2012 through July 1, 2013

Table II-2 Changes in Market Values¹		
Value of Assets – July 1, 2012		\$ 4,152,817,000
<u>Additions</u>		
Contributions:		
Employer Contributions	\$ 551,823,000	
Employee Contributions	49,614,000	
Total Contributions		\$ 601,437,000
Investment Income:		
Gain/(Loss) from Sale of Investments	\$ 332,000,000	
Interest and Dividends	122,893,000	
Total Investment Income	\$ 454,893,000	
Investment Activity Expenses:		
Investment Expenses	(12,226,000)	
Total Investment Activity Expenses	\$ (12,226,000)	
Securities Lending Activities:		
Securities Lending Income	\$ 2,996,000	
Securities Lending Expenses	(331,000)	
Net Income from Securities Lending Activities	\$ 2,665,000	
Miscellaneous Operating Revenues	\$ 469,000	
Net Investment Income		445,801,000
Total Additions		\$ 1,047,238,000
<u>Deductions</u>		
Administrative Expenses	\$ (8,341,000)	
Withdrawal Refunds	(5,744,000)	
Benefit Payments	(740,746,000)	
PAF Distributions	0	
Total Deductions		(754,831,000)
<u>Total</u>		
Net Increase (Decrease)		292,407,000
Value of Assets – July 1, 2013		\$ 4,445,224,000

¹ Includes the PAF which is not available for funding purposes and beginning of year assets reflect \$230 million in deferred contributions actually received during the year.

² Does not include the \$230 million in deferred contributions repaid during the year because they are included in the beginning of year assets.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

SECTION II
ASSETS

Cash Received during Fiscal Year 2013	\$	763,822,655
Cash Received from Quasi-Agencies		18,000,345
Total Cash Received during Fiscal Year 2013	\$	781,823,000
Payment of Deferred Contributions		(230,000,000)
Total Contributions for Fiscal Year 2013	\$	551,823,000

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**SECTION II
ASSETS**

C. Actuarial Value of Assets

To determine on-going funding requirements, most pension funds 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. Beginning with investment losses as of Fiscal Year End 2009, gains and losses are prospectively distributed in equal amounts over a ten-year period (over a five year period prior to 2009) coupled with the requirement that the resulting asset value may not be more or less than 20% of the MVA.

Table II-4 Development of Actuarial Value of Assets as of July 1, 2013						
1. Market Value of Assets as of July 1, 2013						\$ 4,445,223,788
2. Pension Adjustment Fund (PAF) as of July 1, 2013 Before Additional Transfers						\$ 1,096,608
3. Market Value of Assets Net of Original PAF*						\$ 4,444,127,180
4. Deferred Asset Gains/(Losses)						
<u>Plan</u> <u>Year</u>	<u>Investment</u> <u>Gains / (Losses)</u>	<u>Percent</u> <u>Recognized</u>	<u>Percent</u> <u>Deferred</u>	<u>Amount</u> <u>Deferred</u>		
2008	\$ (1,235,073,412)	50%	50%	\$ (617,536,706)		
2009	200,524,637	40%	60%	120,314,782		
2010	414,187,915	30%	70%	289,931,541		
2011	(328,486,968)	20%	80%	(262,789,574)		
2012	127,718,278	10%	90%	114,946,450		
Total				\$ (355,133,507)		
5. Preliminary Actuarial Value as of July 1, 2013 (5 = 3 - 4)						\$ 4,799,260,687
6. Corridor for Actuarial Value						
a. 80% of Market Value Net of PAF						\$ 3,555,301,744
b. 120% of Market Value Net of PAF						\$ 5,332,952,616
7. Additional PAF Transfer as of July 1, 2013						\$ 0
8. Actuarial Value of Assets Net of Final PAF as of July 1, 2013 8 = max((min of 5 or 6b) and 6a), minus 7						\$ 4,799,260,687
9. As a percent of Market Value Net of Final PAF						108.0%
10. Market Value of Assets Net of Final PAF						\$ 4,444,127,180

* Market value of assets net of original PAF before the determination of the final PAF amount. See section II - 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, 2013 ACTUARIAL VALUATION**

**SECTION II
ASSETS**

D. Allocation of Actuarial Value of Assets

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

Table II-5									
Allocation of Assets for Valuation Purposes Between Plans as of July 1, 2013									
(\$ thousands)									
	<u>1967 Plan</u>			<u>1987 Plan</u>				<u>Plan '10</u>	<u>Total</u>
	Municipal	Police	Fire	Municipal	Elected	Police	Fire	Municipal	
1. Actuarial Value of Assets as of July 1, 2012	\$ 1,786,073	\$ 751,692	\$ 309,350	\$ 853,066	\$ 10,992	\$ 792,441	\$ 213,179	\$ 0	\$ 4,716,793
2. Transactions During Plan Year July 1, 2012 to June 30, 2013									
a. Contributions									
City and Commonwealth Employees	\$ 241,378 6,173	\$ 141,513 2,577	\$ 53,851 813	\$ 47,157 15,249	\$ 822 241	\$ 38,119 19,020	\$ 10,983 5,537	\$ 0 4	\$ 533,823 49,614
Quasi-Public Agencies	15,408	0	0	2,592	0	0	0	0	18,000
b. Benefit Payments	(402,147)	(204,666)	(88,516)	(24,536)	(1,530)	(14,973)	(4,378)	0	(740,746)
c. Withdrawals	(1,429)	(272)	(19)	(2,199)	0	(1,570)	(255)	0	(5,744)
d. Administrative Expenses	(3,160)	(1,326)	(457)	(2,367)	(6)	(794)	(231)	0	(8,341)
e. Net Transactions	\$ (143,777)	\$ (62,174)	\$ (34,328)	\$ 35,896	\$ (473)	\$ 39,802	\$ 11,656	\$ 4	\$ (153,394)
3. Total Fund Balance Prior to Allocation of Investment Income [1. + 2e.]	\$ 1,642,296	\$ 689,518	\$ 275,022	\$ 888,962	\$ 10,519	\$ 832,243	\$ 224,835	\$ 4	\$ 4,563,399
4. Investment Income During Plan Year July 1, 2012 to June 30, 2013	\$ 84,883	\$ 35,638	\$ 14,215	\$ 45,946	\$ 544	\$ 43,015	\$ 11,621	\$ 0	\$ 235,862
5. Preliminary Actuarial Value of Assets as of July 1, 2013 [3. + 4.]	\$ 1,727,179	\$ 725,155	\$ 289,237	\$ 934,909	\$ 11,062	\$ 875,258	\$ 236,456	\$ 4	\$ 4,799,261
6. Final Actuarial Value of Assets With Corridor as of July 1, 2013	\$ 1,727,179	\$ 725,155	\$ 289,237	\$ 934,909	\$ 11,062	\$ 875,258	\$ 236,456	\$ 4	\$ 4,799,261

Note: Numbers may not add due to rounding

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**SECTION II
ASSETS**

E. Development of the Pension Adjustment Fund as of July 1, 2013

The table below 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 increase 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 II-6 Development of the Pension Adjustment Fund as of July 1, 2013		
1. PAF on July 1, 2012	\$	988,497
2. PAF Distribution		0
3. Market Value Asset Return Through June 30, 2013 *		10.94%
4. PAF on July 1, 2013 Before Additional Transfers** =(1) x [1 + (3)] + (2)	\$	1,096,608
5. Adjusted Market Value of Assets Through June 30, 2013	\$	4,333,264,645
6. Adjusted Market Value of Assets Return Through June 30, 2013 ***		3.61%
7. Return in Excess of Investment Assumption Plus 1.0%, Limited to 5.0% =(6) - [7.95% + 1.00%]		0.00%
8. Additional Transfer as of July 1, 2013 =50% of (7) x (5)	\$	0
9. Total PAF as of July 1, 2013 = (4) + (8)	\$	1,096,608

* 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, 2013 ACTUARIAL VALUATION

**SECTION II
ASSETS**

F. Investment Performance

The market value of assets internal rate of return was 10.9% for the year ending June 30, 2013. This is compared to an assumed return of 7.95% for the same period. This return produced an overall investment gain of \$127.7 million for the year ending June 30, 2013. In the table below, we also provide returns from the two broad asset classes for comparison.

On an actuarial value of assets basis (net of PAF), the return for FYE 2013 was 5.1%.

Year Ending June 30,	Investment Return Assumption	Market Value	Actuarial Value *	Total Return Standard & Poor's 500 Index	Barclays Aggregate Bond Index**
1995	9.00%	11.7%	7.8%	26.1%	12.8%
1996	9.00%	15.1%	10.1%	26.0%	4.7%
1997	9.00%	18.3%	12.2%	34.6%	8.2%
1998	9.00%	14.3%	13.1%	30.2%	10.5%
1999	9.00%	10.0%	13.1%	22.7%	3.1%
2000	9.00%	9.6%	11.1%	7.3%	4.6%
2001	9.00%	-6.0%	8.3%	-14.8%	11.2%
2002	9.00%	-5.8%	3.4%	-18.0%	8.6%
2003	9.00%	1.8%	-2.2%	0.3%	10.4%
2004	9.00%	16.6%	4.6%	19.1%	0.3%
2005	8.75%	9.9%	1.8%	6.3%	6.8%
2006	8.75%	11.3%	6.1%	8.6%	-0.8%
2007	8.75%	17.0%	10.7%	20.6%	6.1%
2008	8.75%	-4.5%	10.1%	-13.1%	7.1%
2009	8.75%	-19.9%	-9.3%	-26.2%	6.0%
2010	8.25%	13.8%	12.9%	14.4%	9.2%
2011	8.15%	19.4%	9.9%	28.1%	3.6%
2012	8.10%	0.2%	2.4%	3.1%	7.3%
2013	7.95%	10.9%	5.1%	17.9%	-0.8%

* Net of PAF

** Formerly Lehman Brothers Aggregate Bond Index

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**SECTION II
ASSETS**

G. Asset Gain/(Loss)

There was a \$127.7 million investment gain on market value of assets when compared to the expected as of July 1, 2013. Table II-8 reconciles the 2013 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 II – 4). Also provided below is a reconciliation of the PAF. There was no PAF transfer amount or distribution as of July 1, 2013.

Table II-8			
Calculation of Asset Gain/(Loss)			
	Market Value (Net of PAF)	PAF	Total Market Value
1. Market Value of Assets as of July 1, 2012	\$ 4,151,828,291	\$ 988,497	\$ 4,152,816,788
2. Transactions During Plan Year July 1, 2012 to June 30, 2013			
a. Contributions			
City and Commonwealth	\$ 533,822,655	\$ 0	\$ 533,822,655
Employees	49,614,000	0	49,614,000
Quasi-Public Agencies	18,000,345	0	18,000,345
b. Benefit Payments	(740,746,000)	0	(740,746,000)
c. Withdrawals	(5,744,000)	0	(5,744,000)
d. Administrative Expenses	(8,341,000)	0	(8,341,000)
e. Net Transactions	\$ (153,394,000)	\$ 0	\$ (153,394,000)
3. Expected Investment Income From July 1, 2012 to June 30, 2013	\$ 318,676,443	\$ 108,111 ¹	\$ 318,784,554
4. PAF transfer at July 1, 2013	\$ 0	\$ 0	\$ 0
5. Expected Market Value of Assets as of July 1, 2013 [1. + 2.e. + 3. + 4]	\$ 4,317,110,734	\$ 1,096,608	\$ 4,318,207,342
6. Market Value of Assets as of July 1, 2013	\$ 4,444,127,180	\$ 1,096,608	\$ 4,445,223,788
7. Investment Gain/(Loss) [6. - 5.]	\$ 127,016,446	\$ 0	\$ 127,016,446

¹ 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, 2013 ACTUARIAL VALUATION

**SECTION III
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, 2012 and July 1, 2013,
- 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, 2014.

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 pay off 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.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**SECTION III
LIABILITIES**

Table III-1 shows the present value of future benefits, actuarial liability, and unfunded actuarial liability as of July 1, 2013, and July 1, 2012, for the Retirement System.

Table III-1 Disclosure of Liabilities (\$ thousands)		
	July 1, 2013	July 1, 2012
Present Value of Future Benefits		
Actives	\$ 4,198,370	\$ 3,924,652
Terminated Vesteds	117,083	116,813
Disabled	720,597	699,033
Retirees	4,441,281	4,187,990
Beneficiaries	571,413	550,868
DROP Account plus Deferred Annuities	1,098,426	1,292,585
Non-Vested Refunds	<u>6,123</u>	<u>5,975</u>
Total City PVFB	\$ 11,153,293	\$ 10,777,916
Market Value of Assets	(4,445,224)	(4,152,817)
Present Value Future Member Contrib.	<u>(348,784)</u>	<u>(339,045)</u>
City's Unfunded Future Obligation	\$ 6,359,285	\$ 6,286,054
Actuarial Liability		
Actives	\$ 3,171,233	\$ 2,946,588
Terminated Vesteds	117,083	116,813
Disabled	720,597	699,033
Retirees	4,441,281	4,187,990
Beneficiaries	571,413	550,868
DROP	1,098,426	1,292,585
Non-Vested Refunds	<u>6,123</u>	<u>5,975</u>
Total City AL	\$ 10,126,156	\$ 9,799,852
Actuarial Value of Assets	<u>(4,799,261)</u>	<u>(4,716,793)</u>
Unfunded Actuarial Liability	\$ 5,326,895	\$ 5,083,059

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**SECTION III
LIABILITIES**

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

Table III-2									
Liabilities Detail as of July 1, 2013									
(\$ thousands)									
	<u>1967 Plan</u>			<u>1987 Plan</u>				<u>Plan '10</u>	<u>Total</u>
	<u>Municipal</u>	<u>Police</u>	<u>Fire</u>	<u>Municipal</u>	<u>Elected</u>	<u>Police</u>	<u>Fire</u>	<u>Municipal</u>	
Present Value of Future Benefits									
Actives	\$ 877,743	\$ 274,176	\$ 80,026	\$ 1,250,827	\$ 14,391	\$ 1,345,637	\$ 355,498	\$ 73	\$ 4,198,370
Terminated Vesteds	58,458	147	0	42,541	0	12,833	3,104	0	117,083
Disabled	233,930	219,839	53,740	56,305	0	132,898	23,886	0	720,597
Retirees	2,382,069	1,268,481	590,045	137,074	10,788	35,260	17,564	0	4,441,281
Beneficiaries	312,482	152,324	67,100	19,349	426	13,831	5,901	0	571,413
DROP	608,905	278,116	90,456	70,292	0	39,565	11,092	0	1,098,426
Non-Vested Refunds	1,736	156	50	3,507	0	533	141	0	6,123
Total PVFB	\$ 4,475,323	\$ 2,193,239	\$ 881,417	\$ 1,579,896	\$ 25,605	\$ 1,580,557	\$ 417,186	\$ 73	\$11,153,293
Actuarial Liability									
Actives	\$ 805,769	\$ 244,199	\$ 71,738	\$ 934,213	\$ 11,940	\$ 881,897	\$ 221,471	\$ 5	\$ 3,171,233
Terminated Vesteds	58,458	147	0	42,541	0	12,833	3,104	0	117,083
Disabled	233,930	219,839	53,740	56,305	0	132,898	23,886	0	720,597
Retirees	2,382,069	1,268,481	590,045	137,074	10,788	35,260	17,564	0	4,441,281
Beneficiaries	312,482	152,324	67,100	19,349	426	13,831	5,901	0	571,413
DROP	608,905	278,116	90,456	70,292	0	39,565	11,092	0	1,098,426
Non-Vested Refunds	1,736	156	50	3,507	0	533	141	0	6,123
Total AL	\$ 4,403,349	\$ 2,163,262	\$ 873,129	\$ 1,263,283	\$ 23,154	\$ 1,116,817	\$ 283,159	\$ 5	\$10,126,156
Actuarial Value of Assets	(1,727,179)	(725,155)	(289,237)	(934,909)	(11,062)	(875,258)	(236,456)	(4)	(4,799,261)
Unfunded Actuarial Liability	\$ 2,676,170	\$ 1,438,107	\$ 583,892	\$ 328,374	\$ 12,092	\$ 241,559	\$ 46,703	\$ 1	\$ 5,326,895
Funding %	39.2%	33.5%	33.1%	74.0%	47.8%	78.4%	83.5%	79.9%	47.4%

Note: Numbers may not add due to rounding.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**SECTION III
LIABILITIES**

Table III-3 shows the derivation of the City normal cost as a percent of pay for each Plan in the System.

	Table III-3								
	Derivation of the Normal Cost as of July 1, 2013								
	(\$ thousands)								
	<u>1967 Plan</u>			<u>1987 Plan</u>				<u>Plan '10</u>	
	<u>Municipal</u>	<u>Police</u>	<u>Fire</u>	<u>Municipal</u>	<u>Elected</u>	<u>Police</u>	<u>Fire</u>	<u>Municipal</u>	<u>Total</u>
Retirement	\$ 8,596	\$ 4,663	\$ 1,374	\$ 23,805	\$ 230	\$ 36,246	\$ 10,731	\$ 5	\$ 85,651
Death	438	198	59	1,826	17	1,687	513	1	4,739
Disability	1,272	605	165	5,389	30	5,241	1,495	1	14,198
Termination	3,623	635	176	15,024	144	3,350	828	2	23,782
Administrative Expenses	3,166	1,337	459	2,555	6	836	257	1	8,616
Total Normal Cost	\$ 17,094	\$ 7,437	\$ 2,234	\$ 48,599	\$ 428	\$ 47,361	\$ 13,823	\$ 10	\$ 136,987
Expected Employee Contributions	\$ 5,824	\$ 2,372	\$ 693	\$ 14,553	\$ 264	\$ 18,679	\$ 5,299	\$ 8	\$ 47,692
City Normal Cost	\$ 11,270	\$ 5,066	\$ 1,541	\$ 34,045	\$ 164	\$ 28,682	\$ 8,525	\$ 1	\$ 89,294
Current Annual Payroll	\$ 155,310	\$ 39,527	\$ 11,555	\$ 746,329	\$ 3,168	\$ 369,151	\$ 104,422	\$ 263	\$1,429,723
City Normal Cost as % of Pay, Beginning of Year Payment	7.257%	12.816%	13.334%	4.562%	5.170%	7.770%	8.164%	0.560%	6.246%
City Normal Cost as % of Pay, End of Year Payment	7.826%	13.822%	14.381%	4.920%	5.575%	8.380%	8.805%	0.603%	6.736%

Note: Numbers may not add due to rounding.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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**SECTION III
LIABILITIES**

Table III-4 shows changes in the unfunded actuarial liability from July 1, 2012 to July 1, 2013 due to actuarial experience and assumption changes; there were no plan changes. It also shows the development of the expected unfunded actuarial liability from July 1, 2013 to July 1, 2014 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 IV – 10 and in Appendix D. 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 III-4 Expected Unfunded Actuarial Liability for the Plan Year Ending June 30, 2014 (\$ thousands)									
	<u>1967 Plan</u>			<u>1987 Plan</u>				<u>Plan '10</u>	<u>Total</u>
	<u>Municipal</u>	<u>Police</u>	<u>Fire</u>	<u>Municipal</u>	<u>Elected</u>	<u>Police</u>	<u>Fire</u>	<u>Municipal</u>	
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation*	\$ 2,455,516	\$ 1,333,377	\$ 556,404	\$ 241,722	\$ 10,420	\$ 193,478	\$ 41,226	\$ 0	\$ 4,832,143
2. Changes in UAL due to									
a. Actuarial Experience	\$ 165,104	\$ 77,840	\$ 16,773	\$ 63,022	\$ 1,363	\$ 27,304	\$ 292	\$ 1	\$ 351,699
b. Assumption Changes	55,550	26,889	10,714	23,630	308	20,777	5,184	0	143,054
c. Active Plan Changes	0	0	0	0	0	0	0	0	0
d. Inactive Plan Changes	0	0	0	0	0	0	0	0	0
e. Subtotal	\$ 220,654	\$ 104,729	\$ 27,487	\$ 86,652	\$ 1,672	\$ 48,081	\$ 5,476	\$ 1	\$ 494,753
3. Actual UAL as of July 1, 2013 [1. + 2e.]	\$ 2,676,170	\$ 1,438,106	\$ 583,892	\$ 328,374	\$ 12,092	\$ 241,558	\$ 46,703	\$ 1	\$ 5,326,895
4. Expected Changes in UAL from July 1, 2013 to July 1, 2014 due to									
a. Interest on Changes in UAL	\$ 17,321	\$ 8,221	\$ 2,158	\$ 6,802	\$ 131	\$ 3,774	\$ 430	\$ 0	\$ 38,838
b. FY 2014 Amortization Contribution	(183,400)	(116,341)	(42,119)	(6,984)	(331)	(3,550)	(769)	0	(353,493)
c. Subtotal	\$ (166,078)	\$ (108,120)	\$ (39,962)	\$ (181)	\$ (199)	\$ 224	\$ (339)	\$ 0	\$ (314,655)
5. Expected UAL as of July 1, 2014 [3. + 4c.]	\$ 2,510,092	\$ 1,329,986	\$ 543,930	\$ 328,193	\$ 11,892	\$ 241,782	\$ 46,364	\$ 1	\$ 5,012,240

* Expected UAL is based upon the City's funding policy

Note: Numbers may not add due to rounding.

**SECTION IV
CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION**

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contribution is needed based upon 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 are both stable, predictable and 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. Finally, the normal cost is reduced by the member contribution to produce the employer normal cost. The unfunded actuarial liability is the difference between the EAN actuarial liability and the actuarial value of assets.

Within this section of the report, two contribution amounts are determined based upon two different sets of rules for determining the way the unfunded actuarial liability is funded.

The first method 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 method is in accordance with the City's Funding Policy which predates the Act 205 rules and calls for contributions that are greater than the MMO until the initial unfunded liability determined in 1984 is fully funded. Under both funding methods 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 and the City's Funding Policy, which is outlined in more detail in Appendix B, 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.

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

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**SECTION IV
CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION**

In Table IV-1 we provide the employee contribution rates as a percent of pay effective for the plan year starting July 1, 2014. Table IV-2a and Table IV-2b shows the quasi-agency funding rates as a percent of payroll for both Plans 67 Municipal and 87 Municipal based on the funding policy and MMO respectively.

Table IV-1				
Employee Contribution Rates				
for the Plan Year Beginning July 1, 2014				
	Municipal¹	Elected²	Police	Fire
Plan 67	3.75%	N/A	6.00%	6.00%
Plan 87	1.95%	8.33%	5.00%	5.00%
Plan 87 Prime ³	3.38%	N/A	6.00%	6.00%
Plan '10 ⁴	3.23%	N/A	5.50%	5.50%

¹For Municipal 1967 plan, employee contributions are 6% for pay in excess of the social security wage base

²The employee contribution rate is based upon the normal cost of \$427,618 under Plan 87 Elected, normal cost of \$234,093 under Plan 87 Municipal and current annual payroll of \$3,167,623

³Plan 87 Prime refers to new hires who have the option to elect Plan '10 but have elected to stay in Plan '87

⁴There were only 7 participants in Plan '10 Municipal as of the valuation date. Since this group is so small the employee contribution rate is phased in over 10 years with the employee contribution rate calculated for new entrants in Plan '87 Prime

The next two tables isolate the City Funding Policy requirements for the Quasi Agencies that participate in the System broken out for Municipal Plans 1967 and 1987 both under the Funding Policy and MMO.

Table IV-2a		
Quasi Agency Funding Rate as a		
Percent of Payroll (Based on Funding Policy)		
Valuation Date	July 1, 2013	July 1, 2012
Fiscal Year Ending in Year	2015	2014
67 Municipal		
1. Normal Cost Rate	7.826%	7.702%
2. Amortization Rate under the City's Funding Policy	<u>261.704%</u>	<u>229.469%</u>
3. Total Year-End Rate [1. + 2.]	269.530%	237.171%
4. Quarterly adjustment factor	0.97184	0.97150
5. Total, adjusted for Quarterly Payments [3. x 4.]	261.940%	230.412%
87 Municipal		
1. Normal Cost Rate	4.920%	4.871%
2. Amortization Rate under the City's Funding Policy	<u>4.819%</u>	<u>3.745%</u>
3. Total Year-End Rate [1. + 2.]	9.739%	8.616%
4. Quarterly adjustment factor	0.97184	0.97150
5. Total, adjusted for Quarterly Payments [3. x 4.]	9.465%	8.370%

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**SECTION IV
CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION**

Table IV-2b		
Quasi Agency Funding Rate as a Percent of Payroll (Based on MMO)		
Valuation Date	July 1, 2013	July 1, 2012
Fiscal Year Ending in Year	2015	2014
67 Municipal		
1. Normal Cost Rate	7.826%	7.702%
2. Amortization Rate under MMO	<u>161.849%</u>	<u>145.529%</u>
3. Total Year-End Rate [1. + 2.]	169.675%	153.231%
4. Quarterly adjustment factor	0.97184	0.97150
5. Total, adjusted for Quarterly Payments [3. x 4.]	164.897%	148.864%
87 Municipal		
1. Normal Cost Rate	4.920%	4.871%
2. Amortization Rate under MMO	<u>4.133%</u>	<u>3.196%</u>
3. Total Year-End Rate [1. + 2.]	9.053%	8.066%
4. Quarterly adjustment factor	0.97184	0.97150
5. Total, adjusted for Quarterly Payments [3. x 4.]	8.798%	7.837%

Table IV-3 shows the development of the FYE 2015 Minimum Municipal Obligation (MMO) for each division. Table IV-4 on the following page shows a schedule of amortization payments toward the MMO.

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

Table IV-3				
Development of the Minimum Municipal Obligation for Fiscal Year End 2015				
(\$ thousands)				
	Non-Uniformed	Police	Fire	Total
Estimated FY 2014-2015 Payroll	\$ 934,937	\$ 422,164	\$ 119,804	\$ 1,476,904
Normal Cost %	6.674%	12.877%	13.228%	8.979%
Normal Cost	\$ 62,396	\$ 54,362	\$ 15,848	\$ 132,606
Amortization Payment	262,724	145,995	55,070	463,789
Administrative Expenses	5,917	2,244	740	8,901
Subtotal	\$ 331,037	\$ 202,601	\$ 71,658	\$ 605,296
Expected Employee Contributions	(21,331)	(21,745)	(6,190)	(49,266)
Minimum Municipal Obligation	\$ 309,706	\$ 180,857	\$ 65,467	\$ 556,030

Note: Numbers may not add due to rounding.

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

Table IV-4 Unfunded Liability Payments toward the MMO for Fiscal Year 2015 (\$ thousands)												
Type of Base	Municipal			Police			Fire			Total		
	7/1/2013 Balance	Years Left	FY 2015 Payment									
Fresh Start Base												
est. July 1, 2009	\$ 2,661,521	26	\$ 225,305	\$ 1,498,129	26	\$ 126,821	\$ 580,553	26	\$ 49,145	\$ 4,740,203	26	\$ 401,271
Gain/Loss Base												
est. July 1, 2010	\$ (55,980)	17	\$ (5,634)	\$ (39,917)	17	\$ (4,017)	\$ (2,988)	17	\$ (301)	\$ (98,885)	17	\$ (9,951)
Assumption Change												
est. July 1, 2010	\$ 75,370	12	\$ 9,201	\$ 30,242	12	\$ 3,693	\$ 27,599	12	\$ 3,369	\$ 133,211	12	\$ 16,264
Gain/Loss												
est. July 1, 2011	\$ (109,667)	18	\$ (10,737)	\$ (22,222)	18	\$ (2,176)	\$ (21,853)	18	\$ (2,140)	\$ (153,742)	18	\$ (15,053)
Assumption Change												
est. July 1, 2011	\$ 21,640	13	\$ 2,518	\$ 13,011	13	\$ 1,514	\$ 4,388	13	\$ 511	\$ 39,039	13	\$ 4,542
Gain/Loss												
est. July 1, 2012	\$ 151,316	19	\$ 14,452	\$ 80,030	19	\$ 7,644	\$ 20,726	19	\$ 1,979	\$ 252,072	19	\$ 24,075
Assumption Change												
est. July 1, 2012	\$ 58,999	14	\$ 6,578	\$ 33,706	14	\$ 3,758	\$ 11,777	14	\$ 1,313	\$ 104,482	14	\$ 11,649
Gain/Loss												
est. July 1, 2013	\$ 133,949	20	\$ 12,509	\$ 39,019	20	\$ 3,644	\$ (5,507)	20	\$ (514)	\$ 167,461	20	\$ 15,639
Assumption Change												
est. July 1, 2013	\$ 79,489	15	\$ 8,532	\$ 47,666	15	\$ 5,116	\$ 15,899	15	\$ 1,707	\$ 143,054	15	\$ 15,355
Total	\$ 3,016,637		\$ 262,724	\$ 1,679,664		\$ 145,997	\$ 630,594		\$ 55,070	\$ 5,326,895		\$ 463,790

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**SECTION IV
CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION**

Table IV-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, 2013 for the MMO.

Table IV-5a				
Development of the Fiscal Year 2015 Amortization Payment under MMO				
Municipal and Elect				
(\$ thousands)				
	7/1/2013	Remaining		FY 2015
	Outstanding Balance	Years		Payment
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation	\$ 2,803,199		\$	241,682
2. Changes in UAL due to				
a. Actuarial Experience	\$ 133,949	20	\$	12,509
b. Assumption Changes	79,489	15		8,532
c. Active Plan Changes	0	10		0
d. Inactive Plan Changes	<u>0</u>	1		<u>0</u>
e. Subtotal	\$ 213,438		\$	21,041
3. Total [1c. + 2e.]	\$ 3,016,637		\$	262,723

Note: Numbers may not add due to rounding.

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Table IV-5b			
Development of the Fiscal Year 2015 Amortization Payment under MMO			
Police			
(\$ thousands)			
	7/1/2013	Remaining	FY 2015
	Outstanding Balance	Years	Payment
1. Expected Unfunded Actuarial			
Liability (UAL) as of July 1, 2013			
Based on July 1, 2012 Valuation	\$ 1,592,979		\$ 137,236
2. Changes in UAL due to			
a. Actuarial Experience	\$ 39,019	20	\$ 3,644
b. Assumption Changes	47,666	15	5,116
c. Active Plan Changes	0	10	0
d. Inactive Plan Changes	<u>0</u>	1	<u>0</u>
e. Subtotal	\$ 86,685		\$ 8,760
3. Total [1c. + 2e.]	\$ 1,679,664		\$ 145,996

Note: Numbers may not add due to rounding.

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**SECTION IV
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Table IV-5c				
Development of the Fiscal Year 2015 Amortization Payment under MMO				
Fire				
(\$ thousands)				
	7/1/2013	Remaining		FY 2015
	Outstanding Balance	Years		Payment
1. Expected Unfunded Actuarial				
Liability (UAL) as of July 1, 2013				
Based on July 1, 2012 Valuation	\$ 620,202		\$	53,877
2. Changes in UAL due to				
a. Actuarial Experience	\$ (5,507)	20	\$	(514)
b. Assumption Changes	15,899	15		1,707
c. Active Plan Changes	0	10		0
d. Inactive Plan Changes	<u>0</u>	1		<u>0</u>
e. Subtotal	\$ 10,392		\$	1,192
3. Total [1c. + 2e.]	\$ 630,594		\$	55,069

Note: Numbers may not add due to rounding.

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Table IV-5d			
Development of the Fiscal Year 2015 Amortization Payment under MMO			
Total			
(\$ thousands)			
	7/1/2013	Remaining	FY 2015
	Outstanding Balance	Years	Payment
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation	\$ 5,016,380		\$ 432,795
2. Changes in UAL due to			
a. Actuarial Experience	\$ 167,461	20	\$ 15,639
b. Assumption Changes	143,054	15	15,355
c. Active Plan Changes	0	10	0
d. Inactive Plan Changes	<u>0</u>	1	<u>0</u>
e. Subtotal	\$ 310,515		\$ 30,994
3. Total [1c. + 2e.]	\$ 5,326,895		\$ 463,789

Note: Numbers may not add due to rounding.

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

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

Table IV-6				
Summary of Modified Actuarial Data				
(\$ thousands)				
	Municipal	Police	Fire	Total
Actuarial Liability	\$ 5,689,791	\$ 3,280,077	\$ 1,156,287	\$ 10,126,156
Market Value of Assets (less POB)	\$ 2,145,571	\$ 1,376,741	\$ 360,286	\$ 3,882,598
Actuarial Value of Assets (less POB)	\$ 2,172,982	\$ 1,375,221	\$ 372,011	\$ 3,920,214
Unfunded Actuarial Liability (AL - AVA)	\$ 3,516,809	\$ 1,904,856	\$ 784,276	\$ 6,205,941
Amortization Contributions				
Total Amortization Amount	\$ 305,576	\$ 165,453	\$ 68,319	\$ 539,348
Remaining Years	24	24	24	24

Note: Numbers may not add due to rounding.

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Table IV-7												
Modified Unfunded Liability Payments toward the MMO for Fiscal Year 2015												
(\$ thousands)												
Type of Base	<u>Municipal</u>			<u>Police</u>			<u>Fire</u>			<u>Total</u>		
	7/1/2013 Balance	Remaining Years	FY 2015 Payment									
Fresh Start UAL Base est. July 1, 2009	\$ 3,121,042	26	\$ 264,204	\$ 1,690,514	26	\$ 143,106	\$ 716,176	26	\$ 60,626	\$ 5,527,732	26	\$ 467,937
July 1, 2010 Charges												
Experience (Gain)/Loss	\$ (49,581)	17	\$ (4,990)	\$ (34,683)	17	\$ (3,490)	\$ 1,702	17	\$ 171	\$ (82,561)	17	\$ (8,309)
Assumption Change	75,370	12	9,201	30,242	12	3,692	27,599	12	3,369	133,212	12	16,263
July 1, 2011 Charges												
Experience (Gain)/Loss	\$ (85,801)	18	\$ (8,401)	\$ (8,649)	18	\$ (847)	\$ (11,583)	18	\$ (1,134)	\$ (106,032)	18	\$ (10,381)
Assumption Change	\$ 21,640	13	\$ 2,518	\$ 13,011	13	\$ 1,514	\$ 4,388	13	\$ 511	\$ 39,039	13	\$ 4,542
July 1, 2012 Charges												
Experience (Gain)/Loss	\$ 152,016	19	\$ 14,519	\$ 84,389	19	\$ 8,060	\$ 21,641	19	\$ 2,067	\$ 258,046	19	\$ 24,646
Assumption Change	\$ 58,999	14	\$ 6,578	\$ 33,706	14	\$ 3,758	\$ 11,777	14	\$ 1,313	\$ 104,483	14	\$ 11,649
July 1, 2013 Charges												
Experience (Gain)/Loss	\$ 143,634	20	\$ 13,414	\$ 48,659	20	\$ 4,544	\$ (3,323)	20	\$ (310)	\$ 188,970	20	\$ 17,647
Assumption Change	<u>\$ 79,489</u>	15	<u>\$ 8,532</u>	<u>\$ 47,666</u>	15	<u>\$ 5,116</u>	<u>\$ 15,899</u>	15	<u>\$ 1,707</u>	<u>\$ 143,054</u>	15	<u>\$ 15,355</u>
Total	<u>\$ 3,516,809</u>		<u>\$ 305,576</u>	<u>\$ 1,904,856</u>		<u>\$ 165,453</u>	<u>\$ 784,277</u>		<u>\$ 68,319</u>	<u>\$ 6,205,942</u>		<u>\$ 539,348</u>

Note: Numbers may not add due to rounding.

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

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

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

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

Table IV-9a				
Receipts and Disbursements Excluding Bond Issue Assets				
	Municipal	Police	Fire	Total
Assets as of July 1, 2012	\$ 2,023,896,237	\$ 1,260,542,301	\$ 340,847,171	\$ 3,625,285,709
Receipts				
Employer Contributions	\$ 285,144,124	\$ 158,422,632	\$ 62,548,669	\$ 506,115,425
Employee Contributions	21,667,000	21,597,000	6,350,000	49,614,000
State Aid	35,632,105	22,120,361	7,983,906	65,736,372
Supplemental State Assistance	0	0	0	0
Investment Income (includes investment expenses)	216,605,978	137,659,415	36,412,683	390,678,076
Other Receipts	0	0	0	0
Total Receipts	\$ 559,049,207	\$ 339,799,408	\$ 113,295,259	\$ 1,012,143,873
Disbursements				
Benefit Payments	\$ 428,213,000	\$ 219,639,000	\$ 92,894,000	\$ 740,746,000
Refund of Contributions	3,628,000	1,842,000	274,000	5,744,000
Administrative Expenses	5,533,116	2,119,883	688,002	8,341,000
PAF Transfer at Year End	0	0	0	0
Other Disbursements	0	0	0	0
Total Disbursements	\$ 437,374,116	\$ 223,600,883	\$ 93,856,002	\$ 754,831,000
Assets as of July 1, 2013	\$ 2,145,571,328	\$ 1,376,740,826	\$ 360,286,428	\$ 3,882,598,583

Note: Numbers may not add due to rounding.

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

Table IV-9b				
Receipts and Disbursements Including Bond Issue Assets				
	Municipal	Police	Fire	Total
Assets as of July 1, 2012	\$ 2,333,317,153	\$ 1,363,751,321	\$ 454,759,819	\$ 4,151,828,293
Receipts				
Employer Contributions	\$ 271,724,414	\$ 157,511,543	\$ 56,850,671	\$ 486,086,628
Employee Contributions	21,667,000	21,597,000	6,350,000	49,614,000
State Aid	35,632,105	22,120,361	7,983,906	65,736,372
Supplemental State Assistance	0	0	0	0
Investment Income (includes investment expenses)	248,053,269	149,486,900	48,152,720	445,692,889
Other Receipts	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Receipts	\$ 577,076,788	\$ 350,715,804	\$ 119,337,297	\$ 1,047,129,889
Disbursements				
Benefit Payments	\$ 428,213,000	\$ 219,639,000	\$ 92,894,000	\$ 740,746,000
Refund of Contributions	3,628,000	1,842,000	274,000	5,744,000
Administrative Expenses	5,533,116	2,119,883	688,002	8,341,000
PAF Transfer at Year End	0	0	0	0
Other Disbursements	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Disbursements	\$ 437,374,116	\$ 223,600,883	\$ 93,856,002	\$ 754,831,000
Assets as of July 1, 2013	\$ 2,473,019,825	\$ 1,490,866,242	\$ 480,241,114	\$ 4,444,127,181

Note: Numbers may not add due to rounding.

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The Table IV – 10 and Table IV – 11 provide information on the City’s Funding Policy for FYE 2014 and FYE 2015. The differences between the MMO and the City’s Funding Policy are:

- The City’s Funding Policy amortizes the initial July 1, 1985 unfunded actuarial liability over 34 years. 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, 2013 valuation report will determine FYE 2014 contribution amounts). However, no interest is added to the MMO for this delay.
- 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 IV – 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 IV – 11 provides the estimated FYE 2015 and updated FYE 2014 contribution amount under the City’s Funding Policy. The estimated FYE 2015 contribution will be updated in next year’s actuarial valuation report based upon the July 1, 2014 payroll.

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Table IV-10					
Development of the Fiscal Year 2015 Amortization Payment under the City's Funding Policy					
Total					
(\$ thousands)					
	7/1/2013	7/1/2014	Remaining	FY 2015 Payment	FY 2015 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation Remaining	\$ 4,832,142	\$ 4,478,649		\$ 682,622	\$ 736,208
2. Changes in UAL due to					
a. Actuarial Experience	\$ 351,698	\$ 379,307	20	\$ 35,422	\$ 38,203
b. Assumption Changes	143,054	154,284	15	16,560	17,860
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	<u>0</u>	<u>0</u>	1	<u>0</u>	<u>0</u>
e. Subtotal	\$ 494,752	\$ 533,591		\$ 51,983	\$ 56,063
3. Total [1c. + 2e.]	\$ 5,326,894	\$ 5,012,240		\$ 734,605	\$ 792,272

Table IV-11					
City's Funding Policy Contributions*					
Fiscal Year	2015	% of Pay	2014	% of Pay	
Estimated FY Payroll	\$ 1,476,904		\$ 1,429,723		**
Normal Cost (with Expenses)	\$ 141,507	9.58%	\$ 134,980	9.44%	
Employee Contributions	<u>(49,266)</u>	3.34%	<u>(47,859)</u>	3.35%	
City Normal Cost	\$ 92,241	6.25%	\$ 87,121	6.09%	
Amortization Payment	<u>734,606</u>	49.74%	<u>681,919</u>	47.70%	
City's Funding Policy	\$ 826,847	55.99%	\$ 769,040	53.79%	

* Assuming beginning-of-year payment.

** FY 2014 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.

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The Governmental Accounting Standards Board's Statement No. 25 (GASB 25) is effective for plan years beginning after June 15, 1996, and supersedes Statement No. 5. GASB No. 25 establishes standards for disclosure of pension information by public employee retirement systems and governmental employers in notes to financial statements and supplementary information.

For the System effective for the Plan year beginning June 30, 2014 GASB Statement No. 67 will replace Statement No. 25, and effective for the City's Fiscal year ending June 30, 2015, GASB Statement No. 68 will replace Statement No. 27. This report only provides information under Statements 25 and 27. A separate report will be issued reporting amounts under Statement 67 as of June 30, 2014.

The disclosure presents the actuarial liability computed for funding purposes to the actuarial value of assets to determine a funding ratio (i.e., the EAN liability). The actuarial liability is determined assuming that participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 8.10% per annum for Fiscal Year 2013. For Fiscal Year 2014, the assumed interest rate will change to 7.95% based upon July 1, 2012 liabilities valued at this interest rate. For Fiscal Year 2015, the assumed interest rate will change to 7.85% based upon July 1, 2013 liabilities valued at this interest rate. GASB Statement No. 25 requires the actuarial liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of July 1, 2012 and July 1, 2013 are presented in Table V-1 and Table V-2.

GASB 25 also requires for the disclosure of two financial statements and two schedules of historical information:

- Statement of Plan Net Assets – includes information about System assets and liabilities at the valuation date. This statement can be found at the beginning of the Assets section of this report, in Table II-1. The City's deferred contributions are included in these amounts based on the requirement set out in Section 10 of Act 205.
- Statement of Changes in Plan Net Assets – shows receipts and disbursements from the Fund for the most recent plan year. This statement can also be found in the Assets section of this report, in Table II-2. The City's deferred contributions are included in these amounts based on the requirement set out in Section 10 of Act 205.
- Schedule of Funding Progress – discloses current and historical information about the funded status of the plan. This schedule can be found in Tables V-1 and V-3. Consistent with the exclusion of the deferred contribution amounts in the Schedule of Employer Contribution amounts, we have adjusted the Actuarial Value of Assets for the net amounts of the deferred contribution of \$230 million for the July 1, 2012 value.
- Schedule of Employer Contributions – discloses historical information about the Annual Required Contribution (ARC) and the actual contributions made by the employer. This

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schedule can be found in Table V-4. These contributions do not include the deferred contributions of \$150 million for FYE 2010 and \$80 million for FYE 2011.

GASB Statement No. 27 requires that financial statements must include additional disclosures for pension expenditures/expenses. It is effective for the period beginning after June 15, 1997. Table V-5 summarizes the results of this valuation according to our interpretation of GASB 27.

The interpretation of the statements is subject to your auditor's review. The required disclosures are:

- Annual Required Contribution (ARC) – this is the expected contribution required based on statement-specific valuation methods and assumptions, with the unfunded liability amortized over an initial period not to exceed 40 years and thereafter 30 years, either as a level-dollar amount or as a level percentage of pay, and with amortization of contributions less than or in excess of the required amount. Historically, the ARC has been shown as the contribution required under the City's Funding Policy.
- Equivalent Single Amortization Period – this is the number of years incorporated in a weighted average amortization factor for all amortization components combined. The weighted average amortization factor is equal to the total unfunded actuarial liability divided by the sum of the amortization provisions for each of the separately amortized components. This weighted average produces 9.9 years where the amortized components are based upon the Funding policy.
- Net Pension Obligation (NPO) – the accumulated value of contribution deficiencies (or excesses) over required contributions from July 1, 1987 to July 1, 2013 between the annual pension cost and the employer's contribution.
- Annual Pension Cost – is equal to the ARC plus one year's interest on NPO and ARC adjustment.

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Table V-1			
Funding Status Under GASB Statement No. 25			
(\$ thousands)			
	July 1, 2013	July 1, 2012	% Change
1. Actuarial Liabilities			
a. Members Currently Receiving Payments	\$ 6,831,717	\$ 6,730,476	1.5%
b. Vested Terminated and Inactive Members	123,206	122,788	0.3%
c. Active Members	<u>3,171,233</u>	<u>2,946,587</u>	7.6%
d. Total Actuarial Liability	\$ 10,126,156	\$ 9,799,851	3.3%
2. Actuarial Value of Assets*	\$ 4,799,261	\$ 4,486,793	7.0%
3. Unfunded Actuarial Liability	\$ 5,326,895	\$ 5,313,058	0.3%
4. Ratio of Actuarial Value of Assets to Actuarial Liability (2)/(1)(d)	47.4%	45.8%	1.6%

* Actuarial Value of Assets have been adjusted to net out the outstanding deferred contribution amount of \$230 million as of July 1, 2012.

Note: Numbers may not add due to rounding.

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SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-2
Statement of Changes in Liabilities - GASB No. 25 Basis
(\$ thousands)

Actuarial Liability as of July 1, 2012	\$	9,799,851
Increase (Decrease) During Year Attributable to:		
Passage of Time		749,415
Benefits Paid		(746,490)
Assumption Change		143,054
Plan Amendment		0
Benefits Accrued, Other Gains/Losses		180,326
Net Increase (Decrease)	\$	326,305
Actuarial Liability as of July 1, 2013	\$	10,126,156

Table V-3
Schedule of Funding Progress
(\$ millions)

Actuarial Valuation Date *	Actuarial Value of Assets (a)	Actuarial Liability (b)	Unfunded Actuarial Liability (UAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAL as a % of Covered Payroll [(b-a)/c]
7/1/1992	\$ 1,981.8	\$ 4,425.5	\$ 2,443.7	44.8%	\$ 993.3	246.0%
7/1/1993	2,113.9	4,502.1	2,388.2	47.0%	975.0	244.9%
7/1/1994	2,225.2	4,662.6	2,437.4	47.7%	974.3	250.2%
7/1/1995	2,312.1	4,850.8	2,538.7	47.7%	1,006.4	252.3%
7/1/1996	2,457.2	5,098.1	2,640.9	48.2%	1,068.3	247.2%
7/1/1997	2,660.9	5,318.1	2,657.2	50.0%	1,067.7	248.9%
7/1/1998	2,921.3	5,586.1	2,664.8	52.3%	1,128.2	236.2%
7/1/1999	4,496.8	5,862.1	1,365.3	76.7%	1,178.6	115.8%
7/1/2000	4,765.0	6,193.4	1,428.4	76.9%	1,142.8	125.0%
7/1/2001	4,943.4	6,379.8	1,436.4	77.5%	1,180.4	121.7%
7/1/2002	4,891.3	6,727.2	1,835.9	72.7%	1,207.3	152.1%
7/1/2003	4,548.1	7,188.3	2,640.2	63.3%	1,269.3	208.0%
7/1/2004	4,333.1	7,247.7	2,914.6	59.8%	1,266.0	230.2%
7/1/2005	4,159.5	7,851.5	3,692.0	53.0%	1,270.7	290.5%
7/1/2006	4,168.5	8,083.7	3,915.2	51.6%	1,319.4	296.7%
7/1/2007	4,421.7	8,197.2	3,775.5	53.9%	1,351.8	279.3%
7/1/2008	4,623.6	8,402.2	3,778.7	55.0%	1,456.5	259.4%
7/1/2009	4,042.1	8,975.0	4,932.9	45.0%	1,463.3	337.1%
7/1/2010	4,230.9	9,317.0	5,086.2	45.4%	1,421.2	357.9%
7/1/2011	4,489.1	9,487.5	4,998.4	45.8%	1,371.3	364.5%
7/1/2012	4,486.8	9,799.9	5,313.1	45.8%	1,372.2	387.2%
7/1/2013	4,799.3	10,126.2	5,326.9	47.4%	1,429.7	372.6%

* The actuarial valuation reports need to be referenced in comparison of these values to ascertain when and if the values reflect assumption, benefit or method changes.

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**Table V-4
Schedule of Employer Contributions
(\$ millions)**

Fiscal Year Ended June 30	Annual Required Contribution (ARC)	Percentage of ARC Contributed
1993	\$ 209.4	100.0%
1994	223.8	104.5%
1995	212.8	100.0%
1996	222.5	100.0%
1997	237.0	100.0%
1998	252.1	100.0%
1999	256.7	586.9%*
2000	168.9	108.9%
2001	167.6	100.0%
2002	178.2	100.0%
2003	195.5	91.9%
2004	253.8	79.9%
2005	358.1	83.6%
2006	395.0	84.0%
2007	527.9	81.9%
2008	536.9	79.5%
2009	539.5	84.4%
2010	581.1	53.8%**
2011	715.5	65.7%**
2012	722.5	77.0%
2013	738.0	105.9%***

* Due to Pension Obligation Bond worth \$1,250,000,000 deposited February 2, 1999

** Reflects actual contributions for FYE 2010 and FYE 2011 which does not include the deferred contributions

*** Reflects repayment of deferred contributions of \$230 million

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Table V-5

**Calculation of Annual Pension Cost
(\$ thousands)**

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
ARC	\$ 223,750	\$ 212,838	\$ 222,482	\$ 237,016	\$ 252,080	\$ 256,704	\$ 168,928	\$ 167,616	\$ 178,239	\$ 195,514
Interest on NPO	0	(900)	(869)	(840)	(811)	(783)	(113,257)	(110,748)	(106,975)	(103,330)
Adjustment to ARC	<u>0</u>	<u>1,241</u>	<u>1,198</u>	<u>1,158</u>	<u>1,118</u>	<u>1,080</u>	<u>156,130</u>	<u>152,672</u>	<u>147,470</u>	<u>142,446</u>
Annual Pension Cost	\$ 223,750	\$ 213,179	\$ 222,811	\$ 237,334	\$ 252,387	\$ 257,001	\$ 211,801	\$ 209,540	\$ 218,734	\$ 234,630
Contributions	<u>233,750</u>	<u>212,838</u>	<u>222,482</u>	<u>237,016</u>	<u>252,080</u>	<u>1,506,704</u>	<u>183,928</u>	<u>167,616</u>	<u>178,239</u>	<u>179,757</u>
Increase in NPO	\$ (10,000)	\$ 341	\$ 329	\$ 318	\$ 307	\$(1,249,703)	\$ 27,873	\$ 41,924	\$ 40,495	\$ 54,873
NPO at BOY	<u>0</u>	<u>(10,000)</u>	<u>(9,659)</u>	<u>(9,330)</u>	<u>(9,012)</u>	<u>(8,705)</u>	<u>(1,258,408)</u>	<u>(1,230,535)</u>	<u>(1,188,611)</u>	<u>(1,148,116)</u>
NPO at EOY	\$ (10,000)	\$ (9,659)	\$ (9,330)	\$ (9,012)	\$ (8,705)	\$(1,258,408)	\$(1,230,535)	\$(1,188,611)	\$(1,148,116)	\$(1,093,243)
Interest Rate	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%	9.00%
15-Year Amortization Factor (EOY)	8.06	8.06	8.06	8.06	8.06	8.06	8.06	8.06	8.06	8.06

Note: (\$9,012,000) was the NPO at transition date

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**SECTION V
ACCOUNTING STATEMENT INFORMATION**

**Table V-5
Calculation of Annual Pension Cost (continued)
(\$ thousands)**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ARC	\$ 253,844	\$ 358,141	\$ 394,950	\$527,925	\$ 536,874	\$ 539,464	\$ 581,123	\$ 715,544	\$ 722,491	\$ 738,010
Interest on NPO	(98,392)	(90,448)	(82,068)	(71,541)	(60,685)	(48,957)	(39,899)	(14,155)	6,521	19,756
Adjustment to ARC	<u>135,638</u>	<u>124,687</u>	<u>113,135</u>	<u>99,953</u>	<u>84,785</u>	<u>68,399</u>	<u>55,744</u>	<u>20,353</u>	<u>(9,435)</u>	<u>(28,660)</u>
Annual Pension Cost	\$ 291,090	\$ 392,380	\$ 426,017	\$ 556,337	\$ 560,974	\$ 558,906	\$ 596,968	\$ 721,742	\$ 719,577	\$ 729,106
Contributions	<u>202,827</u>	<u>299,266</u>	<u>331,765</u>	<u>432,267</u>	<u>426,934</u>	<u>455,389</u>	<u>312,556</u>	<u>470,155</u>	<u>555,690</u>	<u>781,823</u>
Increase in NPO	\$ 88,263	\$ 93,114	\$ 94,252	\$ 124,069	\$ 134,040	\$ 103,517	\$ 284,412	\$ 251,587	\$ 163,887	\$ (52,717)
NPO at BOY	<u>(1,093,243)</u>	<u>(1,004,980)</u>	<u>(911,866)</u>	<u>(817,614)</u>	<u>(693,545)</u>	<u>(559,505)</u>	<u>(455,987)</u>	<u>(171,575)</u>	<u>80,012</u>	<u>243,898</u>
NPO at EOY	\$(1,004,980)	\$(911,866)	\$(817,614)	\$(693,545)	\$(559,505)	\$(455,987)	\$(171,575)	\$ 80,012	\$ 243,898	\$ 191,181
Interest Rate	9.00%	9.00%	9.00%	8.75%	8.75%	8.75%	8.75%	8.25%	8.15%	8.10%
15-Year Amortization Factor (EOY)	8.06	8.06	8.06	8.18	8.18	8.18	8.18	8.43	8.48	8.51

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

The data for this valuation was provided by the Board of Pensions as of July 1, 2013. Cheiron did not audit any of the data; however, it was reviewed to ensure that it complies with generally accepted actuarial standards. 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-22: Age/Service Distribution for Active Participants, Counts and Average Salary for all Plans
- A-23: Reconciliation of Plan Membership
- A-24 through A-28: Age and Benefit Distributions for Non-Active Member Data

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Table A-1
Active Member Data**

	July 1, 2013	July 1, 2012	% Change		July 1, 2013	July 1, 2012	% Change
<u>2010 Municipal</u>				<u>1987 Elected</u>			
Count	7	0	100.0%	Count	24	24	0.0%
Average Age	38.9	0	100.0%	Average Age	54.2	53.2	1.9%
Average Service	0.7	0	100.0%	Average Service	17.9	15.8	13.2%
Average Salary	\$ 37,586	\$ 0	100.0%	Average Salary	\$ 131,984	\$ 128,429	2.8%
Total Annual Salary	\$ 263,100	\$ 0	100.0%	Total Annual Salary	\$ 3,167,623	\$ 3,082,302	2.8%
<u>1967 Municipal</u>				<u>1987 Municipal</u>			
Count	2,697	2,973	-9.3%	Count	16,190	15,575	3.9%
Average Age	53.1	52.4	1.3%	Average Age	43.9	43.9	0.1%
Average Service	26.7	25.8	3.6%	Average Service	9.8	9.4	3.9%
Average Salary	\$ 57,586	\$ 55,384	4.0%	Average Salary	\$ 46,098	\$ 44,797	2.9%
Total Annual Salary	\$ 155,310,328	\$ 164,655,468	-5.7%	Total Annual Salary	\$ 746,328,624	\$ 697,718,917	7.0%
<u>1967 Police</u>				<u>1987 Police</u>			
Count	519	587	-11.6%	Count	5,485	5,395	1.7%
Average Age	53.7	53.0	1.3%	Average Age	40.3	39.8	1.4%
Average Service	28.5	27.8	2.7%	Average Service	13.9	13.3	4.3%
Average Salary	\$ 76,159	\$ 73,624	3.4%	Average Salary	\$ 67,302	\$ 65,327	3.0%
Total Annual Salary	\$ 39,526,567	\$ 43,217,018	-8.5%	Total Annual Salary	\$ 369,150,638	\$ 352,440,835	4.7%
<u>1967 Fire</u>				<u>1987 Fire</u>			
Count	164	184	-10.9%	Count	1,702	1,568	8.5%
Average Age	54.6	54.1	1.0%	Average Age	40.6	40.7	-0.1%
Average Service	28.8	28.2	2.1%	Average Service	12.0	12.1	-0.9%
Average Salary	\$ 70,456	\$ 69,691	1.1%	Average Salary	\$ 61,352	\$ 62,651	-2.1%
Total Annual Salary	\$ 11,554,793	\$ 12,823,234	-9.9%	Total Annual Salary	\$ 104,421,763	\$ 98,236,686	6.3%

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
 JULY 1, 2013 ACTUARIAL VALUATION**

**APPENDIX A
 MEMBERSHIP INFORMATION**

Table A-1			
Active Member Data (continued)			
	July 1, 2013	July 1, 2012	% Change
<u>Total City</u>			
Count	26,788	26,306	1.8%
Average Age	44.1	44.1	0.1%
Average Service	12.9	12.8	1.4%
Average Salary	\$ 53,372	\$ 52,162	2.3%
Total Annual Salary	\$ 1,429,723,436	\$ 1,372,174,460	4.2%

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Table A-2
Non-Active Member Data
Count**

	July 1, 2013	July 1, 2012	% Change		July 1, 2013	July 1, 2012	% Change
<u>Total City</u>				<u>1987 Municipal Plan</u>			
Retired	21,696	21,314	1.8%	Retired	1,315	1,127	16.7%
Disabled	4,152	4,169	-0.4%	Disabled	328	273	20.1%
Beneficiary	<u>8,614</u>	<u>8,621</u>	-0.1%	Beneficiary	<u>252</u>	<u>223</u>	13.0%
In Pay Status Total	34,462	34,104	1.0%	In Pay Status Total	1,895	1,623	16.8%
DROP	2,427	2,786	-12.9%	DROP	439	398	10.3%
Deferred Vested	1,281	1,289	-0.6%	Deferred Vested	735	702	4.7%
<u>1967 Municipal Plan</u>				<u>1987 Elected Plan</u>			
Retired	12,655	12,613	0.3%	Retired	20	20	0.0%
Disabled	1,623	1,656	-2.0%	Disabled	0	0	0.0%
Beneficiary	<u>5,177</u>	<u>5,253</u>	-1.4%	Beneficiary	<u>3</u>	<u>3</u>	0.0%
In Pay Status Total	19,455	19,522	-0.3%	In Pay Status Total	23	23	0.0%
DROP	1,305	1,485	-12.1%	DROP	0	0	0.0%
Deferred Vested	413	452	-8.6%	Deferred Vested	0	0	0.0%
<u>1967 Police Plan</u>				<u>1987 Police Plan</u>			
Retired	5,434	5,428	0.1%	Retired	165	121	36.4%
Disabled	1,486	1,548	-4.0%	Disabled	317	289	9.7%
Beneficiary	<u>2,231</u>	<u>2,203</u>	1.3%	Beneficiary	<u>109</u>	<u>98</u>	11.2%
In Pay Status Total	9,151	9,179	-0.3%	In Pay Status Total	591	508	16.3%
DROP	406	485	-16.3%	DROP	115	122	-5.7%
Deferred Vested	1	1	0.0%	Deferred Vested	110	112	-1.8%
<u>1967 Fire Plan</u>				<u>1987 Fire Plan</u>			
Retired	2,023	1,948	3.9%	Retired	84	57	47.4%
Disabled	340	351	-3.1%	Disabled	58	52	11.5%
Beneficiary	<u>800</u>	<u>800</u>	0.0%	Beneficiary	<u>42</u>	<u>41</u>	2.4%
In Pay Status Total	3,163	3,099	2.1%	In Pay Status Total	184	150	22.7%
DROP	132	250	-47.2%	DROP	30	46	-34.8%
Deferred Vested	0	0	0.0%	Deferred Vested	22	22	0.0%

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

Table A-3 Non-Active Member Data Total Annual Benefit								
	July 1, 2013	July 1, 2012	% Change		July 1, 2013	July 1, 2012	% Change	
<u>Total City</u>				<u>1987 Municipal Plan</u>				
Retired	\$ 522,489,570	\$ 496,582,988	5.2%	Retired	\$ 15,900,200	\$ 13,140,618	21.0%	
Disabled	81,533,059	79,880,492	2.1%	Disabled	5,882,914	4,734,822	24.2%	
Beneficiary	<u>72,612,160</u>	<u>70,453,153</u>	3.1%	Beneficiary	<u>1,840,869</u>	<u>1,592,823</u>	15.6%	
In Pay Status Total	\$ 676,634,789	\$ 646,916,633	4.6%	In Pay Status Total	\$ 23,623,983	\$ 19,468,263	21.3%	
DROP (pension)	\$ 86,858,118	\$ 104,849,735	-17.2%	DROP (pension)	\$ 6,432,148	\$ 6,007,138	7.1%	
DROP (account balance)	201,966,855	216,900,194	-6.9%	DROP (account balance)	12,705,269	9,745,906	30.4%	
Deferred Vested	\$ 18,467,489	\$ 19,236,304	-4.0%	Deferred Vested	\$ 9,402,120	\$ 9,429,593	-0.3%	
<u>1967 Municipal Plan</u>				<u>1987 Elected Plan</u>				
Retired	\$ 289,422,820	\$ 278,602,611	3.9%	Retired	\$ 1,462,876	\$ 1,462,876	0.0%	
Disabled	28,855,975	28,910,080	-0.2%	Disabled	0	0	0.0%	
Beneficiary	<u>40,544,994</u>	<u>39,883,710</u>	1.7%	Beneficiary	<u>68,613</u>	<u>68,613</u>	0.0%	
In Pay Status Total	\$ 358,823,789	\$ 347,396,401	3.3%	In Pay Status Total	\$ 1,531,489	\$ 1,531,489	0.0%	
DROP (pension)	\$ 48,014,488	\$ 55,776,928	-13.9%	DROP (pension)	\$ 0	\$ 0	0.0%	
DROP (account balance)	114,188,811	112,490,212	1.5%	DROP (account balance)	0	0	0.0%	
Deferred Vested	\$ 6,929,775	\$ 7,703,697	-10.0%	Deferred Vested	\$ 0	\$ 0	0.0%	
<u>1967 Police Plan</u>				<u>1987 Police Plan</u>				
Retired	\$ 144,024,116	\$ 139,604,307	3.2%	Retired	\$ 3,207,839	\$ 2,170,689	47.8%	
Disabled	26,636,123	27,390,215	-2.8%	Disabled	11,378,697	10,116,182	12.5%	
Beneficiary	<u>19,952,779</u>	<u>19,317,247</u>	3.3%	Beneficiary	<u>1,216,213</u>	<u>981,392</u>	23.9%	
In Pay Status Total	\$ 190,613,018	\$ 186,311,769	2.3%	In Pay Status Total	\$ 15,802,749	\$ 13,268,263	19.1%	
DROP (pension)	\$ 21,376,372	\$ 25,208,045	-15.2%	DROP (pension)	\$ 3,117,429	\$ 3,219,218	-3.2%	
DROP (account balance)	49,993,445	51,975,750	-3.8%	DROP (account balance)	6,527,393	5,081,695	28.4%	
Deferred Vested	\$ 13,436	\$ 13,436	0.0%	Deferred Vested	\$ 1,753,042	\$ 1,772,853	-1.1%	
<u>1967 Fire Plan</u>				<u>1987 Fire Plan</u>				
Retired	\$ 66,848,691	\$ 60,637,261	10.2%	Retired	\$ 1,623,028	\$ 964,626	68.3%	
Disabled	6,731,656	6,942,960	-3.0%	Disabled	2,047,694	1,786,233	14.6%	
Beneficiary	<u>8,469,781</u>	<u>8,113,633</u>	4.4%	Beneficiary	<u>518,911</u>	<u>495,735</u>	4.7%	
In Pay Status Total	\$ 82,050,128	\$ 75,693,854	8.4%	In Pay Status Total	\$ 4,189,633	\$ 3,246,594	29.0%	
DROP (pension)	\$ 7,063,605	\$ 13,391,475	-47.3%	DROP (pension)	\$ 854,076	\$ 1,246,931	-31.5%	
DROP (account balance)	16,760,811	35,029,109	-52.2%	DROP (account balance)	1,791,126	2,577,523	-30.5%	
Deferred Vested	\$ 0	\$ 0	0.0%	Deferred Vested	\$ 369,116	\$ 316,725	16.5%	

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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APPENDIX A
MEMBERSHIP INFORMATION

Table A-4											
Non-Active Member Data											
Average Annual Benefit											
	July 1, 2013			July 1, 2012			% Change				
<u>Total City</u>					<u>1987 Municipal Plan</u>						
Retired	\$	24,082	\$	23,298	3.4%	Retired	\$	12,091	\$	11,660	3.7%
Disabled		19,637		19,161	2.5%	Disabled		17,936		17,344	3.4%
Beneficiary		8,430		8,172	3.1%	Beneficiary		7,305		7,143	2.3%
In Pay Status Total		19,634		18,969	3.5%	In Pay Status Total		12,466		11,995	3.9%
DROP (pension)		35,788		37,635	-4.9%	DROP (pension)		14,652		15,093	-2.9%
DROP (account balance)		83,217		77,854	6.9%	DROP (account balance)		28,941		24,487	18.2%
Deferred Vested		14,416		14,923	-3.4%	Deferred Vested		12,792		13,432	-4.8%
<u>1967 Municipal Plan</u>					<u>1987 Elected Plan</u>						
Retired	\$	22,870	\$	22,089	3.5%	Retired	\$	73,144	\$	73,144	0.0%
Disabled		17,779		17,458	1.8%	Disabled		0		0	0.0%
Beneficiary		7,832		7,593	3.2%	Beneficiary		22,871		22,871	0.0%
In Pay Status Total		18,444		17,795	3.6%	In Pay Status Total		66,586		66,586	0.0%
DROP (pension)		36,793		37,560	-2.0%	DROP (pension)		0		0	0.0%
DROP (account balance)		87,501		75,751	15.5%	DROP (account balance)		0		0	0.0%
Deferred Vested		16,779		17,044	-1.6%	Deferred Vested		0		0	0.0%
<u>1967 Police Plan</u>					<u>1987 Police Plan</u>						
Retired	\$	26,504	\$	25,719	3.1%	Retired	\$	19,441	\$	17,940	8.4%
Disabled		17,925		17,694	1.3%	Disabled		35,895		35,004	2.5%
Beneficiary		8,943		8,769	2.0%	Beneficiary		11,158		10,014	11.4%
In Pay Status Total		20,830		20,298	2.6%	In Pay Status Total		26,739		26,119	2.4%
DROP (pension)		52,651		51,975	1.3%	DROP (pension)		27,108		26,387	2.7%
DROP (account balance)		123,137		107,166	14.9%	DROP (account balance)		56,760		41,653	36.3%
Deferred Vested		13,436		13,436	0.0%	Deferred Vested		15,937		15,829	0.7%
<u>1967 Fire Plan</u>					<u>1987 Fire Plan</u>						
Retired	\$	33,044	\$	31,128	6.2%	Retired	\$	19,322	\$	16,923	14.2%
Disabled		19,799		19,781	0.1%	Disabled		35,305		34,351	2.8%
Beneficiary		10,587		10,142	4.4%	Beneficiary		12,355		12,091	2.2%
In Pay Status Total		25,941		24,425	6.2%	In Pay Status Total		22,770		21,644	5.2%
DROP (pension)		53,512		53,566	-0.1%	DROP (pension)		28,469		27,107	5.0%
DROP (account balance)		126,976		140,116	-9.4%	DROP (account balance)		59,704		56,033	6.6%
Deferred Vested		0		0	0.0%	Deferred Vested		16,778		14,397	16.5%

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

**Table A-5
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- Total City**

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	200	287	71	1	0	0	0	0	559
25 to 29	427	1,036	845	51	0	0	0	0	2,359
30 to 34	219	682	1,496	595	37	0	0	0	3,029
35 to 39	127	421	1,031	1,100	530	25	0	1	3,235
40 to 44	92	364	783	1,061	1,352	375	24	0	4,051
45 to 49	84	271	642	729	1,199	1,061	268	16	4,270
50 to 54	70	229	562	655	850	908	859	306	4,439
55 to 59	40	184	472	532	598	458	443	426	3,153
60 to 64	15	93	287	262	226	102	92	107	1,184
65 & up	3	53	176	117	51	38	19	52	509
Total	1,277	3,620	6,365	5,103	4,843	2,967	1,705	908	26,788

**Table A-6
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	\$ 37,730	\$ 31,212	\$ 31,314	\$ 47,787	\$ -	\$ -	\$ -	\$ -	\$ 33,587
25 to 29	39,748	45,546	50,655	43,640	-	-	-	-	46,285
30 to 34	38,838	47,417	53,814	55,887	50,044	-	-	-	51,652
35 to 39	39,013	48,001	54,328	59,468	61,696	52,366	-	34,418	55,837
40 to 44	41,824	45,004	51,723	56,960	63,591	65,844	52,456	-	57,538
45 to 49	38,544	40,893	47,296	52,381	59,592	65,236	61,078	60,695	56,411
50 to 54	39,408	42,205	42,866	47,881	56,085	60,387	62,701	66,890	55,127
55 to 59	41,405	43,177	43,152	46,313	50,131	56,599	63,912	67,380	53,132
60 to 64	41,380	42,726	41,969	46,314	48,275	52,978	60,556	63,448	48,520
65 & up	26,350	41,473	37,400	39,814	42,891	41,216	45,233	55,765	41,318
Total	\$ 39,294	\$ 44,181	\$ 49,567	\$ 53,371	\$ 58,378	\$ 61,658	\$ 62,306	\$ 65,933	\$ 53,372

**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, 2013 -- 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	0
25 to 29	0	1	0	0	0	0	0	0	0	1
30 to 34	0	0	0	0	0	0	0	0	0	0
35 to 39	0	1	0	0	1	1	0	0	0	3
40 to 44	0	0	0	0	6	61	7	0	0	74
45 to 49	0	0	0	4	13	294	169	12	0	492
50 to 54	0	2	0	2	10	399	556	218	0	1,187
55 to 59	0	0	1	3	10	197	255	272	0	738
60 to 64	0	0	2	0	0	34	51	50	0	137
65 & up	0	0	0	0	0	21	13	31	0	65
Total	0	4	3	9	40	1,007	1,051	583	0	2,697

**Table A-8
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 to 29	-	51,960	-	-	-	-	-	-	-	51,960
30 to 34	-	-	-	-	-	-	-	-	-	-
35 to 39	-	45,006	-	-	33,145	48,566	-	-	-	42,239
40 to 44	-	-	-	-	42,272	56,915	44,932	-	-	54,594
45 to 49	-	-	-	34,429	51,414	55,280	57,504	62,253	-	55,942
50 to 54	-	72,679	-	39,363	45,616	53,727	58,861	63,760	-	57,914
55 to 59	-	-	79,622	64,356	51,000	50,185	60,443	66,537	-	59,865
60 to 64	-	-	63,592	-	-	37,851	57,984	61,181	-	54,236
65 & up	-	-	-	-	-	49,506	43,555	51,886	-	49,451
Total	\$ -	\$ 60,581	\$ 68,935	\$ 45,501	\$ 48,033	\$ 53,051	\$ 58,702	\$ 64,172	\$ -	\$ 57,586

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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**Table A-9
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	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	2	4	1	0	0	7
45 to 49	0	0	0	1	1	30	32	0	0	64
50 to 54	0	0	0	0	0	15	154	61	0	230
55 to 59	0	0	0	0	0	1	87	91	0	179
60 to 64	0	0	0	0	0	1	17	19	0	37
65 & up	0	0	0	0	0	0	1	1	0	2
Total	0	0	0	1	3	51	292	172	0	519

**Table A-10
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 to 29	-	-	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-	-	-
40 to 44	-	-	-	-	66,532	68,522	66,851	-	-	67,715
45 to 49	-	-	-	66,086	66,532	71,821	76,658	-	-	74,067
50 to 54	-	-	-	-	-	74,081	75,983	82,569	-	77,605
55 to 59	-	-	-	-	-	76,211	73,350	77,262	-	75,355
60 to 64	-	-	-	-	-	73,536	71,425	81,327	-	76,567
65 & up	-	-	-	-	-	-	67,234	74,308	-	70,771
Total	\$ -	\$ -	\$ -	\$ 66,086	\$ 66,532	\$ 72,347	\$ 74,946	\$ 79,576	\$ -	\$ 76,159

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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**Table A-11
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	1	0	1
45 to 49	0	0	0	0	0	5	10	0	0	15
50 to 54	0	0	0	0	0	4	66	3	0	73
55 to 59	0	0	0	0	1	2	44	12	0	59
60 to 64	0	0	0	0	0	0	6	6	0	12
65 & up	0	0	0	0	0	0	1	3	0	4
Total	0	0	0	0	1	11	128	24	0	164

**Table A-12
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 to 29	-	-	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-	-	-
40 to 44	-	-	-	-	-	-	78,223	-	-	78,223
45 to 49	-	-	-	-	-	65,678	68,701	-	-	67,694
50 to 54	-	-	-	-	-	61,123	70,198	84,863	-	70,303
55 to 59	-	-	-	-	60,834	65,402	67,445	80,580	-	69,935
60 to 64	-	-	-	-	-	-	65,363	73,624	-	69,494
65 & up	-	-	-	-	-	-	76,566	97,449	-	92,228
Total	\$ -	\$ -	\$ -	\$ -	\$ 60,834	\$ 63,971	\$ 69,021	\$ 81,485	\$ -	\$ 70,456

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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**Table A-13
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	142	237	65	1	0	0	0	0	445
25 to 29	290	802	497	39	0	0	0	0	1,628
30 to 34	160	542	925	325	28	0	0	0	1,980
35 to 39	101	360	707	577	194	23	0	1	1,963
40 to 44	83	325	567	694	547	85	13	0	2,314
45 to 49	80	263	572	560	626	139	51	3	2,294
50 to 54	67	225	551	594	583	146	78	18	2,262
55 to 59	39	184	467	502	513	116	56	48	1,925
60 to 64	15	92	283	252	206	53	18	27	946
65 & up	3	53	175	117	49	17	4	15	433
Total	980	3,083	4,809	3,661	2,746	579	220	112	16,190

**Table A-14
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	\$ 34,864	\$ 26,099	\$ 28,999	\$ 47,787	\$ -	\$ -	\$ -	\$ -	\$ 29,368
25 to 29	37,544	41,303	41,174	37,990	-	-	-	-	40,515
30 to 34	37,487	43,374	47,340	47,036	45,256	-	-	-	45,379
35 to 39	37,907	45,715	49,806	52,987	50,219	51,915	-	34,418	49,436
40 to 44	41,539	42,274	47,036	52,287	56,150	56,176	50,775	-	50,256
45 to 49	38,341	39,815	45,184	48,537	52,646	57,368	58,864	50,185	48,233
50 to 54	38,986	41,469	42,483	46,193	51,215	54,018	56,294	48,739	46,774
55 to 59	41,300	43,177	42,744	45,122	47,514	51,878	59,693	49,741	45,866
60 to 64	41,380	41,847	41,426	45,575	46,489	58,330	55,979	42,940	44,941
65 & up	26,350	41,473	37,238	39,814	41,926	30,976	37,353	45,165	38,938
Total	\$ 37,860	\$ 41,132	\$ 44,807	\$ 48,372	\$ 51,181	\$ 54,345	\$ 57,059	\$ 47,203	\$ 46,098

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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**Table A-15
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	0	0	0	0	0	0	0	0	0
40 to 44	0	3	0	0	0	0	0	0	3
45 to 49	0	2	1	1	0	1	1	0	6
50 to 54	0	1	0	0	1	0	1	0	3
55 to 59	0	0	1	0	1	1	1	0	4
60 to 64	0	1	1	0	0	0	0	4	6
65 & up	0	0	0	0	0	0	0	2	2
Total	0	7	3	1	2	2	3	6	24

**Table A-16
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 to 29	-	-	-	-	-	-	-	-	-
30 to 34	-	-	-	-	-	-	-	-	-
35 to 39	-	-	-	-	-	-	-	-	-
40 to 44	-	123,600	-	-	-	-	-	-	123,600
45 to 49	-	123,600	123,600	123,600	-	172,271	123,600	-	131,712
50 to 54	-	123,600	-	-	132,428	-	126,121	-	127,383
55 to 59	-	-	132,428	-	123,600	123,600	208,101	-	146,932
60 to 64	-	123,600	127,337	-	-	-	-	134,634	131,579
65 & up	-	-	-	-	-	-	-	123,600	123,600
Total	\$ -	\$ 123,600	\$ 127,788	\$ 123,600	\$ 128,014	\$ 147,936	\$ 152,607	\$ 130,956	\$ 131,984

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**Table A-17
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	41	48	6	0	0	0	0	0	95
25 to 29	76	210	266	8	0	0	0	0	560
30 to 34	14	134	381	230	6	0	0	0	765
35 to 39	7	55	209	409	307	1	0	0	988
40 to 44	2	35	135	240	662	210	2	0	1,286
45 to 49	1	4	36	110	415	510	3	1	1,080
50 to 54	1	1	3	37	177	263	3	4	489
55 to 59	1	0	1	19	53	110	0	3	187
60 to 64	0	0	0	7	13	12	0	0	32
65 & up	0	0	1	0	2	0	0	0	3
Total	143	487	1,038	1,060	1,635	1,106	8	8	5,485

**Table A-18
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	\$ 46,037	\$ 55,624	\$ 56,397	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 51,535
25 to 29	46,553	61,010	65,616	65,289	-	-	-	-	61,297
30 to 34	45,723	63,447	66,112	67,341	67,394	-	-	-	65,651
35 to 39	45,949	62,430	65,901	67,621	68,822	66,532	-	-	67,187
40 to 44	54,344	63,375	65,886	66,921	69,478	72,239	69,636	-	68,885
45 to 49	45,498	61,728	66,342	66,927	68,430	72,118	66,851	73,536	69,903
50 to 54	63,189	65,320	65,639	66,636	68,145	70,947	73,559	69,407	69,550
55 to 59	45,498	-	65,639	66,977	68,527	69,460	-	73,576	68,861
60 to 64	-	-	-	66,086	67,214	68,411	-	-	67,416
65 & up	-	-	65,639	-	66,532	-	-	-	66,234
Total	\$ 46,505	\$ 61,495	\$ 65,863	\$ 67,256	\$ 68,884	\$ 71,553	\$ 70,063	\$ 71,487	\$ 67,302

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**Table A-19
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	17	2	0	0	0	0	0	0	19
25 to 29	61	22	80	4	0	0	0	0	167
30 to 34	44	6	190	40	3	0	0	0	283
35 to 39	18	5	115	114	28	0	0	0	280
40 to 44	7	1	81	127	135	15	0	0	366
45 to 49	3	2	33	53	144	82	2	0	319
50 to 54	2	0	8	22	79	81	1	2	195
55 to 59	0	0	2	8	20	30	0	0	60
60 to 64	0	0	1	3	7	2	0	0	13
65 & up	0	0	0	0	0	0	0	0	0
Total	152	38	510	371	416	210	3	2	1,702

**Table A-20
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	\$ 41,637	\$ 51,206	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 42,644
25 to 29	41,752	53,559	60,397	55,428	-	-	-	-	52,567
30 to 34	41,637	54,684	60,667	61,946	60,025	-	-	-	57,755
35 to 39	41,637	54,472	61,094	63,019	64,101	-	-	-	60,809
40 to 44	41,637	53,434	60,932	63,666	65,779	66,699	-	-	63,516
45 to 49	41,637	58,258	60,812	62,555	65,007	67,723	92,240	-	64,772
50 to 54	41,637	-	60,735	62,687	65,366	67,820	61,123	61,297	65,586
55 to 59	-	-	64,227	65,208	63,854	66,387	-	-	65,313
60 to 64	-	-	67,003	62,309	65,642	65,402	-	-	64,941
65 & up	-	-	-	-	-	-	-	-	-
Total	\$ 41,683	\$ 53,977	\$ 60,800	\$ 62,999	\$ 65,184	\$ 67,474	\$ 81,868	\$ 61,297	\$ 61,352

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**Table A-21
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	2	1	0	0	0	0	0	0	3
30 to 34	1	0	0	0	0	0	0	0	1
35 to 39	1	0	0	0	0	0	0	0	1
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	1	0	0	0	0	0	0	0	1
60 to 64	1	0	0	0	0	0	0	0	1
65 & up	0	0	0	0	0	0	0	0	0
Total	6	1	0	0	0	0	0	0	7

**Table A-22
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2013 -- 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	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
25 to 29	26,955	18,690	-	-	-	-	-	-	24,200
30 to 34	35,500	-	-	-	-	-	-	-	35,500
35 to 39	55,000	-	-	-	-	-	-	-	55,000
40 to 44	-	-	-	-	-	-	-	-	-
45 to 49	-	-	-	-	-	-	-	-	-
50 to 54	-	-	-	-	-	-	-	-	-
55 to 59	55,000	-	-	-	-	-	-	-	55,000
60 to 64	45,000	-	-	-	-	-	-	-	45,000
65 & up	-	-	-	-	-	-	-	-	-
Total	\$ 40,735	\$ 18,690	\$ -	\$ 37,586					

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	1967 Plan			Plan 87				Plan '10	Total City
	Municipal	Police	Fire	Municipal	Elected	Police	Fire	Municipal	
Active									
Active July 1, 2012	2,973	587	184	15,575	24	5,395	1,568	0	26,306
New Entrants and Rehires	10	2	1	1,648	0	197	161	7	2,026
Refunded Contributions	-6	0	0	-266	0	-12	-3	0	-287
Non-Vested Terminations	-1	0	0	-162	0	-3	-4	0	-170
Terminated Vested	-2	0	0	-45	0	-2	0	0	-49
Became Disabled	-14	-2	0	-35	0	-20	-8	0	-79
Retired	-68	-7	-1	-90	0	-14	-5	0	-185
Entered DROP	-179	-60	-19	-109	0	-18	-5	0	-390
Net Other Terminations	-16	-1	-1	-326	0	-38	-2	0	-384
Active July 1, 2013	2,697	519	164	16,190	24	5,485	1,702	7	26,788
Retired									
Retired July 1, 2012	12,613	5,428	1,948	1,127	20	121	57	0	21,314
New Retirees	531	148	140	210	0	45	27	0	1,101
Died with Beneficiary Payable	-145	-85	-33	-4	0	0	0	0	-267
Died without Beneficiary Payable	-340	-55	-31	-11	0	-1	0	0	-438
Net Other Terminations	-4	-2	-1	-7	0	0	0	0	-14
Retired July 1, 2013	12,655	5,434	2,023	1,315	20	165	84	0	21,696
Beneficiary									
Beneficiary July 1, 2012	5,253	2,203	800	223	3	98	41	0	8,621
New Beneficiaries	187	119	45	29	0	11	2	0	393
Deaths	-256	-89	-44	0	0	0	-1	0	-390
Net Other Terminations	-7	-2	-1	0	0	0	0	0	-10
Beneficiary July 1, 2013	5,177	2,231	800	252	3	109	42	0	8,614

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
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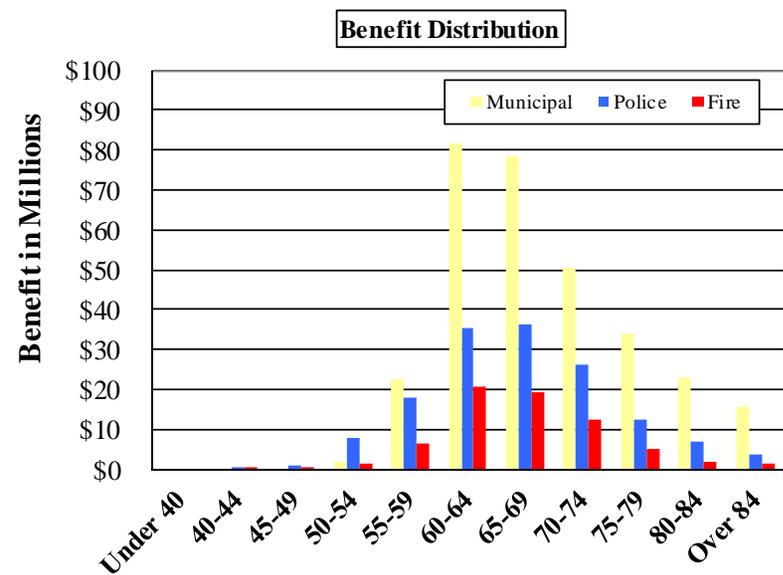
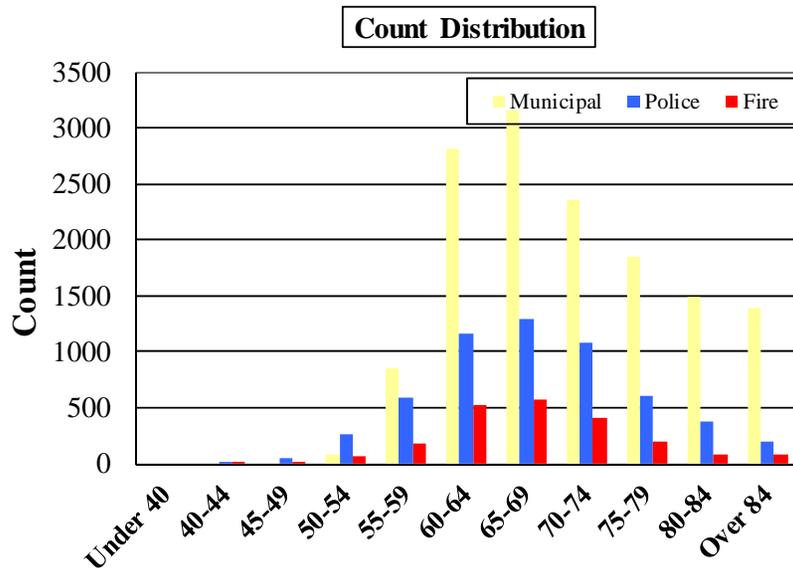
Table A-23 Reconciliation of Plan Membership (continued)									
	1967 Plan			Plan 87				Plan '10	Total City
	Municipal	Police	Fire	Municipal	Elected	Police	Fire	Municipal	
Disabled									
Disabled July 1, 2012	1,656	1,548	351	273	0	289	52	0	4,169
New Disabilities	20	4	0	59	0	30	8	0	121
Died with Beneficiary Payable	-12	-19	-2	-2	0	-1	0	0	-36
Died without Beneficiary Payable	-40	-44	-9	-2	0	0	-1	0	-96
Net Other Terminations	-1	-3	0	0	0	-1	-1	0	-6
Disabled July 1, 2013	1,623	1,486	340	328	0	317	58	0	4,152
Terminated Vested									
Terminated Vested July 1, 2012	452	1	0	702	0	112	22	0	1,289
New Vested Terminations	11	0	0	62	0	6	2	0	81
Retired	-46	0	0	-16	0	-6	-1	0	-69
Net Other Terminations	-4	0	0	-13	0	-2	-1	0	-20
Terminated Vested July 1, 2013	413	1	0	735	0	110	22	0	1,281
DROP									
DROP July 1, 2012	1,485	485	250	398	0	122	46	0	2,786
New DROP Participants	216	60	19	130	0	18	5	0	448
Retired	-389	-134	-136	-87	0	-22	-21	0	-789
Net Other Terminations	-7	-5	-1	-2	0	-3	0	0	-18
DROP July 1, 2013	1,305	406	132	439	0	115	30	0	2,427

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**Table A-24
Age Distribution of Retired Members as of July 1, 2013**

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	7	78,038	1	6,535
45-49	0	0	42	870,649	9	168,036
50-54	78	1,755,585	264	7,917,911	59	1,519,733
55-59	850	22,255,028	582	17,696,942	176	6,266,005
60-64	2,816	81,702,477	1,167	35,211,606	525	20,453,383
65-69	3,162	78,324,077	1,295	36,204,580	576	19,475,449
70-74	2,359	50,435,668	1,072	26,163,722	401	12,376,622
75-79	1,854	34,025,610	612	12,493,519	197	5,021,579
80-84	1,482	22,841,065	368	7,047,176	82	1,749,674
Over 84	1,389	15,446,386	190	3,547,812	81	1,434,703
Total	13,990	306,785,896	5,599	147,231,955	2,107	68,471,719

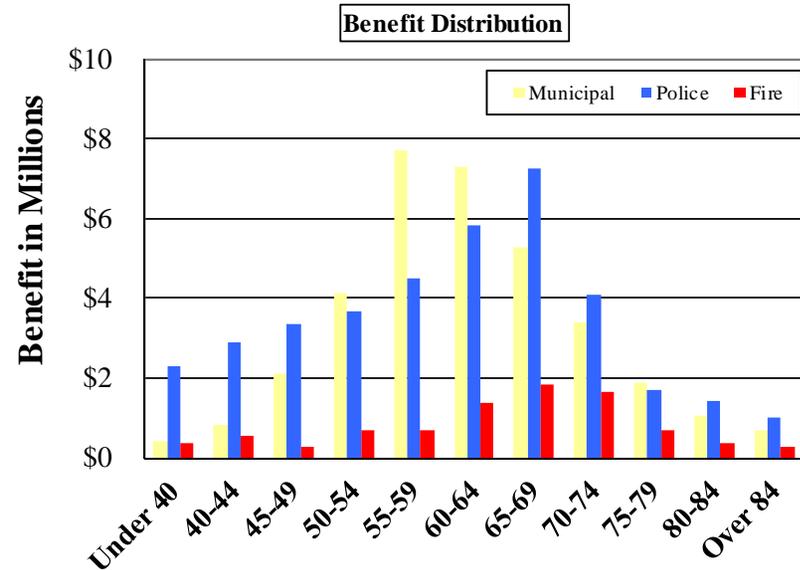
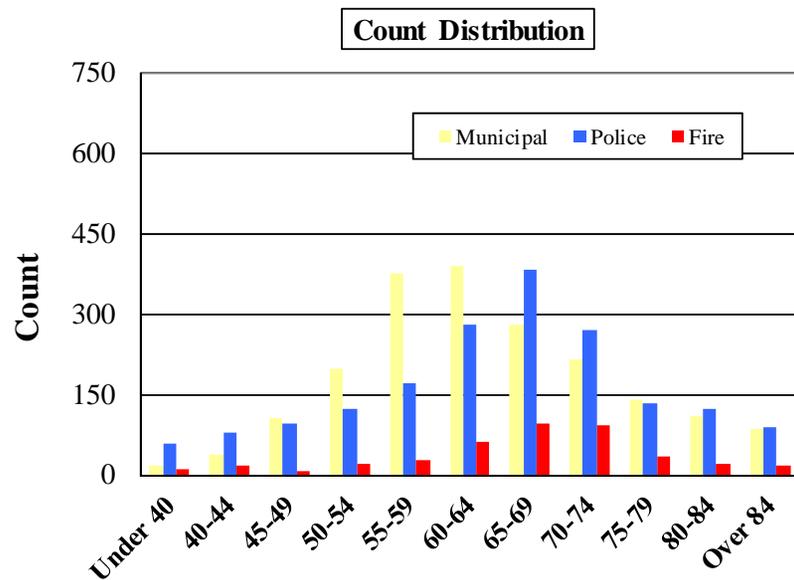


**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Table A-25
Age Distribution of Disabled Members as of July 1, 2013**

Age	Municipal		Police		Fire	
	Count	Annual Pensions	Count	Annual Pensions	Count	Annual Pensions
Under 40	18	\$ 394,379	59	\$ 2,315,784	10	\$ 388,047
40-44	36	817,628	78	2,908,716	16	570,313
45-49	107	2,106,426	94	3,356,174	8	285,516
50-54	198	4,130,731	124	3,681,306	20	678,559
55-59	374	7,698,377	172	4,482,166	27	699,330
60-64	389	7,273,291	281	5,812,975	61	1,368,354
65-69	281	5,269,294	382	7,258,746	95	1,843,105
70-74	214	3,416,866	270	4,094,460	91	1,650,528
75-79	141	1,882,704	133	1,687,192	35	665,939
80-84	109	1,058,252	123	1,408,476	19	376,467
Over 84	84	690,941	87	1,008,825	16	253,192
Total	1,951	34,738,889	1,803	38,014,820	398	8,779,350

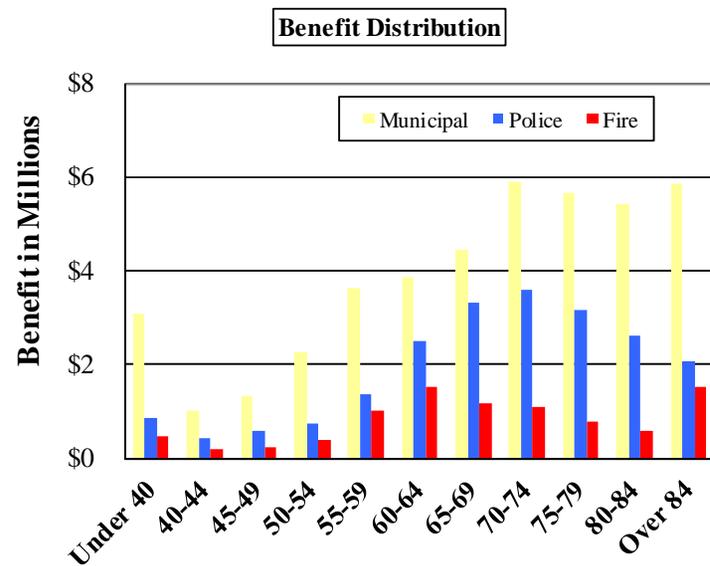
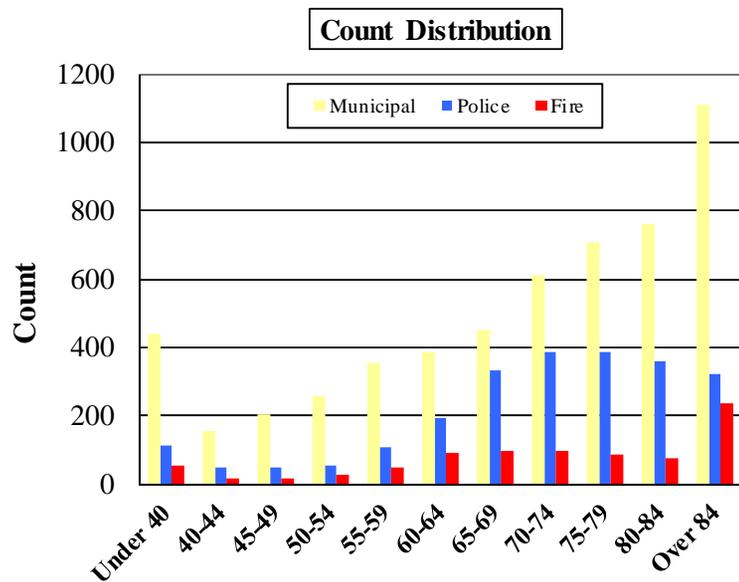


**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Table A-26
Age Distribution of Beneficiaries as of July 1, 2013**

Age	Municipal		Police		Fire	
	Count	Annual Pensions	Count	Annual Pensions	Count	Annual Pensions
Under 40	438	\$ 3,066,518	112	\$ 853,738	52	\$ 485,127
40-44	156	1,020,003	46	412,835	16	203,544
45-49	202	1,323,869	46	573,984	15	215,104
50-54	255	2,244,657	55	736,773	26	392,198
55-59	355	3,618,396	108	1,371,387	49	1,016,662
60-64	386	3,882,070	191	2,480,623	93	1,532,109
65-69	452	4,438,984	330	3,325,638	94	1,170,040
70-74	611	5,882,659	386	3,585,367	98	1,079,932
75-79	705	5,661,460	388	3,160,279	87	776,287
80-84	761	5,443,619	357	2,606,817	74	596,837
Over 84	1,111	5,872,241	321	2,061,551	238	1,520,852
Total	5,432	42,454,476	2,340	21,168,992	842	8,988,692



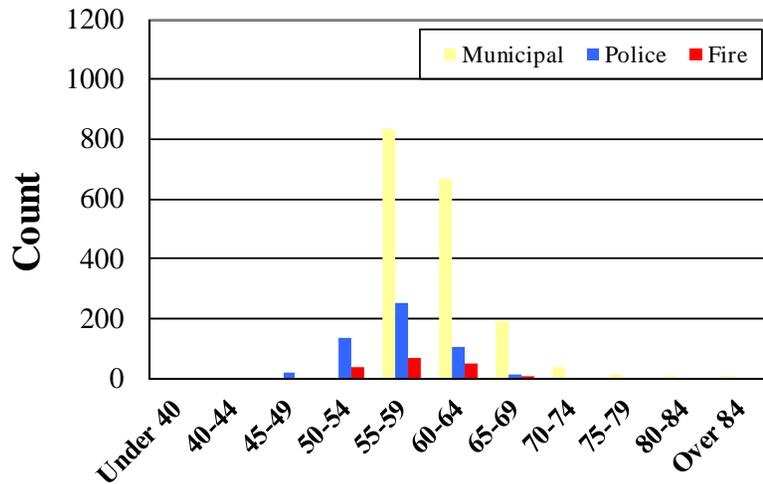
**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

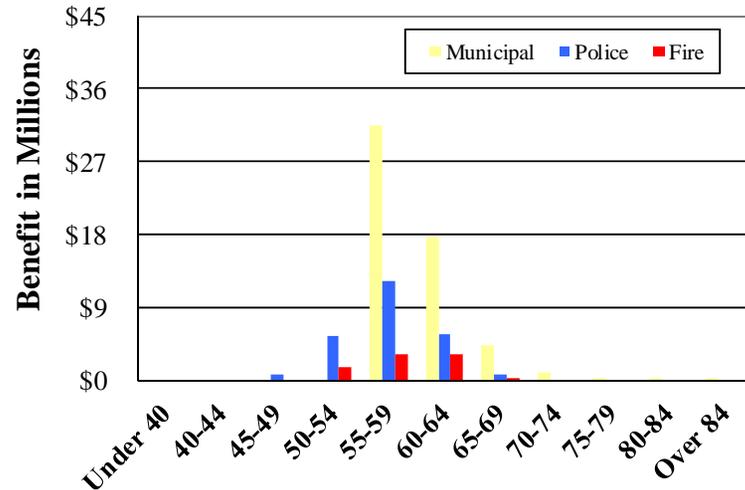
**Table A-27
Age Distribution of DROP Participants as of July 1, 2013**

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	16	623,676	0	0
50-54	0	0	137	5,478,396	38	1,495,416
55-59	832	31,478,344	251	12,161,336	70	3,124,980
60-64	667	17,529,607	107	5,589,332	51	3,118,233
65-69	192	4,404,021	10	641,061	3	179,052
70-74	39	823,075	0	0	0	0
75-79	10	150,528	0	0	0	0
80-84	2	27,936	0	0	0	0
Over 84	2	33,125	0	0	0	0
Total	1,744	54,446,636	521	24,493,801	162	7,917,681

Count Distribution



Benefit Distribution

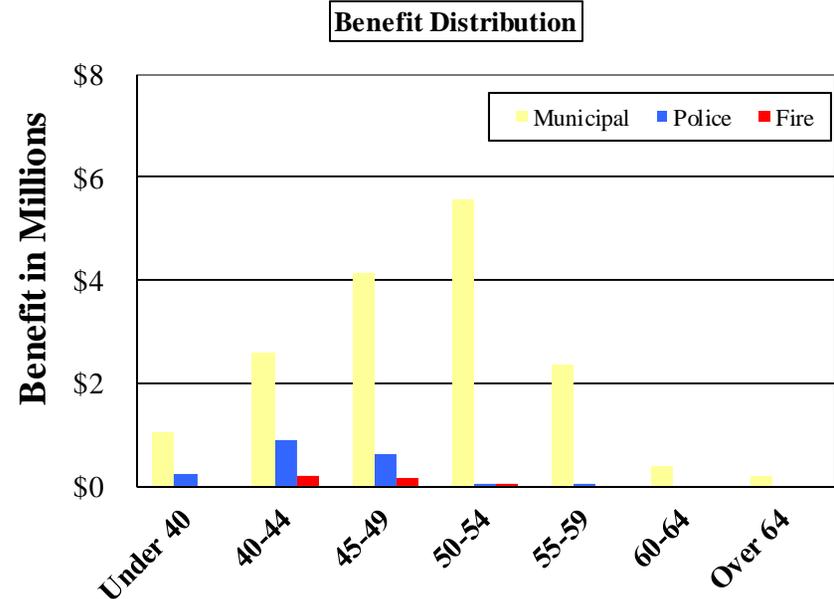
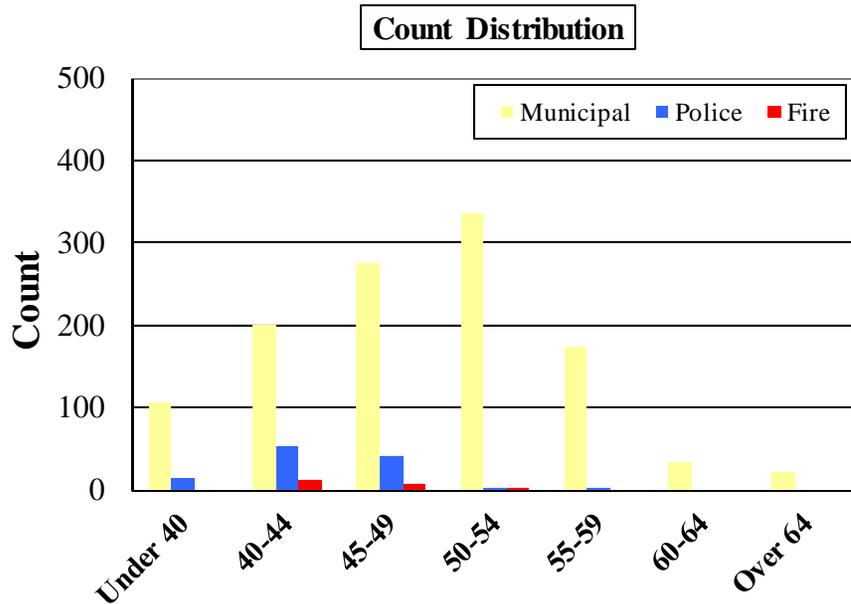


**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**APPENDIX A
MEMBERSHIP INFORMATION**

**Table A-28
Age Distribution of Terminated Vested Members as of July 1, 2013**

Age	Municipal		Police		Fire	
	Count	Annual Pensions	Count	Annual Pensions	Count	Annual Pensions
Under 40	107	\$ 1,049,042	15	\$ 220,393	0	\$ -
40-44	201	2,607,322	54	888,219	12	196,792
45-49	276	4,144,347	40	628,551	7	138,722
50-54	336	5,573,703	1	15,879	3	33,602
55-59	174	2,370,977	1	13,436	0	0
60-64	33	401,769	0	0	0	0
Over 64	21	184,735	0	0	0	0
Total	1,148	16,331,895	111	1,766,478	22	369,116



CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

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 2015 Amortization Payment under the City's Funding Policy					
1967 Plan - Municipal					
(\$ thousands)					
	7/1/2013	7/1/2014	Remaining	FY 2015 Payment	FY 2015 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation					
a. Remaining	\$ 2,455,516	\$ 2,272,116		\$ 353,809	\$ 381,583
2. Changes in UAL due to					
a. Actuarial Experience	\$ 165,104	\$ 178,064	20	\$ 16,629	\$ 17,934
b. Assumption Changes	55,550	59,911	15	6,431	6,935
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 220,654	\$ 237,975		\$ 23,060	\$ 24,870
3. Total [1c. + 2e.]	\$ 2,676,170	\$ 2,510,092		\$ 376,869	\$ 406,453

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

APPENDIX B
SUPPORTING TABLES FOR CITY'S FUNDING POLICY

Table B-1b					
Development of the Fiscal Year 2015 Amortization Payment under the City's Funding Policy					
1967 Plan - Police					
(\$ thousands)					
	7/1/2013	7/1/2014	Remaining	FY 2015 Payment	FY 2015 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation					
a. Remaining	\$ 1,333,377	\$ 1,217,036		\$ 202,109	\$ 217,974
2. Changes in UAL due to					
a. Actuarial Experience	\$ 77,840	\$ 83,950	20	\$ 7,840	\$ 8,455
b. Assumption Changes	26,889	29,000	15	3,113	3,357
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 104,729	\$ 112,951		\$ 10,953	\$ 11,812
3. Total [1c. + 2e.]	\$ 1,438,106	\$ 1,329,986		\$ 213,061	\$ 229,787

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

APPENDIX B
SUPPORTING TABLES FOR CITY'S FUNDING POLICY

Table B-1c					
Development of the Fiscal Year 2015 Amortization Payment under the City's Funding Policy					
1967 Plan - Fire					
(\$ thousands)					
	7/1/2013	7/1/2014	Remaining	FY 2015 Payment	FY 2015 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation					
a. Remaining	\$ 556,404	\$ 514,285		\$ 79,909	\$ 86,182
2. Changes in UAL due to					
a. Actuarial Experience	\$ 16,773	\$ 18,090	20	\$ 1,689	\$ 1,822
b. Assumption Changes	10,714	11,555	15	1,240	1,338
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 27,488	\$ 29,645		\$ 2,930	\$ 3,160
3. Total [1c. + 2e.]	\$ 583,892	\$ 543,930		\$ 82,839	\$ 89,341

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

APPENDIX B
SUPPORTING TABLES FOR CITY'S FUNDING POLICY

Table B-1d					
Development of the Fiscal Year 2015 Amortization Payment under the City's Funding Policy					
Plan 87 - Municipal					
(\$ thousands)					
	7/1/2013	7/1/2014	Remaining	FY 2015 Payment	FY 2015 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation					
a. Remaining	\$ 241,722	\$ 234,738		\$ 24,267	\$ 26,172
2. Changes in UAL due to					
a. Actuarial Experience	\$ 63,022	\$ 67,970	20	\$ 6,347	\$ 6,846
b. Assumption Changes	23,630	25,485	15	2,735	2,950
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 86,652	\$ 93,455		\$ 9,083	\$ 9,796
3. Total [1c. + 2e.]	\$ 328,374	\$ 328,193		\$ 33,350	\$ 35,968

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

APPENDIX B
SUPPORTING TABLES FOR CITY'S FUNDING POLICY

Table B-1e					
Development of the Fiscal Year 2015 Amortization Payment under the City's Funding Policy					
Plan 87 - Elected					
(\$ thousands)					
	7/1/2013	7/1/2014	Remaining	FY 2015 Payment	FY 2015 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation					
a. Remaining	\$ 10,420	\$ 10,089		\$ 1,099	\$ 1,185
2. Changes in UAL due to					
a. Actuarial Experience	\$ 1,363	\$ 1,470	20	\$ 137	\$ 148
b. Assumption Changes	308	333	15	36	39
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 1,672	\$ 1,803		\$ 173	\$ 187
3. Total [1c. + 2e.]	\$ 12,092	\$ 11,892		\$ 1,272	\$ 1,372

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

APPENDIX B
SUPPORTING TABLES FOR CITY'S FUNDING POLICY

Table B-1f					
Development of the Fiscal Year 2015 Amortization Payment under the City's Funding Policy					
Plan 87 - Police					
(\$ thousands)					
	7/1/2013	7/1/2014	Remaining	FY 2015 Payment	FY 2015 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation					
a. Remaining	\$ 193,477	\$ 189,927		\$ 17,611	\$ 18,994
2. Changes in UAL due to					
a. Actuarial Experience	\$ 27,304	\$ 29,447	20	\$ 2,750	\$ 2,966
b. Assumption Changes	20,777	22,408	15	2,405	2,594
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 48,081	\$ 51,855		\$ 5,155	\$ 5,560
3. Total [1c. + 2e.]	\$ 241,558	\$ 241,782		\$ 22,767	\$ 24,554

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

APPENDIX B
SUPPORTING TABLES FOR CITY'S FUNDING POLICY

Table B-1g					
Development of the Fiscal Year 2015 Amortization Payment under the City's Funding Policy					
Plan 87 - Fire					
(\$ thousands)					
	7/1/2013	7/1/2014	Remaining	FY 2015 Payment	FY 2015 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation					
a. Remaining	\$ 41,226	\$ 40,458		\$ 3,818	\$ 4,118
2. Changes in UAL due to					
a. Actuarial Experience	\$ 292	\$ 315	20	\$ 29	\$ 32
b. Assumption Changes	5,184	5,591	15	600	647
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 5,476	\$ 5,906		\$ 630	\$ 679
3. Total [1c. + 2e.]	\$ 46,703	\$ 46,364		\$ 4,447	\$ 4,797

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
 JULY 1, 2013 ACTUARIAL VALUATION

APPENDIX B
SUPPORTING TABLES FOR CITY'S FUNDING POLICY

Table B-1h						
Development of the Fiscal Year 2015 Amortization Payment under the City's Funding Policy						
Plan 10 - Municipal						
(\$ thousands)						
	7/1/2013		7/1/2014	Remaining	FY 2015 Payment	FY 2015 Payment
	Outstanding Balance		Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation						
a. Remaining	\$ 0	\$	0		\$ 0	\$ 0
2. Changes in UAL due to						
a. Actuarial Experience	\$ 1	\$	1	20	\$ 0	\$ 0
b. Assumption Changes	0		0	15	0	0
c. Active Plan Changes	0		0	10	0	0
d. Inactive Plan Changes	0		0	1	0	0
e. Subtotal	\$ 1	\$	1		\$ 0	\$ 0
3. Total [1c. + 2e.]	\$ 1	\$	1		\$ 0	\$ 0

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

APPENDIX B
SUPPORTING TABLES FOR CITY'S FUNDING POLICY

Table B-1i					
Development of the Fiscal Year 2015 Amortization Payment under the City's Funding Policy					
Total - All Divisions					
(\$ thousands)					
	7/1/2013	7/1/2014	Remaining	FY 2015 Payment	FY 2015 Payment
	Outstanding Balance	Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2013 Based on July 1, 2012 Valuation					
a. Remaining	\$ 4,832,142	\$ 4,478,649		\$ 682,622	\$ 736,208
2. Changes in UAL due to					
a. Actuarial Experience	\$ 351,699	\$ 379,307	20	\$ 35,422	\$ 38,203
b. Assumption Changes	143,054	154,284	15	16,560	17,860
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	<u>\$ 494,753</u>	<u>\$ 533,591</u>		<u>\$ 51,983</u>	<u>\$ 56,063</u>
3. Total [1c. + 2e.]	\$ 5,326,895	\$ 5,012,240		\$ 734,605	\$ 792,272

APPENDIX C
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Data Assumptions and Practices

In preparing our data, we relied, without audit, on information supplied by the City of Philadelphia Municipal Retirement System staff. However, 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.
- We include terminated vested records in the valuation data, regardless of whether they have enough service for vesting.
- We delete 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 first attempt to identify the record with the most recent status change, and keep only that record. If it is not apparent which record is the most recent, we keep the record that generates the highest liability in our valuation system.
- 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.
- Valuation pay reflects a load of 4% of pay for Police (stress pay) and Firefighters (premium pay).
- 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.
- For pensioners under the form of payment 50% J&S annuity with return of contributions, 60% are assumed to be married based upon data provided by the City. All other forms of payments are explicitly valued.
- Records with missing dates of birth have their data filled in based on the average for their plan.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**APPENDIX C
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

- 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, missing this year, and fully vested became terminated vested with total credited service equal to credited service from last year plus one and final pay equal to pay from last year increased by the salary scale assumption.
- We assumed that any participant who was active last year, missing this year, and not fully vested became 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.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

APPENDIX C
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

1. Investment Return Assumption

7.85% compounded annually, net of expenses.

2. Salary Increase Rate

	All Divisions
Age	
<20	20.80%
20-24	12.30%
25-29	7.55%
30-34	5.30%
35-39	4.55%
40-44	4.30%
45-49	3.55%
50-54	3.55%
55-59	3.55%
60-64	3.55%
65+	3.55%

3. Total Annual Payroll Growth

3.30% per year.

4. Administrative Expenses

Annual expected expenses included in this report are \$8,616,253, and assumed to increase by 3.30% per year.

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 0.54%. This estimate is based on the statistical average expected value of the benefits.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION**

**APPENDIX C
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

6. Rates of Termination

Age	1967 Plan			Plan 87	
	Municipal		Uniformed	Municipal and Elected Officials	Uniformed
	Male	Female	Unisex	Unisex	Unisex
20	0.100000	0.105319	0.030000	0.260000	0.030000
25	0.086000	0.096000	0.037800	0.150000	0.037800
30	0.072000	0.071562	0.029900	0.105000	0.029900
35	0.045000	0.056170	0.025200	0.090000	0.025200
40	0.035000	0.039379	0.015400	0.090000	0.015400
45	0.030000	0.035597	0.010000	0.075000	0.010000
50	0.020000	0.022400	0.001600	0.065000	0.001600
55	0.000000	0.000000	0.001600	0.050000	0.001600

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

Age	Municipal and Elected Officials		Uniformed
	Male	Female	Unisex
20	0.000025	0.000043	0.000795
25	0.000070	0.000061	0.000870
30	0.000557	0.000263	0.001668
35	0.001514	0.000620	0.002918
40	0.001800	0.001314	0.003184
45	0.003840	0.002359	0.003334
50	0.007600	0.004285	0.002654
55	0.008680	0.007088	0.000000

For municipal and elected members, we assume that 70% of all disabilities are ordinary and 30% are service-connected. For police and fire members, we assume that 50% are ordinary and 50% are service-connected.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM
JULY 1, 2013 ACTUARIAL VALUATION

APPENDIX C
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

8. Rates of Pre-Retirement Mortality (RP 2000 with 5 year set back for Municipal females, 3 year set forward for Police and Fire females, no adjustment for males)

The mortality tables used in this item 8 as well as items 9 and 10 describing the mortality assumptions for post-retirement and post-disability mortality respectively, do not reflect projected improvements in life expectancy. 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.

Age	Municipal and Elected Officials		Uniformed	
	Male	Female	Male	Female
20	0.000345	0.000170	0.000345	0.000197
25	0.000376	0.000191	0.000376	0.000235
30	0.000444	0.000207	0.000444	0.000394
35	0.000773	0.000264	0.000773	0.000598
40	0.001079	0.000475	0.001079	0.000937
45	0.001508	0.000706	0.001508	0.001434
50	0.002138	0.001124	0.002138	0.002207
55	0.003624	0.001676	0.003624	0.003923
60	0.006747	0.002717	0.006747	0.007648
65	0.012737	0.005055	0.012737	0.013445

* 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.

9. Rates of Post-Retirement Mortality

For Police and Fire, we assume that mortality for healthy inactive lives will follow RP 2000 with a one year set forward for males and a two year set forward for females. For Municipal and Elected officials, we assume that mortality for healthy inactive lives will follow RP 2000 with a two year set forward for both males and females.

10. Rates of Post-Disability Mortality

For Police and Fire, we assume that mortality for disabled retirees follows RP 2000 Healthy mortality with a 30% upwards adjustment. For Municipal and Elected officials, we assume that mortality for disabled retirees follows RP 2000 Disabled mortality with a 5% downward adjustment.

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APPENDIX C
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

11. Rates of Retirement

Rates of Service Retirement - 1967 Plan		
	<u>Municipal</u>	<u>Uniformed</u>
Age		
45-54	-	0.07
55	0.40	0.20
56	0.21	0.20
57-59	0.16	0.20
60	0.20	0.20
61	0.20	0.25
62	0.35	0.25
63-69	0.20	0.25
70 and up	1.00	1.00

Rates of Service Retirement - Plan 87				
	<u>Municipal and Elected Officials</u>		<u>Uniformed</u>	
Age	First Year Eligible	Subsequent Years	First Year Eligible	Subsequent Years
40-51	-	-	0.200	0.075
52	0.450	0.060	0.200	0.090
53	0.420	0.060	0.200	0.100
54	0.390	0.060	0.200	0.120
55	0.360	0.060	0.200	0.140
56	0.330	0.060	0.200	0.165
57	0.300	0.060	0.200	0.175
58	0.300	0.060	0.200	0.175
59	0.300	0.080	0.200	0.180
60	0.300	0.100	0.200	0.180
61	0.350	0.150	0.200	0.195
62	0.430	0.300	0.200	0.245
63	0.500	0.187	0.200	0.215
64	0.500	0.199	0.200	0.210
65	0.600	0.309	0.200	1.000
66	0.600	0.232	-	-
67	0.600	0.214	-	-
68	0.600	0.214	-	-
69	0.600	0.238	-	-
70	0.600	1.000	-	-

APPENDIX C
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

12. Family Composition Assumptions

70% of active members and 60% 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. Changes Since Last Valuation

- The interest rate assumption was decreased from 7.95% to 7.85%.
- A liability load of 0.54% was applied to the actuarial liability to account for funding on the future benefits payable under the PAF.

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 is 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 years
- Plan changes mandated by the State – 20 years

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.

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. 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 method.

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SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

4. Changes Since Last Valuation

None.

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 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 4% 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

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SUMMARY OF PLAN PROVISIONS – 1967 PLAN

termination, including supplementary compensation received under Civil Service Regulation No. 32.

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

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):

Each employee who participates in the Social Security System contributes 3 3/4% of total compensation up to the taxable wage base (\$106,800 in 2010 and 2011, and \$110,100 in 2012) 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.

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.

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SUMMARY OF PLAN PROVISIONS – 1967 PLAN

Uniformed (Plans D and X):

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

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.

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 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.

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SUMMARY OF PLAN PROVISIONS – 1967 PLAN

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

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.

APPENDIX D
SUMMARY OF PLAN PROVISIONS – 1967 PLAN

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.

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).

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SUMMARY OF PLAN PROVISIONS – 1967 PLAN

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.

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.

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.

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SUMMARY OF PLAN PROVISIONS – 1967 PLAN

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.

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.

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SUMMARY OF PLAN PROVISIONS – 1967 PLAN

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 four optional forms. Options 1, 2, and 3 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.

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 number of the pensioner's completed years of credited service, to a 10 year maximum.

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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 dependent children at age 18 (age 22 if 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.

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' service and have reached minimum retirement age.

APPENDIX D
SUMMARY OF PLAN PROVISIONS – 1987 PLAN

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.

Uniformed (Plans A and B):

Same as municipal except for 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.

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 4% 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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SUMMARY OF PLAN PROVISIONS – 1987 PLAN

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 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 current employees as of January 13, 1999 that elect to do so) will contribute an additional amount to become vested in five years.

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. Exempt and non-represented 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 five years.

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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.

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.

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.

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SUMMARY OF PLAN PROVISIONS – 1987 PLAN

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.

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

APPENDIX D
SUMMARY OF PLAN PROVISIONS – 1987 PLAN

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).

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.

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SUMMARY OF PLAN PROVISIONS – 1987 PLAN

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.

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.

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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.

Uniformed (Plans A and B):

Same as municipal.

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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.

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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.

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).

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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.

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

Eligibility

Municipal (Plan Y):

Service pensions, deferred vested benefits, service-connected disability benefits, and ordinary disability benefits are payable under four 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.

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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.

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 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

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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 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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SUMMARY OF PLAN PROVISIONS – PLAN '10

1. Participation

Municipal:

Municipal employees of the Register of Wills and employees of the Sheriffs' Office represented by Lodge 5 of the Fraternal Order of Police (FOP) hired or rehired on or after January 1, 2012 are members in Plan '10 immediately upon employment. Employees of the Sherriff's office have the option with 30 days to elect to participate in Plan Y.

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 4% of base pay) received during a 12-month period.

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.

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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.

Uniformed:

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

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 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 a maximum of 20 years.

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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.

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.

Uniformed:

Same as municipal.

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

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

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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.

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

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SUMMARY OF PLAN PROVISIONS – PLAN '10

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).

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:

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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.

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.

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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.

16. Survivor Benefits

Eligibility

Municipal:

Service pensions, deferred vested benefits, service-connected disability benefits, and ordinary disability benefits are payable under four 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.

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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 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.

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

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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 service and have reached minimum retirement age.

**APPENDIX E
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.

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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. Annual Required Contribution (ARC) under GASB 25

The Governmental Accounting Standards Board (GASB) Statement No. 25 defines the Plan Sponsor’s “Annual Required Contribution” (ARC) that must be disclosed annually and is defined in accordance with the City’s Funding Policy.

11. Normal Cost

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

12. 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.