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SHERRY S. CHAN
CHIEF ACTUARY

Eleventh Annual Actuarial Valuation
Of Other Postemployment Benefits
Provided under the New York City Health Benefits Program

For Fiscal Year Ended June 30, 2016

Prepared as of June 30, 2015

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SHERRY S. CHAN
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September 23, 2016

Honorable Scott M. Stringer
Comptroller
The City of New York
Municipal Building, Room 530
One Centre Street
New York, NY 10007

Re: GASB43/45 Actuarial Valuation Report

Dear Comptroller Stringer:

This Report presents the results of the June 30, 2015 actuarial valuation of the Other Postemployment Benefits (OPEB) provided under the New York City Health Benefits Program (Program). These results are intended to form the basis for accounting and financial reporting under Governmental Accounting Standards Board (GASB) Statement No. 45 (GASB45) for Fiscal Year 2016 (i.e., July 1, 2015 to June 30, 2016) for the City of New York (City) and certain non-City entities (Component Units).

These results also form the basis for financial reporting under GASB Statement No. 43 (GASB43) for the New York City Other Postemployment Benefits Plan (OPEB Plan or Plan). Where these results are applicable under both GASB43 and GASB45, the term GASB43/45 is used.

The results shown herein are based upon:

- The Office of the Actuary's (OA) interpretation of GASB43 and GASB45.
- The OA's understanding of the benefits provided to eligible retirees and beneficiaries.

- Census data used in the June 30, 2015 actuarial valuations of the New York City Retirement Systems (NYCRS)[1] to produce Preliminary Fiscal Year 2017 Employer Contributions, supplemental data provided to the OA by the New York City Office of Labor Relations (OLR) and by the Educational Construction Fund (ECF) and data provided to Buck Consultants, LLC (Buck) by the City University of New York (CUNY) for participants in the Teachers Insurance Annuity Association – College Retirement Equities Fund (TIAA or CUNY TIAA).

- Health insurance premium rates and related financial information for Fiscal Year 2016 provided to the OA by OLR.

- Welfare Fund contribution rates as of June 30, 2015, as well as information about negotiated increases, lump-sum and retroactive payments made on behalf of retirees to Welfare Funds for Fiscal Years 2016 and 2015, provided to the OA by OLR.

- Certain Actuarial Assumptions[2] used in the actuarial valuations of the NYCRS that were adopted by the Boards of Trustees during Fiscal Year 2012 (i.e., the Silver Books) for purposes of measuring pension obligations with updates to the tables of post-retirement mortality that were proposed by the Actuary and adopted by each of the NYCRS Boards during Fiscal Year 2016. These tables were based primarily on the experience of each system and the application of Mortality Improvement Scale MP-2015 published by the Society of Actuaries in October 2015. Scale MP-2015 applied on a generational basis replaced Mortality Improvement Scale AA which was applied on a static projection basis.

- Additional OPEB-specific Actuarial Assumptions, as described in Section V and Appendix D of this Report.

- An Actuarial Cost Method (ACM), as described in Section V of this Report.

- Financial information provided by the Office of Management and Budget (OMB) for City entities and by the administrative offices of the Component Units.

- Information on the Stabilization Fund provided by OLR and OMB.

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[1] New York City Employees' Retirement System (NYCERS)
New York City Teachers' Retirement System (TRS)
New York City Board of Education Retirement System (BERS)
New York City Police Pension Fund (POLICE)
New York Fire Department Pension Fund (FIRE)

[2] See Appendix D – Details of Actuarial Assumptions and Certain Methods.

The results presented in this Report continue to take into account the current understanding of the Chief Actuary of the NYCRS (the Actuary) of National Health Care Reform (NHCR) (i.e., the Patient Protection and Affordable Care Act (PPACA) signed into law on March 23, 2010 and the Health Care and Education Reconciliation Act (HCERA) signed into law on March 30, 2010).

This Report does not include results for the New York City Off-Track Betting Corporation (OTB). It is the understanding of the Actuary that, effective May 26, 2011, neither the City nor the Plan has any OPEB obligation for current or future OTB retirees.

The results contained in this Report are not meant for other purposes. In particular, the analysis in this Report is not to be relied upon by employers, retirees or any retiree representatives (such as unions) for any decisions regarding benefit design. Use of this Report for any other purpose or by anyone other than the City, the Component Units or their auditors may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies or inapplicability of the Report for that purpose. This Report should not be provided except in its entirety. No one other than the City, Component Units or their auditors may make any representations or warranties based on any statements or conclusions contained in this Report without the written consent of the OA.

This Report is intended to present the OPEB obligations of the New York City Health Benefits Program as of the valuation date.

All costs, obligations and actuarial present values have been determined in accordance with generally accepted actuarial principles and procedures.

An Actuarial Certification is included in Section VIII.

The Table of Contents, which immediately follows, outlines in more detail the contents of this report.

Best Regards,

Sherry Chan

Sherry S. Chan
Chief Actuary

SSC/eh

cc: <u>New York City Office of the Actuary</u>
Mr. Sam Rumley
Mr. Michael Samet

<u>Auditors</u>
Mr. Joseph Bukzin - KPMG
Mr. Glen Friedrich - Deloitte & Touche, LLP
Ms. Hope Goldstein - Marks Paneth, LLP
Ms. Marla Hummel - Grant Thornton, LLP
Mr. Ben Kohnle - Grant Thornton, LLP
Mr. Warren Rupple - Marks Paneth, LLP
Mr. Cosmo Saginario - Grant Thornton, LLP
Mr. Andrew Wilder - ITC

<u>Buck Consultants</u>
Mr. Thomas Billone
Mr. Abednigo Sibanda
Ms. Robin Simon

<u>Component Units</u>
Mr. Robert Balducci - WFA
Mr. Dan Frydberg - New York City Housing Authority
Ms. Miriam Katowitz - City University of New York
Mr. James Linhart - New York City Health and Hospitals Corporation
Mr. Jeffrey Pagelson - New York City Housing Authority
Ms. Yi-Wen Wang - School Construction Authority
Ms. Cynthia Wong - ECF

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Ms. Rosa Charles
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Ms. Nicole Fleming
Mr. Dean Fuleihan
Mr. Ken Godiner
Mr. John Grathwol
Mr. Omair Hassan
Ms. Simone Saywack

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Of Other Postemployment Benefits
Provided under the New York City Health Benefits Program

For Fiscal Year Ended June 30, 2016

Prepared as of June 30, 2015

SECTION I

EXECUTIVE SUMMARY

1. This actuarial report was prepared as of June 30, 2015 and presents the results of an actuarial valuation of the Other Postemployment Benefits (OPEB) provided by the City of New York (City) and certain entities (Component Units) to eligible retirees and beneficiaries through the New York City Health Benefits Program (Program).

   A comparison with the June 30, 2014 OPEB actuarial valuation results is also provided. For information on the June 30, 2014 OPEB actuarial valuation, see "Report on the Tenth Annual Actuarial Valuation of Other Postemployment Benefits Provided under the New York City Health Benefits Program," dated September 17, 2015 (Tenth Annual OPEB Report).

   The OPEB for which the City has financial responsibility are referred to as the OPEB Plan (Plan). The Plan is distinguished from the Program based on which entity has financial responsibility for the OPEB.

   The purpose of this OPEB actuarial valuation is to determine the Annual Required Contribution (ARC) and measure the Annual OPEB Cost (AOC) for the Plan and certain entities for Fiscal Year 2016 (i.e., July 1, 2015 to June 30, 2016) in accordance with Governmental Accounting Standards Board (GASB) Statement No. 45 (GASB45). This OPEB actuarial valuation also measures the funded status of the Plan and determines the ARC for Fiscal Year 2016 in accordance with GASB Statement No. 43 (GASB43).

2. This OPEB actuarial valuation measures only the total Actuarial Present Value of Benefits, the Actuarial Accrued Liability and the Normal Cost for the New York City Housing Authority (NYCHA) as of June 30, 2015. NYCHA's financial results are presented on a fiscal year differing from that of the City.

3. For the New York City Off-Track Betting Corporation (OTB), it is the understanding of the Actuary that neither the City nor the Plan has any OPEB obligation for current or future OTB retirees. This understanding is based, in part, on a unanimous Appellate Division decision (Roberts v. Paterson, Filed as Index No. 116602/10, 2011 NY Slip Op 04380 [84 AD3d 655]) rendered on May 26, 2011, that precluded the City from assuming the legal obligation to pay OTB retirees' health insurance benefits. The decision was upheld by the Court of Appeals on June 28, 2012 (2012 NY Slip Op 05197).

   The Actuary further understands that approximately $8 million in OPEB paid on behalf of OTB retirees remains unreimbursed.

4. The results contained in this Report continue to take into account the current understanding of the Actuary of National Health Care Reform (NHCR) (i.e., the Patient Protection and Affordable Care Act (PPACA) signed into law on March 23, 2010 and the Health Care and Education Reconciliation Act (HCERA) signed into law on March 30, 2010) and its impact on certain benefits and on certain OPEB-specific actuarial assumptions.

   In light of the decisions of the U.S. Supreme Court in June 2012 and June 2015 to uphold major parts of the law, the decision of the Obama administration in July 2013 to delay implementation of certain provisions of NHCR, legislation in the Fall of 2015 that defers the implementation of the Cadillac Tax until 2020, and continuing additional legal and legislative challenges, the Actuary reviewed the OPEB actuarial assumptions employed to estimate the impact of NHCR on OPEB measured in this valuation. The Actuary believes that no changes in the approach to measuring the impact of NHCR are required at this time.

5. Presented in the following Table I-1 are the principal GASB45 results of the June 30, 2015 and the June 30, 2014 OPEB actuarial valuations:

TABLE I-1

SUMMARY OF PRINCIPAL GASB45 RESULTS OF THE OPEB ACTUARIAL VALUATIONS[1] AS OF JUNE 30, 2015 AND JUNE 30, 2014

($ Millions)

Valuation Date	June 30, 2015			June 30, 2014		
Fiscal Year	2016			2015		
Entity	City	Component Units[2]	Total	City	Component Units[2]	Total
Actuarial Present Value of Benefits (APVB)	$ 126,797.4	$ 10,620.6	$ 137,418.0	$ 116,944.9	$ 9,778.8	$ 126,723.7
Actuarial Accrued Liability (AAL)[3]	$ 76,423.1	$ 6,281.2	$ 82,704.3	$ 70,363.3	$ 5,736.4	$ 76,099.7
Actuarial Asset Value (AAV)[4]	$ 3,396.5	$ 0.0	$ 3,396.5	$ 2,378.1	$ 0.0	$ 2,378.1
Unfunded Actuarial Accrued Liability (UAAL)	$ 73,026.6	$ 6,281.2	$ 79,307.8	$ 67,985.2	$ 5,736.4	$ 73,721.6
Normal Cost (EANC)[3]	$ 3,691.4	$ 347.7	$ 4,039.1	$ 3,454.1	$ 322.7	$ 3,776.8
Annual Required Contribution (ARC)[5]	$ 92,273.7	$ 5,126.2	$ 97,399.9	$ 88,594.1	$ 4,824.3	$ 93,418.4
Net OPEB Obligation at End of Fiscal Year[5]	$ 89,376.6	$ 5,029.6	$ 94,406.2	$ 85,458.2	$ 4,703.9	$ 90,162.1

[1] For GASB43 results, see Section VI.

[2] Includes ECF, HHC, NYCHA, SCA and WFA.

[3] Based on Entry Age Actuarial Cost Method.

[4] Reflects Revised Net Position at June 30, 2015 as noted in Appendix A.

[5] Excludes NYCHA.

6. Section II of this Report provides a summary of the census data used to prepare the June 30, 2015 OPEB actuarial valuation.

7. Section III of this Report provides an overview of the assets and other financial information used to prepare the June 30, 2015 and the June 30, 2014 OPEB actuarial valuations and used in the determination of the Net OPEB Obligation (NOO) under GASB45 as of June 30, 2016 and June 30, 2015.

8. Section IV of this Report summarizes the OPEB provisions used in the June 30, 2015 OPEB actuarial valuation. The OPEB provisions as of June 30, 2015 remain substantially unchanged from the provisions reflected in the prior actuarial valuation. The June 30, 2015 OPEB actuarial valuation continues to include the assumption that the OPEB provisions will comply with any legislative mandates under NHCR.

9. Section V of this Report describes the actuarial assumptions and methods employed in the June 30, 2015 OPEB actuarial valuation, including any changes in assumptions and methods since the June 30, 2014 OPEB actuarial valuation.

10. Section VI of this Report presents the results of the June 30, 2015 OPEB actuarial valuation and the development of the Fiscal Year 2016 Annual Required Contribution (ARC) in accordance with GASB43. Section VI also provides a comparison with Fiscal Year 2015 results.

11. Section VII of this Report presents the results of the June 30, 2015 OPEB actuarial valuation and the development of the Fiscal Year 2016 ARC and the Annual OPEB Cost (AOC) in accordance with GASB45 for the City and certain Component Units. Section VII also provides a comparison with Fiscal Year 2015 results.

12. Section VIII of this Report presents the Actuarial Certification. The Certification is signed by the Chief Actuary of the New York City Office of the Actuary (Actuary) who serves as the Actuary for the New York City Retirement Systems (NYCRS)[3]. The Actuarial Certification is also signed by the Chief Actuary, Health Practice, for Buck Consultants, LLC (Buck).

13. Appendix A of this Report presents a Statement of Net Assets and a Statement of Changes in Net Assets for the New York City Other Postemployment Benefits Plan for the Fiscal Years ended June 30, 2016 and June 30, 2015.

14. Appendix B of this Report presents detailed census data information.

[3] New York City Employees' Retirement System (NYCERS)
New York City Teachers' Retirement System (TRS)
New York City Board of Education Retirement System (BERS)
New York City Police Pension Fund (POLICE)
New York Fire Department Pension Fund (FIRE)

15. Appendix C of this Report presents detailed results, including Required Supplementary Information (RSI), of the June 30, 2015 OPEB actuarial valuation under GASB45 for the City and certain Component Units. Appendix C also presents detailed GASB43 results for the OPEB Plan.

16. Appendix D of this Report provides details of the actuarial assumptions and methods used in the June 30, 2015 OPEB actuarial valuation with comparisons to the actuarial assumptions and methods used in the June 30, 2014 OPEB actuarial valuation, where different.

The actuarial assumptions used in the OPEB actuarial valuations are classified as those used in the NYCRS pension actuarial valuations and those specific to the OPEB actuarial valuations. The tables of post-retirement mortality have been updated based primarily on the experience of each system and the application of Mortality Improvement Scale MP-2015 published by the Society of Actuaries in October 2015. Scale MP-2015 applied on a generational basis replaced Mortality Improvement Scale AA which was applied on a static projection basis.

The OPEB-specific actuarial assumptions used in the June 30, 2015 OPEB actuarial valuation are generally the same as those used in the June 30, 2014 OPEB actuarial valuation with the following exceptions. See Section V and Appendix D for details.

- Per capita claims costs have been updated to reflect more recent experience, and adjusted to reflect changes announced by the De Blasio administration.

- Welfare Fund contributions and assumed future trend rates have been updated to reflect recent and negotiated future contribution rates.

- The factors used to adjust the premiums for HIP HMO Medicare-eligible retirees were updated to reflect actual Calendar Year 2016 HIP premiums.

- Medicare Part B Premium reimbursement amounts have been updated to reflect actual premium rates announced for calendar years through 2016, including changes adopted as part of the Bipartisan Budget Act of 2015. Due to there being no cost-of-living increase in Social Security benefits for Calendar Year 2016, most Medicare Part B participants will not be charged the Medicare Part B premium originally projected or ultimately announced for 2016. The initially projected Medicare Part B premium was artificially increased so that the overall amount collected by the Center for Medicare and Medicaid Services (CMS) would be sufficient for the needs of the Medicare Part B program. The Bipartisan Budget Act allowed for certain borrowing of funds, but still resulted in a stated Part B premium amount in excess of the amount sufficient for the Part B Program if collected for all participants. These changes for Calendar Year 2016 are reflected in the valuation. Thus, for the June 30, 2015 OPEB actuarial valuation (i.e., Fiscal Year 2016), the annual premium used of $1,289.22 equals six months of the Calendar Year 2015 premium plus six months of:

  - 70% of the Calendar Year 2015 monthly premium (i.e., $104.90), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and

  - 30% of the announced Calendar Year 2016 monthly premium (i.e., $121.80), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2016 amount.

  This blended premium reflects the overall amount collected for Medicare Part B and therefore is a more accurate measure upon which to base future projections.

- The cost of the benefits assumed to be provided by the Stabilization Fund has been updated to reflect more recent experience. The Stabilization Fund load was reduced to 0.4% from 0.6%.

- Aging - For the June 30, 2015 OPEB actuarial valuation, the cost measured for basic medical coverage for Other HMO's (e.g. coverage options other than GHI/EBCBS and HIP) reflects age adjusted premium costs. For the June 30, 2014 valuation, premium costs for Other HMOs were assumed to be community rated. Age adjusted premiums were used for GHI/EBCBS and HIP for both the June 30, 2015 and June 30, 2014 OPEB actuarial valuations. The age adjustment for the non-Medicare GHI/EBCBS premium continues to reflect a 5% reduction in the GHI portion of the premium and a 3% reduction in the EBCBS portion of the premium for the estimated margin anticipated to be returned, as was reflected in the June 30, 2014 OPEB actuarial valuation.

The assumptions from the NYCRS pension actuarial valuations were unchanged from the assumptions used in the June 30, 2014 OPEB actuarial valuation, with the exception of the aforementioned mortality. For the June 30, 2015 valuations, new tables of post-retirement mortality were proposed by the Actuary and adopted by each of the NYCRS Boards during Fiscal Year 2016. These tables, which have been selected for use in this valuation, were based primarily on the experience of each system and the application of Mortality Improvement Scale MP-2015 published by the Society of Actuaries in October 2015. Scale MP-2015 applied on a generational basis replaced Mortality Improvement Scale AA which was applied on a static projection basis. All other demographic assumptions requiring Board approval for determining pension obligations were adopted by each NYCRS Board of Trustees during Fiscal Year 2012.

The Actuarial Asset Valuation Method (Market Value) is unchanged from the prior valuation.

The Actuarial Cost Method (Entry Age Actuarial Cost Method) is unchanged from the prior valuation.

17. Appendix E of this Report presents information on the actuarial assumptions and methods used in the June 30, 2015 OPEB actuarial valuation for the New York City Educational Construction Fund (ECF), including references to a June 2015 report entitled "New York State/SUNY GASB 45 Valuation—Development of Recommended Actuarial Assumptions Participating Agency Version" that has been used as a basis for those actuarial assumptions. The assumptions used in the June 30, 2014 OPEB actuarial valuation had their basis in that same report.

18. Appendix F of this Report presents information on the actuarial assumptions and methods used in the June 30, 2015 OPEB actuarial valuation for CUNY TIAA employees. A comparison to the assumptions used in the June 30, 2014 OPEB actuarial valuation is shown, where different.

SECTION II

CENSUS DATA

In general, the census data used in the June 30, 2015 OPEB actuarial valuation is based upon the census data used in the June 30, 2015 (Lag) pension actuarial valuations of the NYCRS to determine Preliminary Fiscal Year 2017 employer contributions.

This census data was supplemented by information provided to the OA by the New York City Office of Labor Relations (OLR) relating to eligible retirees and other eligible beneficiaries covered by the Program. The census data does not generally include employees who are not yet participants in the NYCRS.

The census data was also supplemented by information provided directly to Buck by the City University of New York (CUNY) on individuals who elect to be covered under alternate retirement benefits provided through the Teachers Insurance Annuity Association – College Retirement Equities Fund (TIAA or CUNY TIAA) rather than through the NYCRS.

In addition to the participants of NYCRS and CUNY TIAA, the OPEB actuarial valuation also includes 11 active CUNY employees and 2 active/inactive CUNY employees covered under the Cultural Institutions Retirement System (CIRS), who were assumed to ultimately be eligible for certain OPEB outlined in this Report.

The OA and Buck performed tests on this census data for reasonability and, on the basis of these tests, the Actuary believes the data is sufficiently complete and appropriate for determining the OPEB obligations in total for the City and for the OPEB Plan.

Effective with the June 30, 2007 OPEB actuarial valuation, the City has been recognized as responsible for payment of Welfare Fund benefits to certain non-pedagogical CUNY Senior College retirees of the NYCRS. The data for current retirees identified which individuals were non-pedagogical retirees. Since a Union Welfare Fund code is not available in the active, active/inactive and deferred vested data to distinguish the non-pedagogical staff, it was not possible to directly segregate pedagogical and non-pedagogical CUNY Senior College staff in these populations. Beginning with the June 30, 2007 OPEB actuarial valuation, an adjustment has been made to estimate these populations' Welfare Fund liabilities for the City. For the three Systems (NYCERS, TRS and BERS) with CUNY Senior College non-retiree participants, the CUNY Senior College Welfare Fund liability was allocated between CUNY and the City based on the ratio of each System's actual non-pedagogical retiree headcounts to total CUNY Senior College retiree headcounts. All CUNY TIAA participants are assumed to be pedagogical.

It was discovered during the first (i.e., June 30, 2005) OPEB actuarial valuation that the NYCRS retiree data did not always accurately incorporate Component Unit codes. For certain Component Units, some retirees were identified and valued as City retirees. For the June 30, 2006 OPEB actuarial valuation, OLR provided more detailed information about which entity was responsible for payment of benefits of each covered retiree. The overall census counts were provided to each Component Unit with a request for verification by the administrative staff of each Component Unit.

This issue also potentially applies to active/inactive and deferred vested members. However, active census information includes payroll location. The OA has more recently been capturing location information from the last payroll of formerly active employees. Thus, the number of individuals potentially impacted by this issue is declining over time.

Beginning with the June 30, 2007 OPEB actuarial valuation, each Component Unit is provided with a reconciliation of their data, by employee group, to be used in the valuation. Additionally, each Component Unit is provided with overall census counts. The staff of each Component Unit is then requested to verify the data to be used in the OPEB actuarial valuation. This does not apply to ECF since ECF provides census data directly to the OA.

For the June 30, 2015 and June 30, 2014 OPEB actuarial valuations, HHC and WFA confirmed the number of participants used in the valuation for the purposes of measuring OPEB costs.

The following Table II-1 indicates the number of participants noted by NYCHA compared to the number of participants reflected in the June 30, 2008 through June 30, 2015 OPEB actuarial valuations. NYCHA did not confirm the counts of the participants provided by the OA for the June 30, 2007 valuation.

TABLE II-1

COMPARISON OF NYCHA CENSUS DATA USED IN OPEB ACTUARIAL VALUATIONS WITH NUMBER CONFIRMED BY NYCHA

	Total			Active		
OPEB Actuarial Valuation Date	NYCHA Census Count Used	Number Confirmed by NYCHA	Percent Difference	NYCHA Census Count Used	Number Confirmed by NYCHA	Percent Difference
6/30/2008	21,323	21,154	-0.8%	11,192	11,192	0.0%
6/30/2009	20,980	21,055	0.4%	10,770	10,828	0.5%
6/30/2010	20,622	20,749	0.6%	10,623	10,696	0.7%
6/30/2011	20,565	20,993	2.1%	10,455	10,810	3.4%
6/30/2012	20,896	21,094	0.9%	10,675	10,706	0.3%
6/30/2013	20,942	21,252	1.5%	10,748	10,852	1.0%
6/30/2014	20,690	21,020	1.6%	10,371	10,486	1.1%
6/30/2015	20,738	20,828	0.4%	10,368	10,451	0.8%

The OA researched the June 30, 2014 and June 30, 2015 data discrepancies based on data provided to the OA for use in the NYCRS pension actuarial valuations.

The OA found that the active members added by NYCHA were either non-vested terminations, active elsewhere in the OPEB actuarial valuation or not reported to the OA as a NYCRS participant.

The OA also found that the inactive members added by NYCHA were either non-vested terminations or inactive elsewhere in the OPEB actuarial valuation.

Based on the kind of discrepancies found upon investigation for the June 30, 2014 and June 30, 2015 valuations, and the magnitude of differences shown in confirmations as shown above, the Actuary concluded that the valuation data was reasonable for the purpose of measuring OPEB costs.

For the June 30, 2009 OPEB actuarial valuation, employer contribution (Pay-As-You-Go (PAYG)) information provided to the OA by SCA indicated that the number of SCA retirees identified in the OA census data as in receipt of Welfare Fund benefits is less than the estimated number of retirees for whom SCA is paying OLR.

Similar discrepancies also occurred for the June 30, 2010 and the subsequent OPEB actuarial valuations. The following Table II-2 provides a comparison of the OA census data with the number of retirees implied by the monthly PAYG reported amounts.

TABLE II-2

COMPARISON OF SCA RETIREE CENSUS DATA USED IN OPEB ACTUARIAL VALUATIONS WITH ESTIMATED NUMBER FOR WHOM CONTRIBUTIONS ARE BEING MADE

OPEB Actuarial Valuation Date	Retiree Census Used	Estimated Number For Whom Distributions Are Being Made
6/30/2009	140	170
6/30/2010	151	187
6/30/2011	173	192
6/30/2012	176	207
6/30/2013	204*	223
6/30/2014	229**	245
6/30/2015	253***	266

* 206 SCA retirees were identified on the OA census data, of which two had only OPEB benefits provided by the City and were not eligible for Welfare Fund contributions that would have been the responsibility of SCA.

** 231 SCA retirees were identified on the OA census data, of which two had only OPEB benefits provided by the City and were not eligible for Welfare Fund contributions that would have been the responsibility of SCA.

*** 254 SCA retirees were identified on the OA census data, of which one had only OPEB benefits provided by the City and was not eligible for Welfare Fund contributions that would have been the responsibility of SCA.

These discrepancies remain under investigation.

The overall impact of these discrepancies is less than 5% of total Actuarial Present Value of Benefits (APVB) for SCA, if the problem is limited to current retirees. It should be noted that the impact could be greater, perhaps 20% to 25% of total APVB, if data issues of similar magnitude as historic discrepancies affect the identification of future as well as current retirees. However, it appears that many of the retirees in question are being valued elsewhere in the OPEB actuarial valuation and are being charged to the City. Moreover, as a percentage, the discrepancy seems to be decreasing over time. Since SCA is a Blended Component Unit of the City, the impact on the City results appears to be negligible.

PAYG amounts for Fiscal Years 2010 through 2016 and the Net OPEB Obligation as of June 30, 2010 and subsequent years include the amounts actually paid by SCA.

In preparing the June 30, 2008 OPEB actuarial valuation, it was discovered that the issues of identifying location affected certain former employees who are participants in the NYCRS but who should not have been included in the June 30, 2008 OPEB actuarial valuation, either as a City participant or as a participant in one of the Component Units. For example, if the location code were missing for an individual who had last worked as a Transit employee but was now coded as active/inactive or deferred vested, the valuation includes the individual in measuring the obligation of the City. Since, as noted above, the OA has recently been capturing location information from the last payroll of formerly active employees, the number of individuals potentially impacted by this issue is *de minimis* and declining over time.

Overall, the Actuary believes the data as prepared for the June 30, 2015 OPEB actuarial valuation is sufficient for determining the OPEB obligations presented in this Report for the Component Units.

Certain retirees who previously worked part-time and are entitled to full retiree medical benefits (i.e., pre-Medicare and Medicare Basic Coverage in addition to reimbursement of the Medicare Part B Premium), but only a portion of the Welfare Fund contributions available to retirees who were full-time active employees. Based on information provided by OLR, there are a total of 700 of these part-time retirees as of June 30, 2011, 700 as of June 30, 2012, 740 as of June 30, 2013, 755 as of June 30, 2014, and 763 as of June 30, 2015. The data did not provide any individual information on these retirees such as age, gender or identification of their employers. The calculations herein do not reflect the reduced Welfare Fund contributions that would be paid on behalf of these retirees. It is estimated that the reduction in total APVB, had detailed information been available, would be less than $15 million for each of the valuations.

The census data is broken into the following major classifications as used in the NYCRS pension actuarial valuations:

- Actives (in payroll status as of the valuation date).

- Active/Inactives (generally, still a NYCRS member but no longer on payroll as of the valuation date).

- Deferred Vesteds and Deferred Retirees (separated from service, eligible for a pension benefit but not yet in receipt).

- Retirees and other Eligible Beneficiaries (in receipt).

In addition, census data was provided for the following groups not part of the NYCRS:

- Active employees of CUNY who participate in TIAA or CIRS.
- Retired employees of CUNY who participate in TIAA and have been participating in the New York City Health Benefits Program.
- Line-of-Duty Survivors who are currently receiving continued lifetime medical coverage and Medicare Part B Premium reimbursements.

Certain individuals who were classified as retired in the NYCRS pension actuarial valuation were not included in the census files provided by OLR that indicated medical plan elections and dependent coverage. Those individuals were assumed to have single coverage electing the GHI option, and were assumed to be on Medicare if over age 65. Approximately 8,800 individuals were valued using this conservative assumption.

Census data was not available for individuals on COBRA continuation, including those surviving spouses of POLICE, FIRE, Corrections or Sanitation members who are entitled to similar lifetime COBRA continuation coverage, as this benefit is administered directly by the insurance carriers.

Effective with the June 30, 2010 OPEB actuarial valuation, the number and obligation for the surviving spouses with lifetime coverage were estimated based on current census of POLICE and FIRE retirees and projected number of deaths that would have occurred since the inception of this benefit on November 13, 2001.

Effective with the June 30, 2012 OPEB actuarial valuation, the number and obligation for the surviving spouses with lifetime coverage were estimated based on current census of retirees of the Departments of Correction and Sanitation and projected number of deaths that would have occurred since the inception of this benefit on August 31, 2010.

Complete census data was not available for terminated CUNY employees who had participated in TIAA and who are entitled, as a deferred vested, to receive Medicare Part B Premium reimbursements, as well as medical and Welfare Fund benefits if employed by a Community College, when they retire under certain conditions. The number and obligation for this vested group was estimated based on census information for CUNY TIAA employees who terminated within the last 13 years.

Effective with the June 30, 2007 OPEB actuarial valuation, the City is responsible for the payment of medical benefits and Welfare Fund contributions for CUNY TIAA Community College retirees. The data for current active employees identified which individuals were Senior College versus Community College employees. Prior to the June 30, 2013 OPEB actuarial valuation, a Senior College versus a Community College code was not available in the retiree data provided to the OA by OLR. Thus, it was not possible to directly segregate these populations.

An adjustment was made in prior valuations allocating retiree and deferred vested liabilities between CUNY and the City based on the historic ratio of CUNY Senior College and Community College employees in TIAA[4].

The data provided by CUNY for the June 30, 2010 OPEB actuarial valuation came from its new human resources recordkeeping system, with the exception of information on the Retirement Plan code.

CUNY has enhanced its human resources recordkeeping system. Based on discussions between CUNY and Buck, the date of hire reported by CUNY for the June 30, 2011 OPEB actuarial valuation was based on date of first full-time position instead of original date of hire. It was agreed that this was a better measure of eligibility for OPEB benefits.

CUNY had been working to identify the Senior/Community College indicator and gender for the CUNY TIAA retirees. This information was not available on either the June 30, 2011 or the June 30, 2012 data on CUNY TIAA retirees provided by OLR to the OA. Thus, the allocation of benefit costs between CUNY and the City reflected in these calculations continued to reflect an estimate of the proportion that represents Community College retirees.

The data provided by OLR to the OA for the June 30, 2013 OPEB actuarial valuation for CUNY TIAA retirees included the Senior/Community College indicator and gender for the vast majority of these retirees. Of the 2,542 retirees, 11 were missing the Senior/Community College indicator and 59 were missing the gender indicator. Consistent with the assumption used for missing data in the June 30, 2012 OPEB actuarial valuation, it has been assumed that 75% of the 11 retirees were Senior College retirees and 25% were Community College retirees and that all 59 retirees missing the gender indicator are female. All of the records provided for the CUNY TIAA retirees as of June 30, 2014 contained both a Senior/Community College and a gender indicator.

The data provided to the OA by OLR for the June 30, 2013 OPEB actuarial valuation appeared to be missing information on covered child dependents of eligible retirees participating in NYCRS. The proportion of retirees reported with spouse and children covered was significantly lower than previously reported. The problem appeared to continue with the data provided for the June 30, 2014 OPEB actuarial valuation for retirees in TRS and BERS only. The valuation results include an adjustment for the liability and benefit payments projected for pre-Medicare retiree costs so that the overall proportion of child beneficiary cost by each retirement system represents the same proportion that had been measured in the June 30, 2012 OPEB actuarial valuation. Adjustments were made for all five NYCRS for the June 30, 2013 OPEB actuarial valuation and for TRS and BERS only for the June 30, 2014 OPEB actuarial valuation. Data did not appear to be missing from eligible retirees who were not receiving NYCRS benefits (e.g., TIAA and LOD retirees), so no adjustments were made to those results in either valuation. Data for spouse and covered children did not appear to be missing for the June 30, 2015 valuation, following a dependent eligibility audit. No adjustments were made for missing records for the June 30, 2015 valuation.

[4] Source: Statistics published by the CUNY Office of Institutional Research and Assessment.

There were 4,542 dependents reported for the TRS retirees for the June 30, 2015 valuation. About half of these dependents were reported with information in the sex and date of birth fields switched. The data was adjusted, but this left 467 TRS dependent spouses without a reported sex. These dependent spouses were included in the valuation assuming the opposite sex from the retiree. For comparison purposes, there were 306 TRS spouse records without reported sex that had been valued using sex opposite of the retiree in the June 30, 2014 valuation.

Attached in Appendix B are the following tables that set forth the census data used in this Report:

- Tables 1a-1g Plan Participation.

- Tables 2a-2e Welfare Fund Contributions.

Except for ECF, generally all of the census data for the Component Units is included in the NYCRS census data. The majority of those participants in the Component Units who are included in the NYCRS census data participate in NYCERS.

The following Table II-3 presents a summary of the census data used in the June 30, 2015 and June 30, 2014 OPEB actuarial valuations:

TABLE II-3

SUMMARY OF CENSUS DATA USED IN THE JUNE 30, 2015 AND JUNE 30, 2014 OPEB ACTUARIAL VALUATIONS

Valuation Date	June 30, 2015			June 30, 2014		
Fiscal Year	2016			2015		
Group	City	Component Units[1]	Total	City	Component Units[1]	Total
Active	281,734	43,530	325,264	277,682	43,643	321,325
Active/Inactive	21,537	4,792	26,329	22,830	4,774	27,604
Deferred Vested	14,860	2,416	17,276	14,674	2,519	17,193
Retired	225,989	29,493	255,482	221,789	28,910	250,699
Total	544,120	80,231	624,351	536,975	79,846	616,821

[1] Includes ECF, HHC, NYCHA, SCA and WFA.

SECTION III

ASSETS

The New York City Retiree Health Benefits Trust (NYCRHBT) was legally established on June 12, 2006 and first funded as of June 21, 2006. The Trust was established to fund OPEB provided under the New York City Health Benefits Program for the exclusive benefit of retirees and their eligible beneficiaries for whom the City is directly obligated.

Wells Fargo Bank, N.A. is the Trustee and Custodian. The City represents the Grantor of the Trust.

Beginning with the June 30, 2008 OPEB actuarial valuation, the Statement of Net Assets represents assets of the Plan instead of assets of the NYCRHBT. This reflects the interpretation by the OA, Buck and the City of Question and Answer (Q&A) 8.81.4 of the GASB Comprehensive Implementation Guide.

Appendix A includes two tables showing the detailed financial position of the Plan as of June 30, 2016 and June 30, 2015.

Appendix A - Table 1 sets forth the assets of the Plan. Plan assets equal NYCRHBT assets.

Appendix A - Table 2 sets forth the changes in net assets and includes non-trust activity for Fiscal Years 2016 and 2015.

All amounts are assumed to be determined on an accrual basis.

Financial information reflected in this valuation for the City and the Plan was provided by OMB and confirmed by the OA on August 19, 2016. Financial information was also supplied by the administrative staff of each Component Unit. None of the Component Units have separately identified OPEB assets as of June 30, 2016 or June 30, 2015.

A summary of the Net Assets Available for Benefits is set forth in the following Table III-1:

TABLE III-1

NEW YORK CITY OTHER POSTEMPLOYMENT BENEFITS PLAN
NET ASSETS AVAILABLE FOR BENEFITS[1]

($ Millions)

FYE June 30	2016	2015	2014	2013	2012
Assets	$ 4,363.6	$ 3,921.3	$ 2,937.8	$ 1,834.1	$ 2,556.1
Liabilities	$ 327.3	$ 524.8	$ 559.7[2]	$ 471.0	$ 440.3
Net Assets	$ 4,036.3	$ 3,396.5	$ 2,378.1[2]	$ 1,363.1	$ 2,115.8

[1] Source: Wells Fargo Statements and information from OMB.

[2] Reflects Post-Publication Adjustments to Benefits Payable.

SECTION IV

SUMMARY OF OPEB PLAN PROVISIONS

Following is a summary of the employer-provided Other Postemployment Benefits available to eligible retirees and other eligible beneficiaries covered under the Program. The OA believes that these provisions form the "Substantive Plan" as defined in Paragraph 34.a(1) of GASB43 and 13.a(1) of GASB45 and that the OA's understanding of the Substantive Plan is derived from the Administrative Code of the City of New York (ACNY), the New York City Health Benefits Program Summary Program Description, meetings with City officials and a review of historical information. This information has been augmented by a review of the recent negotiated agreement regarding health savings[5], along with a report on the progress made regarding health savings[6].

Note: The OPEB actuarial valuation results presented in this Report show the value of OPEB in effect during each fiscal year and do not represent an obligation of the City or the Component Units to continue, modify or eliminate OPEB in the future.

ACNY Section 12-126 defines OPEB payable to include:

- Health Insurance.
- Medicare Part B Premium Reimbursement.

Welfare Fund benefits are provided through Welfare Fund arrangements agreed upon, in most cases, through collective bargaining.

Covered Benefits

The City and certain Component Units provide OPEB through the New York City Health Benefits Program (Program). In addition, the City provides certain Program benefits through the Stabilization Fund. The City and certain Component Units contribute to various Welfare Funds, generally negotiated with and administered by various labor organizations. The City and certain Component Units also reimburse Medicare Part B Premiums paid by eligible retirees and other eligible beneficiaries.

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[5] 2014 MLC-NYC Health Savings Agreement, Agreement found at: http://www.nyc.gov/html/olr/downloads/pdf/collective_bargaining/2014MLCNYCHealthSavingsAgreement.pdf

[6] Report on Status of Healthcare Savings Q2 and Q3 Fiscal 2016 sent to Bill de Blasio February 25, 2016, http://www1.nyc.gov/assets/olr/downloads/pdf/collectivebargaining/savings-report-q2-q3-fy2016.pdf. Note the Report on Status of Healthcare Savings Q4 Fiscal 2016 was sent September 6, 2016, http://www1.nyc.gov/assets/olr/downloads/pdf/collectivebargaining/savings-report-q4-fy2016.pdf, but information from this more recent report was not reflected in this valuation, as it was not available during the majority of the preparation time for this valuation.

It is the understanding of the OA that no other OPEB, such as life insurance or long-term care benefits, are directly subsidized by the City through its general account[7]. The City and the Component Units (except CUNY for certain retirees and ECF) generally provide most death and disability benefits through the NYCRS. Those benefits are measured as part of the obligations of the NYCRS and are not subject to GASB43 or GASB45.

Therefore, the OPEB actuarial valuation results presented herein reflect projected benefit costs only for the retiree health insurance, Welfare Fund contributions and Medicare Part B Premium reimbursements outlined in this Report.

Certain former New York State Court employees, who are covered under the New York State Health Insurance Program (NYSHIP), are not included in the OPEB actuarial valuation. The cash cost for these benefits paid from the Plan during Fiscal Year 2015 was less than $1 million.

The OPEB provisions applicable to ECF and CUNY TIAA retirees were provided by ECF and CUNY staff, respectively.

Eligibility for OPEB

Retirees:

- At least 10 years of credited service as a member of NYCRS (five years of credited service if employed on or before December 27, 2001, 15 years of service if a member of TRS or BERS, represented by the United Federation of Teachers and employed after April 27, 2010, and no service requirement for disability retirements) and be working at least 20 hours a week at termination of active service, plus

- Receives a pension check from a NYCRS (or is eligible for certain Deferred Retirement benefits). Payability date varies by System and group.

Terminated Vested Members:

- Eligible for OPEB the same as retirees once in receipt of a pension benefit if the other eligibility rules for retirees are satisfied.

Members Eligible for Certain Deferred Retirement Benefits:

- Certain members of NYCERS, TRS and BERS who have at least 20 years of credited service are eligible for up to five years of OPEB coverage prior to commencement of pension benefits.

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[7] Such benefits may be funded through the mechanisms of the Welfare Benefit Funds.

Members Terminated for Other than Immediate Retirement:

- Members who do not have retiree medical coverage under the retiree medical provisions are eligible to continue coverage under COBRA provisions. COBRA continuation coverage is generally limited to certain maximum periods (generally to the end of 36 months under New York State insurance law).

Surviving Spouses and Other Dependents:

- Dependent coverage is terminated when a retiree dies, except in the following situations:

  i. Lifetime coverage is provided to the surviving spouse or domestic partner and to children (coverage to age 26 based on legislative mandates under National Health Care Reform) of uniformed members of the Police or Fire Departments who die in the Line of Duty.

  ii. Effective November 13, 2001, other surviving spouses of retired uniformed members of the Police and Fire Departments may elect to continue coverage for life by paying 102% of stated premium.

  iii. Effective August 31, 2010, surviving spouses of retired uniformed members of the Departments of Correction and Sanitation may elect to continue coverage for life by paying 102% of stated premium.

ECF and CUNY TIAA Benefit Provisions

The OPEB available to ECF and to CUNY TIAA retirees are described in Appendix E and Appendix F, respectively.

Basic Coverage

The City and certain Component Units currently provide Basic Medical Coverage (Basic Coverage) at no cost if a non-Medicare-eligible retiree participates in HIP HMO or GHI/EBCBS indemnity arrangement, or a Medicare-eligible retiree participates in HIP HMO or GHI/EBCBS Senior Care. The same coverage arrangement applies to individuals (active employees and retirees) who are not included in this OPEB actuarial valuation. The premiums for these individuals are paid by their current or former employer, which may be a New York City Payroll Agency (as listed on Table IV-1), or another entity (either governmental or non-governmental).

Basic Coverage includes hospital and physician coverage and excludes coverage for prescription drugs. GHI/EBCBS Senior Care coordinates with Medicare Part A and Medicare Part B on a supplement basis. Under the HIP HMO, Medicare-eligible retirees generally participate in a Medicare Advantage Plan under Medicare Part C. Cost sharing provisions (e.g., deductibles, co-payments) are assumed to change over time to contain the overall cost of coverage.

Basic Coverage under other plans may require additional retiree contributions.

Other plans available to non-Medicare-eligible retirees for Fiscal Year 2016 include Aetna HMO, CIGNA, Empire HMO, Empire EPO, GHI HMO, MetroPlus Gold and Vytra Health Plans.

Other plans available to Medicare-eligible retirees for Fiscal Year 2016 include Medicare supplemental plans, such as Empire Medicare-Related Coverage, and Aetna Medicare PPO with Extended Service Area, as well as various Medicare Advantage arrangements such as MediBlue.

Retirees of the Component Units herein, except for ECF, have the same coverage as City retirees. It is the understanding of the OA that ECF retirees are covered by NYSHIP.

Retirees may waive Basic Coverage. It is the understanding of the OA that many of those who waive Basic Coverage are dependents of other active or retired City employees with healthcare coverage. The City and the Component Units do not provide both subscriber and dependent coverage for the same individual.

Other OPEB Coverage

The valuation reflects an estimate for the cost of the implicit subsidy provided to terminated employees who elect COBRA. Effective January 1, 2014 under NHCR, terminated employees who do not elect employer-provided COBRA coverage are eligible for coverage on the State-specific health insurance exchanges (known as Marketplaces). Individuals with low or moderate income may be eligible for federal subsidies in purchasing coverage through the Marketplaces. This may result in a reduction in COBRA elections in the future. This valuation does not directly reflect the possibility of reduced COBRA elections, as there is not yet significant data indicating such reduction in COBRA election.

The OA understands that the City and certain Component Units currently provide certain supplementary healthcare coverage through the mechanism of the Stabilization Fund discussed later in this Section.

Otherwise, the OA understands that medical benefits not provided under the Basic Coverage, such as prescription drug coverage, may be provided through optional riders. These optional riders may provide separately rated coverage with stand-alone premiums. Alternatively, prescription drug coverage may be available on an integrated basis with medical for the other HMOs, but in those situations, medical only coverage is offered if the Welfare Plan offers drug coverage.

The cost of riders are either fully paid by the employees or retirees who enroll in that benefit, or are provided through various Welfare Funds. Thus, the City does not directly pay for any of the premiums of these separately rated riders. As such, any implicit subsidy in the price of these separately rated riders is paid by the actives who are assumed to pay more than the cost of their own rider coverage.[8] Thus, this valuation does not include any implicit subsidy on these separately rated riders in this valuation.

Health Care Cost Savings

The Municipal Labor Committee (MLC) agreed to generate cumulative healthcare savings of $3.4 billion over the course of Fiscal Years 2015 through 2018, through a variety of initiatives, which were not fully defined at the time of the agreement, and an additional $1.3 billion of recurring savings every year thereafter. This valuation reflects as part of the Substantive Plan being measured only initiatives that had been defined as of Fiscal Year 2016. According to a Report of Status of Healthcare Savings dated February 25, 2016[9], there had been 13 specific strategies defined at that point. These strategies are listed below, along with how each is reflected in this valuation:

1. Funding structure change to minimum premium plan—Assumed reflected in GHI premium rate for fiscal year 2016.

2. Dependent Eligibility Verification Audit—Census data reported is assumed to reflect reduction in covered dependents based on results of the audit.

3. Change to Care Management program—Assumed reflected in GHI premium rate for fiscal year 2016.

4. Specialty Drugs (PICA) Program changes—Assumed reflected in GHI premium rate for fiscal year 2016.

5. HIP Rate Savings—5.98% rate increase for fiscal year 2017 reflected in non-Medicare HIP costs and assumed HIP benchmark for non-Medicare HMOs.

6. Premiums for GHI Senior Care Plan for fiscal year 2015 and 2016—Assumed reflected in GHI premium rate for fiscal year 2015 and 2016.

7. Lower Radiology Fees—Estimated full fiscal year 2017 savings reflected by reducing the age-adjusted fiscal year 2016 per capita costs assumed for non-Medicare GHI/EBCBS.

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8 See discussion in questions 58-63 of Guide to Implementation of GASB Statements 43 and 45 on Other Postemployment Benefits, published by GASB. In particular, question 63 says "Only if the amounts contributed by active employees were to exceed the age-adjusted premiums for their coverage should the employer conclude that the active employees are subsidizing healthcare coverage for retirees in the group."

9 Sent to Bill de Blasio and Anthony Shorris from Robert Linn and Claire Levitt http://www1.nyc.gov/assets/olr/downloads/pdf/collectivebargaining/savings-report-q2-q3-fy2016.pdf .

8. Lower Durable Medical Equipment Fees—Estimated full fiscal year 2017 savings reflected by reducing the age-adjusted fiscal year 2016 per capita costs assumed for non-Medicare GHI/EBCBS.

9. HIP HMO Preferred Plan—Further reduction in fiscal year 2017 rate increase to 4.88% (down from 5.98% discussed above) reflected in non-Medicare HIP costs and assumed HIP benchmark for non-Medicare HMOs.

10. GHI CBP Program—Estimated full fiscal year 2017 savings reflected by reducing the age-adjusted fiscal year 2016 per capita costs assumed for non-Medicare GHI/EBCBS. Savings estimate confirmed based on manual rate calculations.

11. Telemedicine and ZocDoc—Assumed reflected in GHI premium rate for fiscal year 2016.

12. Diabetes Management Program—Estimated full fiscal year 2017 savings reflected by reducing the age-adjusted fiscal year 2016 per capita costs assumed for non-Medicare GHI/EBCBS.

13. Stabilization Fund Adjustment—Assumed to be an intra-governmental transfer, not reflected in the valuation.

In addition to the savings initiatives discussed above, the 2014 MLC NYC Health Savings Agreement reflected that there would be amounts contributed to the Welfare Funds from the Stabilization Fund for the life of the agreement. These additional funds represented an increase of $25 for each retiree for fiscal year 2015, plus an additional increase for fiscal year 2016 (to a total additional amount of $50), and a further additional $25 each in fiscal year 2017 and 2018. For the June 30, 2014 OPEB actuarial valuation, these increases are reflected directly, and are assumed for all Welfare Funds, whether the union running the Fund had agreed to the 2015 MLC NYC Health Savings Agreement as of the date of this valuation or not. For the June 30, 2015 valuation, a further additional $100 will be added to the contribution for fiscal year 2016.

Health Care Benefits Per Capita Costs

Based on current practice (the Substantive Plan), the City and certain Component Units pay the full cost of coverage for retirees who elect Basic Coverage. The costs of Basic Coverage are reflected in the OPEB actuarial valuations herein by using age-adjusted premium amounts. Beginning with the June 30, 2012 OPEB actuarial valuation, an estimated age and gender distribution of the covered population was used with the premiums for the HIP HMO and the non-Medicare GHI/EBCBS arrangement. Beginning with the June 30, 2015 OPEB actuarial valuation, the estimated age and gender distribution was used with premiums for other HMO coverage. For the GHI/EBCBS Medicare arrangement, enrollment information from OLR was compared with census information included in the valuation. The comparison indicated that over 95% of the participants of this group are included in the census data for this valuation. For the age adjustments used beginning with the June 30, 2007 OPEB actuarial valuation, the actual age distribution of the GHI/EBCBS Medicare participants was used.

Claims data were generally not provided to the OA for the HIP coverage or for Other HMOs. OLR provided a copy of the claims component of the Fiscal Year 2016 GHI and Fiscal Year 2016 Empire Blue Cross renewals. For the non-Medicare participants, retiree claims were not segregated from active claims. The claims information provided was compared to the premium rates provided. Based on examination of the renewals and discussions with employees of OMB, it is understood that the GHI and Empire Blue Cross premiums that were applied to the active and non-Medicare retiree population had, in recent years, included a margin to provide amounts in excess of that necessary to support the current level of coverage. These amounts were expected to ultimately be refunded.

Complete information about the financial arrangement was not available to the OA, nor were claims data segregated for the group reflected in the OPEB actuarial valuation. However, the OA is aware that a Minimum Premium Arrangement (MPA) was implemented for the EBCBS benefit during Fiscal Year 2010, and a Minimum Premium Arrangement was implemented for the GHI benefit during Fiscal Year 2014. The general practice of using the age-adjusted premiums for valuation measurement has been continued.

Beginning with the June 30, 2008 OPEB actuarial valuation, an estimate of the margin was removed from the GHI non-Medicare premium before age adjustment to better reflect the understanding about the cost of the underlying coverage. For the June 30, 2012 OPEB actuarial valuation, an estimate of the margin was also removed from the EBCBS non-Medicare premium before age adjustment.

For the June 30, 2013 OPEB actuarial valuation, due to premium rates for Fiscal Year 2014 for the GHI/EBCBS arrangement having been frozen at the Fiscal Year 2013 level, and based on examination of current year renewals, the OA had assumed that the margin had been removed from the Fiscal Year 2014 premiums. However, the OA was later informed by OLR and OMB that the margin had continued to be reflected in the Fiscal Year 2014 and Fiscal Year 2015 premiums. Based on that information, for the June 30, 2014 OPEB actuarial valuation, the practice of adjusting the premiums to remove the estimated margin was reinstated.

GASB45 provides that costs for retirees should be segregated from those for actives in developing per capita costs for valuation purposes, either via use of segregated claims experience or, as is done in this OPEB actuarial valuation, by approximation with age-adjusted premium rates. However, GASB45 provides an exception allowing community-rated plans to use unadjusted net premium rates charged for both active employees and retirees, based on the language in the version of Actuarial Standard of Practice No. 6, ***Measuring Retiree Group Benefit Obligations*** (old ASOP 6) effective for valuations with measurement dates prior to March 31, 2015. Prior to that measurement date, under the terms of GASB 45, and old ASOP 6, an employer could use the community-rated exception if an actuary determines that the insurer/health program would offer the same premium to that employer if only the non-Medicare eligible retirees of that employer were covered and not its active employees.

The Actuary has determined that the New York City Health Benefits Program premiums for HIP and GHI/EBCBS members would not be the same if the premiums for those programs were determined based on a population that excluded the active employees included in the OPEB actuarial valuation. Therefore, the community-rated exception is not available for the HIP and GHI/EBCBS premiums and the valuation uses age-adjusted estimated costs. For previous OPEB actuarial valuations, the community-rated exception had been applied to the costs measured for other HMOs and for the NYSHIP benefits provided to ECF retirees. As Actuarial Standards of Practice has eliminated the community rating exception going forward except in limited specified circumstances, this valuation reflects age adjusted premium costs for all basic coverage.

This OPEB actuarial valuation includes liabilities for Component Units that are separate legal entities from the City. In issuing this OPEB actuarial valuation report, the Actuary is not opining on whether each Component Unit that participates in the New York City Health Benefits Program, when looked at from its own perspective, would have the same premiums if only their non-Medicare-eligible retirees were covered.

A retiree who elects basic medical coverage other than the benchmark HIP and GHI/EBCBS plans is required to contribute the amount by which the selected arrangement's premium exceeds the Basic Coverage cost benchmarks. In previous OPEB actuarial valuations, the benchmark premiums were reflected without age adjustment for retirees who elect options other than HIP and EBCBS, based on the community rated exception. Gross and net employer premium contributions for the various medical options were provided to the OA by OLR, providing the OA information about the contributions required for these options and allowing the OA to confirm that net employer premiums were consistent with the benchmark rates and stated policy regarding other coverage. Detailed information on financial arrangements was not provided for other options. It is the understanding of the OA that many of these options are subject to New York State insurance law community-rating mandates.

For this OPEB actuarial valuation, the cost of these other arrangements is measured by age-adjusted gross premium minus retiree contribution amount. Under the new version of Actuarial Standard of Practice No. 6, ***Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions*** (new ASOP 6), the community rated exception generally is not applicable to such arrangements except in very limited cases. The most relevant exception for this benefit would be to look at the pooled integrated health plan and determine if its premium structure would be sustainable over the measurement period, even if other groups or active participants cease to participate. The New York State insurance law mandated community rating does not in turn mandate that employers and lower cost active employees continue to participate, and thus the premiums for these coverages would be expected to be higher if other groups and actives ceased to participate.

It is the understanding of the OA that the City has filed for and is receiving the Medicare Part D Retiree Drug Subsidy (RDS) for a small number of retirees who make certain elections that include drug coverage. The OA has assumed that premium amounts reported do not anticipate receipt of any RDS amounts. The value of the RDS is not knowingly reflected herein, in accordance with GASB Technical Bulletin No. 2006-1 on this issue.

Welfare Funds

The City and certain Component Units pay annual per capita contributions directly to the various Welfare Funds that cover retirees for various health care benefits not provided through the Basic Coverage. Welfare Fund benefits may include (but are not limited to) prescription drug coverage, vision and dental coverage, sometimes with dollar limits. In addition, the Welfare Funds provide non-health related benefits such as life insurance, accidental death or disability (ADD) benefits, legal services, or short or long term disability benefits. The Welfare Funds are generally separate legal entities, often administered by various labor organizations. Information on the Welfare Funds is available in a Special Report issued by the Office of the Comptroller (Comptroller Report)[10].

Contributions are sometimes made for active employees to Welfare Funds that are combined with retirees. Alternatively, contributions are made to separate retiree only funds. The Welfare Funds' per capita contributions apply to retirees only without any additional funds for covered dependents. The contributions for retirees are generally made only on behalf of individuals who retired since 1971. In recent years, a portion of the Welfare Fund contributions has been reimbursed by the Stabilization Fund.

The City and certain Component Units also sponsor a Welfare Fund for management employees, which, for purposes of this Report, is being treated the same as other Welfare Funds.

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[10] Analysis of the Financial and Operating Practices of Union-Administered Benefit Funds with Fiscal Years Ending in Calendar Year 2011, issued December 17, 2014, http://comptroller.nyc.gov/wp-content/uploads/documents/SR14_100S.pdf retrieved May 8, 2015.

The per capita contribution amounts change periodically based on negotiated contract provisions. The recent collective bargaining agreements reflected in the June 30, 2014 valuation, generally included a $25 per year increase for each retiree for each of the next four years starting July 1, 2014, to be paid out of the Stabilization Fund. The June 30, 2015 valuation reflects a further additional $100 annual contribution starting July 1, 2015. In addition to prospective increases, the collective bargaining agreements have provided for ad hoc lump-sum payment amounts to the Welfare Funds. It is the understanding of the OA that the benefits provided from the Welfare Funds are adjusted from time to time so that costs to the Welfare Funds do not exceed available assets and income. Benefit type and levels provided to retirees also differ from benefits provided to active employees even within the same fund. For purposes of this Report, this understanding was not verified at source but was confirmed in conversations with OLR and OMB.

It is the understanding of the OA that some of the Welfare Funds have applied for and receive the Retiree Drug Subsidy under Medicare Part D. The calculations in this Report reflect only the net employer Welfare Fund contributions and do not reflect this or any other underlying financial mechanisms of the Welfare Funds.

The OA is not aware of any actuarial valuations performed by the individual Welfare Funds for measurement under GASB43 or other purposes[11]. The Comptroller Report indicated that a significant number of the funds received qualified opinions from their independent auditors because their financial statements did not include a measurement of postretirement benefit obligations[12]. The Comptroller's Office indicated that there was some mention of postretirement benefit obligations on 2 out of 18 sampled Welfare Fund reports, but these amounts did not necessarily appear to be based on actuarial valuations of government-provided benefits performed with parameters consistent with GASB 43. Thus, the OA has not considered the impact of any such calculations on the analyses herein.

The OPEB actuarial valuation reflects the Welfare Fund contribution, which in turn is used to pay various premiums for coverage provided by each of the funds. Such coverage could potentially vary by age, and/or could involve various cross subsidies within the pool of each fund between active employees, non-Medicare retirees and Medicare retirees. Under the revised ASOP No. 6, the valuation should reflect age adjusted costs for pooled plans except in very limited cases. Factors to be considered include:

1. the purpose of the measurement (for example, for a projection of short-term cash flow needs the use of the premium may be appropriate);

2. whether for the type of benefit plan being valued (for example, certain dental plans) the impact of using age-specific costs would not be material;

3. the extent to which there are no age-related implicit subsidies between actives and retirees that occur within the pooled health plan; and

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[11] Table XXIV on page 34 of Comptroller Report.

[12] Paragraph 13 of GASB45 provides that the employer should reflect the same assumptions and methods used by a plan if the amounts calculated would comply with the requirements of GASB45. Thus, any such analyses might require the use of differing assumptions for results under GASB45.

4. whether the pooled health plan and its premium structure are sustainable over the measurement period, even if other groups or active participants cease to participate.

The Actuary has considered these factors and concluded that the cost of the Welfare Funds should be measured on a pooled basis. In particular, the Actuary has concluded that there is no significant cross subsidy between retiree and active benefits because the two groups are not generally pooled together.

There are more than a hundred different Union Welfare Funds reflected in this valuation, each of which potentially have different allocations of benefit costs based on age. The Actuary considers that the amount of information and additional calculations required to reflect age adjusted costs for the various health benefits offered by each of these different Funds is not warranted given any potential impact of those refinements to the calculations.

Each of these funds get separately negotiated contributions for actives as opposed to retirees. While it is not practical to separately identify and measure the age adjusted costs for each of these arrangements, it is reasonable to assume that the Welfare Fund managers recognize that benefit levels have to be set in consideration of the competing interests of the separate groups of participants. Benefit levels have to be set in a manner where contributions made on behalf of active employees do not act to cross subsidize the retirees over the long term. If not, the Fund managers would face internal political complications within their unions. For those funds that operate separate trusts for actives and retirees, cross subsidy could potentially violate fiduciary requirements as well.

Many of the benefits provided do not in fact have significantly higher costs for older retirees. Once an individual reaches age 40, the most commonly provided benefit, vision, has costs that level off. The next most common benefit, dental, has costs that actually tend to decrease with age. The third most common benefit, prescription drug coverage, has costs that substantially increase with age. However, the prescription benefit provided to retirees is often different than that provided for active employees. For Medicare eligible retirees, Medicare Part D offers a variety of ways that a benefit can be provided at substantially lower costs. Even for non-Medicare retirees, the Welfare Fund might offer a more limited coverage and/or premium reimbursement. With all of these opportunities for cost management, and with the political incentive to keep retiree costs within the retiree allocation of funds, the Actuary has concluded that any Welfare Fund cross subsidization has to be relatively insignificant in the long run, especially when considered that no single fund represents a majority of the costs of these benefits. While there may be some short run cross subsidies applicable to some of the Welfare Funds, the Actuary has concluded that the overall difference in costs would not be material in relation to the entire amounts measured in the OPEB actuarial valuation, and has elected to value any Welfare Fund benefits on a pooled contribution basis.

A review of the historic per capita contributions to the Welfare Funds showed that there were sometimes temporary supplemental contributions, resulting in an apparent leveling of the Welfare Fund contributions or even an apparent decline in certain contribution rates for some groups. Beginning with the June 30, 2007 OPEB actuarial valuation, the actuarial assumptions for the starting Welfare Fund contributions were revised to reflect a three-year trended average of reported annual contribution amounts for current retirees. A trended average was used instead of a single reported Welfare Fund amount to smooth out negotiated variations. For the June 30, 2009 through June 30, 2013 OPEB actuarial valuations, certain lump-sum payments to the Welfare Funds on behalf of retirees were included in the three-year average. Furthermore, for the June 30, 2010 through June 30, 2013 OPEB actuarial valuations, retroactive adjustments to Welfare Fund contribution rates were used in the trended average as of the dates they were effective (i.e., using the retroactive date).

For the June 30, 2014 OPEB actuarial valuation, the current level of Welfare Fund contributions and the current schedule of $25 increase amounts for the four years starting July 1, 2014 (plus an additional $100 for fiscal year 2016) is reflected as the assumed amount of Welfare Fund contribution required. Thereafter, the valuation assumes that the contribution amount to the Welfare Funds will increase at the Welfare Plan trend rates. Based on historic negotiated welfare fund contributions, the long term Welfare Plan trend rate was decreased from 5.0% used in the June 30, 2014 valuation to 3.5% used in the June 30, 2015 valuation.

Appendix D addresses the assumptions in more detail.

Medicare Part B Premium Reimbursement

Upon application, the City and certain Component Units reimburse the Medicare Part B Premium for all Medicare-eligible retirees and eligible covered dependents. The reimbursement includes the base Part B premium and any additional premium charged to high-income retirees via the Income Related Monthly Adjustment Amounts (IRMAA). The recently legislated change in the scheduled IRMAA amounts (MACRA) are reflected in the June 30, 2014 OPEB actuarial valuation.

Reimbursement is computed and paid on a calendar year basis. Due to administrative processing, reimbursement occurs during the following fiscal year. For example, Calendar Year 2013 Medicare Part B Premiums were generally reimbursed in August 2014, with IRMAA reimbursed during March 2015.

The June 30, 2014 OPEB actuarial valuation projects Medicare Part B Premium reimbursements for premiums to be paid starting July 1, 2014. The OA understands that the City takes into account for Fiscal Year 2015 an estimate of the Medicare Part B Premiums for the period from January 1, 2015 through June 30, 2015 as well as known Calendar Year 2014 costs.

It should also be noted that the Medicare Part B Premiums for retirees of certain Component Units and other entities are considered obligations of the City and have been included in the City results rather than as obligations of those particular Component Units.

- Medicare Part B Premium reimbursement amounts have been updated to reflect actual premium rates announced for calendar years through 2016, including changes adopted as part of the Bipartisan Budget Act of 2015. Due to there being no cost-of-living increase in Social Security benefits for Calendar Year 2016, most Medicare Part B participants will not be charged the Medicare Part B premium originally projected or ultimately announced for 2016. The initially projected Medicare Part B premium was artificially increased so that the overall amount collected by the Center for Medicare and Medicaid Services (CMS) would be sufficient for the needs of the Medicare Part B program. The Bipartisan Budget Act allowed for certain borrowing of funds, but still resulted in a stated Part B premium amount in excess of the amount sufficient for the Part B Program if collected for all participants. These changes for Calendar Year 2016 are reflected in the valuation. Thus, for the June 30, 2015 OPEB actuarial valuation (i.e., Fiscal Year 2016), the annual premium used of $1,289.22 equals six months of the Calendar Year 2015 premium plus six months of:

  - 70% of the Calendar Year 2015 monthly premium (i.e., $104.90), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and

  - 30% of the announced Calendar Year 2016 monthly premium (i.e., $121.80), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2016 amount.

  This blended premium reflects the overall amount collected for Medicare Part B and therefore is a more accurate measure upon which to base future projections.

Additionally, experience shows that not all eligible retirees/dependents apply for Medicare Part B Premium reimbursement each year. Beginning with the June 30, 2008 OPEB actuarial valuation, this experience is reflected as a separate assumption (i.e., the percentage of eligible retirees/dependents assumed to apply for Medicare Part B Premium reimbursement). Effective with the June 30, 2010 OPEB actuarial valuation, OLR informed the OA that individuals who waive Basic Coverage are not permitted to apply for Medicare Part B Premium reimbursement.

For the June 30, 2013 and the June 30, 2012 OPEB actuarial valuations, OLR provided the OA with information regarding which individuals had requested Medicare Part B Premium reimbursement. The overall number indicated as receiving Medicare Part B Premium reimbursement was consistent with the valuation assumption. However, the detailed data was not fully consistent with the understanding of the OA regarding the benefit. The Actuary has concluded that the data was not sufficiently credible for this purpose, and that the benefit provision is appropriately reflected in the separate assumption regarding the percentage of retirees/dependents assumed to apply for Medicare Part B Premium reimbursement**.**

Stabilization Fund

The City maintains and has historically contributed to the Health Insurance Stabilization Reserve Fund (Stabilization Fund). Certain Component Units are understood to have contributed to the Stabilization Fund in situations where the GHI/EBCBS premiums paid would be lower than the HIP benchmark premium. In addition, the Stabilization Fund receives dividends from participating insurance carriers including the GHI/EBCBS arrangement.

The Stabilization Fund has been used for various purposes in the past. For example, when the non-Medicare GHI/EBCBS premium rate was greater than the non-Medicare HIP HMO premium rate for short periods historically, the Stabilization Fund made up the difference between the non-Medicare GHI/EBCBS premium rates and non-Medicare HIP HMO premium rates, until such time as the benefits provided under those arrangements were adjusted to bring the financing into balance. In recent years, the Stabilization Fund has been used to provide the following health related benefits, based on financial information on the Stabilization Fund provided to the OA by OLR:

- A GHI Home Care benefit for certain non-Medicare participants.

- Welfare Fund contributions for the Line-of-Duty Survivors.

- Injectables and Chemotherapy Drug plan for certain non-Medicare participants (formerly referred to as “PICA” but psychotropic and asthma drugs are not currently covered).

- New York County Health Services Review Organization for utilization review for the GHI/EBCBS arrangement.

- Healthline (Intracorp) providing pre-certification of hospitalization for GHI/EBCBS participants.

In addition, the Stabilization Fund has been used for the following purposes:

- Under the 2009 Health Benefits Agreement, certain funds were used by the City for purposes other than Program benefits.

- During Fiscal Year 2010, certain funds were used to set up a Minimum Premium Account for the Empire insurance arrangement. The Stabilization Fund was reimbursed for those monies by the City during Fiscal Year 2011. During Fiscal Years 2014 and 2015, certain funds were used to set up a Minimum Premium Account for the GHI insurance arrangement, with the Stabilization Fund reimbursed for a portion of those monies during Fiscal Year 2015.

- The Stabilization Fund has reimbursed the City, the various Component Units and various other entities participating in the Program for a portion of Welfare Fund contributions.

- Under the 2014 MLC Health Savings Agreement, the Stabilization Fund has conveyed to the City $1 billion to be used to support wage increases. The agreement also provides for up to a total amount of $150 million over the next four years to go to the Welfare Funds from the Stabilization Fund, as well as $60 million a year thereafter. In addition, the Stabilization Fund has made a contribution to fill the gap between savings realized from the savings program initiatives and the required savings target for the fiscal year.

The OA is not aware of any actuarial valuation performed by the Stabilization Fund for measurements under GASB43 or other purposes. Thus, the OA has not considered the impact of any such calculations on the analyses herein.

The City's current contributions to the Stabilization Fund provide benefits to both active and retired participants. In addition, the City can be considered to have historically contributed additional amounts to the Stabilization Fund each year via the mechanism of the margins on the GHI and EBCBS non-Medicare insured rates. These amounts exceed the amount that is estimated to be used to provide benefits to current retirees, including the amounts estimated to provide Welfare Fund contributions on behalf of retirees.

The calculations do not assume that any of the existing Stabilization Fund assets will be used for retiree benefits.

The amount reflected for the Stabilization Fund in the current OPEB actuarial valuation is based on an estimated allocation between active and retired participants of actual Fiscal Year 2016 Stabilization Fund benefits. The allocation reflects the fact that retirees are on average older and have more costly medical benefits than actives, and separates out Welfare Fund contribution reimbursements from other Stabilization Fund benefits. The allocation amount is used to develop a load that is only reflected in the OPEB actuarial valuation for the City. The allocation for this valuation reflects the impact of the 2014 MLC Healthcare Savings Agreement by reflecting higher PICA rebates resulting from one of the initiatives.

The load of 0.4% used in the June 30, 2015 OPEB actuarial valuation was changed from 0.6% used in the prior valuation. Welfare Fund contributions reimbursed by the Stabilization Fund are considered a part of Welfare Fund benefits and are not included in the determination of the Stabilization Fund load.

The Stabilization Fund load is added to both the GASB45 results for the City and the GASB43 results of the Plan.

OPEB Coverage Groupings

The City subsidizes only some of the OPEB described herein for various groups of NYCRS retirees.

Table IV-1 on the next page presents, by payroll agency, those benefits assumed to be provided by the City for purposes of the June 30, 2015 OPEB actuarial valuation.

Table IV-2 on the succeeding page presents, by payroll agency, those benefits assumed to be provided by the City for purposes of the June 30, 2014 OPEB actuarial valuation.

There is no change in coverage from the prior OPEB actuarial valuation.

For the Component Units included in the OPEB actuarial valuation, the benefit categories not paid by the City are reflected in the results of the individual Component Units.

Table IV - 1

New York City Retirement Systems

Components of Post-Retirement Medical Benefits

Paid By New York City

Fiscal Year 2016

Payroll Agency	Health Insurance	Welfare Fund [1]	Medicare Part B
Charter Schools	Yes	Yes	Yes
Custodial Engineer	Yes	Yes	Yes
CUNY - Senior Colleges	No*	Yes [2]	Yes
CUNY - Community Colleges	Yes	Yes	Yes
Correction Department	Yes	Yes	Yes
CP Engineers	No*	No	No
Courts (State)	Yes	Yes	Yes
DA Investigators	Yes	Yes	Yes
Department of Education	Yes	Yes	Yes
HSG Develop Corp	No	No	No
Health and Hospital Corp	No*	No	Yes
Housing Authority	No*	No	No*
Housing Police (Retirees Only)	Yes	Yes	No*
Regular	Yes	Yes	Yes
REMIC	NA	NA	NA
Sanitation	Yes	Yes	Yes
School Construction Authority	Yes	No	Yes
State Housing	No	No	No
Transit Authority	No*	No	No
Transit Police (Retirees Only)	Yes	Yes	Yes
Triboro Bridge	No	No	No
Water Finance Authority	No*	No	Yes
POLICE	Yes	Yes	Yes
FIRE	Yes	Yes	Yes
TIAA - Senior Colleges	No*	No	Yes
TIAA - Community Colleges	Yes	Yes	Yes
ECF	No	No	No
LOD Survivors	Yes	No	Yes

* The City pays these benefits upfront, not out of the NYCRHBT, and then is reimbursed.

[1] Welfare Fund coverage not available to pre-1/1/1971 retirees. LOD death beneficiary coverage provided through Stabilization Fund.

[2] The City pays the Welfare Fund for non-pedagogical CUNY Senior Colleges retirees.

Table IV - 2
New York City Retirement Systems
Components of Post-Retirement Medical Benefits
Paid By New York City
Fiscal Year 2015

Payroll Agency	Health Insurance	Welfare Fund [1]	Medicare Part B
Charter Schools	Yes	Yes	Yes
Custodial Engineer	Yes	Yes	Yes
CUNY - Senior Colleges	No*	Yes [2]	Yes
CUNY - Community Colleges	Yes	Yes	Yes
Correction Department	Yes	Yes	Yes
CP Engineers	No*	No	No
Courts (State)	Yes	Yes	Yes
DA Investigators	Yes	Yes	Yes
Department of Education	Yes	Yes	Yes
HSG Develop Corp	No	No	No
Health and Hospital Corp	No*	No	Yes
Housing Authority	No*	No	No*
Housing Police (Retirees Only)	Yes	Yes	No*
Regular	Yes	Yes	Yes
REMIC	NA	NA	NA
Sanitation	Yes	Yes	Yes
School Construction Authority	Yes	No	Yes
State Housing	No	No	No
Transit Authority	No*	No	No
Transit Police (Retirees Only)	Yes	Yes	Yes
Triboro Bridge	No	No	No
Water Finance Authority	No*	No	Yes
POLICE	Yes	Yes	Yes
FIRE	Yes	Yes	Yes
TIAA - Senior Colleges	No*	No	Yes
TIAA - Community Colleges	Yes	Yes	Yes
ECF	No	No	No
LOD Survivors	Yes	No	Yes

* The City pays these benefits upfront, not out of the NYCRHBT, and then is reimbursed.

[1] Welfare Fund coverage not available to pre-1/1/1971 retirees. LOD death beneficiary coverage provided through Stabilization Fund.

[2] The City pays the Welfare Fund for non-pedagogical CUNY Senior Colleges retirees.

<u>Subsequent Events</u>

National Healthcare Reform

Annually, the Actuary reviews the OPEB actuarial assumptions employed to estimate the impact of NHCR on OPEB measured in the valuation. The Actuary believes that no changes in the approach to measuring the impact of NHCR are required at this time. At some future date, should other provisions of the NHCR laws be modified, delayed or repealed, in whole or in part, the implications would be evaluated and reflected in future OPEB actuarial valuations.

GASB 74 and 75

GASB has issued GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* (GASB 74), and GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* (GASB75). The provisions of GASB74 are effective for financial statements for fiscal years beginning after June 15, 2016. The provisions of GASB75 are effective for fiscal years beginning after June 15, 2017. The Actuary has not yet evaluated the impact of these new standards on the calculations included in this valuation. Revisions in accounting standards could result in significant changes in the measurements produced by the valuation.

SECTION V

ACTUARIAL ASSUMPTIONS AND METHODS

The actuarial assumptions used in the OPEB actuarial valuations are classified as those used in the NYCRS pension actuarial valuations and those specific to the OPEB actuarial valuations.

The OPEB-specific actuarial assumptions and methods used in the June 30, 2015 OPEB actuarial valuation are generally the same as those used in the June 30, 2014 OPEB actuarial valuation, except that:

- The following have been reviewed and updated as necessary to reflect more recent experience:
    - Per capita claims costs.
    - Welfare Fund contributions.
    - Medicare Part B Premiums.
    - The Stabilization Fund load (0.4%, changed from 0.6%).
    - The estimated margin amounts on non-Medicare premiums expected to be returned and thus not reflected in the age-adjusted cost of coverage.
    - Assumptions for demographic characteristics of dependents where data is unavailable.
    - Assumption for percent of Active/Inactive members ultimately eligible for OPEB (40%, unchanged).
- The trend factors were reviewed. The health care cost trend assumptions used represent the annual rate of change in the per capita claims cost over time due to factors such as medical inflation, utilization and intensity of services, technology improvements, cost-shifting and leveraging of fixed-dollar plan design features. The primary purpose of the trend assumption is to determine the best estimate of the long-term costs of the Program. Therefore, the focus is on establishing a reasonable pattern of trend rates over many years, with less concern about attempting to predict the short-term fluctuations in costs. The trend assumption is based on a select and ultimate model; that is, near-term trend rates may differ from the ultimate trend level.

The near term rate for the Pre-Medicare plans has been based on historical average trend rates under the Program. Over the last 15 years, the benchmark HIP HMO rate has averaged 8.30%. In addition, recent industry surveys for large group plans have been averaging between 8.0% and 8.5%.

This near term rate is assumed to decline gradually to an ultimate level of 5.0%, consisting of 2.5% CPI, 1.5% real assumed GDP and 1.0% excess growth differential.

The excess growth cost differential is a concept that is used in CMS projections of long-term growth of healthcare costs in the U.S. This is an expectation that long-term health care costs will continue to increase faster than the general economy even after health care costs are constrained. This differential is defined by the CMS Office of the Actuary as "the difference between (i) the U.S. per capita growth rate in age-gender-adjusted health-care costs and (ii) the per capita growth rate in GDP"[13] and includes the impact of technology improvements on the long-term health care spending.

For the Medicare Plans, the benchmark plan GHI Senior Care has averaged 2.47% over the last 15 years. This amount is lower than the assumed 5.0% trend for the Medicare plans, since historic costs for Medicare coordinated arrangements have been impacted by legislative changes that have suppressed both the cost of the Medicare program and the cost of the plan. The selected trend assumption does not assume that the recent historic cost shifting from the Medicare program will continue at current levels in the short term.

The Medicare Part B Premium trend is slightly higher than the overall Medicare Plan trend rate since Medicare suppression and cost shifting has been more concentrated in the hospital portion of the Medicare plan arrangements, with doctor costs more subject to political pressures (including the so called "doc fix" that was the heart of the recently enacted MACRA). Over the last 15 years, the base Medicare Part B premium has averaged an increase of 5.55% per annum.

For the Welfare Fund contribution trend, the historical negotiated increase rates for the larger Welfare funds over the past 18 years were examined. There was an average increase of 2.5% over the past 18 years, which was significantly lower than the 5.0% assumed in the previous valuation for the period after the current contracts. This rate was lowered to 3.5% for the June 30, 2015 valuation.

[13] https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Downloads/ProjectionMethodology2016.pdf

- The factor applied to HIP Medicare HMO costs in addition to medical trend, to reflect expected changes in Medicare Advantage reimbursements, was reviewed in light of actual Calendar Year 2016 HIP premiums.

- Welfare Fund contributions have been updated to reflect recent contribution rates. Recently negotiated amounts including scheduled increases for Fiscal Years 2016 through 2018 were reflected.

- Medicare Part B Premium reimbursement amounts have been updated to reflect actual premium rates announced for calendar years through 2016, including changes adopted as part of the Bipartisan Budget Act of 2015. Due to there being no cost-of-living increase in Social Security benefits for Calendar Year 2016, most Medicare Part B participants will not be charged the Medicare Part B premium originally projected or ultimately announced for 2016. The initially projected Medicare Part B premium was artificially increased so that the overall amount collected by the Center for Medicare and Medicaid Services (CMS) would be sufficient for the needs of the Medicare Part B program. The Bipartisan Budget Act allowed for certain borrowing of funds, but still resulted in a stated Part B premium amount in excess of the amount sufficient for the Part B Program if collected for all participants. These changes for Calendar Year 2016 are reflected in the valuation. Thus, for the June 30, 2015 OPEB actuarial valuation (i.e., Fiscal Year 2016), the annual premium used of $1,289.22 equals six months of the Calendar Year 2015 premium plus six months of:

    - 70% of the Calendar Year 2015 monthly premium (i.e., $104.90), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and

    - 30% of the announced Calendar Year 2016 monthly premium (i.e., $121.80), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2016 amount.

  This blended premium reflects the overall amount collected for Medicare Part B and therefore is a more accurate measure upon which to base future projections.

- Aging – For the June 30, 2015 OPEB actuarial valuation, an age adjustment was applied to the cost of Other HMOs. In the previous valuation, these premiums were assumed to be community rated.

The actuarial assumptions used to value the NYCRS are provided in the following five reports (the Silver Books), dated February 10, 2012:

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2011 for the New York City Employees’ Retirement System.

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2011 for the New York City Teachers’ Retirement System.

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2011 for the New York City Board of Education Retirement System.

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2011 for the New York City Police Pension Fund.

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2011 for the New York City Fire Department Pension Fund.

The NYCRS pension actuarial assumptions used in the June 30, 2015 OPEB actuarial valuation are unchanged from those used in the June 30, 2014 OPEB actuarial valuation except for post-retirement mortality as prepared by the Actuary and adopted by each NYCRS Board of Trustees during Fiscal Year 2016. The new tables of post-retirement mortality are based primarily on the experience of each system and the application of Mortality Improvement Scale MP-2015 published by the Society of Actuaries in October 2015. Scale MP-2015 applied on a generational basis replaced Mortality Improvement Scale AA which was applied on a static projection basis.

Those demographic assumptions requiring Board approval for determining pension obligations were adopted by each Board of Trustees during Fiscal Years 2012 and 2016. All other demographic and salary increase assumptions are reflected in the June 30, 2015 OPEB actuarial valuation.

Additional details regarding the actuarial assumptions and certain methods used in the June 30, 2015 OPEB actuarial valuation are set forth in Appendices D, E and F.

Actuarial Cost Method

The Entry Age Actuarial Cost Method (one of the Actuarial Cost Methods set forth in GASB43 Paragraph 34.d and GASB45 Paragraph 13.d) is used to determine the Annual Required Contribution (ARC) and the Unfunded Actuarial Accrued Liability (UAAL). The method is unchanged from the method used in the previous OPEB actuarial valuation.

Under this method, as used in this OPEB actuarial valuation, the Actuarial Present Value (APV) of Benefits (APVB) of each individual included in the actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit age(s). The employer portion of this APVB allocated to a valuation year is the Employer Normal Cost. The portion of this APVB not provided for at a valuation date by the APV of Future Employer Normal Costs or future member contributions is the Actuarial Accrued Liability (AAL).

The excess, if any, of the AAL over the Actuarial Asset Value (AAV) is the Unfunded Actuarial Accrued Liability (UAAL).

Under this method, actuarial gains (losses), as they occur, reduce (increase) the UAAL and are explicitly identified and amortized.

Increases (decreases) in obligations due to benefit changes, actuarial assumption changes and/or actuarial method changes are also explicitly identified and amortized.

For the June 30, 2012 OPEB actuarial valuation, all actuarial gains (losses) that occurred prior to the adoption of the Entry Age Actuarial Cost Method were effectively included in the measurement of the change in Actuarial Cost Method.

For subsequent OPEB actuarial valuations, the Unfunded Actuarial Accrued Liability due to accumulated funding deficiencies (e.g., not having funded previously measured Annual Required Contribution amounts) is separately identified and amortized over a one-year period.

The OPEB actuarial valuation reflects the covered earnings of a participant only once, based on the participant's employer on the valuation date. This method is consistent with the method used in the previous valuation. For individuals who are not in one of the Component Units included in the Report but who have only partial City–provided benefits, their covered earnings are not included.

Actuarial Asset Valuation Method

The Actuarial Value of Assets is equal to the Market Value of Assets. The method is unchanged from the previous OPEB actuarial valuation.

Amortization of Transition Liability

The Transition Liability was amortized over an open one–year period.

Amortization of Changes to UAAL

All changes in the Unfunded Actuarial Accrued Liability as of June 30, 2015 are being amortized over a one-year period for purposes of calculating the ARC except for the amount of change in UAAL attributable to the change in the Actuarial Cost Method, established as of June 30, 2012, which is being amortized over a closed 10-year period using level-dollar amortization. This is the minimum period permitted in cases where there is a significant reduction in the UAAL in accordance with Paragraph 13.f(3) of GASB45.

GASB45 requires the calculation of the ARC, but does not require that an employer actually contribute its "required" contribution. Amounts "required" but not actually set aside to pay for these benefits are accumulated on the employer's books as the Net OPEB Obligation (NOO).

Except for the UAAL established in conjunction with the change in the Actuarial Cost Method as of June 30, 2012, the City and Component Units, in consultation with their auditors, have elected to amortize the Initial UAAL and any subsequent UAAL bases over a one-year period. The use of a one-year amortization period is essentially equivalent to recognizing the entire UAAL into the ARC immediately.

The “known amount” (e.g., a separately identified actual amount that is included in the ARC related to the amortization of past employer contribution deficiencies), has been used to calculate the ARC Adjustment for purposes of the Annual OPEB Cost (AOC). This approach is consistent with the language of GASB45 Paragraph 16 which states that the ARC Adjustment should be calculated using the same amortization period that was used in determining the ARC for the year. This approach was confirmed in GASB Technical Bulletin No. 2008-1 issued December 15, 2008.

The OA understands that there were no obligations for Other Postemployment Benefits on the books of the City or the Component Units as of Transition. Therefore, for Fiscal Year 2006, the AOC was equal to the Annual Required Contribution.

Implicit Rate Subsidy

These results reflect, beginning Fiscal Year 2009, employer contributions for the City and certain Component Units, toward the AOC that include certain expenditures that had previously been nominally allocated to active costs rather than retiree costs. The Fiscal Year 2009 employer contributions reflected the cumulative impact of the nominal re-allocation of these expenditures, retroactive to Fiscal Year 2006.

The Implicit Rate Subsidy is the difference between the age-adjusted premiums approximating retiree claims costs and the actual cash premiums paid on behalf of retirees. The concept of age-adjusted premiums is explained in Appendix D. The Implicit Rate Subsidy is assumed to be the additional cost for coverage of retirees that, in this case, had initially been allocated to active costs because the cash premiums do not vary by age of the covered individual.

For Fiscal Years 2006 through 2009, the Implicit Rate Subsidy was estimated using information provided to the New York City Office of the Actuary (OA) by the New York City Office of Management and Budget (OMB). For Fiscal Years beginning 2010, the Implicit Rate Subsidy was estimated by the OA directly from the assumptions and data used in the respective OPEB actuarial valuations, reflecting as cash premium costs the amounts directly paid for Basic Benefits and amounts paid to the Stabilization Fund in lieu of the benchmark HIP premium. Effective with the June 30, 2015 valuation, the age-adjusted premiums used reflect the difference in age-adjusted premiums and cash premium costs for Other HMOs.

Funding Policy

The City has set aside certain assets for OPEB benefits in the NYCRHBT. The assets in the NYCRHBT are used to pay benefits during the fiscal year, with the City potentially reimbursing the trust and making any additional contributions on an annual basis. As there is no set policy to contribute any specified actuarially determined contribution, there is no assurance that assets will be available to pay benefits when due.

SECTION VI

PRINCIPAL RESULTS UNDER GASB43

For the New York City OPEB Plan, the principal results of the June 30, 2015 and June 30, 2014 OPEB actuarial valuations, prepared in accordance with the requirements of GASB43, are summarized in the following Table VI-1:

TABLE VI-1

PRINCIPAL RESULTS OF THE GASB43
ACTUARIAL VALUATIONS FOR THE NEW YORK CITY OPEB PLAN
AS OF JUNE 30, 2015 AND JUNE 30, 2014

($ Millions)

Valuation Date	June 30, 2015	June 30, 2014
Fiscal Year	2016	2015
Actuarial Present Value of Benefits (APVB)	$ 126,797.4	$ 116,944.9
Actuarial Asset Value (AAV)	$ 3,396.5	$ 2,378.1
Unfunded Actuarial Accrued Liability[1] (UAAL)	$ 73,026.6	$ 67,985.2
Annual Required Contribution (ARC)		
Normal Cost – BOY	$ 3,691.4	$ 3,454.1
UAAL Payment[2] – BOY	87,323.7	84,022.9
UAAL Payment[3] – BOY	(2,290.4)	(2,290.4)
Interest to EOY	3,549.0	3,407.5
Total ARC	$ 92,273.7	$ 88,594.1

[1] Based on Entry Age Actuarial Cost Method.

[2] Based on One-Year Amortization.

[3] Based on a Closed 10-Year Amortization Period.

Detailed results of the June 30, 2015 GASB43 actuarial valuation of the OPEB Plan are shown in Appendix C-7.

In Fiscal Years 2006, 2007 and 2008, financial statements under GASB43 were prepared for the NYCRHBT. Beginning in Fiscal Year 2009, NYCRHBT accounting was replaced by OPEB Plan accounting. As such, all GASB43 results are equal to the applicable GASB45 results shown in Table VII-1 and in Appendix C-6 of this Report.

SECTION VII

PRINCIPAL RESULTS UNDER GASB45

For the City of New York (City) and certain of its Component Units, the principal results of the June 30, 2015 and the June 30, 2014 OPEB actuarial valuations, prepared in accordance with the requirements of GASB45, are summarized in the following Table VII-1:

TABLE VII-1

PRINCIPAL RESULTS OF THE GASB45 ACTUARIAL VALUATIONS AS OF JUNE 30, 2015 AND JUNE 30, 2014

($ Millions)

Valuation Date	June 30, 2015			June 30, 2014		
Fiscal Year	2016			2015		
Entity	City	Component Units[1]	Total	City	Component Units[1]	Total
Actuarial Present Value of Benefits (APVB)	$ 126,797.4	$ 10,620.6	$ 137,418.0	$ 116,944.9	$ 9,778.8	$ 126,723.7
Actuarial Asset Value (AAV)[2]	$ 3,396.5	$ 0.0	$ 3,396.5	$ 2,378.1	$ 0.0	$ 2,378.1
Unfunded Actuarial Accrued Liability[3] (UAAL)	$ 73,026.6	$ 6,281.2	$ 79,307.8	$ 67,985.2	$ 5,736.4	$ 73,721.6
Normal Cost[3]	$ 3,691.4	$ 347.7	$ 4,039.1	$ 3,454.1	$ 322.7	$ 3,776.8
Annual Required Contribution (ARC)						
Normal Cost - BOY	$ 3,691.4	$ 245.2	$ 3,936.6	$ 3,454.1	$ 229.2	$ 3,683.3
UAAL Payment[4] - BOY	87,323.7	4,800.9	92,124.6	84,022.9	4,526.6	88,549.5
UAAL Payment[5] - BOY	(2,290.4)	(117.1)	(2,407.5)	(2,290.4)	(117.1)	(2,407.5)
Interest to EOY	3,549.0	197.2	3,746.2	3,407.5	185.6	3,593.1
Total ARC[6]	$ 92,273.7	$ 5,126.2	$ 97,399.9	$ 88,594.1	$ 4,824.3	$ 93,418.4
Net OPEB Obligation at End Of Fiscal Year[6]	$ 89,376.6	$ 5,029.6	$ 94,406.2	$ 85,458.2	$ 4,703.9	$ 90,162.1

[1] ECF, HHC, NYCHA, SCA and WFA.

[2] Reflects Revisions for Fiscal Year 2015 as noted in Appendix A.

[3] Based on Entry Age Actuarial Cost Method.

[4] Based on One-Year Amortization.

[5] Based on a Closed 10-Year Amortization Period.

[6] Excludes NYCHA.

Detailed results of the June 30, 2015 GASB45 actuarial valuation for the City and certain Component Units are shown in Appendices C-1 through C-6.

SECTION VIII

ACTUARIAL CERTIFICATION

This Report presents the results of the June 30, 2015 actuarial valuation of the Other Postemployment Benefits (OPEB) provided under the New York City Health Benefits Program (Program).

A comparison with the June 30, 2014 OPEB actuarial valuation results is also provided. For information on the June 30, 2014 OPEB actuarial valuation, see “Report on the Tenth Annual Actuarial Valuation of Other Postemployment Benefits Provided under the New York City Health Benefits Program,” dated September 17, 2015 (Tenth Annual OPEB Report).

These OPEB actuarial valuation results are intended to form the basis for financial reporting under Governmental Accounting Standards Board (GASB) Statement No. 43 (GASB43) for the New York City OPEB Plan (the Plan) and for accounting and financial reporting under GASB Statement No. 45 (GASB45) for the City of New York (City) and certain non-City entities (Component Units) for Fiscal Year 2016.

Beginning with the June 30, 2008 OPEB actuarial valuation, the determination of annual employer contributions includes certain non-trust activity for the City and certain expenditures that had previously been nominally allocated to active costs rather than retiree costs (i.e., an approximate value of the Implicit Rate Subsidy) for HHC. These determinations were retroactive to Fiscal Year 2006 and the cumulative impact was included in Fiscal Year 2009 PAYG employer contributions and in the June 30, 2009 Net OPEB Obligation.

Beginning with Fiscal Year 2010, the determination of annual employer contributions also includes certain non-trust activity for the City and an approximate value of the Implicit Rate Subsidy for HHC. For Fiscal Year 2009, the Implicit Rate Subsidy was estimated by the New York City Office of Management and Budget (OMB). For subsequent fiscal years, the Implicit Rate Subsidy was estimated directly from the assumptions and data used in the respective OPEB actuarial valuations.

The results contained in this Report are based upon census data and financial information provided by the City and certain Component Units.

The data used for the June 30, 2015 OPEB actuarial valuation is that of the New York City Retirement Systems (NYCRS)[14] with supplemental data provided by the New York City Office of Labor Relations (OLR), ECF and CUNY.

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[14] New York City Employees’ Retirement System (NYCERS)
New York City Teachers’ Retirement System (TRS)
New York City Board of Education Retirement System (BERS)
New York City Police Pension Fund (POLICE)
New York Fire Department Pension Fund (FIRE)

Effective with the June 30, 2007 OPEB actuarial valuation, the City is responsible for payment of Welfare Fund benefits to certain non-pedagogical CUNY Senior College retirees of the NYCRS. The data for current CUNY retirees identified which individuals were non-pedagogical retirees. Since a Union Welfare Fund code is not available in the active, active/inactive and deferred vested data to distinguish the non-pedagogical staff, it was not possible to directly segregate pedagogical and non-pedagogical CUNY Senior College staff in these populations. An adjustment was made to estimate these populations' Welfare Fund liabilities for the City. For the three systems (NYCERS, BERS and TRS) with CUNY Senior College non-retiree participants, the CUNY Senior College Welfare Fund liability was allocated between CUNY and the City based on the ratio of each System's actual non-pedagogical to total CUNY Senior College retirees headcounts.

Effective with the June 30, 2007 OPEB actuarial valuation, the City is responsible for payment of medical benefits and Welfare Fund contributions for CUNY TIAA Community College retirees. The data for current active employees identified which individuals were Senior versus Community College employees. Prior to the June 30, 2013 OPEB actuarial valuation, a Senior College versus Community College code was not available in the retiree data provided to the OA by OLR. Thus, it was not possible to directly segregate these populations. An adjustment was made allocating retiree and deferred vested liabilities between CUNY and the City based on the historic ratio of CUNY Senior College and Community College employees in CUNY TIAA and information provided by CUNY to Buck about the portion of existing retirees that were Senior versus Community College participants.

The data provided by OLR to the OA for the June 30, 2013 OPEB actuarial valuation for CUNY TIAA retirees included a Senior/Community College indicator and gender code for the vast majority of these retirees. Of the 2,542 retirees, 11 were missing the Senior/Community College indicator and 59 were missing the gender indicator. Consistent with the assumption used for missing data in the June 30, 2012 OPEB actuarial valuation, it was assumed that 75% of the 11 retirees were Senior College retirees and 25% were Community College retirees and it was assumed that all 59 retirees missing the gender indicator are female. All of the records provided for the CUNY TIAA retirees as of June 30, 2014 and June 30, 2015, contained both a Senior/Community College and a gender indicator.

Effective with the June 30, 2010 OPEB actuarial valuation, results for the New York City Off-Track Betting Corporation (OTB) are not included in GASB45 results. It is the understanding of the Actuary that, effective May 26, 2011, neither the City nor the Plan has any OPEB obligation for current or future OTB retirees.

The Office of the Actuary (OA) and Buck Consultants, LLC (Buck) performed tests on this census data for reasonability and, on the basis of these tests, the Actuary believes the data is sufficiently complete and appropriate for use in the June 30, 2015 OPEB actuarial valuation.

The following discusses the June 30, 2015 census data for certain Component Units:

- ECF provided separate data directly to the OA. The ECF employees and retirees are not members of the NYCRS.

- HHC and WFA confirmed that the number of participants used in the OPEB actuarial valuation was reasonable for purposes of measuring OPEB costs.

- SCA confirmed that the number of participants used in the OPEB actuarial valuation was reasonable for purposes of measuring OPEB costs.

  However, employer contribution (i.e., PAYG) information provided to the OA indicated that the number of SCA retirees identified in the OA census data as in receipt of Welfare Fund benefits is less than the number of retirees for whom SCA is paying OLR.

  This discrepancy remains under investigation.

  The overall impact of this discrepancy is less than 5% of the total Actuarial Present Value of Benefits (APVB) for SCA, if the problem is limited to current retirees. It should be noted that the impact could be greater, perhaps 20% to 25% of APVB, if data issues of similar magnitude as historic discrepancies affect the identification of future as well as current retirees. However, it appears that many of the retirees in question are being valued elsewhere in the OPEB actuarial valuation and are being assumed to be charged to the City. Moreover, as a percentage, the discrepancy seems to be decreasing over time. Since SCA is a Blended Component Unit of the City, the impact on the City results appears to be negligible.

- NYCHA was provided counts for the census data used for its OPEB actuarial valuation. NYCHA confirmed that the number of participants used in the OPEB actuarial valuation was within 0.4% of those used for measuring OPEB costs. After investigation, the Actuary concluded that the data was reasonable for this purpose.

The actuarial assumptions outlined in this Report were selected for use for the City of New York rather than based on the experience of any individual entity. The obligations for OPEB for any individual Component Unit might differ if determined under its own, separate, OPEB actuarial valuation.

The determination of GASB43 and GASB45 costs and obligations have been made on the basis of the understanding of the OA regarding the Program (Substantive Plan) and on the interpretation by the OA of the requirements of GASB43 and GASB45. Beginning with the June 30, 2008 OPEB actuarial valuation, the requirements of GASB43 and GASB45 have been interpreted to take into account the Question and Answer (Q&A) 2009-8.81.4 of the GASB Comprehensive Implementation Guide.

The results contained in this report take into account the OA's current understanding of the enactment of National Health Care Reform (NHCR) (i.e., the Patient Protection and Affordable Care Act (PPACA) and the Health Care and Education Reconciliation Act (HCERA), signed into law on March 30, 2010), along with certain subsequently issued guidance.

The impact of NHCR has been reflected, beginning with the June 30, 2009 OPEB actuarial valuation, in changes in certain benefits and actuarial assumptions.

This Report has been prepared in accordance with generally accepted actuarial principles and procedures as of the valuation date. The actuarial assumptions used in the development of the GASB43 and GASB45 obligations include those used by the Chief Actuary of the New York City Office of the Actuary (Actuary) in her capacity as the Actuary for the NYCRS, to value the benefits payable by the NYCRS. These NYCRS pension actuarial assumptions are unchanged from those used in the June 30, 2014 OPEB actuarial valuation, except for postretirement mortality as proposed by the Actuary and adopted by each NYCRS Board of Trustees in Fiscal Year 2016. The new tables of post-retirement mortality are based primarily on the experience of each system and the application of Mortality Improvement Scale MP-2015 published by the Society of Actuaries in October 2015. Scale MP-2015 applied on as generational basis replaced Mortality Improvement Scale AA which was applied on a static projection basis.

Note: Separate actuarial assumptions shown in Appendix E and Appendix F were used to value OPEB for ECF participants and for CUNY TIAA participants, respectively.

While the Actuary believes that the assumptions are reasonable for financial reporting purposes, it should be understood that there is a range of assumptions that could be deemed reasonable that would yield different results. Moreover, while the Actuary considers the assumption set to be reasonable based on prior plan experience, it should be understood that future actuarial measurements may differ significantly from the current measurements presented in this Report due to such factors as the following: retiree group benefits program experience differing from that anticipated by the assumptions, changes in assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period), and changes in retiree group benefits program provisions or applicable law. Retiree group benefits models necessarily rely on the use of approximations and estimates, and are sensitive to changes in these approximations and estimates. Small variations in these approximations and estimates may lead to significant changes in actuarial measurements. Because of the limited scope of this measurement, this Report contains no analysis of the potential range of such future differences.

The Entry Age Actuarial Cost Method used to determine the Annual Required Contribution (ARC), the Annual OPEB Cost (AOC) and the Net OPEB Obligation (NOO) is one of the Actuarial Cost Methods permitted under GASB43 Paragraph 34.d and GASB45 Paragraph 13.d. The method is unchanged from the previous OPEB actuarial valuation.

The use of a one-year amortization of the Unfunded Actuarial Accrued Liability (UAAL), where permitted under GASB45, is included in this actuarial valuation. This period was chosen by the City and the Component Units included in this OPEB actuarial valuation in consultation with their respective auditors. The UAAL established as of June 30, 2012 in connection with the change in funding method is being amortized over a closed ten-year period which is the minimum amortization period in accordance with GASB45 Paragraph 13.f(3) where there is a significant reduction in the UAAL. The level dollar approach is used for the 10-year amortization.

GASB45 Paragraph 13.f(1) provides that an equivalent single amortization period should be calculated when components are amortized over different periods, and that the equivalent single amortization period calculated should not exceed 30 years. As the amortization amount required for the City and the Component Units included in this OPEB actuarial valuation exceeds the UAAL in all cases, the equivalent single amortization period would be less than 1 and meets the maximum amortization period requirement.

In preparing this Report, the staff of the OA has been assisted by and collaborated with the staff of Buck.

The Actuary states that this Report, and its attachments, is a Statement of Actuarial Opinion (SAO). The Actuary takes overall responsibility for the results herein.

The actuaries whose signatures appear below are Members of the American Academy of Actuaries (AAA) and, together, meet the Qualification Standards of the AAA to render this SAO. The actuaries certify that the assumptions used in this Report are reasonable for the purposes of measurement of the obligations under GASB43 and GASB45 contained herein.

Sherry Chan

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Chief Actuary
New York City Office of the Actuary

Robin Simon

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Principal, Consulting Actuary and Chief Actuary, Health Practice
Buck Consultants, LLC

APPENDIX A

Appendix A - Table 1

NEW YORK CITY HEALTH BENEFITS PROGRAM

New York City Other Postemployment Benefits Plan

Statement of Net Position

As of June 30, 2016 and June 30, 2015

		June 30, 2016 [1]		June 30, 2015 [2]
ASSETS				
Cash				
Settled Cash	$	1,503,320,035	$	897,652,587 [3]
Receivables				
Trust		3,187,712		2,749,044
DOE Welfare Fund		0		0
Medicare Part D		301,229		205,105
Other		64,194		0
Payables				
Investment Securities Purchased		(55,057,944)		(109,710,750)
Total Cash	**$**	**1,451,815,226**	**$**	**790,895,986**
Cash Equivalents				
US Treasury Bills	$	149,270,366	$	349,105,667
Commercial Paper		825,286,723		565,993,687 [3]
Asset-Backed Securities		0		10,002,800
Short Term Funds		121,017,472		57,759,952
Government Agency		0		49,829,375
Total Cash Equivalents	**$**	**1,095,574,561**	**$**	**1,032,691,481**
Fixed Income				
Corporate Bonds and Notes	$	9,368,934	$	65,054,879
Government and Agencies		1,806,852,288		2,032,481,335
Total Fixed Income	**$**	**1,816,221,222**	**$**	**2,097,536,214**
Prepaid Benefits / Expenses	$	40,902	$	222,295
Total Prepaid	**$**	**40,902**	**$**	**222,295**
Total Assets	**$**	**4,363,651,911**	**$**	**3,921,345,976**
LIABILITIES				
Medicare Part B	$	176,690,845	$	157,640,930
Benefits Payable		150,566,391		367,098,685
Trustee Fees Payable		23,471		46,902
Audit Fees Payable		40,000		35,921 [3]
Total Liabilities	**$**	**327,320,707**	**$**	**524,822,438**
NET POSITION				
Held in Trust for Benefit Payments	**$**	**4,036,331,204**	**$**	**3,396,523,538** [3]

[1] Based on Information Provided by OMB on August 29, 2016.
[2] Based on Information Provided by OMB on August 20, 2015 and Post-Publication Adjustments.
[3] Reflects Post-Publication Adjustments.

Appendix A - Table 2

NEW YORK CITY HEALTH BENEFITS PROGRAM

New York City Other Postemployment Benefits Plan

Statement of Changes in Net Position

As of June 30, 2016 and June 30, 2015

		June 30, 2016 [1]		June 30, 2015 [2]
ADDITIONS				
Employer Contributions				
Pay-As-You-Go				
Trust	$	2,660,262,046 [3]	$	2,943,663,268 [4]
Non-Trust		236,866,895		192,233,438
Other		0		0
Total Contributions	**$**	**2,897,128,941**	**$**	**3,135,896,706**
Earned Income				
Interest Income	$	16,320,916	$	5,778,245
Net Accrued Income		438,668		2,421,019
Net Realized Gain / (Loss)		865,762		694,942
Total Investment Income	**$**	**17,625,346**	**$**	**8,894,206**
Net Unrealized Gain / (Loss)		2,940,089		1,135,616
TOTAL ADDITIONS	**$**	**2,917,694,376**	**$**	**3,145,926,528**
DEDUCTIONS				
Benefit Payments				
Trust	$	2,040,648,748 [3]	$	1,934,788,988 [4]
Non-Trust		236,866,895		192,233,438
Sub-Total	$	2,277,515,643	$	2,127,022,426
Expenses				
Administrative Expenses	$	40,000	$	15,921 [5]
Legal Fees		0		0
Trustee Fees		331,067		508,335
Sub-Total	$	371,067	$	524,256
TOTAL DEDUCTIONS	**$**	**2,277,886,710**	**$**	**2,127,546,682**
CHANGE IN NET POSITION	**$**	**639,807,666**	**$**	**1,018,379,846**
NET POSITION HELD IN TRUST FOR BENEFIT PAYMENTS				
Beginning of Year	**$**	**3,396,523,538**	**$**	**2,378,143,692**
End of Year	**$**	**4,036,331,204**	**$**	**3,396,523,538** [5]

[1] Based on Information Provided by OMB on August 29, 2016.
[2] Based on Information Provided by OMB on August 20, 2015 and Post-Publication Adjustments.
[3] Net of the Interfund Transfer of $559,862,181 in Fiscal Year 2016.
[4] Net of the Interfund Transfer of $533,568,289 in Fiscal Year 2015.
[5] Reflects Post-Publication Adjustments.

APPENDIX B

Appendix B - Table 1a
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation

PLAN PARTICIPATION - NYCERS

Pre-Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City*	14,365	4,096	854	787	20,102
Component Units:					
HHC	2,531	587	115	108	3,341
NYCHA	1,276	577	73	55	1,981
WFA	1	0	0	0	1

Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City*	34,790	9,231	2,398	2,720	49,139
Component Units:					
HHC	12,567	3,115	594	882	17,158
NYCHA	4,138	1,174	199	314	5,825
WFA	1	1	0	0	2

*The City headcounts include SCA retirees since the City is responsible for SCA's health insurance coverage.

Appendix B - Table 1b
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation

PLAN PARTICIPATION - TRS

Pre-Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City	10,564	1,191	274	971	13,000
Component Units:					
HHC	1	0	0	0	1
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City	54,670	4,095	1,434	2,790	62,989
Component Units:					
HHC	5	0	0	1	6
NYCHA	2	1	0	0	3
WFA	0	0	0	0	0

Appendix B - Table 1c
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation

PLAN PARTICIPATION - BERS

Pre-Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City*	1,564	383	34	187	2,168
Component Units:					
HHC	0	0	0	0	0
NYCHA	5	0	1	1	7
WFA	0	0	0	0	0

Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City*	10,068	2,117	200	784	13,169
Component Units:					
HHC	5	0	0	0	5
NYCHA	9	1	1	0	11
WFA	0	0	0	1	1

*The City headcounts include SCA retirees since the City is responsible for SCA's health insurance coverage.

Appendix B - Table 1d
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation

PLAN PARTICIPATION - POLICE

Pre-Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City	23,499	2,449	1,380	1,226	28,554
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City	15,870	1,996	1,026	469	19,361
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

Appendix B - Table 1e
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation

PLAN PARTICIPATION - FIRE

Pre-Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City	5,601	658	555	112	6,926
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City	7,359	1,146	574	182	9,261
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

Appendix B - Table 1f
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation

PLAN PARTICIPATION - TIAA

Pre-Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City	20	2	5	0	27
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City	687	41	30	0	758
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

Appendix B - Table 1g
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation

PLAN PARTICIPATION - LODW

Pre-Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City	36	7	3	0	46
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

Medicare Headcounts	GHI Indemnity	HIP HMO	Other HMO	Waived	Total
City	614	110	19	0	743
Component Units:					
HHC	0	0	0	0	0
NYCHA	0	0	0	0	0
WFA	0	0	0	0	0

Appendix B - Table 2a
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation
ANNUAL WELFARE FUND CONTRIBUTIONS - NYCERS

UWF	Description	Count[1]	6/30/13 Rate[2]	6/30/14 Rate[2]	6/30/15 Rate[2]
001	NYC MANAGEMENT WELFARE FUND	7,408	$1,640	$1,640	$1,665
005	ALLIED BUILDNG INSPECTORS	352	1,640	1,640	1,665
010	ASST DEP WARDENS ASSC SBF	395	1,490	1,490	1,515
030	CORRECTION CAPTAINS ASSOC	1,745	1,490	1,490	1,515
035	CORRECT OFFICRS BEN ASSOC	8,018	1,640	1,640	1,665
040	NYS COURT OFFICERS ASSOC	1	830	830	830
045	CWA LOCAL 1182 RETIREE SBF	388	1,640	1,640	1,665
046	CWA L1181 SEC BEN FND RET	280	1,640	1,640	1,665
048	DETECT END ASSN RET FUND	6	1,523	1,523	1,498
049	DET END ASSN RET FUND (T)	168	1,523	1,523	1,498
050	DET END ASSN RET FUND (H)	116	1,523	1,523	1,498
055	DEA RET FND(PBA OF THE DA)	117	1,523	1,523	1,548
060	DISTRICT COUNCIL 37	34,830	1,640	1,640	1,665
061	DC 37 - (TAPD CIVILIANS)	8	1,640	1,640	1,665
066	DC 37 MEBA - FERRYBOATS	108	1,640	1,640	1,665
070	DOCTORS CNCL RET WELF FND	470	1,540	1,540	1,540
075	LCL 3 IBEW ELECTR INSPECT	23	1,640	1,640	1,665
080	FIRE ALARM DSP BEN ASSOC	162	1,640	1,640	1,665
081	UNKNOWN	1	n/a	n/a	1,665
100	LPN RETIREE WELFARE FUND	610	1,640	1,640	1,665
105	OSA SUPV.EMG.MED.SVC.SPEC	27	1,640	1,640	1,665
106	OSA WELF FND-SCHOOL SEC/T	33	1,640	1,640	1,665
107	OSA WELF FUND -SAN CHIEFS	61	1,540	1,540	1,565
108	ORG OF STAFF ANALYSTS	1,994	1,640	1,640	1,665
109	LCL 14 MUN W F-CRANE OPER	38	1,640	1,640	1,640
110	L144 DIV OF L1199 NHHSEU	524	1,590	1,590	1,615
115	LOCAL 306 RETIR HLTH WELF	6	1,640	1,640	1,665
120	LOCAL 333 DOCKHANDS	191	1,640	1,640	1,665
130	LOCAL 832 RETIREES	48	1,840	1,840	1,865
131	UNKNOWN	58	1,640	1,640	1,665
135	RET CWA L1183 DOE H&W FND	131	1,753	1,753	1,778
140	1199 NHHSEU	351	1,640	1,640	1,665
155	LCL 1180 CWA RET BENE FND	5,768	1,675	1,675	1,700
156	L1180 RET BEN FD-TAPD CIV	1	1,675	1,675	1,700
160	NYC DEPY SHER ASS RET SBF	57	1,365	1,365	1,390
162	UFT WELFARE FUND	30	1,720	1,720	1,745
163	UFT WELFARE FUND	38	1,720	1,720	1,745
164	COUNCIL OF SUPERVISORS AND ADMINISTRATORS	8	1,720	1,720	1,745
165	RET WELF FND AUTO SVC WKR	37	1,640	1,640	1,665
170	PBA (NYPD)	8	1,579	1,579	1,579
171	PBA (NYPD) (TA)	1,545	1,579	1,579	1,579
172	PBA (NYPD) (HA)	537	1,579	1,579	1,579
185	NYS NURSES ASSOCIATION	3,176	1,640	1,640	1,665
187	PAVERS & RDBULDERS INSPCT	37	1,640	1,640	1,665
190	UNITED PROBATION OFFICERS	390	1,723	1,723	1,748
200	SANITATION OFF RET WEL FN	2,439	1,390	1,390	1,415
225	SOC NYPD LT BENEV ASSOCIA	2	1,565	1,565	1,590
226	SOC NYPD CAPT ENDOW ASSOC	8	1,565	1,565	1,590
228	SOC NYPD LT BENEV ASSO(T)	107	1,565	1,565	1,590
229	SOC NYPD CAPT END ASS (T)	34	1,565	1,565	1,590
230	SBA HLTH&WELF FUND/RET(T)	221	1,740	1,740	1,740
231	SOC NYPD LT BENEV ASSO(H)	74	1,565	1,565	1,590
232	SOC NYPD CAPT END ASSN(H)	40	1,565	1,565	1,590
233	SBA HLTH&WELF FUND/RET(H)	119	1,740	1,740	1,740
235	L237 RETIREE BENE FND-CW	6,626	1,840	1,840	1,865
250	USA RETIREES' WELFARE FND	7,121	1,909	1,909	1,934

Appendix B - Table 2a
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation
ANNUAL WELFARE FUND CONTRIBUTIONS - NYCERS

UWF	Description	Count[1]	6/30/13 Rate[2]	6/30/14 Rate[2]	6/30/15 Rate[2]
251	UNKNOWN	212	1,640	1,640	1,665
260	LCL 300 RETIREE WELF FUND	390	1,640	1,640	1,665
261	LEEBA RETIRED EES WELF FD	5	1,640	1,640	1,665
275	PROFESSIONAL STAFF CONGRESS	214	1,865	1,865	1,890
276	PROFESSIONAL STAFF CONGRESS	5	1,865	1,865	1,890
277	SBA HLTH & WELF FND/RETIR	1	1,865	1,865	1,890
555	CIVILIAN, TRANSIT POLICE DEPT. NYC TRANSIT	26	1,640	1,640	1,665
556	UNKNOWN	7	1,640	1,640	1,665
605	NYSCCA SEC BEN FND RETIRE	2	930	930	930
700	LCL 237 RWF(L621 SUP MEC)	236	1,640	1,640	1,665
701	LCL 237 RWF(L621 SUP I W)	11	1,640	1,640	1,665
702	LOCAL 237 RWF(L621 DDMEM)	5	1,640	1,640	1,665
703	L237 BRCKLYR RETIREES	103	1,840	1,840	1,865
704	L1969(L806 BRDG PAINTERS)	26	1,640	1,640	1,665
705	L.40 361&417 JT UN SEC FD	41	1,540	1,540	1,540
706	LCL 3 IBEW COMMUN ELEC ET	59	1,540	1,540	1,565
709	L237RWF (L621 ADFM)	3	1,640	1,640	1,665
710	LCL UNION#3 IBEW NYC ELEC	1	1,640	1,640	1,665
712	LCL 3 IBEW ELCTRCN SUP HL	450	1,640	1,640	1,665
714	LCL 237 ELEV MECH RETIREE	271	1,840	1,840	1,865
715	LCL237MASON'S HLPS RETIRE	23	1,840	1,840	1,865
717	LOCAL 1969, GLAZIERS	39	1,640	1,640	1,665
720	DC37 LOCKSMITH SUPV LKSMT	38	1,540	1,540	1,565
724	RET H&W FD L3 IBEW-SUP.ME	68	1,540	1,540	1,565
725	UNKNOWN	56	1,640	1,640	1,665
727	LCL 2 CIVIL SVC PLUMBERS	411	1,640	1,640	1,665
728	LCL 1969 NYC PAINTERS	300	1,640	1,640	1,665
730	PAVERS RDBLDR DC PAVERS	2	1,340	1,340	1,365
731	LCL 237 ROOF RETIREES	26	1,840	1,840	1,865
732	LCL237PLASTERERS RETIREES	180	1,840	1,840	1,865
736	RET.WF AUTO MECH-UPSTATE	21	1,640	1,640	1,665
738	RET WELF FND AUTO MECHNYC	843	1,640	1,640	1,665
739	RET WELF FUND-TRACT OPERS	5	1,640	1,640	1,665
741	RET WELFARE FUND MOTOR GRA OPERATOR	16	1,640	1,640	1,665
742	LCL 14 PILE DRIVING ENGNR	3	1,640	1,640	1,640
743	DC 37 HIGHWAY REPAIRERS	326	1,640	1,640	1,665
744	DC 37 FURNIT MAINTAINER	1	1,640	1,640	1,665
745	DC37 CYLD PRESS OPERATOR	17	1,640	1,640	1,665
746	LCL 300 HIGHWAY REPAIRERS	23	1,640	1,640	1,665
747	PAVERS RDBLDRS HW SP HW R	18	1,640	1,640	1,665
748	LCL 14-RETIR. GAS RLR ENG	14	1,640	1,640	1,640
749	DC37SUPERVISOR HIGHWAY RE	91	1,540	1,540	1,565
750	LCL300 SUPV.HWY REPAIRER	9	1,540	1,540	1,565
751	PAVERS & RDBULDERS - SUPERVISOR HIGHWAY RE	6	1,540	1,540	1,565
753	DC37 COMPOSITOR (JOB)	11	1,640	1,640	1,665
754	RET WEL FUND CARRGE UPHOL	2	1,640	1,640	1,665
756	LCL 237 CEMENT MAS RETIRE	52	1,840	1,840	1,865
777	PATROLMEN'S BENEVOLENT ASSOCIATION (LINE-OF-DUTY SURVIVORS)	4	0	0	0
782	LCL 237 HORSE/HARN RETIRE	3	1,840	1,840	1,865
786	DC37 CITY LABORERS	534	1,640	1,640	1,665
787	DC37 CONSTRUCTION LABORER	275	1,640	1,640	1,665
804	LCL 237 MAINT WKR RETIREE	986	1,840	1,840	1,865
808	LCL 30, OILER	195	1,640	1,640	1,665
812	DC37 RADIO REPAIR MECHANI	43	1,640	1,640	1,665
814	LCL 246 RWF RUBR TIRE REP	13	1,640	1,640	1,665

Appendix B - Table 2a
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation
ANNUAL WELFARE FUND CONTRIBUTIONS - NYCERS

UWF	Description	Count[1]	6/30/13 Rate[2]	6/30/14 Rate[2]	6/30/15 Rate[2]
816	DC37 SEWAGE TRTMT WKRS	405	1,640	1,640	1,665
818	RET WEL FND SGN PTRS/LTRS	4	1,640	1,640	1,665
820	LCL 30 STAT ENG SR ST ENG	453	1,640	1,640	1,665
823	NYC DIST.COUNCIL OF CARPS	401	1,640	1,640	1,665
825	NYC DIST COUNCIL OF CARPS	4	1,640	1,640	1,665
826	LCL 3 IBEW SR STAT ENGR E	97	1,640	1,640	1,665
827	RET WEL FND SHEET MTL WKR	51	1,640	1,640	1,665
828	LCL 3 IBEW STATN ENGR ELE	196	1,640	1,640	1,665
832	DC 37 HI-PRESS PLANT TEND	114	1,640	1,640	1,665
837	LCL LDG 5 BLKSMTH HLP SUP	50	2,583	2,583	2,583
838	NYC DIST. COUNCIL OF CARP	32	1,640	1,640	1,665
839	LCL LDG 5 BOLRMKR HLP SUP	20	860	860	860
842	LCL 638 STMFTRS HLPR SUPR	70	1,640	1,640	1,665
843	LOCAL 15-GASOLINE RLR ENG	23	1,640	1,640	1,665
844	LOCAL 15-BASIN MACH OPERS	1	1,115	1,115	1,140
845	LCL 15 WELDERS FD	58	1,640	1,640	1,665
847	LCL 15 HIPRESS OPER.	2	965	965	990
848	LCL 15 TRACTOR OPER(SANI)	106	1,640	1,640	1,665
888	Either not entitled to Welfare Fund Benefits or UWF contribution is not funded by the City. Medicare Part B reimbursement.	252	0	0	0
948		2	0	0	0
950		9	0	0	0
960		8	0	0	0
999		59	0	0	0
Blank		5,913	0	0	0
	Total Count:	**102,143**			

[1] Data includes entire population provided by OLR and supplemented by the OA, including Component Units and other groups not attributable to the City for GASB45 purposes.

[2] Rates used as of June 30, 2013, June 30, 2014, and June 30, 2015, include any known one-time Welfare Fund payments paid during the Fiscal Year following the date of the rate. Also reflected are any known retroactive increases as of their effective date. Effective rates and information on one-time payments are based on information supplied by OLR. The rate for DC37 was used for UWFs without a reported rate. Rates for Professional Staff Congress came from its website. An additional $50 was added to each amount as of 7/1/2015, assuming that any welfare funds who have not yet negotiated the increase will do so in the future. In addition, a negotiated one time increase of $100 was reflected as of 7/1/2015 for all funds.

Appendix B - Table 2b
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation
ANNUAL WELFARE FUND CONTRIBUTIONS - TRS

UWF	Description	Count[1]	6/30/13 Rate[2]	6/30/14 Rate[2]	6/30/15 Rate[2]
001	NYC MANAGEMENT WELFARE FUND	182	$1,640	$1,640	$1,665
035	CORRECT OFFICRS BEN ASSOC	1	1,640	1,640	1,665
045	CWA LOCAL 1182 SEC BEN FUND	1	1,640	1,640	1,665
055	DEA RET FUND (PBA OF THE DA)	1	1,523	1,523	1,548
060	DISTRICT COUNCIL 37	663	1,640	1,640	1,665
100	LPN RETIREE WELFARE FUND	1	1,640	1,640	1,665
108	ORG OF STAFF ANALYSTS	4	1,640	1,640	1,665
155	LCL 1180 CWA RET BENE FND	29	1,675	1,675	1,700
163	UFT	65,201	1,720	1,720	1,745
164	COUNCIL OF SUPERVISORS AND ADMINISTRATORS	7,137	1,720	1,720	1,745
185	NYS NURSES ASSOCIATION	1	1,640	1,640	1,665
190	UNITED PROBATION OFFICERS	1	1,723	1,723	1,748
200	SANITATION OFF RET WEL FN	1	1,390	1,390	1,415
235	L237 RETIREE BENE FND-CW	12	1,840	1,840	1,865
275	PROFESSIONAL STAFF CONGRESS	2,365	1,865	1,865	1,890
276	PROFESSIONAL STAFF CONGRESS	29	1,865	1,865	1,890
277	SBA HLTH & WELF FND/RETIR	2	1,865	1,865	1,890
724	RET H&W Fd, L3, IBEW-SUP, ME	1	1,540	1,540	1,565
777	PATROLMENT'S BENEV. ASSOC.(LOD SURVIVORS)	1	0	0	0
888	Either not entitled to Welfare Fund Benefits or UWF contribution is not funded by the City. Medicare Part B reimbursement.	27	0	0	0
905		1	0	0	0
940		2	0	0	0
999		38	0	0	0
Blank		2,169	0	0	0
	Total Count:	**77,870**			

[1] Data includes entire population provided by OLR and supplemented by the OA, including Component Units and other groups not attributable to the City for GASB45 purposes.

[2] Rates used as of June 30, 2013, June 30, 2014, and June 30, 2015, include any known one-time Welfare Fund payments paid during the Fiscal Year following the date of the rate. Also reflected are any known retroactive increases as of their effective date. Effective rates and information on one-time payments are based on information supplied by OLR. The rate for DC37 was used for UWFs without a reported rate. Rates for Professional Staff Congress came from its website. An additional $50 was added to each amount as of 7/1/2015, assuming that any welfare funds who have not yet negotiated the increase will do so in the future. In addition, a negotiated one time increase of $100 was reflected as of 7/1/2015 for all funds.

Appendix B - Table 2c
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation
ANNUAL WELFARE FUND CONTRIBUTIONS - BERS

UWF	Description	Count[1]	6/30/13 Rate[2]	6/30/14 Rate[2]	6/30/15 Rate[2]
001	NYC MANAGEMENT WELFARE FUND	550	$1,640	$1,640	$1,665
035	CORRECT OFFICRS BEN ASSOC	1	1,640	1,640	1,665
045	CWA LOCAL 1182 SEC BEN FUND	1	1,640	1,640	1,665
060	DISTRICT COUNCIL 37	11,301	1,640	1,640	1,665
075	LCL 3 IBEW ELECTR INSPECT	1	1,640	1,640	1,665
106	OSA WELF FND-SCHOOL SEC/T	8	1,640	1,640	1,665
108	ORG OF STAFF ANALYSTS	19	1,640	1,640	1,665
115	LOCAL 306 RETIR HLTH WELF	11	1,640	1,640	1,665
130	LOCAL 832 RETIREES	305	1,840	1,840	1,865
131	DISTRICT COUNCIL 37	528	1,640	1,640	1,665
135	RET CWA L1183 DOE H&W FND	1	1,753	1,753	1,778
155	LCL 1180 CWA RET BENE FND	454	1,675	1,675	1,700
162	UFT WELFARE FUND	21	1,720	1,720	1,745
163	UFT WELFARE FUND	686	1,720	1,720	1,745
164	COUNCIL OF SUPERVISORS AND ADMINISTRATION	6	1,720	1,720	1,745
165	RET WELF FND AUTO SVC WKR	3	1,640	1,640	1,665
185	NYC RET HLTH&WEL FD-NYSNA	5	1,640	1,640	1,665
235	L237 RETIREE BENE FND-CW	411	1,840	1,840	1,865
250	USA RETIREES' WELFARE FUND	1	1,909	1,909	1,934
260	LCL 300 RETIREE WELF FUND	56	1,640	1,640	1,665
275	PROFESSIONAL STAFF CONGRESS	10	1,865	1,865	1,890
555	CIVILIAN, TRANSIT POLICE DEPT. NYC TRANSIT	1	1,640	1,640	1,665
700	LCL 237 RWF(L621 SUP MEC)	7	1,640	1,640	1,665
708	LOCAL 246, DEPT OF EDUCATION	3	1,640	1,640	1,665
711	LCL 3 IBEW ELECTRCN WEST	1	1,640	1,640	1,665
712	LCL 3 IBEW ELCTRCN SUP HL	33	1,640	1,640	1,665
714	LCL 237 ELEV MECH RETIREE	4	1,840	1,840	1,865
717	LOCAL1969 GLAZIERS	12	1,640	1,640	1,665
720	DC37 LOCKSMITH SUPV LKSMT	4	1,540	1,540	1,565
724	RET H&W FD L3 IBEW-SUP.ME	21	1,540	1,540	1,565
727	LCL 2 CIVIL SVC PLUMBERS	41	1,640	1,640	1,665
728	LCL 1969 NYC PAINTERS	26	1,640	1,640	1,665
731	LCL 237 ROOF RETIREES	6	1,840	1,840	1,865
732	LCL237PLASTERERS RETIREES	8	1,840	1,840	1,865
738	RET WELF FND AUTO MECHNYC	28	1,640	1,640	1,665
740	RET WELF FND GEN MECHANIC	1	1,190	1,190	1,215
744	DC 37 FURNIT MAINTAINER	5	1,640	1,640	1,665
756	LCL 237 CEMENT MAS RETIRE	1	1,840	1,840	1,865
760	LOCAL 246, DEPT OF EDUCATION	8	1,640	1,640	1,665
786	DC37 CONSTRUCT LABORER	16	1,640	1,640	1,665
787	DC37 CONSTRUCTION LABORER	2	1,640	1,640	1,665
804	LCL 237 MAINT WKR RETIREE	16	1,840	1,840	1,865

Appendix B - Table 2c
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation
ANNUAL WELFARE FUND CONTRIBUTIONS - BERS

UWF	Description	Count[1]	6/30/13 Rate[2]	6/30/14 Rate[2]	6/30/15 Rate[2]
812	DC37 RADIO REPAIR MECHANI	7	1,640	1,640	1,665
820	LCL 30 STAT ENG SR ST ENG	5	1,640	1,640	1,665
823	NYC DIST.COUNCIL OF CARPS	91	1,640	1,640	1,665
826	LCL 3 IBEW SR SSTAT ENGR E	1	1,640	1,640	1,665
827	RET WEL FND SHEET MTL WKR	9	1,640	1,640	1,665
832	DC 37 HI-PRESS PLANT TEND	1	1,640	1,640	1,665
838	NYC DIST. COUNCIL OF CARP	19	1,640	1,640	1,665
839	LOCAL LODGE 5	1	860	860	860
842	LCL 638 STMFTRS HLPR SUPR	24	1,640	1,640	1,665
845	LCL 15 WELDERS FD	2	1,640	1,640	1,665
888	Either not entitled to Welfare Fund Benefits or UWF contribution is not funded by the City. Medicare Part B reimbursement.	8	0	0	0
999		32	0	0	0
Blank		570	0	0	0
	Total Count:	**15,393**			

[1] Data includes entire population provided by OLR and supplemented by the OA, including Component Units and other groups not attributable to the City for GASB45 purposes.

[2] Rates used as of June 30, 2013, June 30, 2014, and June 30, 2015, include any known one-time Welfare Fund payments paid during the Fiscal Year following the date of the rate. Also reflected are any known retroactive increases as of their effective date. Effective rates and information on one-time payments are based on information supplied by OLR. The rate for DC37 was used for UWFs without a reported rate. Rates for Professional Staff Congress came from its website. An additional $50 was added to each amount as of 7/1/2015, assuming that any welfare funds who have not yet negotiated the increase will do so in the future. In addition, a negotiated one time increase of $100 was reflected as of 7/1/2015 for all funds.

Appendix B - Table 2d
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation
ANNUAL WELFARE FUND CONTRIBUTIONS - POLICE

UWF	Description	Count	6/30/13 Rate[1]	6/30/14 Rate[1]	6/30/15 Rate[1]
001	NYC MANAGEMENT WELFARE FUND	115	$1,640	$1,640	$1,665
048	DETECT END ASSN RET FUND	11,819	1,523	1,523	1,498
055	DEA RET FUND (PBA OF THE DA)	1			1,548
170	PBA (NYPD)	22,766	1,579	1,579	1,579
225	SOC NYPD LT BENEV ASSOCIATION	3,665	1,565	1,565	1,590
226	SOC NYPD CAPT ENDOW ASSOCIATION	1,384	1,565	1,565	1,590
227	SBA HLTH & WELF FND/RETIR	7,283	1,740	1,740	1,740
777	PATROLEMEN'S BENEVOLENT ASSOCIATION (LINE-OF-	214	0	0	0
888	Either not entitled to Welfare Fund benefits or UWF contribution is not funded by the City. Medicare Part B reimbursement.	399	0	0	0
901		1	0	0	0
926		12	0	0	0
927		40	0	0	0
930		20	0	0	0
931		3	0	0	0
948		79	0	0	0
949		1	0	0	0
999		1	0	0	0
Blank		112	0	0	0
	Total Count:	**47,915**			

[1] Rates used as of June 30, 2013, June 30, 2014, and June 30, 2015 include any known one-time Welfare Fund payments paid during the Fiscal Year following the date of the rate. Also reflected are any known retroactive increases as of their effective date. Effective rates and information on one-time payments are based on information supplied by OLR. The rate for DC37 was used for UWFs without a reported rate. An additional $50 was added to each amount as of 7/1/2015, assuming that any welfare funds who have not yet negotiated the increase will do so in the future. In addition, a negotiated one time increase of $100 was reflected as of 7/1/2015 for all funds.

Appendix B - Table 2e
New York City Health Benefits Program
June 30, 2015 OPEB Actuarial Valuation
ANNUAL WELFARE FUND CONTRIBUTIONS - FIRE

UWF	Description	Count	6/30/13 Rate[1]	6/30/14 Rate[1]	6/30/15 Rate[1]
001	NYC MANAGEMENT WELFARE FUND	75	$1,640	$1,640	$1,665
060	DISTRICT COUNCIL 37	1	1,640	1,640	1,665
065	DC 37 UNIF MARINE ENGR	112	1,660	1,660	1,685
163	UFT WELFARE FUND	2	1,720	1,720	1,745
170	PBA (NYPD)	1	1,579	1,579	1,579
205	RETIRED FIREFIGHTERS SBF	10,365	1,720	1,720	1,745
206	RET FIREFIGHTRS SBF-WIPER	10	1,570	1,570	1,595
240	UFOA LOCAL 854 RETIREES	4,761	1,595	1,595	1,620
888	Either not entitled to Welfare Fund Benefits or UWF contribution is not funded by the City. Medicare Part B reimbursement.	262	0	0	0
901		1	0	0	0
905		328	0	0	0
940		188	0	0	0
941		1	0	0	0
999		1	0	0	0
Blank		79	0	0	0
	Total Count:	**16,187**			

[1] Rates used as of June 30, 2013, June 30, 2014, and June 30, 2015 include any known one-time Welfare Fund payments paid during the Fiscal Year following the date of the rate. Also reflected are any known retroactive increases as of their effective date. Effective rates and information on one-time payments are based on information supplied by OLR. The rate for DC37 was used for UWFs without a reported rate. An additional $50 was added to each amount as of 7/1/2015, assuming that any welfare funds who have not yet negotiated the increase will do so in the future. In addition, a negotiated one time increase of $100 was reflected as of 7/1/2015 for all funds.

APPENDIX C

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Educational Construction Fund (ECF)

Summary of Data

1. Actives	
a. Number	4
b. Salary	$483,451
c. Average Age	51.26
d. Average Service	5.69
e. Average Salary	$120,863
2. Inactives	
a. Number	0
b. Average Age	NA
c. Average Service	NA
3. Deferreds (Includes Deferred Retirees, if any)	
a. Number	1
b. Average Age	43.34
4. Retirees	
a. Total*	
i. Number	5
ii. Average Age	78.64
b. By Benefit	<u>Participant / Spouse</u>
i. Pre-Medicare**	0 / 0
ii. Medicare Eligible**	4 / 2
iii. Welfare Fund**	NA / NA
iv. Medicare Part B#	5 / 3

* Retirees eligible for at least one benefit from ECF.
** Retirees currently eligible for benefit from ECF.
# Retirees eligible for benefit from ECF now or in the future.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Educational Construction Fund (ECF)

Results of the Actuarial Valuation

	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Cadillac Tax	Total
1. Total Present Value of Projected Benefits						
a. Active [1]	$140,943	$761,137	$0	$191,396	$34,395	**$1,127,871**
b. Deferred [2]	162,273	176,555	0	58,373	73,869	**471,070**
c. Retired	0	554,377	0	161,248	332	**715,957**
d. TOTAL	**$303,216**	**$1,492,069**	**$0**	**$411,017**	**$108,596**	**$2,314,898**
2. Entry Age Actuarial Accrued Liability						
a. Active [1]	$35,835	$256,945	$0	$64,669	$9,998	**$367,447**
b. Deferred [2]	162,273	176,555	0	58,373	73,869	**471,070**
c. Retired	0	554,377	0	161,248	332	**715,957**
d. TOTAL	**$198,108**	**$987,877**	**$0**	**$284,290**	**$84,199**	**$1,554,474**
3. Actuarial Value of Assets						**$0**
4. Unfunded Actuarial Accrued Liability (UAAL)						**$1,554,474**
5. Entry Age Normal Cost						**$67,317**
6. Salary of Active Participants						**$483,451**
7. Normal Cost Percentage [5. / 6.]						**13.924%**

[1] Includes Total Present Value of Projected Benefits for Inactives, if any.
[2] Includes Deferred Retirees, if any.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Educational Construction Fund (ECF)

Development of the Annual Required Contribution (ARC)
For the Fiscal Year Ending June 30, 2016

1. Entry Age Normal Cost at June 30, 2015	$67,317
2. Amortization of Unfunded Actuarial Accrued Liability - BOY	1,673,323
3. Subtotal	$1,740,640
4. Interest to June 30, 2016 at 4.0%	69,626
5. Annual Required Contribution (ARC)	$1,810,266

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Educational Construction Fund (ECF)

Development of the Annual OPEB Cost (AOC)
and Development of the Net OPEB Obligation (NOO)

For the Fiscal Year Ending June 30, 2016

1. **Annual OPEB Cost (AOC)**

a. Net OPEB Obligation at June 30, 2015	$1,757,940
b. Annual Required Contribution (ARC)	
i. Entry Age Normal Cost	$67,317
ii. UAAL Amortization Payment	1,673,323
iii. Interest to End of Year	69,626
iv. Total	$1,810,266
c. ARC Adjustment	$1,828,258
d. Interest on Net OPEB Obligation	$70,318
e. Fiscal Year 2016 Annual OPEB Cost (AOC) (1b.iv.-1c.+1d.)	$52,326

2. **Net OPEB Obligation (NOO)**

a. Net OPEB Obligation at June 30, 2015	$1,757,940
b. Fiscal Year 2016 Annual OPEB Cost (AOC)	$52,326
c. Fiscal Year 2016 Employer Contributions	$62,303 *
d. Net OPEB Obligation (NOO) at June 30, 2016 (2a.+ 2b.-2c.)	$1,747,963

* Employer Contributions provided by ECF.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Educational Construction Fund (ECF)

Required Supplementary Information (RSI)
and Additional Note Disclosure
For the Fiscal Year Ending June 30, 2016

Required Supplementary Information
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2015[1]	$0	$1,554,474	$1,554,474	0.0%	$483,451	321.5%
June 30, 2014[1]	$0	$1,554,079	$1,554,079	0.0%	$344,574	451.0%
June 30, 2013[1]	$0	$1,380,469	$1,380,469	0.0%	$344,574	400.6%
June 30, 2012[1]	$0	$1,153,280	$1,153,280	0.0%	$373,329	308.9%
June 30, 2011[2]	$0	$1,372,315	$1,372,315	0.0%	$373,329	367.6%
June 30, 2010[2]	$0	$1,333,593	$1,333,593	0.0%	$373,579	357.0%
June 30, 2009[2]	$0	$1,306,382	$1,306,382	0.0%	$337,908	386.6%
June 30, 2008[2]	$0	$1,199,232	$1,199,232	0.0%	$332,908	360.2%
June 30, 2007[2]	$0	$1,174,692	$1,174,692	0.0%	$158,408	741.6%
June 30, 2006[2]	$0	$1,111,366	$1,111,366	0.0%	$158,408	701.6%
June 30, 2005[2]	$0	$954,749	$954,749	0.0%	$148,770	641.8%

1 Beginning June 30, 2012 based on Entry Age Actuarial Cost Method.

2 Based on Frozen Entry Age Actuarial Cost Method.

Additional Note Disclosure
Annual OPEB Cost and Net OPEB Obligation

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
June 30, 2016	$52,326	119.1%	$1,747,963
June 30, 2015	$220,646	25.4%	$1,757,940
June 30, 2014	$274,860	21.0%	$1,593,433
June 30, 2013	$23,912	251.4%	$1,376,273
June 30, 2012	$98,634	59.3%	$1,412,476
June 30, 2011	$95,755	59.6%	$1,372,315
June 30, 2010	$156,176	27.8%	$1,333,593
June 30, 2009	$57,166	65.9%	$1,220,855
June 30, 2008	$66,593	44.8%	$1,201,354
June 30, 2007	$147,549	0.0%	$1,164,573
June 30, 2006*	$1,017,024	0.0%	$1,017,024

* As published.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Educational Construction Fund (ECF)

Derivation of Unfunded Actuarial Accrued Liability

1.	Unfunded Actuarial Accrued Liability at June 30, 2014	$1,554,079
2.	Entry Age Normal Cost at June 30, 2014	54,150
3.	Interest on 1. and 2. @ 4.00%	64,329
4.	Expected Employer Contributions - Fiscal Year 2015	1,814,079
5.	Expected Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-4.)	(141,521)
6.	Actual (PAYG) Employer Contributions - Fiscal Year 2015	56,139 [1]
7.	Preliminary Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-6.)	1,616,419
8.	Actuarial (Gain) / Loss - Experience	47,432
9.	Change in Assumptions [2]	(109,377)
10.	Unfunded Actuarial Accrued Liability at June 30, 2015 (7.+8.+9.)	$1,554,474

[1] Employer Contributions provided by ECF.
[2] Per Capita Costs Update and Aging Factors.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Educational Construction Fund (ECF)

Schedule of Unfunded Actuarial Accrued Liability Bases

Base	Date Established	Original Amount	Initial / Remaining Amortization Period	June 30, 2015 Balance	June 30, 2015 Amortization Payment
1. Change in Actuarial Cost Method	June 30, 2012	$ (191,245)	10-Years / 7-Years	$ (141,521)	$ (22,672)
2. Actuarial Loss - Accumulated Deficiency	June 30, 2015	$ 1,757,940	1-Year / 1-Year	$ 1,757,940	$ 1,757,940
3. Actuarial (Gain) / Loss - Experience	June 30, 2015	$ 47,432	1-Year / 1-Year	$ 47,432	$ 47,432
4. Change in Assumptions	June 30, 2015	$ (109,377)	1-Year / 1-Year	$ (109,377)	$ (109,377)
TOTAL		$ 1,504,750		$1,554,474	$ 1,673,323

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Health and Hospitals Corporation (HHC)

Summary of Data

	NYCERS	TRS	BERS	TOTAL
1. Actives				
a. Number	32,534	0	3	32,537
b. Salary	$2,171,184,406	$0	$151,293	$2,171,335,699
c. Average Age	49.51	NA	54.00	49.51
d. Average Service	10.90	NA	11.67	10.90
e. Average Salary	$66,736	NA	$50,431	$66,734
2. Inactives				
a. Number	3,747	0	0	3,747
b. Average Age	44.24	NA	NA	44.24
c. Average Service	5.60	NA	NA	5.60
3. Deferreds (Includes Deferred Retirees, if any)				
a. Number	1,738	0	1	1,739
b. Average Age	54.40	NA	62.00	54.40
4. Retirees				
a. Total*				
i. Number	20,499	7	5	20,511
ii. Average Age	73.27	73.88	79.35	73.27
b. By Benefit				Participant / Spouse
i. Pre-Medicare**				3,342 / 1,794
ii. Medicare Eligible**				17,169 / 3,960
iii. Welfare Fund**				19,159 / NA
iv. Medicare Part B#				NR / NR

* Retirees eligible for at least one benefit from HHC.
** Retirees currently eligible for benefit from HHC.
\# Retirees eligible for benefit from HHC now or in the future.
NR Benefit not the responsibility of HHC.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Health and Hospitals Corporation (HHC)

Results of the Actuarial Valuation

	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Cadillac Tax	Total
1. Total Present Value of Projected Benefits						
a. Active [1]	$1,968,235,033	$1,985,512,375	$1,181,710,413	$0	$49,682,452	**$5,185,140,273**
b. Deferred [2]	127,154,717	107,026,421	67,930,083	0	378,922	**302,490,143**
c. Retired	287,150,223	781,614,963	490,319,454	0	243,984	**1,559,328,624**
d. TOTAL	**$2,382,539,973**	**$2,874,153,759**	**$1,739,959,950**	**$0**	**$50,305,358**	**$7,046,959,040**
2. Entry Age Actuarial Accrued Liability						
a. Active [1]	$736,341,396	$912,847,812	$526,756,735	$0	$12,125,399	**$2,188,071,342**
b. Deferred [2]	127,154,717	107,026,421	67,930,083	0	378,922	**302,490,143**
c. Retired	287,150,223	781,614,963	490,319,454	0	243,984	**1,559,328,624**
d. TOTAL	**$1,150,646,336**	**$1,801,489,196**	**$1,085,006,272**	**$0**	**$12,748,305**	**$4,049,890,109**
3. Actuarial Value of Assets						**$0**
4. Unfunded Actuarial Accrued Liability (UAAL)						**$4,049,890,109**
5. Entry Age Normal Cost						**$244,154,396**
6. Salary of Active Participants						**$2,171,335,699**
7. Normal Cost Percentage [5. / 6.]						**11.244%**

[1] Includes Total Present Value of Projected Benefits for Inactives, if any.
[2] Includes Deferred Retirees, if any.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Health and Hospitals Corporation (HHC)

Development of the Annual Required Contribution (ARC)
For the Fiscal Year Ending June 30, 2016

1. Entry Age Normal Cost at June 30, 2015	$244,154,396
2. Amortization of Unfunded Actuarial Accrued Liability - BOY	4,657,728,836
3. Subtotal	$4,901,883,232
4. Interest to June 30, 2016 at 4.0%	196,075,329
5. Annual Required Contribution (ARC)	$5,097,958,561

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Health and Hospitals Corporation (HHC)

Development of the Annual OPEB Cost (AOC)
and Development of the Net OPEB Obligation (NOO)

For the Fiscal Year Ending June 30, 2016

1. **Annual OPEB Cost (AOC)**

a. Net OPEB Obligation at June 30, 2015	$4,676,533,848
b. Annual Required Contribution (ARC)	
i. Entry Age Normal Cost	$244,154,396
ii. UAAL Amortization Payment	4,657,728,836
iii. Interest to End of Year	196,075,329
iv. Total	$5,097,958,561
c. ARC Adjustment	$4,863,595,202
d. Interest on Net OPEB Obligation	$187,061,354
e. Fiscal Year 2016 Annual OPEB Cost (AOC) (1b.iv.-1c.+1d.)	$421,424,713

2. **Net OPEB Obligation (NOO)**

a. Net OPEB Obligation at June 30, 2015	$4,676,533,848
b. Fiscal Year 2016 Annual OPEB Cost (AOC)	$421,424,713
c. Fiscal Year 2016 PAYG Employer Contributions	$95,999,857 *
d. Net OPEB Obligation (NOO) at June 30, 2016 (2a.+2b.-2c.)	$5,001,958,704

* Employer Contributions include amounts provided by HHC and the FY2016 Implicit Rate Subsidy.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Health and Hospitals Corporation (HHC)

Required Supplementary Information (RSI)
and Additional Note Disclosure
For the Fiscal Year Ending June 30, 2016

Required Supplementary Information
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2015[1]	$0	$4,049,890,109	$4,049,890,109	0.0%	$2,171,335,699	186.5%
June 30, 2014[1]	$0	$3,688,063,704	$3,688,063,704	0.0%	$2,138,008,344	172.5%
June 30, 2013[1]	$0	$3,732,883,451	$3,732,883,451	0.0%	$2,105,659,504	177.3%
June 30, 2012[1]	$0	$3,544,019,201	$3,544,019,201	0.0%	$2,083,348,902	170.1%
June 30, 2011[2]	$0	$4,234,109,641	$4,234,109,641	0.0%	$2,026,170,345	209.0%
June 30, 2010[2]	$0	$3,984,256,215	$3,984,256,215	0.0%	$2,043,062,682	195.0%
June 30, 2009[2]	$0	$3,464,071,831	$3,464,071,831	0.0%	$1,989,955,487	174.1%
June 30, 2008[2]	$0	$3,010,302,429	$3,010,302,429	0.0%	$1,830,957,842	164.4%
June 30, 2007[2]	$0	$2,722,879,773	$2,722,879,773	0.0%	$1,741,623,721	156.3%
June 30, 2006[2]	$0	$2,418,075,620	$2,418,075,620	0.0%	$1,610,130,192	150.2%
June 30, 2005[2]	$0	$2,019,525,531	$2,019,525,531	0.0%	$1,521,870,266	132.7%

[1] Beginning June 30, 2012 based on Entry Age Actuarial Cost Method.

[2] Based on Frozen Entry Age Actuarial Cost Method.

Additional Note Disclosure
Annual OPEB Cost and Net OPEB Obligation

Fiscal Year Ended	Annual OPEB Cost	Percentage of OPEB Cost Contributed	Net OPEB Obligation
June 30, 2016	$421,424,713	22.8%	$5,001,958,704
June 30, 2015	($28,300,910)	ND [1]	$4,676,533,848
June 30, 2014	$221,539,466	54.3%	$4,824,784,625
June 30, 2013	$314,956,434	36.0%	$4,723,533,633
June 30, 2012	$319,164,228	34.5%	$4,521,852,936
June 30, 2011	$636,600,580	16.6%	$4,312,816,427
June 30, 2010	$617,623,160	16.1%	$3,781,633,121
June 30, 2009	$359,891,470	28.7% [2]	$3,263,573,474
June 30, 2008	$428,212,562	17.5%	$3,007,038,589
June 30, 2007	$396,996,705	18.8%	$2,653,902,496
June 30, 2006	$2,398,590,675	2.8%	$2,331,404,675

[1] Not Determined due to the Annual OPEB Cost being less than Zero.

[2] Includes cumulative adjustment for approximate Implicit Rate Subsidy amounts for Fiscal Years ending 6/30/06, 6/30/07 and 6/30/08.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Health and Hospitals Corporation (HHC)

Derivation of Unfunded Actuarial Accrued Liability

1.	Unfunded Actuarial Accrued Liability at June 30, 2014	3,688,063,704
2.	Entry Age Normal Cost at June 30, 2014	227,986,792
3.	Interest on 1. and 2. @ 4.00%	156,642,020
4.	Expected Employer Contributions - Fiscal Year 2015	4,796,483,715
5.	Expected Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-4.)	(723,791,199)
6.	Actual (PAYG) Employer Contributions - Fiscal Year 2015	119,949,867 [1]
7.	Preliminary Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-6.)	3,952,742,649
8.	Actuarial (Gain) / Loss - Experience	(48,071,462)
9.	Change in Assumptions [2]	145,218,922
10.	Unfunded Actuarial Accrued Liability at June 30, 2015 (7.+8.+9.)	4,049,890,109

[1] Employer Contributions provided by HHC and the FY2015 Implicit Rate Subsidy.

[2] Post Retirement Mortality Assumptions.
HMO Aging Adjustment.
Welfare Trend Rates.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Health and Hospitals Corporation (HHC)

Schedule of Unfunded Actuarial Accrued Liability Bases

Base	Date Established	Original Amount	Initial / Remaining Amortization Period	June 30, 2015 Balance	June 30, 2015 Amortization Payment
1. Change in Actuarial Cost Method	June 30, 2012	$ (978,097,552)	10-Years / 7-Years	$ (723,791,199)	$ (115,952,472)
2. Actuarial Loss - Accumulated Deficiency	June 30, 2015	$ 4,676,533,848	1-Year / 1-Year	$ 4,676,533,848	$ 4,676,533,848
3. Actuarial (Gain) / Loss - Experience	June 30, 2015	$ (48,071,462)	1-Year / 1-Year	$ (48,071,462)	$ (48,071,462)
4. Change in Assumptions	June 30, 2015	$ 145,218,922	1-Year / 1-Year	$ 145,218,922	$ 145,218,922
TOTAL		$ 3,795,583,756		$4,049,890,109	$ 4,657,728,836

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Housing Authority (NYCHA)

Summary of Data

	NYCERS	TRS	BERS	TOTAL
1. Actives				
a. Number	10,337	1	30	10,368
b. Salary	$634,021,952	$87,201	$2,394,002	$636,503,155
c. Average Age	47.94	67.00	50.93	47.95
d. Average Service	14.42	27.00	16.27	14.43
e. Average Salary	$61,335	$87,201	$79,800	$61,391
2. Inactives				
a. Number	990	0	7	997
b. Average Age	44.81	NA	49.86	44.84
c. Average Service	8.98	NA	7.43	8.97
3. Deferreds (Includes Deferred Retirees, if any)				
a. Number	653	0	0	653
b. Average Age	54.40	NA	NA	54.40
4. Retirees				
a. Total*				
i. Number	8,699	3	18	8,720
ii. Average Age	71.07	81.57	69.91	71.07
b. By Benefit				Participant / Spouse
i. Pre-Medicare**				1,988 / 1,302
ii. Medicare Eligible**				5,839 / 1,904
iii. Welfare Fund**				7,428 / NA
iv. Medicare Part B[#]				8,720 / 3,720

* Retirees eligible for at least one benefit from NYCHA.
** Retirees currently eligible for benefit from NYCHA.
\# Retirees eligible for benefit from NYCHA now or in the future.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Housing Authority (NYCHA)

Results of the Actuarial Valuation

	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Cadillac Tax	Total
1. Actuarial Present Value of Benefits						
a. Active [1]	$882,711,016	$680,275,075	$381,553,787	$436,675,282	$24,093,088	**$2,405,308,248**
b. Deferred [2]	57,402,977	41,124,821	24,285,508	26,592,339	202,498	**149,608,143**
c. Retired	224,154,134	326,312,281	209,454,880	226,603,592	177,022	**986,701,909**
d. TOTAL	**$1,164,268,127**	**$1,047,712,177**	**$615,294,175**	**$689,871,213**	**$24,472,608**	**$3,541,618,300**
2. Entry Age Actuarial Accrued Liability						
a. Active [1]	$362,540,033	$324,224,760	$173,768,416	$208,135,982	$5,918,379	**$1,074,587,570**
b. Deferred [2]	57,402,977	41,124,821	24,285,508	26,592,339	202,498	**149,608,143**
c. Retired	224,154,134	326,312,281	209,454,880	226,603,592	177,022	**986,701,909**
d. TOTAL	**$644,097,144**	**$691,661,862**	**$407,508,804**	**$461,331,913**	**$6,297,899**	**$2,210,897,622**
3. Actuarial Value of Assets						**$0**
4. Unfunded Actuarial Accrued Liability (UAAL)						**$2,210,897,622**
5. Entry Age Normal Cost						**$102,492,998**
6. Salary of Active Participants						**$636,503,155**
7. Normal Cost Percentage [5. / 6.]						**16.103%**

[1] Includes Actuarial Present Value of Benefits for Inactives, if any.
[2] Includes Deferred Retirees, if any.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City School Construction Authority (SCA)

Summary of Data

	NYCERS	BERS	TOTAL
1. Actives			
a. Number	52	557	609
b. Salary	$5,718,580	$55,047,395	$60,765,975
c. Average Age	54.77	52.28	52.49
d. Average Service	20.62	11.59	12.36
e. Average Salary	$109,973	$98,828	$99,780
2. Inactives			
a. Number	4	42	46
b. Average Age	52.75	47.62	48.07
c. Average Service	10.25	5.48	5.89
3. Deferreds (Includes Deferred Retirees, if any)			
a. Number	8	15	23
b. Average Age	55.38	54.07	54.53
4. Retirees			
a. Total*			
i. Number	42	211	253
ii. Average Age	70.68	72.49	72.19
b. By Benefit			Participant / Spouse
i. Pre-Medicare**			NR / NR
ii. Medicare Eligible**			NR / NR
iii. Welfare Fund**			253 / NA
iv. Medicare Part B#			NR / NR

* Retirees eligible for at least one benefit from SCA.
** Retirees currently eligible for benefit from SCA.
\# Retirees eligible for benefit from SCA now or in the future.
NR Benefit not the responsibility of SCA.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City School Construction Authority (SCA)

Results of the Actuarial Valuation

	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Cadillac Tax	Total
1. Total Present Value of Projected Benefits						
a. Active [1]	$0	$0	$19,327,040	$0	$0	$19,327,040
b. Deferred [2]	0	0	912,955	0	0	912,955
c. Retired	0	0	6,811,393	0	0	6,811,393
d. TOTAL	$0	$0	$27,051,388	$0	$0	$27,051,388
2. Entry Age Actuarial Accrued Liability						
a. Active [1]	$0	$0	$9,987,285	$0	$0	$9,987,285
b. Deferred [2]	0	0	912,955	0	0	912,955
c. Retired	0	0	6,811,393	0	0	6,811,393
d. TOTAL	$0	$0	$17,711,633	$0	$0	$17,711,633
3. Actuarial Value of Assets						$0
4. Unfunded Actuarial Accrued Liability (UAAL)						$17,711,633
5. Entry Age Normal Cost						$919,396
6. Salary of Active Participants						$60,765,975
7. Normal Cost Percentage [5. / 6.]						1.513%

[1] Includes Total Present Value of Projected Benefits for Inactives, if any.
[2] Includes Deferred Retirees, if any.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City School Construction Authority (SCA)

Development of the Annual Required Contribution (ARC)
For the Fiscal Year Ending June 30, 2016

1. **Entry Age Normal Cost at June 30, 2015**	**$919,396**
2. **Amortization of Unfunded Actuarial Accrued Liability - BOY**	**23,241,929**
3. **Subtotal**	**$24,161,325**
4. **Interest to June 30, 2016 at 4.0%**	**966,453**
5. **Annual Required Contribution (ARC)**	**$25,127,778**

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City School Construction Authority (SCA)

Development of the Annual OPEB Cost (AOC) and Development of the Net OPEB Obligation (NOO)

For the Fiscal Year Ending June 30, 2016

1. **Annual OPEB Cost (AOC)**

a. Net OPEB Obligation at June 30, 2015	$24,619,407
b. Annual Required Contribution (ARC)	
i. Entry Age Normal Cost	$919,396
ii. UAAL Amortization Payment	23,241,929
iii. Interest to End of Year	966,453
iv. Total	$25,127,778
c. ARC Adjustment	$25,604,183
d. Interest on Net OPEB Obligation	$984,776
e. Fiscal Year 2016 Annual OPEB Cost (AOC) (1b.iv.-1c.+1d.)	$508,371

2. **Net OPEB Obligation (NOO)**

a. Net OPEB Obligation at June 30, 2015	$24,619,407
b. Fiscal Year 2016 Annual OPEB Cost (AOC)	$508,371
c. Fiscal Year 2016 Employer Contributions	$477,190 *
d. Net OPEB Obligation (NOO) at June 30, 2016 (2a.+ 2b.-2c.)	$24,650,588

* Employer Contributions provided by SCA.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City School Construction Authority (SCA)

Required Supplementary Information (RSI)
and Additional Note Disclosure
For the Fiscal Year Ending June 30, 2016

Required Supplementary Information
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2015[1]	$0	$17,711,633	$17,711,633	0.0%	$60,765,975	29.1%
June 30, 2014[1]	$0	$16,715,827	$16,715,827	0.0%	$60,127,293	27.8%
June 30, 2013[1]	$0	$17,899,625	$17,899,625	0.0%	$58,362,537	30.7%
June 30, 2012[1]	$0	$16,826,855	$16,826,855	0.0%	$60,120,590	28.0%
June 30, 2011[2]	$0	$24,365,855	$24,365,855	0.0%	$58,348,442	41.8%
June 30, 2010[2]	$0	$22,158,714	$22,158,714	0.0%	$58,293,409	38.0%
June 30, 2009[2]	$0	$19,569,767	$19,569,767	0.0%	$56,771,493	34.5%
June 30, 2008[2]	$0	$18,369,464	$18,369,464	0.0%	$49,129,270	37.4%
June 30, 2007[2]	$0	$17,352,451	$17,352,451	0.0%	$40,937,457	42.4%
June 30, 2006[2]	$0	$16,039,618	$16,039,618	0.0%	$36,506,304	43.9%
June 30, 2005[2,3]	$0	$9,936,653	$9,936,653	0.0%	$33,827,738	29.4%

1 Beginning June 30, 2012 based on Entry Age Actuarial Cost Method.
2 Based on Frozen Entry Age Actuarial Cost Method.
3 Provided by SCA on July 24, 2007.

Additional Note Disclosure
Annual OPEB Cost and Net OPEB Obligation

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
June 30, 2016	$508,371	93.9%	$24,650,588
June 30, 2015	($1,767,440)	ND[1]	$24,619,407
June 30, 2014	$625,260	62.1%	$26,807,204
June 30, 2013	$1,198,193	29.5%	$26,570,496
June 30, 2012	$2,568,768	13.1%	$25,725,875
June 30, 2011	$3,019,804	10.0%	$23,492,627
June 30, 2010	$1,523,772	20.9%	$20,774,586
June 30, 2009	$1,473,093	18.5%	$19,569,767
June 30, 2008	$1,292,276	21.3%	$18,369,464
June 30, 2007	$6,270,529	0.0%	$17,352,451
June 30, 2006	$11,081,922	0.0%	$11,081,922

1 Not Determined due to the Annual OPEB Cost being less than Zero.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City School Construction Authority (SCA)

Derivation of Unfunded Actuarial Accrued Liability

1.	Unfunded Actuarial Accrued Liability at June 30, 2014	$16,715,827
2.	Entry Age Normal Cost at June 30, 2014	1,028,883
3.	Interest on 1. and 2. @ 4.00%	709,788
4.	Expected Employer Contributions - Fiscal Year 2015	25,039,764
5.	Expected Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-4.)	(6,585,266)
6.	Actual (PAYG) Employer Contributions - Fiscal Year 2015	420,357 [1]
7.	Preliminary Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-6.)	18,034,141
8.	Actuarial (Gain) / Loss - Experience	1,092,028
9.	Change in Assumptions [2]	(1,414,536)
10.	Unfunded Actuarial Accrued Liability at June 30, 2015 (7.+8.+9.)	$17,711,633

[1] Employer Contributions provided by SCA.

[2] Post Retirement Mortality Assumptions.
HMO Aging Adjustment.
Welfare Trend Rates.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City School Construction Authority (SCA)

Schedule of Unfunded Actuarial Accrued Liability Bases

Base	Date Established	Original Amount	Initial / Remaining Amortization Period	June 30, 2015 Balance	June 30, 2015 Amortization Payment
1. Change in Actuarial Cost Method	June 30, 2012	$ (8,899,020)	10-Years / 7-Years	$ (6,585,266)	$ (1,054,970)
2. Actuarial Loss - Accumulated Deficiency	June 30, 2015	$ 24,619,407	1-Year / 1-Year	$ 24,619,407	$ 24,619,407
3. Actuarial (Gain) / Loss - Experience	June 30, 2015	$ 1,092,028	1-Year / 1-Year	$ 1,092,028	$ 1,092,028
4. Change in Assumptions	June 30, 2015	$ (1,414,536)	1-Year / 1-Year	$ (1,414,536)	$ (1,414,536)
TOTAL		$ 15,397,879		$17,711,633	$ 23,241,929

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Municipal Water Finance Authority (WFA)

Summary of Data

	NYCERS	BERS	TOTAL
1. Actives			
a. Number	12	0	12
b. Salary	$1,147,964	NA	$1,147,964
c. Average Age	44.67	NA	44.67
d. Average Service	7.25	NA	7.25
e. Average Salary	$95,664	NA	$95,664
2. Inactives			
a. Number	2	0	2
b. Average Age	33.00	NA	33.00
c. Average Service	2.00	NA	2.00
3. Deferreds (Includes Deferred Retirees, if any)			
a. Number	0	0	0
b. Average Age	NA	NA	NA
4. Retirees			
a. Total*			
i. Number	3	1	4
ii. Average Age	69.74	71.81	70.26
b. By Benefit			Participant / Spouse
i. Pre-Medicare**			1 / NA
ii. Medicare Eligible**			3 / 1
iii. Welfare Fund**			4 / NA
iv. Medicare Part B#			NR / NR

* Retirees eligible for at least one benefit from WFA.
** Retirees currently eligible for benefit from WFA.
\# Retirees eligible for benefit from WFA now or in the future.
NR Benefit not the responsibility of WFA.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Municipal Water Finance Authority (WFA)

Results of the Actuarial Valuation

	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Cadillac Tax	Total
1. Total Present Value of Projected Benefits						
a. Active [1]	$1,099,142	$817,350	$448,070	$0	$23,770	**$2,388,332**
b. Deferred [2]	0	0	0	0	0	**0**
c. Retired	12,829	120,559	118,882	0	30	**252,300**
d. TOTAL	**$1,111,971**	**$937,909**	**$566,952**	**$0**	**$23,800**	**$2,640,632**
2. Entry Age Actuarial Accrued Liability						
a. Active [1]	$396,247	$312,607	$167,047	$0	$6,092	**$881,993**
b. Deferred [2]	0	0	0	0	0	**0**
c. Retired	12,829	120,559	118,882	0	30	**252,300**
d. TOTAL	**$409,076**	**$433,166**	**$285,929**	**$0**	**$6,122**	**$1,134,293**
3. Actuarial Value of Assets						**$0**
4. Unfunded Actuarial Accrued Liability (UAAL)						**$1,134,293**
5. Entry Age Normal Cost						**$102,326**
6. Salary of Active Participants						**$1,147,964**
7. Normal Cost Percentage [5. / 6.]						**8.914%**

[1] Includes Total Present Value of Projected Benefits for Inactives, if any.
[2] Includes Deferred Retirees, if any.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Municipal Water Finance Authority (WFA)

Development of the Annual Required Contribution (ARC)
For the Fiscal Year Ending June 30, 2016

1. **Entry Age Normal Cost at June 30, 2015**	**$102,326**
2. **Amortization of Unfunded Actuarial Accrued Liability - BOY**	**1,135,544**
3. **Subtotal**	**$1,237,870**
4. **Interest to June 30, 2016 at 4.0%**	**49,515**
5. **Annual Required Contribution (ARC)**	**$1,287,385**

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Municipal Water Finance Authority (WFA)

Development of the Annual OPEB Cost (AOC)
and Development of the Net OPEB Obligation (NOO)

For the Fiscal Year Ending June 30, 2016

1. **Annual OPEB Cost (AOC)**

a. Net OPEB Obligation at June 30, 2015	$988,593
b. Annual Required Contribution (ARC)	
i. Entry Age Normal Cost	$102,326
ii. UAAL Amortization Payment	1,135,544
iii. Interest to End of Year	49,515
iv. Total	$1,287,385
c. ARC Adjustment	$1,028,137
d. Interest on Net OPEB Obligation	$39,544
e. Fiscal Year 2016 Annual OPEB Cost (AOC) (1b.iv.-1c.+1d.)	$298,792

2. **Net OPEB Obligation (NOO)**

a. Net OPEB Obligation at June 30, 2015	$988,593
b. Fiscal Year 2016 Annual OPEB Cost (AOC)	$298,792
c. Fiscal Year 2016 Employer Contributions	$16,973 *
d. Net OPEB Obligation (NOO) at June 30, 2016 (2a.+ 2b.-2c.)	$1,270,412

* Employer Contributions provided by WFA.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Municipal Water Finance Authority (WFA)

Required Supplementary Information (RSI)
and Additional Note Disclosure
For the Fiscal Year Ending June 30, 2016

Required Supplementary Information
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2015[1]	$0	$1,134,293	$1,134,293	0.0%	$1,147,964	98.8%
June 30, 2014[1]	$0	$855,557	$855,557	0.0%	$1,213,165	70.5%
June 30, 2013[1]	$0	$819,390	$819,390	0.0%	$1,107,246	74.0%
June 30, 2012[1]	$0	$793,124	$793,124	0.0%	$1,063,872	74.6%
June 30, 2011[2]	$0	$662,361	$662,361	0.0%	$918,579	72.1%
June 30, 2010[2]	$0	$562,510	$562,510	0.0%	$1,026,437	54.8%
June 30, 2009[2]	$0	$430,799	$430,799	0.0%	$675,808	63.7%
June 30, 2008[2]	$0	$317,005	$317,005	0.0%	$728,732	43.5%
June 30, 2007[2]	$0	$242,193	$242,193	0.0%	$486,052	49.8%
June 30, 2006[2]	$0	$172,974	$172,974	0.0%	$306,155	56.5%
June 30, 2005[2]	$0	$308,348	$308,348	0.0%	$1,041,223	29.6%

1 Beginning June 30, 2012 based on Entry Age Actuarial Cost Method.

2 Based on Frozen Entry Age Actuarial Cost Method.

Additional Note Disclosure
Annual OPEB Cost and Net OPEB Obligation

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
June 30, 2016	$298,792	5.7%	$1,270,412
June 30, 2015	$51,613	26.8%	$988,593
June 30, 2014	$41,314	27.3%	$950,812
June 30, 2013	$144,665	9.5%	$920,759
June 30, 2012	$99,259	8.8%	$789,801
June 30, 2011	$171,309	3.3%	$699,268
June 30, 2010	$143,130	3.1%	$533,688
June 30, 2009	$86,374	8.6%	$395,026
June 30, 2008	$87,656	1.1%	$316,060
June 30, 2007	($168,612)	0.0%	$229,398
June 30, 2006*	$398,010	0.0%	$398,010

* As published.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Municipal Water Finance Authority (WFA)

Derivation of Unfunded Actuarial Accrued Liability

1. Unfunded Actuarial Accrued Liability at June 30, 2014	$855,557
2. Entry Age Normal Cost at June 30, 2014	106,881
3. Interest on 1. and 2. @ 4.00%	38,498
4. Expected Employer Contributions - Fiscal Year 2015	1,002,425
5. Expected Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-4.)	(1,489)
6. Actual (PAYG) Employer Contributions - Fiscal Year 2015	13,832 [1]
7. Preliminary Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-6.)	987,104
8. Actuarial (Gain) / Loss - Experience	99,641
9. Change in Assumptions [2]	47,548
10. Unfunded Actuarial Accrued Liability at June 30, 2015 (7.+8.+9.)	1,134,293

[1] Employer Contributions provided by WFA.
[2] Post Retirement Mortality Assumptions.
HMO Aging Adjustment.
Welfare Trend Rates.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation

New York City Municipal Water Finance Authority (WFA)

Schedule of Unfunded Actuarial Accrued Liability Bases

Base	Date Established	Original Amount	Initial / Remaining Amortization Period	June 30, 2015 Balance	June 30, 2015 Amortization Payment
1. Change in Actuarial Cost Method	June 30, 2012	$ (2,011)	10-Years / 7-Years	$ (1,489)	$ (238)
2. Actuarial Loss - Accumulated Deficiency	June 30, 2015	$ 988,593	1-Year / 1-Year	$ 988,593	$ 988,593
3. Actuarial (Gain) / Loss - Experience	June 30, 2015	$ 99,641	1-Year / 1-Year	$ 99,641	$ 99,641
4. Change in Assumptions	June 30, 2015	$ 47,548	1-Year / 1-Year	$ 47,548	$ 47,548
TOTAL		$ 1,133,771		$1,134,293	$ 1,135,544

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB45 Results for the City of New York (Excluding Component Units)
Summary of Data

By System Not Including Component Units [1]

	NYCERS	TRS	BERS	POLICE	FIRE	NYCRS TOTAL
1. Actives						
a. Number	98,540	111,426	24,300	34,435	10,780	279,481
b. Salary	$6,718,187,340	$8,664,753,114	$1,034,769,197	$3,564,029,659	$1,164,994,036	$21,146,733,346
c. Average Age	46.81	43.92	50.92	37.75	40.77	44.67
d. Average Service	12.35	11.42	9.89	11.71	14.13	11.76
e. Average Salary	$68,177	$77,762	$42,583	$103,500	$108,070	$75,664
2. Inactives						
a. Number	9,040	6,966	3,921	1,484	18	21,429
b. Average Age	42.77	41.37	47.82	37.13	39.00	42.84
c. Average Service	6.94	8.27	5.85	2.84	11.06	6.89
3. Deferreds (Includes Deferred Retirees, if any)						
a. Number	5,088	8,971	202	490	28	14,779
b. Average Age	54.41	51.17	58.38	42.16	45.04	52.07
4. Retirees						
a. Total [3]						
i. Number	69,198	75,989	15,126	47,915	16,187	224,415
ii. Average Age	70.00	72.65	74.31	61.22	66.66	69.07
b. By Benefit*	Participant / Spouse	Participant / Spouse	Participant / Spouse	Participant / Spouse	Participant / Spouse	Participant / Spouse
i. Pre-Medicare**	20,102 / 12,464	13,000 / 5,773	2,168 / 905	28,554 / 20,546	6,926 / 6,325	70,750 / 46,013
ii. Medicare Eligible**	49,139 / 15,803	62,989 / 18,330	13,169 / 4,107	19,361 / 10,834	9,261 / 5,222	153,919 / 54,296
iii. Welfare Fund**	68,323 / NA	74,047 / NA	14,714 / NA	47,044 / NA	15,348 / NA	219,476 / NA
iv. Medicare Part B#	91,056 / 34,280	77,867 / 24,931	15,373 / 5,019	47,915 / 31,380	16,187 / 11,547	248,398 / 107,157

	TIAA	LODW	GRAND TOTAL
1. Actives			
a. Number	2,253	0	281,734
b. Salary	$187,802,743	0	$21,334,536,089
c. Average Age	51.28	NA	44.72
d. Average Service	15.00	NA	11.78
e. Average Salary	$83,357	NA	$75,726
2. Inactives			
a. Number	108	0	21,537
b. Average Age	56.50	NA	42.91
c. Average Service	20.03	NA	6.96
3. Deferreds (Includes Deferred Retirees, if any)			
a. Number	81 [2]	0	14,860
b. Average Age	54.65	NA	52.09
4. Retirees			
a. Total			
i. Number	785	789	225,989
ii. Average Age	75.78	79.62	69.13
b. By Benefit*	Participant / Spouse	Participant / Spouse	Participant / Spouse
i. Pre-Medicare**	27 / 54	46 / 0	70,823 / 46,067
ii. Medicare Eligible**	758 / 283	743 / 9	155,420 / 54,588
iii. Welfare Fund**	785 / NA	NA / NA	220,261 / NA
iv. Medicare Part B#	2,699 / 1,183	789 / 9	251,886 / 108,349

[1] City results also include Medicare Part B coverage for 47,402 actives, 5,210 inactives, 26,790 retirees and 2,196 deferred participants in HHC, SCA, WFA and CUNY Senior Colleges and Health Insurance coverage for 609 actives, 46 inactives, 1,147 retirees and 23 deferred participants in NYCHA (Housing Police retirees only) and SCA and Welfare Fund coverage for 4,055 actives, 570 inactives, 2,959 retirees and 80 deferred participants in NYCHA (Housing Police retirees only) and CUNY Senior Colleges (non-pedagogical).

[2] Estimate due to lack of data.

[3] Retirees eligible for receipt of Health Insurance, excluding Component Units.

* Includes Component Unit participants with City-provided benefits.

** Retirees currently eligible for benefit.

\# Retirees eligible for benefit now or in the future.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB45 Results for the City of New York (Excluding Component Units)
Results of the Actuarial Valuation

1. Actuarial Present Value of Projected Benefits [1]

	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Cadillac Tax	Total
a. Active [2]	$34,468,469,604	$21,007,559,768	$11,375,265,262	$15,204,368,389	$1,442,895,298	$83,498,558,321
b. Deferred [3]	1,947,623,141	1,090,284,215	714,593,498	792,330,216	15,414,786	$4,560,245,856
c. Retired	12,949,305,762	11,165,829,475	7,018,917,819	7,587,364,470	17,200,990	$38,738,618,516
d. TOTAL	$49,365,398,507	$33,263,673,458	$19,108,776,579	$23,584,063,075	$1,475,511,074	$126,797,422,693

2. Entry Age Actuarial Accrued Liability

	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Cadillac Tax	Total
a. Active [2]	$12,888,001,893	$8,716,829,141	$4,808,281,860	$6,396,630,815	$314,522,254	$33,124,265,963
b. Deferred [3]	1,947,623,141	1,090,284,215	714,593,498	792,330,216	15,414,786	$4,560,245,856
c. Retired	12,949,305,762	11,165,829,475	7,018,917,819	7,587,364,470	17,200,990	$38,738,618,516
d. TOTAL	$27,784,930,796	$20,972,942,831	$12,541,793,177	$14,776,325,501	$347,138,030	$76,423,130,335

3. Actuarial Value of Assets	$3,396,523,538
4. Unfunded Actuarial Accrued Liability (UAAL) [2d. - 3.]	$73,026,606,797
5. Entry Age Normal Cost	$3,691,362,181
6. Salary of Active Participants	$21,334,536,089
7. Normal Cost Percentage [5. / 6.]	17.302%

[1] City results also include Medicare Part B coverage for 47,402 actives, 5,210 inactives, 26,790 retirees and 2,196 deferred participants in HHC, SCA, WFA and CUNY Senior Colleges and Health Insurance coverage for 609 actives, 46 inactives, 1,147 retirees and 23 deferred participants in NYCHA (Housing Police retirees only) and SCA and Welfare Fund coverage for 4,055 actives, 570 inactives, 2,959 retirees and 80 deferred participants in NYCHA (Housing Police retirees only) and CUNY Senior Colleges (non-pedagogical).

[2] Includes Actuarial Present Value of Projected Benefits for Inactives, if any.

[3] Includes Deferred Retirees, if any.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB45 Results for the City of New York (Excluding Component Units)
Development of the Annual Required Contribution (ARC)
For the Fiscal Year Ending June 30, 2016

1. **Entry Age Normal Cost at June 30, 2015**	**$3,691,362,181**
2. **Amortization of Unfunded Actuarial Accrued Liability - BOY**	**85,033,385,900**
3. **Subtotal**	**$88,724,748,081**
4. **Interest to June 30, 2016 at 4.0%**	**3,548,989,923**
5. **Annual Required Contribution (ARC)**	**$92,273,738,004**

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB45 Results for the City of New York (Excluding Component Units)
Development of the Annual OPEB Cost (AOC)
and Development of the Net OPEB Obligation (NOO)

For the Fiscal Year Ending June 30, 2016

1. Annual OPEB Cost (AOC)

a. Net OPEB Obligation at June 30, 2015	**$85,458,175,136**	
b. Annual Required Contribution (ARC)		
i. Entry Age Normal Cost	**$3,691,362,181**	
ii. UAAL Amortization Payment	**85,033,385,900**	
iii. Interest to End of Year	**3,548,989,923**	
iv. Total	**$92,273,738,004**	
c. ARC Adjustment	**$88,876,502,141**	
d. Interest on Net OPEB Obligation	**$3,418,327,005**	
e. Fiscal Year 2016 Annual OPEB Cost (AOC) (1b.iv.-1c.+1d.)	**$6,815,562,868**	

2. Net OPEB Obligation (NOO)

a. Net OPEB Obligation at June 30, 2015	**$85,458,175,136**	
b. Fiscal Year 2016 Annual OPEB Cost (AOC)	**$6,815,562,868**	
c. Fiscal Year 2016 Employer Contributions	**$2,897,128,941**	[1]
d. Net OPEB Obligation (NOO) at June 30, 2016 (2a.+2b.-2c.)	**$89,376,609,063**	

[1] Employer Contributions include amounts provided by OMB including the effect of non-trust activity for Fiscal Year 2016.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB45 Results for the City of New York (Excluding Component Units)

Required Supplementary Information (RSI)
and Additional Note Disclosure
For the Fiscal Year Ending June 30, 2016

Required Supplementary Information
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2015[1]	$3,396,523,538	$76,423,130,335	$73,026,606,797	4.4%	$21,334,536,089	342.3%
June 30, 2014[1]	$2,378,143,692	$70,363,331,880	$67,985,188,188	3.4%	$20,652,309,701	329.2%
June 30, 2013[1]	$1,363,072,931	$71,319,105,968	$69,956,033,037	1.9%	$20,193,923,609	346.4%
June 30, 2012[1]	$2,115,846,394	$71,399,272,700	$69,283,426,306	3.0%	$20,202,358,642	342.9%
June 30, 2011[2]	$2,631,584,347	$85,945,756,187	$83,314,171,840	3.1%	$19,854,039,496	419.6%
June 30, 2010[2]	$3,022,624,061	$82,040,359,975	$79,017,735,914	3.7%	$19,672,460,069	401.7%
June 30, 2009[2]	$3,103,186,200	$73,653,281,314	$70,550,095,114	4.2%	$19,412,072,236	363.4%
June 30, 2008[2]	$3,186,139,468	$65,144,934,748	$61,958,795,280	4.9%	$18,672,219,289	331.8%
June 30, 2007[2]	$2,594,451,907	$62,116,926,083	$59,522,474,176	4.2%	$17,314,779,336	343.8%
June 30, 2006[2]	$1,001,331,648	$56,060,000,324	$55,058,668,676	1.8%	$16,510,165,373	333.5%
June 30, 2005[2]	$0	$50,523,014,097	$50,523,014,097	0.0%	$15,703,554,657	321.7%

1 Beginning June 30, 2012 based on Entry Age Actuarial Cost Method.
2 Based on Frozen Entry Age Actuarial Cost Method.

Additional Note Disclosure
Annual OPEB Cost and Net OPEB Obligation [1]

Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation
June 30, 2016	$6,816,123,565	42.5% [3]	$89,403,007,614
June 30, 2015	($864,197,000)	ND [2]	$85,484,552,000
June 30, 2014	$78,551,000	3,965.3% [3]	$89,485,122,000
June 30, 2013	$5,542,845,000	21.6% [3]	$92,521,346,000
June 30, 2012	$5,707,001,000	25.2% [3]	$88,174,139,000
June 30, 2011	$10,494,993,000	15.0% [3]	$83,906,953,000
June 30, 2010	$11,021,425,000	14.3% [3]	$74,984,832,000
June 30, 2009	$3,937,583,000	42.8% [4]	$65,544,361,000
June 30, 2008	$7,419,205,000	25.5%	$63,290,218,000 [5]
June 30, 2007	$7,164,986,000	40.6%	$57,761,938,000
June 30, 2006	$55,690,322,000	3.9%	$53,507,451,000

1 Amounts shown for Fiscal Years prior to Fiscal Year 2016 are as published in the City CAFR. Includes amounts for ECF and SCA.
2 Not Determined due to the Annual OPEB Cost being less than Zero.
3 Includes non-trust activity.
4 Includes cumulative adjustment for approximate non-trust activity for Fiscal Years ending 6/30/06, 6/30/07 and 6/30/08.
5 As published. Correct amount should be $63,289,913,000.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB45 Results for the City of New York (Excluding Component Units)
Derivation of Unfunded Actuarial Accrued Liability

1.	Unfunded Actuarial Accrued Liability at June 30, 2014	67,985,188,188
2.	Entry Age Normal Cost at June 30, 2014	3,454,097,115
3.	Interest on 1. and 2. @ 4.00%	2,857,571,412
4.	Expected Employer Contributions - Fiscal Year 2015	88,594,071,842
5.	Expected Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-4.)	(14,297,215,127)
6.	Actual (PAYG) Employer Contributions - Fiscal Year 2015	3,135,896,706 [1]
7.	Preliminary Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-6.)	71,160,960,009
8.	Actuarial (Gain) / Loss - Experience	(1,225,707,163)
9.	Change in Assumptions [2]	3,091,353,951
10.	Unfunded Actuarial Accrued Liability at June 30, 2015 (7.+8.+9.)	73,026,606,797

[1] Employer Contributions include amounts provided by OMB including the effect of non-trust activity for Fiscal Year 2015.

[2] Post Retirement Mortality Assumptions.
HMO Aging Adjustment.
Welfare Trend Rates.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB45 Results for the City of New York (Excluding Component Units)
Schedule of Unfunded Actuarial Accrued Liability Bases

Base	Date Established	Original Amount	Initial / Remaining Amortization Period	June 30, 2015 Balance	June 30, 2015 Amortization Payment
1. Change in Actuarial Cost Method	June 30, 2012	$ (19,320,587,398)	10-Years / 7-Years	$ (14,297,215,127)	$ (2,290,436,024)
2. Actuarial Loss - Accumulated Deficiency	June 30, 2015	$ 85,458,175,136	1-Year / 1-Year	$ 85,458,175,136	$ 85,458,175,136
3. Actuarial (Gain)/Loss - Experience	June 30, 2015	$ (1,225,707,163)	1-Year / 1-Year	$ (1,225,707,163)	$ (1,225,707,163)
4. Change in Assumptions	June 30, 2015	$ 3,091,353,951	1-Year / 1-Year	$ 3,091,353,951	$ 3,091,353,951
TOTAL		$ 68,003,234,526		$ 73,026,606,797	$ 85,033,385,900

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB43 Results for the City of New York (Excluding Component Units)
Summary of Data

By System Not Including Component Units [1]

	NYCERS	TRS	BERS	POLICE	FIRE	NYCRS TOTAL
1. Actives						
a. Number	98,540	111,426	24,300	34,435	10,780	279,481
b. Salary	$6,718,187,340	$8,664,753,114	$1,034,769,197	$3,564,029,659	$1,164,994,036	$21,146,733,346
c. Average Age	46.81	43.92	50.92	37.75	40.77	44.67
d. Average Service	12.35	11.42	9.89	11.71	14.13	11.76
e. Average Salary	$68,177	$77,762	$42,583	$103,500	$108,070	$75,664
2. Inactives						
a. Number	9,040	6,966	3,921	1,484	18	21,429
b. Average Age	42.77	41.37	47.82	37.13	39.00	42.84
c. Average Service	6.94	8.27	5.85	2.84	11.06	6.89
3. Deferreds (Includes Deferred Retirees, if any)						
a. Number	5,088	8,971	202	490	28	14,779
b. Average Age	54.41	51.17	58.38	42.16	45.04	52.07
4. Retirees						
a. Total [3]						
i. Number	69,198	75,989	15,126	47,915	16,187	224,415
ii. Average Age	70.00	72.65	74.31	61.22	66.66	69.07
b. By Benefit*	Participant / Spouse	Participant / Spouse	Participant / Spouse	Participant / Spouse	Participant / Spouse	Participant / Spouse
i. Pre-Medicare**	20,102 / 12,464	13,000 / 5,773	2,168 / 905	28,554 / 20,546	6,926 / 6,325	70,750 / 46,013
ii. Medicare Eligible**	49,139 / 15,803	62,989 / 18,330	13,169 / 4,107	19,361 / 10,834	9,261 / 5,222	153,919 / 54,296
iii. Welfare Fund**	68,323 / NA	74,047 / NA	14,714 / NA	47,044 / NA	15,348 / NA	219,476 / NA
iv. Medicare Part B[#]	91,056 / 34,280	77,867 / 24,931	15,373 / 5,019	47,915 / 31,380	16,187 / 11,547	248,398 / 107,157

	TIAA	LODW	GRAND TOTAL
1. Actives			
a. Number	2,253	0	281,734
b. Salary	$187,802,743	0	$21,334,536,089
c. Average Age	51.28	NA	44.72
d. Average Service	15.00	NA	11.78
e. Average Salary	$83,357	NA	$75,726
2. Inactives			
a. Number	108	0	21,537
b. Average Age	56.50	NA	42.91
c. Average Service	20.03	NA	6.96
3. Deferreds (Includes Deferred Retirees, if any)			
a. Number	81 [2]	0	14,860
b. Average Age	54.65	NA	52.09
4. Retirees			
a. Total			
i. Number	785	789	225,989
ii. Average Age	75.78	79.62	69.13
b. By Benefit*	Participant / Spouse	Participant / Spouse	Participant / Spouse
i. Pre-Medicare**	27 / 54	46 / 0	70,823 / 46,067
ii. Medicare Eligible**	758 / 283	743 / 9	155,420 / 54,588
iii. Welfare Fund**	785 / NA	NA / NA	220,261 / NA
iv. Medicare Part B[#]	2,699 / 1,183	789 / 9	251,886 / 108,349

1 City results also include Medicare Part B coverage for 47,402 actives, 5,210 inactives, 26,790 retirees and 2,196 deferred participants in HHC, SCA, WFA and CUNY Senior Colleges and Health Insurance coverage for 609 actives, 46 inactives, 1,147 retirees and 23 deferred participants in NYCHA (Housing Police retirees only) and SCA and Welfare Fund coverage for 4,055 actives, 570 inactives, 2,959 retirees and 80 deferred participants in NYCHA (Housing Police retirees only) and CUNY Senior Colleges (non-pedagogical).

2 Estimate due to lack of data.

3 Retirees eligible for receipt of Health Insurance, excluding Component Units.

* Includes Component Unit participants with City-provided benefits.

** Retirees currently eligible for benefit.

\# Retirees eligible for benefit now or in the future.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB43 Results for the City of New York (Excluding Component Units)
Results of the Actuarial Valuation

1. Actuarial Present Value of Projected Benefits [1]

	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Cadillac Tax	Total
a. Active [2]	$34,468,469,604	$21,007,559,768	$11,375,265,262	$15,204,368,389	$1,442,895,298	$83,498,558,321
b. Deferred [3]	1,947,623,141	1,090,284,215	714,593,498	792,330,216	15,414,786	$4,560,245,856
c. Retired	12,949,305,762	11,165,829,475	7,018,917,819	7,587,364,470	17,200,990	$38,738,618,516
d. TOTAL	$49,365,398,507	$33,263,673,458	$19,108,776,579	$23,584,063,075	$1,475,511,074	$126,797,422,693

2. Entry Age Actuarial Accrued Liability

	Pre-Medicare	Medicare	Welfare Funds	Part B Premium	Cadillac Tax	Total
a. Active [2]	$12,888,001,893	$8,716,829,141	$4,808,281,860	$6,396,630,815	$314,522,254	$33,124,265,963
b. Deferred [3]	1,947,623,141	1,090,284,215	714,593,498	792,330,216	15,414,786	$4,560,245,856
c. Retired	12,949,305,762	11,165,829,475	7,018,917,819	7,587,364,470	17,200,990	$38,738,618,516
d. TOTAL	$27,784,930,796	$20,972,942,831	$12,541,793,177	$14,776,325,501	$347,138,030	$76,423,130,335

3. Actuarial Value of Assets	$3,396,523,538
4. Unfunded Actuarial Accrued Liability (UAAL) [2d. - 3.]	$73,026,606,797
5. Entry Age Normal Cost	$3,691,362,181
6. Salary of Active Participants	$21,334,536,089
7. Normal Cost Percentage [5. / 6.]	17.302%

[1] City results also include Medicare Part B coverage for 47,402 actives, 5,210 inactives, 26,790 retirees and 2,196 deferred participants in HHC, SCA, WFA and CUNY Senior Colleges and Health Insurance coverage for 609 actives, 46 inactives, 1,147 retirees and 23 deferred participants in NYCHA (Housing Police retirees only) and SCA and Welfare Fund coverage for 4,055 actives, 570 inactives, 2,959 retirees and 80 deferred participants in NYCHA (Housing Police retirees only) and CUNY Senior Colleges (non-pedagogical).

[2] Includes Actuarial Present Value of Projected Benefits for Inactives, if any.

[3] Includes Deferred Retirees, if any.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB43 Results for the City of New York (Excluding Component Units)
Development of the Annual Required Contribution (ARC)
For the Fiscal Year Ending June 30, 2016

1. **Entry Age Normal Cost at June 30, 2015**	**$3,691,362,181**
2. **Amortization of Unfunded Actuarial Accrued Liability - BOY**	**85,033,385,900**
3. **Subtotal**	**$88,724,748,081**
4. **Interest to June 30, 2016 at 4.0%**	**3,548,989,923**
5. **Annual Required Contribution (ARC)**	**$92,273,738,004**

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB43 Results for the City of New York (Excluding Component Units)

Required Supplementary Information (RSI)
and Additional Note Disclosure
For the Fiscal Year Ending June 30, 2016

Required Supplementary Information
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
June 30, 2015[1]	$3,396,523,538	$76,423,130,335	$73,026,606,797	4.4%	$21,334,536,089	342.3%
June 30, 2014[1]	$2,378,143,692	$70,363,331,880	$67,985,188,188	3.4%	$20,652,309,701	329.2%
June 30, 2013[1]	$1,363,072,931	$71,319,105,968	$69,956,033,037	1.9%	$20,193,923,609	346.4%
June 30, 2012[1]	$2,115,846,394	$71,399,272,700	$69,283,426,306	3.0%	$20,202,358,642	342.9%
June 30, 2011[2]	$2,631,584,347	$85,945,756,187	$83,314,171,840	3.1%	$19,854,039,496	419.6%
June 30, 2010[2]	$3,022,624,061	$82,040,359,975	$79,017,735,914	3.7%	$19,672,460,069	401.7%
June 30, 2009[2]	$3,103,186,200	$73,653,281,314	$70,550,095,114	4.2%	$19,412,072,236	363.4%
June 30, 2008[2]	$3,186,139,468	$65,144,934,748	$61,958,795,280	4.9%	$18,672,219,289	331.8%
June 30, 2007[2]	$2,594,451,907	$62,116,926,083	$59,522,474,176	4.2%	$17,314,779,336	343.8%
June 30, 2006[2]	$1,001,331,648	$56,060,000,324	$55,058,668,676	1.8%	$16,510,165,373	333.5%
June 30, 2005[2]	$0	$50,523,014,097	$50,523,014,097	0.0%	$15,703,554,657	321.7%

1 Beginning June 30, 2012 based on Entry Age Actuarial Cost Method.
2 Based on Frozen Entry Age Actuarial Cost Method.

Schedule of Employer Contributions

Fiscal Year Ended	Annual Required Contribution	Percentage Contributed
June 30, 2016	$92,273,738,004	3.1% [1]
June 30, 2015	$88,594,071,842	3.5% [1]
June 30, 2014	$92,571,050,462	3.4% [1]
June 30, 2013	$93,688,623,719	1.3% [1]
June 30, 2012	$89,586,423,101	1.6% [1]
June 30, 2011	$85,454,602,423	1.8% [1]
June 30, 2010	$76,543,317,158	2.1% [1]
June 30, 2009	$67,206,700,283	2.5% [2]
June 30, 2008	$65,161,266,615	2.9%
June 30, 2007	$60,653,920,448	4.8%
June 30, 2006	$55,665,901,829	3.9%

1 Includes non-trust activity.
2 Includes cumulative adjustment for approximate non-trust activity for Fiscal Years ending 6/30/06, 6/30/07, 6/30/08 and 6/30/09.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB43 Results for the City of New York (Excluding Component Units)
Derivation of Unfunded Actuarial Accrued Liability

1.	Unfunded Actuarial Accrued Liability at June 30, 2014	67,985,188,188
2.	Entry Age Normal Cost at June 30, 2014	3,454,097,115
3.	Interest on 1. and 2. @ 4.00%	2,857,571,412
4.	Expected Employer Contributions - Fiscal Year 2015	88,594,071,842
5.	Expected Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-4.)	(14,297,215,127)
6.	Actual (PAYG) Employer Contributions - Fiscal Year 2015	3,135,896,706 [1]
7.	Preliminary Unfunded Actuarial Accrued Liability at June 30, 2015 (1.+2.+3.-6.)	71,160,960,009
8.	Actuarial (Gain) / Loss - Experience	(1,225,707,163)
9.	Change in Assumptions [2]	3,091,353,951
10.	Unfunded Actuarial Accrued Liability at June 30, 2015 (7.+8.+9.)	73,026,606,797

[1] Employer Contributions include amounts provided by OMB including the effect of non-trust activity for Fiscal Year 2015.

[2] Post Retirement Mortality Assumptions.
HMO Aging Adjustment.
Welfare Trend Rates.

New York City Health Benefits Program

June 30, 2015 OPEB Actuarial Valuation
GASB43 Results for the City of New York (Excluding Component Units)
Schedule of Unfunded Actuarial Accrued Liability Bases

Base	Date Established	Original Amount	Initial / Remaining Amortization Period	June 30, 2015 Balance	June 30, 2015 Amortization Payment
1. Change in Actuarial Cost Method	June 30, 2012	$ (19,320,587,398)	10-Years / 7-Years	$ (14,297,215,127)	$ (2,290,436,024)
2. Actuarial Loss - Accumulated Deficiency	June 30, 2015	$ 85,458,175,136	1-Year / 1-Year	$ 85,458,175,136	$ 85,458,175,136
3. Actuarial (Gain)/Loss - Experience	June 30, 2015	$ (1,225,707,163)	1-Year / 1-Year	$ (1,225,707,163)	$ (1,225,707,163)
4. Change in Assumptions	June 30, 2015	$ 3,091,353,951	1-Year / 1-Year	$ 3,091,353,951	$ 3,091,353,951
TOTAL		$ 68,003,234,526		$ 73,026,606,797	$ 85,033,385,900

APPENDIX D

APPENDIX D

NEW YORK CITY HEALTH BENEFITS PROGRAM

DETAILS OF ACTUARIAL ASSUMPTIONS AND CERTAIN METHODS

Actuarial Assumptions

The actuarial assumptions used in the June 30, 2015 and the June 30, 2014 OPEB actuarial valuations are classified as those used in the NYCRS pension actuarial valuations and those specific to the OPEB actuarial valuations.

NYCRS Valuations

The actuarial assumptions used to value the NYCRS are generally unchanged from the actuarial assumptions used in the June 30, 2014 OPEB actuarial valuation and are provided in the following five reports (the Silver Books) available on the website of the Office of the Actuary (www.nyc.gov/actuary):

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2011 for the New York City Employees' Retirement System, dated February 10, 2012.

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2011 for the New York City Teachers' Retirement System, dated February 10, 2012.

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2011 for the New York City Board of Education Retirement System, dated February 10, 2012.

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2011 for the New York City Police Pension Fund, dated February 10, 2012

- Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2011 for the New York City Fire Department Pension Fund, dated February 10, 2012.

The probability of retirement set out in each of the Silver Books is assumed to be 100% at either age 63 or 70, depending upon the program of benefits for the individual employee. For purposes of valuing pension obligations under NYCRS, 100% of the individuals remaining in service at and after these ages are assumed to retire with their currently accrued pension, whether or not they have attained the service requirement for vesting in their particular program of pension benefits. For purposes of the OPEB actuarial valuation, 100% of the individuals remaining in service at these ages are assumed to either retire with a benefit or to terminate employment without a benefit, depending upon whether they have attained the requisite five, ten or 15 years of service required for eligibility for OPEB.

For purposes of determining pension obligations, the demographic assumptions requiring Board approval were adopted by each NYCRS Board of Trustees during Fiscal Year 2012. Chapter 3 of the Laws of 2013 enacted those actuarial assumptions and methods that require New York State legislation. Subsequently, for the June 30, 2015 valuation, new tables of post-retirement mortality were proposed by the Actuary and adopted by each of the NYCRS Boards during Fiscal Year 2016. These tables were based primarily on the experience of each system and the application of Mortality Improvement Scale MP-2015 published by the Society of Actuaries in October 2015. Scale MP-2015 applied on a generational basis replaced Mortality Improvement Scale AA which was applied on a static projection basis.

The other actuarial assumptions and methods used in the OPEB actuarial valuation are set forth in this Report.

OPEB-Specific Assumptions

The OPEB–specific actuarial assumptions used in the June 30, 2015 OPEB actuarial valuation of the Program are as follows:

Valuation Date	June 30, 2015.
Discount Rate	4.0% per annum[1].
Actuarial Cost Method	Entry Age calculated on an individual basis with the Actuarial Value of Projected Benefits allocated on a level basis over earnings from hire through age of exit.
Per-Capita Claims Costs	HIP HMO and GHI/EBCBS benefit costs reflect age adjusted premiums for June 30, 2015 and June 30, 2014 valuations. For June 30, 2015 valuation, Other HMOs reflect age adjusted premiums GHI/EBCBS non-Medicare premiums adjusted for Health Savings Agreement changes. Age adjustments based on assumed age distribution of covered population used for non-Medicare retirees and HIP and Other HMO Medicare retirees. Age adjustment based on actual age distribution of the GHI/EBCBS Medicare covered population. For June 30, 2014 valuation, insured premiums without age adjustment for other basic coverage. All reported premiums assumed to include administrative costs.

[1] 2.5% CPI, 1.5% real rate of return on short-term investments

Employers' premium contribution schedules for the month of July 2015 and January 2016 were reported by OLR. In most cases, the premium contributions remained the same throughout the year. Other HMO HIP HMO Medicare rates varied by date and by specific Plan option. These variations are the result of differing Medicare reimbursements. The various monthly rates were blended by proportion of enrollment. For other rates, where the January 2016 premium rate was different than the July 2015 premium rate, the valuation assumed that the January 2016 premium rate was more representative of the long-range cost of the arrangement.

Initial monthly premium rates used in valuations are shown in the following tables:

Plan	MONTHLY RATES	
	FY16[1]	FY15[2]
HIP HMO		
Non-Medicare Single	$ 603.02	$ 586.10
Non-Medicare Family	$ 1,477.41	$ 1,435.95
Medicare	$ 160.05	$ 157.55
GHI/EBCBS		
Non-Medicare Single	$ 524.44[3]	$ 497.39[3]
Non-Medicare Family	$ 1,376.15[3]	$ 1,292.81[3]
Medicare	$ 160.75	$ 160.86
Other HMOs		
Non-Medicare Single	$ 923.23[4]	$ 586.10[4]
Non-Medicare Family	$ 2,010.43[4]	$ 1,435.95[4]
Medicare Single	$ 245.19[4]	$ 160.86[4]
Medicare Family	$ 501.71[4]	$ 321.72[4]

1 Used in June 30, 2015 OPEB actuarial valuation.

2 Used in June 30, 2014 OPEB actuarial valuation.

3 For June 30, 2015 valuation, GHI/EBCBS Pre-Medicare premiums decreased 2.48% to reflect fiscal year 2016 Health Savings agreement changes. For June 30, 2014 valuation, GHI/EBCBS Pre-Medicare premiums decreased 2.05%

4 For June 30, 2015 valuation, Other HMO premiums is total premium for medical (not prescription) coverage including retiree contributions. For June 30, 2014, Other HMO premium is net employer contribution.

Welfare Funds . . . .

For the June 30, 2015 and June 30, 2014 valuation, the Welfare Fund contribution reported for Fiscal Year 2016, (including any reported retroactive amounts) was used as the per capita cost for valuation purposes. The amount used included the $25 increase effective July 1, 2015 under the 2014 MLC-NYC Health Savings Agreement, $100 for Fiscal Year 2016 under further negotiations (reflected in the June 30, 2015 valuation) as well as further $25 annual increases effective July 1, 2016 and July 1, 2017. It is assumed that all Welfare Funds will ultimately be subject to those agreements, whether or not the union running the particular Welfare Fund has currently signed.

Reported annual contribution amounts for the last three years are shown in Appendix B, Tables 2a to 2e. The amounts shown for Fiscal Year 2016 as of June 30, 2015, increased by $25 as of July 1, 2015, plus an additional $100, are used for current retirees. For current retirees in the June 30, 2014 valuation, the valuation reflected the Fiscal Year 2015 values shown as of June 30, 2014 increased by $25 as of July 1, 2014.

Welfare Fund rates based on actual reported Union Welfare Fund code for current retirees. Where Union Welfare Fund code was missing, the most recently reported union code was reflected.

Weighted average annual contribution rates used for future retirees are shown in the following table. These averages were developed based on Welfare Fund enrollment of recent retirees (during the five years prior to the valuation).

	Annual Rate	
	6/30/2015	**6/30/2014**
NYCERS	$ 1,692	$ 1,693
TRS	1,746	1,746
BERS	1,677	1,677
POLICE	1,584	1,614
FIRE	1,705	1,707

Contributions were assumed to increase by Medicare Plans trend rates. For the June 30, 2014 OPEB actuarial valuation, the assumed increases were replaced by the negotiated $25 increase for the next 3 fiscal years. For the June 30, 2015 valuation, the assumed increase is replaced by the negotiated $25 increase for the next 2 fiscal years. In addition to current increasing payments an expected one time $100 increase was also reflected for Fiscal Year 2016.

For Welfare Fund contribution amounts reflected in the June 30, 2014 OPEB actuarial valuation for current retirees, see the Tenth Annual OPEB Report.

Medicare Part B Premiums . . . .

Calendar Year	Monthly Premium
2012	$ 99.90
2013	$ 104.90
2014	$ 104.90
2015	$ 104.90
2016	$ 109.97*

* Reflected only in the June 30, 2015 OPEB actuarial valuation.

2016 Medicare Part B Premium assumed to increase by Medicare Part B trend rates.

Medicare Part B Premium reimbursement amounts have been updated to reflect actual premium rates announced for calendar years through 2016, including changes adopted as part of the Bipartisan Budget Act of 2015. Due to there being no cost-of-living increase in Social Security benefits for Calendar Year, most Medicare Part B participants will not be charged the Medicare Part B premium originally projected or ultimately announced for 2016. The initially projected Medicare Part B premium was artificially increased so that the overall amount collected by the Center for Medicare and Medicaid Services (CMS) would be sufficient for the needs of the Medicare Part B program. The Bipartisan Budget Act allowed for certain borrowing of funds, but still resulted in a stated Part B premium amount in excess of the amount sufficient for the Part B Program if collected for all participants. These changes for Calendar Year 2016 are reflected in the valuation. Thus, for the June 30, 2015 OPEB actuarial valuation (i.e., Fiscal Year 2016), the annual premium used of $1,289.22 equals six months of the Calendar Year 2015 premium plus six months of:

- 70% of the Calendar Year 2015 monthly premium (i.e., $104.90), representing the approximate percentage of the overall U.S. Medicare population that will pay the frozen amount, and

- 30% of the announced Calendar Year 2016 monthly premium (i.e., $121.80), representing the approximate percentage of the overall U.S. Medicare population that will pay the Calendar Year 2016 amount.

Future Calendar Year Medicare Part B Premium rates are projected from the Calendar Year 2016 rate of $121.80 using the assumed Medicare Part B Premium trend.

Overall Medicare Part B Premium amounts are assumed to increase by the following percentages to reflect the income-related increases in Medicare Part B Premiums for high income individuals. The percentages assumed have been increased to reflect revisions to the income-related Part B Premium provisions as adopted in the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). Percentages assumed based on CMS income distribution published statistics and provisions of Social Security Act related to Medicare Part B Premium amounts, both before and after MACRA changes.

	Income-Related Medicare Part B Increase	
Fiscal Year	**June 30, 2015 Valuation**	**June 30, 2014 Valuation**
2015	N/A	3.8%
2016	3.9%	3.9%
2017	4.0%	4.0%
2018	4.5%	4.5%
2019	5.0%	5.0%
2020	5.2%	5.2%
2021	5.3%	5.3%
2022	5.4%	5.4%
2023	5.5%	5.5%
2024	5.6%	5.6%
2025	5.8%	5.8%
2026	5.9%	5.9%
2027 and later	6.0%	6.0%

Medicare Part B Premium Reimbursement Assumption . . . . For the June 30, 2015 OPEB actuarial valuation, 90% of Medicare participants are assumed to claim reimbursement (unchanged from last year). Percentage based on claim counts reported by OLR for calendar years 2007 through 2013.

Health Care Cost Trend Rate (HCCTR) . . . . Covered medical expenses are assumed to increase by the following percentages (unchanged from the last valuation). For purposes of measuring entry age calculations, actual historic plan increases are reflected to the extent known, with further historic trend rates based on the trend assumed for Fiscal Year 2016 (initial trend).

HCCTR ASSUMPTIONS

Year Ending[1]	Pre-Medicare Plans	Medicare Plans	Medicare Part B Premiums
2016[2,3]	8.5%	5.0%	5.5%
2017[3]	8.0%	5.0%	5.0%
2018	7.5%	5.0%	5.0%
2019	7.0%	5.0%	5.0%
2020	6.5%	5.0%	5.0%
2021	6.0%	5.0%	5.0%
2022	5.5%	5.0%	5.0%
2023 and Later	5.0%	5.0%	5.0%

[1] Fiscal Year for Pre-Medicare Plans and Medicare Plans and Calendar Year for Medicare Part B Premiums.

[2] For the June 30, 2015 OPEB actuarial valuation, rates shown for 2016 were not reflected since actual values for the Fiscal Year 2016 per capita costs, Fiscal Year 2016 Welfare Fund contributions and Calendar Year 2016 Medicare Part B Premium amounts were used.

[3] For the June 30, 2015 OPEB actuarial valuation, HIP and Other HMO Pre-Medicare trend assumed to be 4.88% based on 2014 Health Care Savings Agreement initiatives. For the June 30, 2014 OPEB actuarial valuation, HIP and HMO Pre-Medicare trend assumed to be 2.89% based on 2014 Health Care Savings Agreement initiatives.

Welfare Fund contribution rates assumed to increase based on current pattern bargaining until Fiscal Year 2018, and for the June 30, 2015 valuation assumed to increase 3.5% each future fiscal year (5.0% for the June 30, 2014 valuation).

Age–and Gender–Related Morbidity . . . .

The premiums are age adjusted for HIP HMO and GHI/EBCBS participants. Beginning with the June 30, 2012 OPEB actuarial valuation, the premiums are also adjusted for gender. Beginning with the June 30, 2015 valuation, the premiums for the Other HMOs are age and gender adjusted.

Beginning with the June 30, 2012 OPEB actuarial valuation, the assumed relative costs of coverage are consistent with information presented in ***Health Care Costs - From Birth to Death***, prepared by Dale H. Yamamoto[3] (Yamamoto Study).

For non-Medicare costs, relative factors were based on graduated 2010 PPO/POS data as presented in Chart 28 of the Yamamoto Study. The resultant relative factors, normalized to the male age 65 rate, used for non-Medicare costs are as follows:

Age	Male	Female	Age	Male	Female
20	0.170	0.225	43	0.325	0.480
21	0.157	0.227	44	0.340	0.487
22	0.147	0.236	45	0.355	0.495
23	0.143	0.252	46	0.372	0.505
24	0.143	0.274	47	0.391	0.519
25	0.146	0.301	48	0.412	0.536
26	0.151	0.329	49	0.437	0.556
27	0.157	0.357	50	0.463	0.576
28	0.165	0.384	51	0.491	0.597
29	0.173	0.408	52	0.519	0.616
30	0.181	0.428	53	0.547	0.635
31	0.190	0.444	54	0.577	0.653
32	0.199	0.456	55	0.608	0.671
33	0.208	0.463	56	0.641	0.690
34	0.217	0.466	57	0.676	0.710
35	0.227	0.466	58	0.711	0.732
36	0.237	0.465	59	0.747	0.756
37	0.249	0.464	60	0.783	0.783
38	0.261	0.464	61	0.822	0.813
39	0.274	0.465	62	0.864	0.846
40	0.286	0.467	63	0.909	0.881
41	0.299	0.471	64	0.957	0.917
42	0.312	0.475			

Children costs were assumed to represent a relative factor of 0.229.

[3] http://www.healthcostinstitute.org/files /Age-Curve-Study_0.pdf. Retrieved July 15, 2013. The Study was sponsored by the Society of Actuaries and is part of the Health Care Cost Institute's Independent Report Series.

For Medicare costs, relative factors based on the Yamamoto Study for net Medicare costs for 2010 for inpatient, outpatient and professional costs were blended. Prescription drug costs were not reflected as NYCHBP excludes most drugs from coverage. Professional costs were weighted at 64%, based on the GHI portion of the combined GHI/EBCBS premiums reported historically. Inpatient costs were weighted as twice as prevalent as outpatient costs based on the relative allocation suggested in the Yamamoto Study. Costs prior to age 65 were approximated using the non-Medicare data, but assuming that individuals under age 65 on Medicare had an additional disability-related morbidity factor. The resultant Medicare relative factors are as follows:

Age	Males	Female	Age	Males	Female
20	0.323	0.422	60	1.493	1.470
21	0.297	0.426	61	1.567	1.526
22	0.280	0.443	62	1.646	1.588
23	0.272	0.474	63	1.731	1.653
24	0.272	0.516	64	1.822	1.721
25	0.278	0.565	65	0.919	0.867
26	0.288	0.618	66	0.917	0.864
27	0.300	0.671	67	0.918	0.864
28	0.314	0.721	68	0.924	0.867
29	0.329	0.766	69	0.933	0.875
30	0.346	0.804	70	0.946	0.885
31	0.363	0.834	71	0.961	0.898
32	0.380	0.856	72	0.978	0.911
33	0.397	0.869	73	0.996	0.925
34	0.414	0.875	74	1.013	0.939
35	0.432	0.876	75	1.032	0.953
36	0.452	0.874	76	1.049	0.967
37	0.474	0.872	77	1.067	0.982
38	0.497	0.871	78	1.085	0.996
39	0.521	0.873	79	1.103	1.012
40	0.545	0.878	80	1.122	1.029
41	0.569	0.885	81	1.141	1.047
42	0.594	0.893	82	1.161	1.065
43	0.620	0.902	83	1.180	1.083
44	0.647	0.914	84	1.199	1.100
45	0.676	0.929	85	1.217	1.116
46	0.708	0.949	86	1.234	1.130
47	0.744	0.975	87	1.250	1.143
48	0.785	1.007	88	1.264	1.155
49	0.832	1.043	89	1.277	1.164
50	0.883	1.082	90	1.287	1.169
51	0.935	1.120	91	1.295	1.171
52	0.988	1.156	92	1.301	1.167
53	1.042	1.191	93	1.305	1.156
54	1.099	1.225	94	1.306	1.139
55	1.159	1.260	95	1.304	1.113
56	1.222	1.295	96	1.299	1.077
57	1.288	1.333	97	1.292	1.033
58	1.355	1.374	98	1.281	0.978
59	1.423	1.419	99 +	1.281	0.978

For the June 30, 2015 and June 30, 2014 OPEB actuarial valuations, an actual age and gender distribution based on reported census information was used for GHI/EBCBS Medicare-eligible participants. For the June 30, 2015 and June 30, 2014 OPEB actuarial valuations, the Medicare participants in the HIP Medicare Advantage arrangement were assumed to have the same age and gender distribution as the data underlying the Yamamoto Study. For the June 30, 2015 valuation, the Medicare participants in the Other HMO arrangements were assumed to have the same age and gender distribution as the data underlying the Yamamoto study.

For the June 30, 2015 and June 30, 2014 OPEB actuarial valuations, the age and gender of non-Medicare eligible participants were based on the following assumed distribution table, assuming a total of 2,354 single contracts and 2,492 family contracts.

	Members Used	
Age Range	Male	Female
00-00	64	64
01-01	67	67
02-04	210	210
05-09	373	373
10-14	403	403
15-19	388	371
20-24	310	323
25-29	338	357
30-34	431	447
35-39	481	499
40-44	495	530
45-49	446	486
50-54	392	422
55-59	271	272
60-64	173	166
65+	89	76

The age adjustment for the non-Medicare GHI/EBCBS premium reflects a 5% reduction in the GHI portion of the monthly premium (with the GHI portion representing $254.27 out of $537.76 single and $674.06 out of $1,411.11 Family for Fiscal Year 2016 rates) and a 3% reduction in the EBCBS portion of the premium (with the EBCBS portion representing the remainder of the premiums) for the estimated margin anticipated to be returned.

The morbidity factors are used to age-adjust the reported premiums for the HIP and GHI/EBCBS arrangements. The stated premiums provided to OA by OLR reflect average cost of retirees and actives of the Program, not all of whom are included in this valuation report. The assumed underlying cost of the benefit provided to retirees is developed by taking the stated premiums, removing any known margin to get to underlying expected cost of benefits provided (including administrative costs), adjusting for any plan changes, and then finally adjusting for the age and gender of the particular retiree. The age and gender is compared to a distribution for the age and gender of the overall population reflected in developing the stated premium. The distribution can reflect the actual age and gender of the covered population, or can be an estimate if the actual data is not available.

Medicare Advantage Adjustment Factors . . . .

The age-adjusted premiums for HIP HMO Medicare-eligible retirees were multiplied by the following factors to reflect actual Calendar Year 2016 premiums and future anticipated changes in Medicare Advantage reimbursement rates. As of June 30, 2009, the factors had been updated to reflect that Medicare Advantage reimbursement rates are expected to be significantly reduced over the next several years. The reductions in the reimbursement rates were part of the NHCR legislation and are likely to be most significant in areas where medical costs are greater, such as New York City. In developing the adjustment factors for the June 30, 2015 and the June 30, 2014 OPEB actuarial valuations, it was assumed that the cost of HIP coverage would not be allowed to exceed the cost of GHI/EBCBS coverage for Medicare retirees. Since the reported calendar year 2016 and 2015 HIP Medicare Advantage premium rates are within 1/2% of the Fiscal Year 2016 and 2015 GHI/EBCBS Medicare rates, respectively, the assumption that HIP would not be allowed to exceed the GHI/EBCBS rate has resulted in a factor of 1.0 for all future years.

Fiscal Year	Factor*	
	6/30/15 Valuation	6/30/14 Valuation
2015	1.00	1.00
2016	1.00	1.00
Thereafter	1.00	1.00

* Includes anticipated impact of National Health Care Reform

Medicare . . . . Medicare is assumed to be the primary payer over age 65 and for retirees currently on Medicare. For future disability retirements, Medicare is assumed to start 2.5 years after retirement for the following portion of retirees:

Proportion based on portion of recent disability retirees who have been retired at least 2½ years who are reported with Medicare.

	Valuation as of June 30	
	2015	2014
NYCERS	35%	35%
TRS	45%	45%
BERS	45%	45%
POLICE	15%	15%
FIRE	20%	20%

Participation . . . . Active participation assumptions based on current retiree elections. Actual elections for current retirees. Portions of current retirees not eligible for Medicare are assumed to change elections upon attaining age 65 based on patterns of elections of Medicare-eligible retirees. Detailed assumptions appear in the following tables (while two tables are shown, the participation assumptions were the same in both years):

PLAN PARTICIPATION ASSUMPTIONS

Benefits	June 30, 2015 Valuation				
	NYCERS	TRS	BERS	POLICE	FIRE
Pre-Medicare					
- GHI/EBCBS	65%	83%	73%	76%	71%
- HIP HMO	22%	6%	16%	13%	16%
- Other HMO	8%	4%	3%	9%	12%
- Waiver	5%	7%	8%	2%	1%
Medicare					
- GHI	72%	87%	78%	82%	77%
- HIP HMO	21%	9%	16%	12%	16%
- Other HMO	4%	2%	2%	4%	6%
- Waiver	3%	2%	4%	2%	1%
Post-Medicare Migration					
- Other HMO to GHI	50%	0%	33%	50%	50%
- HIP HMO to GHI	0%	0%	0%	0%	0%
- Pre-Med. Waiver					
** To GHI @ 65	13%	35%	50%	0%	0%
** To HIP @ 65	13%	35%	0%	0%	0%

PLAN PARTICIPATION ASSUMPTIONS					
Benefits	June 30, 2014 Valuation				
	NYCERS	TRS	BERS	POLICE	FIRE
Pre-Medicare					
- GHI/EBCBS	65%	83%	73%	76%	71%
- HIP HMO	22%	6%	16%	13%	16%
- Other HMO	8%	4%	3%	9%	12%
- Waiver	5%	7%	8%	2%	1%
Medicare					
- GHI	72%	87%	78%	82%	77%
- HIP HMO	21%	9%	16%	12%	16%
- Other HMO	4%	2%	2%	4%	6%
- Waiver	3%	2%	4%	2%	1%
Post-Medicare Migration					
- Other HMO to GHI	50%	0%	33%	50%	50%
- HIP HMO to GHI	0%	0%	0%	0%	0%
- Pre-Med. Waiver					
** To GHI @ 65	13%	35%	50%	0%	0%
** To HIP @ 65	13%	35%	0%	0%	0%

Waivers are assumed to include participants who do not qualify for coverage because they were working less than 20 hours a week at termination.

Dependent Coverage . . . . Dependent coverage is assumed to terminate when a retiree dies, except as noted in Section IV.

For survivors of POLICE and FIRE who die other than in the Line of Duty (assumed to be all who terminate with Accidental Death Benefits), and for all survivors of uniformed members of the Departments of Correction and Sanitation, the valuation assumes that 30% of spouses eligible for survivor continuation will elect the benefit, with costs equal to 30% greater than the age-adjusted premiums for surviving spouses for HIP HMO and GHI/EBCBS participants.

Beginning with the June 30, 2010 OPEB actuarial valuation, the valuation includes an estimate of the value of benefits provided to existing survivors of POLICE and FIRE retirees who died other than in the Line of Duty, who qualified for lifetime continuation coverage prior to the valuation date, based on the assumptions outlined above. Beginning with the June 30, 2012 OPEB actuarial valuation, the valuation includes an estimate of the value of benefits provided to existing survivors of retired uniformed members of the Departments of Correction and Sanitation who qualified for lifetime continuation coverage prior to the valuation date, based on the assumptions outlined above.

The valuation includes the entire cost of additional surviving spouse benefits for basic coverage and Medicare Part B Premium reimbursement for Line of Duty survivors, although the OA understands that some of this amount may be reimbursed through Welfare Funds.

Dependents . . . . Dependent assumptions based on distribution of coverage of recent retirees are shown in the following tables. Actual spouse data for current retirees. Child dependents of current retirees are assumed to receive coverage until age 26.

Beginning with the June 30, 2012 valuation, based on experience under the Plan, for NYCERS, TRS and BERS employees, male retirees were assumed to be four (4) years older than their wives, and female retirees were assumed to be two (2) years younger than their husbands; for POLICE and FIRE employees, husbands are assumed to be two (2) years older than their wives.

Children are assumed to be covered for eight (8) years after retirement. For employees eligible to retire based only on service, children are assumed to be covered for an additional five (5) years.

DEPENDENT COVERAGE ASSUMPTIONS					
Group	June 30, 2015 Valuation				
	NYCERS	TRS	BERS	POLICE	FIRE
Male					
- Single Coverage	30%	45%	35%	15%	10%
- Spouse	40%	35%	55%	15%	20%
- Child/No Spouse	5%	5%	2%	5%	5%
- Spouse and Child	25%	15%	8%	65%	65%
Total	100%	100%	100%	100%	100%
Female					
- Single Coverage	70%	60%	60%	45%	10%
- Spouse	20%	32%	35%	10%	20%
- Child/No Spouse	5%	3%	2%	25%	5%
- Spouse and Child	5%	5%	3%	20%	65%
Total	100%	100%	100%	100%	100%

Note: For accidental death, 80% of POLICE and FIRE members are assumed to have family coverage.

DEPENDENT COVERAGE ASSUMPTIONS					
Group	June 30, 2014 Valuation				
	NYCERS	TRS	BERS	POLICE	FIRE
Male					
- Single Coverage	30%	45%	35%	15%	10%
- Spouse	40%	35%	55%	15%	20%
- Child/No Spouse	5%	5%	2%	5%	5%
- Spouse and Child	25%	15%	8%	65%	65%
Total	100%	100%	100%	100%	100%
Female					
- Single Coverage	70%	60%	60%	45%	10%
- Spouse	20%	32%	35%	10%	20%
- Child/No Spouse	5%	3%	2%	25%	5%
- Spouse and Child	5%	5%	3%	20%	65%
Total	100%	100%	100%	100%	100%

Note: For accidental death, 80% of POLICE and FIRE members are assumed to have family coverage.

Demographic Assumptions	The same assumptions that were used to value the pension benefits of the NYCRS for determining employer contributions for fiscal years beginning 2016.
COBRA Benefits	Although COBRA beneficiaries pay 102% of "premiums," typical claim costs for COBRA participants run about 50% greater than other participants. There is no cost to the City for COBRA beneficiaries who enroll in community-rated HMO's, including HIP, since these individuals pay their full community rate. However, the City's costs under the experience-rated GHI/EBCBS coverage are affected by the claims for COBRA-covered individuals. In order to reflect the cost of COBRA coverage, the cost of excess claims for GHI covered individuals and families is estimated assuming 15% of employees not eligible for other benefits included in the valuation elect COBRA coverage for 15 months. These assumptions are based on experience of other large employers. This percentage is applied to the overall enrollment in the active plan and reflects a load for individuals not yet members of the retirement systems who are still eligible for COBRA benefits. This results in an assumption in the June 30, 2015 OPEB actuarial valuation of a lump-sum COBRA cost of $925 for terminations during Fiscal Year 2016 ($875 lump-sum cost during Fiscal Year 2015 was assumed in the June 30, 2014 OPEB actuarial valuation). The $925 ($875) lump-sum amount is increased by the Pre-Medicare HCCTR for future years but is not adjusted for age-related morbidity.
Cadillac Tax	Effective June 30, 2012, the OPEB actuarial valuation includes an explicit calculation of the high-cost plan excise tax (Cadillac Tax) that will be imposed beginning in 2020 under NHCR.

The tax is 40% of the excess of (a) over (b) where (a) is the cost of medical coverage, and (b) is the statutory limits ($10,200 for single coverage and $27,500 for family coverage), adjusted for the following:

- The limit will first be increased by the excess of accumulated trend for the period from 2010 through 2018 over 55% (reflecting the adjustment for excess trend on the standard Federal Blue Cross/Blue Shield option). The calculation reflects actual trend on the standard Federal Blue Cross/Blue Shield option for 2010 through 2015. Trend was estimated using the Pre-Medicare trend for the period from 2015 through 2018 and actual Federal Blue Cross/Blue Shield trend for the period 2010-2015.

- For Pre-Medicare retirees above the age of 55, the limit will be further increased by $1,650 for single coverage; $3,450 for family coverage.

- For 2019, the 2018 limit was increased by CPI + 1% (e.g. 3.5%). For each year after 2019, the limit is further increased by CPI (2.5%). Indexing of limits starts in 2018; tax first applied in 2020 (legislative change reflected in June 30, 2015 valuation).

The impact of the Cadillac Tax for the NYCHBP benefits is calculated based on the following assumptions about the cost of medical coverage:

- Benefit costs were based on Pre-Medicare and Medicare plan premiums as stated, without adjustment for age.

- For Medicare participants, the cost of reimbursing the Medicare Part B premium was reflected based on average cost assumed in the valuation, including IRMAA.

- The cost for each benefit option (GHI, HIP, or other HMO, combined with Medicare Part B premium reimbursement, if applicable) was separately compared to the applicable limit.

- The additional Cadillac Tax due to the riders or optional benefit arrangements is assumed to be reflected in the contribution required for the rider or optional benefit.

- The additional Cadillac Tax due to amounts provided by Welfare Fund benefits is assumed to be absorbed by the Welfare Fund or by lower net Welfare Fund contribution amounts.

- The additional amount for Pre-Medicare retirees above age 55 is available to Medicare retirees or retirees who are younger than age 55 for plans sponsored by an employer where the majority of employees are engaged in high-risk professions including law enforcement officers and fire fighters. It has been assumed that the majority of the employees of the City are not engaged in such professions and have not extended the adjustment to these additional ages.

In cases where the City provides only a portion of the OPEB benefits which give rise to the Cadillac Tax, the calculated Cadillac Tax is allocated to the appropriate paying entity in proportion to the OPEB liabilities for relevant OPEB benefits.

Active/Inactive Liabilities . . . . Beginning with the June 30, 2010 OPEB actuarial valuation, it was assumed that the liability for the Active/Inactive members should be 40% of the measured liability of the Active/Inactive population. This is roughly equivalent to assuming that 60% of the Active/Inactive members will terminate membership prior to vesting and not receive OPEB. Beginning with the June 30, 2012 OPEB actuarial valuation, the Entry Age Actuarial Accrued Liability is assumed to include the 40% of the measured present value of projected benefits.

Stabilization Fund . . . . A 0.4% load is applied on all City GASB45 obligations (0.6% last year). The same loads apply to the GASB43 obligations in the current and preceding valuation. The load is not applicable to Component Units.

Educational Construction Fund . . . . The actuarial assumptions used for determining GASB45 obligations for ECF are shown in Appendix E.

CUNY TIAA . . . . The actuarial assumptions used for determining obligations for CUNY TIAA are shown in Appendix F.

APPENDIX E

APPENDIX E

EDUCATIONAL CONSTRUCTION FUND

ACTUARIAL ASSUMPTIONS AND METHODS AND PLAN PROVISIONS

The demographic assumptions used for the Educational Construction Fund (ECF) June 30, 2015 OPEB actuarial valuation presented in this Report are based on a report on the "Development of Recommended Actuarial Assumptions Participating Agency Version," dated June 2015, prepared by Aon Hewitt (2014 State Report)[1]. Since ECF employees and retirees participate in the New York State and Local Employees' Retirement System (NYSLERS) and the New York State Health Insurance Program (NYSHIP), the Actuary adopted assumptions based on the recommendations of the 2014 State Report for this valuation. These assumptions reflect the same demographic assumptions as used in the June 30, 2014 OPEB actuarial valuation, which also had been based on the recommendations of the 2014 State Report.

Following is an overview of the key elements of the plan provisions and actuarial assumptions and methods used for the ECF OPEB actuarial valuation:

- Eligibility for Benefits: ECF employees are eligible for retirement and OPEB at age 55 with 10 years of service. Termination after 10 years of service entitles employees to deferred pension benefits and OPEB. Disability retirement with OPEB is available after 10 years of service. Unlike the New York City Health Benefits Program, ECF is assumed to offer retiree health coverage that continues for dependents after the death of the retiree. ECF employees who retire after 1995 are also eligible for dental insurance.

- NYSHIP health benefits consist of a hospital program, a medical program covering amounts after copayment at participating providers, a managed mental health and substance abuse program, and a card-based prescription drug program. NYSHIP requires retirees to enroll in Medicare Part A and Medicare Part B and mandates that participants be reimbursed for Medicare Part B Premiums. Beginning Fiscal Year 2013, NYSHIP provides drug coverage to Medicare eligible participants through a Medicare Part D Employer Group Waiver Plan (EGWP). Previously, NYSHIP filed for the Medicare Part D Retiree Drug Subsidy on behalf of Participating Agencies.

[1] The report is available at http://www.cs.ny.gov/GASB/2014-PA-Assumption-Report-Aon.pdf.

- Per Capita Plan Costs: For the June 30, 2015 valuation, the per capita costs were based on amounts developed by Aon Hewitt as reported in the 2014 State Report. The per capita amounts were developed using 2013 incurred claims, paid through March 31, 2014, for the hospital, medical, MH/SA, and prescription drug benefit programs for retired participants in the State plan (excluding PA and PE participants), along with enrollment, split between Medicare eligible and non-Medicare eligible participants. The experience was projected to the period July 1, 2015 through June 30, 2016, and adjusted to each age. This valuation relies on the costs developed for the State valuation, which were assumed to be suitable for this purpose, and State experience was assumed to be appropriate for the ECF retirees. The age 65 rates are shown below:

Non-Medicare:	$16,054
Medicare (Reflecting EGWP):	$3,521

  As suggested as an alternative in the 2014 State Report, the June 30, 2014 ECF OPEB actuarial valuation used premium amounts unadjusted for age. The premiums reported to the OA by ECF for health coverage are consistent with the 2016 and 2015 Participating Agency rates for the Empire Plan offering, as follows:

  - Empire Plan (Pre-Medicare)

    - Individual - $849.01 monthly ($805.05 last year).

    - Family - $1,926.21 monthly ($1,808.86 last year).

  - Empire Plan (Medicare)

    - Individual - $452.79 monthly ($401.84 last year).

    - Family – Two Medicares - $1,133.37 monthly ($1,002.46 last year).

    - 65% of the Empire Plan (Medicare) premium is assumed to reflect the cost for prescription drug benefits in developing the trend applied to the Medicare premium (unchanged from the last valuation).

- ECF also provided information for dental premiums of $34 per month (unchanged) for single coverage, $65 per month for two-persons coverage (unchanged) and $87 per month for family coverage (unchanged).

- Age Related Morbidity: Beginning with the June 30, 2015 valuation, the per capita costs are adjusted for relative cost by age based on the following table. These factors are a blend of the medical and prescription drug age related morbidity factors set out in the 2014 State Report.

Age	Factor	Age	Factor
40	0.380	66	1.033
41	0.392	67	1.067
42	0.405	68	1.102
43	0.419	69	1.139
44	0.432	70	1.176
45	0.447	71	1.202
46	0.464	72	1.228
47	0.482	73	1.255
48	0.500	74	1.283
49	0.520	75	1.311
50	0.540	76	1.329
51	0.563	77	1.348
52	0.587	78	1.367
53	0.612	79	1.387
54	0.639	80	1.407
55	0.666	81	1.578
56	0.696	82	1.598
57	0.726	83	1.619
58	0.759	84	1.640
59	0.792	85	1.662
60	0.827	86	1.673
61	0.859	87	1.685
62	0.893	88	1.696
63	0.927	89	1.708
64	0.963	90+	1.720
65	1.000		

- Calculations reflect actual coverage for current retirees, except that individuals now under age 65 are assumed to qualify for Medicare and receive Medicare Part B Premium reimbursement when they reach age 65.

- Dependents: Based on the 2014 State Report, for the June 30, 2015 and June 30, 2014 OPEB actuarial valuations, 60% of males and 50% of females are assumed to cover a spouse at retirement. For both valuations, female dependent spouses are assumed to be 3 years younger than their husbands. Male dependent spouses are assumed to be 2 years older than their wives.

- Elections: Future retirees are assumed to continue in the health and dental insurance programs.

- Cost Sharing: No retiree contributions are assumed.

- Interest Rate: For the June 30, 2015 and the June 30, 2014 OPEB actuarial valuations, 4.0% per annum.

- Trend: Covered medical, dental and Medicare Part B Premiums are assumed to increase by the following percentages:

ECF HCCTR Assumptions[1]			
Fiscal Year Ending June 30[2]	Pre-Medicare, Dental and Drug Benefits	Medicare Medical Benefits	Medicare Part B Premiums
2016[3]	8.50%	5.00%	5.50%
2017	8.00%	5.00%	5.00%
2018	7.50%	5.00%	5.00%
2019	7.00%	5.00%	5.00%
2020	6.50%	5.00%	5.00%
2021	6.00%	5.00%	5.00%
2022	5.50%	5.00%	5.00%
2023+	5.00%	5.00%	5.00%

[1] Includes anticipated impact of National Health Care Reform.

[2] Fiscal Year for medical and dental premiums and Calendar Year for Medicare Part B Premiums.

[3] For the June 30, 2015 OPEB actuarial valuation, rates shown for 2016 were not reflected since actual values for the Fiscal Year 2016 medical and dental premiums and Calendar Year 2016 Medicare Part B Premium amounts were used.

- Medicare Part B Premiums: Overall Medicare Part B Premium amounts are assumed to increase as outlined in Appendix D. 100% of ECF participants are assumed to receive reimbursements of Medicare Part B Premiums, since there is no obligation on the part of eligible participants to claim such reimbursement.

- Demographic Assumptions: Beginning with the June 30, 2014 OPEB actuarial valuation, the actuarial valuation assumptions that apply to NYSLERS as modified in the 2014 State Report are used.

- Salary Scale: Beginning with the June 30, 2012 OPEB actuarial valuation, the salary scale as described in the 2012 State Report for NYSLERS participants is used. This salary scale remained unchanged as described in the 2014 State Report for NYSLERS participants.

- Medicare Part D: Beginning Fiscal Year 2013, NYSHIP is providing drug coverage for Medicare retirees through an EGWP. It is the understanding of the Actuary that the value of the Federal Subsidies and Pharmaceutical Manufacturers' brand discounts under the EGWP are allowed to be reflected in GASB 45 calculations. The OA understands that New York State adopted the EGWP for Participating Agencies like ECF part way through Fiscal Year 2013, and thus the premium rates presumably reflect the savings associated with the EGWP for a portion of the year. Premiums charged during Fiscal Year 2015 are assumed to fully reflect the savings associated with the EGWP arrangement.

- Cadillac Tax: Beginning in 2020 (recently legislatively altered from 2018) National Health Care Reform will impose an excise tax on providers of certain “high cost plans” with total health care benefit values above certain thresholds (commonly referred to as Cadillac Tax). The June 30, 2015 and the June 30, 2014 OPEB actuarial valuations include an estimate of the cost of the tax. The tax is 40% of the excess of (a) over (b) where (a) is the sum of the medical, drug and Medicare Part B Premiums, and (b) is the statutory limits (2018 level $10,200 for single coverage and $27,500 for family coverage), adjusted for the following:

  - The limit will first be increased by the excess of the accumulated Pre-Medicare trend for the period from 2010 through 2018 over 55% (reflecting the adjustment for excess trend on the standard Federal Blue Cross/Blue Shield option);

  - For Pre-Medicare retirees, the limit will be further increased by $1,650 for single coverage; $3,450 for family coverage;

  - Limits will increase from 2018 to 2019 by CPI plus 1%; and

  - Limits will increase thereafter by CPI.

  For purposes of estimating the Cadillac Tax, CPI was assumed to be 2.5% for the June 30, 2015 and for the June 30, 2014 OPEB actuarial valuations.

- Actuarial Cost Method: Entry Age, described in Section V.

- Actuarial Asset Valuation Method: Market Value, described in Section V.

- Amortization of UAAL: All UAAL are being amortized over an open one-year period except for the change in the Actuarial Accrued Liability due to the change in the Actuarial Cost Method, established as of June 30, 2012, which is being amortized over a closed 10-year period using level dollar amortization. This is the minimum period permitted in cases where there is a significant reduction in the Unfunded Actuarial Accrued Liability as provided in GASB45 Paragraph 13.f(3). The portion of the Unfunded Actuarial Accrued Liability related to previous accumulated deficiencies in funding and any actuarial gains or losses due to experience are being amortized over a one-year period.

APPENDIX F

APPENDIX F

CUNY TIAA

ACTUARIAL ASSUMPTIONS AND METHODS AND PLAN PROVISIONS

Employees and retirees of The City University of New York (CUNY) are eligible for the same health benefits (both in active service and in retirement, if eligible) as employees and retirees of the City. The health benefits are administered by OLR. The City is responsible for the cost of all OPEB for Community College retirees who retired under one of the NYCRS, for Medicare Part B Premiums for Senior College retirees who retired under one of the NYCRS and for Medicare Part B Premiums for all CUNY TIAA retirees. Effective with the June 30, 2007 OPEB actuarial valuation, it is understood that the City is also responsible for all OPEB for Community College retirees who retired under TIAA and for Welfare Fund contributions for non-pedagogical Senior College retirees.

The actuarial assumptions used for CUNY members of the NYCRS are the same as those used for City members of the applicable retirement system, except that the assumption for members of TRS electing the optional 55/25 Plan does not apply to CUNY because its employees were not eligible to opt into that plan. According to the data used in the OPEB actuarial valuation, there are CUNY employees covered by NYCERS, TRS and BERS.

For the June 30, 2006 OPEB actuarial valuation, CUNY provided Buck with snapshot data of active City (Community College) and State (Senior College) employees as of June 30, 2002, 2003, 2004, 2005 and 2006 and provided a file of all terminations during the period July 1, 2001 through June 30, 2006. Based on the data provided, assumptions were developed for probabilities of termination (withdrawal) and retirement for TIAA members of CUNY. These probabilities of termination and retirement continued to be used for all subsequent OPEB actuarial valuations.

The assumptions used for pre-retirement mortality, disability and salary increase are the same as those used for TRS (i.e., the Silver Books) and are unchanged from the June 30, 2014 OPEB actuarial valuation. The post-retirement mortality used for TRS for the June 30, 2015 valuation is also used for TIAA for the June 30, 2015 valuation.

The table on the following page outlines these demographic assumptions.

Except as noted below, all other assumptions (e.g., discount rate, per capita claims costs, health care cost trend rates, Medicare Part B Premiums, age-related morbidity) are the same as those used for members of TRS.

Dependent Coverage. . . . . For the June 30, 2015 and June 30, 2014 OPEB actuarial valuations, 50% of future retirees are assumed to be married with spousal coverage. Actual spouse data is used for current retirees. Dependent coverage is assumed to terminate when a retiree dies.

For the June 30, 2015 and June 30, 2014 OPEB actuarial valuations, male retirees were assumed to be four (4) years older than their wives, and female retirees were assumed to be two (2) years younger than their husbands.

Participation . . . . Active participation assumption based on current retiree elections, as shown in the following table. Actual elections for current retirees.

PLAN PARTICIPATION ASSUMPTIONS

Benefits	June 30, 2015 Valuation		June 30, 2014 Valuation	
	Pre-Medicare	Medicare	Pre-Medicare	Medicare
GHI/EBCBS	90%	90%	90%	90%
HIP HMO	6%	6%	6%	6%
Other HMO	4%	4%	4%	4%
Waiver	0%	0%	0%	0%

Demographic Assumptions. The same as those used for the TRS, except for the following:

Withdrawal		Retirement	
Years of Service	**Probability**	**Age**	**Probability**
0	15.0%	55	2.0%
1	12.0%	56	2.0%
2	11.0%	57	2.0%
3	10.0%	58	2.0%
4	9.0%	59	2.0%
5	7.0%	60	3.0%
6	6.0%	61	3.0%
7	6.0%	62	4.0%
8	6.0%	63	5.0%
9	4.0%	64	6.0%
10	4.0%	65	10.0%
11	3.0%	66	5.0%
12	3.0%	67	5.0%
13	2.0%	68	5.0%
14-19	2.0%	69	10.0%
20+	1.0%	70	100.0%

The following is an outline of the eligibility provisions for OPEB for CUNY TIAA participants:

Retirement with Immediate OPEB Eligibility:

- Hired before July 1, 1976: Age 55 with 10 years of service.
- Hired between July 1, 1976 and August 31, 1985: Age 62 with 15 years of service.
- Hired on or after September 1, 1985: Age 62 with 15 years of service.

Exception for Executive Compensation Plan (ECP) employees: Age 55 with 10 years of service.

Termination with Deferred OPEB Eligibility**:**

- Hired before July 1, 1976: Terminate with 15 years of service, payable at age 55.

- Hired between July 1, 1976 and August 31, 1985: Terminate with 10 years of service, payable at 62 with no subsequent full-time employment at another college, university or institution of post-secondary education.

- Hired on or after September 1, 1985: Terminate with 15 years of service, payable at 62 with no subsequent full-time employment at another college, university or institution of post-secondary education.

Exception for ECP Employees: Terminate with 10 years of service, payable at 55 with no subsequent full-time employment at another institution of post-secondary education.

Disability Retirement: A CUNY TIAA member who is disabled with at least 10 years of service and receiving a benefit from the Optional Retirement Program (TIAA) is entitled to retiree health benefits.

The OPEB actuarial valuation also assumes:

- Terminated employees with the required number of years of service have no subsequent full-time employment at another college, university or institution of post-secondary education.

  CUNY TIAA participants maintain any required TIAA account balances and/or annuity benefits.

Data Used and Assumptions Made:

- Data for CUNY TIAA retirees were provided by OLR.

- Data for active CUNY TIAA participants as of June 30, 2015 were provided by CUNY. The 11 active employees and 2 active/inactive employees who were identified as covered by the Cultural Institutions Retirement System (CIRS) were valued using the CUNY TIAA provisions.

- The annual Welfare Fund contribution rate assumed as of June 30, 2015 for CUNY TIAA future retirees is $1,890, unchanged from the previous OPEB actuarial valuation.

- CUNY has not historically maintained a database of terminated employees who will be entitled to OPEB in the future. Based on the data provided for the experience study to develop assumptions and updated with data reported for subsequent OPEB actuarial valuations, Buck identified 368 employees who terminated in the last 13 years and could be eligible for OPEB. Based on this information, Buck estimated the number, demographic distribution and liability of possible terminated members entitled to future OPEB.

CUNY TIAA Community College Retirees – Payment Responsibility:

- Beginning with the June 30, 2007 OPEB actuarial valuation for CUNY, the cost of basic medical and Welfare Fund benefits for CUNY Community College TIAA retirees is allocated to the City.

  The data that OLR uses to bill CUNY for its responsibilities for OPEB has not historically contained information identifying TIAA retirees as either Senior or Community College. Thus, this reallocation of responsibilities was not immediately implemented.

  It is understood by the Actuary that CUNY has recently upgraded their recordkeeping system and has been able to identify CUNY TIAA retirees as attributable to either Senior College or Community College. The data submitted for the June 30, 2014 OPEB actuarial valuation contained the College indicator for all of TIAA retirees. A review of CUNY's payment allocation for Fiscal Year 2015 shows that the reallocation of responsibilities was implemented during Fiscal Year 2015, with the City billing CUNY only for Senior College CUNY TIAA retirees.

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