



**City of Philadelphia  
Municipal Retirement System**

**Actuarial Valuation Report  
as of July 1, 2012**

**Produced by **Cheiron****

**March 2013**

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**LETTER OF TRANSMITTAL**

March 29, 2013

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

Dear Board Members:

At your request, we have performed the July 1, 2012 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 2014, 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.

We hereby certify that, to the best of our knowledge, this report is 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.

City of Philadelphia Municipal Retirement System

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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



Karen Zangara, FSA, EA, MAAA  
Consulting Actuary

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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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) 2014,
- 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, 2012 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.

GASB has approved new accounting standards for reporting requirements effective for large, public employer plans for periods beginning after June 15, 2013. The results presented in this valuation report do not reflect any changes that may be required under the new standard.

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## A. Valuation Basis

The June 30, 2012 valuation results are based on the same methods used in the June 30, 2011 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, 2012 and does not reflect any subsequent changes in the membership or the assets.

The valuation results reflect the Board's decision to make the following changes to actuarial assumptions as of July 1, 2012:

- Decrease the interest rate from 8.10% to 7.95%
- Reduce the age-based salary scale assumption by 0.20% for all ages
- Reduce the long term payroll growth assumption from 3.5% to 3.3% .

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

- ***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 \$4.768 billion as of July 1, 2011 to **\$5.083 billion as of July 1, 2012** reflecting the net of asset losses and liability losses from July 1, 2011 through June 30, 2012 and net effect of the changes in actuarial assumptions as of July 1, 2012.
- ***Funding Ratio:*** This is the ratio of the System's AVA to AL. The funding ratio decreased from 49.7% as of July 1, 2011 to **48.1% as of July 1, 2012** mainly due to the asset losses.
- ***Minimum Municipal Obligation (MMO) excluding deferred contribution interest:*** The MMO is the required minimum amount the City must contribute under Pennsylvania State law **before application of amendments** specific to the System as they relate to the deferred contribution provisions of the law. The interest and repayment of the deferred contribution amounts of \$150 million and \$80 million for FYE 2011 and FYE 2012, respectively, have been reflected as a separate line item for the MMO exhibit provided in Table I-5. The MMO increased from \$492.0 million for FYE 2013 to **\$523.4 million for FYE 2014** before accounting for the interest and repayment of the deferred contributions.
- ***Minimum Municipal Obligation (MMO) including deferred contribution interest and repayment:*** It is our understanding that the City has repaid the total outstanding amount of deferred contributions in October 2012. The **MMO for FYE 2013 is \$727.6 million** after reflecting the full repayment of the deferred contributions of \$230.0 million and \$5.6 million in interest for both accrued interest as of the date of repayment and projected interest to account for the difference between 8.25% and 8.10% interest assumptions.

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- **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 \$692.6 million for FYE 2013<sup>1</sup> based upon actual FYE 2013 payroll to an estimated **\$769.2 million for FYE 2014**.

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

<b>Table I-1 Key Results (\$ thousands)</b>			
<b>Valuation Date</b>		<b>7/1/2012</b>	<b>7/1/2011</b>
Unfunded Actuarial Liability	\$	5,083,059	\$ 4,768,359
Funding Ratio		48.1%	49.7%
		<b>Fiscal Year 2014</b>	<b>Fiscal Year 2013</b>
Minimum Municipal Obligation*	\$	523,368	\$ 727,604
City's Funding Policy Contribution**	\$	769,175	\$ 692,565

\* Fiscal Year end 2013 MMO includes full repayment of the \$230 million in deferred contributions and \$5.6 million in interest on these amounts.

\*\*The City’s funding policy contribution for FYE Fiscal Year 2013 was updated based upon the actual payroll of \$1,372.2 million (provided as pay rates in the data) as of July 1, 2012, used to estimate the beginning of year FYE 2013 payroll. In the July 1, 2011 actuarial valuation report, the estimated FYE 2013 payroll was \$1,419.3 million based upon July 1, 2011 pay rates and increased based upon the payroll assumption

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**B. Current Financial Condition**

On the following pages, we summarize the key results of the July 1, 2012 valuation and how they compare to the results from the July 1, 2011 valuation.

1. City Membership:

As shown in Table I-2 below, total membership in the Retirement System increased by 0.2% from 2011 to 2012.

<b>Table I-2</b>				
<b>Membership Total</b>				
		<b>July 1, 2012</b>	<b>July 1, 2011</b>	<b>% Change</b>
Actives		26,306	26,671	-1.4%
Terminated Vesteds		1,289	1,324	-2.6%
Disabled		4,169	4,235	-1.6%
Retirees		21,314	21,134	0.9%
Beneficiaries		8,621	8,273	4.2%
DROP		2,786	2,712	2.7%
Total City Members		64,485	64,349	0.2%
Annual Salaries	\$	1,372,174,460	\$ 1,371,273,920	0.1%
Average Salary per Active Member	\$	52,162	\$ 51,414	1.5%
Annual Retirement Allowances	\$	646,916,633	\$ 627,116,620	3.2%
Average Retirement Allowance	\$	18,969	\$ 18,641	1.8%

The active participant population continues to decrease by 1.4% during the 2011 to 2012 plan year. DROP participants increased about 2.7% from 2011 to 2012. The average salary per active member increased by only 1.5% during the plan year, which is less than assumed by the salary scale assumption. The combined result of lower active membership and salary growth produced a total payroll growth lower than expected of 0.1% versus the expected 3.5% payroll growth assumption from last year.

Annual retirement allowances continued to increase, growing by 3.2% this year and reflects a 1.8% increase in the average benefits provided and an increase in participants in pay status of 1.4%.

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2. City Assets and Liabilities:

Table I-3 presents a comparison between the July 1, 2012 and July 1, 2011 System assets, liabilities, UAL, and funding ratios. The Funding Ratio decreased from 49.7% as of July 1, 2011 to **48.1%** as of July 1, 2012 due to the lower than expected asset returns, liability losses and changes in actuarial assumptions.

Both the July 1, 2011 and the July 1, 2012 market value of assets (MVA) include a total deferral amount of \$230 million in accordance with the requirements of Act 44.

<b>Table I-3</b>				
<b>Assets and Liabilities</b>				
(\$ thousands)				
	<b>July 1, 2012</b>		<b>July 1, 2011</b>	<b>% Change</b>
<b>Actuarial Liabilities by Membership:</b>				
Actives	\$ 2,946,588	\$	2,881,397	2.3%
Terminated Vesteds	116,813		120,270	-2.9%
Disabled	699,033		688,621	1.5%
Retirees	4,187,990		4,071,325	2.9%
Beneficiaries	550,868		501,392	9.9%
DROP	1,292,585		1,218,351	6.1%
Non-Vested Refunds	5,975		6,122	-2.4%
Total Actuarial Liability	\$ 9,799,852	\$	9,487,478	3.3%
Market Value of Assets (net of PAF)*	\$ 4,151,828	\$	4,259,229	-2.5%
Actuarial Value of Assets (net of PAF)*	4,716,793		4,719,119	0.0%
Unfunded Actuarial Liability	\$ 5,083,059	\$	4,768,359	6.6%
Funding Ratio	48.1%		49.7%	-1.6%

\*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 0.2% compared to the 8.10% 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 2.4%.

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3. Components of UAL Change between July 1, 2011 and July 1, 2012:

The Retirement System’s unfunded actuarial liability increased by \$314.7 million, from \$4,768.4 million as of July 1, 2011 to \$5,083.1 million as of July 1, 2012. Table I-4 below presents the specific components of this change in the UAL.

The System experienced a \$260.7 million investment loss based upon the actuarial value of assets and a \$35.9 million liability loss which is attributable to demographic experience, offset in part by the lower than expected payroll. There was also an additional liability of \$130.1 million recognized due to of the decrease in interest rate from 8.10% to 7.95%, and a decrease in liability of \$21.6 million due to the reduction in the salary scale assumption. The net impact of the changes in assumptions was \$108.5 million. Actual FYE 2012 contributions when compared to the expected MMO created a \$16.2 million gain because of higher contributions.. This is combined with a \$22.7 million gain due to the one year deferral of gains and losses under the MMO funding requirements. When these changes are compared to the expected paydown of the UAL as part of the MMO there is a net increase in the UAL of \$314.7 over what is expected as of July 1, 2012.

**Table I-4  
Change in Unfunded Actuarial Liability  
(\$ millions)**

<b>Experience</b>	
1. UAL change due to investment (gain)/loss	\$ 260.7
2. UAL change due to overall liability (gain)/loss	35.9
<b>Contributions</b>	
3. UAL change due to difference in benefit accruals, MMO contributions, and timin	(16.2)
4. UAL change due to one-year delay in MMO contributions	(22.7)
<b>Total (Gain)/Loss Amortization Base</b>	
5. Total UAL change due to gains and losses: sum 1 through 4	\$ 257.7
<b>Assumption Changes</b>	
6. UAL change due to assumption changes	108.5
<b>Total</b>	
7. Total net overall change: 5 + 6	\$ 366.2
8. Expected change in UAL	<u>(51.5)</u>
9. Net increase/(decrease) in UAL: 7 + 8	\$ 314.7

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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 2013 was originally estimated to be \$696.3 million based upon estimated FYE 2013 payroll. Using updated payroll, the FYE 2013 contribution is \$692.6 million. For Fiscal Year 2014, the funding policy contributions increased by 3.79% of payroll, from 50.47% to 54.26%. In dollar terms, the contributions under the City's Funding Policy increased from \$692.6 million to \$769.2 million, a \$76.6 million increase. The FYE 2014 contributions under the City's Funding Policy will be updated next year when the actual payroll is available. All contributions for the City's Funding Policy are provided as of the beginning of the year.

The **Minimum Municipal Obligation** for FYE 2014 measured as of the beginning of the year increased by 2.25% of payroll, from 34.67% to 36.92% before consideration of deferred contribution interest and principal payments. In dollar terms, the required beginning of year contribution increased from \$492.0 million to \$523.4 million, a \$31.4 million increase. The MMO for FYE 2013 after reflecting the full repayment of the deferred contributions including any interest adjustments in October 2012, is \$727.6 million.

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

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<b>Table I-5 Contributions (\$ thousands)</b>				
<b>Fiscal Year Ending in Year:</b>	<b>2014</b>	<b>% of Pay</b>	<b>2013</b>	<b>% of Pay</b>
<b>City's Funding Policy<sup>1</sup></b>				
Estimated FY Payroll	\$ 1,417,456		\$ 1,372,174 <sup>2</sup>	
Normal Cost (with Expenses)	\$ 134,705	9.50%	\$ 129,525	9.44%
Employee Contributions	<u>(47,449)</u>	3.35%	<u>(46,198)</u>	3.37%
City Normal Cost	\$ 87,256	6.16%	\$ 83,327	6.07%
Amortization Payment	<u>681,919</u>	48.11%	<u>609,237</u>	44.40%
City's Funding Policy	\$ 769,175	54.26%	\$ 692,564	50.47%
<b>Minimum Municipal Obligation <sup>3</sup></b>				
Estimated FY Payroll	\$ 1,417,456		\$ 1,419,269	
Normal Cost (with Expenses)	\$ 134,705	9.50%	\$ 134,810	9.50%
Employee Contributions	<u>(47,449)</u>	3.35%	<u>(47,784)</u>	3.37%
City Normal Cost	\$ 87,256	6.16%	\$ 87,026	6.13%
Amortization Payment	<u>436,112</u>	30.77%	<u>404,964</u>	28.53%
Minimum Municipal Obligation before Adjustment	\$ 523,368	36.92%	\$ 491,990	34.67%
Deferred Contribution Interest	\$ 0		\$ 5,615	
Deferred Contribution Principal Repayment	<u>0</u>		<u>230,000</u>	
Total Deferred Contribution Repayments	\$ 0		\$ 235,615	
Minimum Municipal Obligation plus Interest & Repayment for Deferrals	\$ 523,368	36.92%	\$ 727,604	51.27%

<sup>1</sup> Assuming beginning-of-year payment.

<sup>2</sup> FY 2013 Payroll for the City's Funding Policy is based upon the 7/1/2012 pay rates and will be finalized when the FYE 2013 payroll is available. All other payroll is estimated based upon the prior year's data used for the actuarial valuation.

<sup>3</sup> The MMO does not include Quasi-Agency contributions.

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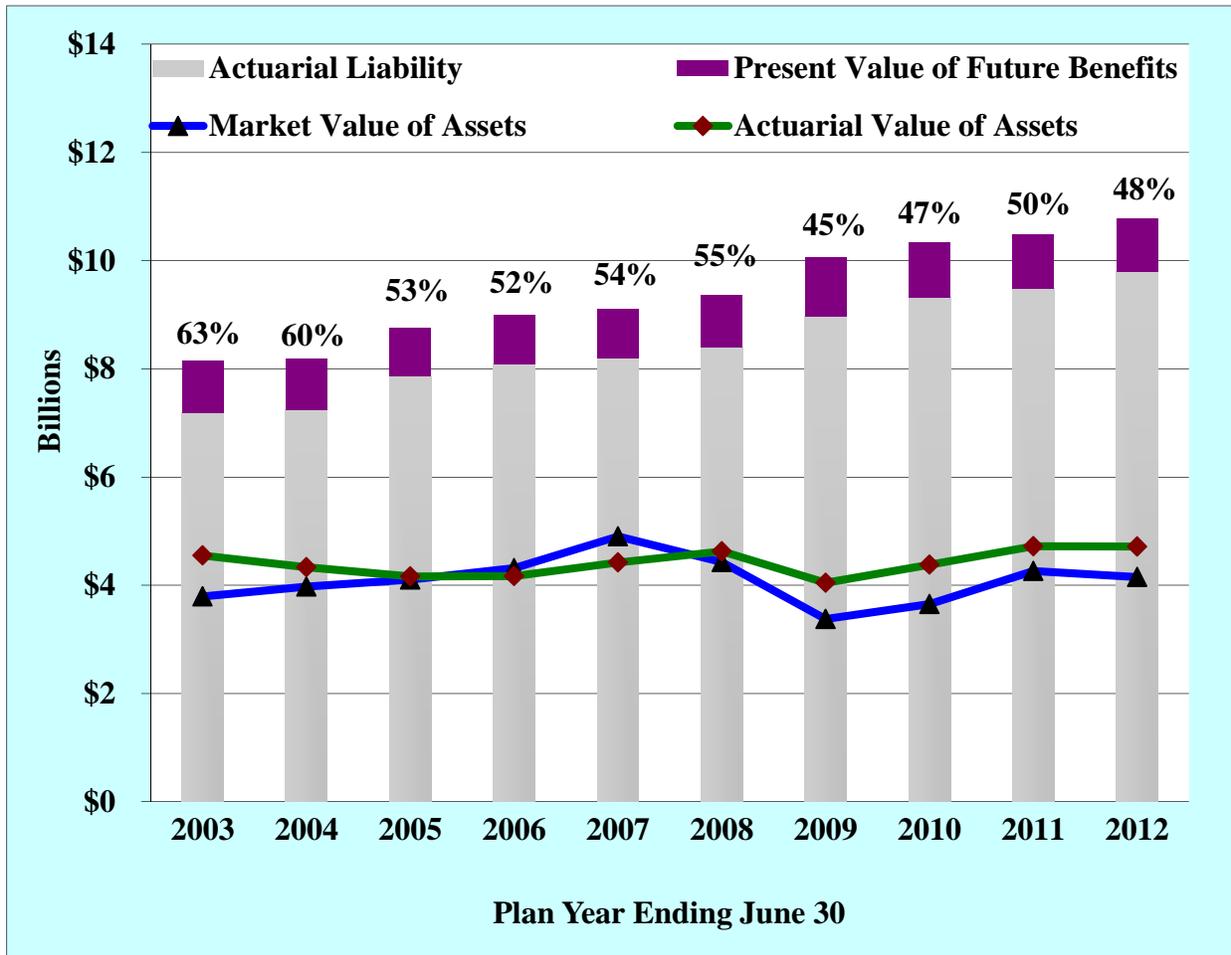
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**C. Historical Trends**

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 2003.

**City of Philadelphia Assets\* and Liabilities – 2003 to 2012**



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

The System's funding ratio has declined significantly since 2003. 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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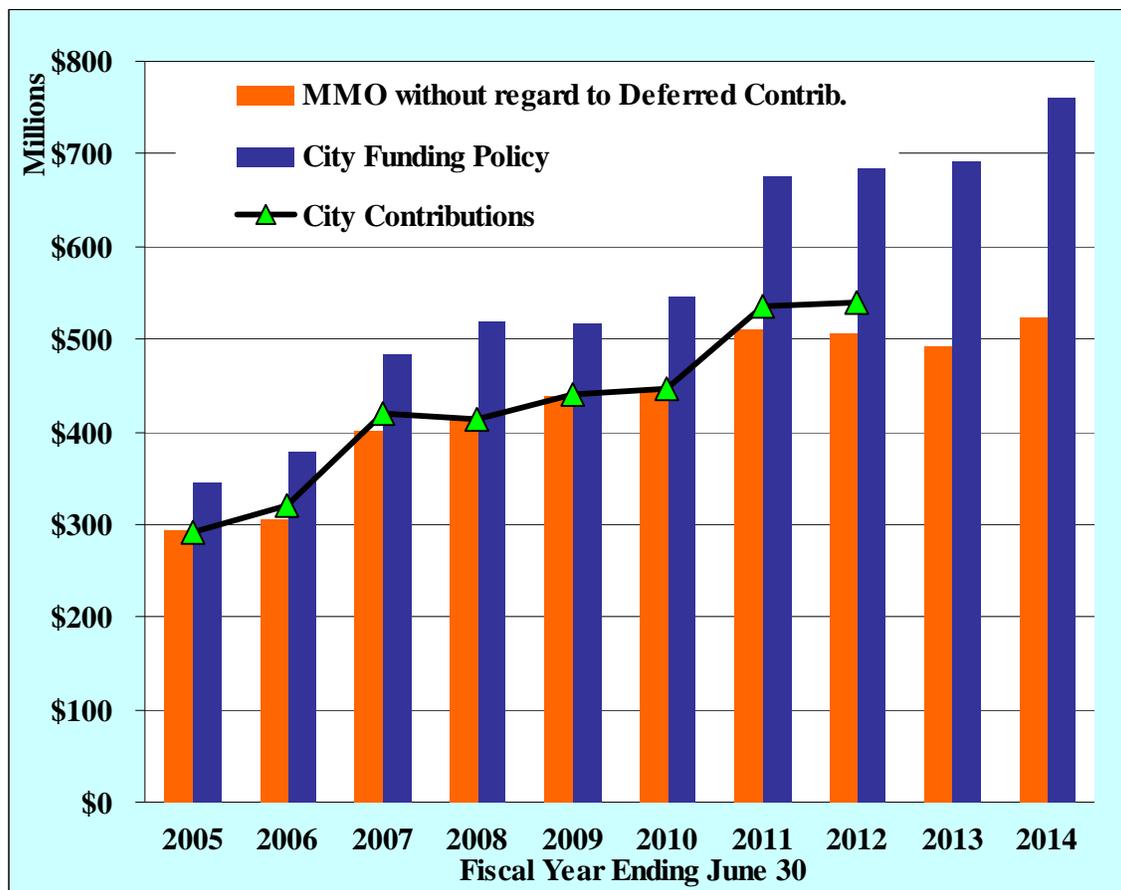
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assumption changes. In 2012 the funding ratio decreased by 2% due to lower than expected investment returns and additional changes in assumptions to reduce future risks and reflect lower interest rates that drive both investment returns and future salary increases resulting in an increased actuarial liability.

This historic trend emphasizing the relatively low funded status highlights the potential risk of insolvency, if contributions coupled with more stable and favorable investment returns relative to the long-term assumption are not realized in the near future.

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 2013 and 2014. The FYE 2010 and 2011 City contributions include the \$150 million and \$80 million deferred contributions for each year. The deferred contributions are subsequently treated as if they are short-term investments and therefore not reflected in the FYE 2013 MMO amount due.

**City of Philadelphia Contributions for Fiscal Years 2005-2014**



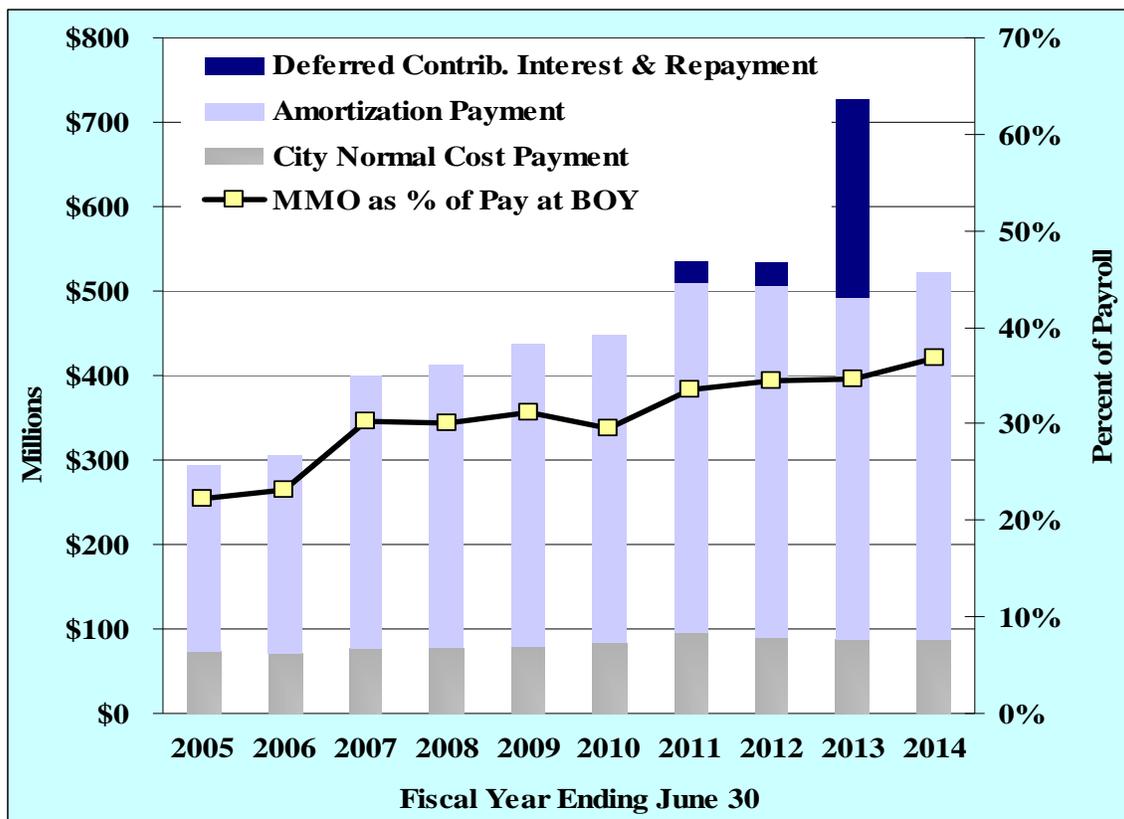
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The key trend illustrated in this chart is the rapid escalation in all three measures starting in FYE 2005 due in part to investment losses and the City’s decision to move from the funding policy to the MMO. This has slowed the funding progress and to maintain the funding policy 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 2012 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 2013 and 2014 the City cost is expected to be about 35% and 37% of payroll respectively. Note that this cost as a percentage of payroll is prior to the additional amounts payable by the City due to interest and repayment of deferred contributions from 2010 and 2011.

**MMO Contributions by Source for Fiscal Years 2005-2014**



The chart illustrates that the City normal cost payment has remained relatively level over the period shown. The amortization payment to pay off the unfunded actuarial liability has increased from just under \$222 million for FYE 2005 to just over \$436 million for FYE 2014. 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.

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 22% in 2005 to about 30% in 2007, remained 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 37% in FYE 2014.

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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, 2012 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 7.95% 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 7.95% 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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Return	3.5%	7.5%	15.5%	5.0%	11.0%	10.5%	7.6%	5.3%	0.0%	-4.5%
Fiscal Year Beginning	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Return	-0.5%	7.5%	6.5%	6.0%	11.5%	15.5%	19.5%	15.5%	12.0%	7.2%

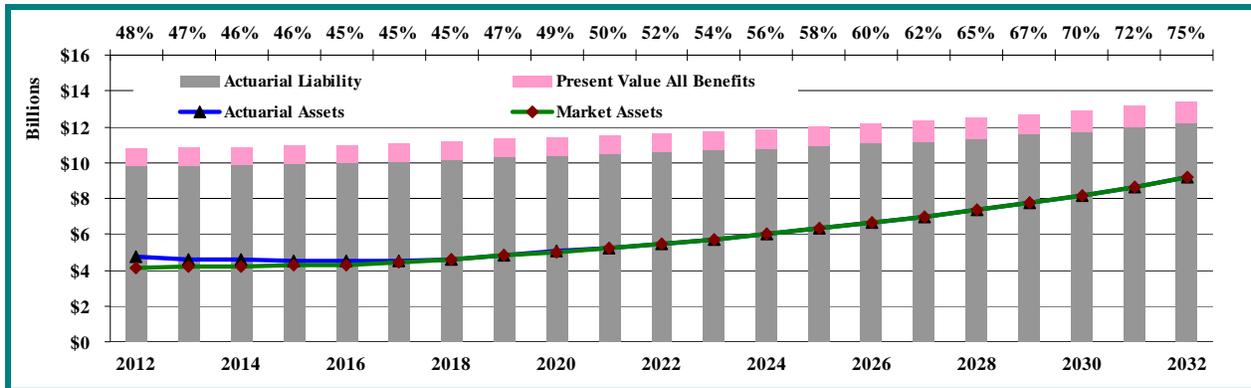
In reviewing each of these projections, it is the future trends, not necessarily the actual values that are important to consider in your deliberation of the risks of the System and the potential volatility of future funding ratios and City contribution levels.

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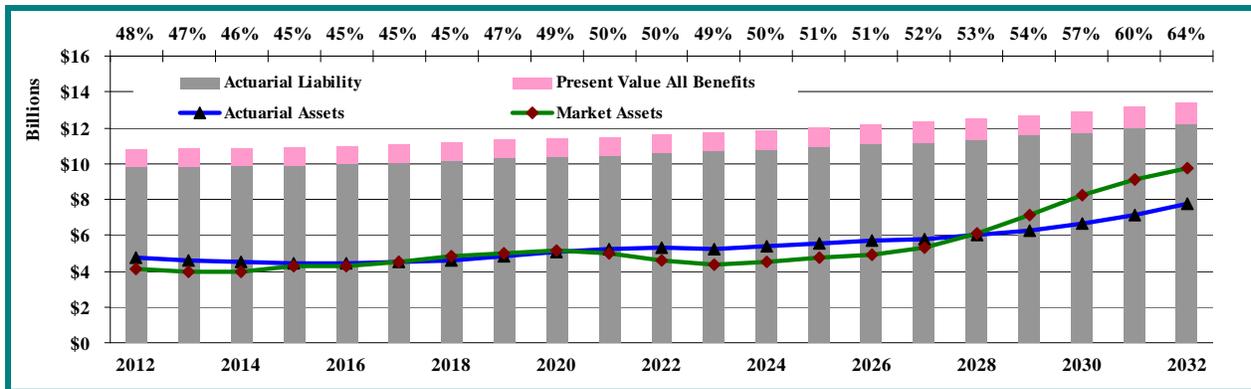
Projection Set 1: Assets and Liabilities

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 after 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.

**Chart 1: Projection of Assets and Liabilities, 7.95% return each year and City makes contributions based on MMO**



**Chart 2: Projection of Assets and Liabilities, varying returns averaging 7.95% and City makes contributions based on MMO**



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

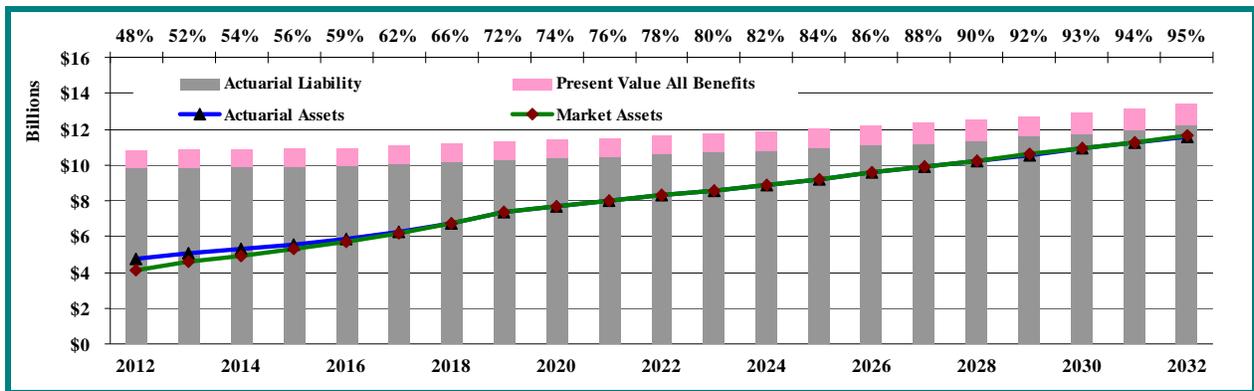
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Chart 2 demonstrates that if the fund can achieve a long-term return rate of 7.95%, the funding ratio can be adversely impacted by volatile returns year by year. This component of funding risk is driven by negative cash flows (where benefit payments 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 and 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, 7.95% 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 95% 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 7.95%**

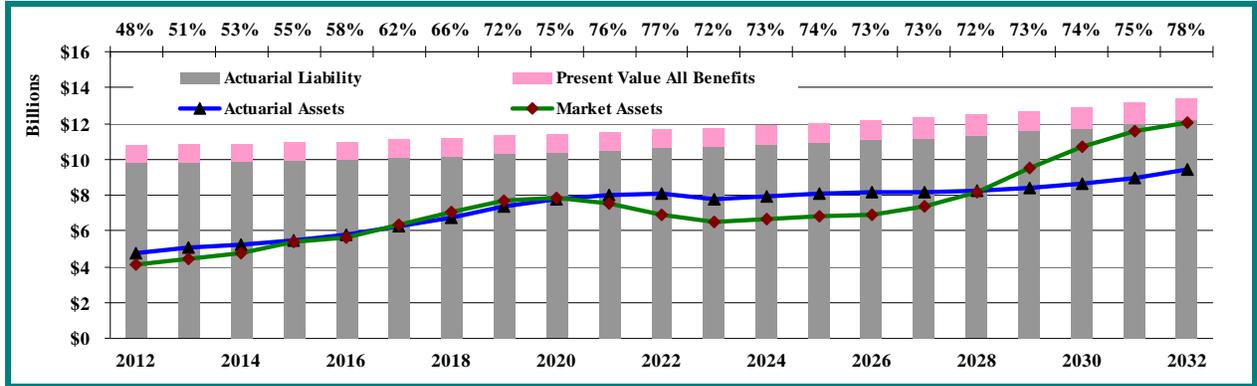


Chart 4 demonstrates that even if the return is achieved on average, because of negative cash flows the funded ratio could be materially less than long-term expectations might imply.

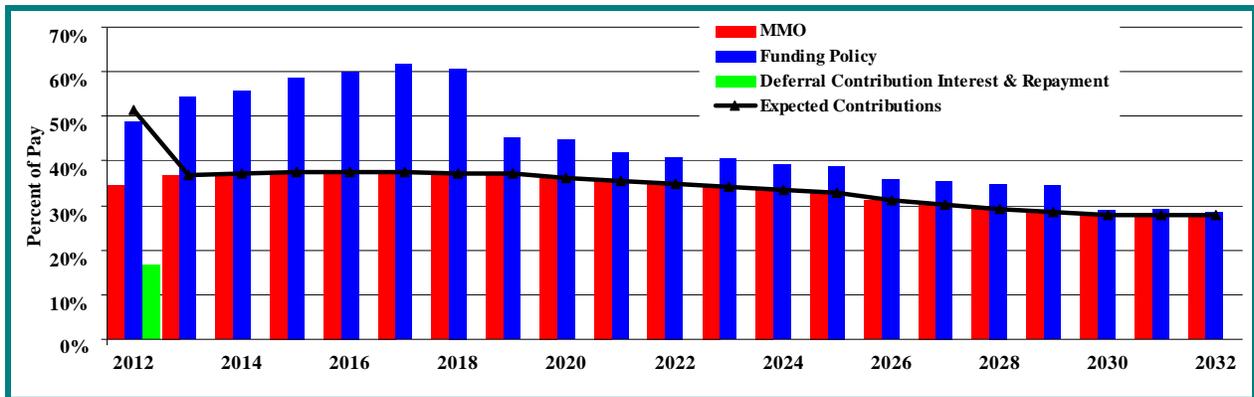
**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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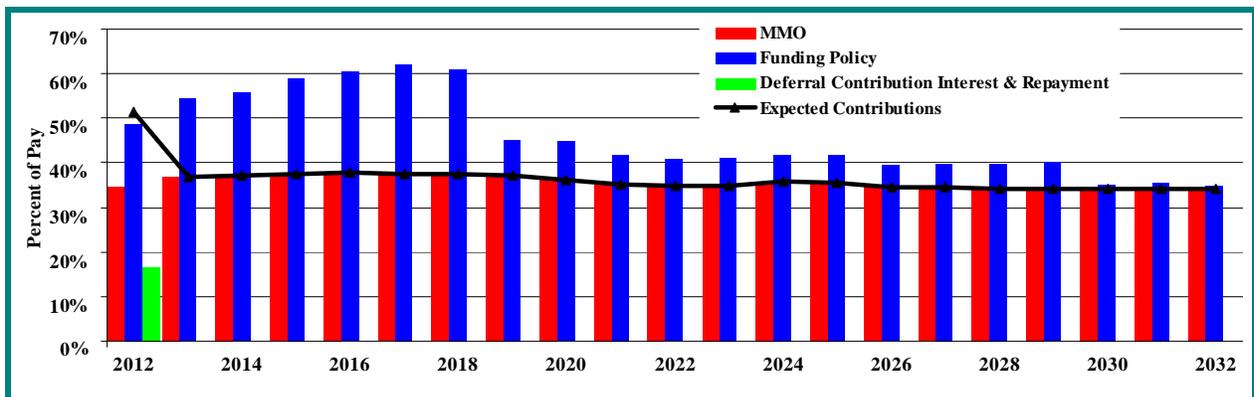
**Projection Set 2: Projected City Contribution Rate**

The chart below shows that the City’s composite contribution rate under the MMO is elevated for 2012 because it includes the repayment of deferred contributions with interest. It drops down after 2012 and remains relatively stable until 2019, after which the MMO decreases slightly until 2028 when the contribution rate drops to less than 30% of payroll. 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 7.95% anticipated investment return assumption, and the MMO contributions are made each year.

**Chart 5: Projection of City Contributions, 7.95% return each year and the City makes contributions based on the the MMO**



**Chart 6: Projection of City Contributions, varying returns averaging 7.95% and the City makes contributions based on the the MMO**



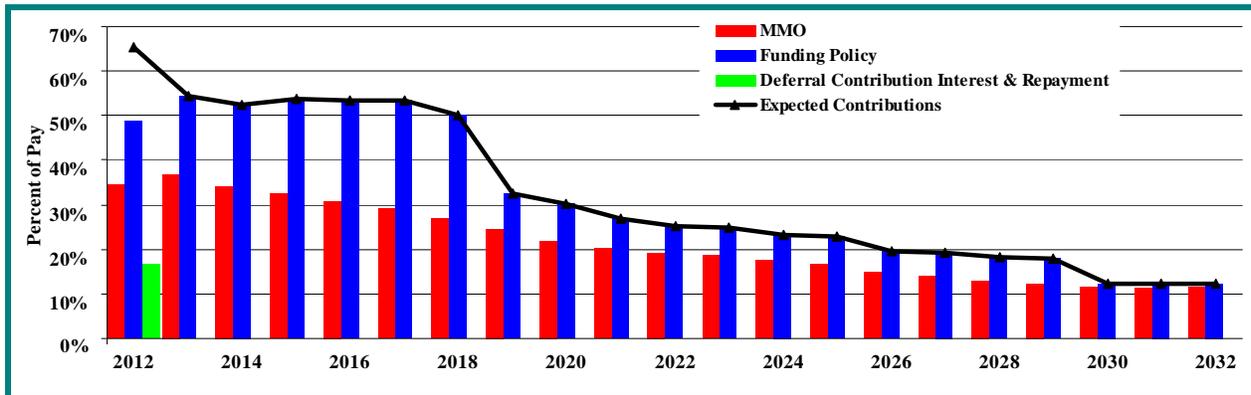
CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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As shown above, varying returns have an impact on the computed City contribution rate, especially in the later projection years. However the volatility is mitigated for two reasons, the 10-year smoothing 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.

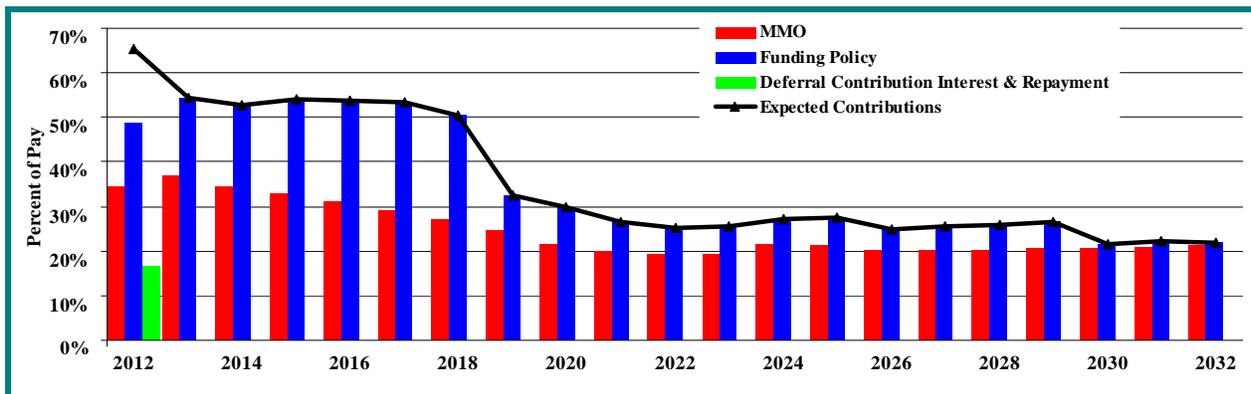
**Chart 7: Projection of City Contributions, 7.95% return each year, and the City makes contributions based on the City’s Funding Policy**

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 steadily decline when compared to Chart 5.



**Chart 8: Projection of City Contributions, varying returns averaging 7.95% 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.



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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.

**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, 2011 and July 1, 2012,
- 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, 2012, 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, 2011 and July 1, 2012. Table II-2 presents the System’s net cash flows for the plan year beginning July 1, 2011 and ending June 30, 2012. Table II-3 presents Fiscal 2012 City contributions.

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**SECTION II  
ASSETS**

**Table II-1  
Statement of Assets at Market Value<sup>1</sup>**

	7/1/2012	7/1/2011
<b><u>Assets</u></b>		
Cash	\$ 202,479,449	\$ 17,756,299
Investments	3,716,592,996	4,039,290,380
Securities Lending	407,007,573	485,348,281
Accounts Receivable	3,051,397	4,429,754
Due from Brokers	243,294,581	620,344,768
Interest and Dividends Receivable	17,868,429	14,434,813
Due from Other Governmental Units	<u>2,441,845</u>	<u>3,612,705</u>
<b>Total Assets</b>	<b>\$ 4,592,736,270</b>	<b>\$ 5,185,217,000</b>
<b><u>Liabilities</u></b>		
Vouchers Payable	\$ 8,812	\$ 106,766
Accounts Payable	4,315,151	3,625,838
Salaries and Wages Payable	56,914	189,208
Due on Securities Lending	407,007,573	485,348,281
Due to Brokers	251,976,826	660,238,187
Accrued Expenses	2,224,357	1,158,489
Deferred Revenue	2,004,312	2,047,238
Monies Held in Escrow	9,161	11,038
Allowance for Unrealized Loss	1,860,053	1,895,088
Other Liabilities	<u>456,326</u>	<u>380,970</u>
<b>Total Liabilities</b>	<b>\$ 669,919,483</b>	<b>\$ 1,155,001,103</b>
<b>Net Assets</b>	<b>\$ 3,922,816,787</b>	<b>\$ 4,030,215,897</b>
Deferred Contributions for each FYE	<u>230,000,001</u>	<u>230,000,001</u>
<b>Net Assets with Deferred Contributions</b>	<b>\$ 4,152,816,788</b>	<b>\$ 4,260,215,898</b>

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

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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SECTION II  
ASSETS

**B. System Cash Flows for the Year July 1, 2011 through July 1, 2012**

<b>Table II-2</b>		
<b>Changes in Market Values<sup>1</sup></b>		
<b>Value of Assets – July 1, 2011</b>		<b>\$ 4,260,215,898</b>
<b><u>Additions</u></b>		
Contributions:		
Employer Contributions	\$ 556,031,693	
Employee Contributions	<u>\$ 49,978,658</u>	
Total Contributions		\$ 606,010,351
Investment Income:		
Gain/(Loss) from Sale of Investments	\$ (57,719,607)	
Interest and Dividends	<u>\$ 86,167,699</u>	
Total Investment Income	\$ 28,448,092	
Investment Activity Expenses:		
Investment Expenses	<u>\$ (20,054,004)</u>	
Total Investment Activity Expenses	\$ (20,054,004)	
Securities Lending Activities:		
Securities Lending Income	\$ 2,075,769	
Securities Lending Expenses	<u>\$ (2,712,211)</u>	
Net Income from Securities Lending Activities	\$ (636,442)	
Miscellaneous Operating Revenues	\$ 0	
Net Investment Income		<u>\$ 7,757,646</u>
Total Additions		\$ 613,767,997
<b><u>Deductions</u></b>		
Administrative Expenses	\$ (8,482,639)	
Withdrawal Refunds	\$ (6,500,247)	
Benefit Payments	\$ (706,184,221)	
PAF Distributions	<u>\$ 0</u>	
Total Deductions		<u>\$ (721,167,107)</u>
<b><u>Total</u></b>		
Net Increase (Decrease)		\$ (107,399,110)
<b>Value of Assets – July 1, 2012</b>		<b>\$ 4,152,816,788</b>

<sup>1</sup> Includes the PAF which is not available for funding purposes and beginning and end of year assets reflect \$230 million in deferred contributions.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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SECTION II  
ASSETS

Cash Received during Fiscal Year 2012	\$	539,838,741
Quasi-Agencies		
Cash Received		17,363,812
Accrued as of June 30, 2012		(1,170,860)
<b>Total</b>	<b>\$</b>	<b>556,031,693</b>

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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**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.

<b>Table II-4 Development of Actuarial Value of Assets as of July 1, 2012</b>					
1. Market Value of Assets as of July 1, 2012		\$	4,152,816,788		
2. Pension Adjustment Fund (PAF) as of July 1, 2012 Before Additional Transfers		\$	988,497		
3. Market Value of Assets Net of Original PAF*		\$	4,151,828,291		
4. Deferred Asset Gains/(Losses)					
Plan Year	Investment Gains / (Losses)	Percent Recognized	Percent Deferred	Amount Deferred	
2007	\$ (642,637,544)	100%	0%	\$ 0	
2008	(1,235,073,412)	40%	60%	(741,044,047)	
2009	200,524,637	30%	70%	140,367,246	
2010	414,187,915	20%	80%	331,350,332	
2011	(328,486,968)	10%	90%	(295,638,271)	
Total				\$ (564,964,740)	
5. Preliminary Actuarial Value as of July 1, 2012 (5 = 3 - 4)		\$	4,716,793,031		
6. Corridor for Actuarial Value					
a. 80% of Market Value Net of PAF		\$	3,321,462,633		
b. 120% of Market Value Net of PAF			4,982,193,949		
7. Additional PAF Transfer as of July 1, 2012		\$	0		
8. Actuarial Value of Assets Net of Final PAF as of July 1, 2012		\$	4,716,793,031		
8 = max( (min of 5 or 6b) and 6a), minus 7					
As a percent of Market Value Net of Final PAF			113.6%		
9. Market Value of Assets Net of Final PAF		\$	4,151,828,291		

\* 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  
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**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.

<b>Table II-5</b>								
<b>Allocation of Assets for Valuation Purposes Between Plans as of July 1, 2012</b>								
(\$ thousands)								
	<u>1967 Plan</u>			<u>1987 Plan</u>				<b>Total</b>
	<b>Municipal</b>	<b>Police</b>	<b>Fire</b>	<b>Municipal</b>	<b>Elected</b>	<b>Police</b>	<b>Fire</b>	
1. Actuarial Value of Assets as of July 1, 2011	\$ 1,870,510	\$ 781,665	\$ 331,753	\$ 794,132	\$ 13,499	\$ 732,450	\$ 195,110	\$ 4,719,119
2. Transactions During Plan Year July 1, 2011 to June 30, 2012								
a. Contributions								
City and Commonwealth Employees	\$ 245,859	\$ 143,419	\$ 55,158	\$ 46,757	\$ 859	\$ 36,388	\$ 11,398	\$ 539,839
Quasi-Public Agencies	7,167	2,948	961	14,891	199	18,463	5,349	49,979
b. Benefit Payments	13,895	0	0	2,298	0	0	0	16,193
c. Withdrawals	(389,199)	(192,716)	(84,592)	(20,941)	(3,753)	(11,649)	(3,334)	(706,184)
d. Administrative Expenses	(1,606)	(239)	(860)	(2,148)	(71)	(1,370)	(208)	(6,500)
e. Net Transactions	(3,277)	(1,367)	(471)	(2,329)	(5)	(799)	(235)	(8,483)
3. Total Fund Balance Prior to Allocation of Investment Income [1. + 2e.]	\$ (127,161)	\$ (47,955)	\$ (29,804)	\$ 38,528	\$ (2,771)	\$ 41,033	\$ 12,970	\$ (115,156)
4. Investment Income During Plan Year July 1, 2011 to June 30, 2012	\$ 1,743,349	\$ 733,710	\$ 301,949	\$ 832,660	\$ 10,728	\$ 773,483	\$ 208,080	\$ 4,603,963
5. Preliminary Actuarial Value of Assets as of July 1, 2012 [3. + 4.]	\$ 42,725	\$ 17,981	\$ 7,400	\$ 20,406	\$ 263	\$ 18,956	\$ 5,099	\$ 112,830
6. Final Actuarial Value of Assets With Corridor as of July 1, 2012	\$ 1,786,073	\$ 751,692	\$ 309,350	\$ 853,066	\$ 10,992	\$ 792,441	\$ 213,179	\$ 4,716,793

Note: Numbers may not add due to rounding

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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**SECTION II  
ASSETS**

**E. Development of the Pension Adjustment Fund as of July 1, 2012**

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.

<b>Table II-6 Development of the Pension Adjustment Fund as of July 1, 2012</b>		
1.	PAF on July 1, 2011	\$ 986,676
2.	PAF Distribution	0
3.	Market Value Asset Return Through June 30, 2012 *	0.18%
4.	PAF on July 1, 2012 Before Additional Transfers** =(1) x [1 + (3)] + (2)	\$ 988,497
5.	Adjusted Market Value of Assets Through June 30, 2012	\$ 4,332,909,944
6.	Adjusted Market Value of Assets Return Through June 30, 2012 ***	0.41%
7.	Return in Excess of Investment Assumption Plus 1.0%, Limited to 5.0% =(6) - [8.1% + 1.00%]	0.00%
8.	Additional Transfer as of July 1, 2012 =50% of (7) x (5)	\$ 0
9.	Total PAF as of July 1, 2012 = (4) + (8)	\$ 988,497

\* Market Value Assset 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  
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**SECTION II  
ASSETS**

**F. Investment Performance**

The market value of assets internal rate of return was 0.2% for the year ending June 30, 2012. This is compared to an assumed return of 7.95%. This return produced an overall investment loss of \$328.5 million for the year ending June 30, 2012.

On an actuarial value of assets basis (net of PAF), the return for FYE 2012 was 2.4%.

<b>Table II-7 Annual Rates of Return</b>					
<b>Year Ending June 30,</b>	<b>Investment Return Assumption</b>	<b>Market Value</b>	<b>Actuarial Value *</b>	<b>Total Return Standard &amp; Poor's 500 Index</b>	<b>Barclays Aggregate Bond Index**</b>
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	8.25%	-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%

\* Net of PAF

\*\* Formerly Lehman Brothers Aggregate Bond Index

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**SECTION III  
LIABILITIES**

**G. Asset Gain/(Loss)**

There was a \$328.5 million investment loss on market value of assets when compared to the expected as of July 1, 2012. Table II-8 reconciles the 2012 asset loss (expected versus actual) for the market value of assets both net of the PAF and in total. This investment loss 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, 2012.

<b>Table II-8 Calculation of Asset Gain/(Loss)</b>			
	<b>Market Value (Net of PAF)</b>	<b>PAF</b>	<b>Total Market Value</b>
1. Market Value of Assets as of July 1, 2011	\$ 4,259,229,222	\$ 986,676	\$ 4,260,215,898
2. Transactions During Plan Year July 1, 2011 to June 30, 2012			
a. Contributions			
City and Commonwealth	\$ 539,838,741	\$ 0	\$ 539,838,741
Employees	49,978,658	0	49,978,658
Quasi-Public Agencies	16,192,953	0	16,192,953
b. Benefit Payments	(706,184,221)	0	(706,184,221)
c. Withdrawals	(6,500,247)	0	(6,500,247)
d. Administrative Expenses	(8,482,639)	0	(8,482,639)
e. Net Transactions	\$ (115,156,755)	\$ 0	\$ (115,156,755)
3. Expected Investment Income From July 1, 2011 to June 30, 2012	\$ 336,242,792	\$ 1,821 <sup>1</sup>	\$ 336,244,613
4. PAF transfer at July 1, 2012	\$ 0	\$ 0	\$ 0
5. Expected Market Value of Assets as of July 1, 2012 [1. + 2.e. + 3. + 4]	\$ 4,480,315,259	\$ 988,497	\$ 4,481,303,756
6. Market Value of Assets as of July 1, 2012	\$ 4,151,828,291	\$ 988,497	\$ 4,152,816,788
7. Investment Gain/(Loss) [6. - 5.]	\$ (328,486,968)	\$ 0	\$ (328,486,968)

<sup>1</sup> The PAF is credited with investment income at the market rate of return earned by plan assets.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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**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, 2011 and July 1, 2012,
- 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, 2013.

**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  
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**SECTION III  
LIABILITIES**

Table III-1 shows the present value of future benefits, actuarial liability, and unfunded actuarial liability as of July 1, 2012, and July 1, 2011, for the Retirement System.

<b>Table III-1 Disclosure of Liabilities (\$ thousands)</b>		
	<b>July 1, 2012</b>	<b>July 1, 2011</b>
<b>Present Value of Future Benefits</b>		
Actives	\$ 3,924,652	\$ 3,873,826
Terminated Vesteds	116,813	120,270
Disabled	699,033	688,621
Retirees	4,187,990	4,071,325
Beneficiaries	550,868	501,392
DROP Account plus Deferred Annuities	1,292,585	1,218,351
Non-Vested Refunds	<u>5,975</u>	<u>6,122</u>
<b>Total City PVFB</b>	<b>\$ 10,777,916</b>	<b>\$ 10,479,907</b>
Market Value of Assets	(4,152,817)	(4,260,216)
Present Value Future Member Contrib.	<u>(339,045)</u>	<u>(346,062)</u>
<b>City's Unfunded Future Obligation</b>	<b>\$ 6,286,054</b>	<b>\$ 5,873,629</b>
<b>Actuarial Liability</b>		
Actives	\$ 2,946,588	\$ 2,881,397
Terminated Vesteds	116,813	120,270
Disabled	699,033	688,621
Retirees	4,187,990	4,071,325
Beneficiaries	550,868	501,392
DROP	1,292,585	1,218,351
Non-Vested Refunds	<u>5,975</u>	<u>6,122</u>
<b>Total City AL</b>	<b>\$ 9,799,852</b>	<b>\$ 9,487,478</b>
Actuarial Value of Assets	<u>(4,716,793)</u>	<u>(4,719,119)</u>
<b>Unfunded Actuarial Liability</b>	<b>\$ 5,083,059</b>	<b>\$ 4,768,359</b>

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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**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.

<b>Table III-2 Liabilities Detail as of July 1, 2012 (\$ thousands)</b>								
	<b>1967 Plan</b>			<b>1987 Plan</b>				<b>Total</b>
	<b>Municipal</b>	<b>Police</b>	<b>Fire</b>	<b>Municipal</b>	<b>Elected</b>	<b>Police</b>	<b>Fire</b>	
<b>Present Value of Future Benefits</b>								
Actives	\$ 890,035	\$ 288,967	\$ 86,028	\$ 1,105,221	\$ 12,572	\$ 1,219,449	\$ 322,380	\$ 3,924,652
Terminated Vesteds	62,571	147	0	39,655	0	11,975	2,466	116,813
Disabled	233,845	226,422	55,920	45,150	0	117,076	20,620	699,033
Retirees	2,275,298	1,226,662	528,220	112,543	11,006	23,702	10,559	4,187,990
Beneficiaries	306,173	147,760	63,400	16,510	437	11,063	5,526	550,868
DROP	683,130	318,317	172,670	63,565	0	39,074	15,828	1,292,585
Non-Vested Refunds	1,776	161	50	3,324	9	537	117	5,975
<b>Total PVFB</b>	<b>\$ 4,452,828</b>	<b>\$ 2,208,436</b>	<b>\$ 906,288</b>	<b>\$ 1,385,969</b>	<b>\$ 24,024</b>	<b>\$ 1,422,877</b>	<b>\$ 377,496</b>	<b>\$10,777,916</b>
<b>Actuarial Liability</b>								
Actives	\$ 812,103	\$ 255,800	\$ 76,767	\$ 813,221	\$ 10,107	\$ 779,389	\$ 199,200	\$ 2,946,588
Terminated Vesteds	62,571	147	0	39,655	0	11,975	2,466	116,813
Disabled	233,845	226,422	55,920	45,150	0	117,076	20,620	699,033
Retirees	2,275,298	1,226,662	528,220	112,543	11,006	23,702	10,559	4,187,990
Beneficiaries	306,173	147,760	63,400	16,510	437	11,063	5,526	550,868
DROP	683,130	318,317	172,670	63,565	0	39,074	15,828	1,292,585
Non-Vested Refunds	1,776	161	50	3,324	9	537	117	5,975
<b>Total AL</b>	<b>\$ 4,374,896</b>	<b>\$ 2,175,269</b>	<b>\$ 897,027</b>	<b>\$ 1,093,969</b>	<b>\$ 21,560</b>	<b>\$ 982,817</b>	<b>\$ 254,316</b>	<b>\$ 9,799,852</b>
Actuarial Value of Assets	(1,786,073)	(751,692)	(309,350)	(853,066)	(10,992)	(792,441)	(213,179)	(4,716,793)
<b>Unfunded Actuarial Liability</b>	<b>\$ 2,588,823</b>	<b>\$ 1,423,577</b>	<b>\$ 587,677</b>	<b>\$ 240,902</b>	<b>\$ 10,568</b>	<b>\$ 190,376</b>	<b>\$ 41,136</b>	<b>\$ 5,083,059</b>
<b>Funding %</b>	<b>40.8%</b>	<b>34.6%</b>	<b>34.5%</b>	<b>78.0%</b>	<b>51.0%</b>	<b>80.6%</b>	<b>83.8%</b>	<b>48.1%</b>

Note: Numbers may not add due to rounding.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 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.

	<b>Table III-3</b>							
	<b>Derivation of the Normal Cost as of July 1, 2012</b>							
	<b>(\$ thousands)</b>							
	<b>1967 Plan</b>			<b>1987 Plan</b>				<b>Total</b>
	<b>Municipal</b>	<b>Police</b>	<b>Fire</b>	<b>Municipal</b>	<b>Elected</b>	<b>Police</b>	<b>Fire</b>	
Retirement	\$ 9,024	\$ 4,961	\$ 1,485	\$ 22,086	\$ 234	\$ 33,648	\$ 9,812	\$ 81,249
Death	455	211	64	1,683	17	1,573	471	4,474
Disability	1,336	651	180	4,988	30	4,922	1,384	13,491
Termination	3,737	678	191	13,665	127	3,127	767	22,292
Administrative Expenses	3,370	1,414	487	2,524	6	847	246	8,895
<b>Total Normal Cost</b>	<b>\$ 17,922</b>	<b>\$ 7,915</b>	<b>\$ 2,407</b>	<b>\$ 44,947</b>	<b>\$ 414</b>	<b>\$ 44,116</b>	<b>\$ 12,680</b>	<b>\$ 130,402</b>
Expected Employee Contributions	\$ 6,175	\$ 2,593	\$ 769	\$ 13,466	\$ 252	\$ 17,753	\$ 4,925	\$ 45,933
City Normal Cost	\$ 11,748	\$ 5,322	\$ 1,638	\$ 31,481	\$ 163	\$ 26,363	\$ 7,754	\$ 84,469
Current Annual Payroll	\$ 164,655	\$ 43,217	\$ 12,823	\$ 697,719	\$ 3,082	\$ 352,441	\$ 98,237	\$1,372,174
City Normal Cost as % of Pay, Beginning of Year Payment	7.135%	12.315%	12.773%	4.512%	5.285%	7.480%	7.894%	6.156%
City Normal Cost as % of Pay, End of Year Payment	7.702%	13.294%	13.788%	4.871%	5.705%	8.075%	8.521%	6.645%

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, 2011 to July 1, 2012 due to actuarial experience and the interest rate assumption change; there were no plan changes. It also shows the development of the expected unfunded actuarial liability from July 1, 2012 to July 1, 2013 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.

<b>Table III-4 Expected Unfunded Actuarial Liability for the Plan Year Ending June 30, 2013 (\$ thousands)</b>								
	<b>1967 Plan</b>			<b>1987 Plan</b>				<b>Total</b>
	<b>Municipal</b>	<b>Police</b>	<b>Fire</b>	<b>Municipal</b>	<b>Elected</b>	<b>Police</b>	<b>Fire</b>	
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2012 Based on July 1, 2011 Valuation*	\$ 2,325,953	\$ 1,293,687	\$ 536,025	\$ 174,526	\$ 9,060	\$ 133,304	\$ 34,407	\$ 4,506,962
2. Changes in UAL due to								
a. Actuarial Experience	\$ 216,129	\$ 107,413	\$ 42,618	\$ 52,092	\$ 1,269	\$ 44,548	\$ 3,534	\$ 467,604
b. Assumption Changes	46,742	22,477	9,034	14,284	238	12,524	3,195	108,494
c. Active Plan Changes	0	0	0	0	0	0	0	0
d. Inactive Plan Changes	0	0	0	0	0	0	0	0
e. Subtotal	\$ 262,871	\$ 129,890	\$ 51,652	\$ 66,376	\$ 1,507	\$ 57,072	\$ 6,729	\$ 576,097
3. Actual UAL as of July 1, 2012 [1. + 2e.]	\$ 2,588,824	\$ 1,423,577	\$ 587,677	\$ 240,902	\$ 10,567	\$ 190,376	\$ 41,136	\$ 5,083,060
4. Expected Changes in UAL from July 1, 2012 to July 1, 2013 due to								
a. Interest on Changes in UAL	\$ 20,898	\$ 10,326	\$ 4,106	\$ 5,277	\$ 120	\$ 4,537	\$ 535	\$ 45,800
b. FY 2013 Amortization Contribution	(154,206)	(100,526)	(35,379)	(4,458)	(267)	(1,436)	(445)	(296,717)
c. Subtotal	\$ (133,308)	\$ (90,200)	\$ (31,273)	\$ 819	\$ (147)	\$ 3,102	\$ 90	\$ (250,917)
5. Expected UAL as of July 1, 2013 [3. + 4c.]	\$ 2,455,516	\$ 1,333,377	\$ 556,404	\$ 241,722	\$ 10,420	\$ 193,478	\$ 41,226	\$ 4,832,143

\* 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 upon the normal cost rate determined by 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.

Due to the contributions deferral in FYE 2010 and FYE 2011, there is an additional part to the MMO to include interest on the deferred contributions for each year of deferral and repayment of these contributions. For FYE 2013, this report reflects full repayment of the deferred contributions of \$230 million plus \$5.6 million in interest accrued as of the October 2012 date of repayment and projected interest to cover the difference between 8.25% and 8.10% return assumptions.

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, 2013. Table IV-2 shows the quasi-agency funding rates as a percent of payroll for both Plans 67 Municipal and 87 Municipal.

<b>Table IV-1</b>				
<b>Employee Contribution Rates</b>				
<b>for the Plan Year Beginning July 1, 2013</b>				
	<b>Municipal<sup>1</sup></b>	<b>Elected<sup>2</sup></b>	<b>Police</b>	<b>Fire</b>
Plan 67	3.75%	N/A	6.00%	6.00%
Plan 87 <sup>3</sup>	1.93%	8.16%	5.04%	5.01%
Plan 10 <sup>4</sup>	2.03%	N/A	5.50%	5.50%

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

<sup>2</sup>The employee contribution rate is based upon the normal cost of \$414,418 under Plan 87 Elected, normal cost of \$232,778 under Plan 87 Municipal and current annual payroll of \$3,082,302

<sup>3</sup>Police '87 and Fire '87 contribution rates reflect the new rate for new hires after January 1, 2010 and October 15, 2010 respectively, who opted to stay in Plan '87

<sup>4</sup>Since there are no participants in Plan '10 Municipal as of the valuation date, the employee contribution rate is estimated based upon the new entrants in Plan '87 Municipal

This table isolates the City Funding Policy requirements for the Quasi Agencies that participate in the System based upon rates used to determine the 1967 Municipal cost.

<b>Table IV-2</b>			
<b>Quasi Agency Funding Rate as a Percent of Payroll</b>			
<b>Valuation Date</b>	<b>July 1, 2012</b>	<b>July 1, 2011</b>	
<b>Fiscal Year Ending in Year</b>	<b>2014</b>	<b>2013</b>	
<b>67 Municipal</b>			
1. Normal Cost Rate	7.702%	7.497%	
2. Amortization Rate under the City's Funding Policy	<u>229.469%</u>	<u>182.424%</u>	
3. Total Year-End Rate [1. + 2.]	237.171%	189.921%	
4. Quarterly adjustment factor	0.97150	0.97098	
5. Total, adjusted for Quarterly Payments [3. x 4.]	230.412%	184.410%	
<b>87 Municipal</b>			
1. Normal Cost Rate	4.871%	4.861%	
2. Amortization Rate under the City's Funding Policy	<u>3.745%</u>	<u>2.729%</u>	
3. Total Year-End Rate [1. + 2.]	8.616%	7.589%	
4. Quarterly adjustment factor	0.97150	0.97098	
5. Total, adjusted for Quarterly Payments [3. x 4.]	8.370%	7.369%	

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

Table IV-3 shows the development of the FYE 2014 Minimum Municipal Obligation (MMO) for each division. Table IV-4 on the following page shows a schedule of amortization payments toward the MMO.

<b>Table IV-3</b>				
<b>Development of the Minimum Municipal Obligation for Fiscal Year End 2014</b>				
(\$ thousands)				
	<b>Non-Uniformed</b>	<b>Police</b>	<b>Fire</b>	<b>Total</b>
Estimated FY 2013-2014 Payroll	\$ 894,017	\$ 408,715	\$ 114,725	\$ 1,417,456
Normal Cost %	6.630%	12.579%	12.924%	8.855%
Normal Cost	\$ 59,276	\$ 51,413	\$ 14,827	\$ 125,516
Amortization Payment	243,537	138,289	54,286	436,112
Administrative Expenses	6,096	2,335	758	9,189
Subtotal	\$ 308,909	\$ 192,037	\$ 69,871	\$ 570,817
Expected Employee Contributions	(20,549)	(21,018)	(5,883)	(47,449)
Minimum Municipal Obligation	\$ 288,360	\$ 171,019	\$ 63,988	\$ 523,368

Note: Numbers may not add due to rounding.

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**SECTION IV  
CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION**

<b>Table IV-4 Unfunded Liability Payments toward the MMO for Fiscal Year 2014 (\$ thousands)</b>												
Type of Base	Municipal			Police			Fire			Total		
	7/1/2012 Balance	Years Left	FY 2014 Payment									
<b>Fresh Start Base</b> est. July 1, 2009	\$ 2,692,595	27	\$ 227,082	\$ 1,515,620	27	\$ 127,821	\$ 587,331	27	\$ 49,533	\$ 4,795,546	27	\$ 404,436
<b>Gain/Loss Base</b> est. July 1, 2010	\$ (57,524)	18	\$ (5,666)	\$ (41,018)	18	\$ (4,040)	\$ (3,070)	18	\$ (302)	\$ (101,612)	18	\$ (10,009)
<b>Assumption Change</b> est. July 1, 2010	\$ 79,061	13	\$ 9,241	\$ 31,723	13	\$ 3,708	\$ 28,951	13	\$ 3,384	\$ 139,734	13	\$ 16,333
<b>Gain/Loss</b> est. July 1, 2011	\$ (112,393)	19	\$ (10,802)	\$ (22,775)	19	\$ (2,189)	\$ (22,397)	19	\$ (2,153)	\$ (157,564)	19	\$ (15,144)
<b>Assumption Change</b> est. July 1, 2011	\$ 22,575	14	\$ 2,529	\$ 13,574	14	\$ 1,521	\$ 4,577	14	\$ 513	\$ 40,726	14	\$ 4,563
<b>Gain/Loss</b> est. July 1, 2012	\$ 154,715	20	\$ 14,543	\$ 81,828	20	\$ 7,692	\$ 21,191	20	\$ 1,992	\$ 257,735	20	\$ 24,227
<b>Assumption Change</b> est. July 1, 2012	<u>\$ 61,264</u>	15	<u>\$ 6,610</u>	<u>\$ 35,001</u>	15	<u>\$ 3,776</u>	<u>\$ 12,229</u>	15	<u>\$ 1,320</u>	<u>\$ 108,493</u>	15	<u>\$ 11,706</u>
<b>Total</b>	<b>\$ 2,840,294</b>		<b>\$ 243,537</b>	<b>\$ 1,613,952</b>		<b>\$ 138,289</b>	<b>\$ 628,812</b>		<b>\$ 54,286</b>	<b>\$ 5,083,058</b>		<b>\$ 436,112</b>

Note: Numbers may not add due to rounding.

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**SECTION IV  
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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, 2012 for the MMO.

<b>Table IV-5a</b>				
<b>Development of the Fiscal Year 2014 Amortization Payment under MMO</b>				
<b>Municipal and Elect</b>				
<b>(\$ thousands)</b>				
	<b>7/1/2012</b>	<b>Remaining</b>	<b>FY 2014</b>	
	<b>Outstanding Balance</b>	<b>Years</b>	<b>Payment</b>	
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2012 Based on July 1, 2011 Valuation	\$ 2,624,314		\$ 222,383	
2. Changes in UAL due to				
a. Actuarial Experience	\$ 154,715	20	\$ 14,543	
b. Assumption Changes	61,264	15	6,610	
c. Active Plan Changes	-	0	-	
d. Inactive Plan Changes	-	0	-	
e. Subtotal	\$ 215,979		\$ 21,153	
3. Total [1c. + 2e.]	\$ 2,840,293		\$ 243,536	

Note: Numbers may not add due to rounding.

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<b>Table IV-5b</b>			
<b>Development of the Fiscal Year 2014 Amortization Payment under MMO</b>			
<b>Police</b>			
<b>(\$ thousands)</b>			
	<b>7/1/2012</b>	<b>Remaining</b>	<b>FY 2014</b>
	<b>Outstanding Balance</b>	<b>Years</b>	<b>Payment</b>
<b>1. Expected Unfunded Actuarial</b>			
Liability (UAL) as of July 1, 2012			
Based on July 1, 2011 Valuation	\$ 1,497,124		\$ 126,821
<b>2. Changes in UAL due to</b>			
a. Actuarial Experience	\$ 81,828	20	\$ 7,692
b. Assumption Changes	35,001	15	3,776
c. Active Plan Changes	-	0	-
d. Inactive Plan Changes	-	0	-
e. Subtotal	<u>\$ 116,829</u>		<u>\$ 11,468</u>
<b>3. Total [1c. + 2e.]</b>	<b>\$ 1,613,953</b>		<b>\$ 138,289</b>

Note: Numbers may not add due to rounding.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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**SECTION IV  
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<b>Table IV-5c</b>				
<b>Development of the Fiscal Year 2014 Amortization Payment under MMO</b>				
<b>Fire</b>				
<b>(\$ thousands)</b>				
	<b>7/1/2012</b>	<b>Remaining</b>		<b>FY 2014</b>
	<b>Outstanding Balance</b>	<b>Years</b>		<b>Payment</b>
<b>1. Expected Unfunded Actuarial</b>				
Liability (UAL) as of July 1, 2012				
Based on July 1, 2011 Valuation	\$ 595,393		\$	50,975
<b>2. Changes in UAL due to</b>				
a. Actuarial Experience	\$ 21,191	20	\$	1,992
b. Assumption Changes	12,229	15		1,320
c. Active Plan Changes	-	0		-
d. Inactive Plan Changes	-	0		-
e. Subtotal	\$ 33,420		\$	3,312
<b>3. Total [1c. + 2e.]</b>	<b>\$ 628,813</b>		<b>\$</b>	<b>54,287</b>

Note: Numbers may not add due to rounding.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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<b>Table IV-5d</b>				
<b>Development of the Fiscal Year 2014 Amortization Payment under MMO</b>				
<b>Total</b>				
<b>(\$ thousands)</b>				
	<b>7/1/2012</b>	<b>Remaining</b>		<b>FY 2014</b>
	<b>Outstanding Balance</b>	<b>Years</b>		<b>Payment</b>
<b>1. Expected Unfunded Actuarial</b>				
Liability (UAL) as of July 1, 2012				
Based on July 1, 2011 Valuation	\$ 4,716,831		\$	400,179
<b>2. Changes in UAL due to</b>				
a. Actuarial Experience	\$ 257,735	20	\$	24,227
b. Assumption Changes	108,493	15		11,706
c. Active Plan Changes	-	0		-
d. Inactive Plan Changes	-	0		-
e. Subtotal	\$ 366,228		\$	35,933
<b>3. Total [1c. + 2e.]</b>	<b>\$ 5,083,059</b>		<b>\$</b>	<b>436,112</b>

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**

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.

<b>Table IV-6</b>				
<b>Summary of Modified Actuarial Data</b>				
(\$ thousands)				
	<b>Municipal</b>	<b>Police</b>	<b>Fire</b>	<b>Total</b>
Actuarial Liability	\$ 5,490,425	\$ 3,158,084	\$ 1,151,343	\$ 9,799,852
Market Value of Assets (less POB)	\$ 2,023,896	\$ 1,260,542	\$ 340,847	\$ 3,625,285
Actuarial Value of Assets (less POB)	\$ 2,153,494	\$ 1,325,754	\$ 369,042	\$ 3,848,290
Unfunded Actuarial Liability (AL - AVA)	\$ 3,336,931	\$ 1,832,330	\$ 782,301	\$ 5,951,562
<b>Amortization Contributions</b>				
Total Amortization Amount	\$ 285,809	\$ 156,989	\$ 67,432	\$ 510,230
Remaining Years	26	26	25	26

Note: Numbers may not add due to rounding.

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**SECTION IV  
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**Table IV-7**

**Modified Unfunded Liability Payments toward the MMO for Fiscal Year 2014**

(\$ thousands)

Type of Base	Municipal			Police			Fire			Total		
	7/1/2012 Balance	Remaining Years	FY 2014 Payment									
<b>Fresh Start UAL Base est. July 1, 2009</b>	\$ 3,157,481	27	\$ 266,289	\$ 1,710,251	27	\$ 144,235	\$ 724,537	27	\$ 61,104	\$ 5,592,269	27	\$ 471,628
<b>July 1, 2010 Charges</b>												
Experience (Gain)/Loss	\$ (50,948)	18	\$ (5,018)	\$ (35,639)	18	\$ (3,510)	\$ 1,749	18	\$ 172	\$ (84,837)	18	\$ (8,357)
Assumption Change	79,061	13	9,241	31,723	13	3,708	28,951	13	3,384	139,734	13	16,332
<b>July 1, 2011 Charges</b>												
Experience (Gain)/Loss	\$ (87,933)	19	\$ (8,451)	\$ (8,864)	19	\$ (852)	\$ (11,871)	19	\$ (1,141)	\$ (108,668)	19	\$ (10,444)
Assumption Change	\$ 22,575	14	\$ 2,529	\$ 13,574	14	\$ 1,521	\$ 4,577	14	\$ 513	\$ 40,727	14	\$ 4,563
<b>July 1, 2012 Charges</b>												
Experience (Gain)/Loss	\$ 155,431	20	\$ 14,611	\$ 86,285	20	\$ 8,111	\$ 22,127	20	\$ 2,080	\$ 263,843	20	\$ 24,801
Assumption Change	\$ 61,264	15	\$ 6,610	\$ 35,001	15	\$ 3,776	\$ 12,229	15	\$ 1,320	\$ 108,494	15	\$ 11,706
<b>Total</b>	\$ 3,336,931		\$ 285,809	\$ 1,832,330		\$ 156,989	\$ 782,301		\$ 67,432	\$ 5,951,562		\$ 510,230

Note: Numbers may not add due to rounding.

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

**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		Premium or		Principal Balance at Valuation Date
	Principal Payment	Interest Payment	Discount Amortized		
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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<b>Table IV-8c</b>				
<b>TOTAL DEBT SERVICE REQUIREMENTS: FIRE</b>				
<b>Plan Year</b>	<b>Required Principal Payment</b>	<b>Required Interest Payment</b>	<b>Premium or Discount Amortized</b>	<b>Principal Balance at Valuation Date</b>
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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**SECTION IV  
CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION**

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

<b>Table IV-9a</b>				
<b>Receipts and Disbursements Excluding Bond Issue Assets</b>				
	<b>Municipal</b>	<b>Police</b>	<b>Fire</b>	<b>Total</b>
Assets as of July 1, 2011	\$ 2,098,343,104	\$ 1,263,380,657	\$ 353,274,956	\$ 3,714,998,717
<b>Receipts</b>				
Employer Contributions	\$ 275,183,485	\$ 152,374,165	\$ 59,517,284	\$ 487,074,934
Employee Contributions	22,257,454	21,411,717	6,309,487	49,978,658
State Aid	47,639,813	29,188,072	10,804,115	87,632,000
Supplemental State Assistance	0	0	0	0
Investment Income (includes investment expenses)	3,801,144	2,327,308	640,055	6,768,507
Other Receipts	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<b>Total Receipts</b>	<b>\$ 348,881,896</b>	<b>\$ 205,301,262</b>	<b>\$ 77,270,941</b>	<b>\$ 631,454,099</b>
<b>Disbursements</b>				
Benefit Payments	\$ 413,893,612	\$ 204,365,335	\$ 87,925,274	\$ 706,184,221
Refund of Contributions	3,824,263	1,608,572	1,067,411	6,500,246
Administrative Expenses	5,610,888	2,165,710	706,041	8,482,639
PAF Transfer at Year End	0	0	0	0
Other Disbursements	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<b>Total Disbursements</b>	<b>\$ 423,328,763</b>	<b>\$ 208,139,617</b>	<b>\$ 89,698,726</b>	<b>\$ 721,167,106</b>
Assets as of July 1, 2012	\$ 2,023,896,237	\$ 1,260,542,301	\$ 340,847,171	\$ 3,625,285,709

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

<b>Table IV-9b</b>				
<b>Receipts and Disbursements Including Bond Issue Assets</b>				
	<b>Municipal</b>	<b>Police</b>	<b>Fire</b>	<b>Total</b>
Assets as of July 1, 2011	\$ 2,420,361,688	\$ 1,368,124,526	\$ 470,743,010	\$ 4,259,229,224
<b>Receipts</b>				
Employer Contributions	\$ 262,028,314	\$ 150,618,986	\$ 55,752,393	\$ 468,399,693
Employee Contributions	22,257,454	21,411,717	6,309,487	49,978,658
State Aid	47,639,813	29,188,072	10,804,115	87,632,000
Supplemental State Assistance	0	0	0	0
Investment Income (includes investment expenses)	4,358,647	2,547,637	849,540	7,755,824
Other Receipts	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<b>Total Receipts</b>	<b>\$ 336,284,228</b>	<b>\$ 203,766,412</b>	<b>\$ 73,715,535</b>	<b>\$ 613,766,175</b>
<b>Disbursements</b>				
Benefit Payments	\$ 413,893,612	\$ 204,365,335	\$ 87,925,274	\$ 706,184,221
Refund of Contributions	3,824,263	1,608,572	1,067,411	6,500,246
Administrative Expenses	5,610,888	2,165,710	706,041	8,482,639
PAF Transfer at Year End	0	0	0	0
Other Disbursements	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<b>Total Disbursements</b>	<b>\$ 423,328,763</b>	<b>\$ 208,139,617</b>	<b>\$ 89,698,726</b>	<b>\$ 721,167,106</b>
Assets as of July 1, 2012	\$ 2,333,317,153	\$ 1,363,751,321	\$ 454,759,819	\$ 4,151,828,293

Note: Numbers may not add due to rounding.

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**SECTION IV  
CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION**

The Table IV – 10 and Table IV – 11 provide information on the City’s Funding Policy for FYE 2013 and FYE 2014. 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.
- Both the City’s Funding Policy and the MMO utilize valuation results developed in the previous year (e.g., the July 1, 2012 valuation report will determine FYE 2013 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 2014 and updated FYE 2013 contribution amount under the City’s Funding Policy. The estimated FYE 2014 contribution will be updated in next year’s actuarial valuation report based upon the July 1, 2013 payroll.

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**SECTION IV  
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<b>Table IV-10</b>					
<b>Development of the Fiscal Year 2014 Amortization Payment under the City's Funding Policy</b>					
<b>Total</b>					
<b>(\$ thousands)</b>					
	<b>7/1/2012</b>	<b>7/1/2013</b>	<b>Remaining</b>	<b>FY 2014 Payment</b>	<b>FY 2014 Payment</b>
	<b>Outstanding Balance</b>	<b>Expected Balance</b>	<b>Years</b>	<b>Beginning-of-Year</b>	<b>End-of-Year</b>
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2012 Based on July 1, 2011 Valuation Remaining	\$ 4,506,961	\$ 4,210,244		\$ 621,832	\$ 671,268
2. Changes in UAL due to					
a. Actuarial Experience	\$ 467,604	\$ 504,778	20	\$ 47,449	\$ 51,222
b. Assumption Changes	108,494	117,119	15	12,637	13,641
c. Active Plan Changes	0	0	10	0	0
d. Inactive Plan Changes	0	0	1	0	0
e. Subtotal	\$ 576,098	\$ 621,897		\$ 60,086	\$ 64,863
3. Total [1c. + 2e.]	\$ 5,083,059	\$ 4,832,141		\$ 681,919	\$ 736,131

<b>Table IV-11</b>					
<b>City's Funding Policy Contributions*</b>					
<b>Fiscal Year</b>	<b>2014</b>	<b>% of Pay</b>	<b>2013</b>	<b>% of Pay</b>	
Estimated FY Payroll	\$ 1,417,456		\$ 1,372,174	**	
Normal Cost (with Expenses)	\$ 134,705	9.50%	\$ 129,525	9.44%	
Employee Contributions	(47,449)	3.35%	(46,198)	3.37%	
City Normal Cost	\$ 87,256	6.16%	\$ 83,327	6.07%	
Amortization Payment	681,919	48.11%	609,237	44.40%	
City's Funding Policy	\$ 769,175	54.26%	\$ 692,564	50.47%	

\* Assuming beginning-of-year payment.

\*\* FY 2013 Payroll for the City's Funding Policy is the final payroll for the prior year. All other payroll is estimated based upon the prior year's data used for the actuarial valuation.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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**SECTION V  
ACCOUNTING STATEMENT INFORMATION**

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. New accounting standards have been approved by GASB and are effective for Plan years beginning after June 15, 2013. Changes that may be required under these new standards have not been reflected in this report. 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 8.15% per annum for Fiscal Year 2012. For Fiscal Year 2013, the assumed interest rate will change to 8.10% based upon July 1, 2011 liabilities valued at this interest rate. For Fiscal Year 2014 the assumed interest rate will change to 7.95% based upon July 1, 2012 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, 2011 and July 1, 2012 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 both the July 1, 2011 and 2012 values.
- Schedule of Employer Contributions – discloses historical information about the Annual Required Contribution (ARC) and the actual contributions made by the employer. This 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.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**SECTION V  
ACCOUNTING STATEMENT INFORMATION**

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 10.4 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, 2012 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.

<b>Table V-1</b>				
<b>Funding Status Under GASB Statement No. 25</b>				
(\$ thousands)				
	July 1, 2012	July 1, 2011	% Change	
1. Actuarial Liabilities				
a. Members Currently Receiving Payments	\$ 6,730,476	\$ 6,479,690		3.9%
b. Vested Terminated and Inactive Members	122,788	126,392		-2.9%
c. Active Members	<u>2,946,588</u>	<u>2,881,396</u>		2.3%
d. Total Actuarial Liability	\$ 9,799,852	\$ 9,487,478		3.3%
2. Actuarial Value of Assets*	\$ 4,486,793	\$ 4,489,119		-0.1%
3. Unfunded Actuarial Liability	\$ 5,313,059	\$ 4,998,359		6.3%
4. Ratio of Actuarial Value of Assets to Actuarial Liability (2)/(1)(d)	45.8%	47.3%		-1.5%

\* Actuarial Value of Assets have been adjusted to net out the outstanding deferred contribution amount of \$230 million as of July 1, 2011 and July 1, 2012.

Note: Numbers may not add due to rounding.

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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**SECTION V**  
**ACCOUNTING STATEMENT INFORMATION**

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

<b>Actuarial Liability as of July 1, 2011</b>	<b>\$</b>	<b>9,487,478</b>
Increase (Decrease) During Year Attributable to:		
Passage of Time		739,622
Benefits Paid		(712,684)
Assumption Change		108,494
Plan Amendment		0
Benefits Accrued, Other Gains/Losses		176,943
Net Increase (Decrease)	<b>\$</b>	<b>312,374</b>
<b>Actuarial Liability as of July 1, 2012</b>	<b>\$</b>	<b>9,799,852</b>

**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	47.3%	1,371.3	364.5%
7/1/2012	4,486.8	9,799.9	5,313.1	45.8%	1,372.2	387.2%

\* 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.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**SECTION V  
ACCOUNTING STATEMENT INFORMATION**

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

<b>Fiscal Year Ended June 30</b>	<b>Annual Required Contribution (ARC)</b>	<b>Percentage of ARC Contributed</b>
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%

\* 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

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**SECTION V  
ACCOUNTING STATEMENT INFORMATION**

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

	1994	1995	1996	1997	1998	1999	2000	2001	2002
ARC	\$ 223,750	\$ 212,838	\$ 222,482	\$ 237,016	\$ 252,080	\$ 256,704	\$ 168,928	\$ 167,616	\$ 178,239
Interest on NPO	-	(900)	(869)	(840)	(811)	(783)	(113,257)	(110,748)	(106,975)
Adjustment to ARC	<u>-</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>
Annual Pension Cost	\$ 223,750	\$ 213,179	\$ 222,811	\$ 237,334	\$ 252,387	\$ 257,001	\$ 211,801	\$ 209,540	\$ 218,734
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>
Increase in NPO	\$ (10,000)	\$ 341	\$ 329	\$ 318	\$ 307	\$(1,249,703)	\$ 27,873	\$ 41,924	\$ 40,495
NPO at BOY	<u>-</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>
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)
Interest Rate	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

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

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION

**SECTION V**  
**ACCOUNTING STATEMENT INFORMATION**

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

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
ARC	\$ 195,514	\$ 253,844	\$ 358,141	\$ 394,950	\$ 527,925	\$ 536,874	\$ 539,464	\$ 581,123	\$ 715,544	\$ 722,491
Interest on NPO	(103,330)	(98,392)	(90,448)	(82,068)	(71,541)	(60,685)	(48,957)	(39,899)	(14,155)	6,521
Adjustment to ARC	<u>142,446</u>	<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>
Annual Pension Cost	\$ 234,630	\$ 291,090	\$ 392,380	\$ 426,017	\$ 556,337	\$ 560,974	\$ 558,906	\$ 596,968	\$ 721,742	\$ 719,577
Contributions	179,757	202,827	299,266	331,765	432,267	426,934	455,389	312,556	470,155	555,690
Increase in NPO	\$ 54,873	\$ 88,263	\$ 93,114	\$ 94,252	\$ 124,069	\$ 134,040	\$ 103,517	\$ 284,412	\$ 251,587	\$ 163,887
NPO at BOY	<u>(1,148,116)</u>	<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>
NPO at EOY	\$ (1,093,243)	\$ (1,004,980)	\$ (911,866)	\$ (817,614)	\$ (693,545)	\$ (559,505)	\$ (455,987)	\$ (171,575)	\$ 80,012	\$ 243,898
Interest Rate	9.00%	9.00%	9.00%	9.00%	8.75%	8.75%	8.75%	8.75%	8.25%	8.15%
15-Year Amortization Factor (EOY)	8.06	8.06	8.06	8.06	8.18	8.18	8.18	8.18	8.43	8.48

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

The data for this valuation was provided by the Board of Pensions as of July 1, 2012. 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-20: Age/Service Distribution for Active Participants, Counts and Average Salary for all Plans
- A-21: Reconciliation of Plan Membership
- A-22 through A-26: Age and Benefit Distributions for Non-Active Member Data

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Table A-1  
Active Member Data**

	<b>July 1, 2012</b>	<b>July 1, 2011</b>	<b>% Change</b>		<b>July 1, 2012</b>	<b>July 1, 2011</b>	<b>% Change</b>
<b><u>Total City</u></b>				<b><u>1987 Municipal</u></b>			
Count	26,306	26,671	-1.4%	Count	15,575	15,341	1.5%
Average Age	44.1	44.0	0.1%	Average Age	43.9	43.9	0.0%
Average Service	12.8	12.6	1.4%	Average Service	9.4	9.1	3.6%
Average Salary	\$ 52,162	\$ 51,414	1.5%	Average Salary	\$ 44,797	\$ 44,232	1.3%
Total Annual Salary	\$ 1,372,174,460	\$ 1,371,273,920	0.1%	Total Annual Salary	\$ 697,718,917	\$ 678,569,594	2.8%
<b><u>1967 Municipal</u></b>				<b><u>1987 Elected</u></b>			
Count	2,973	3,410	-12.8%	Count	24	17	41.2%
Average Age	52.4	52.1	0.6%	Average Age	53.2	57.8	-7.9%
Average Service	25.8	25.2	2.5%	Average Service	15.8	22.1	-28.2%
Average Salary	\$ 55,384	\$ 54,807	1.1%	Average Salary	\$ 128,429	\$ 126,833	1.3%
Total Annual Salary	\$ 164,655,468	\$ 186,893,289	-11.9%	Total Annual Salary	\$ 3,082,302	\$ 2,156,159	43.0%
<b><u>1967 Police</u></b>				<b><u>1987 Police</u></b>			
Count	587	686	-14.4%	Count	5,395	5,417	-0.4%
Average Age	53.0	52.4	1.1%	Average Age	39.8	39.2	1.6%
Average Service	27.8	27.0	2.7%	Average Service	13.3	12.6	5.6%
Average Salary	\$ 73,624	\$ 71,253	3.3%	Average Salary	\$ 65,327	\$ 63,083	3.6%
Total Annual Salary	\$ 43,217,018	\$ 48,879,479	-11.6%	Total Annual Salary	\$ 352,440,835	\$ 341,723,114	3.1%
<b><u>1967 Fire</u></b>				<b><u>1987 Fire</u></b>			
Count	184	214	-14.0%	Count	1,568	1,586	-1.1%
Average Age	54.1	53.6	0.9%	Average Age	40.7	39.8	2.1%
Average Service	28.2	27.6	2.0%	Average Service	12.1	11.3	7.7%
Average Salary	\$ 69,691	\$ 69,132	0.8%	Average Salary	\$ 62,651	\$ 61,953	1.1%
Total Annual Salary	\$ 12,823,234	\$ 14,794,202	-13.3%	Total Annual Salary	\$ 98,236,686	\$ 98,258,083	0.0%

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

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

	<b>July 1, 2012</b>	<b>July 1, 2011</b>	<b>% Change</b>		<b>July 1, 2012</b>	<b>July 1, 2011</b>	<b>% Change</b>
<b><u>Total City</u></b>				<b><u>1987 Municipal Plan</u></b>			
Retired	21,314	21,134	0.9%	Retired	1,127	906	24.4%
Disabled	4,169	4,235	-1.6%	Disabled	273	231	18.2%
Beneficiary	<u>8,621</u>	<u>8,273</u>	4.2%	Beneficiary	<u>223</u>	<u>169</u>	32.0%
In Pay Status Total	34,104	33,642	1.4%	In Pay Status Total	1,623	1,306	24.3%
DROP	2,786	2,712	2.7%	DROP	398	355	12.1%
Deferred Vested	1,289	1,324	-2.6%	Deferred Vested	702	665	5.6%
<b><u>1967 Municipal Plan</u></b>				<b><u>1987 Elected Plan</u></b>			
Retired	12,613	12,580	0.3%	Retired	20	12	66.7%
Disabled	1,656	1,725	-4.0%	Disabled	-	-	0.0%
Beneficiary	<u>5,253</u>	<u>5,116</u>	2.7%	Beneficiary	<u>3</u>	<u>3</u>	0.0%
In Pay Status Total	19,522	19,421	0.5%	In Pay Status Total	23	15	53.3%
DROP	1,485	1,507	-1.5%	DROP	-	7	-100.0%
Deferred Vested	452	520	-13.1%	Deferred Vested	-	-	0.0%
<b><u>1967 Police Plan</u></b>				<b><u>1987 Police Plan</u></b>			
Retired	5,428	5,519	-1.6%	Retired	121	109	11.0%
Disabled	1,548	1,604	-3.5%	Disabled	289	257	12.5%
Beneficiary	<u>2,203</u>	<u>2,119</u>	4.0%	Beneficiary	<u>98</u>	<u>77</u>	27.3%
In Pay Status Total	9,179	9,242	-0.7%	In Pay Status Total	508	443	14.7%
DROP	485	441	10.0%	DROP	122	85	43.5%
Deferred Vested	1	1	0.0%	Deferred Vested	112	114	-1.8%
<b><u>1967 Fire Plan</u></b>				<b><u>1987 Fire Plan</u></b>			
Retired	1,948	1,961	-0.7%	Retired	57	47	21.3%
Disabled	351	369	-4.9%	Disabled	52	49	6.1%
Beneficiary	<u>800</u>	<u>755</u>	6.0%	Beneficiary	<u>41</u>	<u>34</u>	20.6%
In Pay Status Total	3,099	3,085	0.5%	In Pay Status Total	150	130	15.4%
DROP	250	272	-8.1%	DROP	46	45	2.2%
Deferred Vested	-	-	0.0%	Deferred Vested	22	24	-8.3%

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Table A-3  
Non-Active Member Data  
Total Annual Benefit**

	July 1, 2012	July 1, 2011	% Change		July 1, 2012	July 1, 2011	% Change
<b><u>Total City</u></b>				<b><u>1987 Municipal Plan</u></b>			
Retired	\$ 496,582,988	\$ 483,213,479	2.8%	Retired	\$ 13,140,618	\$ 10,235,569	28.4%
Disabled	79,880,492	79,305,585	0.7%	Disabled	4,734,822	3,934,176	20.4%
Beneficiary	<u>70,453,153</u>	<u>64,597,556</u>	9.1%	Beneficiary	<u>1,592,823</u>	<u>1,167,477</u>	36.4%
In Pay Status Total	646,916,633	627,116,620	3.2%	In Pay Status Total	19,468,263	15,337,222	26.9%
DROP (pension)	104,849,735	102,685,511	2.1%	DROP (pension)	6,007,138	5,325,850	12.8%
DROP (account balance)	216,900,194	172,441,210	25.8%	DROP (account balance)	9,745,906	7,459,402	30.7%
Deferred Vested	19,236,304	19,765,248	-2.7%	Deferred Vested	9,429,593	8,579,661	9.9%
<b><u>1967 Municipal Plan</u></b>				<b><u>1987 Elected Plan</u></b>			
Retired	\$ 278,602,611	\$ 269,505,443	3.4%	Retired	\$ 1,462,876	\$ 708,711	106.4%
Disabled	28,910,080	29,476,026	-1.9%	Disabled	-	-	0.0%
Beneficiary	<u>39,883,710</u>	<u>37,164,997</u>	7.3%	Beneficiary	<u>68,613</u>	<u>68,613</u>	0.0%
In Pay Status Total	347,396,401	336,146,466	3.3%	In Pay Status Total	1,531,489	777,324	97.0%
DROP (pension)	55,776,928	56,165,972	-0.7%	DROP (pension)	-	613,809	-100.0%
DROP (account balance)	112,490,212	96,170,966	17.0%	DROP (account balance)	-	2,254,009	-100.0%
Deferred Vested	7,703,697	9,060,074	-15.0%	Deferred Vested	-	-	0.0%
<b><u>1967 Police Plan</u></b>				<b><u>1987 Police Plan</u></b>			
Retired	\$ 139,604,307	\$ 140,502,048	-0.6%	Retired	\$ 2,170,689	\$ 1,891,735	14.7%
Disabled	27,390,215	28,205,304	-2.9%	Disabled	10,116,182	8,748,318	15.6%
Beneficiary	<u>19,317,247</u>	<u>18,041,932</u>	7.1%	Beneficiary	<u>981,392</u>	<u>696,139</u>	41.0%
In Pay Status Total	186,311,769	186,749,284	-0.2%	In Pay Status Total	13,268,263	11,336,192	17.0%
DROP (pension)	25,208,045	22,623,837	11.4%	DROP (pension)	3,219,218	2,192,916	46.8%
DROP (account balance)	51,975,750	32,571,109	59.6%	DROP (account balance)	5,081,695	2,436,839	108.5%
Deferred Vested	13,436	13,436	0.0%	Deferred Vested	1,772,853	1,771,940	0.1%
<b><u>1967 Fire Plan</u></b>				<b><u>1987 Fire Plan</u></b>			
Retired	\$ 60,637,261	\$ 59,607,946	1.7%	Retired	\$ 964,626	\$ 762,027	26.6%
Disabled	6,942,960	7,249,188	-4.2%	Disabled	1,786,233	1,692,573	5.5%
Beneficiary	<u>8,113,633</u>	<u>7,099,055</u>	14.3%	Beneficiary	<u>495,735</u>	<u>359,343</u>	38.0%
In Pay Status Total	75,693,854	73,956,189	2.3%	In Pay Status Total	3,246,594	2,813,943	15.4%
DROP (pension)	13,391,475	14,577,884	-8.1%	DROP (pension)	1,246,931	1,185,243	5.2%
DROP (account balance)	35,029,109	29,823,455	17.5%	DROP (account balance)	2,577,523	1,725,431	49.4%
Deferred Vested	-	-	0.0%	Deferred Vested	316,725	340,137	-6.9%

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

<b>Table A-4 Non-Active Member Data Average Annual Benefit</b>											
	<b>July 1, 2012</b>			<b>July 1, 2011</b>			<b>% Change</b>				
<b><u>Total City</u></b>					<b><u>1987 Municipal Plan</u></b>						
Retired	\$	23,298	\$	22,864	1.9%	Retired	\$	11,660	\$	11,298	3.2%
Disabled		19,161		18,726	2.3%	Disabled		17,344		17,031	1.8%
Beneficiary		8,172		7,808	4.7%	Beneficiary		7,143		6,908	3.4%
In Pay Status Total		18,969		18,641	1.8%	In Pay Status Total		11,995		11,744	2.1%
DROP (pension)		37,635		37,863	-0.6%	DROP (pension)		15,093		15,002	0.6%
DROP (account balance)		77,854		63,585	22.4%	DROP (account balance)		24,487		21,012	16.5%
Deferred Vested		14,923		14,928	0.0%	Deferred Vested		13,432		12,902	4.1%
<b><u>1967 Municipal Plan</u></b>					<b><u>1987 Elected Plan</u></b>						
Retired	\$	22,089	\$	21,423	3.1%	Retired	\$	73,144	\$	59,059	23.8%
Disabled		17,458		17,088	2.2%	Disabled		-		-	0.0%
Beneficiary		7,593		7,264	4.5%	Beneficiary		22,871		22,871	0.0%
In Pay Status Total		17,795		17,308	2.8%	In Pay Status Total		66,586		51,822	28.5%
DROP (pension)		37,560		37,270	0.8%	DROP (pension)		-		87,687	-100.0%
DROP (account balance)		75,751		63,816	18.7%	DROP (account balance)		-		322,001	-100.0%
Deferred Vested		17,044		17,423	-2.2%	Deferred Vested		-		-	0.0%
<b><u>1967 Police Plan</u></b>					<b><u>1987 Police Plan</u></b>						
Retired	\$	25,719	\$	25,458	1.0%	Retired	\$	17,940	\$	17,355	3.4%
Disabled		17,694		17,584	0.6%	Disabled		35,004		34,040	2.8%
Beneficiary		8,769		8,514	3.0%	Beneficiary		10,014		9,041	10.8%
In Pay Status Total		20,298		20,207	0.5%	In Pay Status Total		26,119		25,590	2.1%
DROP (pension)		51,975		51,301	1.3%	DROP (pension)		26,387		25,799	2.3%
DROP (account balance)		107,166		73,857	45.1%	DROP (account balance)		41,653		28,669	45.3%
Deferred Vested		13,436		13,436	0.0%	Deferred Vested		15,829		15,543	1.8%
<b><u>1967 Fire Plan</u></b>					<b><u>1987 Fire Plan</u></b>						
Retired	\$	31,128	\$	30,397	2.4%	Retired	\$	16,923	\$	16,213	4.4%
Disabled		19,781		19,645	0.7%	Disabled		34,351		34,542	-0.6%
Beneficiary		10,142		9,403	7.9%	Beneficiary		12,091		10,569	14.4%
In Pay Status Total		24,425		23,973	1.9%	In Pay Status Total		21,644		21,646	0.0%
DROP (pension)		53,566		53,595	-0.1%	DROP (pension)		27,107		26,339	2.9%
DROP (account balance)		140,116		109,645	27.8%	DROP (account balance)		56,033		38,343	46.1%
Deferred Vested		-		-	N/A	Deferred Vested		14,397		14,172	1.6%

**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, 2012 -- 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	156	318	50	0	0	0	0	0	524
25 to 29	300	1,132	791	38	0	0	0	0	2,261
30 to 34	160	819	1,463	492	40	0	0	0	2,974
35 to 39	112	478	1,039	1,043	498	19	0	0	3,189
40 to 44	104	418	807	1,111	1,224	471	14	0	4,149
45 to 49	79	297	686	753	1,019	1,147	262	30	4,273
50 to 54	72	278	523	637	726	1,030	783	377	4,426
55 to 59	41	241	446	547	475	451	345	367	2,913
60 to 64	20	129	282	245	166	88	65	102	1,097
65 & up	10	88	158	96	47	40	17	44	500
<b>Total</b>	<b>1,054</b>	<b>4,198</b>	<b>6,245</b>	<b>4,962</b>	<b>4,195</b>	<b>3,246</b>	<b>1,486</b>	<b>920</b>	<b>26,306</b>

**Table A-6  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	\$ 33,797	\$ 35,150	\$ 32,650	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 34,509
25 to 29	37,267	45,278	49,842	46,064	-	-	-	-	45,825
30 to 34	38,885	47,985	53,347	55,167	51,843	-	-	-	51,373
35 to 39	37,971	48,769	54,430	57,235	60,026	51,775	-	-	54,779
40 to 44	38,105	43,049	51,600	55,626	61,819	64,167	53,175	-	55,925
45 to 49	41,970	41,776	46,551	50,509	58,131	62,356	60,330	60,473	54,778
50 to 54	36,958	39,035	42,289	47,011	53,916	57,399	61,881	63,461	53,370
55 to 59	40,507	40,656	42,703	46,300	49,625	54,554	65,700	65,178	51,697
60 to 64	34,908	40,715	41,437	44,605	48,470	51,543	58,097	60,999	46,621
65 & up	47,968	26,778	34,820	38,723	43,867	42,838	42,055	54,754	37,909
<b>Total</b>	<b>\$ 37,671</b>	<b>\$ 43,760</b>	<b>\$ 49,252</b>	<b>\$ 52,064</b>	<b>\$ 57,137</b>	<b>\$ 59,366</b>	<b>\$ 62,020</b>	<b>\$ 63,359</b>	<b>\$ 52,162</b>

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**Table A-7  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	1	0	0	0	0	0	0	0	0	1
25 to 29	0	2	0	0	0	0	0	0	0	2
30 to 34	1	0	0	0	0	0	0	0	0	1
35 to 39	2	1	0	0	4	3	0	0	0	10
40 to 44	2	0	0	0	7	110	3	0	0	122
45 to 49	0	1	1	3	14	406	173	26	0	624
50 to 54	1	0	1	2	15	560	526	262	0	1,367
55 to 59	0	0	3	3	10	228	204	200	0	648
60 to 64	0	0	1	0	0	39	44	49	0	133
65 & up	0	0	0	0	1	26	13	25	0	65
<b>Total</b>	<b>7</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>51</b>	<b>1,372</b>	<b>963</b>	<b>562</b>	<b>0</b>	<b>2,973</b>

**Table A-8  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	\$ 216	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 216
25 to 29	-	48,423	-	-	-	-	-	-	-	48,423
30 to 34	39,807	-	-	-	-	-	-	-	-	39,807
35 to 39	243	44,834	-	-	44,271	46,053	-	-	-	36,056
40 to 44	189	-	-	-	49,039	54,043	52,489	-	-	52,834
45 to 49	-	69,066	33,237	42,077	49,767	53,565	55,743	60,978	-	54,330
50 to 54	70,000	-	50,000	38,431	49,077	51,748	58,681	59,091	-	55,786
55 to 59	-	-	74,410	44,148	47,216	48,588	62,890	63,031	-	57,626
60 to 64	-	-	73,635	-	-	45,002	60,689	55,866	-	54,410
65 & up	-	-	-	-	50,396	44,789	41,649	48,641	-	45,729
<b>Total</b>	<b>\$ 15,841</b>	<b>\$ 52,686</b>	<b>\$ 63,350</b>	<b>\$ 41,942</b>	<b>\$ 48,545</b>	<b>\$ 51,608</b>	<b>\$ 58,887</b>	<b>\$ 59,835</b>	<b>\$ -</b>	<b>\$ 55,384</b>

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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**Table A-9  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	3	6	2	0	0	11
45 to 49	0	0	0	1	0	51	49	1	0	102
50 to 54	0	0	0	0	0	38	137	90	0	265
55 to 59	0	0	0	0	0	14	68	96	0	178
60 to 64	0	0	0	0	0	2	6	21	0	29
65 & up	0	0	0	0	0	0	1	1	0	2
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>111</b>	<b>263</b>	<b>209</b>	<b>0</b>	<b>587</b>

**Table A-10  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	-	-	-	-	64,594	67,067	67,605	-	-	66,490
45 to 49	-	-	-	64,160	-	70,726	77,519	65,275	-	73,872
50 to 54	-	-	-	-	-	68,566	71,717	78,637	-	73,615
55 to 59	-	-	-	-	-	67,289	72,082	76,451	-	74,061
60 to 64	-	-	-	-	-	68,149	69,623	74,684	-	73,186
65 & up	-	-	-	-	-	-	65,275	72,144	-	68,710
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 64,160</b>	<b>\$ 64,594</b>	<b>\$ 69,309</b>	<b>\$ 72,789</b>	<b>\$ 77,141</b>	<b>\$ -</b>	<b>\$ 73,624</b>

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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**Table A-11  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	1	0	0	0	1
45 to 49	0	0	0	0	0	13	5	0	0	18
50 to 54	0	0	0	0	0	15	71	3	0	89
55 to 59	0	0	0	0	1	5	36	19	0	61
60 to 64	0	0	0	0	0	1	4	7	0	12
65 & up	0	0	0	0	0	0	0	3	0	3
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>35</b>	<b>116</b>	<b>32</b>	<b>0</b>	<b>184</b>

**Table A-12  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	-	-	-	-	-	76,134	-	-	-	76,134
45 to 49	-	-	-	-	-	66,318	69,431	-	-	67,183
50 to 54	-	-	-	-	-	63,634	69,333	77,964	-	68,663
55 to 59	-	-	-	-	60,834	65,678	68,150	75,603	-	70,149
60 to 64	-	-	-	-	-	67,235	65,686	78,295	-	73,170
65 & up	-	-	-	-	-	-	-	89,882	-	89,882
<b>Total</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 60,834</b>	<b>\$ 65,383</b>	<b>\$ 68,844</b>	<b>\$ 77,752</b>	<b>\$ -</b>	<b>\$ 69,691</b>

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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**Table A-13  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	136	242	43	0	0	0	0	0	421
25 to 29	278	794	447	28	0	0	0	0	1,547
30 to 34	155	601	855	271	29	0	0	0	1,911
35 to 39	103	372	641	571	186	14	0	0	1,887
40 to 44	97	366	546	729	480	79	9	0	2,306
45 to 49	76	290	602	595	522	131	31	3	2,250
50 to 54	69	277	499	582	510	129	45	16	2,127
55 to 59	41	240	431	515	398	104	35	50	1,814
60 to 64	19	129	280	236	154	34	11	22	885
65 & up	10	88	158	96	45	14	3	13	427
<b>Total</b>	<b>984</b>	<b>3,399</b>	<b>4,502</b>	<b>3,623</b>	<b>2,324</b>	<b>505</b>	<b>134</b>	<b>104</b>	<b>15,575</b>

**Table A-14  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	\$ 32,451	\$ 28,700	\$ 28,681	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 29,910
25 to 29	36,687	39,369	39,850	40,543	-	-	-	-	39,047
30 to 34	38,739	43,825	46,326	47,250	47,060	-	-	-	45,067
35 to 39	37,454	45,498	49,017	50,807	49,346	51,496	-	-	48,285
40 to 44	36,854	40,601	46,291	50,860	54,165	55,000	50,197	-	48,388
45 to 49	39,728	41,166	44,370	46,735	50,952	58,891	54,795	54,501	46,956
50 to 54	34,029	38,954	41,344	45,466	49,171	52,968	57,115	46,245	44,876
55 to 59	40,507	40,289	41,902	45,251	46,819	53,405	62,704	47,082	44,891
60 to 64	30,417	40,715	41,027	43,891	47,113	52,329	38,680	43,837	43,051
65 & up	47,968	26,778	34,820	38,723	43,261	39,215	36,074	46,990	35,761
<b>Total</b>	<b>\$ 36,723</b>	<b>\$ 40,110</b>	<b>\$ 43,923</b>	<b>\$ 47,385</b>	<b>\$ 49,937</b>	<b>\$ 54,447</b>	<b>\$ 55,589</b>	<b>\$ 46,469</b>	<b>\$ 44,797</b>

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**Table A-15  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- Elected (Plan 87)**

*COUNTS BY AGE/SERVICE*

Age	Service								Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 & Up	
Under 25	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0
30 to 34	0	0	0	0	0	0	0	0	0
35 to 39	1	0	0	0	0	0	0	0	1
40 to 44	2	0	0	0	0	1	0	0	3
45 to 49	2	1	0	1	1	0	0	0	5
50 to 54	2	0	0	0	1	1	0	0	4
55 to 59	0	1	0	0	1	0	1	1	4
60 to 64	1	0	1	0	0	0	0	3	5
65 & up	0	0	0	0	0	0	0	2	2
<b>Total</b>	<b>8</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>24</b>

**Table A-16  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	120,233	-	-	-	-	-	-	-	120,233
40 to 44	120,233	-	-	-	-	120,233	-	-	120,233
45 to 49	124,527	120,233	-	120,233	168,541	-	-	-	131,612
50 to 54	121,460	-	-	-	120,233	120,233	-	-	120,846
55 to 59	-	128,821	-	-	120,233	-	202,433	120,233	142,930
60 to 64	120,233	-	123,869	-	-	-	-	134,545	129,548
65 & up	-	-	-	-	-	-	-	120,233	120,233
<b>Total</b>	<b>\$ 121,613</b>	<b>\$ 124,527</b>	<b>\$ 123,869</b>	<b>\$ 120,233</b>	<b>\$ 136,336</b>	<b>\$ 120,233</b>	<b>\$ 202,433</b>	<b>\$ 127,389</b>	<b>\$ 128,429</b>

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**Table A-17  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	17	72	5	0	0	0	0	0	94
25 to 29	16	291	255	7	0	0	0	0	569
30 to 34	3	187	422	195	8	0	0	0	815
35 to 39	6	90	267	377	284	1	0	0	1,025
40 to 44	3	43	159	273	594	253	0	0	1,325
45 to 49	1	2	43	106	353	462	2	0	969
50 to 54	0	1	15	37	144	213	3	4	417
55 to 59	0	0	8	22	49	75	1	1	156
60 to 64	0	0	0	7	7	10	0	0	24
65 & up	0	0	0	0	1	0	0	0	1
<b>Total</b>	<b>46</b>	<b>686</b>	<b>1,174</b>	<b>1,024</b>	<b>1,440</b>	<b>1,014</b>	<b>6</b>	<b>5</b>	<b>5,395</b>

**Table A-18  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	\$ 45,615	\$ 55,831	\$ 55,839	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 53,984
25 to 29	45,705	59,697	63,714	62,166	-	-	-	-	61,134
30 to 34	45,194	59,973	64,379	65,262	66,115	-	-	-	63,526
35 to 39	45,705	60,820	64,109	65,451	66,822	64,594	-	-	64,958
40 to 44	49,080	60,952	63,939	65,163	67,423	70,836	-	-	66,939
45 to 49	47,237	54,293	64,568	65,014	66,545	69,114	68,149	-	67,473
50 to 54	-	61,349	63,727	64,854	66,455	68,720	69,150	67,385	67,388
55 to 59	-	-	63,727	65,177	66,332	67,516	84,832	64,160	66,709
60 to 64	-	-	-	64,160	65,824	66,720	-	-	65,712
65 & up	-	-	-	-	64,594	-	-	-	64,594
<b>Total</b>	<b>\$ 45,892</b>	<b>\$ 59,579</b>	<b>\$ 64,071</b>	<b>\$ 65,234</b>	<b>\$ 66,938</b>	<b>\$ 69,315</b>	<b>\$ 71,430</b>	<b>\$ 66,740</b>	<b>\$ 65,327</b>

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**Table A-19  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	2	4	2	0	0	0	0	0	8
25 to 29	6	45	89	3	0	0	0	0	143
30 to 34	1	31	186	26	3	0	0	0	247
35 to 39	0	15	131	95	24	1	0	0	266
40 to 44	0	9	102	109	140	21	0	0	381
45 to 49	0	3	40	47	129	84	2	0	305
50 to 54	0	0	8	16	56	74	1	2	157
55 to 59	0	0	4	7	16	25	0	0	52
60 to 64	0	0	0	2	5	2	0	0	9
65 & up	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>9</b>	<b>107</b>	<b>562</b>	<b>305</b>	<b>373</b>	<b>207</b>	<b>3</b>	<b>2</b>	<b>1,568</b>

**Table A-20  
Distribution of Active Participants (Excludes DROP Participants) as of July 1, 2012 -- 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	\$ 53,163	\$ 60,025	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 51,997
25 to 29	41,637	56,150	60,276	60,025	-	-	-	-	58,190
30 to 34	41,637	56,319	60,586	61,966	60,025	-	-	-	60,112
35 to 39	-	57,850	61,187	63,266	64,989	60,025	-	-	62,080
40 to 44	-	57,055	60,784	63,609	64,862	67,278	-	-	63,361
45 to 49	-	57,066	60,325	64,339	64,207	67,384	91,146	-	64,699
50 to 54	-	-	60,025	63,017	65,000	67,456	61,123	61,123	65,628
55 to 59	-	-	63,159	65,033	64,634	65,505	-	-	64,993
60 to 64	-	-	-	60,429	65,944	65,402	-	-	64,598
65 & up	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>\$ 41,637</b>	<b>\$ 56,427</b>	<b>\$ 60,703</b>	<b>\$ 63,420</b>	<b>\$ 64,630</b>	<b>\$ 67,117</b>	<b>\$ 81,138</b>	<b>\$ 61,123</b>	<b>\$ 62,651</b>

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**Table A-21  
Reconciliation of Plan Membership**

	1967 Plan			Plan 87				Total City
	Municipal	Police	Fire	Municipal	Elected	Police	Fire	
<b>Active</b>								
Active July 1, 2011	<b>3,410</b>	<b>686</b>	<b>214</b>	<b>15,341</b>	<b>17</b>	<b>5,417</b>	<b>1,586</b>	<b>26,671</b>
New Entrants and Rehires	26	2	1	1,566	10	141	17	1,763
Refunded Contributions	-8	-1	0	-295	0	-28	-8	-340
Terminated Vested	-5	0	0	-56	0	-5	-2	-68
Became Disabled	-19	0	0	-29	0	-21	-4	-73
Retired	-70	-14	-2	-106	-3	-8	-1	-204
Entered DROP	-318	-83	-26	-149	0	-45	-7	-628
Net Other Terminations	-43	-3	-3	-697	0	-56	-13	-815
Active July 1, 2012	<b>2,973</b>	<b>587</b>	<b>184</b>	<b>15,575</b>	<b>24</b>	<b>5,395</b>	<b>1,568</b>	<b>26,306</b>
<b>Retired</b>								
Retired July 1, 2011	<b>12,580</b>	<b>5,519</b>	<b>1,961</b>	<b>906</b>	<b>12</b>	<b>109</b>	<b>47</b>	<b>21,134</b>
New Retirees	520	65	44	247	8	19	10	913
Net Other Terminations	-487	-156	-57	-26	0	-7	0	-733
Retired July 1, 2012	<b>12,613</b>	<b>5,428</b>	<b>1,948</b>	<b>1,127</b>	<b>20</b>	<b>121</b>	<b>57</b>	<b>21,314</b>
<b>Beneficiary</b>								
Beneficiary July 1, 2011	<b>5,116</b>	<b>2,119</b>	<b>755</b>	<b>169</b>	<b>3</b>	<b>77</b>	<b>34</b>	<b>8,273</b>
New Beneficiaries	382	178	98	55	0	21	7	741
Net Other Terminations	-245	-94	-53	0	0	0	0	-392
Beneficiary July 1, 2012	<b>5,253</b>	<b>2,203</b>	<b>800</b>	<b>223</b>	<b>3</b>	<b>98</b>	<b>41</b>	<b>8,621</b>

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION

APPENDIX A  
MEMBERSHIP INFORMATION

**Table A-21  
Reconciliation of Plan Membership (continued)**

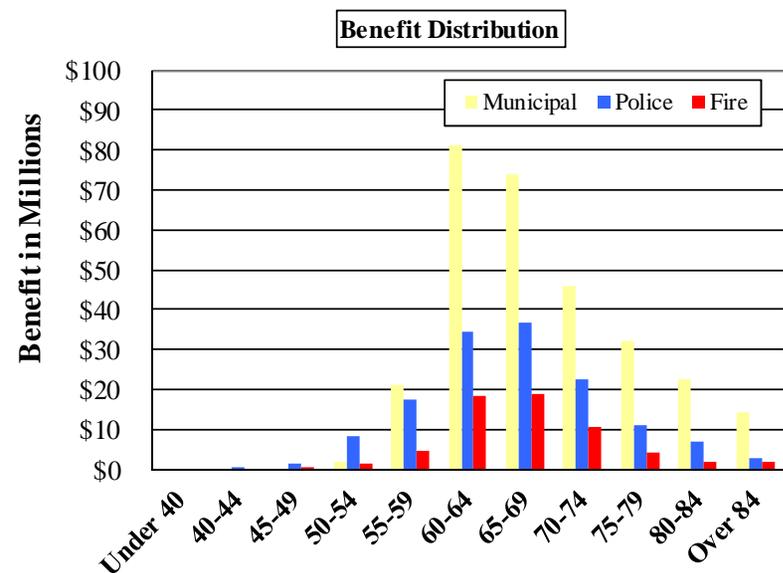
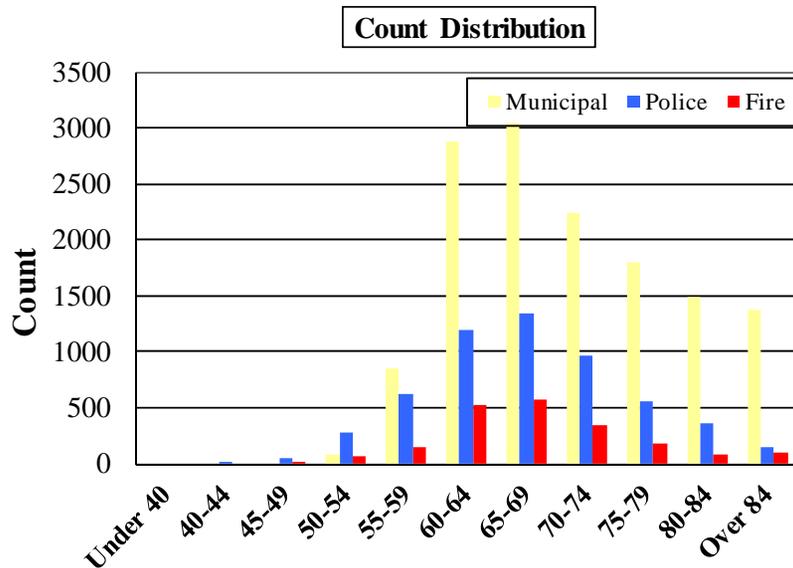
	1967 Plan			Plan 87				Total City
	Municipal	Police	Fire	Municipal	Elected	Police	Fire	
<b>Disabled</b>								
Disabled July 1, 2011	1,725	1,604	369	231	0	257	49	4,235
New Disabilities	26	1	1	46	0	34	4	112
Net Other Terminations	-95	-57	-19	-4	0	-2	-1	-178
Disabled July 1, 2012	1,656	1,548	351	273	0	289	52	4,169
<b>Terminated Vested</b>								
Terminated Vested July 1, 2011	520	1	0	665	0	114	24	1,324
New Vested Terminations	8	0	0	71	0	5	2	86
Net Other Terminations	-76	0	0	-34	0	-7	-4	-121
Terminated Vested July 1, 2012	452	1	0	702	0	112	22	1,289
<b>DROP</b>								
DROP July 1, 2011	1,507	441	272	355	7	85	45	2,712
New DROP Participants	319	84	26	151	0	44	7	631
Net Other Terminations	-341	-40	-48	-108	-7	-7	-6	-557
DROP July 1, 2012	1,485	485	250	398	0	122	46	2,786

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Table A-22  
Age Distribution of Retired Members as of July 1, 2012**

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	5	57,853	0	0
45-49	0	0	56	1,294,187	12	238,789
50-54	87	1,843,633	276	8,100,770	61	1,553,724
55-59	849	21,311,430	619	17,645,463	147	4,727,691
60-64	2,884	81,217,204	1,199	34,547,677	520	18,463,644
65-69	3,039	74,055,901	1,347	36,772,905	571	18,677,554
70-74	2,235	45,973,902	970	22,545,900	340	10,335,475
75-79	1,796	31,964,051	557	10,940,119	179	4,301,656
80-84	1,493	22,418,105	366	7,082,287	82	1,685,965
Over 84	1,377	14,421,879	154	2,787,835	93	1,617,389
<b>Total</b>	<b>13,760</b>	<b>\$ 293,206,105</b>	<b>5,549</b>	<b>\$ 141,774,996</b>	<b>2,005</b>	<b>\$ 61,601,887</b>

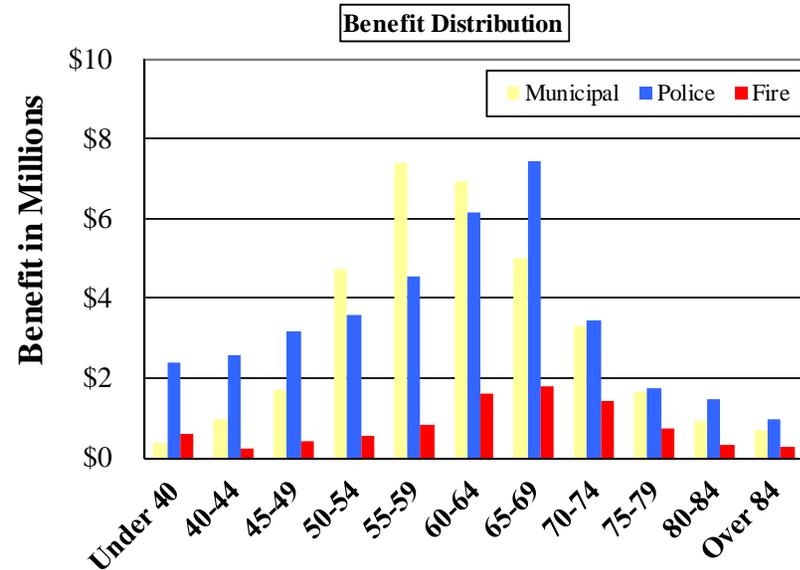
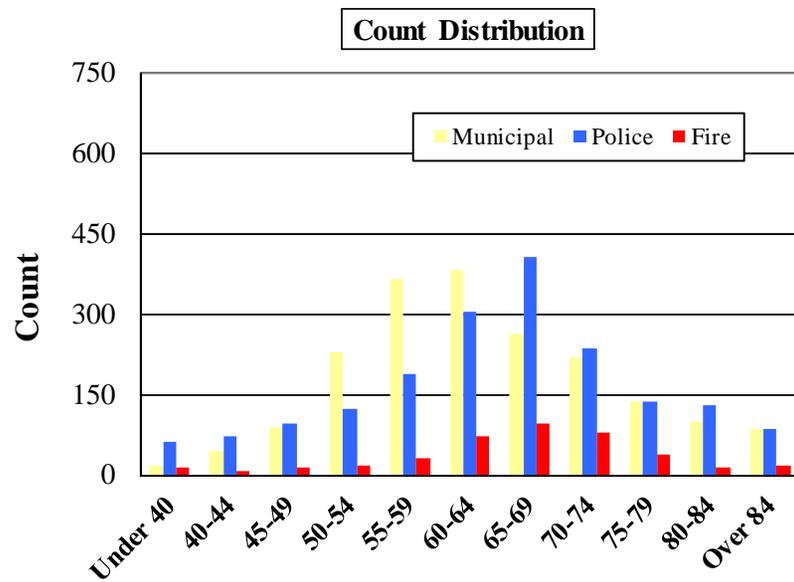


**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Table A-23  
Age Distribution of Disabled Members as of July 1, 2012**

Age	Municipal		Police		Fire	
	Count	Annual Pensions	Count	Annual Pensions	Count	Annual Pensions
Under 40	17	\$ 359,773	62	\$ 2,380,655	15	\$ 610,737
40-44	46	965,559	71	2,587,675	8	232,073
45-49	90	1,701,882	96	3,180,315	13	431,704
50-54	230	4,702,895	123	3,589,671	17	529,195
55-59	364	7,405,778	188	4,555,720	32	806,483
60-64	381	6,935,318	305	6,163,525	73	1,598,839
65-69	264	4,988,356	407	7,439,683	96	1,766,636
70-74	217	3,298,025	235	3,460,770	79	1,441,895
75-79	135	1,669,724	138	1,725,241	38	752,627
80-84	100	938,944	128	1,454,147	15	302,930
Over 84	85	678,648	84	968,995	17	256,074
<b>Total</b>	<b>1,929</b>	<b>\$ 33,644,902</b>	<b>1,837</b>	<b>\$ 37,506,397</b>	<b>403</b>	<b>\$ 8,729,193</b>

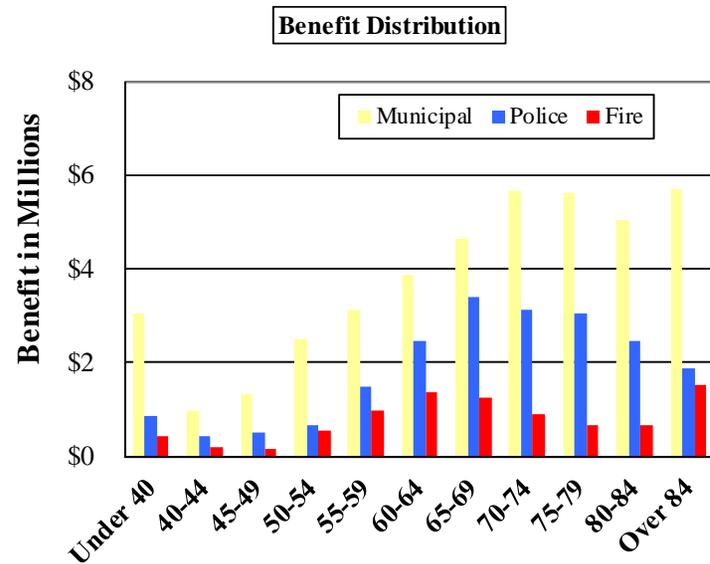
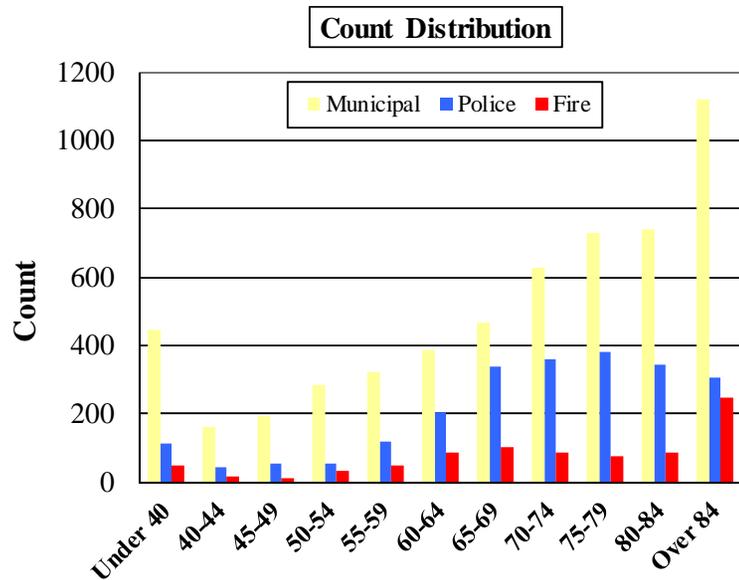


**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Table A-24  
Age Distribution of Beneficiaries as of July 1, 2012**

Age	Municipal		Police		Fire	
	Count	Annual Pensions	Count	Annual Pensions	Count	Annual Pensions
Under 40	443	\$ 3,057,801	112	\$ 848,947	49	\$ 423,863
40-44	161	984,157	43	411,909	15	202,348
45-49	194	1,333,164	51	521,183	13	151,702
50-54	286	2,503,081	54	658,532	33	541,217
55-59	321	3,137,908	116	1,494,990	46	960,932
60-64	388	3,878,376	201	2,474,427	87	1,350,562
65-69	466	4,654,232	338	3,411,003	104	1,232,697
70-74	628	5,662,345	357	3,123,868	86	907,693
75-79	729	5,610,976	378	3,035,777	77	676,899
80-84	741	5,015,447	344	2,444,357	87	655,141
Over 84	1,122	5,707,659	307	1,873,646	244	1,506,314
Total	5,479	\$ 41,545,146	2,301	\$ 20,298,639	841	\$ 8,609,368

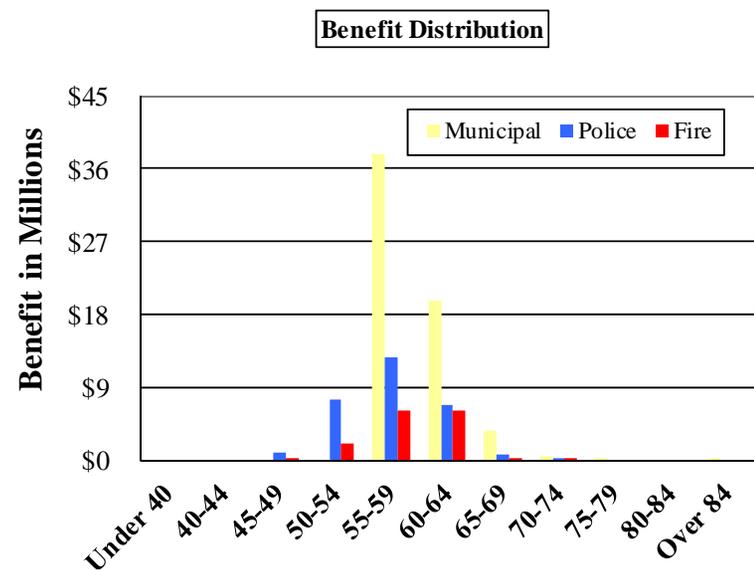
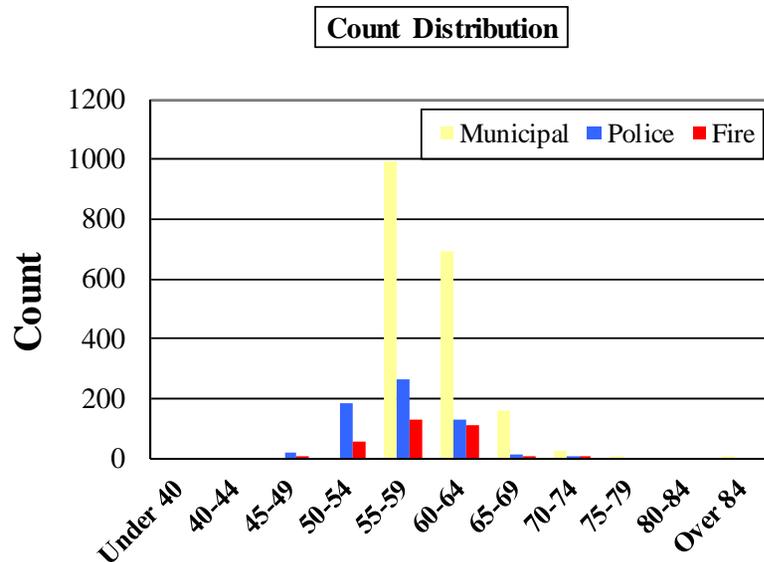


**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Table A-25  
Age Distribution of DROP Participants as of July 1, 2012**

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	20	801,956	1	47,052
50-54	0	0	185	7,509,908	54	2,084,748
55-59	993	37,779,572	265	12,702,611	128	6,069,721
60-64	693	19,660,723	126	6,763,135	108	6,140,649
65-69	162	3,721,044	10	590,553	4	277,012
70-74	25	464,987	1	59,100	1	19,224
75-79	8	124,932	0	0	0	0
80-84	0	0	0	0	0	0
Over 84	2	32,808	0	0	0	0
<b>Total</b>	<b>1,883</b>	<b>\$ 61,784,066</b>	<b>607</b>	<b>\$ 28,427,263</b>	<b>296</b>	<b>\$ 14,638,406</b>

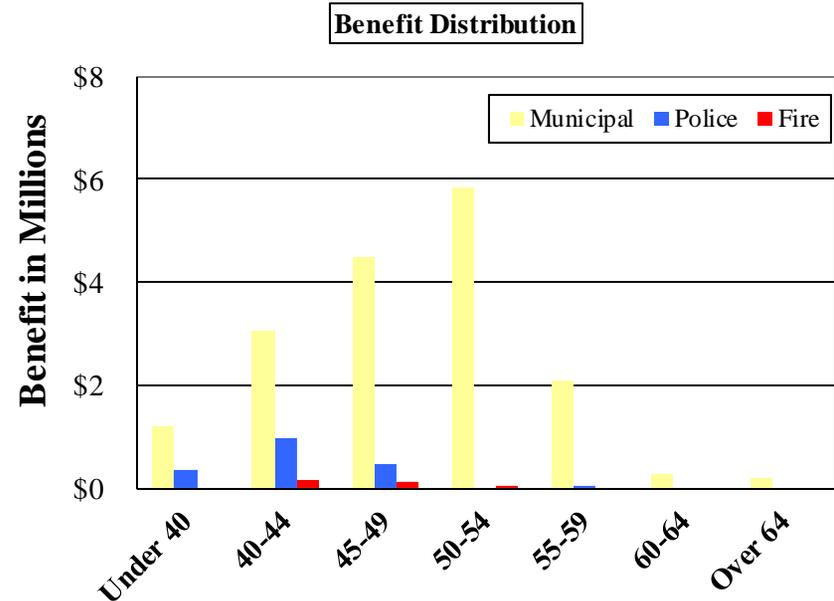
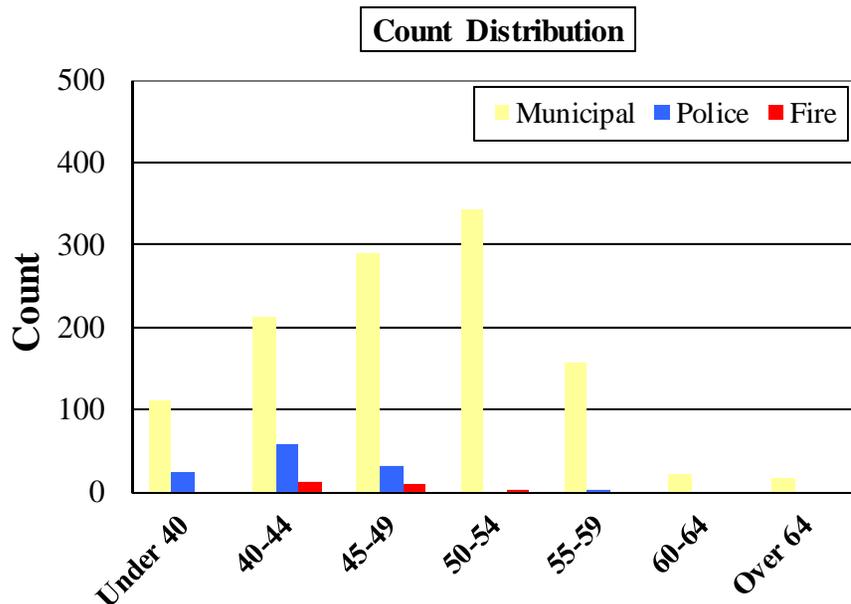


**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION**

**APPENDIX A  
MEMBERSHIP INFORMATION**

**Table A-26  
Age Distribution of Terminated Vested Members as of July 1, 2012**

Age	Municipal		Police		Fire	
	Count	Annual Pensions	Count	Annual Pensions	Count	Annual Pensions
Under 40	110	\$ 1,217,011	24	\$ 349,611	0	\$ -
40-44	213	3,054,484	57	949,361	11	168,148
45-49	290	4,492,500	31	473,881	9	127,746
50-54	344	5,817,931	0	0	2	20,831
55-59	158	2,089,298	1	13,436	0	0
60-64	22	275,123	0	0	0	0
Over 64	17	186,943	0	0	0	0
Total	1,154	\$ 17,133,290	113	\$ 1,786,289	22	\$ 316,725



**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 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.

<b>Table B-1a</b>						
<b>Development of the Fiscal Year 2014 Amortization Payment under the City's Funding Policy</b>						
<b>1967 Plan - Municipal</b>						
<b>(\$ thousands)</b>						
	<b>7/1/2012</b>	<b>7/1/2013</b>	<b>Remaining</b>	<b>FY 2014 Payment</b>	<b>FY 2014 Payment</b>	
	<b>Outstanding Balance</b>	<b>Expected Balance</b>	<b>Years</b>	<b>Beginning-of-Year</b>	<b>End-of-Year</b>	
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2012 Based on July 1, 2011 Valuation						
a. Remaining	\$ 2,325,953	\$ 2,171,746		\$ 322,632	\$ 348,282	
2. Changes in UAL due to						
a. Actuarial Experience	\$ 216,129	\$ 233,312	20	\$ 21,931	\$ 23,675	
b. Assumption Changes	46,742	50,458	15	5,444	5,877	
c. Active Plan Changes	-	-	10	-	-	
d. Inactive Plan Changes	-	-	1	-	-	
e. Subtotal	\$ 262,871	\$ 283,769		\$ 27,376	\$ 29,552	
3. Total [1c. + 2e.]	\$ 2,588,824	\$ 2,455,516		\$ 350,008	\$ 377,834	

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION

**APPENDIX B**  
**SUPPORTING TABLES FOR CITY'S FUNDING POLICY**

<b>Table B-1b</b>						
<b>Development of the Fiscal Year 2014 Amortization Payment under the City's Funding Policy</b>						
<b>1967 Plan - Police</b>						
(\$ thousands)						
	7/1/2012		7/1/2013	Remaining	FY 2014 Payment	FY 2014 Payment
	Outstanding Balance		Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2012 Based on July 1, 2011 Valuation						
a. Remaining	\$ 1,293,687	\$	1,193,160		\$ 192,064	\$ 207,333
2. Changes in UAL due to						
a. Actuarial Experience	\$ 107,413	\$	115,953	20	\$ 10,900	\$ 11,766
b. Assumption Changes	22,477		24,264	15	2,618	2,826
c. Active Plan Changes	-		-	10	-	-
d. Inactive Plan Changes	-		-	1	-	-
e. Subtotal	\$ 129,890	\$	140,217		\$ 13,518	\$ 14,592
3. Total [1c. + 2e.]	\$ 1,423,577	\$	1,333,377		\$ 205,582	\$ 221,926

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION

**APPENDIX B**  
**SUPPORTING TABLES FOR CITY'S FUNDING POLICY**

<b>Table B-1c</b>						
<b>Development of the Fiscal Year 2014 Amortization Payment under the City's Funding Policy</b>						
<b>1967 Plan - Fire</b>						
(\$ thousands)						
	7/1/2012		7/1/2013	Remaining	FY 2014 Payment	FY 2014 Payment
	Outstanding Balance		Expected Balance	Years	Beginning-of-Year	End-of-Year
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2012 Based on July 1, 2011 Valuation						
a. Remaining	\$ 536,025	\$	500,645		\$ 74,453	\$ 80,372
2. Changes in UAL due to						
a. Actuarial Experience	\$ 42,618	\$	46,006	20	\$ 4,325	\$ 4,668
b. Assumption Changes	9,034		9,753	15	1,052	1,136
c. Active Plan Changes	-		-	10	-	-
d. Inactive Plan Changes	-		-	1	-	-
e. Subtotal	\$ 51,652	\$	55,759		\$ 5,377	\$ 5,804
3. Total [1c. + 2e.]	\$ 587,677	\$	556,404		\$ 79,830	\$ 86,177

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION

**APPENDIX B**  
**SUPPORTING TABLES FOR CITY'S FUNDING POLICY**

<b>Table B-1d</b>						
<b>Development of the Fiscal Year 2014 Amortization Payment under the City's Funding Policy</b>						
<b>Plan 87 - Municipal</b>						
<b>(\$ thousands)</b>						
	<b>7/1/2012</b>		<b>7/1/2013</b>	<b>Remaining</b>	<b>FY 2014 Payment</b>	<b>FY 2014 Payment</b>
	<b>Outstanding Balance</b>		<b>Expected Balance</b>	<b>Years</b>	<b>Beginning-of-Year</b>	<b>End-of-Year</b>
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2012 Based on July 1, 2011 Valuation						
a. Remaining	\$ 174,526	\$	170,069		\$ 17,255	\$ 18,627
2. Changes in UAL due to						
a. Actuarial Experience	\$ 52,092	\$	56,233	20	\$ 5,286	\$ 5,706
b. Assumption Changes	14,284		15,420	15	1,664	1,796
c. Active Plan Changes	-		-	10	-	-
d. Inactive Plan Changes	-		-	1	-	-
e. Subtotal	\$ 66,376	\$	71,653		\$ 6,950	\$ 7,502
3. Total [1c. + 2e.]	\$ 240,902	\$	241,722		\$ 24,205	\$ 26,129

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION

**APPENDIX B**  
**SUPPORTING TABLES FOR CITY'S FUNDING POLICY**

<b>Table B-1e</b>						
<b>Development of the Fiscal Year 2014 Amortization Payment under the City's Funding Policy</b>						
<b>Plan 87 - Elected</b>						
<b>(\$ thousands)</b>						
	<b>7/1/2012</b>		<b>7/1/2013</b>	<b>Remaining</b>	<b>FY 2014 Payment</b>	<b>FY 2014 Payment</b>
	<b>Outstanding Balance</b>		<b>Expected Balance</b>	<b>Years</b>	<b>Beginning-of-Year</b>	<b>End-of-Year</b>
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2012 Based on July 1, 2011 Valuation						
a. Remaining	\$ 9,060	\$	8,793		\$ 914	\$ 987
2. Changes in UAL due to						
a. Actuarial Experience	\$ 1,269	\$	1,370	20	\$ 129	\$ 139
b. Assumption Changes	238		257	15	28	30
c. Active Plan Changes	-		-	10	-	-
d. Inactive Plan Changes	-		-	1	-	-
e. Subtotal	\$ 1,507	\$	1,627		\$ 157	\$ 169
3. Total [1c. + 2e.]	\$ 10,567	\$	10,420		\$ 1,071	\$ 1,156

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION

**APPENDIX B**  
**SUPPORTING TABLES FOR CITY'S FUNDING POLICY**

<b>Table B-1f</b>						
<b>Development of the Fiscal Year 2014 Amortization Payment under the City's Funding Policy</b>						
<b>Plan 87 - Police</b>						
<b>(\$ thousands)</b>						
	<b>7/1/2012</b>		<b>7/1/2013</b>	<b>Remaining</b>	<b>FY 2014 Payment</b>	<b>FY 2014 Payment</b>
	<b>Outstanding Balance</b>		<b>Expected Balance</b>	<b>Years</b>	<b>Beginning-of-Year</b>	<b>End-of-Year</b>
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2012 Based on July 1, 2011 Valuation						
a. Remaining	\$ 133,304	\$	131,868		\$ 11,507	\$ 12,422
2. Changes in UAL due to						
a. Actuarial Experience	\$ 44,548	\$	48,090	20	\$ 4,520	\$ 4,880
b. Assumption Changes	12,524		13,519	15	1,459	1,575
c. Active Plan Changes	-		-	10	-	-
d. Inactive Plan Changes	-		-	1	-	-
e. Subtotal	\$ 57,072	\$	61,609		\$ 5,979	\$ 6,454
3. Total [1c. + 2e.]	\$ 190,376	\$	193,477		\$ 17,486	\$ 18,877

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION

**APPENDIX B**  
**SUPPORTING TABLES FOR CITY'S FUNDING POLICY**

<b>Table B-1g</b>						
<b>Development of the Fiscal Year 2014 Amortization Payment under the City's Funding Policy</b>						
<b>Plan 87 - Fire</b>						
<b>(\$ thousands)</b>						
	<b>7/1/2012</b>		<b>7/1/2013</b>		<b>FY 2014 Payment</b>	<b>FY 2014 Payment</b>
	<b>Outstanding Balance</b>		<b>Expected Balance</b>	<b>Remaining</b>	<b>Beginning-of-Year</b>	<b>End-of-Year</b>
				<b>Years</b>		
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2012 Based on July 1, 2011 Valuation						
a. Remaining	\$ 34,407	\$	33,962		\$ 3,006	\$ 3,245
2. Changes in UAL due to						
a. Actuarial Experience	\$ 3,534	\$	3,815	20	\$ 359	\$ 387
b. Assumption Changes	3,195		3,449	15	372	402
c. Active Plan Changes	-		-	10	-	-
d. Inactive Plan Changes	-		-	1	-	-
e. Subtotal	\$ 6,729	\$	7,264		\$ 731	\$ 789
3. Total [1c. + 2e.]	\$ 41,136	\$	41,226		\$ 3,737	\$ 4,034

CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
JULY 1, 2012 ACTUARIAL VALUATION

**APPENDIX B**  
**SUPPORTING TABLES FOR CITY'S FUNDING POLICY**

<b>Table B-1h</b>					
<b>Development of the Fiscal Year 2014 Amortization Payment under the City's Funding Policy</b>					
<b>Total - All Divisions</b>					
<b>(\$ thousands)</b>					
	<b>7/1/2012</b>	<b>7/1/2013</b>	<b>Remaining</b>	<b>FY 2014 Payment</b>	<b>FY 2014 Payment</b>
	<b>Outstanding Balance</b>	<b>Expected Balance</b>	<b>Years</b>	<b>Beginning-of-Year</b>	<b>End-of-Year</b>
1. Expected Unfunded Actuarial Liability (UAL) as of July 1, 2012 Based on July 1, 2011 Valuation					
a. Remaining	\$ 4,506,961	\$ 4,210,244		\$ 621,832	\$ 671,268
2. Changes in UAL due to					
a. Actuarial Experience	\$ 467,604	\$ 504,779	20	\$ 47,449	\$ 51,222
b. Assumption Changes	108,494	117,119	15	12,637	13,641
c. Active Plan Changes	-	-	10	-	-
d. Inactive Plan Changes	-	-	1	-	-
e. Subtotal	\$ 576,098	\$ 621,898		\$ 60,086	\$ 64,863
3. Total [1c. + 2e.]	\$ 5,083,059	\$ 4,832,142		\$ 681,919	\$ 736,131

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. 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  
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**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.
- Service-connected disability benefits are increased by 2.9%.
- 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  
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SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

**A. Actuarial Assumptions**

**1. Investment Return Assumption**

7.95% 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 \$8,895,370, and assumed to increase by 3.30% per year.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

**5. 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.

**6. 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.

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**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS**

**7. 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 7 as well as items 8 and 9 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.

**8. 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.

**9. 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**

**Rates of Retirement**

<b>Rates of Service Retirement - 1967 Plan</b>		
	<b>Municipal</b>	<b>Uniformed</b>
<b>Age</b>		
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

<b>Rates of Service Retirement - Plan 87</b>				
	<b>Municipal and Elected Officials</b>		<b>Uniformed</b>	
<b>Age</b>	<b>First Year Eligible</b>	<b>Subsequent Years</b>	<b>First Year Eligible</b>	<b>Subsequent Years</b>
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**

**10. 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.

**11. Changes Since Last Valuation**

- The interest rate assumption was decreased from 8.10% to 7.95%.
- The salary increase rates assumption was updated to better reflect actual experience. The age based table was reduced by 0.2% for all ages.
- The payroll growth assumption was decreased from 3.50% to 3.30% in step with the salary rate assumption decrease
- The assumed rate of inflation on expenses was decreased from 3.50% to 3.30%.

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. The future MMO will include the interest payments or repayment amounts of any deferred contribution amounts.

### 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 (4/5, 3/5, 2/5, 1/5) of the investment gain or loss in each of the preceding four years for gains and losses prior to July 1, 2009. Beginning July 1, 2009, investment gains and losses are recognized over a ten year period prospectively, creating the decreasing fraction to be (9/10, 8/10, 7/10, etc). 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.

**CITY OF PHILADELPHIA MUNICIPAL RETIREMENT SYSTEM  
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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

**APPENDIX D**  
**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.

**APPENDIX D**  
**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.

**APPENDIX D**  
**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.

**APPENDIX D**  
**SUMMARY OF PLAN PROVISIONS – 1967 PLAN**

*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 (4.5% as of July 1, 2007). 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:*

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 must make an election to participate in Plan B.

*Elected:*

Any City employee on or after January 8, 1987, in any general, municipal, or special election, participates in this Plan.

**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 (Plans A and B):*

Same as municipal.

*Elected:*

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 (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:*

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

**APPENDIX D**  
**SUMMARY OF PLAN PROVISIONS – 1987 PLAN**

**4. Final Compensation**

*Municipal:*

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

*Uniformed (Plans A and B):*

Same as municipal.

*Elected:*

Same as municipal.

**5. Average Final Compensation**

*Municipal:*

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:*

Same as municipal.

**6. Employee Contributions**

*Municipal:*

Total employee contributions equal 30% of the gross normal cost for all members in the municipal division. 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.

*Elected:*

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

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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:*

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:*

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:*

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:*

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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**8. Early Retirement**

**Eligibility**

*Municipal:*

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

*Uniformed (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:*

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:*

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:*

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:*

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

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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:*

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:*

Same as municipal.

**10. Withdrawal Benefit**

**Eligibility**

*Municipal:*

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:*

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:*

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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*Elected:*

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 (Plans A and B):*

Same as municipal.

*Elected:*

Same as municipal.

**12. Ordinary Death**

**Eligibility**

*Municipal:*

The beneficiary of an active employee (or a terminated vested employee who did not withdraw his employee contributions) who dies after completing 10 years of credited service (or 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:*

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:*

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:*

Same as municipal.

**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 (Plans A and B):*

Same as municipal.

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*Elected:*

Same as municipal.

**13. Service-Connected Disability**

**Eligibility**

*Municipal:*

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

*Uniformed (Plans A and B):*

Same as municipal.

*Elected:*

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:*

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:*

Same as municipal.

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**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 (Plans A and B):*

Same as municipal, but only applies to police employees.

*Elected:*

Same as municipal.

**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 (Plans A and B):*

Same as municipal.

*Elected:*

Same as municipal.

**15. Ordinary Disability**

**Eligibility**

*Municipal:*

An active employee found by the Board to be mentally or physically permanently incapacitated from the further performance of duties due to an accident or illness not caused by the performance of duties is eligible for an immediate ordinary disability benefit provided he or she has at least 10 years of credited service (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:*

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:*

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:*

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:*

Service pensions, deferred vested benefits, service-connected disability benefits, and ordinary disability benefits are payable under three 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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*Uniformed (Plans A and B):*

Same as municipal, except that 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.

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.

*Elected:*

Same as municipal.

**17. Service-Connected Health Care Benefit**

**Eligibility**

*Municipal:*

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:*

Not applicable.

**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

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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:*

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

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Police employees hired on or after January 1, 2010, or Fire employees hired on or after October 15, 2010, will be placed in a new retirement program adopted by the City (Plan '10). New employees have the option to participate in a defined benefit plan with a different benefit calculation formula and eligibility and vesting rules, and a defined contribution plan with eligibility for City matching contributions, or enter Plan 87 but with increased employee contributions. The employee contribution rate would be 6.0% instead of 5.0%.

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

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 in some cases rehired) on or after January 1, 2012 are required to participate in Plan 10. The employee contribution rate is equal to 50% of the gross normal cost.

**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.