

## City of Philadelphia BOARD OF PENSIONS AND RETIREMENT ANNUAL REPORT

Fiscal Year Ending June 30, 2012

Michael Nutter Mayor

# Rob Dubow Chairperson

**Francis X. Bielli, Esq.** Executive Director

## **City Of Philadelphia**

## **BOARD OF PENSIONS AND RETIREMENT**

## **Annual Report**

Fiscal Year July 1, 2011 – June 30, 2012



16th Floor, Two Penn Center Plaza Philadelphia, Pennsylvania 19102 (215-496-7418)

## To the People of the City of Philadelphia:

The Board of Pensions and Retirement hereby submits the Annual Report of the Retirement System for City of Philadelphia employees for the fiscal year ending June 30, 2012.

#### The report consists of three sections:

- An introductory section, which contains a brief summary of the Fund and identifies the administrators, trustees, investment managers and professional consultants of the Retirement System, and
- An actuarial section which details the methods of costing and funding current and future benefits to members and beneficiaries of the Retirement System, and
- A financial section, which contains the System's financial statements, membership pension data, and investment statistics.

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If you require more detailed information on the Board's Investment Portfolio, please write to Francis X. Bielli, Esq., Executive Director, Two Penn Center Plaza – 16<sup>th</sup> Floor, Philadelphia, PA 19102 or call 215-496-7418 or 1-800-544-1173.

Additional copies of this report can be downloaded from <u>http://www.phila.gov/pensions</u>.

Cover photo provided by courtesy of the Office of the City Representative, City of Philadelphia

## **INTRODUCTORY SECTION**

#### **CITY OF PHILADELPHIA PUBLIC EMPLOYEES RETIREMENT SYSTEM**

Francis X. Bielli, Esquire Executive Director

## MEMBERS OF THE BOARD

Rob Dubow, Chairperson	Director of Finance, Appointed January 7, 2008.
Alan L. Butkovitz, Esq.	City Controller, Elected by voters of Philadelphia. Serving as Board Member since January 2006.
Albert L. D'Attilio, Esquire	Director of Human Resources, Appointed June 2, 2008.
Richard Negrin, Esquire	Deputy Mayor/Managing Director, Appointed July 1, 2010.
Veronica M. Pankey	AFSCME District Council 33. Serving as Employee Elected Representative since February 2011.
John A. Reilly	Philadelphia Firefighters Union Local No. 22. Serving as Employee Elected Representative since November 1976.
Shelley Smith, Esquire	City Solicitor Appointed January 7, 2008
Ronald Stagliano, ViceChairperson	Fraternal Order of Police. Serving as Employee Elected Representative since November 2004.
Carol Stukes	AFSCME District Council 47. Serving as Employee Elected Representative since September 1994.

## CONSULTANTS

ACTUARY	
Cheiron, Inc.	McLean, Virginia
IN-HOUSE PRE-AUDIT FUNCTIONS	
City of Philadelphia - Office of the City Controlle	r
AUDITOR	
Clifton Gunderson LLP	Timonium, Maryland
IN-HOUSE LEGAL COUNSEL	
City of Philadelphia - Law Department	
GENERAL INVESTMENT CONSULTANT	
Cliffwater LLC	Marina del Ray, California
ALTERNATIVE INVESTMENT CONSULTANTS	
Cliffwater LLC (Hedge Funds, Private Real Estate)	Marina del Ray, California
Franklin Park Associates LLC (Private Markets)	Bala Cynwyd, Pennsylvania
CUSTODIAN BANK	

J.P. Morgan Chase

New York, New York

#### **INVESTMENT MANAGERS**

#### **Domestic Equity**

**Aronson + Johnson+ Ortiz, LLC** Philadelphia, Pennsylvania

**Ceredex Value Advisors** Orlando, Florida

**Emerald Advisors** Lancaster, Pennsylvania

**Fisher Investment Management** Woodside, California **Lee Munder** Boston, Massachusetts

**O'Shaughnessy Asset Management** Stamford, Connecticut

Rhumbline Advisors Boston, Massachusetts

**Turner Investment Partners** Berwyn, Pennsylvania

**Geneva Capital Management** Milwaukee, Wisconsin

#### **International Equity**

**Baring International** London, United Kingdom

**Causeway Capital Management** Los Angeles, California

#### **Emerging Markets Equity**

Eaton Vance Management Boston, Massachusetts Northern Trust Chicago, Illinois

**Trilogy Global Advisors** Winter Park, Florida

#### Core Bond & Core Bond Plus Fixed Income

Rhumbline Advisors Boston, Massachusetts

Global Fixed Income

**Brandywine Global Management** Philadelphia, Pennsylvania Merganser Capital Management Boston, Massachusetts

#### **Global TIPS**

**Western Asset Management** Pasadena , California

#### <u>High Yield</u>

Artio Asset Management New York, New York

## Convertible Bonds

Allianz Global Investors New York, New York

#### **Emerging Market Debt**

**Stone Harbor** New York, New York MacKay Shields New York, New York

IShares J.P.Morgan EM Bond Fund ETF New York, New York

<u>Currency</u> Alpha

J.P. Morgan Asset Management New York, New York

#### Cash Management

J.P. Morgan Asset Management New York, New York

#### **Opportunity Fund**

**PFM Advisors** Philadelphia, Pennsylvania

#### <u>Real Assets</u>

**Fiduciary Asset Management LLC** St. Louis, Missouri

Harvest Fund Advisors, LLC Wayne, Pennsylvania **FIS Group** Philadelphia, Pennsylvania

**Tortoise Capital Advisors, LLC** 

Leawood, Kansas

#### <u>Hedge Funds</u>

Advent Capital Management New York, New York

**Beachpoint Capital Management** Santa Monica, California

**Bridgewater Associates, Inc.** Westport, Connecticut

**Caspian Select Credit Int'l** Harrison, New York

**Emerging Sovereign Group** New York, New York

**Independence Fund** Philadelphia, Pennsylvania Karsch Capital New York, New York

**Kynikos Opportunity Fund** New York, New York

**KKR-PBPR Capital Partners** New York, New York

Mason Capital Management New York, New York

**Regiment Capital Ltd.** Boston, Massachusetts

**Taconic** New York, New York

#### Private Real Estate Investments

Arsenal Real Estate Fund IA, LP Morristown, New Jersey

**CIM Urban REIT, LLC** Los Angeles, California

**Exeter Industrial Value Fund, LP** Plymouth Meeting, Pennsylvania

J.P. Morgan Chase Strategic Property Fund New York, New York

**Mesa West Real Estate Income Fund II, LP** Los Angeles, California

**Advent International GPE VI, LP** Boston, Massachusetts

Altaris Healthcare Partners II, LP New York, New York Beacon Capital Strategic Partners IV&V, LP Boston, Massachusetts

**Colony Investors VIII, LP** Los Angeles, California

**Invesco Core Real Estate- U.S.A., LLC** Dallas, Texas

**Lone Star Real Estate Fund II, LP** Dallas, Texas

**Tishman Speyer European Real Estate Venture VI- Scots** New York, New York

Falcon Mezzanine Partners, LP Boston Massachusetts

**Fenway Partners Capital Fund II, LP** New York, New York Ascend Ventures, LP New York, New York

**Asian Financial Corporation** Philadelphia, Pennsylvania

Audax Mezzanine Fund III, LP New York, New York

Avenue Special Situations Fund V, LP New York, New York

Bay Partners, XI, LP Cupertino, California

Behrman Capital, III, LP New York, New York

Blackstone Capital Partners, IV, V & VI LP New York, New York

Caryle Europe III, LP New York, New York

**Castile Ventures III, LP** Waltham, Massachusetts

**Columbia Capital Equity Partners II & III QP** LP New York, New York

**Court Square Capital Partners II, LP** New York, New York

**European Strategic Partners I & II, LP-Standard Life of Scotland** Ediburgh, Scotland

Fairview Capital II & III, LP Farmington, Connecticut

**Merion Investment Partners, LP** King of Prussia, Pennsylvania

Morgan Stanley Venture Partners IV & 2002 LP New York, New York **Franklin Park Venture Fund Series 2008 LP** Bala Cynwyd, Pennsylvania

**Green Equity Investors IV, LP** Los Angeles, California

ICV Partners II, LP New York, New York

**Keystone Venture V, LP** Philadelphia, Pennsylvania

KKR 2006 Fund, LP New York, New York

Kohlberg Investors V, LP Mt. Kisco, New York

KPS Special Situations Fund II, LP New York, New York

Levine Leichtman Capital Partners IV, LP Los Angeles, California

Lindsay, Goldberg & Bessemer I & II, LP New York, New York

Littlejohn Fund III, LP Greenwich, Connecticut

**LLR Equity Partners I, II & III, LP** Philadelphia, Pennsylvania

Mason Wells Buyout Fund III, LP Milwaukee, Wisconsin

**Meridian Venture Partners, LP & MVP Distribution Partners, LP** Radnor, Pennsylvania

**TA Associates XI, LP** Boston, Massachusetts

**TCW/ Crescent Mezzanine Partners II&III, LP** Los Angeles, California **Natural Gas Partners IX, LP** Irving, Texas

**Nogales Investors Fund I & II, LP** Los Angeles, California

**Novitas Capital III, LP (formerly PA Early Stage)** Wayne, Pennsylvania

**OCM Opportunities Fund III, IV & VIIb, LP** Los Angeles, California

**Pharos Capital Partners II, LP** Houston, Texas

Platinum Equity Capital Partners I & II, LP Beverly Hills, California

**Quaker BioVentures, LP** Philadelphia, Pennsylvania

**Relativity Fund, LP** New York, New York

**Riverside Capital Appreciation Fund V, LP** New York, New York

**SCP Private Equity Partners I & II, LP** Wayne, Pennsylvania

**Sterling Capital Partners II & III, LP** Northbrook, Illinois

**Summit Subordinated Debt IV, LP** Palo Alto, California **Technology Leaders I, II & V, LP** Wayne, Pennsylvania

**TGP Partners II & III, LP** Fort Worth, Texas

**The Retail Initiative 1994, LP** New York, New York

Thomas H. Lee Equity Fund IV & V, LP Boston, Massachusetts

**TWCP, LP** New York, New York

**United Bank of Philadelphia** Philadelphia, Pennsylvania

**Veritas Capital Partners III, LP** New York, New York

**Vista Equity Partners III, LP** Austin, Texas

Wellspring Capital Partners, IV, LP New York, New York

Wicks Capital Partners IV, LP New York, New York

Wicks Communication & Media Partners III, LP New York, New York

### **MISSION STATEMENT**

The Board of Pensions and Retirement was charged under the Philadelphia Home Rule Charter with the creation and maintenance of an actuarially sound Retirement System providing benefits for all City employees. The Ordinance (Bill No. 907) implementing the present Retirement System was formally approved by City Council on December 3, 1956, and the System became operational effective January 1, 1957. The enactment of Bill No. 907 superseded the Act of Assembly approved May 20, 1915, P.L. 566, under which the Pension Fund had previously been governed.

The Board, as defined in the Home Rule Charter, is composed of the Director of Finance, who serves as chairperson, the Managing Director, the City Solicitor, the Personnel Director, the City Controller and four members who are elected by the Civil Service employees of the City of Philadelphia. The elected members serve a four-year term of office.

The 9-member Board formally approves all benefit applications, but its major role is that of "trustee", to ensure that the Retirement System remains actuarially and financially sound for the benefit of current and future benefit recipients. The Board, with the assistance of its professional consultants, develops the policies and strategies which will enable the Board to successfully execute its fiduciary obligations.

The Executive Director, aided by staff, administers the day-to-day activities of the Retirement System, providing services to all system members.

#### MEMBERSHIP

The Public Employees Retirement System provides benefits to police, fire and civilian workers of the City of Philadelphia through the administration of multiple plans adopted from 1915 to the present. In addition, the Board of Pensions administers (but does not fund) a pension plan for the employees of some quasi-public agencies (the Philadelphia Parking Authority, the Philadelphia Municipal Authority, and the Philadelphia Housing Development Corporation). Membership details, as well as membership activity information for fiscal year 2012, may be found in the Actuarial Section of this report.

#### FUNDING

The Municipal Pension Plan Funding Standard and Recovery Act of December 1984 (Act 205) mandated funding methods for all municipal pension plans in the Commonwealth of Pennsylvania. Under the provisions of Act 205, the Municipal Retirement System is required to fund the actuarial liability accrued after July 1, 1985 on a level dollar payment method. In effect, the cost of current pension obligations must be satisfied annually.

The unfunded actuarial liability which had accrued prior to July 1, 1985 is being amortized over a 40-year period with payments increasing at the rate of 6% per year. This debt portion will be satisfied on June 30, 2019.

Act 205 requires that an actuarial valuation be performed annually and that an experience study, covering a 5-year period, be conducted every 4 years to insure that the pension costs derived by the actuary are accurate and based on valid historical experience.

In January 1999, the City issued \$1.29 billion of 30-year pension obligation bonds having an overall rate of 6.61% with a goal of reducing the City's unfunded pension obligation liability.

The Actuarial Section of this report contains fiscal year 2012 information regarding normal cost; total unfunded accrued liability; recommended contribution under the City's funding policy; actual contributions; and the Minimum Municipal Obligation (MMO) as required by the Commonwealth of Pennsylvania's Acts 205 and 189.

## INCOME

The City of Philadelphia is the largest single contributor to the Public Employees Retirement System. Employees contribute a percentage of their pay, which varies with plan membership. Contributions are also paid by the quasi-public agencies whose employees' pension benefits are administered by the Board of Pensions. A major source of income is the earnings of the System's investment portfolio. Both the Actuarial and Financial Sections of this report provide further information on the Board's fiscal year 2012 income.

#### **INVESTMENTS**

The 9-member Board of Pensions and Retirement plays an active role in the determination of investment policy and strategy. All major decisions with regard to the portfolio are approved by the Board based upon the recommendations of its investment consultants and managers and the Board's in-house investment staff. Cliffwater LLC, the Board's Investment Consultant, oversees the management of the portfolio by investment management firms (a listing of these firms is presented on pages 6-10).

The investment policy developed by the Board provides the framework for the investment of funds. However, the manner in which the Board invests its funds is constrained by legal statutes. Investments of the Public Employees Retirement System must be made in compliance with Section 22-1001 of the Public Employees Retirement Code and the regulations for the investment of similar State funds as set forth in the Act of March 1, 1974 (P.L. 125, No. 31), as amended (71 Pa. C.S. Section 5931).

As part of its overall investment policy, the Board approved an asset allocation strategy which has as its goal the identification of the mix of broad asset classes that most efficiently balances the need for achieving an 8.10% rate of return with the desire to minimize the possibility of capital loss. This strategy is periodically reviewed by the Board for possible fine-tuning to ensure that it remains dynamic and reflective of market conditions.

The Financial Section of this report provides further information on the Board's fiscal year 2012 assets.

#### **EXPENSES**

Pension benefit payments are the Board's greatest current normal expense. Other expenses include the refund of pension contributions to employees who left City employment and the administrative expenses of operating the Board.

## AMENDMENTS TO CITY OF PHILADELPHIA PUBLIC EMPLOYEES RETIREMENT CODE

#### Bill # 110836-A (Enacted by City Council on 12/15/11)

Amended Title 22 of the Philadelphia Code, entitled "Public Employees Retirement Code," to expand the scope of "Plan '10" and "DC Plan" to cover additional employees pursuant to an arbitration decision, and to make technical amendments, all under certain terms and conditions.

#### Bill # 110841 (Enacted by City Council on 12/15/11)

Amended Title 22 of the Philadelphia Code, entitled "Public Employees Retirement Code," by further providing conditions under which an employee or any designated beneficiary may be disqualified from receiving any retirement or other benefit or payment.

The full text of these amendments, as well as the entirety of the City of Philadelphia Public Employees Retirement Code (Section 22 of the Philadelphia Code) is available on the City of Philadelphia City Council website at <a href="http://citynet/citycouncil/index.html">http://citynet/citycouncil/index.html</a>.

### **PROFESSIONAL SERVICES**

Professional consultants are retained by the Board of Pensions and Retirement to provide expertise and support necessary for the administration of the Public Employees Retirement System. A list of those firms rendering professional services to the Board is presented on Page 6.

## AUDIT

The City Controller's Office, which is independent of the City of Philadelphia Administration, audits all operational transactions of the Board of Pensions and Retirement. For the Fiscal year ending June 30, 2012, the Board elected to have the annual financial audit of the Municipal Pension Fund performed by the accounting firm of Clifton Gunderson LLP.

## **Actuarial Section**



**Classic Values, Innovative Advice** 

## 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 March 29, 2013 Page 2

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

Karen Zangara, FSA, EA, MAAA **Consulting Actuary** 



## SECTION I BOARD SUMMARY

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

- The financial condition of the City of Philadelphia Municipal Retirement System,
- 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.

### SECTION I BOARD SUMMARY

## 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.

### SECTION I BOARD SUMMARY

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

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

\* 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

### SECTION I BOARD SUMMARY

## **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. <u>City Membership:</u>

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

Table I-2 Membership Total July 1, 2012 July 1, 2011 % Change									
	% Change								
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%.

### SECTION I BOARD SUMMARY

## 2. <u>City Assets and Liabilities:</u>

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.

Table I-3 Assets and Liabilities (\$ thousands)										
July 1, 2012 July 1, 2011 % Char										
Actuarial Liabilities by Membership:										
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  $\mathrm{I\!I}-\mathrm{E}$ 

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%.

## SECTION I BOARD SUMMARY

## 3. <u>Components of UAL Change between July 1, 2011 and July 1, 2012:</u>

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)	
Exper	ience	
1.	UAL change due to investment (gain)/loss	\$ 260.7
2.	UAL change due to overall liability (gain)/loss	35.9
Contr	ibutions	
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)
Total	(Gain)/Loss Amortization Base	
5.	Total UAL change due to gains and losses: sum 1 through 4	\$ 257.7
Assun	uption Changes	
6.	UAL change due to assumption changes	108.5
Total		
7.	Total net overall change: 5 + 6	\$ 366.2
8.	Expected change in UAL	 (51.5)
9.	Net increase/(decrease) in UAL: 7 + 8	\$ 314.7

#### SECTION I BOARD SUMMARY

### 4. <u>Contributions:</u>

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.

## SECTION I BOARD SUMMARY

Table I-5 Contributions								
(\$ thous	and	ls)						
Fiscal Year Ending in Year:		2014	% of Pay		2013	% of Pay		
City's Funding Policy <sup>1</sup> Estimated FY Payroll	\$	1,417,456		\$	1,372,174	2		
Normal Cost (with Expenses) Employee Contributions	\$	134,705 (47,449)	9.50% 3.35%	\$	129,525 (46,198)	9.44% 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%		
Ainimum Municipal Obligation <sup>3</sup>								
Estimated FY Payroll	\$	1,417,456		\$	1,419,269			
Normal Cost (with Expenses)	\$	134,705	9.50%	\$	134,810	9.50%		
Employee Contributions		(47,449)	3.35%		(47,784)	3.37%		
City Normal Cost	\$	87,256	6.16%	\$	87,026	6.13%		
Amortization Payment		436,112	30.77%		404,964	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		0			230,000			
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.

#### SECTION I BOARD SUMMARY

## C. Historical Trends

Although most of the attention given to the valuation reflects the most recently computed unfunded actuarial liability, funding ratio, and contribution amounts, 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.

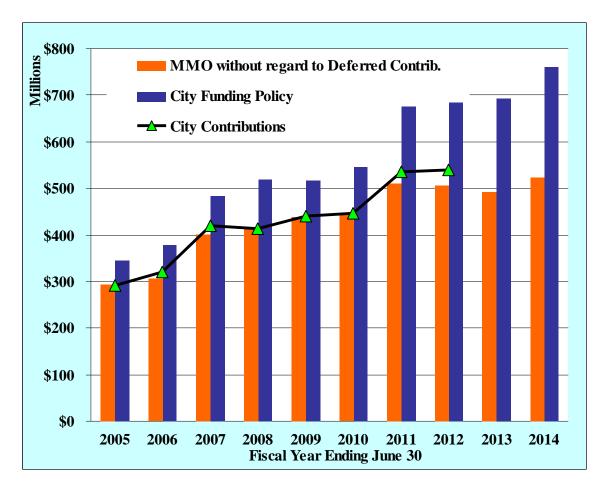
The System's funding ratio has declined significantly since 2003. In 2009, the funding ratio declined by 10% due to the investment losses during the year and the change in the actuarial liability interest rate assumption. In 2011 the funding ratio increased by 3% due to strong investment returns, which was partially offset by the increased actuarial liability due to the

### SECTION I BOARD SUMMARY

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.

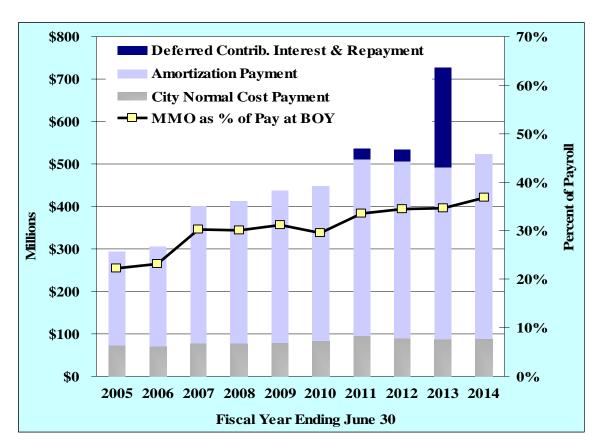


## City of Philadelphia Contributions for Fiscal Years 2005-2014

#### SECTION I BOARD SUMMARY

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

### SECTION I BOARD SUMMARY

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.

#### SECTION I BOARD SUMMARY

## **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%

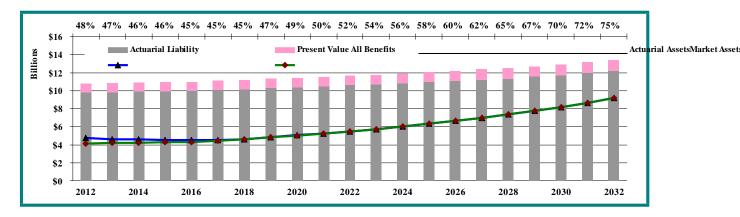
In reviewing each of these projections, it is the future trends, not necessarily the actual values that are important to consider in your deliberation of the risks of the System and the potential volatility of future funding ratios and City contribution levels.

## SECTION I BOARD SUMMARY

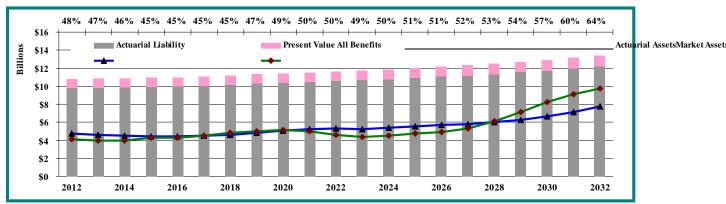
## **Projection Set 1: Assets and Liabilities**

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.

## <u>Chart 1: Projection of Assets and Liabilities, 7.95% return each year and</u> <u>City makes contributions based on MMO</u>



## <u>Chart 2: Projection of Assets and Liabilities, varying returns averaging 7.95% and</u> <u>City makes contributions based on MMO</u>



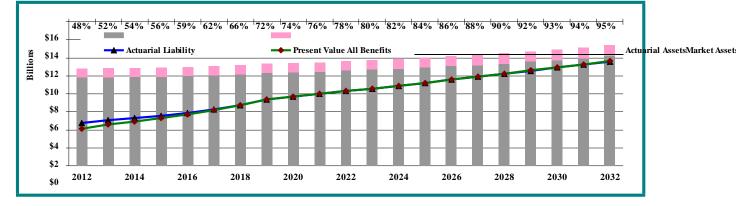
\* Market value of assets includes the PAF, which is not available for funding purposes.

## SECTION I BOARD SUMMARY

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.

## <u>Chart 3: Projection of Assets and Liabilities, 7.95% return each year,</u> 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.

## SECTION I BOARD SUMMARY

## <u>Chart 4: Projection of Assets and Liabilities, if the City makes contributions based on the</u> <u>Funding Policy, varying returns averaging 7.95%</u>

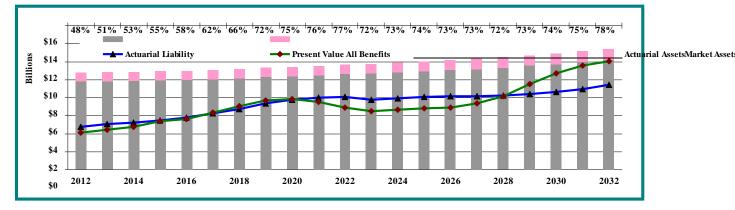


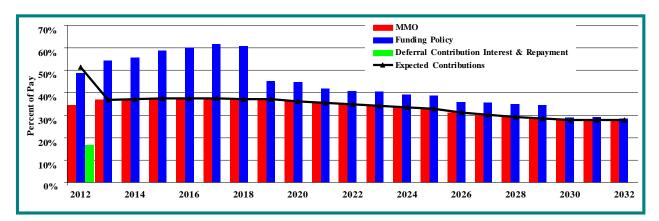
Chart 4 demonstrates that even if the return is achieved on average, because of negative cash flows the funded ratio could be materially less than long-term expectations might imply.

## SECTION I BOARD SUMMARY

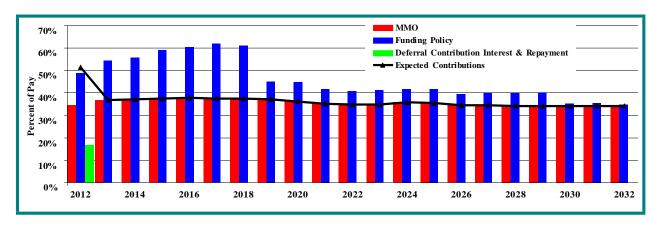
## **Projection Set 2: Projected City Contribution Rate**

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.

## <u>Chart 5: Projection of City Contributions, 7.95% return each year and the City makes</u> <u>contributions based on the the MMO</u>



## <u>Chart 6: Projection of City Contributions, varying returns averaging 7.95% and the City</u> <u>makes contributions based on the the MMO</u>

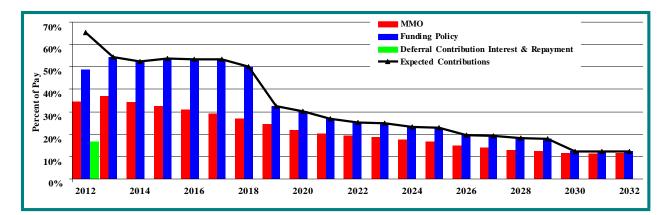


### SECTION I BOARD SUMMARY

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.

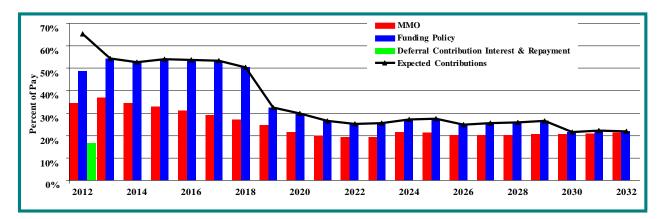
## <u>Chart 7: Projection of City Contributions, 7.95% return each year,</u> and the City makes contributions based on the City's Funding Policy

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.



## <u>Chart 8: Projection of City Contributions, varying returns averaging 7.95% and the City</u> <u>makes contributions based on the City's Funding Policy</u>

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.



### SECTION I BOARD SUMMARY

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.

## SECTION II ASSETS

	Table			
Statement of	t Assets	at Market Value <sup>1</sup>		
		7/1/2012		7/1/2011
Assets	\$	202 470 440	¢	17 756 200
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		2,441,845		3,612,705
Total Assets	\$	4,592,736,270	\$	5,185,217,000
Liabilities				
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		456,326		380,970
Total Liabilities	\$	669,919,483	\$	1,155,001,103
Net Assets	\$	3,922,816,787	\$	4,030,215,897
Deferred Contributions for each FYE	•	230,000,001	·	230,000,001
Net Assets with Deferred Contributions	\$	4,152,816,788	\$	4,260,215,898

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

## SECTION II ASSETS

-Table II- Changes in Mark		lues <sup>1</sup>		
Value of Assets – July 1, 2011	etva	lues	\$	4,260,215,898
Additions				
Contributions:				
Employer Contributions	\$	556,031,693		
Employee Contributions	\$	49,978,658		
Total Contributions		+9,970,050	\$	606,010,35
Investment Income:				
Gain/(Loss) from Sale of Investments	\$	(57,719,607)		
Interest and Dividends	\$	86,167,699		
Total Investment Income	\$	28,448,092		
Investment Activity Expenses:				
Investment Expenses	\$	(20,054,004)		
Total Investment Activity Expenses	\$	(20,054,004)		
Securities Lending Activities:				
Securities Lending Income	\$	2,075,769		
Securities Lending Expenses	\$	(2,712,211)		
Net Income from Securities Lending Activities	\$	(636,442)		
Miscellaneous Operating Revenues	\$	0		
Net Investment Income			<u>\$</u>	7,757,64
Total Additions			\$	613,767,99
Deductions				
Administrative Expenses	\$	(8,482,639)		
Withdrawal Refunds	\$	(6,500,247)		
Benefit Payments	\$	(706,184,221)		
PAF Distributions	\$	0		
Total Deductions			<u>\$</u>	(721,167,10
Total				
Net Increase (Decrease)			\$	(107,399,11
Value of Assets – July 1, 2012			\$	4,152,816,78

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

<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 contriutions.

## SECTION II ASSETS

Table II-3	3	
City Contributions for the Plan Y	ear Ending June	30, 2012
Cash Received during Fiscal Year 2012 Quasi-Agencies	\$	539,838,741
Cash Received		17,363,812 (1,170,860)
Accrued as of June 30, 2012		(1,170,860)
Total	\$	556,031,693

## SECTION II ASSETS

# C. Actuarial Value of Assets

To determine on-going funding requirements, most pension funds utilize an actuarial value of assets that differs from the market value of assets. The actuarial value of assets represents an asset value based on averaging or smoothing year-to-year market value returns for purposes of reducing contribution volatility. Beginning with investment losses as of Fiscal Year End 2009, gains and losses are prospectively distributed in equal amounts over a ten-year period (over a five year period prior to 2009) coupled with the requirement that the resulting asset value may not be more or less than 20% of the MVA.

		Table II-4			
	Developm	ent of Actuarial V as of July 1, 20		ts	
1. Market Val	lue of Assets as of July	1, 2012		\$	4,152,816,788
2. Pension Ad	ljustment Fund (PAF)	as of July 1, 2012			
Before Add	ditional Transfers		\$	988,497	
3. Market Va	lue of Assets Net of O	\$	4,151,828,291		
4. Deferred As	sset Gains/(Losses)				
Plan	Investment	Percent	Percent		Amount
Year	Gains / (Los ses)	Deferred		Deferred	
2007	\$ (642,637,5	44) 100%	0%	\$	0
2008	(1,235,073,4	12) 40%	60%		(741,044,047)
2009	200,524,6	37 30%	70%		140,367,246
2010	414,187,9	15 20%	80%		331,350,332
2011	(328,486,9	68) 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 fo	or Actuarial Value				
a. 80% of 1	Market Value Net of P	AF		\$	3,321,462,633
b. 120%	of Market Value Net of	f PAF			4,982,193,949
7. Additional	PAF Transfer as of Ju		\$	0	
	Value of Assets Net of	, 2012	\$	4,716,793,031	
	(min of 5 or 6b) and 6 nt of Market Value Ne			113.6%	
9. Market Va	lue of Assets Net of F	inal 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 detailes on the development of the total PAF and the additional PAF transfer, if applicable.

## 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.

		r	Table l	I-5									
Allocation	n of Assets fo		n Purpo 5 thousa		etw	veen Pla	ns a	as of July	v <b>1</b> ,	2012			
		1967 Plan						1987	' Pla	an			
	Municipal	Police	Fire		Municipal		Elected		Police		Fire		Total
1. Actuarial Value of Assets													
as of July 1, 2011	\$1,870,510	\$ 781,665	\$ 333	1,753	\$	794,132	\$	13,499	\$	732,450	\$	195,110	\$4,719,119
<ol> <li>Transactions During Plan Year July 1, 2011 to June 30, 2012</li> </ol>													
-													
a. Contributions City and Commonwealth	\$ 245.859	\$ 143,419	\$ 5	5.158	\$	46,757	\$	859	\$	36,388	\$	11,398	\$ 539,83
Employees	<sup>3</sup> 245,857 7.167	<sup>3</sup> 143,417 2,948	φ 5.	961	Ψ	40,7 <i>9</i> 7 14,891	Ψ	199	φ	18,463	φ	5,349	49.97
Quasi-Public Agencies	13,895	2,948		0		2,298		0		10,405		0,547	16,19
b. Benefit Payments	(389,199)	(192,716)	(8	4,592)		(20,941)		(3,753)		(11,649)		(3,334)	(706,18
c. Withdrawals	(1,606)	(1)2,710) (239)	(0	(860)		(2,148)		(3,733)		(11,370)		(208)	(700,10
d. Administrative Expenses	(3,277)	(1,367)		(471)		(2,329)		(5)		(799)		(235)	(8,48
e. Net Transactions	\$ (127,161)	\$ (47,955)	\$ (2	9,804)	\$	38,528	\$	(2,771)	\$	41,033	\$	12,970	\$ (115,15
3. Total Fund Balance Prior to Allocation													
of Investment Income [1. + 2e.]	\$1,743,349	\$ 733,710	\$ 303	1,949	\$	832,660	\$	10,728	\$	773,483	\$	208,080	\$4,603,96
4. Investment Income During Plan Year													
July 1, 2011 to June 30, 2012	\$ 42,725	\$ 17,981	\$ ´	7,400	\$	20,406	\$	263	\$	18,956	\$	5,099	\$ 112,83
5. Preliminary Actuarial Value of Assets													
as of July 1, 2012 [3. + 4.]	\$1,786,073	\$ 751,692	\$ 309	9,350	\$	853,066	\$	10,992	\$	792,441	\$	213,179	\$4,716,79
5. Final Actuarial Value of Assets													
With Corridor as of July 1, 2012	\$1,786,073	\$ 751,692	\$ 309	9,350	\$	853,066	\$	10,992	\$	792,441	\$	213,179	\$4,716,79

## 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.

	Table II-6		
	Development of the Pension Adjustment F	und	
	as of July 1, 2012		
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

#### 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%.

		Т	able II-7		
		Annual I	Rates of Return		
	Investment			<b>Total Return</b>	Barclays
Year Ending	Return	Market	Actuarial	Standard & Poor's	Aggregate
June 30,	Assumption	Value	Value *	500 Index	Bond Index**
1995	9.00%	11.7%	7.8%	26.1%	12.8%
1996	9.00%	15.1%	10.1%	26.0%	4.7%
1997	9.00%	18.3%	12.2%	34.6%	8.2%
1998	9.00%	14.3%	13.1%	30.2%	10.5%
1999	9.00%	10.0%	13.1%	22.7%	3.1%
2000	9.00%	9.6%	11.1%	7.3%	4.6%
2001	9.00%	-6.0%	8.3%	-14.8%	11.2%
2002	9.00%	-5.8%	3.4%	-18.0%	8.6%
2003	9.00%	1.8%	-2.2%	0.3%	10.4%
2004	9.00%	16.6%	4.6%	19.1%	0.3%
2005	8.75%	9.9%	1.8%	6.3%	6.8%
2006	8.75%	11.3%	6.1%	8.6%	-0.8%
2007	8.75%	17.0%	10.7%	20.6%	6.1%
2008	8.75%	-4.5%	10.1%	-13.1%	7.1%
2009	8.25%	-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

## SECTION II ASSETS

# 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.

		Table II-8					
Calcula	atior	n of Asset Gain	/(Lo	ss)			
		Market Value					Total Market
		(Net of PAF)		PAF			Value
1. Market Value of Assets	÷		<b>.</b>			<b>.</b>	
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	Ŷ	49,978,658	Ŷ	0		Ψ	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	1	\$	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 PAE is credited with investment income a						φ	(320,400,908)

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

## 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.

## 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.

Table Disclosure o		oilities	
(\$ thou	sands	)	
	J	uly 1, 2012	July 1, 2011
Present Value of Future Benefits			
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		5,975	 6,122
Total City PVFB	\$	10,777,916	\$ 10,479,907
Market Value of Assets		(4,152,817)	(4,260,216)
Present Value Future Member Contrib.		(339,045)	 (346,062)
City's Unfunded Future Obligation	\$	6,286,054	\$ 5,873,629
Actuarial Liability			
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		5,97 <u>5</u>	 6,122
Total City AL	\$	9,799,852	\$ 9,487,478
Actuarial Value of Assets		(4,716,793)	 (4,719,119)
Unfunded Actuarial Liability	\$	5,083,059	\$ 4,768,359

## SECTION III LIABILITIES

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

				Table III-							
		Liabilitie			f July 1, 201	2					
			(9	\$ thousand	ls)						
		<u> 1967 Plan</u>						<u>Plan</u>			-
	Municipal	Police		Fire	Municipal		Elected	Police		Fire	Total
Present Value of Future Benefits	<b>•</b> • • • • • • •					<b>.</b>			<b>.</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
Total PVFB	\$ 4,452,828	\$ 2,208,436	\$	906,288	\$ 1,385,969	\$	24,024	\$ 1,422,877	\$	377,496	\$10,777,916
Actuarial Liability											
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
Total AL	\$ 4,374,896	\$ 2,175,269	\$	897,027	\$ 1,093,969	\$	21,560	\$ 982,817	\$	254,316	\$ 9,799,852
Actuarial Value of Assets	(1,786,073)	(751,692)		(309,350)	(853,066)		(10,992)	(792,441)		(213,179)	(4,716,793)
Unfunded Actuarial Liability	\$ 2,588,823	\$ 1,423,577	\$	587,677	\$ 240,902	\$	10,568	\$ 190,376	\$	41,136	\$ 5,083,059
Funding %	40.8%	34.6%		34.5%	78.0%		51.0%	80.6%		83.8%	48.1%

## 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.

		D!		<u>6</u> 4].		Table III		C T1	_ 1	2012					
		Deriv	vati	on of the		ormal Co thousand		as of Jul	у <b>1</b> ,	2012					
	_		19	067 Plan	(Ψ					1987	Pla	n			
	Μ	unicipal		Police		Fire	Μ	lunicipal	I	Elected	Police	Fire		Total	
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		<u>6</u>		847	 246		<u>8,895</u>
Total Normal Cost	\$	17,922	\$	7,915	\$	2,407	\$	44,947	\$	414	\$	44,116	\$ 12,680	\$	130,402
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%

## 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.

Expec	ted	Unfunded	Ac	tuarial Lia		ble III-4 ty for the [	Pla	n Year En	din	g June 30,	201	.3		
					( <b>\$</b> tl	nousands)								
	-		1	<u>967 Plan</u>			-			1987	Pla		<b></b>	<b>T</b> ( <b>1</b>
1. Expected Unfunded Actuarial Liability	1	Municipal		Police		Fire	N	Iunicipal		Elected		Police	Fire	Total
(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		<u>0</u>	_	0		<u>0</u>		<u>0</u>		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

## 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 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.

## 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.

Table IV-1											
	Employee Contribution Rates										
	for the Plan Year Beginning July 1, 2013										
	Municipal <sup>1</sup>	Elected <sup>2</sup>	Police	Fire							
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 up on 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.

Table IV-2									
<b>Quasi Agency Funding Rate as a Percent of Payroll</b>									
Valuation Date	July 1, 2012	July 1, 2011							
Fiscal Year Ending in Year	2014	2013							
67 Municipal									
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%							
87 Municipal									
1. Normal Cost Rate	4.871%	4.861%							
2. Amortization Rate under the City's Funding Policy	3.745%	<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%							

## 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.

Table IV-3 Development of the Minimum Municipal Obligation for Fiscal Year End 2014 (\$ thousands)										
	Non-Unifo	rmed	Police		Fire		Total			
Estimated FY 2013-2014 Payroll	\$ 89	4,017 \$	408,715	\$	114,725	\$	1,417,456			
Normal Cost %	6	.630%	12.579%		12.924%		8.855%			
Normal Cost	\$ 5	9,276 \$	51,413	\$	14,827	\$	125,516			
Amortization Payment	24	3,537	138,289		54,286		436,112			
Administrative Expenses		6,096	2,335		<u>758</u>		<u>9,189</u>			
Subtotal	\$ 30	8,909 \$	192,037	\$	69,871	\$	570,817			
Expected Employee Contributions	(2	<u>0,549)</u>	(21,018)		(5,883)		(47,449)			
Minimum Municipal Obligation	\$ 28	8,360 \$	171,019	\$	63,988	\$	523,368			

## SECTION IV CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

								Table 1												
			τ	Jnfu	inded Lia	bili	ty Payments	s towar \$ thousa			for	Fiscal Ye	ar 2014							
		N	Iunicipa	1				Police	mus	•)			Fire					Total		
Type of Base	-	7/1/2012 Balance	Years Left	]	FY 2014 Payment		7/1/2012 Balance	Years Left		FY 2014 Payment		7/1/2012 Balance	Years Left		FY 2014 Payment	I	7/1/2012 Balance	Years Left		FY 2014 Payment
Fresh Start Base	Т																			
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
Gain/Loss Base																				
est. July 1, 2010	\$	(57,524)	18	\$	(5,666)	\$	(41,018)	18	\$	(4,040)	\$	(3,070)	18	\$	(302)	\$	(101,612)	18	\$	(10,009)
Assumption Change																				
est. July 1, 2010	\$	79,061	13	\$	9,241	\$	31,723	13	\$	3,708	\$	28,951	13	\$	3,384	\$	139,734	13	\$	16,333
Gain/Loss	<i>•</i>		10		(10.000)	<b>.</b>		10	<i>.</i>	(2.400)			10	<i>•</i>	(2.4.72)			4.0	<i>•</i>	
est. July 1, 2011	\$	(112,393)	19	\$	(10,802)	\$	(22,775)	19	\$	(2,189)	\$	(22,397)	19	\$	(2,153)	\$	(157,564)	19	\$	(15,144)
Assumption Change	¢	22.575	14	¢	0.500	¢	10 574	14	¢	1 501	ф.	4 677	14	¢	510	¢	10 706	14	¢	1.5.0
est. July 1, 2011 Gain/Loss	\$	22,575	14	\$	2,529	\$	13,574	14	\$	1,521	\$	4,577	14	\$	513	\$	40,726	14	\$	4,563
est. July 1, 2012	\$	154,715	20	\$	14,543	\$	81,828	20	\$	7,692	\$	21,191	20	\$	1,992	\$	257,735	20	\$	24,227
Assumption Change	ф	154,715	20	φ	14,545	Ф	01,020	20	φ	7,092	ф	21,191	20	φ	1,992	φ	237,733	20	φ	24,227
est. July 1, 2012	<u>\$</u>	61,264	15	<u>\$</u>	<u>6,610</u>	<u>\$</u>	35,001	15	<u>\$</u>	<u>3,776</u>	<u>\$</u>	12,229	15	<u>\$</u>	1,320	<u>\$</u>	108,493	15	<u>\$</u>	<u>11,706</u>
Total	\$	2,840,294		\$	243,537	\$	1,613,952		\$	138,289	\$	628,812		\$	54,286	\$	5,083,058		\$	436,112

## SECTION IV CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Table IV-5 (a) - (d) provides more detail by plan on the expected and actual unfunded actuarial liability and the new amortization bases established as of July 1, 2012 for the MMO.

Development of the Fiscal	Year 2 Muni	able IV-5a 2014 Amortizat cipal and Elect thousands)	•	nt u	nder MMO
	Outs	7/1/2012 tanding Balance	Remaining Years		FY 2014 Payment
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

## SECTION IV CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Development of the Fiscal		ıble IV-5b 014 A mortizatio Police	on Payme	ent un	der MMO
	(\$1	thousands) 7/1/2012	Remainin	σ	FY 2014
	Outs	standing Balance	Years	.9	Payment
1. Expected Unfunded Actuarial					
Liability (UAL) as of July 1, 2012					
Based on July 1, 2011 Valuation	\$	1,497,124		\$	126,821
2. Changes in UAL due to					
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	\$	116,829		\$	11,468
3. Total [1c. + 2e.]	\$	1,613,953		\$	138,289

Development of the Fiscal	Table IV-5c Year 2014 Amortiz	ation Payme	nt un	der MMO
	Fire			
	(\$ thousands)			
	7/1/2012 Outstan ding Balan	Remainin ce Years	g	FY 2014 Payment
1. Expected Unfunded Actuarial				
Liability (UAL) as of July 1, 2012				
Based on July 1, 2011 Valuation	595,39	93	\$	50,975
\$				
2. Changes in UAL due to				
a. Actuarial Experience	21,1	91 20	\$	1,992
\$				
b. Assumption Changes	12,22	29 15		1,320
c. Active Plan Changes		- 0		-
d. Inactive Plan Changes		- 0		-
e. Subtotal	\$ 33,42	20	\$	3,312
3. Total [1c. + 2e.]	\$ 628,81	13	\$	54,287
Note: Numbers may not add due to rounding.				

## SECTION IV CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Development of the Fiscal	Year 2	Total	on Payme	nt u n	der MMO
		thousands) 7/1/2012 standing Balance	Remainin Years	g	FY 2014 Payment
1. Expected Unfunded Actuarial		0			
Liability (UAL) as of July 1, 2012					
Based on July 1, 2011 Valuation	\$	4,716,831		\$	400,179
2. Changes in UAL due to					
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
3. Total [1c. + 2e.]	\$	5,083,059		\$	436,112

## 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.

Table IV-6 Summary of Modified Actuarial Data (\$ thousands)										
	I	Municipal		Police		Fire		Total		
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		
Amortization Contributions										
Total Amortization Amount	\$	285,809	\$	156,989	\$	67,432	\$	510,230		
Remaining Years		26		26		25		26		

## SECTION IV CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

					Table IV							
		Modified	l Unfunded	Liability P	-		IMO for Fi	scal Year 2	014			
					(\$ thousan	nds)						
		Municipal			Police			Fire			Total	
Type of Base	7/1/2012	Remaining	FY 2014	7/1/2012	Remaining		7/1/2012	Remaining	FY 2014	7/1/2012	Remaining	
	Balance	Years	Payment	Balance	Years	Payment	Balance	Years	Payment	Balance	Years	Payment
Fresh Start UAL Base												
est. July 1, 2009	\$3,157,481	27	\$ 266,289	\$1,710,251	27	\$ 144,235	\$ 724,537	27	\$ 61,104	\$ 5,592,269	27	\$ 471,628
July 1, 2010 Charges												
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
July 1, 2011 Charges												
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
July 1, 2012 Charges												
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	<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>\$ 108,494</u>	15	<u>\$ 11,706</u>
Total	\$3,336,931		\$ 285,809	\$1,832,330		\$ 156,989	\$ 782,301		\$ 67,432	\$ 5,951,562		\$ 510,230

		Table IV	-8a	
	TOTAL DEBT	SERVICE REQU	IREMENTS: MUNI	CIPAL
	<b>Requi red</b>	Required	Premium or	Principal Balance
Plan Year	Principal Payment	Interest Payment	<b>Discount Amortized</b>	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	-	-

		Table IV		
	TOTAL DEI		<b>QUIREMENTS: POL</b>	LICE
	<b>Requi red</b>	Required	Premium or	Principal Balance
Plan Year	Principal Payment	Interest Payment	Discount Amortized	at Valuation Date
1000	¢	¢ 2.040.000.76	¢	¢ 207.410.5.00.15
1999	\$ -	\$ 3,848,228.76	\$ -	\$ 397,410,560.15
2000	5,420,158.68	16,299,607.13	-	391,990,401.47
2001 2002	2,496,287.61	16,025,889.30 15,896,581.60	-	389,494,113.86 389,494,113.86
2002	3,509,875.74	15,896,581.60	-	385,984,238.12
2003		15,705,644.36	-	381,128,551.13
2004 2005	4,855,686.99 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	-	-

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

## 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.

		Table	e IV	-9a								
<b>Receipts and Disbursements Excluding Bond Issue Assets</b>												
		Municipal		Police		Fire		Total				
Assets as of July 1, 2011	\$	2,098,343,104	\$	1,263,380,657	\$	353,274,956	\$	3,714,998,717				
Receipts												
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		0		0		0		0				
Total Receipts	\$	348,881,896	\$	205,301,262	\$	77,270,941	\$	631,454,099				
Disbursements												
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		0		0		0		0				
Total Disbursements	\$	423,328,763	\$	208,139,617	\$	89,698,726	\$	721,167,106				
Assets as of July 1, 2012	\$	2,023,896,237	\$	1,260,542,301	\$	340,847,171	\$	3,625,285,709				

## 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.

		Table	IV-	9b							
<b>Receipts and Disbursements Including Bond Issue Assets</b>											
		Municipal		Police		Fire		Total			
Assets as of July 1, 2011	\$	2,420,361,688	\$	1,368,124,526	\$	470,743,010	\$	4,259,229,224			
Receipts											
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		0		0		0		0			
Total Receipts	\$	336,284,228	\$	203,766,412	\$	73,715,535	\$	613,766,175			
Disbursements											
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		0		0		0		0			
Total Disbursements	\$	423,328,763	\$	208,139,617	\$	89,698,726	\$	721,167,106			
Assets as of July 1, 2012	\$	2,333,317,153	\$	1,363,751,321	\$	454,759,819	\$	4,151,828,293			

## 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.

## SECTION IV CONTRIBUTIONS AND MINIMUM MUNICIPAL OBLIGATION

Development of the l	Fisca			ble IV-10 tization Paym Total	ent under 1	the	City's Fundin	g I	Policy
			(\$ t	housands)					
		7/1/2012		7/1/2013	Remaining	FY	2014 Payment	F	Y 2014 Payment
	Out	standing Balance	Ex	pected Balance	Years	Beg	ginning-of-Year		End-of-Year
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

Table IV-11 City's Funding Policy Contributions*									
Fiscal Year		2014	% of Pay		2013	% of Pay			
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%			
<b>Amortization Payment</b>		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.

## 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.

## 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.

	Table V-1           Funding Status Under GASB Statement No. 25           (\$ thousands)										
		J	uly 1, 2012	J	uly 1, 2011	% Change					
1.	Actuarial Liabilities a. Members Currently Receiving Payments b. Vested Terminated and Inactive Members	\$	6,730,476 122,788	\$	6,479,690 126,392	3.9% -2.9%					
	<ul><li>c. Active Members</li><li>d. Total Actuarial Liability</li></ul>	\$	<u>2,946,588</u> 9,799,852	\$	<u>2,881,396</u> 9,487,478	2.3% 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.

## SECTION V ACCOUNTING STATEMENT INFORMATION

Table V-2 Statement of Changes in Liabilities - GASB No. 25 Basis (\$ thousands)								
Actuarial Liability as of July 1, 2011	\$	9,487,478						
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)	\$	312,374						
Actuarial Liability as of July 1, 2012	\$	9,799,852						

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.

## SECTION V ACCOUNTING STATEMENT INFORMATION

Table V-4 Schedule of Employer Contributions (\$ millions)									
Fiscal Year Ended June 30	Annual Required Contribution (ARC)	Percentage of ARC Contributed							
1993	\$ 209.4	100.0%							
1994	223.8	104.5%							
1995	212.8	100.0%							
1996	222.5	100.0%							
1997	237.0	100.0%							
1998	252.1	100.0%							
1999	256.7	586.9%*							
2000	168.9	108.9%							
2001	167.6	100.0%							
2002	178.2	100.0%							
2003	195.5	91.9%							
2004	253.8	79.9%							
2005	358.1	83.6%							
2006	395.0	84.0%							
2007	527.9	81.9%							
2008	536.9	79.5%							
2009	539.5	84.4%							
2010	581.1	53.8%**							
2011	715.5	65.7%**							
2012	722.5	77.0%							

\* 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

## SECTION V ACCOUNTING STATEMENT INFORMATION

						Table V	-5									
			C	alculatio	n	of Annua	ıl I	Pension (	Cos	st						
					(	\$ thousar	lds	)								
	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>	 1,241		1,198		1,158		1,118		1,080		156,130		152,672		147,470
Annual Pension Cost	\$ 223,750	\$ 213,179	\$	222,811	\$	237,334	\$	252,387	\$	257,001	\$	211,801	\$	209,540	\$	218,734
Contributions	 233,750	 212,838		222,482		237,016		252,080		<u>1,506,704</u>		183,928		167,616		178,239
Increase in NPO NPO at BOY	\$ (10,000)	\$ 341 (10,000)	\$	329 (9,659)	\$	318 (9,330)	\$	307 (9,012)	\$(	1,249,703) (8,705)		27,873 (1,258,408)	\$ (	41,924 (1,230,535)	\$ (	40,495 1,188,611)
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

## SECTION V ACCOUNTING STATEMENT INFORMATION

								Та	bl	e V-5										
					Ca	alculation	1 0				os	t (continu	ie	d)						
								ζ.	ou	(sands)										
		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012
ARC	\$	105 514	¢	752 94 4	\$	259141	\$	204.050		\$527,925	\$	526 971	\$	520 464	\$	591 102	¢	715 544	¢	722 401
Interest on NPO	Ф	195,514 (103,330)	Ф	253,844 (98,392)	Э	358,141 (90,448)	Э	394,950 (82,068)		\$327,923 (71,541)	Ф	536,874 (60,685)	Ф	539,464 (48,957)	Э	581,123 (39,899)	\$	715,544 (14,155)		722,491 6,521
Adjustment to ARC		142,446		135.638		124.687		113,135		<u>99,953</u>		84,785		68,399		55,744		20,353		(9,435)
Annual Pension Cost	\$	234,630	\$	291,090	\$	392,380	\$	426,017	\$	556,337	\$	560,974	\$	558,906	\$	596,968	\$	721,742	\$	719,577
Contributions	Ψ	179,757	Ψ	202,827	Ψ	299,266	Ψ	331,765	Ψ	432,267	Ψ	426,934	Ψ	455,389	Ψ	312,556	Ψ	470,155	Ψ	555,690
Increase in NPO NPO at BOY	\$ _(	54,873 <u>1,148,116</u> )	\$ (	88,263 (1,093,243)	\$	93,114 ( <u>1,004,980</u> )	\$	94,252 (911,866)	\$	124,069 (817,614)	\$	134,040 (693,545)	\$	103,517 (559,505)	\$	284,412 (455,987)	\$	251,587 (171,575)	\$	163,887 80.012
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 A mortization Factor (EOY)		8.06		8.06		8.06		8.06		8.18		8.18		8.18		8.18		8.43		8.48

## EXHIBIT A-1

## CITY OF PHILADELPHIA MUNICIPAL PENSION FUND STATEMENT OF PLAN NET ASSETS JUNE 30, 2012

## <u>ASSETS</u>

Cash and Cash Equivalents Investments at Fair Value Securities Lending Allowance for Unrealized Loss Accounts Receivable Due from Brokers Total Income Receivable Due from Other Governmental Units	\$ 202,479,449 3,716,592,997 407,007,573 (1,860,052) 3,051,397 243,294,581 17,868,429 2,441,845
Total Assets	\$ 4,590,876,218
LIABILITIES	
Vouchers Payable Accounts Payable Salaries and Wages Payable Due on Securities Lending Due to Brokers Accrued Expenses Deferred Revenue Monies Held in Escrow Other Liabilities	\$ 8,812 4,315,151 56,914 407,007,573 251,976,826 2,224,358 2,004,312 9,161 456,326 668,059,432
Net Assets Held in Trust for Pension Benefits	\$ 3,922,816,786

# SCHEDULE A-1a

# CITY OF PHILADELPHIA MUNICIPAL PENSION FUND SUMMARY OF INVESTMENT TYPE FOR THE FISCAL YEAR ENDED JUNE 30,2012

	Par	Cost	Market
Cash	24	2,640,926	2,640,926
U.S. Government Securities	6,335	172,452,779	180,358,892
U.S. Government Agency Securities	7,336	74,807,109	75,865,789
Corporate Bonds	312,454	490,527,613	506,460,600
Corporate Equity	25,951,995	1,475,834,714	1,540,415,075
Collateralized Mortgage Obligations	4,775	52,608,638	52,972,774
Other Bonds & Investments	70,288	313,370,132	321,721,767
Short Term Investment Pools	10,000	188,978,696	189,010,484
Mutual Funds	283,889	271,126,049	284,701,800
MISCELLANEOUS - LIMITED PARTNERSHI	683,665	775,772,311	739,072,642

Total	\$ 27,330,761	\$ 3,818,118,968	\$ 3,893,220,748

#### EXHIBIT A-2

#### CITY OF PHILADELPHIA MUNICIPAL PENSION FUND STATEMENT OF CHANGES IN PLAN NET ASSETS FOR THE FISCAL YEARS ENDED JUNE 30, 2012 AND 2011

Additions:					
Contributions: Employer's Contribu	tions	\$	556,031,693	¢	470,154,837
Employees' Contribu		Φ	49,978,658	φ	52,705,557
					02,700,007
Total Con Investment Income:	itributions		606,010,352		522,860,393
Interest and Dividend	ds		86,167,699		79,544,476.43
Gain (Loss) from Sa	le of Investments	i	(57,719,607)		635,569,433
(Less) Investment E	xpenses		(13,291,333)		(15,266,001)
Securities Lending R	Revenue		2,075,768.95		2,219,697
Securities Lending U	Inrealized Loss		(1,860,052.45)		(1,895,088)
(Less) Securities Ler	nding Expenses		(852,159.01)		(710,172)
Net Inves	tment Income		14,520,317		699,462,345
Miscellaneous Operating	Revenues		_		1,377,256
Total Add	itions		620,530,668		1,223,699,994
Deductions:					
Personal Services			-		3,675,375
Purchase of Services			-		1,074,344
Materials and Supplies			-		81,257
Employee Benefits					2,384,554
Pension Benefits			706,184,221		681,908,745
Refunds of Members' Co	ontributions		6,500,247		5,124,739
Indemnities			45 045 044		440.400 54
Other Operating Expense Transfer Out	es		15,245,311		119,420.51
Transfer Out	_		-		717,783
Total Ded	uctions		727,929,779		695,086,218
	detions	************************	121,323,113	************************************	090,000,210
Net Decre	ease	******	(107,399,111)		528,613,775
Net Assets Held in Trust for					
Pension Benefits - July 1, 2011			4,030,215,897		3,501,602,121
Fension Benefits - July 1, 2011			4,030,213,037		3,301,002,121
Prior Period Adjustment			-		-
Net Assets Held in Trust for					
Pension Benefits - June 30, 2012			3,922,816,786		4,030,215,897

## **Financial Section**

#### CITY OF PHILADELPHIA MUNICIPAL PENSION FUND ANALYSIS OF MEMBER'S CONTRIBUTION FOR THE PERIOD ENDED JUNE 30, 2012

	Municipal Division Old	Municipal Divison New	Fire Division New	Police Division New	Elected Officials	Municipal Revised Plan 60	Municipal Revised Plan 87	Municipal Revised Plan 93	Fire Division Old	Police Division Old	Total
Balance, July 1, 2011	203,351	307,506	41,049,396	83,714,394	2,359,407	209,204,688	7,144,418	117,655,736	47,042,454	171,555,802	680,237,152
Additions Regular Payroll Deductions Installment Repurchase Deductions Payment Through City Treasurer Retirees' Pension Payment Insions Net Change in Liability for Pensioner's Unexpected		30 - - 11,634.02	823,091 4,694 132,979	2,765,050 30,743 152,540 - (88,479)	198,752 107 236 - -	6,351,088 48,682 757,638 9,936 119,236	2,769 - 967 726 -	13,296,642 416,813 1,166,061 7,008 (1,671)	4,933,944 127,840 286,940 - 34,635	17,944,848 165,947 352,589	46,316,213 794,827 2,849,949 17,670 75,356
Contribution Adjustments to Member's Contribution Accounts Unclaimed Withdrawal Checks Deposited	actional transmission of the second	۳. ۲۴ 19	3,120,553	4,503,376	502,875	10,795,171	• •	1,344,623	406,296	1,227,332	21,900,227
Total Additions	KRANA REPORT OF A CONTRACT OF	11,664	4,081,317	7,363,230	701,970	18,081,751	4,461	16,229,476	5,789,655	19,690,716	71,954,241
Deductions Withdrawais Retirements Adjustments to Member's Contribution Accounts	400-0000000000000000000000000000000000	-	859,590 3,781,496	238,953 3,572,122	70,813 848,629	1,605,527 17,515,312	•	2,147,924 3,411,536	207,822 743,625	1,369,620 1,629,285	6,500,247 31,502,005
Total Deductions	ulandood maalaan aritmiisa aadaa aadaa aadaa a	an an an a	4,641,085	3,811,075	919,442	19,120,839	•	5,559,460	951,446	2,998,905	38,002,252
Net Change in Year	10000000000000000000000000000000000000	11,664	(559,768)	3,552,156	(217,472)	(1,039,088)	4,461	10,670,016	4,838,208	16,691,811	33,951,989
Balance, June 30, 2012	<u>\$ 203,351</u>	\$ 319,169	\$ 40,489,628	87,266,550	2,141,936	208,165,600	7,148,880	128,325,752	51,880,663	188,247,613	714,189,141

Exhibit A-3

Exhibit A-4

#### CITY OF PHILADELPHIA MUNICIPAL PENSION FUND ANALYSIS OF FUND BALANCE FOR THE PERIOD ENDED JUNE 30, 2012

	Reserve for Member Contributions	Reserve for Payment of Pensions and All Other Purposes	Total Reserves
Balance, July 1, 2011	680,237,152	3,349,978,744	4,030,215,897
Additions:			
Contributions:			
Employees	49,978,658	-	
Quasi-Public Agencies Net Accrual		16,192,953	
City Appropriations		539,838,741	
Total Contributions	49,978,658	556,031,693	
Interest:			
Members' Reinstatements	_		
Interest on Long-Term Investments	-	85,916,326	
Interest on Short-Term Investments	_	251,373	
Total Interest		86,167,699	
i otal interest	-	80,107,899	
Net Appreciation (Depreciation) Fair Value of Investmer	~	320,598,660	
Net Income (Loss) from Investment Managers	-	(378,345,135)	
Members' Contributions Transferred to		31,502,005	
Reserve for Retirements	-	-	
Adjustments for Liability to Deceased Pensioners	75,356	-	
Adjustments to Members' Unexpended Contributions	21,900,227	-	
Adjustments for Accrued Death Benefits	-	(130,401)	
Adjustment for Employees Unexpended Vacation Time	-		
Other Additions:			
Unclaimed Withdrawal Checks Deposited Refunds and Cancelled Checks -	-	-	
Prior Years' Pensions	-	(393,465)	
Miscellaneous Receipts	-		
Miscellaneous Fund Balance Adjustments			
Total Other Additions	21,975,583	(26,768,335)	
Total Additions	71,954,241	615,431,057	687,385,298
			•
Deductions			
Withdrawals	6,500,247		
Retirements	31,502,005		
Administrative Expenses	-	15,245,311 706,184,221	
Payments of Pensions and Benefits Investment Manager Expenses	-	13,291,333	
Monies Held In Escrow		9,161	
Adjustments for Liability to Deceased Pensioners		3,101	
Adjustments to Members' Unexpended Contributions	-	21,900,227	
Adjustments for Accrued Death Benefits	-	130,401	
Adjustment for Employees Unexpended Vacation Time Transfer Out	-	10,465	
Reversal of Prior Year Accruals	-	11.038	
Miscellaneous Fund Balance Adjustments	-	-	
Total Deductions	38,002,252	756,782,157	794,784,409
Balance, June 30, 2012	714,189,141	3,208,627,645	3,922,816,786

## CITY OF PHILADELPHIA MUNICIPAL PENSION FUND FOR THE PERIOD ENDED JUNE 30, 2012

## RECEIPTS AND DISBURSEMENTS BY DIVISION

	Employee Contributions	Pension Benefits	Miscellaneous Revenue	Operating Expenses
Police Division - Old	18,463,384	11,652,502	19,391	-
Police Division - New	2,948,333	192,768,987	151,496	
Fire Division - Old	5,348,723	3,334,453	26,520	-
Fire Division - New	960,764	84,614,980	28,059	-
Municipal Revised - Plan 60	7,167,344	389,306,399	133,089	-
Municipal Revised - Plan 87	4,461	279,373	-	-
Municipal Revised - Plan 93	14,886,524	20,471,058	34,867	
Municipal Division - New	30	196,427	45	-
Civilian - Elected Officials	199,095	3,754,082		-
Operating Fund		(194,041)		15,245,311
TOTAL	49,978,658	706,184,221	393,465	15,245,311

## MUNICIPAL PENSION FUND FISCAL 2012 INFORMATION

Cash and Accrued Contributions from the City - Fiscal 2012 \*

Category		Amount		
Cash received Accrued 6/30/12	\$	539,838,741	\$	539,838,741
Cash and Accrued Contributions from Qu	Jasi-A	gencies - Fiscal 20	012	
Cash received		17,363,812		
Accrued 6/30/2012		(1,170,860)		16,192,953
Total City & Quasi Agencies			\$	556,031,693
Contribution from the Comm	nonw	realth		_
Total Contribution requirement			\$	556,031,693

\* Analysis of Contributions from the City - Fiscal 2012

Date	<u>Amount</u>
08/09/2012	\$ 539,838,741
	\$ 539,838,741