

#### **OFFICE OF THE ACTUARY**

255 GREENWICH STREET • 9<sup>TH</sup> FLOOR NEW YORK, NY 10007 (212) 442-5775 • FAX: (212) 442-5777

SHERRY S. CHAN
CHIEF ACTUARY

# GASB 67/68 REPORT FOR THE CITY OF NEW YORK AND THE NEW YORK CITY RETIREMENT SYSTEMS

FOR FISCAL YEAR ENDED JUNE 30, 2017

**September 29, 2017** 

#### **OFFICE OF THE ACTUARY**



255 GREENWICH STREET • 9<sup>™</sup> FLOOR NEW YORK, NY 10007 (212) 442-5775 • FAX: (212) 442-5777

SHERRY S. CHAN
CHIEF ACTUARY

September 29, 2017

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

Re: GASB67/68 Report for Fiscal Year Ended June 30, 2017

Dear Comptroller Stringer:

This GASB67/68 Report for the City of New York and the New York City Retirement Systems<sup>1</sup> (NYCRS) for Fiscal Year Ended June 30, 2017 (Report) presents information requested in a letter from Ms. Michele Mark Levine dated June 16, 2017.

#### **Executive Summary**

- 1. This Report presents information, intended for use by the City of New York for accounting and financial reporting under Governmental Accounting Standards Board Statement No. 68, as amended by GASB Statement No. 71 (GASB71), GASB Statement No. 73 (GASB73), GASB Statement No. 78 (GASB78), and GASB Statement No. 82 (GASB 82) for Fiscal Year 2017.
- 2. This Report also presents information, intended for use by each System for accounting and financial reporting under Governmental Accounting Standards Board Statement No. 67, as amended by GASB73 and GASB82 for Fiscal Year 2017.

<sup>1</sup> 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 City Fire Pension Fund (FIRE)

Honorable Scott M. Stringer September 29, 2017 Page 2

3. The following Table provides a summary of the principal GASB67/68 results for Fiscal Year 2017 by System and in total. Detailed results including results for participating employers (Obligors), if applicable, are provided in Appendices A-E.

SUMMARY OF PRINCIPAL GASB67/68 RESULTS FOR FISCAL YEAR 2017 QUALIFIED PENSION PLAN ONLY UNLESS OTHERWISE STATED (\$ Millions)								
	NYCERS*	TRS	BERS	POLICE*	FIRE*	TOTAL		
Total Pension Liability (TPL)	\$82,421.5	\$73,323.4	\$5,073.3	\$52,353.2	\$21,314.2	\$234,485.6		
Plan Fiduciary Net Position (PFNP)	\$61,655.2	\$50,095.7	\$4,099.6	\$39,363.9	\$12,991.3	\$168,205.7		
Net Pension Liability (NPL)	\$20,766.3	\$23,227.7	\$973.7	\$12,989.3	\$ 8,322.9	\$ 66,279.9		
PFNP as a % of TPL	74.8%	68.3%	80.8%	75.2%	61.0%	71.7%		
Pension Expense	\$ 2,594.6	\$ 3,700.7	\$ 195.3	\$ 1,760.6	\$ 1,071.1	\$ 9,322.3		

<sup>\*</sup> Includes Variable Supplements Funds (VSFs)

- 4. The New York City Off-Track Betting Corporation (OTB) is shown herein as an Obligor. It is unclear at this time whether OTB's pension costs, liabilities and allocated assets are to be reported by the City.
- 5. Some of the Obligors operate on a fiscal year that is different from the City's fiscal year. Those Obligors should consult with their auditors to determine how to apply the results shown in this Report in their individual financial statements.
- 6. The results contained herein are based upon the Office of the Actuary's (OA) interpretation of GASB67, GASB68, GASB71, GASB73, GASB78, and GASB82 in consultation with the New York City Office of the Comptroller (OC) and Grant Thornton, LLP and Marks Paneth, LLP, the City's auditors. The results are based upon an actuarial valuation date of June 30, 2015 and a Measurement Date of June 30, 2017 for Fiscal Year 2017. A Measurement Date of June 30, 2016 was used for Fiscal Year 2016 items.

Honorable Scott M. Stringer September 29, 2017 Page 3

- 7. The Fiscal year 2017 results are based on the same actuarial assumptions as those used for Fiscal Year 2016.
- 8. The Report reflects, for the first time, costs for TRS and BERS associated with the guaranteed 8.25% rate of return for non-UFT members who participate in the respective System's Tax Deferred Annuity (TDA) Plan.
- 9. The results contained herein are for accounting and financial reporting purposes only. Therefore, these results are not to be relied upon for other purposes, including but not limited to, funding of the NYCRS, investment decisions, and plan design.

#### Conclusion

This Report is intended to present the accounting and financial reporting information required under GASB67 and GASB68 as of the Measurement Date of June 30, 2017 and the Reporting Date of June 30, 2017 for the City of New York, for certain Obligors, and for the New York City Retirement Systems. This Report also presents some Fiscal Year 2016 results.

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

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

Honorable Scott M. Stringer September 29, 2017 Page 4

I, Sherry S. Chan, am the Chief Actuary for, and independent of, the New York City Pension Funds and Retirement Systems. I am a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of my knowledge, the results contained herein have been prepared in accordance with generally accepted actuarial principles and procedures and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Best Regards,

Sherry S. Chan, FSA, FCA, MAAA Chief Actuary

SSC:eh

#### cc: New York City Office of the Actuary

Ms. Marlene Markoe-Boyd Mr. Sam Rumley Mr. Michael Samet Keith Snow, Esq.

#### **Component Units**

Mr. Robert Balducci - WFA

Mr. Dan Frydberg - New York City Housing Authority

Mr. Kenneth Tirino - City University of New York

Mr. Jeffrey Pagelson - New York City Housing Authority

Mr. Aaron Stern - New York City Transit Authority

Ms. Yi-Wen Wang - School Construction Authority

Mr. Jay Weinman - New York City Health and Hospitals Corporation

#### New York City Office of the Comptroller

Ms. Susan Cornwall

Mr. David Jeter

Ms. Berta Lara

Ms. Jackie Warburton-Thompson

Mr. Leonel Ferreira

#### Marks Paneth, LLC

Ms. Hope Goldstein Mr. Michael Kaplan

#### **Grant Thornton**

Ms. Marla Hummel

Mr. Ben Kohnle

Mr. Cosmo Saginario

#### New York City Office of Management and Budget

Ms. Nicole Fleming

Mr. Dean Fuleihan

Mr. John Grathwol

Mr. Ken Godiner

#### New York City Retirement Systems

Ms. Sunny Bavakutty - New York City Police Pension Fund

Mr. Stephen Cassidy - New York City Fire Pension Fund

Mr. Albert Connolly - New York Fire Department Pension Fund

Ms. Maureen Dale - New York Fire Department Pension Fund

Mr. Jean-Daniel Desmornes - New York City Board of Education Retirement System

Mr. Michael Goldson - New York City Employees' Retirement System

Mr. John Hartman - New York City Employees' Retirement System

Mr. Kevin Holloran - New York City Police Pension Fund

Mr. Paul Raucci - New York City Teachers' Retirement System

Ms. Patricia Reilly - New York City Teachers' Retirement System

Mr. Sanford Rich- New York City Board of Education Retirement System

Ms. Melanie Whinnery- New York City Employees' Retirement System

#### TABLE OF CONTENTS

<u>SECTION</u>	<u>ITEM</u>	<u>PAGE</u>
I	Census Data	1
II	Assets	3
III	Actuarial Assumptions and Methods	4
IV	Summary of Plan Provisions	8
V	Roll-Forward Methodology	9
VI	Allocation Methodology	10
VII	Subsequent Events	11
VIII	Sensitivity Analysis	12
<u>APPENDIX</u>		
A	Detailed Results for NYCERS	
В	Detailed Results for TRS	
С	Detailed Results for BERS	
D	Detailed Results for POLICE	
E	Detailed Results for FIRE	

#### **SECTION I**

#### **CENSUS DATA**

The census data used in the development of the GASB67/68 results contained herein is the census data used in the June 30, 2015 (Lag) actuarial valuations of the New York City Retirement Systems<sup>1</sup> (NYCRS or Systems) to determine the final Fiscal Year 2017 employer pension contributions.

The Office of the Actuary (OA) and Conduent, Inc. performed tests on this data and, on the basis of these tests, the Chief Actuary of the New York City Retirement Systems (the Actuary) believes the data is sufficiently complete and appropriate for developing the GASB67/68 results contained in this Report.

The following Table I-1 presents a summary of the census data used in the June 30, 2015 (Lag) actuarial valuations to determine the final Fiscal Year 2017 employer pension contributions. Further detail can be found in the Comprehensive Annual Financial Report (CAFR) for each System.

Table I-1 SUMMARY OF CENSUS DATA USED IN THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATIONS						
GROUP	NYCERS	TRS	BERS	POLICE	FIRE	TOTAL
Active	185,758	114,652	24,903	34,435	10,780	370,528
Active/Inactive	16,907	7,347	3,972	1,484	18	29,728
Terminated Vested	9,402	13,482	237	546	32	23,699
Retired	144,526	82,777	16,438	48,703	16,710	309,154
Total	356,593	218,258	45,550	85,168	27,540	733,109

<sup>&</sup>lt;sup>1</sup> 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 City Fire Pension Fund (FIRE)

The following Table I-2 presents the salaries of the active members shown in Table I-1 at June 30, 2015, projected to June 30, 2016 and projected to December 31, 2016. The employer contributions for Fiscal Year 2017 were based on projected covered payroll at December 31, 2016.

Table I-2 SALARIES OF ACTIVE MEMBERS								
System	June 30, 2015	June 30, 2016	December 31, 2016					
NYCERS	\$12,917,466,528	\$12,555,241,827	\$12,443,468,090					
TRS	\$ 8,844,650,633	\$ 8,818,536,927	\$ 8,835,645,958					
BERS	\$ 1,093,962,316	\$ 1,052,171,260	\$ 1,040,522,410					
POLICE	\$ 3,564,029,659	\$ 3,509,985,075	\$ 3,486,857,457					
FIRE	\$ 1,164,994,036	\$ 1,145,919,396	\$ 1,139,672,128					
Total	\$27,585,103,172	\$27,081,854,485	\$26,946,166,043					

The census data used in the June 30, 2015 (Lag) actuarial valuations contains either the negotiated retroactive wage increases or an estimate of any anticipated settlements (pattern bargaining).

#### **SECTION II**

#### **ASSETS**

Asset values for each NYCRS, for the Variable Supplements Funds (VSFs), and for the Tax-Deferred Annuity (TDA) Programs are prepared by the Chief Accountants of each System on the basis of information provided by the investment managers of the respective System and by the Office of the Comptroller of the City of New York (the Comptroller or the OC).

The Board of Trustees of each System establishes an overall Investment Policy and has ultimate authority for the assets of the System.

By statute, the Comptroller is the custodian for each System's investments and also serves as an Investment Advisor to each System's Board of Trustees.

For purposes of developing the results contained in this Report, asset information was provided to the OA by the Office of the Comptroller and the Systems. For all Systems, the Plan Fiduciary Net Positions at June 30, 2017, as well as income items and cash flow items, have been given clearance by Marks Paneth. However, certain categories of assets are subject to revision.

The Chief Actuary for the NYCRS (the Actuary) provides to the Boards of Trustees of NYCERS, POLICE, and FIRE information related to the transfer of SKIM from each System's Qualified Pension Plan (QPP) to its respective Variable Supplements Fund(s) (VSF). A memorandum dated September 15, 2017 to Ms. Jacqueline Warburton-Thompson summarizes these estimates of Fiscal Year 2017 SKIM.

These transfers reduce the Market Value of Assets (MVA) of each System's QPP and increase the MVA of the VSFs as of June 30, 2017.

The SKIM amounts were estimated by the Actuary based on information provided by the Office of the Comptroller as of June 30, 2017 and on calculations performed by the Actuary for Fiscal Year 2017.

#### **SECTION III**

#### **ACTUARIAL ASSUMPTIONS AND METHODS**

All actuarial assumptions and methods used to value the NYCRS are unchanged from those used in the prior valuation and 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 Year 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.

Electronic versions of the Silver Books are available on the OA website (www.nyc.gov/actuary) under the Reports tab.

Those assumptions requiring Board approval were adopted by each Board of Trustees. The New York State Legislature and Governor enacted those Silver Book assumptions and methods requiring State legislation as Chapter 3 of the Laws of 2013 (Chapter 3/13), with revisions to the post-retirement mortality tables proposed by the Actuary and adopted by each NYCRS' Board of Trustees in Fiscal Year 2016.

#### Actuarial Asset Valuation Method

The Plan Fiduciary Net Positions are based on the Market Values of Assets at the Measurement Dates with certain adjustments made to reflect the Actuary's understanding of the accruals within and the transfers between the QPP and the VSFs for NYCERS, POLICE and FIRE.

#### Actuarial Cost Method

The Entry Age Actuarial Cost Method, as set forth in Paragraph 46 of GASB67 and Paragraph 32 of GASB68, is used to determine the results contained in this Report.

#### Discount Rate

The discount rate used to measure the Total Pension Liability (TPL) was 7.0% per annum. The projection of cash flows used to determine the discount rate assumed that each participating employer (Obligor) would contribute the actuarially-determined contribution each year. On this basis, the Plan Fiduciary Net Position (PFNP) of each System was projected to be sufficient to pay all benefits when due.

For all of the VSFs, liabilities are also discounted at 7.0% per annum, consistent with the assumptions and methodology used to determine employer contributions.

Additionally, in TRS and in BERS, Variable Fund liabilities have been developed consistent with Variable Fund investment earnings for Fiscal Years 2016 and 2017.

#### Long-Term Expected Rate of Return

The Long-Term Expected Rate of Return (LTEROR) on the investments of the NYCRS was determined using a Building-Block method as described in each respective System's Silver Book.

The Building-Block methodology develops total investment return by combining expected future inflation with an expected future Real Rate of Return (RROR) on plan assets.

For purposes of GASB67/68, the target asset allocation and estimates of arithmetic RROR for each major asset class were provided by the Comptroller and are summarized in the Appendix for each respective System.

#### **Liability Loads**

In developing the results of the June 30, 2015 (Lag) actuarial valuations of the NYCRS, the Actuary included adjustments for liabilities and benefit payments related to the benefits provided by the World Trade Center laws and for certain other benefits payable to members of each System, if any.

The following Table III-1 provides a brief description of the significant assumptions used in the June 30, 2015 (Lag) actuarial valuation to determine the Final Fiscal Year 2017 employer contributions:

## Table III-1 ACTUARIAL ASSUMPTIONS USED FOR DETERMINING FINAL FISCAL YEAR 2017 EMPLOYER CONTRIBUTIONS

ITEM	FINAL FISCAL YEAR 2017 EMPLOYER CONTRIBUTIONS <sup>1</sup>
Valuation Date	June 30, 2015 (Lag).
Assumed Rate of Return on Investments <sup>2</sup>	7.0% per annum, net of Investment Expenses.
Post-Retirement Mortality	Tables adopted by the Boards of Trustees during Fiscal Year 2016 <sup>3</sup> .
Active Service: Withdrawal, Death, Disability	Tables adopted by the Boards of Trustees during Fiscal Year 2012 <sup>4</sup> .
Retirement	Tables adopted by the Boards of Trustees during Fiscal Year 2012 <sup>4</sup> .
World Trade Center Benefits	Estimates of Certain Obligations.
Salary Increases <sup>2</sup>	Tables adopted by the Boards of Trustees during Fiscal Year 2012 <sup>4</sup> . In general, Merit and Promotion Increases plus assumed General Wage Increase of 3.0% per year.
Assumed Cost-of-Living Adjustments <sup>2</sup>	1.5% per year for Tier I, Tier II, Tier IV and certain Tier III and Tier VI retirees. 2.5% per year for certain Tier III and Tier VI retirees.
Liability Loads	Estimates of Certain Obligations.

- Based on actuarial assumptions and methods proposed by the Actuary during Fiscal Year 2012, adopted by the Boards of Trustees and enacted into law as Chapter 3/13 with revisions proposed by the Actuary and adopted by the Boards of Trustees in Fiscal Year 2017.
- <sup>2</sup> Developed using a long-term Consumer Price Inflation (CPI) assumption of 2.5% per year.
- See December 2015 memoranda to the Boards of Trustees.
- See the Reports entitled "Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2011" dated February 10, 2012 (the Silver Books).

#### **SECTION IV**

#### **SUMMARY OF PLAN PROVISIONS**

A summary of the benefits is contained in the June 30, 2015 and the June 30, 2016 Comprehensive Annual Financial Reports of each NYCRS.

#### **SECTION V**

#### **ROLL-FORWARD METHODOLOGY**

In accordance with Paragraph 22 of GASB68, the Total Pension Liability (TPL) should be determined by:

- (a) an actuarial valuation as of the Measurement Date (i.e., June 30, 2017), or
- (b) the use of update procedures to roll forward to the Measurement Date amounts from an actuarial valuation as of a date no more than 30 months and 1 day earlier than the employer's fiscal year-end.

Actuarial valuations of the NYCRS are performed annually using a June 30, XX-2 actuarial valuation date to determine Fiscal Year XX employer contributions (e.g., June 30, 2015 (Lag) actuarial valuations are used to determine Fiscal Year 2017 employer contributions). This is referred to as One-Year Lag Methodology (OYLM).

Due to the time needed to prepare June 30, 2017 actuarial valuations, primarily related to the collection of census data, the Actuary has developed the TPL at June 30, 2017 by rolling-forward certain results of the June 30, 2015 actuarial valuations of the NYCRS that were used to determine the Final Fiscal Year 2017 employer contributions.

Entry Age Accrued Liabilities and Total Normal Costs are beginning-of-year amounts. Actual Benefit Payments are assumed to be made mid-year. The June 30, 2016 Normal Costs are projected from June 30, 2015 on an expected basis. Except for the Variable Funds of TRS and BERS, all roll-forward amounts assume compound interest at 7.0% per annum.

For TRS and BERS, all Fixed Fund liabilities were determined consistent with the methodology used for the other NYCRS. For TRS and BERS, Variable Fund liabilities were rolled forward using actual Variable Fund asset earnings.

The development of the TPL under the methodology described herein is shown for each System in the Appendices.

#### **SECTION VI**

#### **ALLOCATION METHODOLOGY**

Three of the NYCRS (i.e., NYCERS, TRS and BERS) are cost-sharing, multiple-employer Public Employee Retirement Systems. For these Systems, all GASB67/68 results were first determined, in total, as of the Measurement Date.

For each Obligor, a proportionate share of the Net Pension Liability, Pension Expense, Deferred Outflows of Resources and Deferred Inflows of Resources (the Collective Pension Amounts) were determined in accordance with GASB68 Paragraphs 48-55 and in accordance with a February 2014 whitepaper published by the State and Local Government Expert Panel (SLGEP) of the American Institute of Certified Public Accountants (AICPA).

The Collective Pension Amounts were allocated consistent with the manner in which total employer contributions to each System were determined. Each respective System's Appendix contains the development of the allocation percentage for each Obligor. This percentage is based on Fiscal Year 20XX employer contributions which, under OYLM, is based on a June 30, 20XX-2 actuarial valuation date (see Paragraph 50 of GASB68).

The components of Pension Expense were allocated ratably for each Obligor. Although these component allocations produce results for some Obligors that appear illogical (e.g., a Service Cost for OTB and for the VSFs of HP and TP despite there being no active members), it is the understanding of the Actuary that this methodology is permitted for purposes of determining GASB68 results and that the components (as opposed to the total) are relatively unimportant for developing the key financial reporting results.

#### **SECTION VII**

#### **SUBSEQUENT EVENTS**

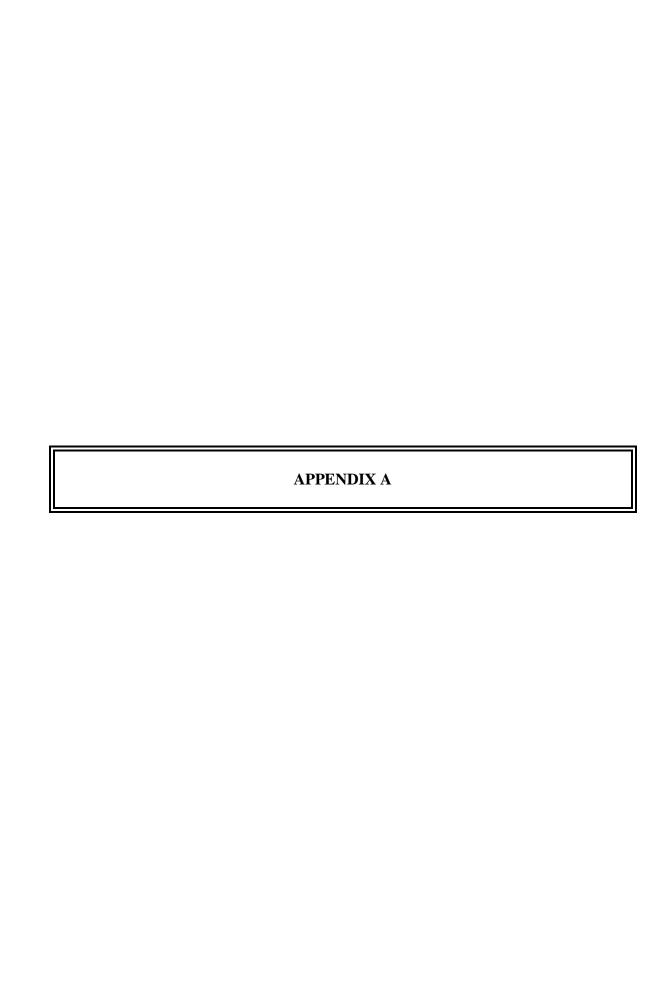
The Fiscal Year 2017 GASB67/68 results contained herein are based on June 30, 2015 actuarial valuations of each of the New York City Retirement Systems used to develop Final Fiscal Year 2017 employer contributions under the One-Year Lag Methodology (OYLM). As described in Section V, these June 30, 2015 actuarial valuation results have been rolled-forward to the Measurement Date of June 30, 2017.

#### **SECTION VIII**

#### **SENSITIVITY ANALYSIS**

The following Table VIII-1 presents the Net Pension Liability of each System, calculated as of the Measurement Date of June 30, 2017, using the Discount Rate of 7.0% per annum (the Current Rate). The Table also shows what each System's Net Pension Liability would be if it were calculated using a Discount Rate that is 1-percentage-point lower (i.e., 6.0% per annum) or 1-percentage-point higher (i.e., 8.0% per annum) than the Current Rate.

Table VIII-1  SENSITIVITY ANALYSIS  NET PENSION LIABILITY AS OF JUNE 30, 2017							
System	System         1% Decrease (6.0%)         Current Rate (7.0%)         1% Increase (8.0%)						
NYCERS	\$30,012,540,794	\$20,766,266,998	\$12,643,381,279				
TRS	\$30,901,066,093	\$23,227,707,452	\$16,811,032,507				
BERS	\$ 1,569,616,027	\$ 973,767,621	\$ 474,279,389				
POLICE	\$18,787,503,124	\$12,989,347,102	\$ 8,167,897,961				
FIRE	\$10,675,273,664	\$ 8,322,919,531	\$ 6,350,643,809				
Total	\$91,945,999,702	\$66,280,008,704	\$44,447,234,945				



#### APPENDIX A

#### NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

Page 1a	- Statement of Fiduciary Net Position - NYCERS	
1b	- Statement of Fiduciary Net Position - COVSF	
1c	- Statement of Fiduciary Net Position - HPOVSF	
1d	- Statement of Fiduciary Net Position - HPSOVSF	
le 1f	- Statement of Fiduciary Net Position - TPOVSF	
11	- Statement of Fiduciary Net Position - TPSOVSF	
Page 2a	- Statement of Changes in Fiduciary Net Position - NYCERS	
2b	- Statement of Changes in Fiduciary Net Position - COVSF	
2c	- Statement of Changes in Fiduciary Net Position - HPOVSF	
2d	- Statement of Changes in Fiduciary Net Position - HPSOVSF	
2e 2f	- Statement of Changes in Fiduciary Net Position - TPOVSF	
21	- Statement of Changes in Fiduciary Net Position - TPSOVSF	
Page 3	- Market Value of Assets	
Page 4	- Long-Term Expected Rate of Return	
Page 5a	- Development of Asset (Gain) / Loss - June 30, 2016	
5b	- Development of Asset (Gain) / Loss - June 30, 2017	
Page 6	- Roll-Forward of Entry Age Actuarial Accrued Liabilities	
Page 7a	- Schedule of Employer Allocations - June 30, 2016	
7b	- Changes in Net Pension Liability by Source - June 30, 2016	
7c	- Changes in Net Pension Liability by Source - June 30, 2016 - Summary	
7d	- Schedule of Employer Allocations - June 30, 2017	
7e	- Changes in Net Pension Liability by Source - June 30, 2017	
7f	- Changes in Net Pension Liability by Source - June 30, 2017 - Summary	
Page 8	- Schedule of Changes in Net Pension Liability and Related Ratios	
Page 9	- Schedule of Employer Contributions	
Page 10	- Average Expected Remaining Service Lives	
Page 11a	<ul> <li>Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience</li> </ul>	
11b	- Increase (Decrease) in Pension Expense Arising from the Recognition of Changes in Assumption	
11c		ns
	- Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments	ns
Page 12a	between Projected and Actual Earnings on Pension Plan Investments	ns
Page 12a 12b		ns
	between Projected and Actual Earnings on Pension Plan Investments - Changes in Proportionate Share - June 30, 2015	ns
12b 12c	<ul> <li>between Projected and Actual Earnings on Pension Plan Investments</li> <li>Changes in Proportionate Share - June 30, 2015</li> <li>Changes in Proportionate Share - June 30, 2016</li> <li>Changes in Proportionate Share - June 30, 2017</li> </ul>	ns
12b 12c Page 13a	<ul> <li>between Projected and Actual Earnings on Pension Plan Investments</li> <li>Changes in Proportionate Share - June 30, 2015</li> <li>Changes in Proportionate Share - June 30, 2016</li> <li>Changes in Proportionate Share - June 30, 2017</li> <li>Components of Pension Expense - June 30, 2016</li> </ul>	ns
12b 12c	between Projected and Actual Earnings on Pension Plan Investments  - Changes in Proportionate Share - June 30, 2015  - Changes in Proportionate Share - June 30, 2016  - Changes in Proportionate Share - June 30, 2017  - Components of Pension Expense - June 30, 2016  - Components of Pension Expense - June 30, 2016 - Summary	ns
12b 12c Page 13a 13b	<ul> <li>between Projected and Actual Earnings on Pension Plan Investments</li> <li>Changes in Proportionate Share - June 30, 2015</li> <li>Changes in Proportionate Share - June 30, 2016</li> <li>Changes in Proportionate Share - June 30, 2017</li> <li>Components of Pension Expense - June 30, 2016</li> </ul>	ns
12b 12c Page 13a 13b 13c 13d	between Projected and Actual Earnings on Pension Plan Investments  - Changes in Proportionate Share - June 30, 2015  - Changes in Proportionate Share - June 30, 2016  - Changes in Proportionate Share - June 30, 2017  - Components of Pension Expense - June 30, 2016  - Components of Pension Expense - June 30, 2016 - Summary  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017 - Summary	ns
12b 12c Page 13a 13b 13c 13d Page 14a	between Projected and Actual Earnings on Pension Plan Investments  - Changes in Proportionate Share - June 30, 2015  - Changes in Proportionate Share - June 30, 2016  - Changes in Proportionate Share - June 30, 2017  - Components of Pension Expense - June 30, 2016  - Components of Pension Expense - June 30, 2016 - Summary  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017 - Summary  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2013	ns
12b 12c Page 13a 13b 13c 13d Page 14a 14b	between Projected and Actual Earnings on Pension Plan Investments  - Changes in Proportionate Share - June 30, 2015  - Changes in Proportionate Share - June 30, 2016  - Changes in Proportionate Share - June 30, 2017  - Components of Pension Expense - June 30, 2016  - Components of Pension Expense - June 30, 2016 - Summary  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017 - Summary  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2013  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2014	ns
12b 12c Page 13a 13b 13c 13d Page 14a 14b	between Projected and Actual Earnings on Pension Plan Investments  - Changes in Proportionate Share - June 30, 2015  - Changes in Proportionate Share - June 30, 2016  - Changes in Proportionate Share - June 30, 2017  - Components of Pension Expense - June 30, 2016  - Components of Pension Expense - June 30, 2016 - Summary  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017 - Summary  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2013  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2014  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2015	ns
12b 12c Page 13a 13b 13c 13d Page 14a 14b	between Projected and Actual Earnings on Pension Plan Investments  - Changes in Proportionate Share - June 30, 2015  - Changes in Proportionate Share - June 30, 2016  - Changes in Proportionate Share - June 30, 2017  - Components of Pension Expense - June 30, 2016  - Components of Pension Expense - June 30, 2016 - Summary  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017 - Summary  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2013  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2014	ns
12b 12c Page 13a 13b 13c 13d Page 14a 14b 14c 14d	between Projected and Actual Earnings on Pension Plan Investments  - Changes in Proportionate Share - June 30, 2015  - Changes in Proportionate Share - June 30, 2016  - Changes in Proportionate Share - June 30, 2017  - Components of Pension Expense - June 30, 2016  - Components of Pension Expense - June 30, 2016 - Summary  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017 - Summary  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2013  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2014  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2015  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2016	ns
12b 12c Page 13a 13b 13c 13d Page 14a 14b 14c 14d 14e 14f	between Projected and Actual Earnings on Pension Plan Investments  - Changes in Proportionate Share - June 30, 2015  - Changes in Proportionate Share - June 30, 2016  - Changes in Proportionate Share - June 30, 2017  - Components of Pension Expense - June 30, 2016  - Components of Pension Expense - June 30, 2016 - Summary  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017 - Summary  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2013  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2014  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2016  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2017  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2017  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2017	ns
12b 12c Page 13a 13b 13c 13d Page 14a 14b 14c 14d 14e 14f	between Projected and Actual Earnings on Pension Plan Investments  - Changes in Proportionate Share - June 30, 2015  - Changes in Proportionate Share - June 30, 2016  - Changes in Proportionate Share - June 30, 2017  - Components of Pension Expense - June 30, 2016  - Components of Pension Expense - June 30, 2016 - Summary  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2013  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2014  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2016  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2017  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2017  - Schedule of Pension Amounts by Employer - June 30, 2016	ns
12b 12c Page 13a 13b 13c 13d Page 14a 14b 14c 14d 14e 14f	between Projected and Actual Earnings on Pension Plan Investments  - Changes in Proportionate Share - June 30, 2015  - Changes in Proportionate Share - June 30, 2016  - Changes in Proportionate Share - June 30, 2017  - Components of Pension Expense - June 30, 2016  - Components of Pension Expense - June 30, 2016 - Summary  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017  - Components of Pension Expense - June 30, 2017 - Summary  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2013  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2014  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2016  - Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2017  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2017  - Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2017	ns

NYC Office of the Actuary

September 29, 2017

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

ACCETC		June 30, 2017	June 30, 2016
ASSETS Cash	\$	163,875	\$ 165,685
Receivables:			
Investment securities sold		687,047	1,413,529
Member loans		1,102,986	1,081,783
Accrued interest and dividends		301,680	280,740
Other receivables		0	0
Receivables due from NYCERS		0	0
Total receivables	\$	2,091,713	\$ 2,776,052
Investments - at fair value			
Short-term investments:			
U.S. treasury bills and agencies		37,090	11,073
Commercial paper		422,635	739,639
Short-term investment fund		442,599	760,635
Discount notes		188,544	59,860
Short-term hedge fund		0	0
Debt securities:			
U.S. Government and agency		7,261,949	4,289,153
Corporate and other		6,254,038	7,157,423
Promissory notes		0	0
Equity securities		18,956,882	18,523,033
Alternative investments		9,258,954	9,873,044
Collective trust funds:			
International equity		13,655,017	9,220,895
Domestic equity		0	0
Mortgage debt securities		640,950	607,685
Treasury inflation protected securities		2,531,110	2,448,307
Fixed income		1,091,294	1,022,145
Collateral from securities lending	_	7,034,093	 5,267,092
Total investments	\$	67,775,155	\$ 59,979,984
Other assets		93,948	84,632
Total assets	\$	70,124,691	\$ 63,006,353
LIABILITIES			
Accounts payable		209,206	177,887
Payables for investment securities purchased		955,572	1,794,940
Accrued benefits payable		321,457	266,616
Amount due to Variable Supplements Funds		5,493	5,724
Transferrable earnings due from QPP to COVSF		281,000	3,000
Due to other retirement systems		1,088	1,590
Securities lending		7,034,093	5,267,092
Total liabilities	\$	8,807,909	\$ 7,516,849
PLAN NET POSITION HELD IN TRUST FOR BENEFITS	\$	61,316,782	\$ 55,489,504

#### NEW YORK CITY CORRECTION OFFICERS' VARIABLE SUPPLEMENTS FUND

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

	$\mathbf{J}_{1}$	une 30, 2017	J	June 30, 2016
ASSETS				
Cash	\$	8,106	\$	213
Receivables:				
Accrued interest		37		25
Transferable earnings due from QPP to VSFs		281,000		3,000
Other receivables		12		11
Total receivables	\$	281,049	\$	3,036
Investments - at fair value:				
Short-term investment fund	\$	43,529	\$	43,693
Accrued Transfer from QPP	\$	0	\$	0
Total assets	\$	332,684	\$	46,942
LIABILITIES				
Accounts Payable	\$	44,519	\$	41,925
Total Liabilities	\$	44,519	\$	41,925
Plan Net Position held in Trust for Benefits	\$	288,165	\$	5,017

#### NEW YORK CITY HOUSING POLICE OFFICERS' VARIABLE SUPPLEMENTS FUND

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

	J	June 30, 2017	June 30, 2016
ASSETS Cash	\$	69	\$ 30
Receivable - due from NYCERS		901	991
Total assets	\$	970	\$ 1,021
LIABILITIES Accrued benefits payable	\$	970	\$ 1,021
Total Liabilities	\$	970	\$ 1,021
Plan Net Position held in Trust for Benefits	\$	0	\$ 0

## NEW YORK CITY HOUSING POLICE SUPERIOR OFFICERS' VARIABLE SUPPLEMENTS FUND

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

	Ju	ne 30, 2017	Ju	ine 30, 2016
ASSETS				
Cash	\$	58	\$	44
Receivables:				
Receivable - due from NYCERS		1,274		1,318
Total assets	\$	1,332	\$	1,362
LIABILITIES				
Accrued benefits payable	\$	1,332	\$	1,362
Total Liabilities	\$	1,332	\$	1,362
Plan Net Position held in Trust for Benefits	\$	0	\$	0

#### NEW YORK CITY TRANSIT POLICE OFFICERS' VARIABLE SUPPLEMENTS FUND

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

	June 30, 2017		June 30, 2016	
ASSETS				
Cash	\$	45	\$ 29	
Receivables:				
Receivable - due from NYCERS		1,886	1,967	
Total assets	\$	1,931	\$ 1,996	
LIABILITIES				
Accounts payable	\$	21	\$ 22	
Accrued benefits payable		1,910	 1,974	
Total Liabilities	\$	1,931	\$ 1,996	
Plan Net Position held in Trust for Benefits	\$	0	\$ 0	

## NEW YORK CITY TRANSIT POLICE SUPERIOR OFFICERS' VARIABLE SUPPLEMENTS FUND

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

	Jur	June 30, 2016				
ASSETS Cash	\$	70	\$	40		
Receivable - due from NYCERS		1,432		1,448		
Total assets	\$	1,502	\$	1,488		
LIABILITIES  Accrued benefits payable	\$	1,502	\$	1,488		
Total Liabilities	\$	1,502	\$	1,488		
Plan Net Position held in Trust for Benefits	\$	0	\$	0		

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

	Jı	me 30, 2017	June 30, 2016			
ADDITIONS						
Contributions:  Member Contributions	\$	513,514	\$	485,508		
Employer Contributions	Ψ	3,328,193	Ψ	3,365,454		
Employer Contributions		3,320,173		3,303,737		
Total contributions	\$	3,841,707	\$	3,850,962		
Investment income:						
Interest income		753,789		692,773		
Dividend income		931,480		836,490		
Net appreciation (depreciation) in fair value	-	5,489,457		(174,204)		
Total investment income	\$	7,174,726	\$	1,355,059		
Less:						
Investment expenses		223,756		212,996		
Net income		6,950,970		1,142,063		
Securities lending transactions:						
Securities lending income		33,703		31,719		
Securities lending fees		2,369		2,062		
Net securities lending income		31,334		29,657		
Net investment income		6,982,304		1,171,720		
Other:						
Other Income		3,266		2,928		
Total additions	\$	10,827,277	\$	5,025,610		
DEDUCTIONS						
Benefit payments and withdrawals		4,635,020		4,402,506		
Payments to other retirement systems		8,087		7,440		
Amount transferred to Variable Supplements Funds		11,297		11,525		
Transferrable earnings due from QPP to COVSF		285,924		(52,724)		
Administrative expenses		59,671		56,683		
Total deductions	\$	4,999,999	\$	4,425,430		
INCREASE IN PLAN NET POSITION		5,827,278		600,180		
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:						
Beginning of year	\$	55,489,504	\$	54,889,324		
End of year	\$	61,316,782	\$	55,489,504		
NYC Office of the Actuar	nv			Sentember 29		

#### NEW YORK CITY CORRECTION OFFICERS' VARIABLE SUPPLEMENTS FUND

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

	Jun	e 30, 2017	Jui	ne 30, 2016
ADDITIONS				
Investment income:				
Interest income	\$	300	\$	184
Net appreciation (depreciation) in fair value		(452)		0
Total investment income	\$	(152)	\$	184
Reimbursement of benefit payments from QPP		0		0
Transferrable earnings due from QPP to COVSF		285,924		(52,724)
Total additions	\$	285,772	\$	(52,540)
DEDUCTIONS				
Benefit payments and withdrawals		2,624		82,149
Total deductions	\$	2,624	\$	82,149
INCREASE IN PLAN NET POSITION		283,148		(134,689)
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:				
Beginning of year	\$	5,017	\$	139,706
End of year	\$	288,165	\$	5,017

#### NEW YORK CITY HOUSING POLICE OFFICERS' VARIABLE SUPPLEMENTS FUND

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

	June	30, 2017	June 30, 2016			
ADDITIONS						
Investment income:						
Interest income	\$	0	\$	0		
Total investment income	\$	0	\$	0		
Reimbursement of benefit payments from QPP		1,889		1,968		
Total additions	\$	1,889	\$	1,968		
DEDUCTIONS						
Benefit payments		1,889		1,968		
Total deductions	\$	1,889	\$	1,968		
INCREASE IN PLAN NET POSITION		0		0		
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:						
Beginning of year		0		0		
End of year		0		0		

#### NEW YORK CITY HOUSING POLICE SUPERIOR OFFICERS' VARIABLE SUPPLEMENTS FUND

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

	June	June 30, 2016			
ADDITIONS					
Investment income:					
Interest income	\$	0	\$	0	
Total investment income	\$	0	\$	0	
Reimbursement of benefit payments from NYCERS		2,595		2,648	
Total additions	\$	2,595	\$	2,648	
DEDUCTIONS					
Benefit payments		2,595		2,648	
Total deductions	\$	2,595	\$	2,648	
INCREASE IN PLAN NET POSITION		0		0	
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:					
Beginning of year		0		0	
End of year		0		0	

#### NEW YORK CITY TRANSIT POLICE OFFICERS' VARIABLE SUPPLEMENTS FUND

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

	June	20, 2017	June 30, 2016		
ADDITIONS					
Investment income:					
Interest income	\$	0	\$	0	
Total investment income	\$	0	\$	0	
Reimbursement of benefit payments from QPP		3,830		3,945	
Total additions	\$	3,830	\$	3,945	
DEDUCTIONS					
Benefit payments		3,830		3,945	
Total deductions	\$	3,830	\$	3,945	
INCREASE IN PLAN NET POSITION		0		0	
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:					
Beginning of year		0		0	
End of year		0		0	

### NEW YORK CITY TRANSIT POLICE SUPERIOR OFFICERS' VARIABLE SUPPLEMENTS FUND

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

	June 30, 2017		June	e <b>30, 2016</b>
ADDITIONS				
Investment income:				
Interest income	\$	0	\$	0
Total investment income	\$	0	\$	0
Reimbursement of benefit payments from QPP		2,983		2,964
Total additions	\$	2,983	\$	2,964
DEDUCTIONS				
Benefit payments		2,983		2,964
Total deductions	\$	2,983	\$	2,964
INCREASE IN PLAN NET POSITION		0		0
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:				
Beginning of year		0		0
End of year		0		0

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Market Values of Assets**

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	Total
1. Plan Net Position @ 6/30/2015	\$ 54,919,324,000	\$ 149,399,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 55,068,723,000
2. Net Accrued Benefits Payable	5,947,000	0	30,000	39,000	16,000	33,000	6,065,000
3. Accrued Transfers from NYCERS to COVSF	 (30,000,000)	 30,000,000	 0	 0	 0	 0	 0
4. Adjusted Market Value @ 6/30/2015	\$ 54,895,271,000	\$ 179,399,000	\$ 30,000	\$ 39,000	\$ 16,000	\$ 33,000	\$ 55,074,788,000
5. Changes for the year:							
a. ER Contributions	3,365,454,000	0	0	0	0	0	3,365,454,000
b. EE Contributions	485,508,000	0	0	0	0	0	485,508,000
c. Net Investment Income	1,171,720,000	184,000	0	0	0	0	1,171,904,000
d. Benefit Payments <sup>1</sup>	(4,402,729,000)	(79,917,000)	(1,968,000)	(2,643,000)	(3,932,000)	(2,957,000)	(4,494,146,000)
e. Payments to Other Retirement Systems	(7,440,000)	0	0	0	0	0	(7,440,000)
f. Transfers to Variable Supplements Funds	(11,525,000)	0	1,968,000	2,648,000	3,945,000	2,964,000	0
g. Administrative Expenses	(56,683,000)	0	0	0	0	0	(56,683,000)
h. Other	 2,928,000	 0	 0	0	0	0	2,928,000
i. Net Changes	\$ 547,233,000	\$ (79,733,000)	\$ 0	\$ 5,000	\$ 13,000	\$ 7,000	\$ 467,525,000
6. Plan Net Position @ 6/30/2016	\$ 55,436,780,000	\$ 99,666,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 55,536,446,000
7. Net Accrued Benefits Payable	5,724,000	0	30,000	44,000	29,000	40,000	5,867,000
8. Accrued Transfers from NYCERS to COVSF	52,724,000	(52,724,000)	0	0	0	0	0
9. Adjusted Market Value @ 6/30/2016	\$ 55,495,228,000	\$ 46,942,000	\$ 30,000	\$ 44,000	\$ 29,000	\$ 40,000	\$ 55,542,313,000
10. Changes for the year:							
a. ER Contributions	3,328,193,000	0	0	0	0	0	3,328,193,000
b. EE Contributions	513,514,000	0	0	0	0	0	513,514,000
c. Net Investment Income	6,982,304,000	(152,000)	0	0	0	0	6,982,152,000
d. Benefit Payments <sup>2</sup>	(4,635,251,000)	(30,000)	(1,850,000)	(2,581,000)	(3,814,000)	(2,953,000)	(4,646,479,000)
e. Payments to Other Retirement Systems	(8,087,000)	0	0	0	0	0	(8,087,000)
f. Transfers to Variable Supplements Funds	(11,297,000)	0	1,889,000	2,595,000	3,830,000	2,983,000	0
g. Administrative Expenses	(59,671,000)	0	0	0	0	0	(59,671,000)
h. Other	 3,266,000	 0	 0	 0	0	0	3,266,000
i. Net Changes	\$ 6,112,971,000	\$ (182,000)	\$ 39,000	\$ 14,000	\$ 16,000	\$ 30,000	\$ 6,112,888,000
11. Plan Net Position @ 6/30/2017	\$ 61,602,706,000	\$ 46,760,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 61,649,466,000
12. Net Accrued Benefits Payable	5,493,000	0	69,000	58,000	45,000	70,000	5,735,000
13. Accrued Transfers from NYCERS to COVSF	 (285,924,000)	 285,924,000	 0	 0	 0	 0	 0
14. Adjusted Market Value @ 6/30/2017	\$ 61,322,275,000	\$ 332,684,000	\$ 69,000	\$ 58,000	\$ 45,000	\$ 70,000	\$ 61,655,201,000

<sup>1</sup> Includes Net Accrued Benefits Payable of \$(223,000) for QPP, \$2,232,000 for COVSF, \$0 for HPOVSF, \$5,000 for HPSOVSF, \$13,000 for TPOVSF and \$7,000 for TPSOVSF.

NYC Office of the Actuary September 29, 2017

<sup>&</sup>lt;sup>2</sup> Includes Net Accrued Benefits Payable of \$(231,000) for QPP, \$2,594,000 for COVSF, \$39,000 for HPOVSF, \$14,000 for HPSOVSF, \$16,000 for TPOVSF and \$30,000 for TPSOVSF.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Long-Term Expected Rate of Return**

The Long-Term Expected Rate of Return (LTEROR) assumption on pension fund investments was determined using a Building-Block Method in which best-estimate ranges of Expected Real Rates of Return (i.e., Expected Returns, net of pension fund investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the LTEROR by weighting the Expected Real Rates of Return (RROR) by the Target Asset Allocation percentage and by adding Expected Inflation. The Target Asset Allocation, and best estimates of Arithmetic Real Rates of Return are presented in the following table:

		Long-Term
	Target	Expected
	Asset	Real Rates
Asset Class	Allocation	of Return
U.S. Public Market Equities	29.00%	5.70%
International Public Market Equities	13.00%	6.10%
Emerging Public Market Equities	7.00%	7.60%
Private Market Equities	7.00%	8.10%
Fixed Income (Core, TIPS, HY, Opportunistic, Convertibles)	33.00%	3.00%
Alternatives (Real Assets, Hedge Funds)	11.00%	4.70%
Total	100.00%	

The Discount Rate used to measure the Total Pension Liability was 7.0% per annum. The projection of Cash Flows used to determine the Discount Rate assumes that employee contributions will be made at the rates applicable to the current Tier for each member and that employer contributions will be made at rates as determined by the Actuary. Based on those assumptions, the pension fund's Fiduciary Net Position is projected to be available to make all projected future benefit payments of current active and non-active members. Therefore, the Long-Term Expected Rate of Return on pension fund investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Development of Asset (Gain) / Loss June 30, 2016

	QPP		COVSF		HPOVSF		HPSOVSF		TPOVSF		TPSOVSF		Total
1. Assets													
a. Market Value 6/30/2015*	\$ 54,925,271,000	\$	149,399,000	\$	30,000	\$	39,000	\$	16,000	\$	33,000	\$	55,074,788,000
b. 2015 Accrued Transfers from NYCERS to COVSF	(30,000,000)		30,000,000		0		0		0		0		0
c. Adjusted Market Value @6/30/2015	54,895,271,000		179,399,000		30,000		39,000		16,000		33,000		55,074,788,000
d. Market Value 6/30/2016**	55,442,504,000		99,666,000		30,000		44,000		29,000		40,000		55,542,313,000
e. 2016 Accrued Transfers from NYCERS to COVSF	52,724,000		(52,724,000)		0		0		0		0		0
f. Adjusted Market Value @6/30/2016	55,495,228,000		46,942,000		30,000		44,000		29,000		40,000		55,542,313,000
2. Net Investment Income	1,171,720,000		184,000		0		0		0		0		1,171,904,000
3. Cash Flow (1.d 1.a 2.)	(654,487,000)		(49,917,000)		0		5,000		13,000		7,000		(704,379,000)
4. Expected Earnings (7% * 1.a. + 3.441% * 3.)	3,822,248,072		8,740,286		2,100		2,902		1,567		2,551		3,830,997,478
5. (Gain) / Loss (4 2.)	2,650,528,072		8,556,286		2,100		2,902		1,567		2,551		2,659,093,478
6. Recognition Period	5 Years		5 Years		5 Years		5 Years		5 Years		5 Years		5 Years
7. Amount Recognized in Pension Expense (5. / 6.)	530,105,614		1,711,257		420		580		313		510		531,818,694
8. Deferred (Inflow) / Outflow of Resources (5 7.)	\$ 2,120,422,458	\$	6,845,029	\$	1,680	\$	2,322	\$	1,254	\$	2,041	\$	2,127,274,784

<sup>\*</sup> Before Reflecting 2015 Accrued Transfers to VSFs.

NYC Office of the Actuary September 29, 2017

<sup>\*\*</sup> Before Reflecting 2016 Accrued Transfers to VSFs.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Development of Asset (Gain) / Loss June 30, 2017

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	Total
1. Assets							
a. Market Value 6/30/2016*	\$ 55,442,504,000	\$ 99,666,000	\$ 30,000	\$ 44,000	\$ 29,000	\$ 40,000	\$ 55,542,313,000
b. 2016 Accrued Transfers from NYCERS to COVSF	52,724,000	(52,724,000)	0	0	0	0	0
c. Adjusted Market Value @6/30/2016	55,495,228,000	46,942,000	30,000	44,000	29,000	40,000	55,542,313,000
d. Market Value 6/30/2017**	61,608,199,000	46,760,000	69,000	58,000	45,000	70,000	61,655,201,000
e. 2017 Accrued Transfers from NYCERS to COVSF	(285,924,000)	285,924,000	0	0	0	0	0
f. Adjusted Market Value @6/30/2017	61,322,275,000	332,684,000	69,000	58,000	45,000	70,000	61,655,201,000
2. Net Investment Income	6,982,304,000	(152,000)	0	0	0	0	6,982,152,000
3. Cash Flow (1.d 1.a 2.)	(816,609,000)	(52,754,000)	39,000	14,000	16,000	30,000	(869,264,000)
4. Expected Earnings (7% * 1.a. + 3.441% * 3.)	3,852,875,764	5,161,355	3,442	3,562	2,581	3,832	3,858,050,536
5. (Gain) / Loss (4 2.)	(3,129,428,236)	5,313,355	3,442	3,562	2,581	3,832	(3,124,101,464)
6. Recognition Period	5 Years	5 Years	5 Years	5 Years	5 Years	5 Years	5 Years
7. Amount Recognized in Pension Expense (5. / 6.)	(625,885,647)	1,062,671	688	712	516	766	(624,820,294)
8. Deferred (Inflow) / Outflow of Resources (5 7.)	\$ (2,503,542,589)	\$ 4,250,684	\$ 2,754	\$ 2,850	\$ 2,065	\$ 3,066	\$ (2,499,281,170)

<sup>\*</sup> Before Reflecting 2016 Accrued Transfers to VSFs.

NYC Office of the Actuary September 29, 2017

<sup>\*\*</sup> Before Reflecting 2017 Accrued Transfers to VSFs.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Roll-Forward of Entry Age Actuarial Accrued Liabilities<sup>1</sup>

	QPP	COVSF	HPOVSF	HPSOVSF		TPOVSF	VSF TPSOVSF		Total
1. Entry Age Accrued Liability (EAAL) at 6/30/2015	\$ 75,488,542,198	\$ 1,283,815,384	\$ 17,273,511	\$ 23,282,499	\$	34,279,665	\$	26,294,582	\$ 76,873,487,839
2. Entry Age Normal Cost at 6/30/2015	1,841,812,168	22,709,838	0	0		0		0	1,864,522,006
3. Benefit Payments-FY16	4,402,729,000	79,917,000	1,968,000	2,643,000		3,932,000		2,957,000	4,494,146,000
4. Interest	5,261,626,901	88,706,822	1,141,427	1,538,829		2,264,276		1,738,870	5,357,017,125
5. Roll-Forward EAAL at 6/30/2016	\$ 78,189,252,267	\$ 1,315,315,044	\$ 16,446,938	\$ 22,178,328	\$	32,611,941	\$	25,076,452	\$ 79,600,880,970
6. Entry Age Normal Cost at 6/30/2016	1,897,066,533	23,391,133	0	0		0		0	1,920,457,666
7. Benefit Payments-FY17	4,635,251,000	30,000	1,850,000	2,581,000		3,814,000		2,953,000	4,646,479,000
8. Interest	5,446,543,329	93,708,400	1,087,627	1,463,671		2,151,596		1,653,739	5,546,608,362
9. Roll-Forward EAAL at 6/30/2017	\$ 80,897,611,129	\$ 1,432,384,577	\$ 15,684,565	\$ 21,060,999	\$	30,949,537	\$	23,777,191	\$ 82,421,467,998

<sup>1</sup> VSFs liabilities are discounted at 7.0% per annum, consistent with the Assumptions and Methodology used to determine employer contributions.

NYC Office of the Actuary September 29, 2017

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Schedule of Employer Allocations June 30, 2016

Employer	 2016 Actual Employer Contributions	Employer Allocation Percentage
Transit Operating	\$ 616,269,330	18.312%
Transit Non-Operating	106,977,528	3.179%
Transit Authority Transit Police	22,624,851	0.672%
Transit Authority CP Engineers	24,780,369	0.736%
Housing Authority Regular	158,272,429	4.703%
Housing Authority Housing Police	9,887,882	0.294%
Health and Hospitals Corporation	497,715,274	14.789%
Off-Track Betting	20,630,774	0.613%
Housing Development Corporation / REMIC	1,780,625	0.053%
State Courts	1,057,613	0.031%
School Construction Authority	1,855,423	0.055%
Water Finance Authority	170,056	0.005%
Senior Colleges	41,979,719	1.247%
Triborough Bridge and Tunnel Authority	42,608,624	1.266%
City	 1,818,843,715	54.045%
Total	\$ 3,365,454,212	100.000%

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016

	Total Pension Liability (a)	Plan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2015	\$ 75,315,562,085 \$	55,074,788,000 \$			
2. Changes for the Year:					
a. Service Cost	1,899,994,413	0	1,899,994,413		
b. Interest	5,372,603,831	0	5,372,603,831		
c. Differences b/t Expected and Actual Experience	(817,971,278)	0	(817,971,278)		
d. Changes of Assumptions	2,563,091,847	0	2,563,091,847		
e. Contributions - Employer	0	3,365,454,000	(3,365,454,000)		
f. Contributions - Employee	0	485,508,000	(485,508,000)		
g. Net Investment Income	0	1,171,904,000	(1,171,904,000)		
h. Benefit Payments	(4,494,146,000)	(4,494,146,000)	0		
i. Payments to Other Retirement Systems	0	(7,440,000)	7,440,000		
j. Transfers to Variable Supplements Funds	0	0	0		
k. Administrative Expenses	0	(56,683,000)	56,683,000		
1. Other Changes	0	2,928,000	(2,928,000)		
Net Changes	\$ 4,523,572,813 \$	467,525,000 \$	4,056,047,813		
3. Balances at June 30, 2016	\$ 79,839,134,898 \$	55,542,313,000 \$	24,296,821,898		

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Transit Operating Balances at June 30, 2016

		Total Pension Liability		Plan Fiduciary Net Position	Net Pension Liability
		(a)	<b>(b)</b>		(a) - (b)
1. Balances at June 30, 2015	18.840%	\$ 14,189,451,897	\$	10,376,090,059	\$ 3,813,361,838
2. Changes for the Year:					
a. Service Cost		347,926,977		0	347,926,977
b. Interest		983,831,214		0	983,831,214
c. Differences b/t Expected and	Actual Experience	(149,786,900)		0	(149,786,900)
d. Changes of Assumptions		469,353,379		0	469,353,379
e. Contributions - Employer		0		616,281,936	(616,281,936)
f. Contributions - Employee		0		88,906,225	(88,906,225)
g. Net Investment Income		0		214,599,060	(214,599,060)
h. Benefit Payments		(822,968,016)		(822,968,016)	0
i. Payments to Other Retirement	Systems	0		(1,362,413)	1,362,413
<ol> <li>Transfers to Variable Supplen</li> </ol>	nents Funds	0		0	0
k. Administrative Expenses		0		(10,379,791)	10,379,791
<ol> <li>Other Changes</li> </ol>		 0		536,175	(536,175)
Net Changes		\$ 828,356,654	\$	85,613,176	\$ 742,743,478
3. SubTotal		\$ 15,017,808,551	\$	10,461,703,235	\$ 4,556,105,316
4. Changes in Proportionate Share		 (397,666,166)		(290,794,878)	(106,871,288)
5. Balances at June 30, 2016	18.312%	\$ 14,620,142,385	\$	10,170,908,357	\$ 4,449,234,028

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Transit Non-Operating Balances at June 30, 2016

		·	Fotal Pension Liability	]	Plan Fiduciary Net Position		Net Pension Liability
			(a)		<b>(b)</b>		(a) - (b)
1. Balances at June 30, 2015	2.812%	\$	2,117,873,606	\$	1,548,703,039	\$	569,170,567
2. Changes for the Year:							
a. Service Cost			60,400,822		0		60,400,822
b. Interest			170,795,076		0		170,795,076
c. Differences b/t Expected and Ac	ctual Experience		(26,003,307)		0		(26,003,307)
d. Changes of Assumptions			81,480,690		0		81,480,690
e. Contributions - Employer			0		106,987,783		(106,987,783)
f. Contributions - Employee			0		15,434,299		(15,434,299)
g. Net Investment Income			0		37,254,828		(37,254,828)
h. Benefit Payments			(142,868,901)		(142,868,901)		0
i. Payments to Other Retirement S	ystems		0		(236,518)		236,518
j. Transfers to Variable Supplement	nts Funds		0		0		0
k. Administrative Expenses			0		(1,801,953)		1,801,953
1. Other Changes			0		93,081		(93,081)
Net Changes		\$	143,804,380	\$	14,862,619	\$	128,941,761
3. SubTotal		\$	2,261,677,986	\$	1,563,565,658	\$	698,112,328
4. Changes in Proportionate Share			276,408,113		202,124,472		74,283,641
5. Balances at June 30, 2016	3.179%	\$	2,538,086,099	\$	1,765,690,130	\$	772,395,969

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source TA TP Balances at June 30, 2016

		Т	otal Pension Liability	Plan Fiduciary Net Position		Net Pension Liability
			(a)	<b>(b)</b>		(a) - (b)
1. Balances at June 30, 2015	0.660%	\$	497,082,710	\$ 363,493,601	\$	133,589,109
2. Changes for the Year:						
a. Service Cost			12,767,962	0		12,767,962
b. Interest			36,103,898	0		36,103,898
c. Differences b/t Expected and A	ctual Experience		(5,496,767)	0		(5,496,767)
d. Changes of Assumptions			17,223,977	0		17,223,977
e. Contributions - Employer			0	22,615,851		(22,615,851)
f. Contributions - Employee			0	3,262,614		(3,262,614)
g. Net Investment Income			0	7,875,195		(7,875,195)
h. Benefit Payments			(30,200,661)	(30,200,661)		0
i. Payments to Other Retirement S	Systems		0	(49,997)		49,997
j. Transfers to Variable Suppleme	ents Funds		0	0		0
k. Administrative Expenses			0	(380,910)		380,910
<ol> <li>Other Changes</li> </ol>			0	19,676		(19,676)
Net Changes		\$	30,398,409	\$ 3,141,768	\$	27,256,641
3. SubTotal		\$	527,481,119	\$ 366,635,369	\$	160,845,750
4. Changes in Proportionate Share			9,037,867	6,608,974		2,428,893
5. Balances at June 30, 2016	0.672%	\$	536,518,986	\$ 373,244,343	\$	163,274,643

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source TA CP Engineers Balances at June 30, 2016

		Т	otal Pension Liability		Plan Fiduciary Net Position		Net Pension Liability
			(a)		<b>(b)</b>		(a) - (b)
1. Balances at June 30, 2015	0.728%	\$	548,297,292	\$	400,944,457	\$	147,352,835
2. Changes for the Year:							
a. Service Cost			13,983,959		0		13,983,959
b. Interest			39,542,364		0		39,542,364
c. Differences b/t Expected and A	ctual Experience		(6,020,269)		0		(6,020,269)
d. Changes of Assumptions			18,864,356		0		18,864,356
e. Contributions - Employer			0		24,769,741		(24,769,741)
f. Contributions - Employee			0		3,573,339		(3,573,339)
g. Net Investment Income			0		8,625,213		(8,625,213)
h. Benefit Payments			(33,076,915)		(33,076,915)		0
i. Payments to Other Retirement S	ystems		0		(54,758)		54,758
j. Transfers to Variable Suppleme	nts Funds		0		0		0
k. Administrative Expenses			0		(417,187)		417,187
1. Other Changes			0		21,550		(21,550)
Net Changes		\$	33,293,495	\$	3,440,983	\$	29,852,512
3. SubTotal		\$	581,590,787	\$	404,385,440	\$	177,205,347
4. Changes in Proportionate Share			6,025,246		4,405,984		1,619,262
5. Balances at June 30, 2016	0.736%	\$	587,616,033	\$	408,791,424	\$	178,824,609

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source HA Regular Balances at June 30, 2016

		•	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
			(a)	<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2015	4.770%	\$	3,592,552,312 \$	2,627,067,388	\$ 965,484,924
2. Changes for the Year:					
a. Service Cost			89,356,737	0	89,356,737
b. Interest			252,673,558	0	252,673,558
c. Differences b/t Expected and A	ctual Experience		(38,469,189)	0	(38,469,189)
d. Changes of Assumptions			120,542,210	0	120,542,210
e. Contributions - Employer			0	158,277,302	(158,277,302)
f. Contributions - Employee			0	22,833,441	(22,833,441)
g. Net Investment Income			0	55,114,645	(55,114,645)
h. Benefit Payments			(211,359,686)	(211,359,686)	0
i. Payments to Other Retirement S	ystems		0	(349,903)	349,903
j. Transfers to Variable Suppleme	nts Funds		0	0	0
k. Administrative Expenses			0	(2,665,801)	2,665,801
<ol> <li>Other Changes</li> </ol>			0	137,704	(137,704)
Net Changes		\$	212,743,630 \$	21,987,702	\$ 190,755,928
3. SubTotal		\$	3,805,295,942 \$	2,649,055,090	\$ 1,156,240,852
4. Changes in Proportionate Share			(50,461,429)	(36,900,110)	(13,561,319)
5. Balances at June 30, 2016	4.703%	\$	3,754,834,513 \$	2,612,154,980	\$ 1,142,679,533

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source HA HP Balances at June 30, 2016

		Т	otal Pension Liability	Plan Fiduciary Net Position		Net Pension Liability
			(a)	<b>(b)</b>		(a) - (b)
1. Balances at June 30, 2015	0.302%	\$	227,452,998	\$ 166,325,860	\$	61,127,138
2. Changes for the Year:						
a. Service Cost			5,585,984	0		5,585,984
b. Interest			15,795,455	0		15,795,455
c. Differences b/t Expected and A	ctual Experience		(2,404,836)	0		(2,404,836)
d. Changes of Assumptions			7,535,490	0		7,535,490
e. Contributions - Employer			0	9,894,435		(9,894,435)
f. Contributions - Employee			0	1,427,394		(1,427,394)
g. Net Investment Income			0	3,445,398		(3,445,398)
h. Benefit Payments			(13,212,789)	(13,212,789)		0
i. Payments to Other Retirement S	Systems		0	(21,874)		21,874
j. Transfers to Variable Suppleme	nts Funds		0	0		0
k. Administrative Expenses			0	(166,648)		166,648
1. Other Changes			0	8,608		(8,608)
Net Changes		\$	13,299,304	\$ 1,374,524	\$	11,924,780
3. SubTotal		\$	240,752,302	\$ 167,700,384	\$	73,051,918
4. Changes in Proportionate Share			(6,025,245)	(4,405,983)		(1,619,262)
5. Balances at June 30, 2016	0.294%	\$	234,727,057	\$ 163,294,401	\$	71,432,656

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source HHC Balances at June 30, 2016

		Total Pension Liability		Plan Fiduciary Net Position		Net Pension
		(a)		(b)		Liability (a) - (b)
1. Balances at June 30, 2015	14.030%	\$ 10,566,773,360	\$	7,726,992,756	\$	2,839,780,604
2. Changes for the Year:						
a. Service Cost		280,990,174		0		280,990,174
b. Interest		794,554,381		0		794,554,381
c. Differences b/t Expected and A	Actual Experience	(120,969,772)		0		(120,969,772)
d. Changes of Assumptions		379,055,653		0		379,055,653
e. Contributions - Employer		0		497,716,992		(497,716,992)
f. Contributions - Employee		0		71,801,778		(71,801,778)
g. Net Investment Income		0		173,312,883		(173,312,883)
h. Benefit Payments		(664,639,252)		(664,639,252)		0
<ol> <li>Payments to Other Retirement</li> </ol>	Systems	0		(1,100,302)		1,100,302
<ol><li>j. Transfers to Variable Suppler</li></ol>	nents Funds	0		0		0
k. Administrative Expenses		0		(8,382,849)		8,382,849
1. Other Changes		 0		433,022		(433,022)
Net Changes		\$ 668,991,184	\$	69,142,272	\$	599,848,912
3. SubTotal		\$ 11,235,764,544	\$	7,796,135,028	\$	3,439,629,516
4. Changes in Proportionate Share		 571,645,117		418,017,642		153,627,475
5. Balances at June 30, 2016	14.789%	\$ 11,807,409,661	\$	8,214,152,670	\$	3,593,256,991

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source OTB Balances at June 30, 2016

		Т	otal Pension Liability		Plan Fiduciary Net Position	Net Pension Liability
			(a)		<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2015	0.362%	\$	272,642,335	\$	199,370,733	\$ 73,271,602
2. Changes for the Year:						
a. Service Cost			11,646,966		0	11,646,966
b. Interest			32,934,061		0	32,934,061
c. Differences b/t Expected and A	ctual Experience		(5,014,164)		0	(5,014,164)
d. Changes of Assumptions			15,711,753		0	15,711,753
e. Contributions - Employer			0		20,630,233	(20,630,233)
f. Contributions - Employee			0		2,976,164	(2,976,164)
g. Net Investment Income			0		7,183,772	(7,183,772)
h. Benefit Payments			(27,549,115)		(27,549,115)	0
i. Payments to Other Retirement S	Systems		0		(45,607)	45,607
j. Transfers to Variable Suppleme	ents Funds		0		0	0
k. Administrative Expenses			0		(347,467)	347,467
<ol> <li>Other Changes</li> </ol>			0		17,949	(17,949)
Net Changes		\$	27,729,501	\$	2,865,929	\$ 24,863,572
3. SubTotal		\$	300,371,836	\$	202,236,662	\$ 98,135,174
4. Changes in Proportionate Share			189,042,060		138,237,717	50,804,343
5. Balances at June 30, 2016	0.613%	\$	489,413,896	\$	340,474,379	\$ 148,939,517

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source HDC/REMIC Balances at June 30, 2016

		T	otal Pension Liability		Plan Fiduciary Net Position		Net Pension Liability
	0.0==0/		(a)	_	(b)	_	(a) - (b)
1. Balances at June 30, 2015	0.053%	\$	39,917,248	\$	29,189,638	\$	10,727,610
2. Changes for the Year:							
a. Service Cost			1,006,997		0		1,006,997
b. Interest			2,847,480		0		2,847,480
c. Differences b/t Expected and A	ctual Experience		(433,525)	)	0		(433,525)
d. Changes of Assumptions			1,358,439		0		1,358,439
e. Contributions - Employer			0		1,783,691		(1,783,691)
f. Contributions - Employee			0		257,319		(257,319)
g. Net Investment Income			0		621,109		(621,109)
h. Benefit Payments			(2,381,897)	)	(2,381,897)		0
i. Payments to Other Retirement S	Systems		0		(3,943)		3,943
j. Transfers to Variable Suppleme	nts Funds		0		0		0
k. Administrative Expenses			0		(30,042)		30,042
<ol> <li>Other Changes</li> </ol>			0		1,552		(1,552)
Net Changes		\$	2,397,494	\$	247,789	\$	2,149,705
3. SubTotal		\$	42,314,742	\$	29,437,427	\$	12,877,315
4. Changes in Proportionate Share			(1)	)	(1)		0
5. Balances at June 30, 2016	0.053%	\$	42,314,741	\$	29,437,426	\$	12,877,315

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source State Courts Balances at June 30, 2016

		T	otal Pension Liability		Plan Fiduciary Net Position	Net Pension Liability
			(a)		(b)	(a) - (b)
1. Balances at June 30, 2015	0.032%	\$	24,100,980	\$	17,623,932	\$ 6,477,048
2. Changes for the Year:						
a. Service Cost			588,998		0	588,998
b. Interest			1,665,507		0	1,665,507
c. Differences b/t Expected and A	ctual Experience		(253,571)	1	0	(253,571)
d. Changes of Assumptions			794,558		0	794,558
e. Contributions - Employer			0		1,043,291	(1,043,291)
f. Contributions - Employee			0		150,507	(150,507)
g. Net Investment Income			0		363,290	(363,290)
h. Benefit Payments			(1,393,185)	1	(1,393,185)	0
i. Payments to Other Retirement S	ystems		0		(2,306)	2,306
j. Transfers to Variable Suppleme	nts Funds		0		0	0
k. Administrative Expenses			0		(17,572)	17,572
<ol> <li>Other Changes</li> </ol>			0		908	(908)
Net Changes		\$	1,402,307	\$	144,933	\$ 1,257,374
3. SubTotal		\$	25,503,287	\$	17,768,865	\$ 7,734,422
4. Changes in Proportionate Share			(753,156)	1	(550,748)	(202,408)
5. Balances at June 30, 2016	0.031%	\$	24,750,131	\$	17,218,117	\$ 7,532,014

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source SCA Balances at June 30, 2016

		To	otal Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
			(a)	(b)	(a) - (b)
1. Balances at June 30, 2015	0.042%	\$	31,632,536	\$ 23,131,411	\$ 8,501,125
2. Changes for the Year:					
a. Service Cost			1,044,997	0	1,044,997
b. Interest			2,954,932	0	2,954,932
c. Differences b/t Expected and Ac	ctual Experience		(449,884)	0	(449,884)
d. Changes of Assumptions			1,409,701	0	1,409,701
e. Contributions - Employer			0	1,851,000	(1,851,000)
f. Contributions - Employee			0	267,029	(267,029)
g. Net Investment Income			0	644,547	(644,547)
h. Benefit Payments			(2,471,780)	(2,471,780)	0
i. Payments to Other Retirement S	ystems		0	(4,092)	4,092
j. Transfers to Variable Suppleme	nts Funds		0	0	0
k. Administrative Expenses			0	(31,176)	31,176
1. Other Changes			0	1,610	(1,610)
Net Changes		\$	2,487,966	\$ 257,138	\$ 2,230,828
3. SubTotal		\$	34,120,502	\$ 23,388,549	\$ 10,731,953
4. Changes in Proportionate Share			9,791,024	7,159,723	2,631,301
5. Balances at June 30, 2016	0.055%	\$	43,911,526	\$ 30,548,272	\$ 13,363,254

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source WFA Balances at June 30, 2016

		To	otal Pension Liability	Plan Fiduciary Net Position (b)	Net Pension Liability
1. Balances at June 30, 2015	0.005%	\$	(a) 3,765,778	\$ 2,753,739	\$ (a) - (b) 1,012,039
2. Changes for the Year:					
a. Service Cost			95,000	0	95,000
b. Interest			268,630	0	268,630
c. Differences b/t Expected and A	ctual Experience		(40,899)	0	(40,899)
d. Changes of Assumptions			128,155	0	128,155
e. Contributions - Employer			0	168,273	(168,273)
f. Contributions - Employee			0	24,275	(24,275)
g. Net Investment Income			0	58,595	(58,595)
h. Benefit Payments			(224,707)	(224,707)	0
i. Payments to Other Retirement S	Systems		0	(372)	372
j. Transfers to Variable Suppleme	nts Funds		0	0	0
k. Administrative Expenses			0	(2,834)	2,834
1. Other Changes			0	146	(146)
Net Changes		\$	226,179	\$ 23,376	\$ 202,803
3. SubTotal		\$	3,991,957	\$ 2,777,115	\$ 1,214,842
4. Changes in Proportionate Share			1	1	0
5. Balances at June 30, 2016	0.005%	\$	3,991,958	\$ 2,777,116	\$ 1,214,842

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Senior Colleges Balances at June 30, 2016

		Т	otal Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
			(a)	<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2015	1.221%	\$	919,603,013	\$ 672,463,161	\$ 247,139,852
2. Changes for the Year:					
a. Service Cost			23,692,930	0	23,692,930
b. Interest			66,996,370	0	66,996,370
c. Differences b/t Expected and Ac	ctual Experience		(10,200,102)	0	(10,200,102)
d. Changes of Assumptions			31,961,755	0	31,961,755
e. Contributions - Employer			0	41,967,211	(41,967,211)
f. Contributions - Employee			0	6,054,285	(6,054,285)
g. Net Investment Income			0	14,613,643	(14,613,643)
h. Benefit Payments			(56,042,001)	(56,042,001)	0
i. Payments to Other Retirement S	ystems		0	(92,777)	92,777
j. Transfers to Variable Supplement	nts Funds		0	0	0
k. Administrative Expenses			0	(706,837)	706,837
1. Other Changes			0	36,512	(36,512)
Net Changes		\$	56,408,952	\$ 5,830,036	\$ 50,578,916
3. SubTotal		\$	976,011,965	\$ 678,293,197	\$ 297,718,768
4. Changes in Proportionate Share			19,582,047	14,319,446	5,262,601
5. Balances at June 30, 2016	1.247%	\$	995,594,012	\$ 692,612,643	\$ 302,981,369

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source TBTA Balances at June 30, 2016

		7	Fotal Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
			(a)	<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2015	1.205%	\$	907,552,523	\$ 663,651,195	\$ 243,901,328
2. Changes for the Year:					
a. Service Cost			24,053,929	0	24,053,929
b. Interest			68,017,165	0	68,017,165
c. Differences b/t Expected and A	ctual Experience		(10,355,516)	0	(10,355,516)
d. Changes of Assumptions			32,448,743	0	32,448,743
e. Contributions - Employer			0	42,606,648	(42,606,648)
f. Contributions - Employee			0	6,146,531	(6,146,531)
g. Net Investment Income			0	14,836,305	(14,836,305)
h. Benefit Payments			(56,895,888)	(56,895,888)	0
i. Payments to Other Retirement S	ystems		0	(94,190)	94,190
j. Transfers to Variable Suppleme	nts Funds		0	0	0
k. Administrative Expenses			0	(717,607)	717,607
1. Other Changes			0	37,068	(37,068)
Net Changes		\$	57,268,433	\$ 5,918,867	\$ 51,349,566
3. SubTotal		\$	964,820,956	\$ 669,570,062	\$ 295,250,894
4. Changes in Proportionate Share			45,942,493	33,595,621	12,346,872
5. Balances at June 30, 2016	1.266%	\$	1,010,763,449	\$ 703,165,683	\$ 307,597,766

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source City Total Balances at June 30, 2016

		Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
		(a)	(b)	(a) - (b)
1. Balances at June 30, 2015	54.938%	\$ 41,376,863,497 \$	30,256,987,031	\$ 11,119,876,466
2. Changes for the Year:				
a. Service Cost		1,026,851,981	0	1,026,851,981
b. Interest		2,903,623,740	0	2,903,623,740
c. Differences b/t Expected and	Actual Experience	(442,072,577)	0	(442,072,577)
d. Changes of Assumptions		1,385,222,988	0	1,385,222,988
e. Contributions - Employer		0	1,818,859,613	(1,818,859,613)
f. Contributions - Employee		0	262,392,800	(262,392,800)
g. Net Investment Income		0	633,355,517	(633,355,517)
h. Benefit Payments		(2,428,861,207)	(2,428,861,207)	0
i. Payments to Other Retirement	Systems	0	(4,020,948)	4,020,948
j. Transfers to Variable Supplen	nents Funds	0	0	0
k. Administrative Expenses		0	(30,634,326)	30,634,326
<ol> <li>Other Changes</li> </ol>		0	1,582,439	(1,582,439)
Net Changes		\$ 2,444,764,925 \$	252,673,888	\$ 2,192,091,037
3. SubTotal		\$ 43,821,628,422 \$	30,509,660,919	\$ 13,311,967,503
4. Changes in Proportionate Share		(672,567,971)	(491,817,860)	(180,750,111)
5. Balances at June 30, 2016	54.045%	\$ 43,149,060,451 \$	30,017,843,059	\$ 13,131,217,392

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Changes in Net Pension Liability (NPL) by Source - By Obligor

	Total Pension Liability																
		Transit Operating	TA Non- Operating	TA TP	TA CP Engineers	HA Regular	НА НР	HHC	OTB	HDC/REMIC	State Courts	SCA	WFA	Senior Colleges	TBTA	City Total	Total
Balances at June 30, 2015	\$	14,189,451,897 \$	2,117,873,606 \$	497,082,710 \$	548,297,292 \$	3,592,552,312 \$	227,452,998 \$	10,566,773,360 \$	272,642,335 \$	39,917,248 \$	24,100,980 \$	31,632,536 \$	3,765,778 \$	919,603,013 \$	907,552,523 \$	41,376,863,497 \$	75,315,562,085
Changes for the Year:																	
Service Cost		347,926,977	60,400,822	12,767,962	13,983,959	89,356,737	5,585,984	280,990,174	11,646,966	1,006,997	588,998	1,044,997	95,000	23,692,930	24,053,929	1,026,851,981	1,899,994,413
Interest		983,831,214	170,795,076	36,103,898	39,542,364	252,673,558	15,795,455	794,554,381	32,934,061	2,847,480	1,665,507	2,954,932	268,630	66,996,370	68,017,165	2,903,623,740	5,372,603,831
Differences b/t Expected and Actual Experience		(149,786,900)	(26,003,307)	(5,496,767)	(6,020,269)	(38,469,189)	(2,404,836)	(120,969,772)	(5,014,164)	(433,525)	(253,571)	(449,884)	(40,899)	(10,200,102)	(10,355,516)	(442,072,577)	(817,971,278)
Changes of Assumptions		469,353,379	81,480,690	17,223,977	18,864,356	120,542,210	7,535,490	379,055,653	15,711,753	1,358,439	794,558	1,409,701	128,155	31,961,755	32,448,743	1,385,222,988	2,563,091,847
Benefit Payments		(822,968,016)	(142,868,901)	(30,200,661)	(33,076,915)	(211,359,686)	(13,212,789)	(664,639,252)	(27,549,115)	(2,381,897)	(1,393,185)	(2,471,780)	(224,707)	(56,042,001)	(56,895,888)	(2,428,861,207)	(4,494,146,000)
Net Changes	\$	828,356,654 \$	143,804,380 \$	30,398,409 \$	33,293,495 \$	212,743,630 \$	13,299,304 \$	668,991,184 \$	27,729,501 \$	2,397,494 \$	1,402,307 \$	2,487,966 \$	226,179 \$	56,408,952 \$	57,268,433 \$	2,444,764,925 \$	4,523,572,813
SubTotal	\$	15,017,808,551 \$	2,261,677,986 \$	527,481,119 \$	581,590,787 \$	3,805,295,942 \$	240,752,302 \$	11,235,764,544 \$	300,371,836 \$	42,314,742 \$	25,503,287 \$	34,120,502 \$	3,991,957 \$	976,011,965 \$	964,820,956 \$	43,821,628,422 \$	79,839,134,898
Changes in Proportionate Share		(397,666,166)	276,408,113	9,037,867	6,025,246	(50,461,429)	(6,025,245)	571,645,117	189,042,060	(1)	(753,156)	9,791,024	1	19,582,047	45,942,493	(672,567,971)	0
Balances at June 30, 2016	•	14 620 142 385 \$	2 538 086 099 \$	536 518 986 \$	587 616 033 \$	3 754 834 513 \$	234 727 057 \$	11 807 409 661 \$	489 413 896 \$	42 314 741 \$	24 750 131 \$	43 911 526 \$	3 991 958 \$	995 594 012 \$	1 010 763 449 \$	43 149 060 451 \$	79 839 134 898

		Plan Fiduciary Net Position <sup>1</sup>															
Balances at June 30, 2015	s	Transit Operating 10,376,090,059 \$	TA Non- Operating 1,548,703,039 \$	TA TP 363,493,601 \$	TA CP Engineers 400,944,457 \$	HA Regular 2,627,067,388 \$	HA HP 166,325,860 \$	HHC 7,726,992,756 \$	OTB 199,370,733 \$	HDC/REMIC 29,189,638 \$	State Courts 17,623,932 \$	SCA 23,131,411 \$	<u>WFA</u> 2,753,739 \$	Senior Colleges 672,463,161 \$	TBTA 663,651,195 \$	City Total 30,256,987,031 \$	<u>Total</u> 55,074,788,000
Changes for the Year:																	
Contributions - Employer		616,281,936	106,987,783	22,615,851	24,769,741	158,277,302	9,894,435	497,716,992	20,630,233	1,783,691	1,043,291	1,851,000	168,273	41,967,211	42,606,648	1,818,859,613	3,365,454,000
Contributions - Employee		88,906,225	15,434,299	3,262,614	3,573,339	22,833,441	1,427,394	71,801,778	2,976,164	257,319	150,507	267,029	24,275	6,054,285	6,146,531	262,392,800	485,508,000
Net Investment Income		214,599,060	37,254,828	7,875,195	8,625,213	55,114,645	3,445,398	173,312,883	7,183,772	621,109	363,290	644,547	58,595	14,613,643	14,836,305	633,355,517	1,171,904,000
Benefit Payments		(822,968,016)	(142,868,901)	(30,200,661)	(33,076,915)	(211,359,686)	(13,212,789)	(664,639,252)	(27,549,115)	(2,381,897)	(1,393,185)	(2,471,780)	(224,707)	(56,042,001)	(56,895,888)	(2,428,861,207)	(4,494,146,000)
Payments to Other Retirement Systems		(1,362,413)	(236,518)	(49,997)	(54,758)	(349,903)	(21,874)	(1,100,302)	(45,607)	(3,943)	(2,306)	(4,092)	(372)	(92,777)	(94,190)	(4,020,948)	(7,440,000)
Transfers to Variable Supplements Funds		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative Expenses		(10,379,791)	(1,801,953)	(380,910)	(417,187)	(2,665,801)	(166,648)	(8,382,849)	(347,467)	(30,042)	(17,572)	(31,176)	(2,834)	(706,837)	(717,607)	(30,634,326)	(56,683,000)
Other Changes <sup>2</sup>		536,175	93,081	19,676	21,550	137,704	8,608	433,022	17,949	1,552	908	1,610	146	36,512	37,068	1,582,439	2,928,000
Net Changes	\$	85,613,176 \$	14,862,619 \$	3,141,768 \$	3,440,983 \$	21,987,702 \$	1,374,524 \$	69,142,272 \$	2,865,929 \$	247,789 \$	144,933 \$	257,138 \$	23,376 \$	5,830,036 \$	5,918,867 \$	252,673,888 \$	467,525,000
SubTotal	\$	10,461,703,235 \$	1,563,565,658 \$	366,635,369 \$	404,385,440 \$	2,649,055,090 \$	167,700,384 \$	7,796,135,028 \$	202,236,662 \$	29,437,427 \$	17,768,865 \$	23,388,549 \$	2,777,115 \$	678,293,197 \$	669,570,062 \$	30,509,660,919 \$	55,542,313,000
Changes in Proportionate Share		(290,794,878)	202,124,472	6,608,974	4,405,984	(36,900,110)	(4,405,983)	418,017,642	138,237,717	(1)	(550,748)	7,159,723	1	14,319,446	33,595,621	(491,817,860)	0
Balances at June 30, 2016	\$	10,170,908,357 \$	1,765,690,130 \$	373,244,343 \$	408,791,424 \$	2,612,154,980 \$	163,294,401 \$	8,214,152,670 \$	340,474,379 \$	29,437,426 \$	17,218,117 \$	30,548,272 \$	2,777,116 \$	692,612,643 \$	703,165,683 \$	30,017,843,059 \$	55,542,313,000

	Net Pension Liability																
		Transit	TA Non-		TA CP									Senior			
		Operating	Operating	TA TP	Engineers	HA Regular	HA HP	HHC	OTB	HDC/REMIC	State Courts	SCA	WFA	Colleges	TBTA	City Total	Total
Balances at June 30, 2015	\$	3,813,361,838 \$	569,170,567 \$	133,589,109 \$	147,352,835 \$	965,484,924 \$	61,127,138 \$	2,839,780,604 \$	73,271,602 \$	10,727,610 \$	6,477,048 \$	8,501,125 \$	1,012,039 \$	247,139,852 \$	243,901,328 \$	11,119,876,466 \$	20,240,774,085
Changes for the Year:																	
Service Cost		347,926,977	60,400,822	12,767,962	13,983,959	89,356,737	5,585,984	280,990,174	11,646,966	1,006,997	588,998	1,044,997	95,000	23,692,930	24,053,929	1,026,851,981	1,899,994,413
Interest		983,831,214	170,795,076	36,103,898	39,542,364	252,673,558	15,795,455	794,554,381	32,934,061	2,847,480	1,665,507	2,954,932	268,630	66,996,370	68,017,165	2,903,623,740	5,372,603,831
Differences b/t Expected and Actual Experience		(149,786,900)	(26,003,307)	(5,496,767)	(6,020,269)	(38,469,189)	(2,404,836)	(120,969,772)	(5,014,164)	(433,525)	(253,571)	(449,884)	(40,899)	(10,200,102)	(10,355,516)	(442,072,577)	(817,971,278)
Changes of Assumptions		469,353,379	81,480,690	17,223,977	18,864,356	120,542,210	7,535,490	379,055,653	15,711,753	1,358,439	794,558	1,409,701	128,155	31,961,755	32,448,743	1,385,222,988	2,563,091,847
Contributions - Employer		(616,281,936)	(106,987,783)	(22,615,851)	(24,769,741)	(158,277,302)	(9,894,435)	(497,716,992)	(20,630,233)	(1,783,691)	(1,043,291)	(1,851,000)	(168,273)	(41,967,211)	(42,606,648)	(1,818,859,613)	(3,365,454,000)
Contributions - Employee		(88,906,225)	(15,434,299)	(3,262,614)	(3,573,339)	(22,833,441)	(1,427,394)	(71,801,778)	(2,976,164)	(257,319)	(150,507)	(267,029)	(24,275)	(6,054,285)	(6,146,531)	(262,392,800)	(485,508,000)
Net Investment Income		(214,599,060)	(37,254,828)	(7,875,195)	(8,625,213)	(55,114,645)	(3,445,398)	(173,312,883)	(7,183,772)	(621,109)	(363,290)	(644,547)	(58,595)	(14,613,643)	(14,836,305)	(633,355,517)	(1,171,904,000)
Benefit Payments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Payments to Other Retirement Systems		1,362,413	236,518	49,997	54,758	349,903	21,874	1,100,302	45,607	3,943	2,306	4,092	372	92,777	94,190	4,020,948	7,440,000
Transfers to Variable Supplements Funds		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative Expenses		10,379,791	1,801,953	380,910	417,187	2,665,801	166,648	8,382,849	347,467	30,042	17,572	31,176	2,834	706,837	717,607	30,634,326	56,683,000
Other Changes		(536,175)	(93,081)	(19,676)	(21,550)	(137,704)	(8,608)	(433,022)	(17,949)	(1,552)	(908)	(1,610)	(146)	(36,512)	(37,068)	(1,582,439)	(2,928,000)
Net Changes	\$	742,743,478 \$	128,941,761 \$	27,256,641 \$	29,852,512 \$	190,755,928 \$	11,924,780 \$	599,848,912 \$	24,863,572 \$	2,149,705 \$	1,257,374 \$	2,230,828 \$	202,803 \$	50,578,916 \$	51,349,566 \$	2,192,091,037 \$	4,056,047,813
SubTotal	s	4,556,105,316 \$	698,112,328 \$	160,845,750 \$	177,205,347 \$	1,156,240,852 \$	73,051,918 \$	3,439,629,516 \$	98,135,174 \$	12,877,315 \$	7,734,422 \$	10,731,953 \$	1,214,842 \$	297,718,768 \$	295,250,894 \$	13,311,967,503 \$	24,296,821,898
Changes in Proportionate Share		(106,871,288)	74,283,641	2,428,893	1,619,262	(13,561,319)	(1,619,262)	153,627,475	50,804,343	0	(202,408)	2,631,301	0	5,262,601	12,346,872	(180,750,111)	0
Balances at June 30, 2016	s	4,449,234,028 \$	772,395,969 \$	163,274,643 \$	178,824,609 \$	1,142,679,533 \$	71,432,656 \$	3,593,256,991 \$	148,939,517 \$	12,877,315 \$	7,532,014 \$	13,363,254 \$	1,214,842 \$	302,981,369 \$	307,597,766 \$	13,131,217,392 \$	24,296,821,898

 $^{\rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

Office of the Actuary September 20, 1

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Schedule of Employer Allocations June 30, 2017

Employer	2017 Actual Employe Contributi	er Allocation
Transit Operating	\$ 607,1	75,982 18.243%
Transit Non-Operating	125,1	43,356 3.760%
Transit Authority Transit Police	23,1	78,270 0.696%
Transit Authority CP Engineers	26,1	25,101 0.785%
Housing Authority Regular	155,9	20,897 4.685%
Housing Authority Housing Police	9,5	71,892 0.288%
Health and Hospitals Corporation	492,1	60,878 14.788%
Off-Track Betting	18,5	19,306 0.556%
Housing Development Corporation / REMIC	1,7	78,800 0.053%
State Courts	1,2	0.036%
School Construction Authority	1,3	21,372 0.040%
Water Finance Authority	1	36,110 0.004%
Senior Colleges	38,8	38,696 1.167%
Triborough Bridge and Tunnel Authority	43,5	46,055 1.308%
City	1,783,5	67,273 53.591%
Total	\$ 3,328,1	92,582 100.000%

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017

	Total Pension Liability (a)	Plan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2016	\$ 79,839,134,898 \$	55,542,313,000	\$ 24,296,821,898		
2. Changes for the Year:					
a. Service Cost	1,920,457,666	0	1,920,457,666		
b. Interest	5,546,608,362	0	5,546,608,362		
c. Differences b/t Expected and Actual Experience	(238, 253, 928)	0	(238, 253, 928)		
d. Changes of Assumptions	0	0	0		
e. Contributions - Employer	0	3,328,193,000	(3,328,193,000)		
f. Contributions - Employee	0	513,514,000	(513,514,000)		
g. Net Investment Income	0	6,982,152,000	(6,982,152,000)		
h. Benefit Payments	(4,646,479,000)	(4,646,479,000)	0		
i. Payments to Other Retirement Systems	0	(8,087,000)	8,087,000		
j. Transfers to Variable Supplements Funds	0	0	0		
k. Administrative Expenses	0	(59,671,000)	59,671,000		
1. Other Changes	0	3,266,000	(3,266,000)		
Net Changes	\$ 2,582,333,100 \$	6,112,888,000	\$ (3,530,554,900)		
3. Balances at June 30, 2017	\$ 82,421,467,998 \$	61,655,201,000	\$ 20,766,266,998		

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Transit Operating Balances at June 30, 2017

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2016	18.312%	\$ 14,620,142,385	\$ 10,170,908,357	\$ 4,449,234,028
2. Changes for the Year:				
a. Service Cost		350,349,092	0	350,349,092
b. Interest		1,011,867,763	0	1,011,867,763
c. Differences b/t Expected and A	Actual Experience	(43,464,664)	0	(43,464,664)
d. Changes of Assumptions		0	0	0
e. Contributions - Employer		0	607,175,982	(607,175,982)
f. Contributions - Employee		0	93,680,359	(93,680,359)
g. Net Investment Income		0	1,273,753,989	(1,273,753,989)
h. Benefit Payments		(847,657,164)	(847,657,164)	0
i. Payments to Other Retirement	Systems	0	(1,475,311)	1,475,311
j. Transfers to Variable Supplem	ents Funds	0	0	0
k. Administrative Expenses		0	(10,885,781)	10,885,781
l. Other Changes		0	595,816	(595,816)
Net Changes		\$ 471,095,027	\$ 1,115,187,890	\$ (644,092,863)
3. SubTotal		\$ 15,091,237,412	\$ 11,286,096,247	\$ 3,805,141,165
4. Changes in Proportionate Share		(55,089,005)	(38,324,198)	(16,764,807)
5. Balances at June 30, 2017	18.243%	\$ 15,036,148,407	\$ 11,247,772,049	\$ 3,788,376,358

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Transit Non-Operating Balances at June 30, 2017

		Total Pension Liability	Plan Fiduciary Net Position		Net Pension Liability
		 (a)	<b>(b)</b>		(a) - (b)
1. Balances at June 30, 2016	3.179%	\$ 2,538,086,099	\$ 1,765,690,130	\$	772,395,969
2. Changes for the Year:					
a. Service Cost		72,209,208	0		72,209,208
b. Interest		208,552,474	0		208,552,474
c. Differences b/t Expected and Ac	tual Experience	(8,958,348)	0		(8,958,348)
d. Changes of Assumptions		0	0		0
e. Contributions - Employer		0	125,143,356		(125,143,356)
f. Contributions - Employee		0	19,308,126		(19,308,126)
g. Net Investment Income		0	262,528,915		(262,528,915)
h. Benefit Payments		(174,707,610)	(174,707,610)		0
i. Payments to Other Retirement S	ystems	0	(304,071)		304,071
j. Transfers to Variable Supplement	nts Funds	0	0		0
k. Administrative Expenses		0	(2,243,630)		2,243,630
<ol> <li>Other Changes</li> </ol>		 0	122,802		(122,802)
Net Changes		\$ 97,095,724	\$ 229,847,888	\$	(132,752,164)
3. SubTotal		\$ 2,635,181,823	\$ 1,995,538,018	\$	639,643,805
4. Changes in Proportionate Share		 463,865,374	322,700,839		141,164,535
5. Balances at June 30, 2017	3.760%	\$ 3,099,047,197	\$ 2,318,238,857	\$	780,808,340

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source TA TP Balances at June 30, 2017

			Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
		(a)		<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2016	0.672%	\$	536,518,986	\$ 373,244,343	\$ 163,274,643
2. Changes for the Year:					
a. Service Cost			13,366,385	0	13,366,385
b. Interest			38,604,394	0	38,604,394
c. Differences b/t Expected and Ac	tual Experience		(1,658,247)	0	(1,658,247)
d. Changes of Assumptions			0	0	0
e. Contributions - Employer			0	23,178,270	(23,178,270)
f. Contributions - Employee			0	3,574,057	(3,574,057)
g. Net Investment Income			0	48,595,778	(48,595,778)
h. Benefit Payments			(32,339,494)	(32,339,494)	0
i. Payments to Other Retirement S	ystems		0	(56,286)	56,286
j. Transfers to Variable Supplemer	its Funds		0	0	0
k. Administrative Expenses			0	(415,310)	415,310
1. Other Changes			0	22,731	(22,731)
Net Changes		\$	17,973,038	\$ 42,559,746	\$ (24,586,708)
3. SubTotal		\$	554,492,024	\$ 415,804,089	\$ 138,687,935
4. Changes in Proportionate Share			19,161,393	13,330,156	5,831,237
5. Balances at June 30, 2017	0.696%	\$	573,653,417	\$ 429,134,245	\$ 144,519,172

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source TA CP Engineers Balances at June 30, 2017

			Total Pension Liability	I	Plan Fiduciary Net Position		Net Pension Liability
		(a)			<b>(b)</b>		(a) - (b)
1. Balances at June 30, 2016	0.736%	\$	587,616,033	\$	408,791,424	\$	178,824,609
2. Changes for the Year:							
a. Service Cost			15,075,593		0		15,075,593
b. Interest			43,540,876		0		43,540,876
c. Differences b/t Expected and Ac	ctual Experience		(1,870,293)		0		(1,870,293)
d. Changes of Assumptions			0		0		0
e. Contributions - Employer			0		26,125,101		(26,125,101)
f. Contributions - Employee			0		4,031,085		(4,031,085)
g. Net Investment Income			0		54,809,893		(54,809,893)
h. Benefit Payments			(36,474,860)		(36,474,860)		0
i. Payments to Other Retirement S	ystems		0		(63,483)		63,483
j. Transfers to Variable Supplement	nts Funds		0		0		0
k. Administrative Expenses			0		(468,417)		468,417
1. Other Changes			0		25,638		(25,638)
Net Changes		\$	20,271,316	\$	47,984,957	\$	(27,713,641)
3. SubTotal		\$	607,887,349	\$	456,776,381	\$	151,110,968
4. Changes in Proportionate Share			39,121,175		27,215,732		11,905,443
5. Balances at June 30, 2017	0.785%	\$	647,008,524	\$	483,992,113	\$	163,016,411

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source HA Regular Balances at June 30, 2017

		Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
		 (a)	<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2016	4.703%	\$ 3,754,834,513 \$	2,612,154,980	\$ 1,142,679,533
2. Changes for the Year:				
a. Service Cost		89,973,442	0	89,973,442
b. Interest		259,858,602	0	259,858,602
c. Differences b/t Expected and Ac	ctual Experience	(11,162,197)	0	(11,162,197)
d. Changes of Assumptions		0	0	0
e. Contributions - Employer		0	155,920,897	(155,920,897)
f. Contributions - Employee		0	24,058,131	(24,058,131)
g. Net Investment Income		0	327,113,821	(327,113,821)
h. Benefit Payments		(217,687,541)	(217,687,541)	0
i. Payments to Other Retirement S	ystems	0	(378,876)	378,876
j. Transfers to Variable Supplement	nts Funds	0	0	0
k. Administrative Expenses		0	(2,795,586)	2,795,586
<ol> <li>Other Changes</li> </ol>		 0	153,012	(153,012)
Net Changes		\$ 120,982,306 \$	286,383,858	\$ (165,401,552)
3. SubTotal		\$ 3,875,816,819 \$	2,898,538,838	\$ 977,277,981
4. Changes in Proportionate Share		(14,371,043)	(9,997,615)	(4,373,428)
5. Balances at June 30, 2017	4.685%	\$ 3,861,445,776 \$	2,888,541,223	\$ 972,904,553

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source HA HP Balances at June 30, 2017

		,	Fotal Pension Liability	Plan Fiduciary Net Position		Net Pension Liability
			(a)	<b>(b)</b>		(a) - (b)
1. Balances at June 30, 2016	0.294%	\$	234,727,057	\$ 163,294,401	\$	71,432,656
2. Changes for the Year:						
a. Service Cost			5,530,918	0		5,530,918
b. Interest			15,974,232	0		15,974,232
c. Differences b/t Expected and Ac	ctual Experience		(686,171)	0		(686,171)
d. Changes of Assumptions			0	0		0
e. Contributions - Employer			0	9,571,892		(9,571,892)
f. Contributions - Employee			0	1,478,920		(1,478,920)
g. Net Investment Income			0	20,108,598		(20,108,598)
h. Benefit Payments			(13,381,860)	(13,381,860)		0
i. Payments to Other Retirement S	ystems		0	(23,291)		23,291
j. Transfers to Variable Supplement	nts Funds		0	0		0
k. Administrative Expenses			0	(171,852)		171,852
1. Other Changes			0	9,406		(9,406)
<b>Net Changes</b>		\$	7,437,119	\$ 17,591,813	\$	(10,154,694)
3. SubTotal		\$	242,164,176	\$ 180,886,214	\$	61,277,962
4. Changes in Proportionate Share			(4,790,348)	(3,332,539)		(1,457,809)
5. Balances at June 30, 2017	0.288%	\$	237,373,828	\$ 177,553,675	\$	59,820,153

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source HHC Balances at June 30, 2017

		Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
1. Balances at June 30, 2016	14.789%	\$ (a) 11,807,409,661	(b) \$ 8,214,152,670	(a) - (b) \$ 3,593,256,991
2. Changes for the Year:				
a. Service Cost		283,997,280	0	283,997,280
b. Interest		820,232,445	0	820,232,445
c. Differences b/t Expected and A	ctual Experience	(35,232,991)	0	(35,232,991)
d. Changes of Assumptions	<b>P</b> · · · · ·	0	0	0
e. Contributions - Employer		0	492,160,878	(492,160,878)
f. Contributions - Employee		0	75,938,450	(75,938,450)
g. Net Investment Income		0	1,032,520,638	(1,032,520,638)
h. Benefit Payments		(687,121,315)	(687,121,315)	0
i. Payments to Other Retirement	Systems	0	(1,195,906)	1,195,906
j. Transfers to Variable Supplement	ents Funds	0	0	0
k. Administrative Expenses		0	(8,824,147)	8,824,147
l. Other Changes		0	482,976	(482,976)
Net Changes		\$ 381,875,419	\$ 903,961,574	\$ (522,086,155)
3. SubTotal		\$ 12,189,285,080	9,118,114,244	\$ 3,071,170,836
4. Changes in Proportionate Share		 (798,392)	(555,424)	(242,968)
5. Balances at June 30, 2017	14.788%	\$ 12,188,486,688	9,117,558,820	\$ 3,070,927,868

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source OTB Balances at June 30, 2017

			Total Pension Liability	Plan Fiduci Net Positi	-	Net Pension Liability
		(a)		(b)		(a) - (b)
1. Balances at June 30, 2016	0.613%	\$	489,413,896	\$ 340	,474,379 \$	148,939,517
2. Changes for the Year:						
a. Service Cost			10,677,745		0	10,677,745
b. Interest			30,839,142		0	30,839,142
c. Differences b/t Expected and Ac	tual Experience		(1,324,692)		0	(1,324,692)
d. Changes of Assumptions			0		0	0
e. Contributions - Employer			0	18	,519,306	(18,519,306)
f. Contributions - Employee			0	2	,855,138	(2,855,138)
g. Net Investment Income			0	38	,820,765	(38,820,765)
h. Benefit Payments			(25,834,423)	(25	,834,423)	0
i. Payments to Other Retirement S	ystems		0		(44,964)	44,964
j. Transfers to Variable Supplemen	nts Funds		0		0	0
k. Administrative Expenses			0		(331,771)	331,771
1. Other Changes			0		18,159	(18,159)
Net Changes		\$	14,357,772	\$ 34	,002,210 \$	(19,644,438)
3. SubTotal		\$	503,771,668	\$ 374	,476,589 \$	129,295,079
4. Changes in Proportionate Share			(45,508,306)	(31	,659,118)	(13,849,188)
5. Balances at June 30, 2017	0.556%	\$	458,263,362	\$ 342	,817,471 \$	115,445,891

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source HDC/REMIC Balances at June 30, 2017

		Total Pension Liability	Plan Fiduciary Net Position		Net Pension Liability
		 (a)	<b>(b)</b>	(a) - (b)	
1. Balances at June 30, 2016	0.053%	\$ 42,314,741	\$ 29,437,426	\$	12,877,315
2. Changes for the Year:					
a. Service Cost		1,017,843	0		1,017,843
b. Interest		2,939,702	0		2,939,702
c. Differences b/t Expected and Ac	tual Experience	(126,275)	0		(126,275)
d. Changes of Assumptions		0	0		0
e. Contributions - Employer		0	1,778,800		(1,778,800)
f. Contributions - Employee		0	272,162		(272,162)
g. Net Investment Income		0	3,700,541		(3,700,541)
h. Benefit Payments		(2,462,633)	(2,462,633)		0
i. Payments to Other Retirement S	ystems	0	(4,286)		4,286
j. Transfers to Variable Supplemen	nts Funds	0	0		0
k. Administrative Expenses		0	(31,626)		31,626
1. Other Changes		0	1,731		(1,731)
<b>Net Changes</b>		\$ 1,368,637	\$ 3,254,689	\$	(1,886,052)
3. SubTotal		\$ 43,683,378	\$ 32,692,115	\$	10,991,263
4. Changes in Proportionate Share		 0	0		0
5. Balances at June 30, 2017	0.053%	\$ 43,683,378	\$ 32,692,115	\$	10,991,263

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source State Courts Balances at June 30, 2017

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2016	0.031%	\$ 24,750,131	\$ 17,218,117	\$ 7,532,014
2. Changes for the Year:				
a. Service Cost		691,365	0	691,365
b. Interest		1,996,779	0	1,996,779
c. Differences b/t Expected and Ad	ctual Experience	(85,771)	0	(85,771)
d. Changes of Assumptions		0	0	0
e. Contributions - Employer		0	1,208,594	(1,208,594)
f. Contributions - Employee		0	184,865	(184,865)
g. Net Investment Income		0	2,513,575	(2,513,575)
h. Benefit Payments		(1,672,732)	(1,672,732)	0
i. Payments to Other Retirement S	Systems	0	(2,911)	2,911
j. Transfers to Variable Suppleme	nts Funds	0	0	0
k. Administrative Expenses		0	(21,482)	21,482
1. Other Changes		0	1,176	(1,176)
Net Changes		\$ 929,641	\$ 2,211,085	\$ (1,281,444)
3. SubTotal		\$ 25,679,772	\$ 19,429,202	\$ 6,250,570
4. Changes in Proportionate Share		 3,991,956	2,777,115	1,214,841
5. Balances at June 30, 2017	0.036%	\$ 29,671,728	\$ 22,206,317	\$ 7,465,411

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source SCA Balances at June 30, 2017

		Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
		 (a)	<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2016	0.055%	\$ 43,911,526	\$ 30,548,272	\$ 13,363,254
2. Changes for the Year:				
a. Service Cost		768,183	0	768,183
b. Interest		2,218,643	0	2,218,643
c. Differences b/t Expected and Ac	tual Experience	(95,302)	0	(95,302)
d. Changes of Assumptions		0	0	0
e. Contributions - Employer		0	1,321,372	(1,321,372)
f. Contributions - Employee		0	205,406	(205,406)
g. Net Investment Income		0	2,792,861	(2,792,861)
h. Benefit Payments		(1,858,592)	(1,858,592)	0
i. Payments to Other Retirement S	ystems	0	(3,235)	3,235
<ol> <li>Transfers to Variable Supplement</li> </ol>	nts Funds	0	0	0
k. Administrative Expenses		0	(23,868)	23,868
<ol> <li>Other Changes</li> </ol>		 0	1,306	(1,306)
Net Changes		\$ 1,032,932	\$ 2,435,250	\$ (1,402,318)
3. SubTotal		\$ 44,944,458	\$ 32,983,522	\$ 11,960,936
4. Changes in Proportionate Share		 (11,975,871)	(8,331,348)	(3,644,523)
5. Balances at June 30, 2017	0.040%	\$ 32,968,587	\$ 24,652,174	\$ 8,316,413

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source WFA Balances at June 30, 2017

		Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
1. Balances at June 30, 2016	0.005%	\$ (a) 3,991,958	\$ (b) 2,777,116	\$ (a) - (b) 1,214,842
		, ,	, ,	, ,
2. Changes for the Year:				
a. Service Cost		76,818	0	76,818
b. Interest		221,864	0	221,864
c. Differences b/t Expected and Ac	tual Experience	(9,530)	0	(9,530)
d. Changes of Assumptions		0	0	0
e. Contributions - Employer		0	136,110	(136,110)
f. Contributions - Employee		0	20,541	(20,541)
g. Net Investment Income		0	279,286	(279,286)
h. Benefit Payments		(185,859)	(185,859)	0
i. Payments to Other Retirement S	ystems	0	(323)	323
j. Transfers to Variable Supplement	nts Funds	0	0	0
k. Administrative Expenses		0	(2,387)	2,387
<ol> <li>Other Changes</li> </ol>		 0	131	(131)
Net Changes		\$ 103,293	\$ 247,499	\$ (144,206)
3. SubTotal		\$ 4,095,251	\$ 3,024,615	\$ 1,070,636
4. Changes in Proportionate Share		 (798,392)	(555,424)	(242,968)
5. Balances at June 30, 2017	0.004%	\$ 3,296,859	\$ 2,469,191	\$ 827,668

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Senior Colleges Balances at June 30, 2017

			Total Pension Liability	Plan Fiduciary Net Position		Net Pension Liability	
		(a)		<b>(b)</b>		(a) - (b)	
1. Balances at June 30, 2016	1.247%	\$	995,594,012	\$ 692,612,643	\$	302,981,369	
2. Changes for the Year:							
a. Service Cost			22,411,741	0		22,411,741	
b. Interest			64,728,920	0		64,728,920	
c. Differences b/t Expected and Actual Experience			(2,780,423)	0		(2,780,423)	
d. Changes of Assumptions			0	0		0	
e. Contributions - Employer			0	38,838,696		(38,838,696)	
f. Contributions - Employee			0	5,992,708		(5,992,708)	
g. Net Investment Income			0	81,481,714		(81,481,714)	
h. Benefit Payments			(54,224,410)	(54,224,410)		0	
i. Payments to Other Retirement Systems			0	(94,375)		94,375	
j. Transfers to Variable Supplements Funds			0	0		0	
k. Administrative Expenses			0	(696,361)		696,361	
1. Other Changes			0	38,114		(38,114)	
<b>Net Changes</b>		\$	30,135,828	\$ 71,336,086	\$	(41,200,258)	
3. SubTotal		\$	1,025,729,840	\$ 763,948,729	\$	261,781,111	
4. Changes in Proportionate Share			(63,871,308)	(44,433,851)		(19,437,457)	
5. Balances at June 30, 2017	1.167%	\$	961,858,532	\$ 719,514,878	\$	242,343,654	

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source TBTA Balances at June 30, 2017

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2016	1.266%	\$ 1,010,763,449	\$ 703,165,683	\$ 307,597,766
2. Changes for the Year:				
a. Service Cost		25,119,586	0	25,119,586
b. Interest		72,549,637	0	72,549,637
c. Differences b/t Expected and Actual Experience		(3,116,361)	0	(3,116,361)
d. Changes of Assumptions		0	0	0
e. Contributions - Employer		0	43,546,055	(43,546,055)
f. Contributions - Employee		0	6,716,763	(6,716,763)
g. Net Investment Income		0	91,326,548	(91,326,548)
h. Benefit Payments		(60,775,945)	(60,775,945)	0
i. Payments to Other Retirement Systems		0	(105,778)	105,778
j. Transfers to Variable Supplements Funds		0	0	0
k. Administrative Expenses		0	(780,497)	780,497
l. Other Changes		0	42,719	(42,719)
Net Changes		\$ 33,776,917	\$ 79,969,865	\$ (46,192,948)
3. SubTotal		\$ 1,044,540,366	\$ 783,135,548	\$ 261,404,818
4. Changes in Proportionate Share		33,532,435	23,327,770	10,204,665
5. Balances at June 30, 2017	1.308%	\$ 1,078,072,801	\$ 806,463,318	\$ 271,609,483

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source City Total Balances at June 30, 2017

		Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
		 (a)	<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2016	54.045%	\$ 43,149,060,451	\$ 30,017,843,059	\$ 13,131,217,392
2. Changes for the Year:				
a. Service Cost		1,029,192,467	0	1,029,192,467
b. Interest		2,972,482,889	0	2,972,482,889
c. Differences b/t Expected and A	Actual Experience	(127,682,663)	0	(127,682,663)
d. Changes of Assumptions		0	0	0
e. Contributions - Employer		0	1,783,567,691	(1,783,567,691)
f. Contributions - Employee		0	275,197,289	(275,197,289)
g. Net Investment Income		0	3,741,805,078	(3,741,805,078)
h. Benefit Payments		(2,490,094,562)	(2,490,094,562)	0
i. Payments to Other Retirement	Systems	0	(4,333,904)	4,333,904
j. Transfers to Variable Supplement	ents Funds	0	0	0
k. Administrative Expenses		0	(31,978,285)	31,978,285
l. Other Changes		 0	1,750,283	(1,750,283)
Net Changes		\$ 1,383,898,131	\$ 3,275,913,590	\$ (1,892,015,459)
3. SubTotal		\$ 44,532,958,582	\$ 33,293,756,649	\$ 11,239,201,933
4. Changes in Proportionate Share		(362,469,668)	(252,162,095)	(110,307,573)
5. Balances at June 30, 2017	53.591%	\$ 44,170,488,914	\$ 33,041,594,554	\$ 11,128,894,360

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Changes in Net Pension Liability (NPL) by Source - By Obligor

Total Pension Liability

							Tota	al Pension Li	ability							
	TRANSIT	TA NON-		TA CP									Senior			
	OPERATING	OPERATING	TA TP	Engineers	HA Regular	HA HP	HHC	OTB	HDC/REMIC	State Courts	SCA	WFA	Colleges	TBTA	City Total	TOTAL
Balances at June 30, 2016	\$ 14,620,142,385 \$	2,538,086,099 \$	536,518,986 \$	587,616,033 \$	3,754,834,513 \$	234,727,057 \$	11,807,409,661 \$	489,413,896 \$	42,314,741 \$	24,750,131 \$	43,911,526 \$	3,991,958 \$	995,594,012 \$	1,010,763,449 \$	43,149,060,451 \$	79,839,134,898
Changes for the Year:																
Service Cost	350,349,092	72,209,208	13,366,385	15,075,593	89,973,442	5,530,918	283,997,280	10,677,745	1,017,843	691,365	768,183	76,818	22,411,741	25,119,586	1,029,192,467	1,920,457,666
Interest	1,011,867,763	208,552,474	38,604,394	43,540,876	259,858,602	15,974,232	820,232,445	30,839,142	2,939,702	1,996,779	2,218,643	221,864	64,728,920	72,549,637	2,972,482,889	5,546,608,362
Differences b/t Expected and Actual Experience	(43,464,664)	(8,958,348)	(1,658,247)	(1,870,293)	(11,162,197)	(686,171)	(35,232,991)	(1,324,692)	(126,275)	(85,771)	(95,302)	(9,530)	(2,780,423)	(3,116,361)	(127,682,663)	(238,253,928)
Changes of Assumptions	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Benefit Payments	(847,657,164)	(174,707,610)	(32,339,494)	(36,474,860)	(217,687,541)	(13,381,860)	(687,121,315)	(25,834,423)	(2,462,633)	(1,672,732)	(1,858,592)	(185,859)	(54,224,410)	(60,775,945)	(2,490,094,562)	(4,646,479,000)
Net Changes	\$ 471,095,027 \$	97,095,724 \$	17,973,038 \$	20,271,316 \$	120,982,306 \$	7,437,119 \$	381,875,419 \$	14,357,772 \$	1,368,637 \$	929,641 \$	1,032,932 \$	103,293 \$	30,135,828 \$	33,776,917 \$	1,383,898,131 \$	2,582,333,100
SubTotal	\$ 15,091,237,412 \$	2,635,181,823 \$	554,492,024 \$	607,887,349 \$	3,875,816,819 \$	242,164,176 \$	12,189,285,080 \$	503,771,668 \$	43,683,378 \$	25,679,772 \$	44,944,458 \$	4,095,251 \$	1,025,729,840 \$	1,044,540,366 \$	44,532,958,582 \$	82,421,467,998
Changes in Proportionate Share	 (55,089,005)	463,865,374	19,161,393	39,121,175	(14,371,043)	(4,790,348)	(798,392)	(45,508,306)	0	3,991,956	(11,975,871)	(798,392)	(63,871,308)	33,532,435	(362,469,668)	0
Balances at June 30, 2017	\$ 15,036,148,407 \$	3,099,047,197 \$	573,653,417 \$	647,008,524 \$	3,861,445,776 \$	237,373,828 \$	12,188,486,688 \$	458,263,362 \$	43,683,378 \$	29,671,728 \$	32,968,587 \$	3,296,859 \$	961,858,532 \$	1,078,072,801 \$	44,170,488,914 \$	82,421,467,998

							Plan F	iduciary Net	Position <sup>1</sup>							
	 TRANSIT	TA NON-		TA CP				•					Senior			
	OPERATING	OPERATING	TA TP	Engineers	HA Regular	HA HP	HHC	OTB	HDC/REMIC	State Courts	SCA	WFA	Colleges	TBTA	City Total	TOTAL
Balances at June 30, 2016	\$ 10,170,908,357 \$	1,765,690,130 \$	373,244,343 \$	408,791,424 \$	2,612,154,980 \$	163,294,401 \$	8,214,152,670 \$	340,474,379 \$	29,437,426 \$	17,218,117 \$	30,548,272 \$	2,777,116 \$	692,612,643 \$	703,165,683 \$	30,017,843,059 \$	55,542,313,000
Changes for the Year:																
Contributions - Employer	607,175,982	125,143,356	23,178,270	26,125,101	155,920,897	9,571,892	492,160,878	18,519,306	1,778,800	1,208,594	1,321,372	136,110	38,838,696	43,546,055	1,783,567,691	3,328,193,000
Contributions - Employee	93,680,359	19,308,126	3,574,057	4,031,085	24,058,131	1,478,920	75,938,450	2,855,138	272,162	184,865	205,406	20,541	5,992,708	6,716,763	275,197,289	513,514,000
Net Investment Income	1,273,753,989	262,528,915	48,595,778	54,809,893	327,113,821	20,108,598	1,032,520,638	38,820,765	3,700,541	2,513,575	2,792,861	279,286	81,481,714	91,326,548	3,741,805,078	6,982,152,000
Benefit Payments	(847,657,164)	(174,707,610)	(32,339,494)	(36,474,860)	(217,687,541)	(13,381,860)	(687,121,315)	(25,834,423)	(2,462,633)	(1,672,732)	(1,858,592)	(185,859)	(54,224,410)	(60,775,945)	(2,490,094,562)	(4,646,479,000)
Payments to Other Retirement Systems	(1,475,311)	(304,071)	(56,286)	(63,483)	(378,876)	(23,291)	(1,195,906)	(44,964)	(4,286)	(2,911)	(3,235)	(323)	(94,375)	(105,778)	(4,333,904)	(8,087,000)
Transfers to Variable Supplements Funds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative Expenses	(10,885,781)	(2,243,630)	(415,310)	(468,417)	(2,795,586)	(171,852)	(8,824,147)	(331,771)	(31,626)	(21,482)	(23,868)	(2,387)	(696,361)	(780,497)	(31,978,285)	(59,671,000)
Other Changes	595,816	122,802	22,731	25,638	153,012	9,406	482,976	18,159	1,731	1,176	1,306	131	38,114	42,719	1,750,283	3,266,000
Net Changes	\$ 1,115,187,890 \$	229,847,888 \$	42,559,746 \$	47,984,957 \$	286,383,858 \$	17,591,813 \$	903,961,574 \$	34,002,210 \$	3,254,689 \$	2,211,085 \$	2,435,250 \$	247,499 \$	71,336,086 \$	79,969,865 \$	3,275,913,590 \$	6,112,888,000
SubTotal	\$ 11,286,096,247 \$	1,995,538,018 \$	415,804,089 \$	456,776,381 \$	2,898,538,838 \$	180,886,214 \$	9,118,114,244 \$	374,476,589 \$	32,692,115 \$	19,429,202 \$	32,983,522 \$	3,024,615 \$	763,948,729 \$	783,135,548 \$	33,293,756,649 \$	61,655,201,000
Changes in Proportionate Share	 (38,324,198)	322,700,839	13,330,156	27,215,732	(9,997,615)	(3,332,539)	(555,424)	(31,659,118)	0	2,777,115	(8,331,348)	(555,424)	(44,433,851)	23,327,770	(252,162,095)	0
Balances at June 30, 2017	\$ 11,247,772,049 \$	2,318,238,857 \$	429,134,245 \$	483,992,113 \$	2,888,541,223 \$	177,553,675 \$	9,117,558,820 \$	342,817,471 \$	32,692,115 \$	22,206,317 \$	24,652,174 \$	2,469,191 \$	719,514,878 \$	806,463,318 \$	33,041,594,554 \$	61,655,201,000

								Ne	t Pension Lia	bility							
		TRANSIT OPERATING	TA NON- OPERATING	TA TP	TA CP Engineers	HA Regular	HA HP	HHC	ОТВ	HDC/REMIC	State Courts	SCA	WFA	Senior Colleges	TBTA	City Total	TOTAL
Balances at June 30, 2016	\$	4,449,234,028 \$	772,395,969 \$	163,274,643 \$	178,824,609 \$	1,142,679,533 \$	71,432,656 \$	3,593,256,991 \$	148,939,517 \$	12,877,315 \$	7,532,014 \$	13,363,254 \$	1,214,842 \$	302,981,369 \$	307,597,766 \$	13,131,217,392 \$	24,296,821,898
Changes for the Year:																	
Service Cost		350,349,092	72,209,208	13,366,385	15,075,593	89,973,442	5,530,918	283,997,280	10,677,745	1,017,843	691,365	768,183	76,818	22,411,741	25,119,586	1,029,192,467	1,920,457,666
Interest		1,011,867,763	208,552,474	38,604,394	43,540,876	259,858,602	15,974,232	820,232,445	30,839,142	2,939,702	1,996,779	2,218,643	221,864	64,728,920	72,549,637	2,972,482,889	5,546,608,362
Differences b/t Expected and Actual experience		(43,464,664)	(8,958,348)	(1,658,247)	(1,870,293)	(11,162,197)	(686,171)	(35,232,991)	(1,324,692)	(126,275)	(85,771)	(95,302)	(9,530)	(2,780,423)	(3,116,361)	(127,682,663)	(238, 253, 928)
Changes of Assumptions		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Contributions - Employer		(607,175,982)	(125,143,356)	(23,178,270)	(26,125,101)	(155,920,897)	(9,571,892)	(492,160,878)	(18,519,306)	(1,778,800)	(1,208,594)	(1,321,372)	(136,110)	(38,838,696)	(43,546,055)	(1,783,567,691)	(3,328,193,000)
Contributions - Employee		(93,680,359)	(19,308,126)	(3,574,057)	(4,031,085)	(24,058,131)	(1,478,920)	(75,938,450)	(2,855,138)	(272,162)	(184,865)	(205,406)	(20,541)	(5,992,708)	(6,716,763)	(275,197,289)	(513,514,000)
Net Investment Income		(1,273,753,989)	(262,528,915)	(48,595,778)	(54,809,893)	(327,113,821)	(20,108,598)	(1,032,520,638)	(38,820,765)	(3,700,541)	(2,513,575)	(2,792,861)	(279,286)	(81,481,714)	(91,326,548)	(3,741,805,078)	(6,982,152,000)
Benefit Payments		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Payments to Other Retirement Systems		1,475,311	304,071	56,286	63,483	378,876	23,291	1,195,906	44,964	4,286	2,911	3,235	323	94,375	105,778	4,333,904	8,087,000
Transfers to Variable Supplements Funds		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative Expenses		10,885,781	2,243,630	415,310	468,417	2,795,586	171,852	8,824,147	331,771	31,626	21,482	23,868	2,387	696,361	780,497	31,978,285	59,671,000
Other Changes		(595,816)	(122,802)	(22,731)	(25,638)	(153,012)	(9,406)	(482,976)	(18,159)	(1,731)	(1,176)	(1,306)	(131)	(38,114)	(42,719)	(1,750,283)	(3,266,000)
Net Changes	\$	(644,092,863) \$	(132,752,164) \$	(24,586,708) \$	(27,713,641) \$	(165,401,552) \$	(10,154,694) \$	(522,086,155) \$	(19,644,438) \$	(1,886,052) \$	(1,281,444) \$	(1,402,318) \$	(144,206) \$	(41,200,258) \$	(46,192,948) \$	(1,892,015,459) \$	(3,530,554,900)
SubTotal	\$	3,805,141,165 \$	639,643,805 \$	138,687,935 \$	151,110,968 \$	977,277,981 \$	61,277,962 \$	3,071,170,836 \$	129,295,079 \$	10,991,263 \$	6,250,570 \$	11,960,936 \$	1,070,636 \$	261,781,111 \$	261,404,818 \$	11,239,201,933 \$	20,766,266,998
Changes in Proportionate Share		(16,764,807)	141,164,535	5,831,237	11,905,443	(4,373,428)	(1,457,809)	(242,968)	(13,849,188)	0	1,214,841	(3,644,523)	(242,968)	(19,437,457)	10,204,665	(110,307,573)	0
Balances at June 30, 2017	s	3.788.376.358 \$	780,808,340 \$	144,519,172 \$	163.016.411 \$	972,904,553 \$	59.820.153 \$	3,070,927,868 \$	115,445,891 \$	10.991.263 \$	7.465.411 \$	8,316,413 \$	827,668 \$	242,343,654 \$	271,609,483 \$	11.128.894.360 \$	20,766,266,998

Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Schedule of Changes in Net Pension Liability and Related Ratios

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
1. Total Pension Liability					
a. Service Cost	\$ 1,920,457,666 \$	1,899,994,413	\$ 1,832,487,270	\$ 1,807,063,169	\$ 1,754,430,261
b. Interest	5,546,608,362	5,372,603,831	5,071,014,309	4,910,458,886	4,728,226,227
c. Changes of Benefit Terms	0	0	0	0	0
d. Differences b/t Expected and Actual Experience	(238, 253, 928)	(817,971,278)	(288,598,641)	0	0
e. Changes of Assumptions	0	2,563,091,847	0	0	0
f. Benefit Payments	 (4,646,479,000)	(4,494,146,000)	(4,324,135,000)	(4,002,681,000)	(3,863,595,000)
g. Net Changes in Total Pension Liability	\$ 2,582,333,100 \$	4,523,572,813	\$ 2,290,767,938	\$ 2,714,841,055	\$ 2,619,061,488
2. Total Pension Liability - Beginning	\$ 79,839,134,898 \$	75,315,562,085	\$ 73,024,794,147	\$ 70,309,953,092	\$ 67,690,891,604
3. Total Pension Liability - Ending	\$ 82,421,467,998 \$	79,839,134,898	\$ 75,315,562,085	\$ 73,024,794,147	\$ 70,309,953,092
4. Plan Fiduciary Net Position					
a. Contributions - Employer	\$ 3,328,193,000 \$	3,365,454,000	\$ 3,160,258,000	\$ 3,114,068,000	\$ 3,046,845,000
b. Contributions - Employee	513,514,000	485,508,000	467,129,000	447,689,000	437,775,000
c. Net Investment Income	6,982,152,000	1,171,904,000	1,175,109,000	8,262,487,000	4,967,056,000
d. Benefit Payments	(4,646,479,000)	(4,494,146,000)	(4,324,135,000)	(4,002,681,000)	(3,863,595,000)
e. Payments to Other Retirement Systems	(8,087,000)	(7,440,000)	(7,142,000)	(7,228,000)	(5,250,000)
f. Transfers to Variable Supplements Fund	0	0	0	0	0
g. Administrative Expenses	(59,671,000)	(56,683,000)	(54,635,000)	(50,431,000)	(48,666,000)
h. Other Changes	3,266,000	2,928,000	(347,323,000)	4,881,000	5,072,000
i. Net Changes in Fiduciary Net Position	\$ 6,112,888,000 \$	467,525,000	\$ 69,261,000	\$ 7,768,785,000	\$ 4,539,237,000
5. Plan Fiduciary Net Position - Beginning	\$ 55,542,313,000 \$	55,074,788,000	\$ 55,005,527,000	\$ 47,236,742,000	\$ 42,697,505,000
6. Plan Fiduciary Net Position - Ending	\$ 61,655,201,000 \$	55,542,313,000	\$ 55,074,788,000	\$ 55,005,527,000	\$ 47,236,742,000
7. NYCERS' Net Pension Liability	\$ 20,766,266,998 \$	24,296,821,898	\$ 20,240,774,085	\$ 18,019,267,147	\$ 23,073,211,092
8. Plan Fiduciary Net Position as a Percentage					
of Total Pension Liability	74.8%	69.6%	73.1%	75.3%	67.2%
9. Covered Employee Payroll <sup>1</sup>	\$ 12,555,241,827 \$	12,336,979,280	\$ 12,314,958,283	\$ 12,183,010,903	\$ 11,955,093,092
10. NYCERS' Net Pension Liability as a Percentage					
of Covered Employee Payroll	165.4%	196.9%	164.4%	147.9%	193.0%

<sup>&</sup>lt;sup>1</sup> Projected Employee Payroll at Time 1.0 under One-Year Lag Methodology.

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### **Schedule of Employer Contributions (\$ in thousands)**

Fiscal Year Ended June 30	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially Determined Contribution	\$ 3,328,193	\$ 3,365,454 \$	3,160,258	\$ 3,114,068 \$	3,046,845	\$ 3,017,004 \$	2,387,216 \$	2,197,717 \$	2,150,438 \$	1,874,242
Contributions in relation to the Actuarially Determined Contribution	\$ 3,328,193	\$ 3,365,454 \$	3,160,258	\$ 3,114,068 \$	3,046,845	\$ 3,017,004 \$	2,387,216 \$	2,197,717 \$	2,150,438 \$	1,874,242
Contribution Deficency (Excess)	0	0	0	0	0	0	0	0	0	0
Contributions as a percentage of Covered employee payroll <sup>1</sup>	26.508%	27.279%	25.662%	25.561%	25.486%	25.540%	20.820%	20.020%	20.570%	19.001%

<sup>&</sup>lt;sup>1</sup> The Employer Rate of Contribution equals the Statutory Contribution as a percentage of the salaries of members who were on payroll or projected to be on payroll (under One-Year Lag Methodology) as of the preceding June 30 increased to reflect overtime earnings and adjusted, where applicable, to be consistent with collective bargaining agreements estimated to be achieved.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## **Average Expected Remaining Service Lives**

			Average Expected	Average Expected
		Future WorkLife	<b>Remaining Service Life</b>	Remaining Service Life
Group	# Count	@ 6/30/2015	<u>@ 6/30/2015</u>	@ 6/30/2016
Active	185,758	2,182,716	11.75	10.75
Active/Inactive	16,907	0	0	0
Terminated Vested	9,402	0	0	0
Retired	144,526	<u>0</u>	<u>0</u>	<u>0</u>
Total	356,593	2,182,716	6.12	5.60

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience

Year	b	Differences etween Expected and Actual Expereince	Recognition Period (Years)	2015	2016	2017	2018	2019	2020	2021	2022
								2019	2020	2021	2022
2015	\$	(288,598,641)	3.37	(85,637,579)	(85,637,579)	(85,637,579)	(31,685,904)				
2016	\$	(817,971,278)	3.33		(245,637,020)	(245,637,020)	(245,637,020)	(81,060,218)			
2017	\$	(238, 253, 928)	5.60			(42,545,344)	(42,545,344)	(42,545,344)	(42,545,344)	(42,545,344)	(25,527,208)
2018											
2019											
2020											
Net increase	(decre	ase) in Pension Expens	se	\$ (85,637,579) \$	(331,274,599) \$	(373,819,943) \$	(319,868,268) \$	(123,605,562) \$	(42,545,344) \$	(42,545,344) \$	(25,527,208)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Increase (Decrease) in Pension Expense Arising from the Recognition of Changes in Assumptions

		Changes in	Recognition Period							
Year		Assumptions	(Years)	2016	2017	2018	2019	2020	2021	2022
2016	\$	2,563,091,847	3.33	769,697,251	769,697,251	769,697,251	254,000,094			
2017		0	0.00		0	0	0			
2018										
2019										
2020										
2021										
Net increase	(decre	ease) in Pension Expens	e	\$ 769,697,251 \$	769,697,251 \$	769.697.251 \$	254,000,094 \$	0 \$	0 \$	0

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

#### Differences between Projected and Actual

		Earnings on Pension Plan	Recognition Period									
Year		Investments	(Years)	2013	2014	2015	2016	2017	2018	2019	2020	2021
2013 \$	\$	(1,992,951,901)	5	(398,590,379)	(398,590,379)	(398,590,379)	(398,590,379)	(398,590,385)				
2014 \$	8	(4,972,903,346)	5		(994,580,670)	(994,580,670)	(994,580,670)	(994,580,670)	(994,580,666)			
2015 \$	8	2,624,717,092	5			524,943,419	524,943,419	524,943,419	524,943,419	524,943,416		
2016 \$	8	2,659,093,478	5				531,818,694	531,818,694	531,818,694	531,818,694	531,818,702	
2017 \$	8	(3,124,101,464)	5					(624,820,294)	(624,820,294)	(624,820,294)	(624,820,294)	(624,820,288)
2018												
2019												
2020												
Net increase (de	ecrea	ase) in Pension Expens	se S	(398,590,379) \$	(1.393,171,049) \$	(868,227,630) \$	(336,408,936) \$	(961,229,236) \$	(562,638,847) \$	431,941,816 \$	(93,001,592) \$	(624,820,288)

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Proportionate Share at 6/30/2015

<b>Transit Operating</b>	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 19.501%	Share at 6/30/2015 18.840%	Change in Proportionate Share	Recognition Period (Years)			in Pension Exp or Ended June 3 2017	
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0
Deferred Inflows of Resources	(5,174,093,819)	(1,009,000,036)	(974,799,275)	34,200,761	3.37	10,148,594	10,148,594	10,148,594	3,754,979
Net Pension Liability	(18,019,267,147)	(3,513,937,286)	(3,394,829,930)	119,107,356	3.37	35,343,429	35,343,429	35,343,429	13,077,069
Total	(23,193,360,966)	(4,522,937,322)	(4,369,629,205)	153,308,117		45,492,023	45,492,023	45,492,023	16,832,048
TA Non-Operating	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 2.497%	Share at 6/30/2015 2.812%	Change in Proportionate Share	Recognition Period (Years)			in Pension Exp or Ended June 3 2017	
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0
Deferred Inflows of Resources	(5,174,093,819)	(129,197,123)	(145,495,518)	(16,298,395)	3.37	(4,836,319)	(4,836,319)	(4,836,319)	(1,789,438)
Net Pension Liability	(18,019,267,147)	(449,941,101)	(506,701,792)	(56,760,691)	3.37	(16,842,935)	(16,842,935)	(16,842,935)	(6,231,886)
Total	(23,193,360,966)	(579,138,224)	(652,197,310)	(73,059,086)		(21,679,254)	(21,679,254)	(21,679,254)	(8,021,324)
TA TP	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 0.645%	Share at 6/30/2015 0.660%	Change in Proportionate Share	Recognition Period (Years)			in Pension Exp or Ended June 3 2017	
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0
Deferred Inflows of Resources	(5,174,093,819)	(33,372,905)	(34,149,019)	(776,114)	3.37	(230,301)	(230,301)	(230,301)	(85,211)
Net Pension Liability	(18,019,267,147)	(116,224,273)	(118,927,163)	(2,702,890)	3.37	(802,045)	(802,045)	(802,045)	(296,755)
Net Pension Liability  Total	(18,019,267,147) (23,193,360,966)	(116,224,273) (149,597,178)	(118,927,163) (153,076,182)	(2,702,890) (3,479,004)	3.37	(802,045) (1,032,346)	(802,045) (1,032,346)	(802,045) (1,032,346)	(296,755) (381,966)
•	, , , , , ,	(149,597,178) (2)	(153,076,182)	, , ,	3.37	, , ,	, , ,	, , ,	, ,
Total	(23,193,360,966)	(149,597,178)	(153,076,182)	(3,479,004)	Recognition Period (Years)	(1,032,346)	(1,032,346) nt to Recognize	, , ,	(381,966) ense
Total	(23,193,360,966) (1) Collective Amount	(149,597,178)  (2)  Proportionate  Share at 6/30/2014	(153,076,182)  (3)  Proportionate  Share at 6/30/2015	(3,479,004) (3) - (2) Change in Proportionate	Recognition Period	(1,032,346)  Amou Fo	(1,032,346)  nt to Recognize r the Fiscal Yea	(1,032,346) in Pension Expur Ended June 3	(381,966) ense 0
Total  TA CP Engineers  Deferred Outflows	(23,193,360,966) (1) Collective Amount at 6/30/2014	(149,597,178)  (2)  Proportionate  Share at 6/30/2014  0.770%	(3) Proportionate Share at 6/30/2015 0.728%	(3,479,004) (3) - (2) Change in Proportionate Share	Recognition Period (Years)	(1,032,346)  Amou Fo 2015	(1,032,346)  nt to Recognize r the Fiscal Yea 2016	(1,032,346) in Pension Expar Ended June 3 2017	(381,966) ense 0
Total  TA CP Engineers  Deferred Outflows of Resources  Deferred Inflows	(23,193,360,966)  (1)  Collective Amount at 6/30/2014	(149,597,178)  (2) Proportionate Share at 6/30/2014 0.770%	(3) Proportionate Share at 6/30/2015 0.728%	(3,479,004)  (3) - (2)  Change in Proportionate Share	Recognition Period (Years) 3.37	(1,032,346)  Amou Fo 2015	nt to Recognize r the Fiscal Yea 2016	(1,032,346)  in Pension Expar Ended June 3 2017	(381,966)  ense 0 2018

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Proportionate Share at 6/30/2015

HA Regular	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 4.714%	Share at 6/30/2015 4.770%	Change in Proportionate Share	Recognition Period (Years)		_	in Pension Exp r Ended June 3 2017	
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0
D. 6. 12. 6									
Deferred Inflows of Resources	(5,174,093,819)	(243,906,783)	(246,804,275)	(2,897,492)	3.37	(859,790)	(859,790)	(859,790)	(318,122)
Net Pension Liability	(18,019,267,147)	(849,428,253)	(859,519,043)	(10,090,790)	3.37	(2,994,300)	(2,994,300)	(2,994,300)	(1,107,890)
Total	(23,193,360,966)	(1,093,335,036)	(1,106,323,318)	(12,988,282)		(3,854,090)	(3,854,090)	(3,854,090)	(1,426,012)
НА НР	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 0.307%	Share at 6/30/2015 0.302%	Change in Proportionate Share	Recognition Period (Years)		_	in Pension Exp r Ended June 3 2017	
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0
Deferred Inflows of Resources	(5,174,093,819)	(15,884,468)	(15,625,763)	258,705	3.37	76,767	76,767	76,767	28,404
Net Pension Liability	(18,019,267,147)	(55,319,150)	(54,418,187)	900,963	3.37	267,348	267,348	267,348	98,919
Total	(23,193,360,966)	(71,203,618)	(70,043,950)	1,159,668		344,115	344,115	344,115	127,323
ННС	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 13.991%	Share at 6/30/2015 14.030%	Change in Proportionate Share	Recognition Period (Years)		0	in Pension Exp r Ended June 3 2017	
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0
Deferred Inflows of Resources	(5,174,093,819)	(723,907,466)	(725,925,363)	(2,017,897)	3.37	(598,782)	(598,782)	(598,782)	(221,551)
Net Pension Liability	(18,019,267,147)	(2,521,075,667)	(2,528,103,181)	(7,027,514)	3.37	(2,085,316)	(2,085,316)	(2,085,316)	(771,566)
Total	(23,193,360,966)	(3,244,983,133)	(2.254.020.544)			(2,684,098)	(2 (84 008)	(2.694.009)	(993,117)
	(23,173,300,700)	(3,244,963,133)	(3,254,028,544)	(9,045,411)		(2,084,098)	(2,684,098)	(2,684,098)	(993,117)
OTB	(1)	(2)	(3)	(9,045,411)		(2,064,098)	(2,084,098)	(2,084,098)	(993,117)
ОТВ					Recognition Period (Years)	Amou	nt to Recognize	in Pension Exp r Ended June 3 2017	ense
OTB  Deferred Outflows of Resources	(1) Collective Amount	(2) Proportionate Share at 6/30/2014	(3) Proportionate Share at 6/30/2015	(3) - (2) Change in Proportionate	Period	Amoui For	nt to Recognize the Fiscal Yea	in Pension Exp r Ended June 3	ense 0
Deferred Outflows	(1) Collective Amount at 6/30/2014	(2) Proportionate Share at 6/30/2014 0.344%	(3) Proportionate Share at 6/30/2015 0.362%	(3) - (2) Change in Proportionate Share	Period (Years)	Amoui For 2015	nt to Recognize the Fiscal Yea 2016	in Pension Exp r Ended June 3 2017	ense 0 2018
Deferred Outflows of Resources Deferred Inflows	(1)  Collective Amount at 6/30/2014	(2) Proportionate Share at 6/30/2014 0.344%	(3) Proportionate Share at 6/30/2015 0.362%	(3) - (2) Change in Proportionate Share	Period (Years)	Amour For 2015	nt to Recognize the Fiscal Yea 2016	in Pension Exp r Ended June 3 2017	ense 0 2018

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Proportionate Share at 6/30/2015

HDC/REMIC	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 0.054%	Share at 6/30/2015 0.053%	Change in Proportionate Share	Recognition Period (Years)		t to Recognize i the Fiscal Year 2016	-	
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0
Deferred Inflows of Resources	(5,174,093,819)	(2,794,011)	(2,742,270)	51,741	3.37	15,353	15,353	15,353	5,682
Net Pension Liability	(18,019,267,147)	(9,730,404)	(9,550,212)	180,192	3.37	53,469	53,469	53,469	19,785
Total	(23,193,360,966)	(12,524,415)	(12,292,482)	231,933		68,822	68,822	68,822	25,467
State Courts	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 0.034%	Share at 6/30/2015 0.032%	Change in Proportionate Share	Recognition Period (Years)	Amount For 2015			
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0
Deferred Inflows of Resources	(5,174,093,819)	(1,759,192)	(1,655,710)	103,482	3.37	30,707	30,707	30,707	11,361
Net Pension Liability	(18,019,267,147)	(6,126,551)	(5,766,165)	360,386	3.37	106,939	106,939	106,939	39,569
Total	(23,193,360,966)	(7,885,743)	(7,421,875)	463,868		137,646	137,646	137,646	50,930
SCA	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 0.048%	Share at 6/30/2015 0.042%	Change in Proportionate Share	Recognition Period (Years)		t to Recognize i the Fiscal Year 2016	_	
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0
Deferred Inflows of Resources	(5,174,093,819)	(2,483,565)	(2,173,119)	310,446	3.37	92,120	92,120	92,120	34,086
Net Pension Liability	(18,019,267,147)	(8,649,248)	(7,568,092)	1,081,156	3.37	320,818	320,818	320,818	118,702
Total	(23,193,360,966)	(11,132,813)	(9,741,211)	1,391,602		412,938	412,938	412,938	152,788
WFA	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 0.005%	Share at 6/30/2015 0.005%	Change in Proportionate Share	Recognition Period (Years)		t to Recognize i the Fiscal Year 2016	-	
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0
Deferred Inflows of Resources	(5,174,093,819)	(258,705)	(258,705)	0	3.37	0	0	0	0
Net Pension Liability	(18,019,267,147)	(900,963)	(900,963)	0	3.37	0	0	0	0
Total	(23,193,360,966)	(1,159,668)	(1,159,668)	0					

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Proportionate Share at 6/30/2015

Senior College	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)							
	Collective Amount	Share at 6/30/2014	Share at 6/30/2015	Change in Proportionate	Recognition Period		nt to Recognize the Fiscal Yea	-			
	at 6/30/2014	1.151%	1.221%	Share	(Years)	2015	2016	2017	2018		
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0		
Deferred Inflows											
of Resources	(5,174,093,819)	(59,553,820)	(63,175,686)	(3,621,866)	3.37	(1,074,738)	(1,074,738)	(1,074,738)	(397,652)		
Net Pension Liability	(18,019,267,147)	(207,401,765)	(220,015,252)	(12,613,487)	3.37	(3,742,874)	(3,742,874)	(3,742,874)	(1,384,865)		
Total	(23,193,360,966)	(266,955,585)	(283,190,938)	(16,235,353)		(4,817,612)	(4,817,612)	(4,817,612)	(1,782,517)		
TBTA	(1)	(2)	(3)	(3) - (2)							
		Proportionate	Proportionate	., .,							
	Collective	Share	Share	Change in	Recognition	Amou	nt to Recognize	e in Pension Expense			
	Amount	at 6/30/2014	at 6/30/2015	Proportionate	Period						
D.C. 10.45	at 6/30/2014	1.090%	1.205%	Share	(Years)	2015	2016	2017	2018		
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0		
Deferred Inflows											
of Resources	(5,174,093,819)	(56,397,623)	(62,347,831)	(5,950,208)	3.37	(1,765,640)	(1,765,640)	(1,765,640)	(653,288)		
Net Pension Liability	(18,019,267,147)	(196,410,012)	(217,132,169)	(20,722,157)	3.37	(6,149,008)	(6,149,008)	(6,149,008)	(2,275,133)		
Total	(23,193,360,966)	(252,807,635)	(279,480,000)	(26,672,365)		(7,914,648)	(7,914,648)	(7,914,648)	(2,928,421)		
City	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)							
	Collective Amount	Share at 6/30/2014	Share at 6/30/2015	Change in Proportionate	Recognition Period		nt to Recognize the Fiscal Yea	-			
	at 6/30/2014	54.849%	54.938%	Share	(Years)	2015	2016	2017	2018		
Deferred Outflows of Resources	0	0	0	0	3.37	0	0	0	0		
Deferred Inflows of Resources	(5,174,093,819)	(2,837,938,718)	(2,842,543,663)	(4,604,945)	3.37	(1,366,452)	(1,366,452)	(1,366,452)	(505,589)		
Net Pension Liability	(18,019,267,147)	(9,883,387,837)	(9,899,424,985)	(16,037,148)	3.37	(4,758,797)	(4,758,797)	(4,758,797)	(1,760,757)		
Total	(23,193,360,966)	(12,721,326,555)	(12,741,968,648)	(20,642,093)		(6,125,249)	(6,125,249)	(6,125,249)	(2,266,346)		

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Proportionate Share at 6/30/2016

Transit Operating	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)	D			. i Di E			
	Collective Amount	Share at 6/30/2015	Share at 6/30/2016	Change in Proportionate	Recognition Period	Fo	r the Fiscal Yea	in Pension Exp or Ended June 3	0		
Deferred Outflows	at 6/30/2015	18.840%	18.312%	Share	(Years)	2016	2017	2018	2019		
of Resources	2,099,773,673	395,597,360	384,510,555	(11,086,805)	3.33	(3,329,371)	(3,329,371)	(3,329,371)	(1,098,692)		
Deferred Inflows											
of Resources	(3,983,883,832)	(750,563,714)	(729,528,807)	21,034,907	3.33	6,316,789	6,316,789	6,316,789	2,084,540		
Net Pension Liability	(20,240,774,085)	(3,813,361,838)	(3,706,490,550)	106,871,288	3.33	32,093,480	32,093,480	32,093,480	10,590,848		
Total	(22,124,884,244)	(4,168,328,192)	(4,051,508,802)	116,819,390		35,080,898	35,080,898	35,080,898	11,576,696		
TA Non-Operating	(1)	(2)	(3)	(3) - (2)							
	Collective	Proportionate Share	Proportionate Share	Change in	Recognition	Amount to Recognize in Pension Exp			Expense		
	Amount	at 6/30/2015	at 6/30/2016	Proportionate	Period	For the Fiscal Year Ended June 30 2016 2017 2018					
Deferred Outflows	at 6/30/2015	2.812%	3.179%	Share	(Years)	2016	2017	2018	2019		
of Resources	2,099,773,673	59,045,636	66,751,805	7,706,169	3.33	2,314,165	2,314,165	2,314,165	763,674		
Deferred Inflows											
of Resources	(3,983,883,832)	(112,026,813)	(126,647,667)	(14,620,854)	3.33	(4,390,647)	(4,390,647)	(4,390,647)	(1,448,913)		
Net Pension Liability	(20,240,774,085)	(569,170,567)	(643,454,208)	(74,283,641)	3.33	(22,307,400)	(22,307,400)	(22,307,400)	(7,361,441)		
Total	(22,124,884,244)	(622,151,744)	(703,350,070)	(81,198,326)		(24,383,882)	(24,383,882)	(24,383,882)	(8,046,680)		
TA TP	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)							
	Collective	Share	Share	Change in	Recognition	Amou	nt to Recognize	in Pension Exp	ense		
	Amount	at 6/30/2015	at 6/30/2016	Proportionate	Period			r Ended June 3			
Deferred Outflows	at 6/30/2015	0.660%	0.672%	Share	(Years)	2016	2017	2018	2019		
of Resources	2,099,773,673	13,858,506	14,110,479	251,973	3.33	75,668	75,668	75,668	24,969		
Deferred Inflows											
of Resources	(3,983,883,832)	(26,293,633)	(26,771,699)	(478,066)	3.33	(143,563)	(143,563)	(143,563)	(47,377)		
Net Pension Liability	(20,240,774,085)	(133,589,109)	(136,018,002)	(2,428,893)	3.33	(729,397)	(729,397)	(729,397)	(240,702)		
Total	(22,124,884,244)	(146,024,236)	(148,679,222)	(2,654,986)		(797,292)	(797,292)	(797,292)	(263,110)		
TA CP Engineers	(1)	(2)	(3)	(3) - (2)							
	Collective	Proportionate Share	Proportionate Share	Change in	Recognition	Amou	nt to Recognize	in Pension Exp	ense		
	Amount	at 6/30/2015	at 6/30/2016	Proportionate	Period			r Ended June 3	0		
Deferred Outflows	at 6/30/2015	0.728%	0.736%	Share	(Years)	2016	2017	2018	2019		
of Resources	2,099,773,673	15,286,352	15,454,334	167,982	3.33	50,445	50,445	50,445	16,647		
Deferred Inflows											
of Resources	(3,983,883,832)	(29,002,674)	(29,321,385)	(318,711)	3.33	(95,709)	(95,709)	(95,709)	(31,584)		
Net Pension Liability	(20,240,774,085)	(147,352,835)	(148,972,097)	(1,619,262)	3.33	(486,265)	(486,265)	(486,265)	(160,467)		

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Proportionate Share at 6/30/2016

HA Regular	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2015	Share at 6/30/2015 4.770%	Share at 6/30/2016 4.703%	Change in Proportionate Share	Recognition Period (Years)			in Pension Exp or Ended June 3 2018	
Deferred Outflows of Resources	2,099,773,673	100,159,204	98,752,356	(1,406,848)	3.33	(422,477)	(422,477)	(422,477)	(139,417)
Deferred Inflows of Resources	(3,983,883,832)	(190,031,259)	(187,362,057)	2,669,202	3.33	801,562	801,562	801,562	264,516
Net Pension Liability	(20,240,774,085)	(965,484,924)	(951,923,605)	13,561,319	3.33	4,072,468	4,072,468	4,072,468	1,343,915
Total	(22,124,884,244)	(1,055,356,979)	(1,040,533,306)	14,823,673		4,451,553	4,451,553	4,451,553	1,469,014
НА НР	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2015	Share at 6/30/2015 0.302%	Share at 6/30/2016 0.294%	Change in Proportionate Share	Recognition Period (Years)	Amou Fo 2016			
Deferred Outflows of Resources	2,099,773,673	6,341,316	6,173,335	(167,981)	3.33	(50,445)	(50,445)	(50,445)	(16,646)
Deferred Inflows of Resources	(3,983,883,832)	(12,031,329)	(11,712,618)	318,711	3.33	95,709	95,709	95,709	31,584
Net Pension Liability	(20,240,774,085)	(61,127,138)	(59,507,876)	1,619,262	3.33	486,265	486,265	486,265	160,467
Total	(22,124,884,244)	(66,817,151)	(65,047,159)	1,769,992		531,529	531,529	531,529	175,405
ННС	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount	Share at 6/30/2015	Share at 6/30/2016 14.789%	Change in Proportionate Share	Recognition Period (Years)		_	in Pension Exp or Ended June 3 2018	
	at 6/30/2015	14.030%							
Deferred Outflows of Resources	at 6/30/2015 2,099,773,673	14.030% 294,598,246	310,535,528	15,937,282	3.33	4,785,971	4,785,971	4,785,971	1,579,369
			310,535,528 (589,176,580)	15,937,282 (30,237,678)		4,785,971 (9,080,384)	4,785,971 (9,080,384)	4,785,971 (9,080,384)	1,579,369 (2,996,526)
of Resources  Deferred Inflows	2,099,773,673	294,598,246			3.33				
of Resources  Deferred Inflows of Resources	2,099,773,673	294,598,246 (558,938,902)	(589,176,580)	(30,237,678)	3.33	(9,080,384)	(9,080,384)	(9,080,384)	(2,996,526)
of Resources  Deferred Inflows of Resources  Net Pension Liability	2,099,773,673 (3,983,883,832) (20,240,774,085)	294,598,246 (558,938,902) (2,839,780,604) (3,104,121,260)	(589,176,580) (2,993,408,079) (3,272,049,131)	(30,237,678) (153,627,475)	3.33	(9,080,384) (46,134,377)	(9,080,384) (46,134,377)	(9,080,384) (46,134,377)	(2,996,526) (15,224,344)
of Resources  Deferred Inflows of Resources  Net Pension Liability  Total	2,099,773,673 (3,983,883,832) (20,240,774,085) (22,124,884,244)	294,598,246 (558,938,902) (2,839,780,604) (3,104,121,260)	(589,176,580) (2,993,408,079) (3,272,049,131)	(30,237,678) (153,627,475) (167,927,871)	3.33	(9,080,384) (46,134,377) (50,428,790)	(9,080,384) (46,134,377) (50,428,790) <b>nt to Recognize</b>	(9,080,384) (46,134,377)	(2,996,526) (15,224,344) (16,641,501)
of Resources  Deferred Inflows of Resources  Net Pension Liability  Total	2,099,773,673 (3,983,883,832) (20,240,774,085) (22,124,884,244) (1) Collective Amount	294,598,246 (558,938,902) (2,839,780,604) (3,104,121,260) (2) Proportionate Share at 6/30/2015	(589,176,580) (2,993,408,079) (3,272,049,131) (3) Proportionate Share at 6/30/2016	(30,237,678) (153,627,475) (167,927,871) (3) - (2) Change in Proportionate	3.33 3.33 3.33 Recognition Period	(9,080,384) (46,134,377) (50,428,790) Amou Fo	(9,080,384) (46,134,377) (50,428,790) nt to Recognize r the Fiscal Yea	(9,080,384) (46,134,377) (50,428,790) in Pension Exp or Ended June 3	(2,996,526) (15,224,344) (16,641,501) eense 0
of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  OTB	2,099,773,673 (3,983,883,832) (20,240,774,085) (22,124,884,244) (1) Collective Amount at 6/30/2015	294,598,246 (558,938,902) (2,839,780,604) (3,104,121,260) (2) Proportionate Share at 6/30/2015 0.362%	(589,176,580) (2,993,408,079) (3,272,049,131) (3) Proportionate Share at 6/30/2016 0.613%	(30,237,678) (153,627,475) (167,927,871) (3) - (2) Change in Proportionate Share	3.33 3.33 Recognition Period (Years)	(9,080,384) (46,134,377) (50,428,790) Amou Fo 2016	(9,080,384) (46,134,377) (50,428,790) Int to Recognize or the Fiscal Yea 2017	(9,080,384) (46,134,377) (50,428,790) in Pension Exp rr Ended June 3 2018	(2,996,526) (15,224,344) (16,641,501) eense 0
of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  OTB  Deferred Outflows of Resources  Deferred Inflows	2,099,773,673 (3,983,883,832) (20,240,774,085) (22,124,884,244) (1) Collective Amount at 6/30/2015 2,099,773,673	294,598,246 (558,938,902) (2,839,780,604) (3,104,121,260) (2) Proportionate Share at 6/30/2015 0.362% 7,601,181	(589,176,580) (2,993,408,079) (3,272,049,131)  (3)  Proportionate Share at 6/30/2016 0.613%	(30,237,678) (153,627,475) (167,927,871) (3) - (2) Change in Proportionate Share	3.33 3.33 3.33  Recognition Period (Years) 3.33	(9,080,384) (46,134,377) (50,428,790) Amou Fo 2016	(9,080,384) (46,134,377) (50,428,790) Int to Recognizer the Fiscal Yea 2017	(9,080,384) (46,134,377) (50,428,790) in Pension Exp ar Ended June 3 2018	(2,996,526) (15,224,344) (16,641,501) eense 0 2019 522,296

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Proportionate Share at 6/30/2016

HDC/REMIC	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2015	Share at 6/30/2015 0.053%	Share at 6/30/2016 0.053%	Change in Proportionate Share	Recognition Period (Years)		_	n Pension Expe Ended June 30 2018	
Deferred Outflows of Resources	2,099,773,673	1,112,880	1,112,880	0	3.33	0	0	0	0
Deferred Inflows of Resources	(3,983,883,832)	(2,111,458)	(2,111,458)	0	3.33	0	0	0	0
Net Pension Liability	(20,240,774,085)	(10,727,610)	(10,727,610)	0	3.33	0	0	0	0
Total	(22,124,884,244)	(11,726,188)	(11,726,188)	0		0	0	0	0
State Courts	(1) Collective Amount	(2) Proportionate Share at 6/30/2015	(3) Proportionate Share at 6/30/2016	(3) - (2)  Change in  Proportionate	Recognition Period	For	the Fiscal Year	n Pension Expe Ended June 30	
Deferred Outflows of Resources	at 6/30/2015 2,099,773,673	<b>0.032%</b> 671,928	<b>0.031%</b> 650,930	(20,998)	(Years) 3.33	(6,306)	(6,306)	(6,306)	(2,080)
Deferred Inflows of Resources	(3,983,883,832)	(1,274,843)	(1,235,004)	39,839	3.33	11,964	11,964	11,964	3,947
Net Pension Liability	(20,240,774,085)	(6,477,048)	(6,274,640)	202,408	3.33	60,783	60,783	60,783	20,059
Total	(22,124,884,244)	(7,079,963)	(6,858,714)	221,249		66,441	66,441	66,441	21,926
SCA	(1) Collective	(2) Proportionate Share	(3) Proportionate Share	(3) - (2) Change in	Recognition	Amoun	t to Recognize i	n Pension Expe	nse
	Amount at 6/30/2015	at 6/30/2015 0.042%	at 6/30/2016 0.055%	Proportionate Share	Period (Years)	For 2016	the Fiscal Year 2017	Ended June 30 2018	2019
Deferred Outflows of Resources	2,099,773,673	881,905	1,154,876	272,971	3.33	81,973	81,973	81,973	27,052
Deferred Inflows of Resources	(3,983,883,832)	(1,673,231)	(2,191,136)	(517,905)	3.33	(155,527)	(155,527)	(155,527)	(51,324)
Net Pension Liability	(20,240,774,085)	(8,501,125)	(11,132,426)	(2,631,301)	3.33	(790,180)	(790,180)	(790,180)	(260,761)
Total	(22,124,884,244)	(9,292,451)	(12,168,686)	(2,876,235)		(863,734)	(863,734)	(863,734)	(285,033)
WFA	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)					
	Collective Amount at 6/30/2015	Share at 6/30/2015 0.005%	Share at 6/30/2016 0.005%	Change in Proportionate Share	Recognition Period (Years)			n Pension Expe Ended June 30 2018	
Deferred Outflows of Resources	2,099,773,673	104,989	104,989	0	3.33	0	0	0	0
Deferred Inflows of Resources	(3,983,883,832)	(199,194)	(199,194)	0	3.33	0	0	0	0
Net Pension Liability	(20,240,774,085)	(1,012,039)	(1,012,039)	0	3.33	0	0	0	0
Total	(22,124,884,244)	(1,106,244)	(1,106,244)	0		0	0	0	0

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Proportionate Share at 6/30/2016

Senior College	(1)	(2)	(3)	(3) - (2)					
	Collective Amount	Proportionate Share at 6/30/2015	Proportionate Share at 6/30/2016	Change in Proportionate	Recognition Period		_	in Pension Exp r Ended June 3	
	at 6/30/2015	1.221%	1.247%	Share	(Years)	2016	2017	2018	2019
Deferred Outflows of Resources	2,099,773,673	25,638,237	26,184,178	545,941	3.33	163,946	163,946	163,946	54,103
Deferred Inflows									
of Resources	(3,983,883,832)	(48,643,222)	(49,679,031)	(1,035,809)	3.33	(311,054)	(311,054)	(311,054)	(102,647)
Net Pension Liability	(20,240,774,085)	(247,139,852)	(252,402,453)	(5,262,601)	3.33	(1,580,361)	(1,580,361)	(1,580,361)	(521,518)
Total	(22,124,884,244)	(270,144,837)	(275,897,306)	(5,752,469)		(1,727,469)	(1,727,469)	(1,727,469)	(570,062)
TBTA	(1)	(2)	(3)	(3) - (2)					
	(=)	Proportionate	Proportionate	(-) (-)					
	Collective	Share	Share	Change in	Recognition	Amou	nt to Recognize	in Pension Exp	ense
	Amount	at 6/30/2015	at 6/30/2016	Proportionate	Period	For	0		
	at 6/30/2015	1.205%	1.266%	Share	(Years)	2016	2017	2018	2019
Deferred Outflows of Resources	2,099,773,673	25,302,273	26,583,135	1,280,862	3.33	384,643	384,643	384,643	126,933
Deferred Inflows									
of Resources	(3,983,883,832)	(48,005,800)	(50,435,969)	(2,430,169)	3.33	(729,780)	(729,780)	(729,780)	(240,829)
Net Pension Liability	(20,240,774,085)	(243,901,328)	(256,248,200)	(12,346,872)	3.33	(3,707,769)	(3,707,769)	(3,707,769)	(1,223,565)
Total	(22,124,884,244)	(266,604,855)	(280,101,034)	(13,496,179)		(4,052,906)	(4,052,906)	(4,052,906)	(1,337,461)
City	(1)	(2)	(3)	(3) - (2)					
		Proportionate	Proportionate						
	Collective	Share	Share	Change in	Recognition			in Pension Exp	
	Amount	at 6/30/2015	at 6/30/2016	Proportionate	Period			r Ended June 3	
Deferred Outflows	at 6/30/2015	54.938%	54.045%	Share	(Years)	2016	2017	2018	2019
of Resources	2,099,773,673	1,153,573,660	1,134,822,680	(18,750,980)	3.33	(5,630,924)	(5,630,924)	(5,630,924)	(1,858,208)
Deferred Inflows									
of Resources	(3,983,883,832)	(2,188,666,100)	(2,153,090,018)	35,576,082	3.33	10,683,508	10,683,508	10,683,508	3,525,558
Net Pension Liability	(20,240,774,085)	(11,119,876,467)	(10,939,126,356)	180,750,111	3.33	54,279,312	54,279,312	54,279,312	17,912,175
Total	(22,124,884,244)	(12,154,968,907)	(11,957,393,694)	197,575,213		59,331,896	59,331,896	59,331,896	19,579,525

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Changes in Proportionate Share at 6/30/2017

Transit Operating	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)							
	Collective Amount	Share at 6/30/2016	Share at 6/30/2017	Change in Proportionate	Recognition Period		Fo	r the Fiscal Yea	in Pension Exp	0	
Deferred Outflows	at 6/30/2016	18.312%	18.243%	Share	(Years)	2017	2018	2019	2020	2021	2022
of Resources	5,495,499,634	1,006,335,893	1,002,543,998	(3,791,895)	5.60	(677,124)	(677,124)	(677,124)	(677,124)	(677,124)	(406,275)
Deferred Inflows of Resources	(3,077,409,462)	(563,535,221)	(561,411,808)	2,123,413	5.60	379,181	379,181	379,181	379,181	379,181	227,508
Net Pension Liability	(24,296,821,898)	(4,449,234,026)	(4,432,469,219)	16,764,807	5.60	2,993,716	2,993,716	2,993,716	2,993,716	2,993,716	1,796,227
Total	(21,878,731,726)	(4,006,433,354)	(3,991,337,029)	15,096,325		2,695,773	2,695,773	2,695,773	2,695,773	2,695,773	1,617,460
TA Non-Operating	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)							
	Collective Amount at 6/30/2016	Share at 6/30/2016 3.179%	Share at 6/30/2017 3.760%	Change in Proportionate Share	Recognition Period (Years)	2017		_	in Pension Exp r Ended June 3 2020		2022
Deferred Outflows of Resources	5,495,499,634	174,701,933	206,630,786	31,928,853	5.60	5,701,581	5,701,581	5,701,581	5,701,581	5,701,581	3,420,948
Deferred Inflows of Resources	(3,077,409,462)	(97,830,847)	(115,710,596)	(17,879,749)	5.60	(3,192,812)	(3,192,812)	(3,192,812)	(3,192,812)	(3,192,812)	(1,915,689)
Net Pension Liability	(24,296,821,898)	(772,395,968)	(913,560,503)	(141,164,535)	5.60	(25,207,953)	(25,207,953)	(25,207,953)	(25,207,953)	(25,207,953)	(15,124,770)
Total	(21,878,731,726)	(695,524,882)	(822,640,313)	(127,115,431)		(22,699,184)	(22,699,184)	(22,699,184)	(22,699,184)	(22,699,184)	(13,619,511)
TA TP	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)							
	Collective Amount	Share at 6/30/2016	Share at 6/30/2017	Change in Proportionate	Recognition Period		Fo	r the Fiscal Yea	in Pension Exp r Ended June 3	0	
Deferred Outflows	at 6/30/2016	0.672%	0.696%	Share	(Years)	2017	2018	2019	2020	2021	2022
of Resources	5,495,499,634	36,929,758	38,248,677	1,318,919	5.60	235,521	235,521	235,521	235,521	235,521	141,314
Deferred Inflows of Resources	(3,077,409,462)	(20,680,192)	(21,418,770)	(738,578)	5.60	(131,889)	(131,889)	(131,889)	(131,889)	(131,889)	(79,133)
Net Pension Liability	(24,296,821,898)	(163,274,643)	(169,105,880)	(5,831,237)	5.60	(1,041,292)	(1,041,292)	(1,041,292)	(1,041,292)	(1,041,292)	(624,777)
Total	(21,878,731,726)	(147,025,077)	(152,275,973)	(5,250,896)		(937,660)	(937,660)	(937,660)	(937,660)	(937,660)	(562,596)
TA CP Engineers	(1)	(2)	(3)	(3) - (2)							
TA CP Engineers	(1)  Collective  Amount at 6/30/2016	(2) Proportionate Share at 6/30/2016 0.736%	(3) Proportionate Share at 6/30/2017 0.785%	(3) - (2)  Change in Proportionate Share	Recognition Period (Years)	2017			in Pension Exp r Ended June 3 2020		2022
TA CP Engineers  Deferred Outflows of Resources	Collective Amount	Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017	Change in Proportionate	Period	<b>2017</b> 480,856	Fo	r the Fiscal Yea	r Ended June 3	0	<b>2022</b> 288,515
Deferred Outflows	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.736%	Proportionate Share at 6/30/2017 0.785%	Change in Proportionate Share	Period (Years)		Fo 2018	r the Fiscal Yea 2019	r Ended June 3 2020	2021	
Deferred Outflows of Resources Deferred Inflows	Collective Amount at 6/30/2016 5,495,499,634	Proportionate Share at 6/30/2016 0.736% 40,446,877	Proportionate Share at 6/30/2017 0.785% 43,139,672	Change in Proportionate Share 2,692,795	Period (Years) 5.60	480,856	Fo 2018 480,856	r the Fiscal Yea 2019 480,856	2020 480,856	2021 480,856	288,515
Deferred Outflows of Resources Deferred Inflows of Resources	Collective Amount at 6/30/2016 5,495,499,634 (3,077,409,462)	Proportionate Share at 6/30/2016 0.736%  40,446,877  (22,649,734)	Proportionate Share at 6/30/2017 0.785%  43,139,672  (24,157,664)	Change in Proportionate Share 2,692,795 (1,507,930)	Period (Years) 5.60	480,856 (269,273)	Fo 2018 480,856 (269,273)	480,856 (269,273)	480,856 (269,273)	2021 480,856 (269,273)	288,515 (161,565)

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Changes in Proportionate Share at 6/30/2017

HA Regular	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)							
	Collective Amount at 6/30/2016	Share at 6/30/2016 4.703%	Share at 6/30/2017 4.685%	Change in Proportionate Share	Recognition Period (Years)	2017		_	in Pension Expe Ended June 30 2020		2022
Deferred Outflows of Resources	5,495,499,634	258,453,348	257,464,158	(989,190)	5.60	(176,641)	(176,641)	(176,641)	(176,641)	(176,641)	(105,985)
Deferred Inflows of Resources	(3,077,409,462)	(144,730,567)	(144,176,633)	553,934	5.60	98,917	98,917	98,917	98,917	98,917	59,349
Net Pension Liability	(24,296,821,898)	(1,142,679,534)	(1,138,306,106)	4,373,428	5.60	780,969	780,969	780,969	780,969	780,969	468,583
Total	(21,878,731,726)	(1,028,956,753)	(1,025,018,581)	3,938,172		703,245	703,245	703,245	703,245	703,245	421,947
НА НР	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)							
	Collective Amount at 6/30/2016	Share at 6/30/2016 0.294%	Share at 6/30/2017 0.288%	Change in Proportionate Share	Recognition Period (Years)	2017			in Pension Expe Ended June 30 2020		2022
Deferred Outflows of Resources	5,495,499,634	16,156,769	15,827,039	(329,730)	5.60	(58,880)	(58,880)	(58,880)	(58,880)	(58,880)	(35,330)
Deferred Inflows of Resources	(3,077,409,462)	(9,047,584)	(8,862,939)	184,645	5.60	32,972	32,972	32,972	32,972	32,972	19,785
Net Pension Liability	(24,296,821,898)	(71,432,656)	(69,974,847)	1,457,809	5.60	260,323	260,323	260,323	260,323	260,323	156,194
Total	(21,878,731,726)	(64,323,471)	(63,010,747)	1,312,724		234,415	234,415	234,415	234,415	234,415	140,649
ННС	(1)	(2)	(3) Proportionate	(3) - (2)							
ННС	Collective Amount	Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017	Change in Proportionate	Recognition Period (Years)	2017	For	the Fiscal Year	in Pension Expe Ended June 30	)	2022
Deferred Outflows of Resources	Collective	Proportionate Share	Proportionate Share	Change in		(9,813)		-	-		<b>2022</b> (5,890)
Deferred Outflows	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 14.789%	Proportionate Share at 6/30/2017 14.788%	Change in Proportionate Share	Period (Years)		For 2018	the Fiscal Year 2019	Ended June 30 2020	2021	
Deferred Outflows of Resources Deferred Inflows	Collective Amount at 6/30/2016 5,495,499,634	Proportionate Share at 6/30/2016 14.789% 812,729,441	Proportionate Share at 6/30/2017 14.788% 812,674,486	Change in Proportionate Share (54,955)	Period (Years)	(9,813)	For 2018 (9,813)	the Fiscal Year 2019 (9,813)	Ended June 30 2020 (9,813)	(9,813)	(5,890)
Deferred Outflows of Resources Deferred Inflows of Resources	Collective Amount at 6/30/2016 5,495,499,634 (3,077,409,462)	Proportionate Share at 6/30/2016 14.789% 812,729,441 (455,118,085)	Proportionate Share at 6/30/2017 14.788%  812,674,486  (455,087,311)	Change in Proportionate Share (54,955) 30,774	Period (Years) 5.60	(9,813) 5,495	(9,813) 5,495	(9,813) 5,495	(9,813) 5,495	(9,813) 5,495	(5,890)
Deferred Outflows of Resources Deferred Inflows of Resources Net Pension Liability	Collective Amount at 6/30/2016 5,495,499,634 (3,077,409,462) (24,296,821,898) (21,878,731,726) (1) Collective	Proportionate Share at 6/30/2016 14.789%  812,729,441  (455,118,085) (3,593,256,990) (3,235,645,634)  (2) Proportionate Share	Proportionate Share at 6/30/2017 14.788%  812,674,486  (455,087,311) (3,593,014,022) (3,235,426,847)  (3) Proportionate Share	Change in Proportionate Share  (54,955)  30,774  242,968  218,787  (3) - (2)  Change in	Period (Years)  5.60  5.60  5.60  Recognition	(9,813) 5,495 43,387	For 2018 (9.813) 5,495 43,387 39,069	(9,813) 5,495 43,387 39,069	9,813) 5,495 43,387 39,069	2021 (9.813) 5,495 43,387 39,069	(5,890) 3,299 26,033
Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  OTB	Collective Amount at 6/30/2016 5,495,499,634 (3,077,409,462) (24,296,821,898) (21,878,731,726)	Proportionate Share at 6/30/2016 14.789%  812,729,441  (455,118,085) (3,593,256,990) (3,235,645,634)  (2) Proportionate	Proportionate Share at 6/30/2017 14.788%  812,674,486  (455,087,311) (3,593,014,022) (3,235,426,847)  (3) Proportionate	Change in Proportionate Share (54,955) 30,774 242,968 218,787	Period (Years)  5.60  5.60  5.60	(9,813) 5,495 43,387	For 2018 (9.813) 5,495 43,387 39,069	(9,813) 5,495 43,387 39,069	(9,813) (9,813) (5,495) (43,387) (39,069)	2021 (9.813) 5,495 43,387 39,069	(5,890) 3,299 26,033
Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total	Collective Amount at 6/30/2016 5,495,499,634 (3,077,409,462) (24,296,821,898) (21,878,731,726) (1) Collective Amount	Proportionate Share at 6/30/2016 14.789%  812,729,441  (455,118,085) (3,593,256,990) (3,235,645,634)  (2)  Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017 14.788%  812,674,486  (455,087,311) (3,593,014,022) (3,235,426,847)  (3)  Proportionate Share at 6/30/2017	Change in Proportionate Share (54,955) 30,774 242,968 218,787 (3) - (2) Change in Proportionate	Period (Years)  5.60  5.60  5.60  Recognition Period	(9,813) 5,495 43,387 39,069	For 2018  (9.813)  5,495  43,387  39,069  Amoun	(9,813) (9,813) 5,495 43,387 39,069 at to Recognize the Fiscal Year	9,813) 5,495 43,387 39,069 in Pension Expe	2021 (9,813) 5,495 43,387 39,069	(5,890) 3,299 26,033 23,442
Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  OTB	Collective Amount at 6/30/2016 5,495,499,634 (3,077,409,462) (24,296,821,898) (21,878,731,726) (1) Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 14.789%  812,729,441  (455,118,085) (3,593,256,990) (3,235,645,634)  (2) Proportionate Share at 6/30/2016 0.613%	Proportionate Share at 6/30/2017 14.788%  812,674,486  (455,087,311) (3,593,014,022) (3,235,426,847)  (3) Proportionate Share at 6/30/2017 0.556%	Change in Proportionate Share (54,955) 30,774 242,968 218,787 (3) - (2) Change in Proportionate Share	Period (Years)  5.60  5.60  5.60  Recognition Period (Years)	(9,813) 5,495 43,387 39,069	For 2018  (9,813)  5,495  43,387  39,069  Amount For 2018	(9,813) (9,813) 5,495 43,387 39,069 at to Recognize the Fiscal Year 2019	(9,813)  (9,813)  5,495  43,387  39,069  in Pension Experiment Supplies Sup	2021 (9,813) 5,495 43,387 39,069	(5,890) 3,299 26,033 23,442
Deferred Outflows of Resources Deferred Inflows of Resources Net Pension Liability Total OTB  Deferred Outflows of Resources Deferred Inflows	Collective Amount at 6/30/2016  5,495,499,634  (3,077,409,462) (24,296,821,898) (21,878,731,726)  (1)  Collective Amount at 6/30/2016  5,495,499,634	Proportionate Share at 6/30/2016 14.789%  812,729,441  (455,118,085)  (3,593,256,990)  (3,235,645,634)  (2) Proportionate Share at 6/30/2016 0.613%  33,687,413	Proportionate Share at 6/30/2017 14.788%  812,674,486  (455,087,311) (3,593,014,022) (3,235,426,847)  (3) Proportionate Share at 6/30/2017 0.556%	Change in Proportionate Share  (54,955)  30,774  242,968  218,787  (3) - (2)  Change in Proportionate Share  (3,132,435)	Period (Years)  5.60  5.60  Recognition Period (Years)  5.60	(9,813) 5,495 43,387 39,069 2017 (559,363)	For 2018  (9.813)  5,495  43,387  39,069  Amoun For 2018  (559,363)	(9,813) (9,813) 5,495 43,387 39,069 at to Recognize the Fiscal Year 2019	9,813)  5,495  43,387  39,069  in Pension Experimental June 30 2020  (559,363)	2021 (9.813) 5,495 43,387 39,069 2021 (559,363)	(5,890) 3,299 26,033 23,442  2022 (335,620)

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Changes in Proportionate Share at 6/30/2017

HDC/REMIC	(1)	(2)	(3)	(3) - (2)							
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.053%	Proportionate Share at 6/30/2017 0.053%	Change in Proportionate Share	Recognition Period (Years)	2017		_	n Pension Expe Ended June 30 2020		2022
Deferred Outflows of Resources	5,495,499,634	2,912,615	2,912,615	0	5.60	0	0	0	0	0	0
Deferred Inflows of Resources	(3,077,409,462)	(1,631,027)	(1,631,027)	0	5.60	0	0	0	0	0	0
Net Pension Liability	(24,296,821,898)	(12,877,316)	(12,877,316)	0	5.60	0	0	0	0	0	0
Total	(21,878,731,726)	(11,595,728)	(11,595,728)	0		0	0	0	0	0	0
State Courts	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)							
	Collective Amount at 6/30/2016	Share at 6/30/2016 0.031%	Share at 6/30/2017 0.036%	Change in Proportionate Share	Recognition Period (Years)	2017		_	n Pension Expe Ended June 30 2020		2022
Deferred Outflows of Resources	5,495,499,634	1,703,605	1,978,380	274,775	5.60	49,067	49,067	49,067	49,067	49,067	29,440
Deferred Inflows of Resources	(3,077,409,462)	(953,997)	(1,107,867)	(153,870)	5.60	(27,477)	(27,477)	(27,477)	(27,477)	(27,477)	(16,485)
Net Pension Liability	(24,296,821,898)	(7,532,015)	(8,746,856)	(1,214,841)	5.60	(216,936)	(216,936)	(216,936)	(216,936)	(216,936)	(130,161)
Total	(21,878,731,726)	(6,782,407)	(7,876,343)	(1,093,936)		(195,346)	(195,346)	(195,346)	(195,346)	(195,346)	(117,206)
SCA	(1) Collective	(2) Proportionate Share	(3) Proportionate Share	(3) - (2) Change in	Recognition		Amoun	t to Recognize i	n Pension Expe	nse	
	Amount at 6/30/2016	at 6/30/2016 0.055%	at 6/30/2017 0.040%	Proportionate Share	Period (Years)	2017	For 2018	the Fiscal Year 2019	Ended June 30 2020	2021	2022
Deferred Outflows of Resources	5,495,499,634	3,022,525	2,198,200	(824,325)	5.60	(147,201)	(147,201)	(147,201)	(147,201)	(147,201)	(88,320)
Deferred Inflows of Resources	(3,077,409,462)										
		(1,692,575)	(1,230,964)	461,611	5.60	82,431	82,431	82,431	82,431	82,431	49,456
Net Pension Liability	(24,296,821,898)	(1,692,575) (13,363,252)	(1,230,964) (9,718,729)	461,611 3,644,523	5.60 5.60	82,431 650,808	82,431 650,808	82,431 650,808	82,431 650,808	82,431 650,808	49,456 390,483
Net Pension Liability  Total	(24,296,821,898) (21,878,731,726)										
•		(13,363,252) (12,033,302)	(9,718,729) (8,751,493)	3,644,523		650,808	650,808	650,808	650,808	650,808	390,483
Total	(21,878,731,726) (1) Collective Amount	(13,363,252) (12,033,302) (2) Proportionate Share at 6/30/2016	(9,718,729) (8,751,493) (3) Proportionate Share at 6/30/2017	3,644,523 3,281,809 (3) - (2) Change in Proportionate	5.60  Recognition Period	650,808 586,038	650,808 586,038 Amount For	650,808 586,038 t to Recognize i	650,808 586,038 in Pension Expe Ended June 30	650,808 586,038	390,483 351,619
Total	(21,878,731,726) (1) Collective	(13,363,252) (12,033,302) (2) Proportionate Share	(9,718,729) (8,751,493) (3) Proportionate Share	3,644,523 3,281,809 (3) - (2) Change in	5.60  Recognition	650,808	650,808 586,038 <b>Amoun</b>	650,808 586,038 t to Recognize i	650,808 586,038 in Pension Expe	650,808 586,038	390,483
Total	(21,878,731,726) (1) Collective Amount	(13,363,252) (12,033,302) (2) Proportionate Share at 6/30/2016	(9,718,729) (8,751,493) (3) Proportionate Share at 6/30/2017	3,644,523 3,281,809 (3) - (2) Change in Proportionate	5.60  Recognition Period	650,808 586,038	650,808 586,038 Amount For	650,808 586,038 t to Recognize i	650,808 586,038 in Pension Expe Ended June 30	650,808 586,038	390,483 351,619
Total WFA Deferred Outflows	(21,878,731,726) (1) Collective Amount at 6/30/2016	(13,363,252) (12,033,302) (2) Proportionate Share at 6/30/2016 0.005%	(9,718,729) (8,751,493) (3) Proportionate Share at 6/30/2017 0.004%	3,644,523 3,281,809 (3) - (2) Change in Proportionate Share	Secognition Period (Years)	650,808 586,038	650,808 586,038 Amoun For 2018	650,808 586,038 It to Recognize is the Fiscal Year 2019	650,808 586,038 in Pension Expe Ended June 30 2020	650,808 586,038 nse	390,483 351,619 2022
Total  WFA  Deferred Outflows of Resources  Deferred Inflows	(21,878,731,726)  (1)  Collective Amount at 6/30/2016  5,495,499,634	(13,363,252) (12,033,302) (2) Proportionate Share at 6/30/2016 0.005%	(9,718,729) (8,751,493)  (3)  Proportionate Share at 6/30/2017 0.004%  219,820	3,644,523 3,281,809 (3) - (2) Change in Proportionate Share (54,955)	Recognition Period (Years) 5.60	650,808 586,038 <b>2017</b> (9,813)	650,808 586,038  Amount For 2018  (9,813)	650,808 586,038 It to Recognize is the Fiscal Year 2019 (9,813)	650,808 586,038 in Pension Expe Ended June 30 2020 (9,813)	650,808 586,038 nse 2021 (9,813)	390,483 351,619 2022 (5,890)
Total  WFA  Deferred Outflows of Resources  Deferred Inflows of Resources	(21,878,731,726) (1) Collective Amount at 6/30/2016  5,495,499,634  (3,077,409,462)	(13,363,252) (12,033,302) (2) Proportionate Share at 6/30/2016 0.005%  274,775  (153,870)	(9,718,729) (8,751,493)  (3)  Proportionate Share at 6/30/2017 0.004%  219,820  (123,096)	3,644,523 3,281,809 (3) - (2) Change in Proportionate Share (54,955)	Recognition Period (Years)  5.60	650,808 586,038 2017 (9,813) 5,495	650,808 586,038  Amount For 2018  (9,813)	650,808 586,038 It to Recognize is the Fiscal Year 2019 (9,813)	650,808 586,038 in Pension Expe Ended June 30 2020 (9,813)	650,808 586,038 nse  2021  (9,813)	390,483 351,619 2022 (5,890) 3,299

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Proportionate Share at 6/30/2017

Senior College	(1)	(2)	(3)	(3) - (2)							
	Collective Amount	Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017	Change in Proportionate	Recognition Period		Fo	nt to Recognize r the Fiscal Yea	r Ended June 3	0	
D.C. 10.49	at 6/30/2016	1.247%	1.167%	Share	(Years)	2017	2018	2019	2020	2021	2022
Deferred Outflows of Resources	5,495,499,634	68,528,880	64,132,481	(4,396,399)	5.60	(785,071)	(785,071)	(785,071)	(785,071)	(785,071)	(471,044)
Deferred Inflows of Resources	(3,077,409,462)	(38,375,296)	(35,913,368)	2,461,928	5.60	439,630	439,630	439,630	439,630	439,630	263,778
Net Pension Liability	(24,296,821,898)	(302,981,369)	(283,543,912)	19,437,457	5.60	3,470,974	3,470,974	3,470,974	3,470,974	3,470,974	2,082,587
Total	(21,878,731,726)	(272,827,785)	(255,324,799)	17,502,986		3,125,533	3,125,533	3,125,533	3,125,533	3,125,533	1,875,321
TBTA	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)							
	Collective Amount	Share at 6/30/2016	Share at 6/30/2017	Change in Proportionate	Recognition Period			nt to Recognize r the Fiscal Yea	-		
	at 6/30/2016	1.266%	1.308%	Share	(Years)	2017	2018	2019	2020	2021	2022
Deferred Outflows of Resources	5,495,499,634	69,573,025	71,881,135	2,308,110	5.60	412,163	412,163	412,163	412,163	412,163	247,295
Deferred Inflows of Resources	(3,077,409,462)	(38,960,004)	(40,252,516)	(1,292,512)	5.60	(230,806)	(230,806)	(230,806)	(230,806)	(230,806)	(138,482)
Net Pension Liability	(24,296,821,898)	(307,597,765)	(317,802,430)	(10,204,665)	5.60	(1,822,262)	(1,822,262)	(1,822,262)	(1,822,262)	(1,822,262)	(1,093,355)
Total	(21,878,731,726)	(276,984,744)	(286,173,811)	(9,189,067)		(1,640,905)	(1,640,905)	(1,640,905)	(1,640,905)	(1,640,905)	(984,542)
City	(1)	(2) Proportionate	(3) Proportionate	(3) - (2)							
	Collective Amount	Share at 6/30/2016	Share at 6/30/2017	Change in Proportionate	Recognition Period		Fo	nt to Recognize r the Fiscal Yea	r Ended June 3	0	
	at 6/30/2016	54.045%	53.591%	Share	(Years)	2017	2018	2019	2020	2021	2022
Deferred Outflows of Resources	5,495,499,634	2,970,042,777	2,945,093,209	(24,949,568)	5.60	(4,455,282)	(4,455,282)	(4,455,282)	(4,455,282)	(4,455,282)	(2,673,158)
Deferred Inflows of Resources	(3,077,409,462)	(1,663,185,944)	(1,649,214,505)	13,971,437	5.60	2,494,900	2,494,900	2,494,900	2,494,900	2,494,900	1,496,937
Net Pension Liability	(24,296,821,898)	(13,131,217,395)	(13,020,909,823)	110,307,573	5.60	19,697,782	19,697,782	19,697,782	19,697,782	19,697,782	11,818,663
Total	(21,878,731,726)	(11,824,360,562)	(11,725,031,119)	99,329,442		17,737,400	17,737,400	17,737,400	17,737,400	17,737,400	10,642,442

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016

Component	<b>Amount</b>
a. Service Cost	\$ 1,899,994,413
b. Interest on the Total Pension Liability	5,372,603,831
c. Differences between Expected and Actual Experience	(331,274,599)
d. Changes of Assumptions	769,697,251
e. Employee Contributions	(485,508,000)
f. Projected Earnings on Pension Plan Investments	(3,830,997,478)
g. Differences between Projected and Actual Earnings on Plan Investments	(336,408,936)
h. Pension Plan Administrative Expenses	56,683,000
i. Other Changes in Fiduciary Net Position*	 4,512,000
Total Pension Expense	\$ 3.119.301.482

<sup>\*</sup> Includes Payments to Other Retirement Systems.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Transit Operating

Component	<u>Amount</u>
a. Service Cost	\$ 347,926,977
b. Interest on the Total Pension Liability	983,831,214
c. Differences between Expected and Actual Experience	(60,663,005)
d. Changes of Assumptions	140,946,961
e. Employee Contributions	(88,906,225)
f. Projected Earnings on Pension Plan Investments	(701,532,258)
g. Differences between Projected and Actual Earnings on Plan Investments	(61,603,204)
h. Pension Plan Administrative Expenses	10,379,791
i. Other Changes in Fiduciary Net Position	 826,237
SubTotal	\$ 571,206,488
j. Changes in Proportionate Share	 (80,572,921)
Total Pension Expense	\$ 490,633,567

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Transit Non-Operating

Component	<u>Amount</u>
a. Service Cost	\$ 60,400,822
b. Interest on the Total Pension Liability	170,795,076
c. Differences between Expected and Actual Experience	(10,531,220)
d. Changes of Assumptions	24,468,676
e. Employee Contributions	(15,434,299)
f. Projected Earnings on Pension Plan Investments	(121,787,410)
g. Differences between Projected and Actual Earnings on Plan Investments	(10,694,440)
h. Pension Plan Administrative Expenses	1,801,953
i. Other Changes in Fiduciary Net Position	 143,436
SubTotal	\$ 99,162,594
j. Changes in Proportionate Share	 46,063,136
Total Pension Expense	\$ 145,225,730

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2016 TA TP

<u>Component</u>		<b>Amount</b>
a. Service Cost	\$	12,767,962
b. Interest on the Total Pension Liability	Ψ	36,103,898
c. Differences between Expected and Actual Experience		(2,226,165)
d. Changes of Assumptions		5,172,366
e. Employee Contributions		(3,262,614)
f. Projected Earnings on Pension Plan Investments		(25,744,303)
g. Differences between Projected and Actual Earnings on Plan Investments		(2,260,668)
h. Pension Plan Administrative Expenses		380,910
i. Other Changes in Fiduciary Net Position		30,321
SubTotal	\$	20,961,707
j. Changes in Proportionate Share		1,829,638
Total Pension Expense	\$	22,791,345

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2016 TA CP Engineers

Component	<b>Amount</b>
a. Service Cost	\$ 13,983,959
b. Interest on the Total Pension Liability	39,542,364
c. Differences between Expected and Actual Experience	(2,438,181)
d. Changes of Assumptions	5,664,972
e. Employee Contributions	(3,573,339)
f. Projected Earnings on Pension Plan Investments	(28,196,141)
g. Differences between Projected and Actual Earnings on Plan Investments	(2,475,970)
h. Pension Plan Administrative Expenses	417,187
i. Other Changes in Fiduciary Net Position	 33,208
SubTotal	\$ 22,958,059
j. Changes in Proportionate Share	 (2,359,038)
Total Pension Expense	\$ 20,599,021

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2016 HA Regular

Component	<u>Amount</u>
a. Service Cost	\$ 89,356,737
b. Interest on the Total Pension Liability	252,673,558
c. Differences between Expected and Actual Experience	(15,579,844)
d. Changes of Assumptions	36,198,862
e. Employee Contributions	(22,833,441)
f. Projected Earnings on Pension Plan Investments	(180,171,811)
g. Differences between Projected and Actual Earnings on Plan Investments	(15,821,312)
h. Pension Plan Administrative Expenses	2,665,801
i. Other Changes in Fiduciary Net Position	 212,199
SubTotal	\$ 146,700,749
j. Changes in Proportionate Share	 (597,463)
Total Pension Expense	\$ 146,103,286

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2016 HA HP

Component	<b>Amount</b>
a. Service Cost	\$ 5,585,984
b. Interest on the Total Pension Liability	15,795,455
c. Differences between Expected and Actual Experience	(973,947)
d. Changes of Assumptions	2,262,910
e. Employee Contributions	(1,427,394)
f. Projected Earnings on Pension Plan Investments	(11,263,133)
g. Differences between Projected and Actual Earnings on Plan Investments	(989,042)
h. Pension Plan Administrative Expenses	166,648
i. Other Changes in Fiduciary Net Position	 13,265
SubTotal	\$ 9,170,746
j. Changes in Proportionate Share	 (875,644)
Total Pension Expense	\$ 8,295,102

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2016 HHC

Component	<u>Amount</u>
a. Service Cost	\$ 280,990,174
b. Interest on the Total Pension Liability	794,554,381
c. Differences between Expected and Actual Experience	(48,992,200)
d. Changes of Assumptions	113,830,526
e. Employee Contributions	(71,801,778)
f. Projected Earnings on Pension Plan Investments	(566,566,217)
g. Differences between Projected and Actual Earnings on Plan Investments	(49,751,518)
h. Pension Plan Administrative Expenses	8,382,849
i. Other Changes in Fiduciary Net Position	 667,280
SubTotal	\$ 461,313,497
j. Changes in Proportionate Share	 53,112,888
Total Pension Expense	\$ 514,426,385

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2016 OTB

Component		<b>Amount</b>
a Samina Cost	¢	11 646 066
a. Service Cost	\$	11,646,966
b. Interest on the Total Pension Liability		32,934,061
c. Differences between Expected and Actual Experience		(2,030,713)
d. Changes of Assumptions		4,718,244
e. Employee Contributions		(2,976,164)
f. Projected Earnings on Pension Plan Investments		(23,484,015)
g. Differences between Projected and Actual Earnings on Plan Investments		(2,062,187)
h. Pension Plan Administrative Expenses		347,467
i. Other Changes in Fiduciary Net Position		27,659
SubTotal	\$	19,121,318
j. Changes in Proportionate Share		17,915,529
Total Pension Expense	\$	37,036,847

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 HDC/REMIC

Component	<b>Amount</b>
a. Service Cost	\$ 1,006,997
b. Interest on the Total Pension Liability	2,847,480
c. Differences between Expected and Actual Experience	(175,576)
d. Changes of Assumptions	407,940
e. Employee Contributions	(257,319)
f. Projected Earnings on Pension Plan Investments	(2,030,429)
g. Differences between Projected and Actual Earnings on Plan Investments	(178,297)
h. Pension Plan Administrative Expenses	30,042
i. Other Changes in Fiduciary Net Position	 2,391
SubTotal	\$ 1,653,229
j. Changes in Proportionate Share	 (68,822)
<b>Total Pension Expense</b>	\$ 1,584,407

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 State Courts

Component	<b>Amount</b>
a. Service Cost	\$ 588,998
b. Interest on the Total Pension Liability	1,665,507
c. Differences between Expected and Actual Experience	(102,695)
d. Changes of Assumptions	238,606
e. Employee Contributions	(150,507)
f. Projected Earnings on Pension Plan Investments	(1,187,609)
g. Differences between Projected and Actual Earnings on Plan Investments	(104,287)
h. Pension Plan Administrative Expenses	17,572
i. Other Changes in Fiduciary Net Position	 1,399
SubTotal	\$ 966,984
j. Changes in Proportionate Share	 (204,087)
<b>Total Pension Expense</b>	\$ 762,897

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2016 SCA

<u>Component</u>		<b>Amount</b>
a. Service Cost	\$	1,044,997
b. Interest on the Total Pension Liability	Ψ	2,954,932
•		* *
c. Differences between Expected and Actual Experience		(182,201)
d. Changes of Assumptions		423,333
e. Employee Contributions		(267,029)
f. Projected Earnings on Pension Plan Investments		(2,107,049)
g. Differences between Projected and Actual Earnings on Plan Investments		(185,025)
h. Pension Plan Administrative Expenses		31,176
i. Other Changes in Fiduciary Net Position		2,482
SubTotal	\$	1,715,616
j. Changes in Proportionate Share		450,796
Total Pension Expense	\$	2,166,412

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2016 WFA

Component		<b>Amount</b>
a. Service Cost	\$	95,000
b. Interest on the Total Pension Liability	Ψ	268,630
c. Differences between Expected and Actual Experience		(16,564)
d. Changes of Assumptions		38,485
e. Employee Contributions		(24,275)
f. Projected Earnings on Pension Plan Investments		(191,550)
g. Differences between Projected and Actual Earnings on Plan Investments		(16,820)
h. Pension Plan Administrative Expenses		2,834
i. Other Changes in Fiduciary Net Position		226
SubTotal	\$	155,966
j. Changes in Proportionate Share		0
<b>Total Pension Expense</b>	\$	155,966

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Senior Colleges

Component	<u>Amount</u>
a. Service Cost	\$ 23,692,930
b. Interest on the Total Pension Liability	66,996,370
c. Differences between Expected and Actual Experience	(4,130,994)
d. Changes of Assumptions	9,598,125
e. Employee Contributions	(6,054,285)
f. Projected Earnings on Pension Plan Investments	(47,772,539)
g. Differences between Projected and Actual Earnings on Plan Investments	(4,195,019)
h. Pension Plan Administrative Expenses	706,837
i. Other Changes in Fiduciary Net Position	 56,265
SubTotal	\$ 38,897,690
j. Changes in Proportionate Share	 6,545,081
Total Pension Expense	\$ 45,442,771

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2016 TBTA

Component	<u>Amount</u>
a. Service Cost	\$ 24,053,929
b. Interest on the Total Pension Liability	68,017,165
c. Differences between Expected and Actual Experience	(4,193,936)
d. Changes of Assumptions	9,744,367
e. Employee Contributions	(6,146,531)
f. Projected Earnings on Pension Plan Investments	(48,500,428)
g. Differences between Projected and Actual Earnings on Plan Investments	(4,258,937)
h. Pension Plan Administrative Expenses	717,607
i. Other Changes in Fiduciary Net Position	 57,122
SubTotal	\$ 39,490,358
j. Changes in Proportionate Share	 11,967,554
Total Pension Expense	\$ 51,457,912

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2016 City Total

Component	<u>Amount</u>
a. Service Cost	\$ 1,026,851,981
b. Interest on the Total Pension Liability	2,903,623,740
c. Differences between Expected and Actual Experience	(179,037,358)
d. Changes of Assumptions	415,982,878
e. Employee Contributions	(262,392,800)
f. Projected Earnings on Pension Plan Investments	(2,070,462,586)
g. Differences between Projected and Actual Earnings on Plan Investments	(181,812,210)
h. Pension Plan Administrative Expenses	30,634,326
i. Other Changes in Fiduciary Net Position	 2,438,510
SubTotal	\$ 1,685,826,481
j. Changes in Proportionate Share	 (53,206,647)
Total Pension Expense	\$ 1,632,619,834

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Components of Pension Expense for the Fiscal Year Ended June 30, 2016 - By Obligor

<u>Component</u>	Transit Operating	TA Non- Operating	TA TP	TA CP Engineers	HA Regular	<u>НА НР</u>
a. Service Cost	\$ 347,926,977	\$ 60,400,822 \$	12,767,962	13,983,959	\$ 89,356,737 \$	5,585,984
b. Interest on the Total Pension Liability	983,831,214	170,795,076	36,103,898	39,542,364	252,673,558	15,795,455
c. Differences between Expected and Actual Experience	(60,663,005)	(10,531,220)	(2,226,165)	(2,438,181)	(15,579,844)	(973,947)
d. Changes of Assumptions	140,946,961	24,468,676	5,172,366	5,664,972	36,198,862	2,262,910
e. Employee Contributions	(88,906,225)	(15,434,299)	(3,262,614)	(3,573,339)	(22,833,441)	(1,427,394)
f. Projected Earnings on Pension Plan Investments	(701,532,258)	(121,787,410)	(25,744,303)	(28,196,141)	(180,171,811)	(11,263,133)
g. Differences between Projected and Actual Earnings on Plan Investments	(61,603,204)	(10,694,440)	(2,260,668)	(2,475,970)	(15,821,312)	(989,042)
h. Pension Plan Administrative Expenses	10,379,791	1,801,953	380,910	417,187	2,665,801	166,648
i. Other Changes in Fiduciary Net Position*	826,237	143,436	30,321	33,208	212,199	13,265
j. Changes in Proportionate Share	 (80,572,921)	46,063,136	1,829,638	(2,359,038)	(597,463)	(875,644)
Total Pension Expense	\$ 490,633,567	\$ 145,225,730 \$	22,791,345	20,599,021	\$ 146,103,286 \$	8,295,102
<u>Component</u>	<u>HHC</u>	OTB	HDC/REMIC	State Courts	<u>SCA</u>	<u>WFA</u>
a. Service Cost	\$ 280,990,174	\$ 11,646,966 \$	1,006,997	588,998	\$ 1,044,997 \$	95,000
b. Interest on the Total Pension Liability	794,554,381	32,934,061	2,847,480	1,665,507	2,954,932	268,630
c. Differences between Expected and Actual Experience	(48,992,200)	(2,030,713)	(175,576)	(102,695)	(182,201)	(16,564)
d. Changes of Assumptions	113,830,526	4,718,244	407,940	238,606	423,333	38,485
e. Employee Contributions	(71,801,778)	(2,976,164)	(257,319)	(150,507)	(267,029)	(24,275)
f. Projected Earnings on Pension Plan Investments	(566,566,217)	(23,484,015)	(2,030,429)	(1,187,609)	(2,107,049)	(191,550)
g. Differences between Projected and Actual Earnings on Plan Investments	(49,751,518)	(2,062,187)	(178,297)	(104,287)	(185,025)	(16,820)
h. Pension Plan Administrative Expenses	8,382,849	347,467	30,042	17,572	31,176	2,834
i. Other Changes in Fiduciary Net Position*	667,280	27,659	2,391	1,399	2,482	226
j. Changes in Proportionate Share	 53,112,888	17,915,529	(68,822)	(204,087)	450,796	0
Total Pension Expense	\$ 514,426,385	\$ 37,036,847 \$	1,584,407	762,897	\$ 2,166,412 \$	155,966
	Senior					
Component	Colleges	<u>TBTA</u>	City Total	<u>Total</u>		
a. Service Cost	\$ 23,692,930	\$ 24,053,929 \$	1,026,851,981	1,899,994,413		
b. Interest on the Total Pension Liability	66,996,370	68,017,165	2,903,623,740	5,372,603,831		
c. Differences between Expected and Actual Experience	(4,130,994)	(4,193,936)	(179,037,358)	(331,274,599)		
d. Changes of Assumptions	9,598,125	9,744,367	415,982,878	769,697,251		
e. Employee Contributions	(6,054,285)	(6,146,531)	(262,392,800)	(485,508,000)		
f. Projected Earnings on Pension Plan Investments	(47,772,539)	(48,500,428)	(2,070,462,586)	(3,830,997,478)		
g. Differences between Projected and Actual Earnings on Plan Investments	(4,195,019)	(4,258,937)	(181,812,210)	(336,408,936)		
h. Pension Plan Administrative Expenses	706,837	717,607	30,634,326	56,683,000		
i. Other Changes in Fiduciary Net Position*	56,265	57,122	2,438,510	4,512,000		
j. Changes in Proportionate Share	 6,545,081	11,967,554	(53,206,647)	0		
<b>Total Pension Expense</b>	\$ 45,442,771	\$ 51,457,912 \$	1,632,619,834	3,119,301,482		

 $<sup>\ ^{*}</sup>$  Includes Payments to Other Retirement Systems.

NYC Office of the Actuary September 29, 2017

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017

<u>Component</u>	<b>Amount</b>
a. Service Cost	\$ 1,920,457,666
b. Interest on the Total Pension Liability	5,546,608,362
c. Differences between Expected and Actual Experience	(373,819,943)
d. Changes of Assumptions	769,697,251
e. Employee Contributions	(513,514,000)
f. Projected Earnings on Pension Plan Investments	(3,858,050,536)
g. Differences between Projected and Actual Earnings on Plan Investments	(961,229,236)
h. Pension Plan Administrative Expenses	59,671,000
i. Other Changes in Fiduciary Net Position*	 4,821,000
Total Pension Expense	\$ 2,594,641,564

<sup>\*</sup> Includes Payments to Other Retirement Systems.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Transit Operating

Component	Amount
a. Service Cost	\$ 350,349,092
b. Interest on the Total Pension Liability	1,011,867,763
c. Differences between Expected and Actual Experience	(68,195,972)
d. Changes of Assumptions	140,415,869
e. Employee Contributions	(93,680,359)
f. Projected Earnings on Pension Plan Investments	(703,824,159)
g. Differences between Projected and Actual Earnings on Plan Investments	(175,357,050)
h. Pension Plan Administrative Expenses	10,885,781
i. Other Changes in Fiduciary Net Position	 879,495
SubTotal	\$ 473,340,460
j. Changes in Proportionate Share	 (83,268,694)
Total Pension Expense	\$ 390,071,766

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Transit Non-Operating

Component	<u>Amount</u>
a. Service Cost	\$ 72,209,208
b. Interest on the Total Pension Liability	208,552,474
c. Differences between Expected and Actual Experience	(14,055,630)
d. Changes of Assumptions	28,940,617
e. Employee Contributions	(19,308,126)
f. Projected Earnings on Pension Plan Investments	(145,062,700)
g. Differences between Projected and Actual Earnings on Plan Investments	(36,142,219)
h. Pension Plan Administrative Expenses	2,243,630
i. Other Changes in Fiduciary Net Position	 181,270
SubTotal	\$ 97,558,524
j. Changes in Proportionate Share	 68,762,320
Total Pension Expense	\$ 166,320,844

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 TA TP

Component	<b>Amount</b>
a. Service Cost	\$ 13,366,385
b. Interest on the Total Pension Liability	38,604,394
c. Differences between Expected and Actual Experience	(2,601,787)
d. Changes of Assumptions	5,357,093
e. Employee Contributions	(3,574,057)
f. Projected Earnings on Pension Plan Investments	(26,852,032)
g. Differences between Projected and Actual Earnings on Plan Investments	(6,690,155)
h. Pension Plan Administrative Expenses	415,310
i. Other Changes in Fiduciary Net Position	 33,554
SubTotal	\$ 18,058,705
j. Changes in Proportionate Share	 2,767,298
<b>Total Pension Expense</b>	\$ 20,826,003

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 TA CP Engineers

<u>Component</u>	<b>Amount</b>
a. Service Cost	\$ 15,075,593
b. Interest on the Total Pension Liability	43,540,876
c. Differences between Expected and Actual Experience	(2,934,487)
d. Changes of Assumptions	6,042,123
e. Employee Contributions	(4,031,085)
f. Projected Earnings on Pension Plan Investments	(30,285,697)
g. Differences between Projected and Actual Earnings on Plan Investments	(7,545,650)
h. Pension Plan Administrative Expenses	468,417
i. Other Changes in Fiduciary Net Position	 37,845
SubTotal	\$ 20,367,935
j. Changes in Proportionate Share	 (444,649)
Total Pension Expense	\$ 19,923,286

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2017 HA Regular

Component	<b>Amount</b>
a. Service Cost	\$ 89,973,442
b. Interest on the Total Pension Liability	259,858,602
c. Differences between Expected and Actual Experience	(17,513,464)
d. Changes of Assumptions	36,060,316
e. Employee Contributions	(24,058,131)
f. Projected Earnings on Pension Plan Investments	(180,749,668)
g. Differences between Projected and Actual Earnings on Plan Investments	(45,033,590)
h. Pension Plan Administrative Expenses	2,795,586
i. Other Changes in Fiduciary Net Position	 225,864
SubTotal	\$ 121,558,957
j. Changes in Proportionate Share	 (1,300,708)
Total Pension Expense	\$ 120,258,249

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 HA HP

<u>Component</u>	<b>Amount</b>
a. Service Cost	\$ 5,530,918
b. Interest on the Total Pension Liability	15,974,232
c. Differences between Expected and Actual Experience	(1,076,601)
d. Changes of Assumptions	2,216,728
e. Employee Contributions	(1,478,920)
f. Projected Earnings on Pension Plan Investments	(11,111,186)
g. Differences between Projected and Actual Earnings on Plan Investments	(2,768,340)
h. Pension Plan Administrative Expenses	171,852
i. Other Changes in Fiduciary Net Position	 13,884
SubTotal	\$ 7,472,567
j. Changes in Proportionate Share	 (1,110,059)
Total Pension Expense	\$ 6,362,508

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 HHC

Component	<u>Amount</u>
a. Service Cost	\$ 283,997,280
b. Interest on the Total Pension Liability	820,232,445
c. Differences between Expected and Actual Experience	(55,280,493)
d. Changes of Assumptions	113,822,829
e. Employee Contributions	(75,938,450)
f. Projected Earnings on Pension Plan Investments	(570,528,513)
g. Differences between Projected and Actual Earnings on Plan Investments	(142, 146, 579)
h. Pension Plan Administrative Expenses	8,824,147
i. Other Changes in Fiduciary Net Position	 712,929
SubTotal	\$ 383,695,595
j. Changes in Proportionate Share	 53,073,819
<b>Total Pension Expense</b>	\$ 436,769,414

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 OTB

Component	<u>Amount</u>
a. Service Cost	\$ 10,677,745
b. Interest on the Total Pension Liability	30,839,142
c. Differences between Expected and Actual Experience	(2,078,439)
d. Changes of Assumptions	4,279,517
e. Employee Contributions	(2,855,138)
f. Projected Earnings on Pension Plan Investments	(21,450,761)
g. Differences between Projected and Actual Earnings on Plan Investments	(5,344,435)
h. Pension Plan Administrative Expenses	331,771
i. Other Changes in Fiduciary Net Position	 26,805
SubTotal	\$ 14,426,207
j. Changes in Proportionate Share	 15,688,587
Total Pension Expense	\$ 30,114,794

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 HDC/REMIC

<u>Component</u>	<b>Amount</b>
a. Service Cost	\$ 1,017,843
b. Interest on the Total Pension Liability	2,939,702
c. Differences between Expected and Actual Experience	(198,125)
d. Changes of Assumptions	407,940
e. Employee Contributions	(272,162)
f. Projected Earnings on Pension Plan Investments	(2,044,767)
g. Differences between Projected and Actual Earnings on Plan Investments	(509,451)
h. Pension Plan Administrative Expenses	31,626
i. Other Changes in Fiduciary Net Position	 2,555
SubTotal	\$ 1,375,161
j. Changes in Proportionate Share	 (68,822)
Total Pension Expense	\$ 1,306,339

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 State Courts

<u>Component</u>	<b>Amount</b>
a. Service Cost	\$ 691,365
b. Interest on the Total Pension Liability	1,996,779
c. Differences between Expected and Actual Experience	(134,575)
d. Changes of Assumptions	277,091
e. Employee Contributions	(184,865)
f. Projected Earnings on Pension Plan Investments	(1,388,898)
g. Differences between Projected and Actual Earnings on Plan Investments	(346,043)
h. Pension Plan Administrative Expenses	21,482
i. Other Changes in Fiduciary Net Position	 1,736
SubTotal	\$ 934,072
j. Changes in Proportionate Share	 (8,741)
Total Pension Expense	\$ 925,331

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 SCA

<u>Component</u>	<b>Amount</b>
a. Service Cost	\$ 768,183
b. Interest on the Total Pension Liability	2,218,643
c. Differences between Expected and Actual Experience	(149,528)
d. Changes of Assumptions	307,879
e. Employee Contributions	(205,406)
f. Projected Earnings on Pension Plan Investments	(1,543,220)
g. Differences between Projected and Actual Earnings on Plan Investments	(384,492)
h. Pension Plan Administrative Expenses	23,868
i. Other Changes in Fiduciary Net Position	 1,928
SubTotal	\$ 1,037,855
j. Changes in Proportionate Share	 (135,242)
Total Pension Expense	\$ 902,613

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2017 WFA

<u>Component</u>	<b>Amount</b>
a. Service Cost	\$ 76,818
b. Interest on the Total Pension Liability	221,864
c. Differences between Expected and Actual Experience	(14,953)
d. Changes of Assumptions	30,788
e. Employee Contributions	(20,541)
f. Projected Earnings on Pension Plan Investments	(154,322)
g. Differences between Projected and Actual Earnings on Plan Investments	(38,449)
h. Pension Plan Administrative Expenses	2,387
i. Other Changes in Fiduciary Net Position	 193
SubTotal	\$ 103,785
j. Changes in Proportionate Share	 (39,069)
Total Pension Expense	\$ 64,716

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Senior Colleges

Component	<b>Amount</b>
a. Service Cost	\$ 22,411,741
b. Interest on the Total Pension Liability	64,728,920
c. Differences between Expected and Actual Experience	(4,362,479)
d. Changes of Assumptions	8,982,367
e. Employee Contributions	(5,992,708)
f. Projected Earnings on Pension Plan Investments	(45,023,450)
g. Differences between Projected and Actual Earnings on Plan Investments	(11,217,545)
h. Pension Plan Administrative Expenses	696,361
i. Other Changes in Fiduciary Net Position	 56,261
SubTotal	\$ 30,279,468
j. Changes in Proportionate Share	 3,419,548
Total Pension Expense	\$ 33,699,016

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 TBTA

Component	<u>Amount</u>
a. Service Cost	\$ 25,119,586
b. Interest on the Total Pension Liability	72,549,637
c. Differences between Expected and Actual Experience	(4,889,565)
d. Changes of Assumptions	10,067,640
e. Employee Contributions	(6,716,763)
f. Projected Earnings on Pension Plan Investments	(50,463,301)
g. Differences between Projected and Actual Earnings on Plan Investments	(12,572,878)
h. Pension Plan Administrative Expenses	780,497
i. Other Changes in Fiduciary Net Position	 63,059
SubTotal	\$ 33,937,912
j. Changes in Proportionate Share	 13,608,459
Total Pension Expense	\$ 47,546,371

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2017 City Total

Component	<u>Amount</u>
a. Service Cost	\$ 1,029,192,467
b. Interest on the Total Pension Liability	2,972,482,889
c. Differences between Expected and Actual Experience	(200,333,845)
d. Changes of Assumptions	412,488,454
e. Employee Contributions	(275,197,289)
f. Projected Earnings on Pension Plan Investments	(2,067,567,862)
g. Differences between Projected and Actual Earnings on Plan Investments	(515,132,360)
h. Pension Plan Administrative Expenses	31,978,285
i. Other Changes in Fiduciary Net Position	 2,583,622
SubTotal	\$ 1,390,494,361
j. Changes in Proportionate Share	 (70,944,047)
Total Pension Expense	\$ 1,319,550,314

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Components of Pension Expense for the Fiscal Year Ended June 30, 2017 - By Obligor

<u>Component</u>		Transit Operating		TA Non- Operating	<u> </u>	'A TP	TA CP Engineers		HA Regular		<u>на нр</u>
a. Service Cost	\$	350,349,092 \$	ħ	72,209,208 \$	12.26	5.385 \$	15,075,593	¢.	89,973,442	¢.	5,530,918
	2	, , , ,	Þ			,	, ,	<b>3</b>	89,973,442 259,858,602	Э	
b. Interest on the Total Pension Liability		1,011,867,763		208,552,474	38,60		43,540,876		, , ,		15,974,232
c. Differences between Expected and Actual Experience		(68,195,972)		(14,055,630)		1,787)	(2,934,487)		(17,513,464)		(1,076,601)
d. Changes of Assumptions		140,415,869		28,940,617	,	7,093	6,042,123		36,060,316		2,216,728
e. Employee Contributions		(93,680,359)		(19,308,126)	* /	1,057)	(4,031,085)		(24,058,131)		(1,478,920)
f. Projected Earnings on Pension Plan Investments		(703,824,159)		(145,062,700)	(26,85		(30,285,697)		(180,749,668)		(11,111,186)
g. Differences between Projected and Actual Earnings on Plan Investments		(175,357,050)		(36,142,219)		),155)	(7,545,650)		(45,033,590)		(2,768,340)
h. Pension Plan Administrative Expenses		10,885,781		2,243,630		5,310	468,417		2,795,586		171,852
i. Other Changes in Fiduciary Net Position*		879,495		181,270		3,554	37,845		225,864		13,884
j. Changes in Proportionate Share		(83,268,694)		68,762,320	2,76	7,298	(444,649)		(1,300,708)		(1,110,059)
Total Pension Expense	\$	390,071,766 \$	\$	166,320,844 \$	20,82	5,003 \$	19,923,286	\$	120,258,249	\$	6,362,508
<u>Component</u>		<u>ннс</u>		<u>OTB</u>	HDC/R	EMIC	State Courts		<u>SCA</u>		WFA
a. Service Cost	\$	283,997,280 \$	\$	10,677,745 \$	,	7,843 \$	691,365	\$	768,183	\$	76,818
b. Interest on the Total Pension Liability		820,232,445		30,839,142	,	9,702	1,996,779		2,218,643		221,864
c. Differences between Expected and Actual Experience		(55,280,493)		(2,078,439)	,	3,125)	(134,575)		(149,528)		(14,953)
d. Changes of Assumptions		113,822,829		4,279,517		7,940	277,091		307,879		30,788
e. Employee Contributions		(75,938,450)		(2,855,138)		2,162)	(184,865)		(205,406)		(20,541)
f. Projected Earnings on Pension Plan Investments		(570,528,513)		(21,450,761)		1,767)	(1,388,898)		(1,543,220)		(154,322)
g. Differences between Projected and Actual Earnings on Plan Investments		(142,146,579)		(5,344,435)		9,451)	(346,043)		(384,492)		(38,449)
h. Pension Plan Administrative Expenses		8,824,147		331,771		,626	21,482		23,868		2,387
i. Other Changes in Fiduciary Net Position*		712,929		26,805		2,555	1,736		1,928		193
j. Changes in Proportionate Share	-	53,073,819		15,688,587	(6	3,822)	(8,741)		(135,242)		(39,069)
Total Pension Expense	\$	436,769,414 \$	\$	30,114,794 \$	1,30	5,339 \$	925,331	\$	902,613	\$	64,716
		<u>Senior</u>			au.						
<u>Component</u>		Colleges		<u>TBTA</u>	City	<u>Total</u>	<u>Total</u>				
a. Service Cost	\$	22,411,741 \$	\$	25,119,586 \$		2,467 \$	1,920,457,666				
b. Interest on the Total Pension Liability		64,728,920		72,549,637	2,972,48	2,889	5,546,608,362				
c. Differences between Expected and Actual Experience		(4,362,479)		(4,889,565)	(200,33	3,845)	(373,819,943)				
d. Changes of Assumptions		8,982,367		10,067,640	412,48	3,454	769,697,251				
e. Employee Contributions		(5,992,708)		(6,716,763)	(275,19	7,289)	(513,514,000)				
f. Projected Earnings on Pension Plan Investments		(45,023,450)		(50,463,301)	(2,067,56	7,862)	(3,858,050,536)				
g. Differences between Projected and Actual Earnings on Plan Investments		(11,217,545)		(12,572,878)	(515,13	2,360)	(961,229,236)				
h. Pension Plan Administrative Expenses		696,361		780,497	31,97	3,285	59,671,000				
i. Other Changes in Fiduciary Net Position*		56,261		63,059	2,58	3,622	4,821,000				
j. Changes in Proportionate Share		3,419,548		13,608,459	(70,94	1,047)	0				
<b>Total Pension Expense</b>	\$	33,699,016 \$	\$	47,546,371 \$	1,319,55	,314 \$	2,594,641,564				

 $<sup>\ ^{*}</sup>$  Includes Payments to Other Retirement Systems.

NYC Office of the Actuary September 29, 2017

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2013, the Obligors recognized Pension Expense for NYCERS of \$2,721,031,010.

At June 30, 2013, the Obligors reported total Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for NYCERS from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources		
Differences between Expected and Actual Experience	\$	0	\$	0		
Changes of Assumptions		0		0		
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0		1,594,361,522		
Total	\$	0	\$	1,594,361,522		

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2013	\$ (398,590,379)
2014	(398,590,379)
2015	(398,590,379)
2016	(398,590,379)
2017	(398,590,385)

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2014, the Obligors recognized Pension Expense for NYCERS of \$1,639,856,352.

For June 30, 2014, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for NYCERS from the following sources:

	Deferred Outflows of Resources			Deferred Inflows Resources
Differences between Expected and Actual Experience	\$	0	\$	0
Changes of Assumptions		0		0
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0	-	3,978,322,676
Total	\$	0	\$	3,978,322,676

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2014	\$ (994,580,670)
2015	(994,580,670)
2016	(994,580,670)
2017	(994,580,670)
2018	(994,580,666)

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2015, the Obligors recognized Pension Expense for NYCERS of \$2,091,781,278.

For June 30, 2015, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for NYCERS from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	\$ 0	\$ 202,961,062
Changes of Assumptions	0	0
Net Difference between Projected and Actual Earnings on Pension Plan Investments	 2,099,773,673	 0
Total	\$ 2,099,773,673	\$ 202,961,062

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2015	\$ 439,305,840
2016	439,305,840
2017	439,305,840
2018	493,257,515
2019	524,943,416

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2016, the Obligors recognized Pension Expense for NYCERS of \$3,119,301,482.

For June 30, 2016, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for NYCERS from the following sources:

			Deferred Inflows of Resources			
Differences between Expected and Actual Experience	\$	0	\$	572,334,258		
Changes of Assumptions		1,793,394,596				
Net Difference between Projected and Actual Earnings on Pension Plan Investments		2,127,274,784		0		
Total	\$	3,920,669,380	\$	572,334,258		

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2016	\$ 1,055,878,925
2017	1,055,878,925
2018	1,055,878,925
2019	704,758,570
2020	531,818,702

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2017, the Obligors recognized Pension Expense for NYCERS of \$2,594,641,564.

For June 30, 2017, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for NYCERS from the following sources:

	Defer Outflo of Reso	•	Deferred Inflows of Resources			
Differences between Expected and Actual Experience	\$	0	\$	195,708,584		
Changes of Assumptions		0		0		
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0		2,499,281,170		
Total	\$	0	\$	2,694,989,754		

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2017	\$ (667,365,638)
2018	(667,365,638)
2019	(667,365,638)
2020	(667,365,638)
2021	(667,365,632)
2022	(25,527,208)

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2017, the Obligors recognized Pension Expense for NYCERS of \$2,594,641,564.

At June 30, 2017, the Obligors reported total Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for NYCERS from the following sources:

	C	Deferred Inflows of Resources				
Differences between Expected and Actual Experience	\$	0	\$	554,091,726		
Changes of Assumptions		1,023,697,345				
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0		848,518,911		
Total	\$	1,023,697,345	\$	1,402,610,637		

Fiscal Year	
Ended	
June 30	Amount
2017	\$ (565,351,928)
2018	(112,809,864)
2019	562,336,348
2020	(135,546,936)
2021	(667,365,632)
2022	(25,527,208)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Schedule of Pension Amounts by Employer As of and for the year ended June 30, 2016

		_		De	ferred Outflows of Re	esources		Deferred Inflows of Resources							Pension Expense			
<u>Entity</u> *		Net Pension Liability	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience		Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources		Proportionate Share of Plan Pension Expense	Net Amortization o Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Total Employer Pension Expense
Transit Operating	\$	4,449,234,028	\$ 0	\$ 677,929,475	\$ 328,406,418	\$ (151,819,997)	\$ 854,515,896	\$ 126,290,126	s	437,245,095	\$ 0	\$ (7,757,434)	\$ 555,777,787	\$	571,206,488	\$(80,572,921)	\$	490,633,567
TA Non-Operating		772,395,969	0	117,689,919	57,012,014	91,907,026	266,608,959	21,924,220		75,906,627	0	5,392,004	103,222,851		99,162,594	46,063,136		145,225,730
TA TP		163,274,643	0	24,878,146	12,051,612	3,448,311	40,378,069	4,634,500		16,045,692	0	176,305	20,856,497		20,961,707	1,829,638		22,791,345
TA CP Engineers		178,824,609	0	27,247,493	13,199,384	(2,604,078)	37,842,799	5,075,881		17,573,853	0	117,537	22,767,271		22,958,059	(2,359,038)		20,599,021
HA Regular		1,142,679,533	0	174,110,000	84,343,348	(6,076,389)	252,376,959	32,434,604		112,295,963	0	(984,371)	143,746,196	i	146,700,749	(597,463)		146,103,286
НА НР		71,432,656	0	10,884,189	5,272,580	(1,827,437)	14,329,332	2,027,594		7,019,990	0	(117,536)	8,930,048		9,170,746	(875,644)		8,295,102
ННС		3,593,256,991	0	547,504,314	265,225,127	132,327,607	945,057,048	101,993,483		353,124,602	0	11,151,311	466,269,396	i	461,313,497	53,112,888		514,426,385
OTB		148,939,517	0	22,693,904	10,993,509	44,241,642	77,929,055	4,227,602		14,636,918	0	3,687,720	22,552,240		19,121,318	17,915,529		37,036,847
HDC/REMIC		12,877,315	0	1,962,116	950,499	(94,289)	2,818,326	365,519		1,265,508	0	0	1,631,027		1,653,229	(68,822)		1,584,407
State Courts		7,532,014	0	1,147,653	555,952	(358,076)	1,345,529	213,794		740,203	0	(14,692)	939,305		966,984	(204,087)		762,897
SCA		13,363,254	0	2,036,158	986,367	1,637,773	4,660,298	379,312		1,313,263	0	190,998	1,883,573		1,715,616	450,796		2,166,412
WFA		1,214,842	0	185,105	89,670	0	274,775	34,483		119,388	0	0	153,871		155,966	0		155,966
Senior Colleges		302,981,369	0	46,165,250	22,363,631	11,007,124	79,536,005	8,600,032		29,775,264	0	381,995	38,757,291		38,897,690	6,545,081		45,442,771
TBTA		307,597,766	0	46,868,650	22,704,376	21,182,561	90,755,587	8,731,067		30,228,937	0	896,219	39,856,223		39,490,358	11,967,554		51,457,912
City	_	13,131,217,392	0	2,000,802,666	969,240,109	(142,971,778)	2,827,070,997	372,725,524		1,290,460,418	0	(13,120,056)	1,650,065,886	_	1,685,826,481	(53,206,647)		1,632,619,834
Total	\$	24,296,821,898	\$ 0	\$3,702,105,038	\$1,793,394,596	\$ 0	\$5,495,499,634	\$ 689,657,741	\$	2,387,751,721	\$ 0	\$ 0	\$ 3,077,409,462	\$	3,119,301,482	\$ 0	\$	3,119,301,482

\* Transit Operating - Transit Authority Operating

TA Non-Operating - Transit Authority Non-Operating

TA TP - Transit Authority / Transit Police

TA CP Engineers - Transit Authority Capital Project Engineers

HA Regular - Housing Authority Regular

HA HP - Housing Authority / Housing Police

HHC - Health and Hospitals Corporation

OTB - Off-Track Betting

HDC/REMIC - Housing Development Corporation / REMIC

State Courts - State Courts

SCA - School Construction Authority

WFA - Water Finance Authority Senior Colleges - Senior Colleges

TBTA - Triborough Bridge and Tunnel Authority

City - City of New York

NYC Office of the Actuary
September 29, 2017

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Schedule of Pension Amounts by Employer As of and for the year ended June 30, 2017

		_		Defe	erred Outflows of Res	ources		Deferred Inflows of Resources						Pension Expense			
<u>Entity</u> *	Net Pension Liability		Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense		
Transit Operating	\$ 3,788,376,3	58	\$ 0	\$ 0	\$ 186,753,107	\$ (83,433,028)	\$ 103,320,079	\$ 101,082,954	\$ 154,795,305	\$ 0	\$ (7,542,834)	\$ 248,335,425	\$ 473,340,460	\$(83,268,694)	\$ 390,071,766		
TA Non-Operating	780,808,3	340	0	0	38,491,020	174,173,244	212,664,264	20,833,849	31,904,311	0	29,305,111	82,043,271	97,558,524	68,762,320	166,320,844		
TA TP	144,519,1	72	0	0	7,124,934	6,939,639	14,064,573	3,856,478	5,905,692	0	1,184,035	10,946,205	18,058,705	2,767,298	20,826,003		
TA CP Engineers	163,016,4	11	0	0	8,036,024	10,722,643	18,758,667	4,349,620	6,660,873	0	2,279,031	13,289,524	20,367,935	(444,649)	19,923,286		
HA Regular	972,904,5	53	0	0	47,960,221	(9,103,925)	38,856,296	25,959,197	39,753,111	0	(1,374,443)	64,337,865	121,558,957	(1,300,708)	120,258,249		
НА НР	59,820,1	53	0	0	2,948,248	(2,250,507)	697,741	1,595,784	2,443,734	0	(337,941)	3,701,577	7,472,567	(1,110,059)	6,362,508		
HHC	3,070,927,8	368	0	0	151,384,363	74,203,888	225,588,251	81,939,084	125,478,977	0	6,320,198	213,738,259	383,695,595	53,073,819	436,769,414		
OTB	115,445,8	191	0	0	5,691,757	11,926,395	17,618,152	3,080,750	4,717,765	0	(468,064)	7,330,451	14,426,207	15,688,587	30,114,794		
HDC/REMIC	10,991,2	263	0	0	542,560	(25,467)	517,093	293,669	449,715	0	0	743,384	1,375,161	(68,822)	1,306,339		
State Courts	7,465,4	11	0	0	368,531	976,615	1,345,146	199,473	305,467	0	217,322	722,262	934,072	(8,741)	925,331		
SCA	8,316,4	13	0	0	409,479	(2,267,891)	(1,858,412)	221,637	339,408	0	(568,099)	(7,054)	1,037,855	(135,242)	902,613		
WFA	827,6	668	0	0	40,948	(224,860)	(183,912)	22,164	33,941	0	(45,142)	10,963	103,785	(39,069)	64,716		
Senior Colleges	242,343,6	554	0	0	11,946,548	(13,690,684)	(1,744,136)	6,466,250	9,902,216	0	(3,393,279)	12,975,187	30,279,468	3,419,548	33,699,016		
TBTA	271,609,4	183	0	0	13,389,961	18,274,473	31,664,434	7,247,520	11,098,627	0	2,407,523	20,753,670	33,937,912	13,608,459	47,546,371		
City	11,128,894,3	60	0	0	548,609,644	(186,220,535)	362,389,109	296,943,297	454,729,769	0	(27,983,418)	723,689,648	1,390,494,361	(70,944,047)	1,319,550,314		
Total	\$ 20,766,266,9	98	\$ 0	\$ 0	\$1,023,697,345	\$ 0	\$1,023,697,345	\$ 554,091,726	\$ 848,518,911	\$ 0	\$ 0	\$ 1,402,610,637	\$ 2,594,641,564	\$ 0	\$ 2,594,641,564		

\* Transit Operating - Transit Authority Operating

TA Non-Operating - Transit Authority Non-Operating

TA TP - Transit Authority / Transit Police

TA CP Engineers - Transit Authority Capital Project Engineers

HA Regular - Housing Authority Regular

HA HP - Housing Authority / Housing Police

HHC - Health and Hospitals Corporation

OTB - Off-Track Betting

HDC/REMIC - Housing Development Corporation / REMIC

State Courts - State Courts

SCA - School Construction Authority

WFA - Water Finance Authority

Senior Colleges - Senior Colleges TBTA - Triborough Bridge and Tunnel Authority

City - City of New York

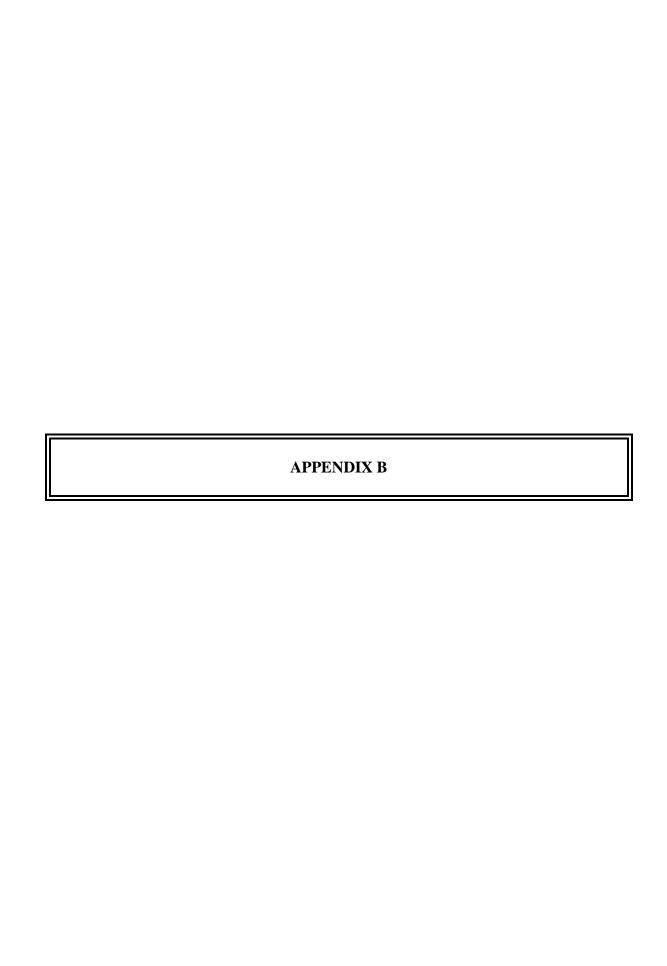
NYC Office of the Actuary
September 29, 2017

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Schedule of Collective Pension Amounts As of and for the year ended June 30, 2017

_		Deferred Outflow	s of Resources						
		Net Difference		Total		Net Difference		Total	
		Between		Deferred		Between		Deferred	
		Projected		Outflows of		Projected		Inflows of	
	Differences	and Actual		Resources Difference		and Actual		Resources	
	Between	Investment		Excluding	Between	Investment		Excluding	
	Expected	Earnings on		Employer	Expected	Earnings on		Employer	Plan
Net Pension	and Actual	Pension Plan	Change of	Specific	and Actual	Pension Plan	Change of	Specific	Pension
Liability	Experience	Investments	Assumptions	Amounts	Experience	Investments	Assumptions	Amounts	Expense
\$ 20,766,266,998	\$ 0	\$ 0	\$ 1,023,697,345	\$ 1,023,697,345	\$ 554,091,726	\$ 848,518,911	\$ 0	\$ 1,402,610,637	\$ 2,594,641,564

NYC Office of the Actuary September 29, 2017



## APPENDIX B

## NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

Page 1	-	Statement of Fiduciary Net Position
Page 2	-	Statement of Changes in Fiduciary Net Position
Page 3	-	Market Value of Assets
Page 4	-	Long-Term Expected Rate of Return
Page 5a	_	Development of Asset (Gain) / Loss - June 30, 2016
Page 5b	_	Development of Asset (Gain) / Loss - June 30, 2017
Page 6	_	Roll-Forward of Entry Age Actuarial Accrued Liabilities
1 age 0	-	Roll-Folward of Entry Age Actualian Accruca Engolitics
Page 7a	-	Schedule of Employer Allocations - June 30, 2016
Page 7b	-	Changes in Net Pension Liability by Source - June 30, 2016
Page 7c	_	Changes in Net Pension Liability by Source - June 30, 2016 - Summary
Page 7d	_	Schedule of Employer Allocations - June 30, 2017
Page 7e	_	Changes in Net Pension Liability by Source - June 30, 2017
Page 7f	-	Changes in Net Pension Liability by Source - June 30, 2017 - Summary
Page 8	-	Schedule of Changes in Net Pension Liability and Related Ratios
Page 9	-	Schedule of Employer Contributions
Page 10	-	Average Expected Remaining Service Lives
Page 11a	-	Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience
Page 11b	-	Increase (Decrease) in Pension Expense Arising from the Recognition of Changes in Assumptions
Dogg 11a		Increase (Decrease) in Pension Expense Arising from the Recognition of Differences
Page 11c	-	between Projected and Actual Earnings on Pension Plan Investments
Page 12a	_	Changes in Proportionate Share - June 30, 2015
Page 12b	-	Changes in Proportionate Share - June 30, 2016
Page 12c	-	Changes in Proportionate Share - June 30, 2017
Page 13a	_	Components of Pension Expense - June 30, 2016
Page 13b	_	Components of Pension Expense - June 30, 2016 - Summary
Page 13c	_	Components of Pension Expense - June 30, 2017
Page 13d	-	Components of Pension Expense - June 30, 2017 - Summary
Page 14a	_	Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2013
Page 14b	_	Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2014
Page 14c	_	Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2015
Page 14d	_	Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2016
Page 14e	_	Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2017
Page 14f		Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2017
Page 15a	-	Schedule of Pension Amounts by Employer - June 30, 2016
Page 15b	-	Schedule of Pension Amounts by Employer - June 30, 2017
Page 15c		Schedule of Collective Pension Amounts - June 30, 2017

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Fiduciary Net Position - QPP Only June 30, 2017 and June 30, 2016 (Dollar amounts in thousands)

ACCIPITE		June 30, 2017	June 30, 2016		
ASSETS Cash	\$	101,499	\$	5,157	
Cash	Ψ	101,477	Ψ	3,137	
Receivables:					
Investment securities sold		989,725		1,772,521	
Member loans		298,146		275,704	
Accrued interest and dividends Other		164,163		151,330	
Total receivables		1,452,034	\$	2,199,555	
Total receivables	Ψ	1,432,034	Ψ	2,177,333	
Investments - at fair value					
Pooled NYC Pension Fund Assets (Fixed-Return Fund):					
Short-term investments:					
Short-term investment fund		557,945		1,025,446	
Commercial paper		230,093		1,070,574	
Discount notes		282,248		83,294	
U.S. Treasury bills and agencies  Debt securities:		0		0	
U.S. Government		7,947,669		5,924,318	
Corporate		7,753,224		8,730,691	
Yankee bonds		0		0	
Foreign		0		0	
Equities:					
Domestic		21,086,002		22,284,584	
Private equity		7,523,885		6,872,850	
Private equity real estate		0		0	
Mutual Funds:		15.524.140		11 505 140	
International equity		15,734,149		11,507,149	
Fixed investment  Domestic equity		1,791,033 0		1,691,577 0	
Mortgage debt security		495,540		485,191	
Treasury inflation protected securities		2,682,432		2,399,270	
Promissory Notes		0		0	
Diversified Equity Funds:					
Short-term investments		65,825		29,570	
Equity Securities		6,031,258		2,206,416	
Corporate Bonds		106,307		50,541	
Bond Funds:		2.576		422	
Short-term investments Corporate Bonds		3,576 83,333		432 24,393	
Internation Equity Funds:		83,333		24,393	
Short-term investments		53		75	
Equity Securities		12,436		8,012	
Inflation Protection Funds:					
Short-term investments		23		12	
Equity Securities		4,761		3,960	
Socially Responsive Equity Funds:					
Short-term investments		662		24	
Equity Securities International - equity		11,320 516		7,650 158	
Collateral from securities lending (Fixed and Variable-Return Funds)		1,610,321		1,858,682	
Conateral from securities fending (Fixed and Variable-Return Funds)	-	1,010,321		1,030,002	
Total Investments	\$	74,014,611	\$	66,264,869	
		, ,			
Other assets		38,932		49,873	
Total assets	\$	75,607,076	\$	68,519,454	
I IADII IMIO					
LIABILITIES Accounts payable		520.050		417 409	
Payables for investment securities purchased		529,059 1,353,803		417,408 2,308,523	
Accrued benefits payable		13,987		12,563	
Due to TDA Program		22,004,183		20,292,733	
Securities lending		1,610,321		1,858,682	
Total liabilities	\$	25,511,353	\$	24,889,909	
Plan Net Position Held in Trust for Benefits	\$	50,095,723	\$	43,629,545	

NYC Office of the Actuary September 29, 2017

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Statement of Changes in Fiduciary Net Position - QPP Only June 30, 2017 and June 30, 2016

(Dollar amounts in thousands)

		June 30		June 30, 2016				
		Fixed		Variable		Fixed		Variable
ADDITIONS								
Contributions:	ф	170 752	Φ	222	ф	172 207	ф	400
Member Contributions	\$	179,753	\$	323	\$	173,287	\$	409
Employer Contributions		3,888,399		0		3,702,569		0
Other Employer Contributions <sup>1</sup>	-	57,340		29		58,105		40
Total contributions	\$	4,125,492	\$	352	\$	3,933,961	\$	449
Investment income:								
Interest income		929,307		2,862		857,408		2,815
Dividend income		912,665		68,422		829,050		67,158
Net appreciation (depreciation) in fair value		5,780,008		736,372		(505,410)		(93,033)
Total investment income	\$	7,621,980	\$	807,656	\$	1,181,048	\$	(23,060)
Less:								
Investment expenses		310,246		3,555		216,240		(1,172)
Net income		7,311,734		804,101		964,808		(21,888)
Securities lending transactions:								
Securities lending income		17,308		1,498		17,530		1,212
Securities lending fees		(1,202)		(158)		(1,279)		(116)
Net securities lending income		16,106		1,340		16,251		1,096
Net investment income Other:		7,327,840		805,440		981,059		(20,792)
Net receipts from other retirement systems		(2,291)		0		1,233		0
Transfers between Funds		(3,757,118)		3,757,118		25,535		(25,535)
Litigation income		0		0		0		0
Total additions	\$	7,693,923	\$	4,562,910	\$	4,941,788	\$	(45,878)
DEDUCTIONS								
Benefit payments and withdrawals		3,652,613		566,699		3,551,588		555,867
Interest to TDA Fixed Funds		1,466,615		0		1,354,207		0
TDA Rebalance		43,938		0		0		0
Administrative expenses		50,874		9,916		47,583		11,784
Total deductions	\$	5,214,040	\$	576,615	\$	4,953,378	\$	567,651
INCREASE IN PLAN NET POSITION		2,479,883		3,986,295		(11,590)		(613,529)
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:								
Beginning of year	\$	41,440,456	\$	2,189,089	\$	41,452,046	\$	2,802,618
End of year	\$	43,920,339	\$	6,175,384	\$	41,440,456	\$	2,189,089

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## **Market Values of Assets - QPP Only**

	Fixed		Variable		Total	
1. Plan Net Position @ 6/30/2015	\$ 41,452,046,000	\$	2,802,618,000	\$	44,254,664,000	
2. Changes for the year:						
a. ER Contributions	3,702,569,000		0		3,702,569,000	
b. Other Employer Contributions <sup>1</sup>	58,105,000		40,000		58,145,000	
c. EE Contributions	173,287,000		409,000		173,696,000	
d. Net Investment Income	981,059,000		(20,792,000)		960,267,000	
e. Benefit Payments	(3,551,588,000)		(555,867,000)		(4,107,455,000)	
f. Payment of Interest on TDA Fixed Funds	(1,354,207,000)		0		(1,354,207,000)	
g. Administrative Expenses	(47,583,000)		(11,784,000)		(59,367,000)	
h. Other	 26,768,000		(25,535,000)		1,233,000	
i. Net Changes	 (11,590,000)		(613,529,000)	'	(625,119,000)	
3. Plan Net Position @ 6/30/2016	\$ 41,440,456,000	\$	2,189,089,000	\$	43,629,545,000	
4. Changes for the year:						
a. ER Contributions	3,888,399,000		0		3,888,399,000	
b. Other Employer Contributions <sup>1</sup>	57,340,000		29,000		57,369,000	
c. EE Contributions	179,753,000		323,000		180,076,000	
d. Net Investment Income	7,327,840,000		805,440,000		8,133,280,000	
e. Benefit Payments	(3,652,613,000)		(566,699,000)		(4,219,312,000)	
f. Payment of Interest on TDA Fixed Funds	(1,466,615,000)		0		(1,466,615,000)	
g. Administrative Expenses	(50,874,000)		(9,916,000)		(60,790,000)	
h. Other	 (3,803,347,000)		3,757,118,000		(46,229,000)	
i. Net Changes	\$ 2,479,883,000	\$	3,986,295,000	\$	6,466,178,000	
5. Plan Net Position @ 6/30/2017	\$ 43,920,339,000	\$	6,175,384,000	\$	50,095,723,000	

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Long-Term Expected Rate of Return**

The Long-Term Expected Rate of Return (LTEROR) assumption on pension fund investments was determined using a Building-Block Method in which best-estimate ranges of Expected Real Rates of Return (i.e., Expected Returns, net of pension fund investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the LTEROR by weighting the Expected Real Rates of Return (RROR) by the Target Asset Allocation percentage and by adding Expected Inflation. The Target Asset Allocation and best estimates of Arithmetic Real Rates of Return for each major asset class are summarized in the following table:

		Long-Term
	Target	Expected
	Asset	Real Rate
Asset Class	<u>Allocation</u>	of Return
U.S. Public Market Equities	29.00%	5.70%
International Public Market Equities	12.00%	6.10%
Emerging Public Market Equities	9.00%	7.60%
Private Market Equities	6.00%	8.10%
Fixed Income (Core, TIPS, HY, Opportunistic, Convertibles)	33.00%	3.00%
Alternatives (Real Assets, Hedge Funds)	11.00%	4.70%
Total	100.0%	

The Discount Rate used to measure the Total Pension Liability was 7.0% per annum. The projection of Cash Flows used to determine the Discount Rate assumes that employee contributions will be made at the rates applicable to the current Tier for each member and that employer contributions will be made at rates as determined by the Actuary. Based on those assumptions, the pension fund's Fiduciary Net Position is projected to be available to make all projected future benefit payments of current active and non-active members. Therefore, the Long-Term Expected Rate of Return on pension fund investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Development of Asset (Gain) / Loss - QPP Only June 30, 2016

	Fixed		Variable	Variable	
1. Market Value 6/30/2015	\$ 41,452,046,000	\$	2,802,618,000	\$	44,254,664,000
2. Market Value 6/30/2016	41,440,456,000		2,189,089,000		43,629,545,000
3. Net Investment Income	981,059,000		(20,792,000)		960,267,000
4. Cash Flow (2 1 3.)	(992,649,000)		(592,737,000)		(1,585,386,000)
5. Projected Earnings* (7% * 1. + 3.441% * 4.)	2,867,486,168		(20,792,000)		2,846,694,168
6. (Gain) / Loss (5 3.)	1,886,427,168		0		1,886,427,168
7. Recognition Period	5 Years		5 Years		5 Years
8. Amount Recognized in Pension Expense (6. / 7.)	377,285,434		0		377,285,434
9. Deferred (Inflow) / Outflow of Resources (6 8.)	\$ 1,509,141,734	\$	0	\$	1,509,141,734

<sup>\*</sup> Variable Funds Projected Earnings set equal to Variable Funds Net Investment Income.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Development of Asset (Gain) / Loss - QPP Only June 30, 2017

	Fixed		Variable	Total	
1. Market Value 6/30/2016	\$ 41,440,456,000	\$	2,189,089,000	\$	43,629,545,000
2. Market Value 6/30/2017	43,920,339,000		6,175,384,000		50,095,723,000
3. Net Investment Income	7,327,840,000		805,440,000		8,133,280,000
4. Cash Flow (2 1 3.)	(4,847,957,000)		3,180,855,000		(1,667,102,000)
5. Projected Earnings* (7% * 1. + 3.441% * 4.)	2,734,013,720		805,440,000		3,539,453,720
6. (Gain) / Loss (5 3.)	(4,593,826,280)		0		(4,593,826,280)
7. Recognition Period	5 Years		5 Years		5 Years
8. Amount Recognized in Pension Expense (6. / 7.)	(918,765,256)		0		(918,765,256)
9. Deferred (Inflow) / Outflow of Resources (6 8.)	\$ (3,675,061,024)	\$	0	\$	(3,675,061,024)

<sup>\*</sup> Variable Funds Projected Earnings set equal to Variable Funds Net Investment Income.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Roll-Forward of Entry Age Actuarial Accrued Liabilities**

	Fixed	Variable	Total
1. Entry Age Accrued Liability (EAAL) at 6/30/2015	\$ 60,471,662,893	\$ 9,153,944,883	\$ 69,625,607,776
2. Entry Age Normal Cost at 6/30/2015	1,309,213,912	0	1,309,213,912
3. Benefit Payments-FY16	3,551,588,000	555,867,000	4,107,455,000
4. Interest*	4,202,451,233	(20,792,000)	4,181,659,233
5. Roll-Forward EAAL at 6/30/2016	\$ 62,431,740,038	\$ 8,577,285,883	\$ 71,009,025,921
6. Entry Age Normal Cost at 6/30/2016	1,386,673,964	0	1,386,673,964
7. Benefit Payments-FY17	3,652,613,000	566,699,000	4,219,312,000
8. Interest*	4,341,602,567	805,440,000	5,147,042,567
9. Roll-Forward EAAL at 6/30/2017	\$ 64,507,403,569	\$ 8,816,026,883	\$ 73,323,430,452

<sup>\*</sup> Interest on Variable Funds set equal to Variable Funds Net Investment Income.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Schedule of Employer Allocations June 30, 2016

Employer	2016 Actual Employer Contributions	Employer Allocation Percentage
Department of Education	\$ 3,555,209,676	96.019%
CUNY Senior Colleges	102,884,499	2.779%
CUNY Community Colleges	39,091,625	1.056%
Beginning with Children Charter School	304,651	0.008%
Future Leaders Charter School	244,310	0.007%
Harriet Tubman Charter School	357,001	0.010%
KIPP Academy Charter School	657,607	0.018%
KIPP AMP Charter School	28,955	0.001%
KIPP Infinity Charter School	635,937	0.017%
Opportunity Charter School	472,731	0.013%
Renaissance Charter School	793,034	0.021%
UFT Charter School	770,823	0.021%
University Prep Charter High School	450,478	0.012%
Voice Charter School	313,675	0.008%
Wildcat Charter School	354,100	0.010%
Total	\$ 3,702,569,102	100.0000%

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	\$ 65,040,367,677 \$	44,254,664,000	\$ 20,785,703,677
2. Changes for the Year:			
a. Service Cost	1,274,307,859	0	1,274,307,859
b. Interest	4,131,176,953	0	4,131,176,953
c. Differences b/t expected and actual experience	1,229,501,602	0	1,229,501,602
d. Change of Assumptions	2,432,878,017	0	2,432,878,017
e. Contributions - employer	0	3,760,714,000	(3,760,714,000)
f. Contributions - employee	0	173,696,000	(173,696,000)
g. Net Investment Income	0	960,267,000	(960,267,000)
h. Benefit payments	(4,107,455,000)	(4,107,455,000)	0
i. Payment of Interest on TDA Fixed Funds	0	(1,354,207,000)	1,354,207,000
j. Administrative expenses	0	(59,367,000)	59,367,000
k. Other changes	0	1,233,000	(1,233,000)
l. Net Changes	\$ 4,960,409,431 \$	(625,119,000)	\$ 5,585,528,431
3. Balances at June 30, 2016	\$ 70,000,777,108 \$	43,629,545,000	\$ 26,371,232,108

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Department of Education Balances at June 30, 2016

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	96.346%	\$ 62,663,792,641	\$ 42,637,598,576	\$ 20,026,194,065
2. Changes for the Year:				
a. Service Cost		1,223,577,662	0	1,223,577,662
b. Interest		3,966,714,798	0	3,966,714,798
c. Differences b/t expected and	d actual experience	1,180,555,145	0	1,180,555,145
d. Change of Assumptions		2,336,025,145	0	2,336,025,145
e. Contributions - employer		0	3,610,999,976	(3,610,999,976)
f. Contributions - employee		0	166,781,161	(166,781,161)
g. Net Investment Income		0	922,038,770	(922,038,770)
h. Benefit payments		(3,943,937,215)	(3,943,937,215)	0
i. Payment of Interest on TDA	Fixed Funds	0	(1,300,296,019)	1,300,296,019
j. Administrative expenses		0	(57,003,599)	57,003,599
k. Other changes		0	1,183,915	(1,183,915)
l. Net Changes		\$ 4,762,935,535	\$ (600,233,011)	\$ 5,363,168,546
3. SubTotal		\$ 67,426,728,176	\$ 42,037,365,565	\$ 25,389,362,611
4. Changes in Proportionate Sha	re	\$ (212,682,009)	\$ (144,712,752)	\$ (67,969,257)
5. Balances at June 30, 2016	96.019%	\$ 67,214,046,167	\$ 41,892,652,813	\$ 25,321,393,354

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source CUNY Senior Colleges Balances at June 30, 2016

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	2.540%	\$ 1,652,025,339	\$ 1,124,068,466	\$ 527,956,873
2. Changes for the Year:				
a. Service Cost		35,413,015	0	35,413,015
b. Interest		114,805,408	0	114,805,408
c. Differences b/t expected and a	ctual experience	34,167,850	0	34,167,850
d. Change of Assumptions		67,609,680	0	67,609,680
e. Contributions - employer		0	104,510,242	(104,510,242)
f. Contributions - employee		0	4,827,012	(4,827,012)
g. Net Investment Income		0	26,685,820	(26,685,820)
h. Benefit payments		(114,146,174)	(114,146,174)	0
<ol> <li>Payment of Interest on TDA F</li> </ol>	ixed Funds	0	(37,633,413)	37,633,413
<ol> <li>j. Administrative expenses</li> </ol>		0	(1,649,809)	1,649,809
k. Other changes		 0	34,265	(34,265)
l. Net Changes		\$ 137,849,779	\$ (17,372,057)	\$ 155,221,836
3. SubTotal		\$ 1,789,875,118	\$ 1,106,696,409	\$ 683,178,709
4. Changes in Proportionate Share		\$ 155,446,478	\$ 105,768,647	\$ 49,677,831
5. Balances at June 30, 2016	2.779%	\$ 1,945,321,596	\$ 1,212,465,056	\$ 732,856,540

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source CUNY Community Colleges Balances at June 30, 2016

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	0.928%	\$	\$ 410,683,282	\$ 192,891,330
2. Changes for the Year:				
a. Service Cost		13,456,691	0	13,456,691
b. Interest		43,625,229	0	43,625,229
c. Differences b/t expected and a	ctual experience	12,983,537	0	12,983,537
d. Change of Assumptions		25,691,192	0	25,691,192
e. Contributions - employer		0	39,713,140	(39,713,140)
f. Contributions - employee		0	1,834,230	(1,834,230)
g. Net Investment Income		0	10,140,420	(10,140,420)
h. Benefit payments		(43,374,725)	(43,374,725)	0
<ol> <li>Payment of Interest on TDA F</li> </ol>	ixed Funds	0	(14,300,426)	14,300,426
j. Administrative expenses		0	(626,916)	626,916
k. Other changes		 0	13,020	(13,020)
l. Net Changes		\$ 52,381,924	\$ (6,601,257)	\$ 58,983,181
3. SubTotal		\$ 655,956,536	\$ 404,082,025	\$ 251,874,511
4. Changes in Proportionate Share		\$ 83,251,670	\$ 56,645,970	\$ 26,605,700
5. Balances at June 30, 2016	1.056%	\$ 739,208,206	\$ 460,727,995	\$ 278,480,211

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Beginning with Children Charter School Balances at June 30, 2016

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 20	0.017%	\$ 11,056,863	\$ 7,523,293	\$ 3,533,570
2. Changes for the Year:				
a. Service Cost		101,945	0	101,945
b. Interest		330,494	0	330,494
c. Differences b/t expe	cted and actual experience	98,360	0	98,360
d. Change of Assumpti	ons	194,630	0	194,630
e. Contributions - empl	loyer	0	300,857	(300,857)
f. Contributions - empl	loyee	0	13,896	(13,896)
g. Net Investment Inco	me	0	76,821	(76,821)
h. Benefit payments		(328,596)	(328,596)	0
<ol> <li>Payment of Interest</li> </ol>	on TDA Fixed Funds	0	(108,337)	108,337
<ol> <li>j. Administrative experi</li> </ol>	nses	0	(4,749)	4,749
k. Other changes		 0	99	(99)
l. Net Changes		\$ 396,833	\$ (50,009)	\$ 446,842
3. SubTotal		\$ 11,453,696	\$ 7,473,284	\$ 3,980,412
4. Changes in Proportiona	ate Share	\$ (5,853,633)	\$ (3,982,920)	\$ (1,870,713)
5. Balances at June 30, 20	16 0.008%	\$ 5,600,063	\$ 3,490,364	\$ 2,109,699

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Future Leaders Charter School Balances at June 30, 2016

		Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
		(a)	<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2015	0.006%	\$ 3,902,422	\$ 2,655,280	\$ 1,247,142
2. Changes for the Year:				
a. Service Cost		89,202	0	89,202
b. Interest		289,182	0	289,182
c. Differences b/t expected and ac	ctual experience	86,065	0	86,065
d. Change of Assumptions		170,301	0	170,301
e. Contributions - employer		0	263,250	(263,250)
f. Contributions - employee		0	12,159	(12,159)
g. Net Investment Income		0	67,219	(67,219)
h. Benefit payments		(287,522)	(287,522)	0
<ol> <li>Payment of Interest on TDA Fi</li> </ol>	xed Funds	0	(94,794)	94,794
<ol> <li>j. Administrative expenses</li> </ol>		0	(4,156)	4,156
k. Other changes		 0	86	(86)
l. Net Changes		\$ 347,228	\$ (43,758)	\$ 390,986
3. SubTotal		\$ 4,249,650	\$ 2,611,522	\$ 1,638,128
4. Changes in Proportionate Share		\$ 650,404	\$ 442,546	\$ 207,858
5. Balances at June 30, 2016	0.007%	\$ 4,900,054	\$ 3,054,068	\$ 1,845,986

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Harriet Tubman Charter School Balances at June 30, 2016

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	0.010%	\$ 6,504,036	\$ 4,425,466	\$ 2,078,570
2. Changes for the Year:				
a. Service Cost		127,431	0	127,431
b. Interest		413,118	0	413,118
c. Differences b/t expected and a	ctual experience	122,950	0	122,950
d. Change of Assumptions		243,288	0	243,288
e. Contributions - employer		0	376,071	(376,071)
f. Contributions - employee		0	17,370	(17,370)
g. Net Investment Income		0	96,027	(96,027)
h. Benefit payments		(410,746)	(410,746)	0
<ol> <li>Payment of Interest on TDA F</li> </ol>	ixed Funds	0	(135,421)	135,421
<ol> <li>Administrative expenses</li> </ol>		0	(5,937)	5,937
k. Other changes		 0	123	(123)
l. Net Changes		\$ 496,041	\$ (62,513)	\$ 558,554
3. SubTotal		\$ 7,000,077	\$ 4,362,953	\$ 2,637,124
4. Changes in Proportionate Share		\$ -	\$ -	\$ -
5. Balances at June 30, 2016	0.010%	\$7,000,077	\$4,362,953	\$2,637,124

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source KIPP Academy Charter School Balances at June 30, 2016

			Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1.	Balances at June 30, 2015	0.016%	\$ 10,406,459	\$ 7,080,746	\$ 3,325,713
2.	Changes for the Year:				
	a. Service Cost		229,375	0	229,375
	b. Interest		743,612	0	743,612
	c. Differences b/t expected and actu	al experience	221,310	0	221,310
	d. Change of Assumptions		437,918	0	437,918
	e. Contributions - employer		0	676,929	(676,929)
	f. Contributions - employee		0	31,265	(31,265)
	g. Net Investment Income		0	172,848	(172,848)
	h. Benefit payments		(739,342)	(739,342)	0
	i. Payment of Interest on TDA Fixe	ed Funds	0	(243,757)	243,757
	j. Administrative expenses		0	(10,686)	10,686
	k. Other changes		 0	222	(222)
	1. Net Changes		\$ 892,873	\$ (112,521)	\$ 1,005,394
3.	SubTotal		\$ 11,299,332	\$ 6,968,225	\$ 4,331,107
4.	Changes in Proportionate Share		\$ 1,300,808	\$ 885,093	\$ 415,715
5.	Balances at June 30, 2016	0.018%	\$ 12,600,140	\$ 7,853,318	\$ 4,746,822

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source KIPP AMP Charter School Balances at June 30, 2016

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	0.001%	\$ 650,404	\$ 442,547	\$ 207,857
2. Changes for the Year:				
a. Service Cost		12,743	0	12,743
b. Interest		41,312	0	41,312
c. Differences b/t expected and ac	tual experience	12,295	0	12,295
d. Change of Assumptions		24,329	0	24,329
e. Contributions - employer		0	37,607	(37,607)
f. Contributions - employee		0	1,737	(1,737)
g. Net Investment Income		0	9,603	(9,603)
h. Benefit payments		(41,075)	(41,075)	0
<ol> <li>Payment of Interest on TDA Fi</li> </ol>	xed Funds	0	(13,542)	13,542
<ol> <li>j. Administrative expenses</li> </ol>		0	(594)	594
k. Other changes		 0	12	(12)
l. Net Changes		\$ 49,604	\$ (6,252)	\$ 55,856
3. SubTotal		\$ 700,008	\$ 436,295	\$ 263,713
4. Changes in Proportionate Share		\$ -	\$ -	\$ -
5. Balances at June 30, 2016	0.001%	\$ 700,008	\$ 436,295	\$ 263,713

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source KIPP Infinity Charter School Balances at June 30, 2016

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	0.018%	\$ 11,707,267	\$ 7,965,840	\$ 3,741,427
2. Changes for the Year:				
a. Service Cost		216,632	0	216,632
b. Interest		702,300	0	702,300
c. Differences b/t expected and ac	tual experience	209,015	0	209,015
d. Change of Assumptions		413,589	0	413,589
e. Contributions - employer		0	639,321	(639,321)
f. Contributions - employee		0	29,528	(29,528)
g. Net Investment Income		0	163,245	(163,245)
h. Benefit payments		(698,267)	(698,267)	0
<ol> <li>Payment of Interest on TDA Fit</li> </ol>	xed Funds	0	(230,215)	230,215
<ol> <li>j. Administrative expenses</li> </ol>		0	(10,092)	10,092
k. Other changes		 0	210	(210)
l. Net Changes		\$ 843,269	\$ (106,270)	\$ 949,539
3. SubTotal		\$ 12,550,536	\$ 7,859,570	\$ 4,690,966
4. Changes in Proportionate Share		\$ (650,404)	\$ (442,547)	\$ (207,857)
5. Balances at June 30, 2016	0.017%	\$ 11,900,132	\$ 7,417,023	\$ 4,483,109

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Opportunity Charter School Balances at June 30, 2016

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	0.024%	\$ 15,609,688	\$ 10,621,119	\$ 4,988,569
2. Changes for the Year:				
a. Service Cost		165,660	0	165,660
b. Interest		537,053	0	537,053
c. Differences b/t expected and ac	ctual experience	159,835	0	159,835
d. Change of Assumptions		316,274	0	316,274
e. Contributions - employer		0	488,893	(488,893)
f. Contributions - employee		0	22,580	(22,580)
g. Net Investment Income		0	124,835	(124,835)
h. Benefit payments		(533,969)	(533,969)	0
<ol> <li>Payment of Interest on TDA Fr</li> </ol>	ixed Funds	0	(176,047)	176,047
<ol><li>j. Administrative expenses</li></ol>		0	(7,718)	7,718
k. Other changes		 0	160	(160)
l. Net Changes		\$ 644,853	\$ (81,266)	\$ 726,119
3. SubTotal		\$ 16,254,541	\$ 10,539,853	\$ 5,714,688
4. Changes in Proportionate Share		\$ (7,154,440)	\$ (4,868,012)	\$ (2,286,428)
5. Balances at June 30, 2016	0.013%	\$ 9,100,101	\$ 5,671,841	\$ 3,428,260

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Renaissance Charter School Balances at June 30, 2016

			Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1.	Balances at June 30, 2015	0.023%	\$ 14,959,285	\$ 10,178,573	\$ 4,780,712
2.	Changes for the Year:				
	a. Service Cost		267,605	0	267,605
	b. Interest		867,547	0	867,547
	c. Differences b/t expected and act	ual experience	258,195	0	258,195
	d. Change of Assumptions		510,904	0	510,904
	e. Contributions - employer		0	789,750	(789,750)
	f. Contributions - employee		0	36,476	(36,476)
	g. Net Investment Income		0	201,656	(201,656)
	h. Benefit payments		(862,566)	(862,566)	0
	i. Payment of Interest on TDA Fix	ed Funds	0	(284,383)	284,383
	j. Administrative expenses		0	(12,467)	12,467
	k. Other changes		 0	259	(259)
	1. Net Changes		\$ 1,041,685	\$ (131,275)	\$ 1,172,960
3.	SubTotal		\$ 16,000,970	\$ 10,047,298	\$ 5,953,672
4.	<b>Changes in Proportionate Share</b>		\$ (1,300,805)	\$ (885,093)	\$ (415,712)
5.	Balances at June 30, 2016	0.021%	\$ 14,700,165	\$ 9,162,205	\$ 5,537,960

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source UFT Charter School Balances at June 30, 2016

			Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1.	Balances at June 30, 2015	0.034%	\$ 22,113,725	\$ 15,046,586	\$ 7,067,139
2.	Changes for the Year:				
	a. Service Cost		267,605	0	267,605
	b. Interest		867,547	0	867,547
	c. Differences b/t expected and actu	ual experience	258,195	0	258,195
	d. Change of Assumptions		510,904	0	510,904
	e. Contributions - employer		0	789,750	(789,750)
	f. Contributions - employee		0	36,476	(36,476)
	g. Net Investment Income		0	201,656	(201,656)
	h. Benefit payments		(862,566)	(862,566)	0
	<ol> <li>Payment of Interest on TDA Fixe</li> </ol>	ed Funds	0	(284,383)	284,383
	<ol> <li>j. Administrative expenses</li> </ol>		0	(12,467)	12,467
	k. Other changes		 0	259	(259)
	l. Net Changes		\$ 1,041,685	\$ (131,275)	\$ 1,172,960
3.	SubTotal		\$ 23,155,410	\$ 14,915,311	\$ 8,240,099
4.	Changes in Proportionate Share		\$ (8,455,245)	\$ (5,753,106)	\$ (2,702,139)
5.	Balances at June 30, 2016	0.021%	\$ 14,700,165	\$ 9,162,205	\$ 5,537,960

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source University Prep Charter High School Balances at June 30, 2016

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	0.016%	\$ 10,406,459	\$ 7,080,746	\$ 3,325,713
2. Changes for the Year:				
a. Service Cost		152,917	0	152,917
b. Interest		495,741	0	495,741
c. Differences b/t expected and ac	ctual experience	147,540	0	147,540
d. Change of Assumptions		291,945	0	291,945
e. Contributions - employer		0	451,286	(451,286)
f. Contributions - employee		0	20,844	(20,844)
g. Net Investment Income		0	115,232	(115,232)
h. Benefit payments		(492,895)	(492,895)	0
<ol> <li>Payment of Interest on TDA Fit</li> </ol>	xed Funds	0	(162,505)	162,505
<ol> <li>Administrative expenses</li> </ol>		0	(7,124)	7,124
k. Other changes		 0	148	(148)
l. Net Changes		\$ 595,248	\$ (75,014)	\$ 670,262
3. SubTotal		\$ 11,001,707	\$ 7,005,732	\$ 3,995,975
4. Changes in Proportionate Share		\$ (2,601,614)	\$ (1,770,187)	\$ (831,427)
5. Balances at June 30, 2016	0.012%	\$ 8,400,093	\$ 5,235,545	\$ 3,164,548

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Voice Charter School Balances at June 30, 2016

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	0.009%	\$ 5,853,633	\$ 3,982,920	\$ 1,870,713
2. Changes for the Year:				
a. Service Cost		101,945	0	101,945
b. Interest		330,494	0	330,494
c. Differences b/t expected and ac	ctual experience	98,360	0	98,360
d. Change of Assumptions		194,630	0	194,630
e. Contributions - employer		0	300,857	(300,857)
f. Contributions - employee		0	13,896	(13,896)
g. Net Investment Income		0	76,821	(76,821)
h. Benefit payments		(328,596)	(328,596)	0
<ol> <li>Payment of Interest on TDA Fit</li> </ol>	ixed Funds	0	(108,337)	108,337
<ol><li>j. Administrative expenses</li></ol>		0	(4,749)	4,749
k. Other changes		 0	99	(99)
l. Net Changes		\$ 396,833	\$ (50,009)	\$ 446,842
3. SubTotal		\$ 6,250,466	\$ 3,932,911	\$ 2,317,555
4. Changes in Proportionate Share		\$ (650,403)	\$ (442,547)	\$ (207,856)
5. Balances at June 30, 2016	0.008%	\$ 5,600,063	\$ 3,490,364	\$ 2,109,699

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Wildcat Charter School Balances at June 30, 2016

		Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
		(a)	(b)	(a) - (b)
1. Balances at June 30, 2015	0.012%	\$ 7,804,844	\$ 5,310,560	\$ 2,494,284
2. Changes for the Year:				
a. Service Cost		127,431	0	127,431
b. Interest		413,118	0	413,118
c. Differences b/t expected and ac	tual experience	122,950	0	122,950
d. Change of Assumptions		243,288	0	243,288
e. Contributions - employer		0	376,071	(376,071)
f. Contributions - employee		0	17,370	(17,370)
g. Net Investment Income		0	96,027	(96,027)
h. Benefit payments		(410,746)	(410,746)	0
<ol> <li>Payment of Interest on TDA Fix</li> </ol>	ed Funds	0	(135,421)	135,421
<ol> <li>j. Administrative expenses</li> </ol>		0	(5,937)	5,937
k. Other changes		 0	123	(123)
l. Net Changes		\$ 496,041	\$ (62,513)	\$ 558,554
3. SubTotal		\$ 8,300,885	\$ 5,248,047	\$ 3,052,838
4. Changes in Proportionate Share		\$ (1,300,807)	\$ (885,092)	\$ (415,715)
5. Balances at June 30, 2016	0.010%	\$ 7,000,078	\$ 4,362,955	\$ 2,637,123

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source - by Obligor Balances at June 30, 2016

								Tota	l Pension L	iability							
1. Balances at June 30, 2015	\$	DEPT. OF ED. 62,663,792,641 \$	SENIOR COLL. 1,652,025,339 \$	COMM. COLL. 603,574,612 \$	BWC 11,056,863 \$	FUT. LEAD. 3,902,422 \$	H. TUBMAN 6,504,036 \$	KIPP ACAD. 10,406,459 \$	KIPP AMP 650,404 \$	KIPP INF. 11,707,267 \$	OPPOR. 15,609,688 \$	REN. 14,959,285 \$	<u>UFT</u> 22,113,725 \$	UNIV PREP 10,406,459 \$	<u>VOICE</u> 5,853,633 \$	WILDCAT 7,804,844 \$	TOTAL 65,040,367,677
2. Changes for the Year:																	
a. Service Cost		1,223,577,662	35,413,015	13,456,691	101,945	89,202	127,431	229,375	12,743	216,632	165,660	267,605	267,605	152,917	101,945	127,431	1,274,307,859
b. Interest		3,966,714,798	114,805,408	43,625,229	330,494	289,182	413,118	743,612	41,312	702,300	537,053	867,547	867,547	495,741	330,494	413,118	4,131,176,953
<ul> <li>Differences b/t Expected and Actual Experience</li> </ul>		1,180,555,145	34,167,850	12,983,537	98,360	86,065	122,950	221,310	12,295	209,015	159,835	258,195	258,195	147,540	98,360	122,950	1,229,501,602
d. Changes of Assumptions		2,336,025,145	67,609,680	25,691,192	194,630	170,301	243,288	437,918	24,329	413,589	316,274	510,904	510,904	291,945	194,630	243,288	2,432,878,017
e. Benefit Payments		(3,943,937,215)	(114,146,174)	(43,374,725)	(328,596)	(287,522)	(410,746)	(739,342)	(41,075)	(698,267)	(533,969)	(862,566)	(862,566)	(492,895)	(328,596)	(410,746)	(4,107,455,000)
f. Net Changes	\$	4,762,935,535 \$	137,849,779 \$	52,381,924 \$	396,833 \$	347,228 \$	496,041 \$	892,873 \$	49,604 \$	843,269 \$	644,853 \$	1,041,685 \$	1,041,685 \$	595,248 \$	396,833 \$	496,041 \$	4,960,409,431
3. SubTotal	\$	67,426,728,176 \$	1,789,875,118 \$	655,956,536 \$	11,453,696 \$	4,249,650 \$	7,000,077 \$	11,299,332 \$	700,008 \$	12,550,536 \$	16,254,541 \$	16,000,970 \$	23,155,410 \$	11,001,707 \$	6,250,466 \$	8,300,885 \$	70,000,777,108
4. Changes in Proportionate Share	\$	(212,682,009) \$	155,446,478 \$	83,251,670 \$	(5,853,633) \$	650,404 \$	- \$	1,300,808 \$	- <b>\$</b>	(650,404) \$	(7,154,440) \$	(1,300,805) \$	(8,455,245) \$	(2,601,614) \$	(650,403) \$	(1,300,807) \$	-
5. Balances at June 30, 2016	\$	67,214,046,167 \$	1,945,321,596 \$	739,208,206 \$	5,600,063 \$	4,900,054 \$	7,000,077 \$	12,600,140 \$	700,008 \$	11,900,132 \$	9,100,101 \$	14,700,165 \$	14,700,165 \$	8,400,093 \$	5,600,063 \$	7,000,078 \$	70,000,777,108
								Plan F	iduciary Ne	t Position							
		DEPT. OF ED.	SENIOR COLL.	COMM. COLL.	BWC	FUT. LEAD.	H. TUBMAN	KIPP ACAD.	KIPP AMP	KIPP INF.	OPPOR.	REN.	UFT	UNIV PREP	VOICE	WILDCAT	TOTAL
1. Balances at June 30, 2015	\$	42,637,598,576 \$	1,124,068,466 \$	410,683,282 \$	7,523,293 \$	2,655,280 \$	4,425,466 \$	7,080,746 \$	442,547 \$	7,965,840 \$	10,621,119 \$	10,178,573 \$	15,046,586 \$	7,080,746 \$	3,982,920 \$	5,310,560 \$	44,254,664,000
2. Changes for the Year:																	
a. Contributions - Employer		3,610,999,976	104,510,242	39,713,140	300,857	263,250	376,071	676,929	37,607	639,321	488,893	789,750	789,750	451,286	300,857	376,071	3,760,714,000
b. Contributions - Employee		166,781,161	4,827,012	1,834,230	13,896	12,159	17,370	31,265	1,737	29,528	22,580	36,476	36,476	20,844	13,896	17,370	173,696,000
c. Net Investment Income		922,038,770	26,685,820	10,140,420	76,821	67,219	96,027	172,848	9,603	163,245	124,835	201,656	201,656	115,232	76,821	96,027	960,267,000
d. Benefit Payments		(3,943,937,215)	(114,146,174)	(43,374,725)	(328,596)	(287,522)	(410,746)	(739,342)	(41,075)	(698,267)	(533,969)	(862,566)	(862,566)	(492,895)	(328,596)	(410,746)	(4,107,455,000)
e. Payment of Interest on TDA Fixed Funds		(1,300,296,019)	(37,633,413)	(14,300,426)	(108,337)	(94,794)	(135,421)	(243,757)	(13,542)	(230,215)	(176,047)	(284,383)	(284,383)	(162,505)	(108,337)	(135,421)	(1,354,207,000)
f. Administrative Expenses		(57,003,599)	(1,649,809)	(626,916)	(4,749)	(4,156)	(5,937)	(10,686)	(594)	(10,092)	(7,718)	(12,467)	(12,467)	(7,124)	(4,749)	(5,937)	(59,367,000)
g. Other Changes	_	1,183,915	34,265	13,020	99	86	123	222	12	210	160	259	259	148	99	123	1,233,000
h. Net Changes	\$	(600,233,011) \$	(17,372,057) \$	(6,601,257) \$	(50,009) \$	(43,758) \$	(62,513) \$	(112,521) \$	(6,252) \$	(106,270) \$	(81,266) \$	(131,275) \$	(131,275) \$	(75,014) \$	(50,009) \$	(62,513) \$	(625,119,000)
3. SubTotal	\$	42,037,365,565 \$	1,106,696,409 \$	404,082,025 \$	7,473,284 \$	2,611,522 \$	4,362,953 \$	6,968,225 \$	436,295 \$	7,859,570 \$	10,539,853 \$	10,047,298 \$	14,915,311 \$	7,005,732 \$	3,932,911 \$	5,248,047 \$	43,629,545,000
4. Changes in Proportionate Share	\$	(144,712,752) \$	105,768,647 \$	56,645,970 \$	(3,982,920) \$	442,546 \$	- \$	885,093 \$	- \$	(442,547) \$	(4,868,012) \$	(885,093) \$	(5,753,106) \$	(1,770,187) \$	(442,547) \$	(885,092) \$	-
5. Balances at June 30, 2016	\$	41,892,652,813 \$	1,212,465,056 \$	460,727,995 \$	3,490,364 \$	3,054,068 \$	4,362,953 \$	7,853,318 \$	436,295 \$	7,417,023 \$	5,671,841 \$	9,162,205 \$	9,162,205 \$	5,235,545 \$	3,490,364 \$	4,362,955 \$	43,629,545,000
								Net	Pension Li	ability							
1. Balances at June 30, 2015	\$	DEPT. OF ED. 20,026,194,065 \$	SENIOR COLL. 527,956,873 \$	COMM. COLL. 192,891,330 \$	BWC 3,533,570 \$	FUT. LEAD. 1,247,142 \$	H. TUBMAN 2,078,570 \$	KIPP ACAD. 3,325,713 \$	KIPP AMP 207,857 \$	KIPP INF. 3,741,427 \$	OPPOR. 4,988,569 \$	REN. 4,780,712 \$	7,067,139 \$	UNIV PREP 3,325,713 \$	VOICE 1,870,713 \$	WILDCAT 2,494,284 \$	TOTAL 20,785,703,677
2. Changes for the Year:																	
a. Service Cost		1,223,577,662	35,413,015	13,456,691	101,945	89,202	127,431	229,375	12,743	216,632	165,660	267,605	267,605	152,917	101,945	127,431	1,274,307,859
b. Interest		3,966,714,798	114,805,408	43,625,229	330,494	289,182	413,118	743,612	41,312	702,300	537,053	867,547	867,547	495,741	330,494	413,118	4,131,176,953
<ul> <li>Differences b/t Expected and Actual Experience</li> </ul>		1,180,555,145	34,167,850	12,983,537	98,360	86,065	122,950	221,310	12,295	209,015	159,835	258,195	258,195	147,540	98,360	122,950	1,229,501,602
d. Changes of Assumptions		2,336,025,145	67,609,680	25,691,192	194,630	170,301	243,288	437,918	24,329	413,589	316,274	510,904	510,904	291,945	194,630	243,288	2,432,878,017
e. Contributions - Employer		(3,610,999,976)	(104,510,242)	(39,713,140)	(300,857)	(263,250)	(376,071)	(676,929)	(37,607)	(639,321)	(488,893)	(789,750)	(789,750)	(451,286)	(300,857)	(376,071)	(3,760,714,000)
f. Contributions - Employee		(166,781,161)	(4,827,012)	(1,834,230)	(13,896)	(12,159)	(17,370)	(31,265)	(1,737)	(29,528)	(22,580)	(36,476)	(36,476)	(20,844)	(13,896)	(17,370)	(173,696,000)
g. Net Investment Income		(922,038,770)	(26,685,820)	(10,140,420)	(76,821)	(67,219)	(96,027)	(172,848)	(9,603)	(163,245)	(124,835)	(201,656)	(201,656)	(115,232)	(76,821)	(96,027)	(960,267,000)
h. Benefit Payments i. Payment of Interest on TDA Fixed Funds		1.300.296.019	0 37.633.413	0 14,300,426	108.337	0 94.794	0 135.421	0 243.757	13.542	230.215	0 176.047	0 284.383	284.383	0 162.505	0 108.337	0 135.421	1.354.207.000
<ol> <li>Payment of Interest on TDA Fixed Funds</li> <li>Administrative Expenses</li> </ol>		1,300,296,019 57,003,599	37,633,413 1,649,809	14,300,426 626,916	4,749	94,794 4,156	135,421 5,937	243,757 10,686	13,542 594	230,215 10,092	7,718	284,383 12,467	284,383 12,467	7,124	108,337 4,749	135,421 5,937	1,354,207,000 59,367,000
<ul> <li>J. Administrative Expenses</li> <li>k. Other Changes</li> </ul>		57,003,399	(34.265)	(13.020)	4,749	4,156	(123)	(222)	(12)	(210)	(160)	(259)	(259)	(148)	4,749	(123)	(1.233.000)
L Net Changes	\$	5,363,168,546 \$	155,221,836 \$	58,983,181 \$	446,842 \$	390,986 \$	558,554 \$	1,005,394 \$	55,856 \$	949,539 \$	726,119 \$	1,172,960 \$	1,172,960 \$	670,262 \$	446,842 \$	558,554 \$	5,585,528,431
3. SubTotal	\$	25,389,362,611 \$	683,178,709 \$	251,874,511 \$	3,980,412 \$	1,638,128 \$	2,637,124 \$	4,331,107 \$	263,713 \$	4,690,966 \$	5,714,688 \$	5,953,672 \$	8,240,099 \$	3,995,975 \$	2,317,555 \$	3,052,838 \$	26,371,232,108
4. Changes in Proportionate Share	\$	(67,969,257) \$	49,677,831 \$	26,605,700 \$	(1,870,713) \$	207,858 \$	- s	415,715 \$	- s	(207,857) \$	(2,286,428) \$	(415,712) \$	(2,702,139) \$	(831,427) \$	(207,856) \$	(415,715) \$	-
5. Balances at June 30, 2016	\$	25,321,393,354 \$	732,856,540 \$	278,480,211 \$	2,109,699 \$	1,845,986 \$	2,637,124 \$	4,746,822 \$	263,713 \$	4,483,109 \$	3,428,260 \$	5,537,960 \$	5,537,960 \$	3,164,548 \$	2,109,699 \$	2,637,123 \$	26,371,232,108

NYC Office of the Actuary

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Schedule of Employer Allocations June 30, 2017

Employer	2017 Actual Employer Contributions	Employer Allocation Percentage
Department of Education	\$ 3,757,187,310	96.627%
CUNY Senior Colleges	84,575,367	2.175%
CUNY Community Colleges	38,469,761	0.989%
Beginning with Children Charter School	569,990	0.015%
Future Leaders Charter School	466,710	0.012%
Harriet Tubman Charter School	519,929	0.013%
KIPP Academy Charter School	1,108,024	0.028%
KIPP AMP Charter School	170,722	0.004%
KIPP Infinity Charter School	951,455	0.024%
Opportunity Charter School	841,436	0.022%
Renaissance Charter School	1,256,792	0.032%
UFT Charter School	565,420	0.015%
University Prep Charter High School	710,248	0.018%
Voice Charter School	356,461	0.009%
Wildcat Charter School	649,845	0.017%
Total	\$ 3,888,399,470	100.0000%

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1.	Balances at June 30, 2016	\$ 70,000,777,108	\$ 43,629,545,000 \$	26,371,232,108
2.	Changes for the Year:			
	a. Service Cost	1,386,673,964	0	1,386,673,964
	b. Interest	5,147,042,567	0	5,147,042,567
	c. Differences b/t expected and actual experience	1,008,248,813	0	1,008,248,813
	d. Change of Assumptions	0	0	0
	e. Contributions - employer	0	3,888,399,000	(3,888,399,000)
	f. Contributions - other employer <sup>1</sup>	0	57,369,000	(57,369,000)
	g. Contributions - employee	0	180,076,000	(180,076,000)
	h. Net Investment Income	0	8,133,280,000	(8,133,280,000)
	i. Benefit payments	(4,219,312,000)	(4,219,312,000)	0
	j. Payment of Interest on TDA Fixed Funds	0	(1,466,615,000)	1,466,615,000
	k. Administrative expenses	0	(60,790,000)	60,790,000
	l. Other changes	0	(46,229,000)	46,229,000
	m. Net Changes	\$ 3,322,653,344	\$ 6,466,178,000 \$	(3,143,524,656)
3.	Balances at June 30, 2017	\$ 73,323,430,452	\$ 50,095,723,000 \$	23,227,707,452

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Department of Education Balances at June 30, 2017

1. Balances at June 30, 2016 96.019%	<u> </u>	Total Pension Liability (a) 67,214,046,167	\$ Plan Fiduciary Net Position (b) 41,892,652,813	\$ Net Pension Liability (a) - (b) 25,321,393,354
2. Changes for the Year:				
a. Service Cost		1,339,901,449	0	1,339,901,449
b. Interest		4,973,432,821	0	4,973,432,821
c. Differences b/t expected and actual experience		974,240,580	0	974,240,580
d. Change of Assumptions		0	0	0
e. Contributions - employer		0	3,757,186,840	(3,757,186,840)
f. Contributions - other employer <sup>1</sup>		0	55,433,945	(55,433,945)
g. Contributions - employee		0	174,002,037	(174,002,037)
h. Net Investment Income		0	7,858,944,466	(7,858,944,466)
i. Benefit payments		(4,076,994,606)	(4,076,994,606)	0
j. Payment of Interest on TDA Fixed Funds		0	(1,417,146,076)	1,417,146,076
k. Administrative expenses		0	(58,739,551)	58,739,551
<ol> <li>Other changes</li> </ol>		0	(44,669,697)	44,669,697
m. Net Changes	\$	3,210,580,244	\$ 6,248,017,358	\$ (3,037,437,114)
3. SubTotal	\$	70,424,626,411	\$ 48,140,670,171	\$ 22,283,956,240
4. Changes in Proportionate Share	\$	425,604,726	\$ 265,267,635	\$ 160,337,091
5. Balances at June 30, 2017 96.627%	\$	70,850,231,137	\$ 48,405,937,806	\$ 22,444,293,331

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source CUNY Senior Colleges Balances at June 30, 2017

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2016 2.779%	\$ 1,945,321,596	\$ 1,212,465,056	\$ 732,856,540
2. Changes for the Year:			
a. Service Cost	30,160,159	0	30,160,159
b. Interest	111,948,176	0	111,948,176
c. Differences b/t expected and actual experience	21,929,412	0	21,929,412
d. Change of Assumptions	0	0	0
e. Contributions - employer	0	84,575,367	(84,575,367)
f. Contributions - other employer <sup>1</sup>	0	1,247,776	(1,247,776)
g. Contributions - employee	0	3,916,653	(3,916,653)
h. Net Investment Income	0	176,898,840	(176,898,840)
i. Benefit payments	(91,770,036)	(91,770,036)	0
j. Payment of Interest on TDA Fixed Funds	0	(31,898,876)	31,898,876
k. Administrative expenses	0	(1,322,183)	1,322,183
<ol> <li>Other changes</li> </ol>	 0	(1,005,481)	1,005,481
m. Net Changes	\$ 72,267,711	\$ 140,642,060	\$ (68,374,349)
3. SubTotal	\$ 2,017,589,307	\$ 1,353,107,116	\$ 664,482,191
4. Changes in Proportionate Share	\$ (422,804,695)	\$ (263,522,453)	\$ (159,282,242)
5. Balances at June 30, 2017 2.175%	\$ 1,594,784,612	\$ 1,089,584,663	\$ 505,199,949

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source CUNY Community Colleges Balances at June 30, 2017

	 Total Pension Liability (a)	 Plan Fiduciary Net Position (b)	 Net Pension Liability (a) - (b)
1. Balances at June 30, 2016 1.056%	\$ 739,208,206	\$ 460,727,995	\$ 278,480,211
2. Changes for the Year:			
a. Service Cost	13,714,206	0	13,714,206
b. Interest	50,904,251	0	50,904,251
c. Differences b/t expected and actual experience	9,971,581	0	9,971,581
d. Change of Assumptions	0	0	0
e. Contributions - employer	0	38,469,761	(38,469,761)
f. Contributions - other employer <sup>1</sup>	0	567,379	(567,379)
g. Contributions - employee	0	1,780,952	(1,780,952)
h. Net Investment Income	0	80,438,139	(80,438,139)
<ol> <li>Benefit payments</li> </ol>	(41,728,996)	(41,728,996)	0
<ol> <li>Payment of Interest on TDA Fixed Funds</li> </ol>	0	(14,504,822)	14,504,822
k. Administrative expenses	0	(601,213)	601,213
<ol> <li>Other changes</li> </ol>	 0	(457,205)	457,205
m. Net Changes	\$ 32,861,042	\$ 63,963,995	\$ (31,102,953)
3. SubTotal	\$ 772,069,248	\$ 524,691,990	\$ 247,377,258
4. Changes in Proportionate Share	\$ (46,900,521)	\$ (29,231,796)	\$ (17,668,725)
5. Balances at June 30, 2017 0.989%	\$ 725,168,727	\$ 495,460,194	\$ 229,708,533

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Beginning with Children Charter School Balances at June 30, 2017

			Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1.	Balances at June 30, 2016	0.008%	\$ 5,600,063	\$ 3,490,364	\$ 2,109,699
2.	Changes for the Year:				
	a. Service Cost		208,001	0	208,001
	b. Interest		772,056	0	772,056
	c. Differences b/t expected and actu	al experience	151,237	0	151,237
	d. Change of Assumptions		0	0	0
	e. Contributions - employer		0	569,990	(569,990)
	f. Contributions - other employer <sup>1</sup>		0	8,605	(8,605)
	g. Contributions - employee		0	27,011	(27,011)
	h. Net Investment Income		0	1,219,992	(1,219,992)
	i. Benefit payments		(632,897)	(632,897)	0
	j. Payment of Interest on TDA Fixe	d Funds	0	(219,992)	219,992
	k. Administrative expenses		0	(9,119)	9,119
	<ol> <li>Other changes</li> </ol>		 0	(6,934)	6,934
	m. Net Changes		\$ 498,397	\$ 956,656	\$ (458,259)
3.	SubTotal		\$ 6,098,460	\$ 4,447,020	\$ 1,651,440
4.	Changes in Proportionate Share		\$ 4,900,056	\$ 3,054,070	\$ 1,845,986
5.	Balances at June 30, 2017	0.015%	\$ 10,998,516	\$ 7,501,090	\$ 3,497,426

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Future Leaders Charter School Balances at June 30, 2017

			Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)		
1.	. Balances at June 30, 2016 0.007%		\$ 4,900,054	\$ 3,054,068	\$ 1,845,986		
2.	Changes for the Year:						
	a. Service Cost		166,401	0	166,401		
	b. Interest		617,645	0	617,645		
	c. Differences b/t expected and actua	al experience	120,990	0	120,990		
	d. Change of Assumptions		0	0	0		
	e. Contributions - employer		0	466,710	(466,710)		
	f. Contributions - other employer <sup>1</sup>		0	6,884	(6,884)		
	g. Contributions - employee		0	21,609	(21,609)		
	h. Net Investment Income		0	975,994	(975,994)		
	i. Benefit payments		(506,317)	(506,317)	0		
	j. Payment of Interest on TDA Fixed	d Funds	0	(175,994)	175,994		
	k. Administrative expenses		0	(7,295)	7,295		
	<ol> <li>Other changes</li> </ol>		0	(5,547)	5,547		
	m. Net Changes		\$ 398,719	\$ 776,044	\$ (377,325)		
3.	SubTotal		\$ 5,298,773	\$ 3,830,112	\$ 1,468,661		
4.	Changes in Proportionate Share		\$ 3,500,039	\$ 2,181,477	\$ 1,318,562		
5.	Balances at June 30, 2017	0.012%	\$ 8,798,812	\$ 6,011,589	\$ 2,787,223		

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Harriet Tubman Charter School Balances at June 30, 2017

	 Total Pension Liability (a)		Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2016 0.010%	\$ 7,000,077	\$	4,362,953	\$	2,637,124	
2. Changes for the Year:						
a. Service Cost	180,268		0		180,268	
b. Interest	669,116		0		669,116	
c. Differences b/t expected and actual experience	131,072		0		131,072	
d. Change of Assumptions	0		0		0	
e. Contributions - employer	0		519,929		(519,929)	
f. Contributions - other employer <sup>1</sup>	0		7,458		(7,458)	
g. Contributions - employee	0		23,410		(23,410)	
h. Net Investment Income	0		1,057,326		(1,057,326)	
<ol> <li>Benefit payments</li> </ol>	(548,511)		(548,511)		0	
j. Payment of Interest on TDA Fixed Funds	0		(190,660)		190,660	
k. Administrative expenses	0		(7,903)		7,903	
<ol> <li>Other changes</li> </ol>	 0		(6,010)		6,010	
m. Net Changes	\$ 431,945	\$	855,039	\$	(423,094)	
3. SubTotal	\$ 7,432,022	\$	5,217,992	\$	2,214,030	
4. Changes in Proportionate Share	\$ 2,100,023 \$ 1,36		1,308,886	\$	791,137	
5. Balances at June 30, 2017 0.013%	\$9,532,045		\$6,526,878		\$3,005,167	

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source KIPP Academy Charter School Balances at June 30, 2017

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2016 0.018%	\$ 12,600,140	\$ 7,853,318	\$ 4,746,822		
2. Changes for the Year:					
a. Service Cost	388,269	0	388,269		
b. Interest	1,441,172	0	1,441,172		
c. Differences b/t expected and actual experience	282,310	0	282,310		
d. Change of Assumptions	0	0	0		
e. Contributions - employer	0	1,108,024	(1,108,024)		
f. Contributions - other employer <sup>1</sup>	0	16,063	(16,063)		
g. Contributions - employee	0	50,421	(50,421)		
h. Net Investment Income	0	2,277,318	(2,277,318)		
i. Benefit payments	(1,181,407)	(1,181,407)	0		
j. Payment of Interest on TDA Fixed Funds	0	(410,652)	410,652		
k. Administrative expenses	0	(17,021)	17,021		
<ol> <li>Other changes</li> </ol>	 0	(12,944)	12,944		
m. Net Changes	\$ 930,344	\$ 1,829,802	\$ (899,458)		
3. SubTotal	\$ 13,530,484	\$ 9,683,120	\$ 3,847,364		
4. Changes in Proportionate Share	\$ 7,000,077	\$ 4,362,954	\$ 2,637,123		
5. Balances at June 30, 2017 0.028%	\$ 20,530,561	\$ 14,046,074	\$ 6,484,487		

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source KIPP AMP Charter School Balances at June 30, 2017

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2016	0.001%	\$ 700,008	\$ 436,295	\$ 263,713		
2. Changes for the Year:						
a. Service Cost		55,467	0	55,467		
b. Interest		205,882	0	205,882		
c. Differences b/t expected and a	actual experience	40,330	0	40,330		
d. Change of Assumptions		0	0	0		
e. Contributions - employer		0	170,722	(170,722)		
f. Contributions - other employe	er <sup>1</sup>	0	2,295	(2,295)		
g. Contributions - employee		0	7,203	(7,203)		
h. Net Investment Income		0	325,331	(325,331)		
<ol> <li>Benefit payments</li> </ol>		(168,772)	(168,772)	0		
<ol> <li>Payment of Interest on TDA I</li> </ol>	Fixed Funds	0	(58,665)	58,665		
k. Administrative expenses		0	(2,432)	2,432		
<ol> <li>Other changes</li> </ol>		 0	(1,849)	1,849		
m. Net Changes		\$ 132,907	\$ 273,833	\$ (140,926)		
3. SubTotal		\$ 832,915	\$ 710,128	\$ 122,787		
4. Changes in Proportionate Share		\$ 2,100,022	\$ 1,308,885	\$ 791,137		
5. Balances at June 30, 2017	0.004%	\$ 2,932,937	\$ 2,019,013	\$ 913,924		

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source KIPP Infinity Charter School Balances at June 30, 2017

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2016 0.017%	\$ 11,900,132	\$ 7,417,023	\$ 4,483,109		
2. Changes for the Year:					
a. Service Cost	332,802	0	332,802		
b. Interest	1,235,290	0	1,235,290		
c. Differences b/t expected and actual experience	241,980	0	241,980		
d. Change of Assumptions	0	0	0		
e. Contributions - employer	0	951,455	(951,455)		
f. Contributions - other employer <sup>1</sup>	0	13,769	(13,769)		
g. Contributions - employee	0	43,218	(43,218)		
h. Net Investment Income	0	1,951,987	(1,951,987)		
i. Benefit payments	(1,012,635)	(1,012,635)	0		
j. Payment of Interest on TDA Fixed Funds	0	(351,988)	351,988		
k. Administrative expenses	0	(14,590)	14,590		
<ol> <li>Other changes</li> </ol>	 0	(11,095)	11,095		
m. Net Changes	\$ 797,437	\$ 1,570,121	\$ (772,684)		
3. SubTotal	\$ 12,697,569	\$ 8,987,144	\$ 3,710,425		
4. Changes in Proportionate Share	\$ 4,900,054	\$ 3,054,067	\$ 1,845,987		
5. Balances at June 30, 2017 0.024%	\$ 17,597,623	\$ 12,041,211	\$ 5,556,412		

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Opportunity Charter School Balances at June 30, 2017

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2016 0.013%	\$ 9,100,101	\$ 5,671,841	\$ 3,428,260		
2. Changes for the Year:					
a. Service Cost	305,068	0	305,068		
b. Interest	1,132,349	0	1,132,349		
c. Differences b/t expected and actual experience	221,815	0	221,815		
d. Change of Assumptions	0	0	0		
e. Contributions - employer	0	841,436	(841,436)		
f. Contributions - other employer <sup>1</sup>	0	12,621	(12,621)		
g. Contributions - employee	0	39,617	(39,617)		
h. Net Investment Income	0	1,789,322	(1,789,322)		
i. Benefit payments	(928,249)	(928,249)	0		
<ul> <li>j. Payment of Interest on TDA Fixed Funds</li> </ul>	0	(322,655)	322,655		
k. Administrative expenses	0	(13,374)	13,374		
l. Other changes	 0	(10,170)	10,170		
m. Net Changes	\$ 730,983	\$ 1,408,548	\$ (677,565)		
3. SubTotal	\$ 9,831,084	\$ 7,080,389	\$ 2,750,695		
4. Changes in Proportionate Share	\$ 6,300,071	\$ 3,926,660	\$ 2,373,411		
5. Balances at June 30, 2017 0.022%	\$ 16,131,155	\$ 11,007,049	\$ 5,124,106		

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Renaissance Charter School Balances at June 30, 2017

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2016 0.021%	\$ 14,700,165	\$ 9,162,205	\$ 5,537,960		
2. Changes for the Year:					
a. Service Cost	443,736	0	443,736		
b. Interest	1,647,054	0	1,647,054		
c. Differences b/t expected and actual experience	322,640	0	322,640		
d. Change of Assumptions	0	0	0		
e. Contributions - employer	0	1,256,792	(1,256,792)		
f. Contributions - other employer <sup>1</sup>	0	18,358	(18,358)		
g. Contributions - employee	0	57,624	(57,624)		
h. Net Investment Income	0	2,602,650	(2,602,650)		
i. Benefit payments	(1,350,180)	(1,350,180)	0		
j. Payment of Interest on TDA Fixed Funds	0	(469,317)	469,317		
k. Administrative expenses	0	(19,453)	19,453		
l. Other changes	 0	(14,793)	14,793		
m. Net Changes	\$ 1,063,250	\$ 2,081,681	\$ (1,018,431)		
3. SubTotal	\$ 15,763,415	\$ 11,243,886	\$ 4,519,529		
4. Changes in Proportionate Share	\$ 7,700,085	\$ 4,799,250	\$ 2,900,835		
5. Balances at June 30, 2017 0.032%	\$ 23,463,500	\$ 16,043,136	\$ 7,420,364		

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source UFT Charter School Balances at June 30, 2017

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2016 0.021%	\$ 14,700,165	\$ 9,162,205	\$	5,537,960	
2. Changes for the Year:					
a. Service Cost	208,001	0		208,001	
b. Interest	772,056	0		772,056	
c. Differences b/t expected and actual experience	151,237	0		151,237	
d. Change of Assumptions	0	0		0	
e. Contributions - employer	0	565,420		(565,420)	
f. Contributions - other employer <sup>1</sup>	0	8,605		(8,605)	
g. Contributions - employee	0	27,011		(27,011)	
h. Net Investment Income	0	1,219,992		(1,219,992)	
i. Benefit payments	(632,897)	(632,897)		0	
j. Payment of Interest on TDA Fixed Funds	0	(219,992)		219,992	
k. Administrative expenses	0	(9,119)		9,119	
l. Other changes	 0	(6,934)		6,934	
m. Net Changes	\$ 498,397	\$ 952,086	\$	(453,689)	
3. SubTotal	\$ 15,198,562	\$ 10,114,291	\$	5,084,271	
4. Changes in Proportionate Share	\$ (4,200,045)	\$ (2,617,771)	\$	(1,582,274)	
5. Balances at June 30, 2017 0.015%	\$ 10,998,517	\$ 7,496,520	\$	3,501,997	

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source University Prep Charter High School Balances at June 30, 2017

	 Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2016 0.012%	\$ 8,400,093	\$ 5,235,545	\$ 3,164,548		
2. Changes for the Year:					
a. Service Cost	249,601	0	249,601		
b. Interest	926,468	0	926,468		
c. Differences b/t expected and actual experience	181,485	0	181,485		
d. Change of Assumptions	0	0	0		
e. Contributions - employer	0	710,248	(710,248)		
f. Contributions - other employer <sup>1</sup>	0	10,326	(10,326)		
g. Contributions - employee	0	32,414	(32,414)		
h. Net Investment Income	0	1,463,990	(1,463,990)		
i. Benefit payments	(759,476)	(759,476)	0		
j. Payment of Interest on TDA Fixed Funds	0	(263,991)	263,991		
k. Administrative expenses	0	(10,942)	10,942		
<ol> <li>Other changes</li> </ol>	 0	(8,321)	8,321		
m. Net Changes	\$ 598,078	\$ 1,174,248	\$ (576,170)		
3. SubTotal	\$ 8,998,171	\$ 6,409,793	\$ 2,588,378		
4. Changes in Proportionate Share	\$ 4,200,046	\$ 2,617,772	\$ 1,582,274		
5. Balances at June 30, 2017 0.018%	\$ 13,198,217	\$ 9,027,565	\$ 4,170,652		

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Voice Charter School Balances at June 30, 2017

	 Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2016 0.008%	\$ 5,600,063	\$ 3,490,364	\$ 2,109,699		
2. Changes for the Year:					
a. Service Cost	124,801	0	124,801		
b. Interest	463,234	0	463,234		
c. Differences b/t expected and actual experience	90,742	0	90,742		
d. Change of Assumptions	0	0	0		
e. Contributions - employer	0	356,461	(356,461)		
f. Contributions - other employer <sup>1</sup>	0	5,163	(5,163)		
g. Contributions - employee	0	16,207	(16,207)		
h. Net Investment Income	0	731,995	(731,995)		
i. Benefit payments	(379,738)	(379,738)	0		
j. Payment of Interest on TDA Fixed Funds	0	(131,995)	131,995		
k. Administrative expenses	0	(5,471)	5,471		
l. Other changes	 0	(4,161)	4,161		
m. Net Changes	\$ 299,039	\$ 588,461	\$ (289,422)		
3. SubTotal	\$ 5,899,102	\$ 4,078,825	\$ 1,820,277		
4. Changes in Proportionate Share	\$ 700,008	\$ 436,296	\$ 263,712		
5. Balances at June 30, 2017 0.009%	\$ 6,599,110	\$ 4,515,121	\$ 2,083,989		

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Net Pension Liability (NPL) by Source Wildcat Charter School Balances at June 30, 2017

		 Fotal Pension Liability (a)	lan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)		
1. Balances at June 30, 2016	\$ 7,000,078	\$ 4,362,955	\$	2,637,123		
2. Changes for the Year:						
a. Service Cost		235,735	0		235,735	
b. Interest		874,997	0		874,997	
c. Differences b/t expected and a	ctual experience	171,402	0		171,402	
d. Change of Assumptions		0	0		0	
e. Contributions - employer		0	649,845		(649,845)	
f. Contributions - other employe	r <sup>1</sup>	0	9,753		(9,753)	
g. Contributions - employee		0	30,613		(30,613)	
h. Net Investment Income		0	1,382,658		(1,382,658)	
i. Benefit payments		(717,283)	(717,283)		0	
<ol> <li>Payment of Interest on TDA F</li> </ol>	ixed Funds	0	(249,325)		249,325	
k. Administrative expenses		0	(10,334)		10,334	
<ol> <li>Other changes</li> </ol>		 0	(7,859)		7,859	
m. Net Changes		\$ 564,851	\$ 1,088,068	\$	(523,217)	
3. SubTotal		\$ 7,564,929	\$ 5,451,023	\$	2,113,906	
4. Changes in Proportionate Share		\$ 4,900,054	\$ 3,054,068	\$	1,845,986	
5. Balances at June 30, 2017	0.017%	\$ 12,464,983	\$ 8,505,091	\$	3,959,892	

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source - by Obligor Balances at June 30, 2017

								Tota	l Pension Li	iability							
1. Balances at June 30, 2016	s	DEPT. OF ED. 67,214,046,167 \$	SENIOR COLL. 1,945,321,596 \$	COMM. COLL. 739,208,206 \$	BWC 5,600,063 \$	FUT. LEAD. 4,900,054 \$	H. TUBMAN 7,000,077 \$	KIPP ACAD. 12,600,140 \$	KIPP AMP 700,008 \$	KIPP INF. 11,900,132 \$	OPPOR. 9,100,101 \$	REN. 14,700,165 \$	<u>UFT</u> 14,700,165 \$	UNIV PREP 8,400,093 \$	VOICE 5,600,063 \$	WILDCAT 7,000,078 \$	TOTAL 70,000,777,108
2. Changes for the Year:																	
a. Service Cost		1,339,901,449	30,160,159	13,714,206	208,001	166,401	180,268	388,269	55,467	332,802	305,068	443,736	208,001	249,601	124,801	235,735	1,386,673,964
b. Interest		4,973,432,821	111,948,176	50,904,251	772,056	617,645	669,116	1,441,172	205,882	1,235,290	1,132,349	1,647,054	772,056	926,468	463,234	874,997	5,147,042,567
<ul> <li>Differences b/t Expected and Actual Experience</li> </ul>		974,240,580	21,929,412	9,971,581	151,237	120,990	131,072	282,310	40,330	241,980	221,815	322,640	151,237	181,485	90,742	171,402	1,008,248,813
d. Changes of Assumptions		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
e. Benefit Payments	s	(4,076,994,606) 3,210,580,244 \$	(91,770,036)	(41,728,996)	(632,897)	(506,317)	(548,511)	(1,181,407)	(168,772)	(1,012,635)	(928,249)	(1,350,180)	(632,897)	(759,476)	(379,738)	(717,283)	(4,219,312,000)
f. Net Changes	,		72,267,711 \$	32,861,042 \$	498,397 \$	398,719 \$	431,945 \$	930,344 \$	132,907 \$	797,437 \$	730,983 \$	1,063,250 \$	498,397 \$	598,078 \$	299,039 \$	564,851 \$	
3. SubTotal	s	70,424,626,411 \$	2,017,589,307 \$	772,069,248 \$	6,098,460 \$	5,298,773 \$	7,432,022 \$	13,530,484 \$	832,915 \$	12,697,569 \$	9,831,084 \$	15,763,415 \$	15,198,562 \$	8,998,171 \$	5,899,102 \$	7,564,929 \$	73,323,430,452
4. Changes in Proportionate Share	s	425,604,726 \$	(422,804,695) \$	(46,900,521) \$	4,900,056 \$	3,500,039 \$	2,100,023 \$	7,000,077 \$	2,100,022 \$	4,900,054 \$	6,300,071 \$	7,700,085 \$	(4,200,045) \$	4,200,046 \$	700,008 \$	4,900,054 \$	-
5. Balances at June 30, 2017	s	70,850,231,137 \$	1,594,784,612 \$	725,168,727 \$	10,998,516 \$	8,798,812 \$	9,532,045 \$	20,530,561 \$	2,932,937 \$	17,597,623 \$	16,131,155 \$	23,463,500 \$	10,998,517 \$	13,198,217 \$	6,599,110 \$	12,464,983 \$	73,323,430,452
								Plan Fi	duciary Ne	t Position							
	-	DEPT. OF ED.	SENIOR COLL.	COMM, COLL.	BWC	FUT. LEAD.	H. TUBMAN	KIPP ACAD.	KIPP AMP	KIPP INF.	OPPOR.	REN.	UFT	UNIV PREP	VOICE	WILDCAT	TOTAL
1. Balances at June 30, 2016	s	41,892,652,813 \$	1,212,465,056 \$	460,727,995 \$	3,490,364 \$	3,054,068 \$	4,362,953 \$	7,853,318 \$	436,295 \$	7,417,023 \$	5,671,841 \$	9,162,205 \$	9,162,205 \$	5,235,545 \$	3,490,364 \$	4,362,955 \$	43,629,545,000
Changes for the Year:     a. Contributions - Employer		3.757.186.840	84.575.367	38.469.761	569,990	466.710	519,929	1.108.024	170.722	951,455	841.436	1.256.792	565,420	710.248	356.461	649,845	3.888.399.000
b. Contributions - Other Employer <sup>1</sup>		55,433,945	1.247.776	567.379	8,605	6.884	7.458	16,063	2,295	13.769	12,621	18,358	8,605	10.326	5.163	9.753	57,369,000
c. Contributions - Employee		174,002,037	3,916,653	1.780.952	27.011	21.609	23,410	50.421	7.203	43.218	39,617	57.624	27.011	32,414	16.207	30.613	180.076.000
d. Net Investment Income		7,858,944,466	176,898,840	80,438,139	1,219,992	975,994	1,057,326	2,277,318	325,331	1,951,987	1,789,322	2,602,650	1,219,992	1,463,990	731,995	1,382,658	8,133,280,000
e. Benefit Payments		(4,076,994,606)	(91,770,036)	(41,728,996)	(632,897)	(506,317)	(548,511)	(1,181,407)	(168,772)	(1,012,635)	(928,249)	(1,350,180)	(632,897)	(759,476)	(379,738)	(717,283)	(4,219,312,000)
<ol> <li>Payment of Interest on TDA Fixed Funds</li> </ol>		(1,417,146,076)	(31,898,876)	(14,504,822)	(219,992)	(175,994)	(190,660)	(410,652)	(58,665)	(351,988)	(322,655)	(469,317)	(219,992)	(263,991)	(131,995)	(249,325)	(1,466,615,000)
g. Administrative Expenses		(58,739,551)	(1,322,183)	(601,213)	(9,119)	(7,295)	(7,903)	(17,021)	(2,432)	(14,590)	(13,374)	(19,453)	(9,119)	(10,942)	(5,471)	(10,334)	(60,790,000)
h. Other Changes i. Net Changes	s	(44,669,697) 6,248,017,358 \$	(1,005,481) 140,642,060 \$	(457,205) 63,963,995 \$	(6,934) 956,656 \$	(5,547) 776,044 \$	(6,010) 855,039 \$	(12,944) 1,829,802 \$	(1,849) 273,833 \$	(11,095) 1,570,121 \$	(10,170) 1,408,548 \$	(14,793) 2,081,681 \$	(6,934) 952,086 \$	(8,321) 1,174,248 \$	(4,161) 588,461 \$	(7,859) 1,088,068 \$	(46,229,000) 6,466,178,000
-																	
3. SubTotal	s	48,140,670,171 \$	1,353,107,116 \$	524,691,990 \$	4,447,020 \$	3,830,112 \$	5,217,992 \$	9,683,120 \$	710,128 \$	8,987,144 \$	7,080,389 \$	11,243,886 \$	10,114,291 \$	6,409,793 \$	4,078,825 \$	5,451,023 \$	50,095,723,000
4. Changes in Proportionate Share	s	265,267,635 \$	(263,522,453) \$	(29,231,796) \$	3,054,070 \$	2,181,477 \$	1,308,886 \$	4,362,954 \$	1,308,885 \$	3,054,067 \$	3,926,660 \$	4,799,250 \$	(2,617,771) \$	2,617,772 \$	436,296 \$	3,054,068 \$	-
5. Balances at June 30, 2017	s	48,405,937,806 \$	1,089,584,663 \$	495,460,194 \$	7,501,090 \$	6,011,589 \$	6,526,878 \$	14,046,074 \$	2,019,013 \$	12,041,211 \$	11,007,049 \$	16,043,136 \$	7,496,520 \$	9,027,565 \$	4,515,121 \$	8,505,091 \$	50,095,723,000
								Net	Pension Lia	ability							
	-	DEPT. OF ED.	SENIOR COLL.	COMM. COLL.	BWC	FUT. LEAD.	H. TUBMAN	KIPP ACAD.	KIPP AMP	KIPP INF.	OPPOR.	REN.	UFT	UNIV PREP	VOICE	WILDCAT	TOTAL
1. Balances at June 30, 2016	s	25,321,393,354 \$	732,856,540 \$	278,480,211 \$	2,109,699 \$	1,845,986 \$	2,637,124 \$	4,746,822 \$	263,713 \$	4,483,109 \$	3,428,260 \$	5,537,960 \$	5,537,960 \$	3,164,548 \$	2,109,699 \$	2,637,123 \$	26,371,232,108
2. Changes for the Year:																	
a. Service Cost		1,339,901,449	30,160,159	13,714,206	208,001	166,401	180,268	388,269	55,467	332,802	305,068	443,736	208,001	249,601	124,801	235,735	1,386,673,964
b. Interest		4,973,432,821	111,948,176	50,904,251	772,056	617,645	669,116	1,441,172	205,882	1,235,290	1,132,349	1,647,054	772,056	926,468	463,234	874,997	5,147,042,567
<ul> <li>Differences b/t Expected and Actual Experience</li> <li>Changes of Assumptions</li> </ul>		974,240,580	21,929,412	9,971,581	151,237	120,990	131,072	282,310	40,330	241,980	221,815	322,640	151,237 0	181,485 0	90,742	171,402 0	1,008,248,813
e. Contributions - Employer		(3.757.186.840)	(84.575.367)	(38.469.761)	(569,990)	(466.710)	(519.929)	(1.108.024)	(170.722)	(951,455)	(841.436)	(1.256,792)	(565,420)	(710.248)	(356,461)	(649.845)	(3.888.399.000)
f. Contributions - Other Employer		(55,433,945)	(1,247,776)	(567,379)	(8,605)	(6,884)	(7,458)	(16,063)	(2,295)	(13,769)	(12,621)	(18,358)	(8,605)	(10,326)	(5,163)	(9,753)	(57,369,000)
g. Contributions - Employee		(174,002,037)	(3,916,653)	(1,780,952)	(27,011)	(21,609)	(23,410)	(50,421)	(7,203)	(43,218)	(39,617)	(57,624)	(27,011)	(32,414)	(16,207)	(30,613)	(180,076,000)
h. Net Investment Income		(7,858,944,466)	(176,898,840)	(80,438,139)	(1,219,992)	(975,994)	(1,057,326)	(2,277,318)	(325,331)	(1,951,987)	(1,789,322)	(2,602,650)	(1,219,992)	(1,463,990)	(731,995)	(1,382,658)	(8,133,280,000)
<ol> <li>Benefit Payments</li> </ol>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
j. Payment of Interest on TDA Fixed Funds		1,417,146,076	31,898,876	14,504,822	219,992	175,994	190,660 7.903	410,652	58,665	351,988	322,655	469,317	219,992	263,991 10,942	131,995	249,325	1,466,615,000
k. Administrative Expenses L. Other Changes		58,739,551 44,669,697	1,322,183 1.005,481	601,213 457,205	9,119 6,934	7,295 5,547	6.010	17,021 12,944	2,432 1.849	14,590 11.095	13,374 10,170	19,453 14,793	9,119 6,934	10,942 8.321	5,471 4,161	10,334 7.859	60,790,000 46,229,000
m. Net Changes	s	(3,037,437,114) \$	(68,374,349) \$	(31,102,953) \$	(458,259) \$	(377,325) \$	(423,094) \$	(899,458) \$	(140,926) \$	(772,684) \$	(677,565) \$	(1,018,431) \$	(453,689) \$	(576,170) \$	(289,422) \$	(523,217) \$	(3,143,524,656)
3. SubTotal	s	22,283,956,240 \$	664,482,191 \$	247,377,258 \$	1.651.440 \$	1.468.661 S	2,214,030 \$	3.847.364 \$	122.787 \$	3,710,425 \$	2.750,695 S	4.519.529 \$	5.084,271 \$	2.588.378 \$	1.820.277 \$	2.113.906 \$	23,227,707,452
4. Changes in Proportionate Share	s	160,337,091 \$	(159,282,242) \$	(17,668,725) \$	1,845,986 \$	1,318,562 \$	791,137 \$	2,637,123 \$	791,137 \$	1,845,987 \$	2,373,411 \$	2,900,835 \$	(1,582,274) \$	1,582,274 \$	263,712 \$	1,845,986 \$	
5. Balances at June 30, 2017	s	22,444,293,331 \$	505,199,949 \$	229,708,533 \$	3,497,426 \$	2,787,223 \$	3,005,167 \$	6,484,487 \$	913,924 \$	5,556,412 \$	5,124,106 \$	7,420,364 \$	3,501,997 \$	4,170,652 \$	2,083,989 \$	3,959,892 \$	23,227,707,452

 $^{1} Includes \ amounts \ for \ member's \ portion \ of \ Additional \ Member \ Contributions \ and \ supplemental \ contributions \ for \ the \ ASAF \ and \ ASF \ Funds.$ 

NYC Office of the Actuary

September 29, 2017

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Schedule of Changes in Net Pension Liability and Related Ratios

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
1. Total Pension Liability					
a. Service Cost	\$ 1,386,673,964	\$1,274,307,859	\$1,223,157,877	\$1,205,662,452	\$1,170,546,070
b. Interest	\$ 5,147,042,567	4,131,176,953	4,027,138,338	4,407,702,189	4,176,571,397
c. Changes of Benefit Terms	0	0	0	0	0
d. Differences b/t Expected and Actual Experience	\$ 1,008,248,813	1,229,501,602	1,507,964,351	0	0
e. Changes of Assumptions	0	2,432,878,017	0	0	0
f. Benefit Payments	\$ (4,219,312,000)	(4,107,455,000)	(4,024,272,000)	(3,818,248,000)	(3,619,254,000)
g. Net Changes in Total Pension Liability	\$ 3,322,653,344	\$ 4,960,409,431	\$ 2,733,988,566	\$ 1,795,116,641	\$ 1,727,863,467
2. Total Pension Liability - Beginning	\$ 70,000,777,108	\$ 65,040,367,677	\$ 62,306,379,111	\$ 60,511,262,470	\$ 58,783,399,003
3. Total Pension Liability - Ending	\$ 73,323,430,452	\$ 70,000,777,108	\$ 65,040,367,677	\$ 62,306,379,111	\$ 60,511,262,470
4. Plan Fiduciary Net Position					
a. Contributions - Employer	\$ 3,888,399,000	\$3,760,714,000	\$3,325,528,000	\$3,054,424,000	\$2,912,844,000
b. Contributions - Other Employer <sup>1</sup>	\$ 57,369,000	n/a	n/a	n/a	n/a
c. Contributions - Employee	\$ 180,076,000	173,696,000	158,590,000	154,962,000	154,698,000
d. Net Investment Income	\$ 8,133,280,000	960,267,000	1,611,929,000	9,435,906,000	5,721,112,000
e. Benefit Payments	\$ (4,219,312,000)	(4,107,455,000)	(4,024,272,000)	(3,818,248,000)	(3,619,254,000)
f. Payment of Interest on TDA Fixed Funds	\$ (1,466,615,000)	(1,354,207,000)	(1,248,988,000)	(1,147,923,000)	(1,047,979,000)
g. Administrative Expenses	\$ (60,790,000)	(59,367,000)	(58,391,000)	(46,042,000)	(39,682,000)
h. Other Changes	\$ (46,229,000)	1,233,000	329,000	404,000	(44,000)
i. Net Changes in Fiduciary Net Position	\$ 6,466,178,000	\$ (625,119,000)	\$ (235,275,000)	\$ 7,633,483,000	\$ 4,081,695,000
5. Plan Fiduciary Net Position - Beginning	\$ 43,629,545,000	\$ 44,254,664,000	\$ 44,489,939,000	\$ 36,856,456,000	\$ 32,774,761,000
6. Plan Fiduciary Net Position - Ending	\$ 50,095,723,000	\$ 43,629,545,000	\$ 44,254,664,000	\$ 44,489,939,000	\$ 36,856,456,000
7. TRS' Net Pension Liability	\$ 23,227,707,452	\$ 26,371,232,108	\$ 20,785,703,677	\$ 17,816,440,111	\$ 23,654,806,470
8. Plan Fiduciary Net Position as a Percentage					
of Total Pension Liability	68.3%	62.3%	68.0%	71.4%	60.9%
9. Covered Employee Payroll <sup>2</sup>	\$ 8,818,536,927	\$ 8,256,100,227	\$ 8,074,522,271	\$ 7,996,941,545	\$ 7,964,148,973
10. TRS' Net Pension Liability as a Percentage					
of Covered Employee Payroll	263.4%	319.4%	257.4%	222.8%	297.0%

<sup>&</sup>lt;sup>1</sup> Includes amounts for member's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

<sup>&</sup>lt;sup>2</sup> Projected Employee Payroll at Time 1.0 under One-Year Lag Methodology.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Schedule of Employer Contributions (\$ in thousands)**

Fiscal Year Ended June 30	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially Determined Contribution	\$ 3,888,399 \$	3,702,569 \$	3,270,007 \$	2,998,694 \$	2,855,640 \$	2,673,078 \$	2,468,973 \$	2,484,074 \$	2,223,644 \$	1,916,520
Contributions in relation to the Actuarially Determined Contribution	\$ 3,888,399 \$	3,702,569 \$	3,270,007 \$	2,998,694 \$	2,855,640 \$	2,673,078 \$	2,468,973 \$	2,484,074 \$	2,223,644 \$	1,916,520
Contribution Deficency (Excess)	0	0	0	0	0	0	0	0	0	0
Contributions as a percentage of Covered employee payroll <sup>1</sup>	44.093%	44.846%	40.498%	37.652%	36.455%	33.747%	31.114%	31.604%	30.792%	27.386%

<sup>&</sup>lt;sup>1</sup> The Employer Rate of Contribution equals the Statutory Contribution as a percentage of the salaries of members who were on payroll or projected to be on payroll (under One-Year Lag Methodology) as of the preceding June 30 adjusted, where applicable, to be consistent with collective bargaining agreements estimated to be achieved.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### **Average Expected Remaining Service Lives**

		Future	Average Expected	Average Expected
		WorkLife	Remaining Service Life	Remaining Service Life
<u>Group</u>	<u>Count</u>	@ 6/30/2015	@ 6/30/2015	@ 6/30/2016
Active	114,652	1,685,383	14.70	13.70
Active/Inactive	7,347	0	0	0.00
Term Vested	13,482	0	0	0.00
Retired	<u>82,777</u>	<u>0</u>	<u>0</u>	0.00
Total	218,258	1,685,383	7.72	7.20

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience

		Differences between Expected and Actual	Recognition Period											
Year		Experience	(Years)		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
2015	\$	1,507,964,351	3.88		388,650,606	388,650,606	388,650,606	342,012,533	0	0	0	0	0	0
2016	\$	1,229,501,602	3.84			320,182,709	320,182,709	320,182,709	268,953,475	0	0	0	0	0
2017	\$	1,008,248,813	7.20				140,034,557	140,034,557	140,034,557	140,034,557	140,034,557	140,034,557	140,034,557	28,006,914
2018														
2019														
2020														
Net increase	(decre:	ase) in Pension Expense		<u> </u>	388,650,606	\$ 708,833,315	\$ 848,867,872	\$ 802,229,799	\$ 408,988,032	\$ 140,034,557	\$ 140,034,557	\$ 140,034,557	\$ 140,034,557	\$ 28,006,914

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Increase (Decrease) in Pension Expense Arising from the Recognition of Changes in Assumptions

Year	Differend between Exp and Actu Experier	pected ual	Recognition Period (Years)		2016	2017	2018	2019
2016	\$ 2,432	2,878,017	3.84		633,561,984	633,561,984	633,561,984	532,192,065
2017								
2018								
2019								
2020								
Not ingrassa (	decrease) in Pensio	on Evnanca		•	633,561,984 \$	633,561,984	\$ 633,561,984	\$ 532,192,065

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

#### Differences between Projected and Actual Earnings on Pension Plan

	Earnings on	Recognition									
		recognition									
Pe	Pension Plan	Period									
Iı	Investments	(Years)	2013	2014	2015	2016	2017	2018	2019	2020	2021
	(3,103,533,986)	5	(620,706,797)	(620,706,797)	(620,706,797)	(620,706,797)	(620,706,798)				
	(6,422,090,406)	5		(1,284,418,081)	(1,284,418,081)	(1,284,418,081)	(1,284,418,081)	(1,284,418,082)			
	1,385,375,562	5			277,075,112	277,075,112	277,075,112	277,075,112	277,075,114		
	1,886,427,168	5				377,285,434	377,285,434	377,285,434	377,285,434	377,285,432	
	(4,593,826,280)	5					(918,765,256)	(918,765,256)	(918,765,256)	(918,765,256)	(918,765,256)
ease) i	in Pension Expense		\$ (620,706,797) \$	(1,905,124,878) \$	(1,628,049,766) \$	(1,250,764,332) \$	(2,169,529,589) \$	(1,548,822,792) \$	(264,404,708) \$	(541,479,824) \$	(918,765,256)
ea		(6,422,090,406) 1,385,375,562 1,886,427,168	Investments (Years)   (3,103,533,986)   5   (6,422,090,406)   5   (1,385,375,562   5   1,886,427,168   5   (4,593,826,280)   5	Investments         (Years)         2013           (3,103,533,986)         5         (620,706,797)           (6,422,090,406)         5           1,385,375,562         5           1,886,427,168         5           (4,593,826,280)         5	Investments         (Years)         2013         2014           (3.103,533,986)         5         (620,706,797)         (620,706,797)           (6,422,090,406)         5         (1,284,418,081)           1,385,375,562         5         5           1,886,427,168         5         (4,593,826,280)           5         (4,593,826,280)         5	Investments         (Years)         2013         2014         2015           (3,103,533,986)         5         (620,706,797)         (620,706,797)         (620,706,797)           (6,422,090,406)         5         (1,284,418,081)         (1,284,418,081)           1,385,375,562         5         277,075,112           1,886,427,168         5         277,075,112           (4,593,826,280)         5	Investments         (Years)         2013         2014         2015         2016           (3,103,533,986)         5         (620,706,797)         (620,706,797)         (620,706,797)         (620,706,797)           (6,422,090,406)         5         (1,284,418,081)         (1,284,418,081)         (1,284,418,081)           1,385,375,562         5         277,075,112         277,075,112         377,285,434           (4,593,826,280)         5         377,285,434         377,285,434	New   New	New Horse   New	New Horse   New	New Horsements   New Horsements   Years   2013   2014   2015   2016   2017   2018   2019   2020

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Proportionate Share Changes in Proportionate Share at 6/30/2015

Department of	(1)	(2)	(3)	(3)-(2)					
Education	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 96.354%	Proportionate Share at 6/30/2015 96.346%	Change in Proportionate Share	Recognition Period (Years)		nt to Recognize the Fiscal Yea 2016		
Deferred Outflows of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows of Resources	(6,999,792,717)	(6,744,580,274)	(6,744,020,291)	559,983	3.88	144,326	144,326	144,326	127,005
Net Pension Liability	(17,816,440,111)	(17,166,852,703)	(17,165,427,389)	1,425,314	3.88	367,349	367,349	367,349	323,267
Total	(24,816,232,828)	(23,911,432,977)	(23,909,447,680)	1,985,297		511,675	511,675	511,675	450,272
CUNY Senior Colleges	(1) Collective Amount at 6/30/2014	(2) Proportionate Share at 6/30/2014 2.502%	(3) Proportionate Share at 6/30/2015 2.540%	(3)-(2) Change in Proportionate Share	Recognition Period (Years)		nt to Recognize the Fiscal Yea 2016	-	
Deferred Outflows of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows of Resources	(6,999,792,717)	(175,134,814)	(177,794,735)	(2,659,921)	3.88	(685,547)	(685,547)	(685,547)	(603,280)
Net Pension Liability	(17,816,440,111)	(445,767,332)	(452,537,579)	(6,770,247)	3.88	(1,744,909)	(1,744,909)	(1,744,909)	(1,535,520)
Total	(24,816,232,828)	(620,902,146)	(630,332,314)	(9,430,168)		(2,430,456)	(2,430,456)	(2,430,456)	(2,138,800)
CUNY Community Colleges	(1) Collective Amount at 6/30/2014	(2) Proportionate Share at 6/30/2014 0.921%	(3) Proportionate Share at 6/30/2015 0.928%	(3)-(2)  Change in  Proportionate  Share	Recognition Period (Years)		nt to Recognize the Fiscal Yea 2016	-	
Deferred Outflows of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows of Resources	(6,999,792,717)	(64,468,091)	(64,958,076)	(489,985)	3.88	(126,285)	(126,285)	(126,285)	(111,130)
Net Pension Liability	(17,816,440,111)	(164,089,413)	(165,336,564)	(1,247,151)	3.88	(321,431)	(321,431)	(321,431)	(282,858)
Total	(24,816,232,828)	(228,557,504)	(230,294,640)	(1,737,136)		(447,716)	(447,716)	(447,716)	(393,988)
Beginning with Children Charter School	(1) Collective Amount at 6/30/2014	(2) Proportionate Share at 6/30/2014 0.018%	(3) Proportionate Share at 6/30/2015 0.017%	(3)-(2)  Change in  Proportionate  Share	Recognition Period (Years)		nt to Recognize the Fiscal Yea 2016	_	
Deferred Outflows of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows of Resources	(6,999,792,717)	(1,259,963)	(1,189,965)	69,998	3.88	18,041	18,041	18,041	15,875
Net Pension Liability	(17,816,440,111)	(3,206,959)	(3,028,795)	178,164	3.88	45,919	45,919	45,919	40,407
Total	(24,816,232,828)	(4,466,922)	(4,218,760)	248,162		63,960	63,960	63,960	56,282

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Proportionate Share Changes in Proportionate Share at 6/30/2015

Future Leaders	(1)	(2)	(3)	(3)-(2)					
Charter School	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.009%	Proportionate Share at 6/30/2015 0.006%	Change in Proportionate Share	Recognition Period (Years)		_	n Pension Expe Ended June 30 2017	nse 2018
Deferred Outflows of Resources	0	0.00978	0.000 76	0	3.88	0	0	0	0
	_	_	_	Ť		-	-	-	-
Deferred Inflows of Resources	(6,999,792,717)	(629,981)	(419,988)	209,993	3.88	54,122	54,122	54,122	47,627
Net Pension Liability	(17,816,440,111)	(1,603,480)	(1,068,986)	534,494	3.88	137,756	137,756	137,756	121,226
Total	(24,816,232,828)	(2,233,461)	(1,488,974)	744,487		191,878	191,878	191,878	168,853
Harriet Tubman Charter School	(1) Collective Amount at 6/30/2014	(2) Proportionate Share at 6/30/2014 0.012%	(3) Proportionate Share at 6/30/2015 0.010%	(3)-(2)  Change in  Proportionate  Share	Recognition Period (Years)			n Pension Expe Ended June 30 2017	
Deferred Outflows of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows of Resources	(6,999,792,717)	(839,975)	(699,979)	139,996	3.88	36,081	36,081	36,081	31,753
Net Pension Liability	(17,816,440,111)	(2,137,973)	(1,781,644)	356,329	3.88	91,837	91,837	91,837	80,818
Total	(24,816,232,828)	(2,977,948)	(2,481,623)	496,325		127,918	127,918	127,918	112,571
KIPP Academy Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 0.026%	Share at 6/30/2015 0.016%	Change in Proportionate Share	Recognition Period (Years)			n Pension Expe Ended June 30 2017	
Deferred Outflows of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows of Resources	(6,999,792,717)	(1,819,946)	(1,119,967)	699,979	3.88	180,407	180,407	180,407	158,758
Net Pension Liability	(17,816,440,111)	(4,632,274)	(2,850,630)	1,781,644	3.88	459,187	459,187	459,187	404,083
Total	(24,816,232,828)	(6,452,220)	(3,970,597)	2,481,623		639,594	639,594	639,594	562,841
KIPP AMP Charter School	(1) Collective Amount	(2) Proportionate Share at 6/30/2014	(3) Proportionate Share at 6/30/2015	(3)-(2) Change in Proportionate	Recognition Period		_	n Pension Expe Ended June 30	
	at 6/30/2014	0.004%	0.001%	Share	(Years)	2015	2016	2017	2018
Deferred Outflows of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows of Resources	(6,999,792,717)	(279,992)	(69,998)	209,994	3.88	54,122	54,122	54,122	47,628
Net Pension Liability	(17,816,440,111)	(712,658)	(178,164)	534,494	3.88	137,756	137,756	137,756	121,226
Total	(24,816,232,828)	(992,650)	(248,162)	744,488		191,878	191,878	191,878	168,854

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Proportionate Share Changes in Proportionate Share at 6/30/2015

KIPP Infinity Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					_
	Collective Amount at 6/30/2014	Share at 6/30/2014 0.028%	Share at 6/30/2015 0.018%	Change in Proportionate Share	Recognition Period (Years)		t to Recognize i the Fiscal Year 2016		
Deferred Outflows of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows of Resources	(6,999,792,717)	(1,959,942)	(1,259,963)	699,979	3.88	180,407	180,407	180,407	158,758
Net Pension Liability	(17,816,440,111)	(4,988,603)	(3,206,959)	1,781,644	3.88	459,187	459,187	459,187	404,083
Total	(24,816,232,828)	(6,948,545)	(4,466,922)	2,481,623		639,594	639,594	639,594	562,841
Opportunity Charter School	(1) Collective Amount at 6/30/2014	(2) Proportionate Share at 6/30/2014 0.019%	(3) Proportionate Share at 6/30/2015 0.024%	(3)-(2)  Change in  Proportionate  Share	Recognition Period (Years)		t to Recognize i the Fiscal Year 2016	-	
Deferred Outflows of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows of Resources	(6,999,792,717)	(1,329,961)	(1,679,950)	(349,989)	3.88	(90,203)	(90,203)	(90,203)	(79,380)
Net Pension Liability	(17,816,440,111)	(3,385,124)	(4,275,946)	(890,822)	3.88	(229,593)	(229,593)	(229,593)	(202,043)
Total	(24,816,232,828)	(4,715,085)	(5,955,896)	(1,240,811)		(319,796)	(319,796)	(319,796)	(281,423)
Renaissance Charter School	(1) Collective Amount	(2) Proportionate Share at 6/30/2014	(3) Proportionate Share at 6/30/2015	(3)-(2) Change in Proportionate	Recognition Period		t to Recognize i	-	
Deferred Outflows	at 6/30/2014	0.025%	0.023%	Share	(Years)	2015	2016	2017	2018
of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows of Resources	(6,999,792,717)	(1,749,948)	(1,609,952)	139,996	3.88	36,081	36,081	36,081	31,753
Net Pension Liability	(17,816,440,111)	(4,454,110)	(4,097,781)	356,329	3.88	91,837	91,837	91,837	80,818
Total	(24,816,232,828)	(6,204,058)	(5,707,733)	496,325		127,918	127,918	127,918	112,571
UFT Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
	Collective Amount at 6/30/2014	Share at 6/30/2014 0.042%	Share at 6/30/2015 0.034%	Change in Proportionate Share	Recognition Period (Years)		t to Recognize i the Fiscal Year 2016		
Deferred Outflows of Resources	Amount	Share at 6/30/2014	Share at 6/30/2015	Proportionate	Period	For	the Fiscal Year	Ended June 30	
	Amount at 6/30/2014	Share at 6/30/2014 0.042%	Share at 6/30/2015 0.034%	Proportionate Share	Period (Years)	For 2015	the Fiscal Year 2016	Ended June 30 2017	2018
of Resources  Deferred Inflows	Amount at 6/30/2014	Share at 6/30/2014 0.042%	Share at 6/30/2015 0.034%	Proportionate Share	Period (Years)	For 2015	the Fiscal Year 2016 0	Ended June 30 2017	<b>2018</b>

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Changes in Proportionate Share Changes in Proportionate Share at 6/30/2015

University Prep	(1)	(2)	(3)	(3)-(2)					
Charter High School	Collective	Proportionate Share	Proportionate Share	Change in	Recognition	Amoun	t to Recognize i	n Pension Exne	nse
	Amount	at 6/30/2014	at 6/30/2015	Proportionate	Period		the Fiscal Year		
	at 6/30/2014	0.018%	0.016%	Share	(Years)	2015	2016	2017	2018
Deferred Outflows									
of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows									
of Resources	(6,999,792,717)	(1,259,963)	(1,119,967)	139,996	3.88	36,081	36,081	36,081	31,753
Net Pension Liability	(17,816,440,111)	(3,206,959)	(2,850,630)	356,329	3.88	91,837	91,837	91,837	80,818
Total	(24,816,232,828)	(4,466,922)	(3,970,597)	496,325		127,918	127,918	127,918	112,571
Voice	(1)	(2)	(3)	(3)-(2)					
Charter School		Proportionate	Proportionate						
	Collective	Share	Share	Change in	Recognition	Amoun	t to Recognize i	n Pension Expe	nse
	Amount	at 6/30/2014	at 6/30/2015	Proportionate	Period	For	the Fiscal Year	Ended June 30	
	at 6/30/2014	0.009%	0.009%	Share	(Years)	2015	2016	2017	2018
Deferred Outflows									
of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows									
of Resources	(6,999,792,717)	(629,981)	(629,981)	0	3.88	0	0	0	0
Net Pension Liability	(17,816,440,111)	(1,603,480)	(1,603,480)	0	3.88	0	0	0	0
Total	(24,816,232,828)	(2,233,461)	(2,233,461)	0		0	0	0	0
Wildcat	(1)	(2)	(3)	(3)-(2)					
Charter School		Proportionate	Proportionate						
	Collective	Share	Share	Change in	Recognition	Amoun	t to Recognize i	n Pension Expe	nse
	Amount	at 6/30/2014	at 6/30/2015	Proportionate	Period	For	the Fiscal Year	Ended June 30	
	at 6/30/2014	0.013%	0.012%	Share	(Years)	2015	2016	2017	2018
Deferred Outflows of Resources	0	0	0	0	3.88	0	0	0	0
Deferred Inflows									
of Resources	(6,999,792,717)	(909,973)	(839,975)	69,998	3.88	18,041	18,041	18,041	15,875
Net Pension Liability	(17,816,440,111)	(2,316,137)	(2,137,973)	178,164	3.88	45,919	45,919	45,919	40,407
Total	(24,816,232,828)	(3,226,110)	(2,977,948)	248,162		63,960	63,960	63,960	56,282

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Proportionate Share Changes in Proportionate Share at 6/30/2016

Department of	(1)	(2)	(3)	(3)-(2)					
Education	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 96.346%	Proportionate Share at 6/30/2016 96.019%	Change in Proportionate Share	Recognition Period (Years)		U	in Pension Exp or Ended June 3 2018	
Deferred Outflows of Resources	2,227,614,195	2,146,217,172	2,138,932,874	(7,284,298)	3.84	(1,896,953)	(1,896,953)	(1,896,953)	(1,593,439)
Deferred Inflows of Resources	(5,094,667,839)	(4,908,508,675)	(4,891,849,112)	16,659,563	3.84	4,338,427	4,338,427	4,338,427	3,644,282
Net Pension Liability	(20,785,703,677)	(20,026,194,063)	(19,958,224,814)	67,969,249	3.84	17,700,324	17,700,324	17,700,324	14,868,277
Total	(23,652,757,321)	(22,788,485,566)	(22,711,141,052)	77,344,514		20,141,798	20,141,798	20,141,798	16,919,120
CUNY Senior Colleges	(1)  Collective  Amount at 6/30/2015	(2) Proportionate Share at 6/30/2015 2.540%	(3) Proportionate Share at 6/30/2016 2.779%	(3)-(2)  Change in  Proportionate  Share	Recognition Period (Years)		_	in Pension Exp or Ended June 3 2018	
Deferred Outflows of Resources	2,227,614,195	56,581,401	61,905,398	5,323,997	3.84	1,386,458	1,386,458	1,386,458	1,164,623
Deferred Inflows of Resources	(5,094,667,839)	(129,404,563)	(141,580,819)	(12,176,256)	3.84	(3,170,900)	(3,170,900)	(3,170,900)	(2,663,556)
Net Pension Liability	(20,785,703,677)	(527,956,873)	(577,634,705)	(49,677,832)	3.84	(12,936,935)	(12,936,935)	(12,936,935)	(10,867,027)
Total	(23,652,757,321)	(600,780,035)	(657,310,126)	(56,530,091)		(14,721,377)	(14,721,377)	(14,721,377)	(12,365,960)
CUNY Community Colleges	(1) Collective	(2) Proportionate Share	(3) Proportionate Share	(3)-(2) Change in	Recognition	Amou	nt to Pocognize	in Pension Exp	anca.
	Amount at 6/30/2015	at 6/30/2015 0.928%	at 6/30/2016 1.056%	Proportionate Share	Period (Years)		_	r Ended June 3 2018	
Deferred Outflows of Resources	2,227,614,195	20,672,260	23,523,606	2,851,346	3.84	742,538	742,538	742,538	623,732
Deferred Inflows of Resources	(5,094,667,839)	(47,278,518)	(53,799,692)	(6,521,174)	3.84	(1,698,222)	(1,698,222)	(1,698,222)	(1,426,508)
Net Pension Liability	(20,785,703,677)	(192,891,330)	(219,497,031)	(26,605,701)	3.84	(6,928,568)	(6,928,568)	(6,928,568)	(5,819,997)
Total	(23,652,757,321)	(219,497,588)	(249,773,117)	(30,275,529)		(7,884,252)	(7,884,252)	(7,884,252)	(6,622,773)
Beginning with Children Charter School	(1) Collective	(2) Proportionate Share	(3) Proportionate Share	(3)-(2) Change in	Recognition	Amou	nt to Recognize	in Pension Exp	ense
	Amount at 6/30/2015	at 6/30/2015 0.017%	at 6/30/2016 0.008%	Proportionate Share	Period (Years)	Fo 2016	r the Fiscal Yea 2017	r Ended June 3 2018	0 2019
Deferred Outflows of Resources	2,227,614,195	378,694	178,209	(200,485)	3.84	(52,210)	(52,210)	(52,210)	(43,855)
Deferred Inflows of Resources	(5,094,667,839)	(866,094)	(407,573)	458,521	3.84	119,407	119,407	119,407	100,300
Net Pension Liability	(20,785,703,677)	(3,533,570)	(1,662,856)	1,870,714	3.84	487,165	487,165	487,165	409,219
Total	(23,652,757,321)	(4,020,970)	(1,892,220)	2,128,750		554,362	554,362	554,362	465,664

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Proportionate Share Changes in Proportionate Share at 6/30/2016

Future Leaders Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
	Collective Amount at 6/30/2015	Share at 6/30/2015 0.006%	Share at 6/30/2016 0.007%	Change in Proportionate Share	Recognition Period (Years)			n Pension Expe Ended June 30 2018	2019
Deferred Outflows of Resources	2,227,614,195	133,657	155,933	22,276	3.84	5,801	5,801	5,801	4,873
Deferred Inflows of Resources	(5,094,667,839)	(305,680)	(356,627)	(50,947)	3.84	(13,267)	(13,267)	(13,267)	(11,146)
Net Pension Liability	(20,785,703,677)	(1,247,142)	(1,454,999)	(207,857)	3.84	(54,129)	(54,129)	(54,129)	(45,470)
Total	(23,652,757,321)	(1,419,165)	(1,655,693)	(236,528)		(61,595)	(61,595)	(61,595)	(51,743)
Harriet Tubman Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
	Collective Amount at 6/30/2015	Share at 6/30/2015 0.010%	Share at 6/30/2016 0.010%	Change in Proportionate Share	Recognition Period (Years)		_	n Pension Expe Ended June 30 2018	2019
Deferred Outflows of Resources	2,227,614,195	222,761	222,761	0	3.84	0	0	0	0
Deferred Inflows of Resources	(5,094,667,839)	(509,467)	(509,467)	0	3.84	0	0	0	0
Net Pension Liability	(20,785,703,677)	(2,078,570)	(2,078,570)	0	3.84	0	0	0	0
Total	(23,652,757,321)	(2,365,276)	(2,365,276)	0		0	0	0	0
KIPP Academy	(1)	<b>(A)</b>	(2)	(2) (2)					
Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
•	Collective Amount at 6/30/2015			(3)-(2)  Change in  Proportionate  Share	Recognition Period (Years)		_	n Pension Expe Ended June 30 2018	nse 2019
•	Collective Amount	Proportionate Share at 6/30/2015	Proportionate Share at 6/30/2016	Change in Proportionate		For	the Fiscal Year	Ended June 30	
Charter School  Deferred Outflows	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.016%	Proportionate Share at 6/30/2016 0.018%	Change in Proportionate Share	Period (Years)	For 1 2016	the Fiscal Year 2017	Ended June 30 2018	2019
Charter School  Deferred Outflows of Resources  Deferred Inflows	Collective Amount at 6/30/2015  2,227,614,195	Proportionate Share at 6/30/2015 0.016%  356,418	Proportionate Share at 6/30/2016 0.018% 400,971	Change in Proportionate Share 44,553	Period (Years)	For 2016	the Fiscal Year 2017 11,602	Ended June 30 2018	<b>2019</b> 9,747
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources	Collective Amount at 6/30/2015 2,227,614,195 (5,094,667,839)	Proportionate Share at 6/30/2015 0.016%  356,418  (815,147)	Proportionate Share at 6/30/2016 0.018%  400,971	Change in Proportionate Share 44,553 (101,893)	Period (Years)  3.84	2016 11,602 (26,535)	the Fiscal Year 2017 11,602 (26,535)	2018 11,602 (26,535)	9,747 (22,288)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability	Collective Amount at 6/30/2015 2,227,614,195 (5,094,667,839) (20,785,703,677)	Proportionate Share at 6/30/2015 0.016%  356,418  (815,147) (3,325,713)	Proportionate Share at 6/30/2016 0.018%  400,971  (917,040)  (3,741,427)	Change in Proportionate Share  44,553  (101,893)  (415,714)	Period (Years)  3.84	For 2016  11,602  (26,535)  (108,259)  (123,192)  Amount	the Fiscal Year 2017  11,602  (26,535)  (108,259)  (123,192)  t to Recognize i	2018 11,602 (26,535) (108,259)	9,747 (22,288) (90,937) (103,478)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  KIPP AMP	Collective Amount at 6/30/2015 2,227,614,195 (5,094,667,839) (20,785,703,677) (23,652,757,321) (1) Collective Amount	Proportionate Share at 6/30/2015 0.016%  356,418  (815,147) (3,325,713) (3,784,442)  (2) Proportionate Share at 6/30/2015	Proportionate Share at 6/30/2016 0.018%  400,971  (917,040)  (3,741,427)  (4,257,496)  (3) Proportionate Share at 6/30/2016	Change in Proportionate Share  44,553  (101,893)  (415,714)  (473,054)  (3)-(2)  Change in Proportionate	Period (Years)  3.84  3.84  3.84  Recognition Period	2016  11,602  (26,535)  (108,259)  (123,192)  Amount	the Fiscal Year 2017  11,602  (26,535)  (108,259)  (123,192)  t to Recognize i the Fiscal Year	2018  11,602  (26,535)  (108,259)  (123,192)  n Pension Experended June 30	2019 9,747 (22,288) (90,937) (103,478)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  KIPP AMP Charter School  Deferred Outflows	Collective Amount at 6/30/2015 2,227,614,195 (5,094,667,839) (20,785,703,677) (23,652,757,321) (1) Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.016%  356,418  (815,147) (3,325,713) (3,784,442)  (2) Proportionate Share at 6/30/2015 0.001%	Proportionate Share at 6/30/2016 0.018%  400,971  (917,040)  (3,741,427)  (4,257,496)  (3)  Proportionate Share at 6/30/2016 0.001%	Change in Proportionate Share  44,553  (101,893)  (415,714)  (473,054)  (3)-(2)  Change in Proportionate Share	Period (Years)  3.84  3.84  3.84  Recognition Period (Years)	For 2016  11,602  (26,535)  (108,259)  (123,192)  Amount For 2016	the Fiscal Year 2017  11,602  (26,535)  (108,259)  (123,192)  t to Recognize i the Fiscal Year 2017	2018  11,602  (26,535)  (108,259)  (123,192)  n Pension Experence Ended June 30  2018	2019 9,747 (22,288) (90,937) (103,478) mse
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  KIPP AMP Charter School  Deferred Outflows of Resources  Deferred Inflows	Collective Amount at 6/30/2015  2,227,614,195  (5,094,667,839) (20,785,703,677) (23,652,757,321)  (1)  Collective Amount at 6/30/2015  2,227,614,195	Proportionate Share at 6/30/2015 0.016%  356,418  (815,147) (3,325,713) (3,784,442)  (2) Proportionate Share at 6/30/2015 0.001%  22,276	Proportionate Share at 6/30/2016 0.018%  400,971  (917,040) (3,741,427) (4,257,496)  (3) Proportionate Share at 6/30/2016 0.001%	Change in Proportionate Share  44,553  (101,893)  (415,714)  (473,054)  (3)-(2)  Change in Proportionate Share  0	Period (Years)  3.84  3.84  3.84  Recognition Period (Years)  3.84	For 2016  11,602  (26,535)  (108,259)  (123,192)  Amount For 2016  0	the Fiscal Year 2017  11,602  (26,535) (108,259) (123,192)  t to Recognize i the Fiscal Year 2017  0	2018  11,602  (26,535)  (108,259)  (123,192)  n Pension Experence Ended June 30 2018  0	2019 9,747 (22,288) (90,937) (103,478) nse 2019

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Proportionate Share Changes in Proportionate Share at 6/30/2016

KIPP Infinity Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
	Collective Amount at 6/30/2015	Share at 6/30/2015 0.018%	Share at 6/30/2016 0.017%	Change in Proportionate Share	Recognition Period (Years)		U	n Pension Expe Ended June 30 2018	
Deferred Outflows of Resources	2,227,614,195	400,971	378,694	(22,277)	3.84	(5,801)	(5,801)	(5,801)	(4,874)
Deferred Inflows of Resources	(5,094,667,839)	(917,040)	(866,094)	50,946	3.84	13,267	13,267	13,267	11,145
Net Pension Liability	(20,785,703,677)	(3,741,427)	(3,533,570)	207,857	3.84	54,129	54,129	54,129	45,470
Total	(23,652,757,321)	(4,257,496)	(4,020,970)	236,526		61,595	61,595	61,595	51,741
Opportunity Charter School	(1) Collective Amount	(2) Proportionate Share at 6/30/2015	(3) Proportionate Share at 6/30/2016	(3)-(2) Change in Proportionate	Recognition Period		_	n Pension Expe	nse
	at 6/30/2015	0.024%	0.013%	Share	(Years)	2016	2017	2018	2019
Deferred Outflows of Resources	2,227,614,195	534,627	289,590	(245,037)	3.84	(63,812)	(63,812)	(63,812)	(53,601)
Deferred Inflows of Resources	(5,094,667,839)	(1,222,720)	(662,307)	560,413	3.84	145,941	145,941	145,941	122,590
Net Pension Liability	(20,785,703,677)	(4,988,569)	(2,702,141)	2,286,428	3.84	595,424	595,424	595,424	500,156
Total	(23,652,757,321)	(5,676,662)	(3,074,858)	2,601,804		677,553	677,553	677,553	569,145
Renaissance Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
	Collective Amount at 6/30/2015	Share at 6/30/2015 0.023%	Share at 6/30/2016 0.021%	Change in Proportionate Share	Recognition Period (Years)		_	n Pension Expe Ended June 30 2018	nse 2019
Deferred Outflows of Resources	2,227,614,195	512,351	467,799	(44,552)	3.84	(11,602)	(11,602)	(11,602)	(9,746)
Deferred Inflows of Resources	(5,094,667,839)	(1,171,774)	(1,069,880)	101,894	3.84	26,535	26,535	26,535	22,289
Net Pension Liability	(20,785,703,677)	(4,780,712)	(4,364,998)	415,714	3.84	108,259	108,259	108,259	90,937
Total	(23,652,757,321)	(5,440,135)	(4,967,079)	473,056		123,192	123,192	123,192	103,480
UFT Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
	Collective Amount at 6/30/2015	Share at 6/30/2015 0.034%	Share at 6/30/2016 0.021%	Change in Proportionate Share	Recognition Period (Years)			n Pension Expe Ended June 30 2018	
Deferred Outflows of Resources	2,227,614,195	757,389	467,799	(289,590)	3.84	(75,414)	(75,414)	(75,414)	(63,348)
Deferred Inflows of Resources	(5,094,667,839)	(1,732,187)	(1,069,880)	662,307	3.84	172,476	172,476	172,476	144,879
Net Pension Liability	(20,785,703,677)	(7,067,139)	(4,364,998)	2,702,141	3.84	703,683	703,683	703,683	591,092
Total	(23,652,757,321)	(8,041,937)	(4,967,079)	3,074,858		800,745	800,745	800,745	672,623

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Changes in Proportionate Share Changes in Proportionate Share at 6/30/2016

University Prep	(1)	(2)	(3)	(3)-(2)					
Charter High School	Collective Amount	Proportionate Share at 6/30/2015	Proportionate Share at 6/30/2016	Change in Proportionate	Recognition Period			n Pension Expe Ended June 30	
	at 6/30/2015	0.016%	0.012%	Share	(Years)	2016	2017	2018	2019
Deferred Outflows of Resources	2,227,614,195	356,418	267,314	(89,104)	3.84	(23,204)	(23,204)	(23,204)	(19,492)
Deferred Inflows									
of Resources	(5,094,667,839)	(815,147)	(611,360)	203,787	3.84	53,070	53,070	53,070	44,577
Net Pension Liability	(20,785,703,677)	(3,325,713)	(2,494,284)	831,429	3.84	216,518	216,518	216,518	181,875
Total	(23,652,757,321)	(3,784,442)	(2,838,330)	946,112		246,384	246,384	246,384	206,960
Voice Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
Charter School	Collective	Share	Share	Change in	Recognition	Amoun	t to Recognize i	n Pension Expe	nse
	Amount	at 6/30/2015	at 6/30/2016	Proportionate	Period			Ended June 30	
	at 6/30/2015	0.009%	0.008%	Share	(Years)	2016	2017	2018	2019
Deferred Outflows of Resources	2,227,614,195	200,485	178,209	(22,276)	3.84	(5,801)	(5,801)	(5,801)	(4,873)
Deferred Inflows									
of Resources	(5,094,667,839)	(458,520)	(407,573)	50,947	3.84	13,267	13,267	13,267	11,146
Net Pension Liability	(20,785,703,677)	(1,870,713)	(1,662,856)	207,857	3.84	54,129	54,129	54,129	45,470
Total	(23,652,757,321)	(2,128,748)	(1,892,220)	236,528		61,595	61,595	61,595	51,743
Wildcat Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
Charter Benoof	Collective	Share	Share	Change in	Recognition	Amoun	t to Recognize i	n Pension Expe	nse
	Amount	at 6/30/2015	at 6/30/2016	Proportionate	Period		U	Ended June 30	
	at 6/30/2015	0.012%	0.010%	Share	(Years)	2016	2017	2018	2019
Deferred Outflows of Resources	2,227,614,195	267,314	222,761	(44,553)	3.84	(11,602)	(11,602)	(11,602)	(9,747)
Deferred Inflows	(5.00 A CCT P20)	(611.260)	(500.457)	101 002	2.94	26.525	26.525	26.525	22.282
of Resources	(5,094,667,839)	(611,360)	(509,467)	101,893	3.84	26,535	26,535	26,535	22,288
Net Pension Liability	(20,785,703,677)	(2,494,284)	(2,078,570)	415,714	3.84	108,259	108,259	108,259	90,937
Total	(23,652,757,321)	(2,838,330)	(2,365,276)	473,054		123,192	123,192	123,192	103,478

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68) $\,$

#### Changes in Proportionate Share Changes in Proportionate Share at 6/30/2017

Department of Education	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)									
	Collective Amount at 6/30/2016	Share at 6/30/2016 96.019%	Share at 6/30/2017 96.627%	Change in Proportionate Share	Recognition Period (Years)	2017	2018			e in Pension Exp ar Ended June 3 2021		2023	2024
Deferred Outflows of Resources	5,779,665,137	5,549,576,668	5,584,717,032	35,140,364	7.20	4,880,607	4,880,607	4,880,607	4,880,607	4,880,607	4,880,607	4,880,607	976,116
Deferred Inflows of Resources	(3,189,542,961)	(3,062,567,255)	(3,081,959,677)	(19,392,422)	7.20	(2,693,393)	(2,693,393)	(2,693,393)	(2,693,393)	(2,693,393)	(2,693,393)	(2,693,393)	(538,670)
Net Pension Liability	(26,371,232,108)	(25,321,393,356)	(25,481,730,449)	(160,337,093)	7.20	(22,269,041)	(22,269,041)	(22,269,041)	(22,269,041)	(22,269,041)	(22,269,041)	(22,269,041)	(4,453,804)
Total	(23,781,109,932)	(22,834,383,943)	(22,978,973,094)	(144,589,147)		(20,081,827)	(20,081,827)	(20,081,827)	(20,081,827)	(20,081,827)	(20,081,827)	(20,081,827)	(4,016,358)
CUNY Senior Colleges	(1) Collective Amount	(2) Proportionate Share at 6/30/2016	(3) Proportionate Share at 6/30/2017	(3)-(2) Change in Proportionate	Recognition Period			Fo	r the Fiscal Ye	e in Pension Exp ar Ended June 3	30		
Deferred Outflows	at 6/30/2016	2.779%	2.175%	Share	(Years)	2017	2018	2019	2020	2021	2022	2023	2024
of Resources	5,779,665,137	160,616,894	125,707,717	(34,909,177)	7.20	(4,848,497)	(4,848,497)	(4,848,497)	(4,848,497)	(4,848,497)	(4,848,497)	(4,848,497)	(969,698)
Deferred Inflows of Resources	(3,189,542,961)	(88,637,399)	(69,372,559)	19,264,840	7.20	2,675,672	2,675,672	2,675,672	2,675,672	2,675,672	2,675,672	2,675,672	535,136
Net Pension Liability	(26,371,232,108)	(732,856,540)	(573,574,298)	159,282,242	7.20	22,122,534	22,122,534	22,122,534	22,122,534	22,122,534	22,122,534	22,122,534	4,424,504
Total	(23,781,109,932)	(660,877,045)	(517,239,140)	143,637,905		19,949,709	19,949,709	19,949,709	19,949,709	19,949,709	19,949,709	19,949,709	3,989,942
CUNY Community Colleges	(1)	(2)	(3)	(3)-(2)									
	Collective Amount	Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017	Change in Proportionate	Recognition Period					e in Pension Exp ar Ended June 3			
_		Share	Share			2017	2018					2023	2024
Deferred Outflows of Resources	Amount	Share at 6/30/2016	Share at 6/30/2017	Proportionate	Period	<b>2017</b> (537,830)	(537,830)	Fo	r the Fiscal Ye	ar Ended June 3	30	<b>2023</b> (537,830)	(107,566)
Deferred Outflows	Amount at 6/30/2016	Share at 6/30/2016 1.056%	Share at 6/30/2017 0.989%	Proportionate Share	Period (Years)			Fo 2019	or the Fiscal Yea	ar Ended June 3 2021	2022		
Deferred Outflows of Resources Deferred Inflows	Amount at 6/30/2016 5,779,665,137	Share at 6/30/2016 1.056% 61,033,264	Share at 6/30/2017 0.989% 57,160,888	Proportionate Share (3,872,376)	Period (Years) 7.20	(537,830)	(537,830)	Fo 2019 (537,830)	2020 (537,830)	2021 (537,830)	2022 (537,830)	(537,830)	(107,566)
Deferred Outflows of Resources Deferred Inflows of Resources	Amount at 6/30/2016 5,779,665,137 (3,189,542,961)	Share at 6/30/2016 1.056% 61,033,264 (33,681,574)	Share at 6/30/2017 0.989% 57,160,888 (31,544,580)	Proportionate Share (3,872,376) 2,136,994	Period (Years) 7.20 7.20	(537,830) 296,805	(537,830) 296,805	(537,830) 296,805	2020 (537,830) 296,805	2021 (537,830) 296,805	2022 (537,830) 296,805	(537,830) 296,805	(107,566) 59,359
Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability	Amount at 6/30/2016 5,779,665,137 (3,189,542,961) (26,371,232,108)	Share at 6/30/2016 1.056% 61,033,264 (33,681,574) (278,480,211)	Share at 6/30/2017 0.989% 57,160,888 (31,544,580) (260,811,486)	Proportionate Share (3,872,376) 2,136,994 17,668,725	Period (Years) 7.20 7.20	(537,830) 296,805 2,453,990	(537,830) 296,805 2,453,990	Fo 2019 (537,830) 296,805 2,453,990 2,212,965	r the Fiscal Yer 2020 (537,830) 296,805 2,453,990 2,212,965	(537,830) 296,805 2,453,990	2022 (537,830) 296,805 2,453,990 2,212,965	(537,830) 296,805 2,453,990	(107,566) 59,359 490,795
Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  Beginning with Children	Amount at 6/30/2016  5,779,665,137  (3,189,542,961) (26,371,232,108) (23,781,109,932)  (1)  Collective Amount	Share at 6/30/2016 1.056% 61,033,264 (33,681,574) (278,480,211) (251,128,521) (2) Proportionate Share at 6/30/2016	Share at 6/30/2017 0.989% 57,160,888 (31,544,580) (260,811,486) (235,195,178) (3) Proportionate Share at 6/30/2017	Proportionate Share  (3,872,376)  2,136,994  17,668,725  15,933,343  (3)-(2)  Change in Proportionate	Period (Years) 7.20 7.20 7.20 7.20 Recognition Period	(537,830) 296,805 2,453,990 2,212,965	(537,830) 296,805 2,453,990 2,212,965	Fo 2019 (537,830) 296,805 2,453,990 2,212,965  Amou	r the Fiscal Yer 2020 (537,830) 296,805 2,453,990 2,212,965 ant to Recognizer the Fiscal Yer	r Ended June 3 2021  (537,830)  296,805  2,453,990  2,212,965  e in Pension Expression E	296,805 2,453,990 2,212,965	(537,830) 296,805 2,453,990 2,212,965	(107,566) 59,359 490,795 442,588
Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  Beginning with Children	Amount at 6/30/2016  5,779,665,137  (3,189,542,961) (26,371,232,108) (23,781,109,932)  (1)  Collective	Share at 6/30/2016 1.056% 61,033,264 (33,681,574) (278,480,211) (251,128,521) (2) Proportionate Share	Share at 6/30/2017 0.989% 57,160,888 (31,544,580) (260,811,486) (235,195,178) (3) Proportionate Share	Proportionate Share (3,872,376) 2,136,994 17,668,725 15,933,343 (3)-(2) Change in	7.20 7.20 7.20 Recognition	(537,830) 296,805 2,453,990	(537,830) 296,805 2,453,990	Fo 2019 (537,830) 296,805 2,453,990 2,212,965	r the Fiscal Yer 2020 (537,830) 296,805 2,453,990 2,212,965	r Ended June 3 2021 (537,830) 296,805 2,453,990 2,212,965 e in Pension Exp	2022 (537,830) 296,805 2,453,990 2,212,965	(537,830) 296,805 2,453,990	(107,566) 59,359 490,795
Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  Beginning with Children Charter School	Amount at 6/30/2016  5,779,665,137  (3,189,542,961) (26,371,232,108) (23,781,109,932) (1)  Collective Amount at 6/30/2016	Share at 6/30/2016 1.056% 61,033,264 (33,681,574) (278,480,211) (251,128,521) (2) Proportionate Share at 6/30/2016 0.008%	Share at 6/30/2017 0.989%  57,160,888  (31,544,580) (260,811,486) (235,195,178)  (3)  Proportionate Share at 6/30/2017 0.015%	Proportionate Share (3,872,376) 2,136,994 17,668,725 15,933,343 (3)-(2) Change in Proportionate Share	Period (Years)  7.20  7.20  7.20  Recognition Period (Years)	(537,830) 296,805 2,453,990 2,212,965	(537,830) 296,805 2,453,990 2,212,965	Fo 2019 (537,830) 296,805 2,453,990 2,212,965  Amou Fo 2019	r the Fiscal Yer 2020 (537,830) 296,805 2,453,990 2,212,965 ant to Recognizer the Fiscal Yer 2020	2021 (537,830) 296,805 2,453,990 2,212,965 e in Pension Expara Ended June 3 2021	2022 (537,830) 296,805 2,453,990 2,212,965	(537,830) 296,805 2,453,990 2,212,965	(107,566) 59,359 490,795 442,588
Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  Beginning with Children Charter School  Deferred Outflows of Resources  Deferred Inflows	Amount at 6/30/2016 5,779,665,137 (3,189,542,961) (26,371,232,108) (23,781,109,932) (1) Collective Amount at 6/30/2016 5,779,665,137	Share at 6/30/2016 1.056% 61,033,264 (33,681,574) (278,480,211) (251,128,521) (2) Proportionate Share at 6/30/2016 0.008% 462,373	Share at 6/30/2017 0.989%  57,160,888  (31,544,580) (260,811,486) (235,195,178)  (31,544,580) (260,811,486) (235,195,178)  806,950	Proportionate Share (3,872,376) 2,136,994 17,668,725 15,933,343 (3)-(2) Change in Proportionate Share 404,577	Period (Years)  7.20  7.20  7.20  Recognition Period (Years)  7.20	(537,830) 296,805 2,453,990 2,212,965 2017	(537,830) 296,805 2,453,990 2,212,965 <b>2018</b> 56,191	Fo 2019 (537,830) 296,805 2,453,990 2,212,965  Amou Fo 2019	r the Fiscal Ver 2020 (537,830) 296,805 2,453,990 2,212,965 and to Recognize r the Fiscal Ver 2020	2021 (537,830) 296,805 2,453,990 2,212,965 e in Pension Exp r Ended June 3 2021	2022 (537,830) 296,805 2,453,990 2,212,965 2022 56,191	(537,830) 296,805 2,453,990 2,212,965 2023	(107,566) 59,359 490,795 442,588 2024

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68) $\,$

#### Changes in Proportionate Share Changes in Proportionate Share at 6/30/2017

Future Leaders Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)									
	Collective Amount at 6/30/2016	Share at 6/30/2016 0.007%	Share at 6/30/2017 0.012%	Change in Proportionate Share	Recognition Period (Years)	2017	2018		the Fiscal Year 2020			2023	2024
Deferred Outflows of Resources	5,779,665,137	404,577	693,560	288,983	7.20	40,137	40,137	40,137	40,137	40,137	40,137	40,137	8,024
Deferred Inflows of Resources	(3,189,542,961)	(223,268)	(382,745)	(159,477)	7.20	(22,150)	(22,150)	(22,150)	(22,150)	(22,150)	(22,150)	(22,150)	(4,427)
Net Pension Liability	(26,371,232,108)	(1,845,986)	(3,164,548)	(1,318,562)	7.20	(183,134)	(183,134)	(183,134)	(183,134)	(183,134)	(183,134)	(183,134)	(36,624)
Total	(23,781,109,932)	(1,664,677)	(2,853,733)	(1,189,056)		(165,147)	(165,147)	(165,147)	(165,147)	(165,147)	(165,147)	(165,147)	(33,027)
Harriet Tubman Charter School	(1) Collective Amount at 6/30/2016	(2) Proportionate Share at 6/30/2016 0.010%	(3) Proportionate Share at 6/30/2017 0.013%	(3)-(2)  Change in  Proportionate  Share	Recognition Period (Years)	2017	2018		nt to Recognize the Fiscal Year 2020			2023	2024
Deferred Outflows of Resources	5,779,665,137	577,967	751,356	173,389	7.20	24,082	24,082	24,082	24,082	24,082	24,082	24,082	4,815
Deferred Inflows of Resources	(3,189,542,961)	(318,954)	(414,641)	(95,687)	7.20	(13,290)	(13,290)	(13,290)	(13,290)	(13,290)	(13,290)	(13,290)	(2,657)
Net Pension Liability	(26,371,232,108)	(2,637,123)	(3,428,260)	(791,137)	7.20	(109,880)	(109,880)	(109,880)	(109,880)	(109,880)	(109,880)	(109,880)	(21,977)
Total	(23,781,109,932)	(2,378,110)	(3,091,545)	(713,435)		(99,088)	(99,088)	(99,088)	(99,088)	(99,088)	(99,088)	(99,088)	(19,819)
KIPP Academy	(1)	(2)	(2)	(2) (2)									
Charter School	Collective Amount	(2) Proportionate Share at 6/30/2016	(3) Proportionate Share at 6/30/2017	(3)-(2) Change in Proportionate	Recognition Period		2040	For	nt to Recognize	Ended June 30			
•	Collective	Proportionate Share	Proportionate Share	Change in		<b>2017</b> 80,273	<b>2018</b> 80,273					<b>2023</b> 80,273	2024 16,055
Charter School  Deferred Outflows	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.018%	Proportionate Share at 6/30/2017 0.028%	Change in Proportionate Share	Period (Years)			For 2019	the Fiscal Year 2020	Ended June 30 2021	2022		
Charter School  Deferred Outflows of Resources  Deferred Inflows	Collective Amount at 6/30/2016 5,779,665,137	Proportionate Share at 6/30/2016 0.018% 1,040,340	Proportionate Share at 6/30/2017 0.028% 1,618,306	Change in Proportionate Share 577,966	Period (Years) 7.20	80,273	80,273	For 2019 80,273	the Fiscal Year 2020 80,273	Ended June 30 2021 80,273	<b>2022</b> 80,273	80,273	16,055
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources	Collective Amount at 6/30/2016 5,779,665,137 (3,189,542,961)	Proportionate Share at 6/30/2016 0.018%  1,040,340  (574,118)	Proportionate Share at 6/30/2017 0.028% 1,618,306 (893,072)	Change in Proportionate Share 577,966 (318,954)	Period (Years) 7.20	80,273 (44,299)	80,273 (44,299)	80,273 (44,299)	80,273 (44,299)	Ended June 30 2021 80,273 (44,299)	<b>2022</b> 80,273 (44,299)	80,273 (44,299)	16,055 (8,861)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability	Collective Amount at 6/30/2016  5.779,665,137  (3,189,542,961) (26,371,232,108) (23,781,109,932)  (1)  Collective	Proportionate Share at 6/30/2016 0.018%  1,040,340  (574,118) (4,746,822) (4,280,600)  (2) Proportionate Share	Proportionate Share at 6/30/2017 0.028%  1,618,306  (893,072) (7,383,945) (6,658,711)  (3) Proportionate Share	Change in Proportionate Share  577,966  (318,954) (2,637,123) (2,378,111)  (3)-(2) Change in	Period (Years)	80,273 (44,299) (366,267)	80,273 (44,299) (366,267)	80,273 80,273 (44,299) (366,267) (330,293)	80,273 80,273 (44,299) (366,267) (330,293)	80,273 (44,299) (366,267) (330,293)	2022 80,273 (44,299) (366,267) (330,293)	80,273 (44,299) (366,267)	16,055 (8,861) (73,254)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  KIPP AMP	Collective Amount at 6/30/2016 5,779,665,137 (3,189,542,961) (26,371,232,108) (23,781,109,932)	Proportionate Share at 6/30/2016 0.018%  1,040,340  (574,118) (4,746,822) (4,280,600)  (2) Proportionate	Proportionate Share at 6/30/2017 0.028%  1,618,306  (893,072)  (7,383,945)  (6,658,711)  3) Proportionate	Change in Proportionate Share  577,966  (318,954) (2,637,123) (2,378,111) (3)-(2)	Period (Years) 7.20 7.20 7.20	80,273 (44,299) (366,267)	80,273 (44,299) (366,267)	80,273 80,273 (44,299) (366,267) (330,293)	80,273 (44,299) (366,267) (330,293)	80,273 (44,299) (366,267) (330,293)	2022 80,273 (44,299) (366,267) (330,293)	80,273 (44,299) (366,267)	16,055 (8,861) (73,254)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  KIPP AMP	Collective Amount at 6/30/2016  5,779,665,137  (3,189,542,961) (26,371,232,108) (23,781,109,932)  (1)  Collective Amount	Proportionate Share at 6/30/2016 0.018%  1,040,340  (574,118) (4,746,822) (4,280,600)  (2) Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017 0.028%  1.618,306  (893,072)  (7,383,945)  (6,658,711)  (3) Proportionate Share at 6/30/2017	Change in Proportionate Share  577,966  (318,954) (2,637,123) (2,378,111)  (3)-(2)  Change in Proportionate	Period (Years)  7.20  7.20  7.20  7.20  Recognition Period	80,273 (44,299) (366,267) (330,293)	80,273 (44,299) (366,267) (330,293)	80,273 80,273 (44,299) (366,267) (330,293)	80,273 80,273 (44,299) (366,267) (330,293) at to Recognize:	80,273 (44,299) (366,267) (330,293) in Pension Expe Ended June 30	2022 80,273 (44,299) (366,267) (330,293)	80,273 (44,299) (366,267) (330,293)	16,055 (8,861) (73,254) (66,060)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  KIPP AMP  Charter School  Deferred Outflows	Collective Amount at 6/30/2016  5,779,665,137  (3,189,542,961) (26,371,232,108) (23,781,109,932)  (1)  Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.018%  1,040,340  (574,118) (4,746,822) (4,280,600)  (2)  Proportionate Share at 6/30/2016 0.001%	Proportionate Share at 6/30/2017 0.028%  1,618,306  (893,072) (7,383,945) (6,658,711)  (3) Proportionate Share at 6/30/2017 0.004%	Change in Proportionate Share  577,966  (318,954) (2,637,123) (2,378,111) (3)-(2) Change in Proportionate Share	Period (Years)  7.20  7.20  7.20  7.20  Recognition Period (Years)	80,273 (44,299) (366,267) (330,293)	80,273 (44,299) (366,267) (330,293)	80,273 80,273 (44,299) (366,267) (330,293) Amoun For 2019	**the Fiscal Year 2020 **  80,273 **  (44,299) ** (366,267) ** (330,293) **  **the Fiscal Year 2020 **	Ended June 30 2021  80,273  (44,299) (366,267) (330,293)  in Pension Expe Ended June 30 2021	2022 80,273 (44,299) (366,267) (330,293) nse	80,273 (44,299) (366,267) (330,293)	16,055 (8,861) (73,254) (66,060)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  KIPP AMP  Charter School  Deferred Outflows of Resources  Deferred Inflows	Collective Amount at 6/30/2016  5,779,665,137  (3,189,542,961) (26,371,232,108) (23,781,109,932)  (1)  Collective Amount at 6/30/2016  5,779,665,137	Proportionate Share at 6/30/2016 0.018%  1,040,340  (574,118) (4,746,822) (4,280,600)  (2) Proportionate Share at 6/30/2016 0.001%	Proportionate Share at 6/30/2017 0.028%  1,618,306  (893,072)  (7,383,945) (6,658,711)  (3) Proportionate Share at 6/30/2017 0.004%  231,187	Change in Proportionate Share  577,966  (318,954) (2,637,123) (2,378,111)  (3)-(2) Change in Proportionate Share  173,390	Period (Years)  7.20  7.20  7.20  7.20  Recognition Period (Years)  7.20	80,273 (44,299) (366,267) (330,293) <b>2017</b> 24,082	80,273 (44,299) (366,267) (330,293) 2018 24,082	80,273 80,273 (44,299) (366,267) (330,293)  Amoun For 2019	**the Fiscal Year 2020	Ended June 30 2021  80,273  (44,299) (366,267) (330,293)  in Pension Expe Ended June 30 2021  24,082	2022 80,273 (44,299) (366,267) (330,293) nse 2022	80,273 (44,299) (366,267) (330,293) 2023	16,055 (8,861) (73,254) (66,060) 2024 4,816

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68) $\,$

#### Changes in Proportionate Share Changes in Proportionate Share at 6/30/2017

KIPP Infinity Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)									
	Collective Amount at 6/30/2016	Share at 6/30/2016 0.017%	Share at 6/30/2017 0.024%	Change in Proportionate Share	Recognition Period (Years)	2017	2018		nt to Recognize i the Fiscal Year 2020			2023	2024
Deferred Outflows of Resources	5,779,665,137	982,543	1,387,120	404,577	7.20	56,191	56,191	56,191	56,191	56,191	56,191	56,191	11,240
Deferred Inflows of Resources	(3,189,542,961)	(542,222)	(765,490)	(223,268)	7.20	(31,009)	(31,009)	(31,009)	(31,009)	(31,009)	(31,009)	(31,009)	(6,205)
Net Pension Liability	(26,371,232,108)	(4,483,109)	(6,329,096)	(1,845,987)	7.20	(256,387)	(256,387)	(256,387)	(256,387)	(256,387)	(256,387)	(256,387)	(51,278)
Total	(23,781,109,932)	(4,042,788)	(5,707,466)	(1,664,678)		(231,205)	(231,205)	(231,205)	(231,205)	(231,205)	(231,205)	(231,205)	(46,243)
Opportunity Charter School	(1) Collective Amount	(2) Proportionate Share at 6/30/2016	(3) Proportionate Share at 6/30/2017	(3)-(2) Change in Proportionate	Recognition Period		2040	For	nt to Recognize i	Ended June 30	1		
Deferred Outflows of Resources	at 6/30/2016 5,779,665,137	0.013% 751.356	0.022% 1,271,526	520,170	7.20	72,246	72,246	<b>2019</b> 72,246	72,246	72,246	72,246	72.246	14,448
	3,779,003,137	/31,330	1,2/1,320	320,170	7.20	72,240	72,240	72,240	72,240	72,240	72,240	72,240	14,446
Deferred Inflows of Resources	(3,189,542,961)	(414,641)	(701,699)	(287,058)	7.20	(39,869)	(39,869)	(39,869)	(39,869)	(39,869)	(39,869)	(39,869)	(7,975)
Net Pension Liability	(26,371,232,108)	(3,428,260)	(5,801,671)	(2,373,411)	7.20	(329,640)	(329,640)	(329,640)	(329,640)	(329,640)	(329,640)	(329,640)	(65,931)
Total	(23,781,109,932)	(3,091,545)	(5,231,844)	(2,140,299)		(297,263)	(297,263)	(297,263)	(297,263)	(297,263)	(297,263)	(297,263)	(59,458)
Renaissance Charter School	(1) Collective	(2) Proportionate Share at 6/30/2016	(3) Proportionate Share at 6/30/2017	(3)-(2) Change in Proportionate	Recognition Period				nt to Recognize i				
Charter School		Proportionate	Proportionate		Recognition Period (Years)	2017	2018		nt to Recognize i the Fiscal Year 2020			2023	2024
	Collective Amount	Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017	Change in Proportionate	Period	<b>2017</b> 88,300	<b>2018</b> 88,300	For	the Fiscal Year	Ended June 30	1	<b>2023</b> 88,300	2024 17,663
Charter School  Deferred Outflows	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.021%	Proportionate Share at 6/30/2017 0.032%	Change in Proportionate Share	Period (Years)			For 2019	the Fiscal Year 2020	Ended June 30 2021	2022		
Charter School  Deferred Outflows of Resources  Deferred Inflows	Collective Amount at 6/30/2016 5,779,665,137	Proportionate Share at 6/30/2016 0.021%  1,213,730	Proportionate Share at 6/30/2017 0.032% 1,849,493	Change in Proportionate Share 635,763	Period (Years) 7.20	88,300	88,300	For 2019 88,300	the Fiscal Year 2020 88,300	Ended June 30 2021 88,300	<b>2022</b> 88,300	88,300	17,663
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources	Collective Amount at 6/30/2016 5,779,665,137 (3,189,542,961)	Proportionate Share at 6/30/2016 0.021%  1,213,730  (669,804)	Proportionate Share at 6/30/2017 0.032% 1,849,493 (1,020,654)	Change in Proportionate Share 635,763 (350,850)	Period (Years) 7.20 7.20	88,300 (48,729)	88,300 (48,729)	88,300 (48,729)	the Fiscal Year 2020 88,300 (48,729)	88,300 (48,729)	2022 88,300 (48,729)	88,300 (48,729)	17,663 (9,747)
Deferred Outflows of Resources Deferred Inflows of Resources Net Pension Liability	Collective Amount at 6/30/2016 5,779,665,137 (3,189,542,961) (26,371,232,108)	Proportionate Share at 6/30/2016 0.021%  1,213,730  (669,804) (5,537,959)	Proportionate Share at 6/30/2017 0.032% 1.849,493 (1,020,654) (8,438,794)	Change in Proportionate Share 635,763 (350,850) (2,900,835)	Period (Years) 7.20 7.20	88,300 (48,729) (402,894)	88,300 (48,729) (402,894)	88,300 (48,729) (402,894) (363,323)	the Fiscal Year 2020 88,300 (48,729) (402,894)	Ended June 30 2021  88,300  (48,729)  (402,894)  (363,323)  in Pension Expe	2022 88,300 (48,729) (402,894) (363,323)	88,300 (48,729) (402,894)	17,663 (9,747) (80,577)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  UFT  Charter School	Collective Amount at 6/30/2016  5,779,665,137  (3,189,542,961) (26,371,232,108) (23,781,109,932)  (1)  Collective	Proportionate Share at 6/30/2016 0.021%  1,213,730  (669,804) (5,537,959) (4,994,033)  (2)  Proportionate Share	Proportionate Share at 6/30/2017 0.032%  1,849,493  (1,020,654) (8,438,794)  (7,609,955)  (3)  Proportionate Share	Change in Proportionate Share 635,763 (350,850) (2,900,835) (2,615,922) (3)-(2) Change in	Period (Years)	88,300 (48,729) (402,894)	88,300 (48,729) (402,894)	88,300 (48,729) (402,894) (363,323)	the Fiscal Year 2020  88,300  (48,729)  (402,894)  (363,323)  at to Recognize i	Ended June 30 2021  88,300  (48,729)  (402,894)  (363,323)  in Pension Expe	2022 88,300 (48,729) (402,894) (363,323)	88,300 (48,729) (402,894)	17,663 (9,747) (80,577)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  UFT	Collective Amount at 6/30/2016  5,779,665,137  (3,189,542,961) (26,371,232,108) (23,781,109,932)  (1)  Collective Amount	Proportionate Share at 6/30/2016 0.021%  1,213,730  (669,804) (5,537,959) (4,994,033) (2) Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017 0.032%  1,849,493  (1,020,654) (8,438,794) (7,609,955)  (3) Proportionate Share at 6/30/2017	Change in Proportionate Share  635,763  (350,850) (2,900,835) (2,615,922)  (3)-(2)  Change in Proportionate	Period (Years)  7.20  7.20  7.20  7.20  Recognition Period	88,300 (48,729) (402,894) (363,323)	88,300 (48,729) (402,894) (363,323)	88,300 (48,729) (402,894) (363,323)	the Fiscal Year 2020  88,300  (48,729)  (402,894)  (363,323)  at to Recognize is the Fiscal Year	88,300 (48,729) (402,894) (363,323) in Pension Expe Ended June 30	2022 88,300 (48,729) (402,894) (363,323)	88,300 (48,729) (402,894) (363,323)	17,663 (9,747) (80,577) (72,661)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  UFT  Charter School  Deferred Outflows	Collective Amount at 6/30/2016  5.779,665,137  (3.189,542,961) (26,371,232,108) (23,781,109,932)  (1)  Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.021%  1,213,730  (669,804) (5,537,959) (4,994,033)  (2) Proportionate Share at 6/30/2016 0.021%	Proportionate Share at 6/30/2017 0.032%  1,849,493  (1,020,654) (8,438,794) (7,609,955)  (3)  Proportionate Share at 6/30/2017 0.015%	Change in Proportionate Share  635,763  (350,850) (2,900,835) (2,615,922)  (3)-(2)  Change in Proportionate Share	Period (Years)  7.20  7.20  7.20  7.20  Recognition Period (Years)	88,300 (48,729) (402,894) (363,323)	88,300 (48,729) (402,894) (363,323)	88,300 (48,729) (402,894) (363,323)  Amour For 2019	the Fiscal Year 2020 88,300 (48,729) (402,894) (363,323) at to Recognize i the Fiscal Year 2020	Ended June 30 2021  88,300  (48,729)  (402,894)  (363,323)  in Pension Expe Ended June 30 2021	2022 88,300 (48,729) (402,894) (363,323) nse	88,300 (48,729) (402,894) (363,323)	17,663 (9,747) (80,577) (72,661)
Charter School  Deferred Outflows of Resources  Deferred Inflows of Resources  Net Pension Liability  Total  UFT  Charter School  Deferred Outflows of Resources  Deferred Inflows	Collective Amount at 6/30/2016  5.779,665,137  (3.189,542,961) (26,371,232,108) (23,781,109,932)  (1)  Collective Amount at 6/30/2016  5.779,665,137	Proportionate Share at 6/30/2016 0.021%  1,213,730  (669,804) (5,537,959) (4,994,033)  (2) Proportionate Share at 6/30/2016 0.021%  1,213,730	Proportionate Share at 6/30/2017 0.032%  1.849,493  (1,020,654) (8,438,794) (7,609,955)  (3) Proportionate Share at 6/30/2017 0.015%  866,950	Change in Proportionate Share  635,763  (350,850)  (2,900,835)  (2,615,922)  (3)-(2)  Change in Proportionate Share  (346,780)	Period (Years)  7.20  7.20  7.20  7.20  Recognition Period (Years)  7.20	88,300 (48,729) (402,894) (363,323) <b>2017</b> (48,164)	88,300 (48,729) (402,894) (363,323) 2018 (48,164)	88,300 (48,729) (402,894) (363,323)  Amour For 2019	the Fiscal Year 2020  88,300  (48,729)  (402,894)  (363,323)  at to Recognize if the Fiscal Year 2020  (48,164)	Ended June 30 2021  88,300  (48,729)  (402,894)  (363,323)  in Pension Expe Ended June 30 2021  (48,164)	2022 88,300 (48,729) (402,894) (363,323) nse 2022	88,300 (48,729) (402,894) (363,323) 2023	17,663 (9,747) (80,577) (72,661) 2024 (9,632)

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68) $\,$

#### Changes in Proportionate Share Changes in Proportionate Share at 6/30/2017

University Prep	(1)	(2)	(3)	(3)-(2)									
Charter High School	Collective	Proportionate Share	Proportionate Share	Change in	Recognition					in Pension Expe			
	Amount at 6/30/2016	at 6/30/2016 0.012%	at 6/30/2017 0.018%	Proportionate Share	Period (Years)	2017	2018	For 2019	the Fiscal Year 2020	Ended June 30 2021	2022	2023	2024
Deferred Outflows of Resources	5,779,665,137	693,560	1,040,340	346,780	7.20	48,164	48,164	48,164	48,164	48,164	48,164	48,164	9,632
Deferred Inflows of Resources	(3,189,542,961)	(382,745)	(574,118)	(191,373)	7.20	(26,580)	(26,580)	(26,580)	(26,580)	(26,580)	(26,580)	(26,580)	(5,313)
Net Pension Liability	(26,371,232,108)	(3,164,548)	(4,746,822)	(1,582,274)	7.20	(219,760)	(219,760)	(219,760)	(219,760)	(219,760)	(219,760)	(219,760)	(43,954)
Total	(23,781,109,932)	(2,853,733)	(4,280,600)	(1,426,867)		(198,176)	(198,176)	(198,176)	(198,176)	(198,176)	(198,176)	(198,176)	(39,635)
Voice Charter School	(1) Collective	(2) Proportionate Share	(3) Proportionate Share	(3)-(2) Change in	Recognition			Amour	at to Recognize	in Pension Expe	ince		
	Amount	at 6/30/2016	at 6/30/2017	Proportionate	Period					Ended June 30			
D.C. 10.45	at 6/30/2016	0.008%	0.009%	Share	(Years)	2017	2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	5,779,665,137	462,373	520,170	57,797	7.20	8,027	8,027	8,027	8,027	8,027	8,027	8,027	1,608
Deferred Inflows of Resources	(3,189,542,961)	(255,163)	(287,059)	(31,896)	7.20	(4,430)	(4,430)	(4,430)	(4,430)	(4,430)	(4,430)	(4,430)	(886)
Net Pension Liability	(26,371,232,108)	(2,109,699)	(2,373,411)	(263,712)	7.20	(36,627)	(36,627)	(36,627)	(36,627)	(36,627)	(36,627)	(36,627)	(7,323)
Total	(23,781,109,932)	(1,902,489)	(2,140,300)	(237,811)		(33,030)	(33,030)	(33,030)	(33,030)	(33,030)	(33,030)	(33,030)	(6,601)
Wildcat Charter School	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)									
	Collective Amount	Share at 6/30/2016	Share at 6/30/2017	Change in Proportionate	Recognition Period					in Pension Expe Ended June 30			
	at 6/30/2016	0.010%	0.017%	Share	(Years)	2017	2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	5,779,665,137	577,967	982,543	404,576	7.20	56,191	56,191	56,191	56,191	56,191	56,191	56,191	11,239
Deferred Inflows of Resources	(3,189,542,961)	(318,954)	(542,222)	(223,268)	7.20	(31,009)	(31,009)	(31,009)	(31,009)	(31,009)	(31,009)	(31,009)	(6,205)
Net Pension Liability	(26,371,232,108)	(2,637,123)	(4,483,109)	(1,845,986)	7.20	(256,387)	(256,387)	(256,387)	(256,387)	(256,387)	(256,387)	(256,387)	(51,277)
Total	(23,781,109,932)	(2,378,110)	(4,042,788)	(1,664,678)		(231,205)	(231,205)	(231,205)	(231,205)	(231,205)	(231,205)	(231,205)	(46,243)

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2016

Component	<b>Amount</b>
a. Service Cost	\$ 1,274,307,859
b. Interest on the Total Pension Liability	4,131,176,953
c. Differences between Expected and Actual Experience	708,833,315
d. Changes of Assumptions	633,561,984
e. Employee Contributions	(173,696,000)
f. Projected Earnings on Pension Plan Investments	(2,846,694,168)
g. Differences between Projected and Actual Earnings on Plan Investments	(1,250,764,332)
h. Pension Plan Administrative Expenses	59,367,000
i. Payment of Interest on TDA Fixed Funds	1,354,207,000
j. Other Changes in Fiduciary Net Position	 (1,233,000)
Total Pension Expense	\$ 3,889,066,611

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Department of Education

Component	<b>Amount</b>
a. Service Cost	\$ 1,223,577,662
b. Interest on the Total Pension Liability	3,966,714,798
c. Differences between Expected and Actual Experience	680,614,661
d. Changes of Assumptions	608,339,881
e. Employee Contributions	(166,781,161)
f. Projected Earnings on Pension Plan Investments	(2,733,367,273)
g. Differences between Projected and Actual Earnings on Plan Investments	(1,200,971,403)
h. Pension Plan Administrative Expenses	57,003,599
i. Payment of Interest on TDA Fixed Funds	1,300,296,019
j. Other Changes in Fiduciary Net Position	 (1,183,915)
Subtotal	3,734,242,868
k. Changes in Proportionate Share	(20,653,473)
<b>Total Pension Expense</b>	\$ 3,713,589,395

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 CUNY Senior Colleges

Component	<b>Amount</b>
a. Service Cost	\$ 35,413,015
b. Interest on the Total Pension Liability	114,805,408
c. Differences between Expected and Actual Experience	19,698,478
d. Changes of Assumptions	17,606,688
e. Employee Contributions	(4,827,012)
f. Projected Earnings on Pension Plan Investments	(79,109,631)
g. Differences between Projected and Actual Earnings on Plan Investments	(34,758,741)
h. Pension Plan Administrative Expenses	1,649,809
i. Payment of Interest on TDA Fixed Funds	37,633,413
j. Other Changes in Fiduciary Net Position	 (34,265)
Subtotal	108,077,162
k. Changes in Proportionate Share	17,151,833
Total Pension Expense	\$ 125,228,995

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 CUNY Community Colleges

Component		<b>Amount</b>
	Ф	12 456 601
a. Service Cost	\$	13,456,691
b. Interest on the Total Pension Liability		43,625,229
c. Differences between Expected and Actual Experience		7,485,280
d. Changes of Assumptions		6,690,415
e. Employee Contributions		(1,834,230)
f. Projected Earnings on Pension Plan Investments		(30,061,090)
g. Differences between Projected and Actual Earnings on Plan Investments		(13,208,071)
h. Pension Plan Administrative Expenses		626,916
i. Payment of Interest on TDA Fixed Funds		14,300,426
j. Other Changes in Fiduciary Net Position		(13,020)
Subtotal		41,068,546
k. Changes in Proportionate Share		8,331,968
Total Pension Expense	\$	49,400,514

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Beginning with Children Charter School

Component	<u>Amount</u>
a. Service Cost	\$ 101,945
b. Interest on the Total Pension Liability	330,494
c. Differences between Expected and Actual Experience	56,707
d. Changes of Assumptions	50,685
e. Employee Contributions	(13,896)
f. Projected Earnings on Pension Plan Investments	(227,736)
g. Differences between Projected and Actual Earnings on Plan Investments	(100,061)
h. Pension Plan Administrative Expenses	4,749
i. Payment of Interest on TDA Fixed Funds	108,337
j. Other Changes in Fiduciary Net Position	 (99)
Subtotal	311,125
k. Changes in Proportionate Share	(618,322)
<b>Total Pension Expense</b>	\$ (307,197)

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Future Leaders Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 89,202
b. Interest on the Total Pension Liability	289,182
c. Differences between Expected and Actual Experience	49,618
d. Changes of Assumptions	44,349
e. Employee Contributions	(12,159)
f. Projected Earnings on Pension Plan Investments	(199,269)
g. Differences between Projected and Actual Earnings on Plan Investments	(87,554)
h. Pension Plan Administrative Expenses	4,156
i. Payment of Interest on TDA Fixed Funds	94,794
j. Other Changes in Fiduciary Net Position	 (86)
Subtotal	272,233
k. Changes in Proportionate Share	(130,283)
Total Pension Expense	\$ 141,950

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Harriet Tubman Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 127,431
b. Interest on the Total Pension Liability	413,118
c. Differences between Expected and Actual Experience	70,883
d. Changes of Assumptions	63,356
e. Employee Contributions	(17,370)
f. Projected Earnings on Pension Plan Investments	(284,669)
g. Differences between Projected and Actual Earnings on Plan Investments	(125,076)
h. Pension Plan Administrative Expenses	5,937
i. Payment of Interest on TDA Fixed Funds	135,421
j. Other Changes in Fiduciary Net Position	 (123)
Subtotal	388,908
k. Changes in Proportionate Share	(127,918)
Total Pension Expense	\$ 260,990

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 KIPP Academy Charter School

Component		<b>Amount</b>
a. Service Cost	\$	229,375
b. Interest on the Total Pension Liability	Ψ	743,612
c. Differences between Expected and Actual Experience		127,590
d. Changes of Assumptions		114,041
e. Employee Contributions		(31,265)
f. Projected Earnings on Pension Plan Investments		(512,405)
g. Differences between Projected and Actual Earnings on Plan Investments		(225,138)
h. Pension Plan Administrative Expenses		10,686
i. Payment of Interest on TDA Fixed Funds		243,757
j. Other Changes in Fiduciary Net Position		(222)
•		· · · · ·
Subtotal		700,031
k. Changes in Proportionate Share		(516,402)
Total Pension Expense	\$	183,629

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 KIPP AMP Charter School

<u>Component</u>		<b>Amount</b>
a. Service Cost	\$	12,743
b. Interest on the Total Pension Liability	Ψ	41,312
c. Differences between Expected and Actual Experience		7,088
d. Changes of Assumptions		6,336
e. Employee Contributions		(1,737)
f. Projected Earnings on Pension Plan Investments		(28,467)
g. Differences between Projected and Actual Earnings on Plan Investments		(12,508)
h. Pension Plan Administrative Expenses		594
i. Payment of Interest on TDA Fixed Funds		13,542
j. Other Changes in Fiduciary Net Position		(12)
		_
Subtotal		38,891
k. Changes in Proportionate Share		(191,878)
<b>Total Pension Expense</b>	\$	(152,987)

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 KIPP Infinity Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 216,632
b. Interest on the Total Pension Liability	702,300
c. Differences between Expected and Actual Experience	120,502
d. Changes of Assumptions	107,706
e. Employee Contributions	(29,528)
f. Projected Earnings on Pension Plan Investments	(483,938)
g. Differences between Projected and Actual Earnings on Plan Investments	(212,630)
h. Pension Plan Administrative Expenses	10,092
i. Payment of Interest on TDA Fixed Funds	230,215
j. Other Changes in Fiduciary Net Position	 (210)
Subtotal	661,141
k. Changes in Proportionate Share	(701,189)
	(, , , , , ,
Total Pension Expense	\$ (40,048)

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Opportunity Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 165,660
b. Interest on the Total Pension Liability	537,053
c. Differences between Expected and Actual Experience	92,148
d. Changes of Assumptions	82,363
e. Employee Contributions	(22,580)
f. Projected Earnings on Pension Plan Investments	(370,070)
g. Differences between Projected and Actual Earnings on Plan Investments	(162,599)
h. Pension Plan Administrative Expenses	7,718
i. Payment of Interest on TDA Fixed Funds	176,047
j. Other Changes in Fiduciary Net Position	 (160)
Subtotal	505,580
k. Changes in Proportionate Share	(357,757)
Total Pension Expense	\$ 147,823

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Renaissance Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 267,605
b. Interest on the Total Pension Liability	867,547
c. Differences between Expected and Actual Experience	148,855
d. Changes of Assumptions	133,048
e. Employee Contributions	(36,476)
f. Projected Earnings on Pension Plan Investments	(597,806)
g. Differences between Projected and Actual Earnings on Plan Investments	(262,661)
h. Pension Plan Administrative Expenses	12,467
i. Payment of Interest on TDA Fixed Funds	284,383
j. Other Changes in Fiduciary Net Position	 (259)
Subtotal	816,703
k. Changes in Proportionate Share	(251,110)
<b>Total Pension Expense</b>	\$ 565,593

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2016 UFT Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 267,605
b. Interest on the Total Pension Liability	867,547
c. Differences between Expected and Actual Experience	148,855
d. Changes of Assumptions	133,048
e. Employee Contributions	(36,476)
f. Projected Earnings on Pension Plan Investments	(597,806)
g. Differences between Projected and Actual Earnings on Plan Investments	(262,661)
h. Pension Plan Administrative Expenses	12,467
i. Payment of Interest on TDA Fixed Funds	284,383
j. Other Changes in Fiduciary Net Position	 (259)
Subtotal	816,703
k. Changes in Proportionate Share	(1,312,420)
Total Pension Expense	\$ (495,717)

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 University Prep Charter High School

Component	<b>Amount</b>
a. Service Cost	\$ 152,917
b. Interest on the Total Pension Liability	495,741
c. Differences between Expected and Actual Experience	85,060
d. Changes of Assumptions	76,027
e. Employee Contributions	(20,844)
f. Projected Earnings on Pension Plan Investments	(341,603)
g. Differences between Projected and Actual Earnings on Plan Investments	(150,092)
h. Pension Plan Administrative Expenses	7,124
i. Payment of Interest on TDA Fixed Funds	162,505
j. Other Changes in Fiduciary Net Position	 (148)
Subtotal	466,687
k. Changes in Proportionate Share	(374,302)
<b>Total Pension Expense</b>	\$ 92,385

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Voice Charter School

Component	<b>Amount</b>
	404.045
a. Service Cost	\$ 101,945
b. Interest on the Total Pension Liability	330,494
c. Differences between Expected and Actual Experience	56,707
d. Changes of Assumptions	50,685
e. Employee Contributions	(13,896)
f. Projected Earnings on Pension Plan Investments	(227,736)
g. Differences between Projected and Actual Earnings on Plan Investments	(100,061)
h. Pension Plan Administrative Expenses	4,749
i. Payment of Interest on TDA Fixed Funds	108,337
j. Other Changes in Fiduciary Net Position	 (99)
Subtotal	311,125
k. Changes in Proportionate Share	(61,595)
Total Pension Expense	\$ 249,530

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Wildcat Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 127,431
b. Interest on the Total Pension Liability	413,118
c. Differences between Expected and Actual Experience	70,883
d. Changes of Assumptions	63,356
e. Employee Contributions	(17,370)
f. Projected Earnings on Pension Plan Investments	(284,669)
g. Differences between Projected and Actual Earnings on Plan Investments	(125,076)
h. Pension Plan Administrative Expenses	5,937
i. Payment of Interest on TDA Fixed Funds	135,421
j. Other Changes in Fiduciary Net Position	 (123)
Subtotal	388,908
k. Changes in Proportionate Share	(187,152)
<b>Total Pension Expense</b>	\$ 201,756

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Components of Pension Expense for the Fiscal Year Ended June 30, 2016 - By Obligor

Component		DEPT. OF ED.	SENIOR COLL.	COMM. COLL.	<u>BWC</u>	FUT. LEAD.	H. TUBMAN
a. Service Cost	\$	1,223,577,662 \$	35,413,015 \$	13,456,691 \$	101,945 \$	89,202 \$	127,431
b. Interest on the Total Pension Liability		3,966,714,798	114,805,408	43,625,229	330,494	289,182	413,118
c. Differences between Expected and Actual Experience		680,614,661	19,698,478	7,485,280	56,707	49,618	70,883
d. Changes of Assumptions		608,339,881	17,606,688	6,690,415	50,685	44,349	63,356
e. Employee Contributions		(166,781,161)	(4,827,012)	(1,834,230)	(13,896)	(12,159)	(17,370)
f. Projected Earnings on Pension Plan Investments		(2,733,367,273)	(79,109,631)	(30,061,090)	(227,736)	(199,269)	(284,669)
g. Differences between Projected and Actual Earnings on Plan Investments		(1,200,971,403)	(34,758,741)	(13,208,071)	(100,061)	(87,554)	(125,076)
h. Pension Plan Administrative Expenses		57,003,599	1,649,809	626,916	4,749	4,156	5,937
i. Payment of Interest on TDA Fixed Funds		1,300,296,019	37,633,413	14,300,426	108,337	94,794	135,421
j. Other Changes in Fiduciary Net Position		(1,183,915)	(34,265)	(13,020)	(99)	(86)	(123)
k. Changes in Proportionate Share		(20,653,473)	17,151,833	8,331,968	(618,322)	(130,283)	(127,918)
Total Pension Expense	\$	3,713,589,395 \$	125,228,995 \$	49,400,514 \$	(307,197) \$	141,950 \$	260,990
<u>Component</u>		KIPP ACAD.	KIPP AMP	KIPP INF.	OPPOR.	REN.	<u>UFT</u>
a. Service Cost	\$	229.375 \$	12.743 \$	216.632 \$	165.660 \$	267.605 \$	267.605
b. Interest on the Total Pension Liability	_	743,612	41,312	702,300	537,053	867,547	867,547
c. Differences between Expected and Actual Experience		127,590	7,088	120,502	92,148	148,855	148,855
d. Changes of Assumptions		114,041	6,336	107,706	82,363	133,048	133,048
e. Employee Contributions		(31,265)	(1,737)	(29,528)	(22,580)	(36,476)	(36,476)
f. Projected Earnings on Pension Plan Investments		(512,405)	(28,467)	(483,938)	(370,070)	(597,806)	(597,806)
g. Differences between Projected and Actual Earnings on Plan Investments		(225,138)	(12,508)	(212,630)	(162,599)	(262,661)	(262,661)
h. Pension Plan Administrative Expenses		10,686	594	10,092	7,718	12,467	12,467
i. Payment of Interest on TDA Fixed Funds		243,757	13,542	230,215	176,047	284,383	284,383
j. Other Changes in Fiduciary Net Position		(222)	(12)	(210)	(160)	(259)	(259)
k. Changes in Proportionate Share		(516,402)	(191,878)	(701,189)	(357,757)	(251,110)	(1,312,420)
<b>Total Pension Expense</b>	\$	183,629 \$	(152,987) \$	(40,048) \$	147,823 \$	565,593 \$	(495,717)
<u>Component</u>		UNIV PREP	<u>voice</u>	<u>WILDCAT</u>	<u>Total</u>		
a. Service Cost	\$	152,917 \$	101,945 \$	127,431 \$	1,274,307,859		
b. Interest on the Total Pension Liability		495,741	330,494	413,118	4,131,176,953		
c. Differences between Expected and Actual Experience		85,060	56,707	70,883	708,833,315		
d. Changes of Assumptions		76,027	50,685	63,356	633,561,984		
e. Employee Contributions		(20,844)	(13,896)	(17,370)	(173,696,000)		
f. Projected Earnings on Pension Plan Investments		(341,603)	(227,736)	(284,669)	(2,846,694,168)		
g. Differences between Projected and Actual Earnings on Plan Investments		(150,092)	(100,061)	(125,076)	(1,250,764,332)		
h. Pension Plan Administrative Expenses		7,124	4,749	5,937	59,367,000		
i. Payment of Interest on TDA Fixed Funds		162,505	108,337	135,421	1,354,207,000		
j. Other Changes in Fiduciary Net Position		(148)	(99)	(123)	(1,233,000)		
k. Changes in Proportionate Share		(374,302)	(61,595)	(187,152)	0		
<b>Total Pension Expense</b>	\$	92,385 \$	249,530 \$	201,756 \$	3,889,066,611		

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2017

Component	<b>Amount</b>
a. Service Cost	\$ 1,386,673,964
b. Interest on the Total Pension Liability	5,147,042,567
c. Differences between Expected and Actual Experience	848,867,872
d. Changes of Assumptions	633,561,984
e. Employee Contributions	(180,076,000)
f. Projected Earnings on Pension Plan Investments	(3,539,453,720)
g. Differences between Projected and Actual Earnings on Plan Investments	(2,169,529,589)
h. Pension Plan Administrative Expenses	60,790,000
i. Payment of Interest on TDA Fixed Funds	1,466,615,000
j. Other Changes in Fiduciary Net Position	 46,229,000
Total Pension Expense	\$ 3,700,721,078

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Department of Education

Component	<b>Amount</b>
a. Service Cost	\$ 1,339,901,449
b. Interest on the Total Pension Liability	4,973,432,821
c. Differences between Expected and Actual Experience	820,235,559
d. Changes of Assumptions	612,191,939
e. Employee Contributions	(174,002,037)
f. Projected Earnings on Pension Plan Investments	(3,420,067,947)
g. Differences between Projected and Actual Earnings on Plan Investments	(2,096,351,356)
h. Pension Plan Administrative Expenses	58,739,551
i. Payment of Interest on TDA Fixed Funds	1,417,146,076
j. Other Changes in Fiduciary Net Position	 44,669,697
Subtotal	3,575,895,752
k. Changes in Proportionate Share	(571,646)
Total Pension Expense	\$ 3,575,324,106

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 CUNY Senior Colleges

Component	<b>Amount</b>
a. Service Cost	\$ 30,160,159
b. Interest on the Total Pension Liability	111,948,176
c. Differences between Expected and Actual Experience	18,462,876
d. Changes of Assumptions	13,779,973
e. Employee Contributions	(3,916,653)
f. Projected Earnings on Pension Plan Investments	(76,983,118)
g. Differences between Projected and Actual Earnings on Plan Investments	(47,187,269)
h. Pension Plan Administrative Expenses	1,322,183
i. Payment of Interest on TDA Fixed Funds	31,898,876
j. Other Changes in Fiduciary Net Position	 1,005,481
Subtotal	80,490,684
k. Changes in Proportionate Share	(2,797,876)
Total Pension Expense	\$ 77,692,808

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 CUNY Community Colleges

Component		<u>Amount</u>
a. Service Cost	\$	13,714,206
b. Interest on the Total Pension Liability		50,904,251
c. Differences between Expected and Actual Experience		8,395,303
d. Changes of Assumptions		6,265,928
e. Employee Contributions		(1,780,952)
f. Projected Earnings on Pension Plan Investments		(35,005,197)
g. Differences between Projected and Actual Earnings on Plan Investments		(21,456,648)
h. Pension Plan Administrative Expenses		601,213
i. Payment of Interest on TDA Fixed Funds		14,504,822
j. Other Changes in Fiduciary Net Position	-	457,205
Subtotal		36,600,131
k. Changes in Proportionate Share		6,119,003
Total Pension Expense	\$	42,719,134

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Beginning with Children Charter School

<u>Component</u>	<u>Amount</u>
a. Service Cost	\$ 208,001
b. Interest on the Total Pension Liability	772,056
c. Differences between Expected and Actual Experience	127,330
d. Changes of Assumptions	95,034
e. Employee Contributions	(27,011)
f. Projected Earnings on Pension Plan Investments	(530,918)
g. Differences between Projected and Actual Earnings on Plan Investments	(325,429)
h. Pension Plan Administrative Expenses	9,119
i. Payment of Interest on TDA Fixed Funds	219,992
j. Other Changes in Fiduciary Net Position	 6,934
Subtotal	555,108
k. Changes in Proportionate Share	(387,117)
Total Pension Expense	\$ 167,991

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Future Leaders Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 166,401
b. Interest on the Total Pension Liability	617,645
c. Differences between Expected and Actual Experience	101,864
d. Changes of Assumptions	76,027
e. Employee Contributions	(21,609)
f. Projected Earnings on Pension Plan Investments	(424,734)
g. Differences between Projected and Actual Earnings on Plan Investments	(260,344)
h. Pension Plan Administrative Expenses	7,295
i. Payment of Interest on TDA Fixed Funds	175,994
j. Other Changes in Fiduciary Net Position	 5,547
Subtotal	444,086
k. Changes in Proportionate Share	34,864
Total Pension Expense	\$ 478,950

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Harriet Tubman Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 180,268
b. Interest on the Total Pension Liability	669,116
c. Differences between Expected and Actual Experience	110,353
d. Changes of Assumptions	82,363
e. Employee Contributions	(23,410)
f. Projected Earnings on Pension Plan Investments	(460,129)
g. Differences between Projected and Actual Earnings on Plan Investments	(282,039)
h. Pension Plan Administrative Expenses	7,903
i. Payment of Interest on TDA Fixed Funds	190,660
j. Other Changes in Fiduciary Net Position	 6,010
Subtotal	481,095
k. Changes in Proportionate Share	(28,830)
Total Pension Expense	\$ 452,265

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 KIPP Academy Charter School

Component		<b>Amount</b>
a. Service Cost	\$	388,269
b. Interest on the Total Pension Liability		1,441,172
c. Differences between Expected and Actual Experience		237,683
d. Changes of Assumptions		177,397
e. Employee Contributions		(50,421)
f. Projected Earnings on Pension Plan Investments		(991,047)
g. Differences between Projected and Actual Earnings on Plan Investments		(607,468)
h. Pension Plan Administrative Expenses		17,021
i. Payment of Interest on TDA Fixed Funds		410,652
j. Other Changes in Fiduciary Net Position		12,944
Subtotal		1,036,202
k. Changes in Proportionate Share		(186,109)
Total Pension Expense	\$	850,093
	•	,

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 KIPP AMP Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 55,467
b. Interest on the Total Pension Liability	205,882
c. Differences between Expected and Actual Experience	33,955
d. Changes of Assumptions	25,342
e. Employee Contributions	(7,203)
f. Projected Earnings on Pension Plan Investments	(141,578)
g. Differences between Projected and Actual Earnings on Plan Investments	(86,781)
h. Pension Plan Administrative Expenses	2,432
i. Payment of Interest on TDA Fixed Funds	58,665
j. Other Changes in Fiduciary Net Position	 1,849
Subtotal	148,030
k. Changes in Proportionate Share	(92,790)
Total Pension Expense	\$ 55,240

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 KIPP Infinity Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 332,802
b. Interest on the Total Pension Liability	1,235,290
c. Differences between Expected and Actual Experience	203,728
d. Changes of Assumptions	152,055
e. Employee Contributions	(43,218)
f. Projected Earnings on Pension Plan Investments	(849,469)
g. Differences between Projected and Actual Earnings on Plan Investments	(520,687)
h. Pension Plan Administrative Expenses	14,590
i. Payment of Interest on TDA Fixed Funds	351,988
j. Other Changes in Fiduciary Net Position	 11,095
Subtotal	888,174
k. Changes in Proportionate Share	(469,984)
Total Pension Expense	\$ 418,190

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Opportunity Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 305,068
b. Interest on the Total Pension Liability	1,132,349
c. Differences between Expected and Actual Experience	186,751
d. Changes of Assumptions	139,384
e. Employee Contributions	(39,617)
f. Projected Earnings on Pension Plan Investments	(778,680)
g. Differences between Projected and Actual Earnings on Plan Investments	(477,297)
h. Pension Plan Administrative Expenses	13,374
i. Payment of Interest on TDA Fixed Funds	322,655
j. Other Changes in Fiduciary Net Position	 10,170
Subtotal	814,157
k. Changes in Proportionate Share	(60,494)
<b>Total Pension Expense</b>	\$ 753,663

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Renaissance Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 443,736
b. Interest on the Total Pension Liability	1,647,054
c. Differences between Expected and Actual Experience	271,638
d. Changes of Assumptions	202,740
e. Employee Contributions	(57,624)
f. Projected Earnings on Pension Plan Investments	(1,132,625)
g. Differences between Projected and Actual Earnings on Plan Investments	(694,249)
h. Pension Plan Administrative Expenses	19,453
i. Payment of Interest on TDA Fixed Funds	469,317
j. Other Changes in Fiduciary Net Position	 14,793
Subtotal	1,184,233
k. Changes in Proportionate Share	112,213
Total Pension Expense	\$ 1,296,446

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 UFT Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 208,001
b. Interest on the Total Pension Liability	772,056
c. Differences between Expected and Actual Experience	127,330
d. Changes of Assumptions	95,034
e. Employee Contributions	(27,011)
f. Projected Earnings on Pension Plan Investments	(530,918)
g. Differences between Projected and Actual Earnings on Plan Investments	(325,429)
h. Pension Plan Administrative Expenses	9,119
i. Payment of Interest on TDA Fixed Funds	219,992
j. Other Changes in Fiduciary Net Position	 6,934
Subtotal	555,108
k. Changes in Proportionate Share	(1,510,596)
Total Pension Expense	\$ (955,488)

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 University Prep Charter High School

<u>Component</u>		<b>Amount</b>
a. Service Cost	\$	249,601
b. Interest on the Total Pension Liability	Ψ	926,468
c. Differences between Expected and Actual Experience		152,796
d. Changes of Assumptions		114,041
e. Employee Contributions		(32,414)
f. Projected Earnings on Pension Plan Investments		(637,102)
g. Differences between Projected and Actual Earnings on Plan Investments		(390,515)
h. Pension Plan Administrative Expenses		10,942
i. Payment of Interest on TDA Fixed Funds		263,991
j. Other Changes in Fiduciary Net Position		8,321
Subtotal		666,129
k. Changes in Proportionate Share		(176,126)
Total Pension Expense	\$	490,003

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Voice Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 124,801
b. Interest on the Total Pension Liability	463,234
c. Differences between Expected and Actual Experience	76,398
d. Changes of Assumptions	57,021
e. Employee Contributions	(16,207)
f. Projected Earnings on Pension Plan Investments	(318,551)
g. Differences between Projected and Actual Earnings on Plan Investments	(195,258)
h. Pension Plan Administrative Expenses	5,471
i. Payment of Interest on TDA Fixed Funds	131,995
j. Other Changes in Fiduciary Net Position	 4,161
	_
Subtotal	333,065
k. Changes in Proportionate Share	(28,565)
	, , ,
Total Pension Expense	\$ 304,500

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Wildcat Charter School

Component	<b>Amount</b>
a. Service Cost	\$ 235,735
b. Interest on the Total Pension Liability	874,997
c. Differences between Expected and Actual Experience	144,308
d. Changes of Assumptions	107,706
e. Employee Contributions	(30,613)
f. Projected Earnings on Pension Plan Investments	(601,707)
g. Differences between Projected and Actual Earnings on Plan Investments	(368,820)
h. Pension Plan Administrative Expenses	10,334
i. Payment of Interest on TDA Fixed Funds	249,325
j. Other Changes in Fiduciary Net Position	 7,859
Subtotal	629,124
k. Changes in Proportionate Share	44,053
Total Pension Expense	\$ 673,177

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Components of Pension Expense for the Fiscal Year Ended June 30, 2017 - By Obligor

<u>Component</u>		DEPT. OF ED.	SENIOR COLL.	COMM. COLL.	<u>BWC</u>	FUT. LEAD.	H. TUBMAN
a. Service Cost	\$	1,339,901,449 \$	30,160,159 \$	13,714,206 \$	208,001 \$	166,401 \$	180,268
b. Interest on the Total Pension Liability		4,973,432,821	111,948,176	50,904,251	772,056	617,645	669,116
c. Differences between Expected and Actual Experience		820,235,559	18,462,876	8,395,303	127,330	101,864	110,353
d. Changes of Assumptions		612,191,939	13,779,973	6,265,928	95,034	76,027	82,363
e. Employee Contributions		(174,002,037)	(3,916,653)	(1,780,952)	(27,011)	(21,609)	(23,410)
f. Projected Earnings on Pension Plan Investments		(3,420,067,947)	(76,983,118)	(35,005,197)	(530,918)	(424,734)	(460,129)
g. Differences between Projected and Actual Earnings on Plan Investments		(2,096,351,356)	(47,187,269)	(21,456,648)	(325,429)	(260,344)	(282,039)
h. Pension Plan Administrative Expenses		58,739,551	1,322,183	601,213	9,119	7,295	7,903
i. Payment of Interest on TDA Fixed Funds		1,417,146,076	31,898,876	14,504,822	219,992	175,994	190,660
j. Other Changes in Fiduciary Net Position		44,669,697	1,005,481	457,205	6,934	5,547	6,010
k. Changes in Proportionate Share		(571,646)	(2,797,876)	6,119,003	(387,117)	34,864	(28,830)
<b>Total Pension Expense</b>	\$	3,575,324,106 \$	77,692,808 \$	42,719,134 \$	167,991 \$	478,950 \$	452,265
<u>Component</u>		KIPP ACAD.	KIPP AMP	KIPP INF.	OPPOR.	REN.	<u>UFT</u>
a. Service Cost	\$	388,269 \$	55,467 \$	332,802 \$	305,068 \$	443,736 \$	208,001
b. Interest on the Total Pension Liability	Ψ	1,441,172	205,882	1,235,290	1,132,349	1,647,054	772,056
c. Differences between Expected and Actual Experience		237,683	33,955	203,728	186,751	271,638	127,330
d. Changes of Assumptions		177,397	25,342	152,055	139,384	202,740	95,034
e. Employee Contributions		(50,421)	(7,203)	(43,218)	(39,617)	(57,624)	(27,011)
f. Projected Earnings on Pension Plan Investments		(991,047)	(141,578)	(849,469)	(778,680)	(1,132,625)	(530,918)
g. Differences between Projected and Actual Earnings on Plan Investments		(607,468)	(86,781)	(520,687)	(477,297)	(694,249)	(325,429)
h. Pension Plan Administrative Expenses		17,021	2,432	14,590	13,374	19,453	9,119
i. Payment of Interest on TDA Fixed Funds		410,652	58,665	351,988	322,655	469,317	219,992
j. Other Changes in Fiduciary Net Position		12,944	1,849	11,095	10,170	14,793	6,934
k. Changes in Proportionate Share		(186,109)	(92,790)	(469,984)	(60,494)	112,213	(1,510,596)
Total Pension Expense	\$	850,093 \$	55,240 \$	418,190 \$	753,663 \$	1,296,446 \$	(955,488)
<u>Component</u>		UNIV PREP	<b>VOICE</b>	WILDCAT	<u>Total</u>		
a. Service Cost	\$	249,601 \$	124,801 \$	235,735 \$	1,386,673,964		
b. Interest on the Total Pension Liability		926,468	463,234	874,997	5,147,042,567		
c. Differences between Expected and Actual Experience		152,796	76,398	144,308	848,867,872		
d. Changes of Assumptions		114,041	57,021	107,706	633,561,984		
e. Employee Contributions		(32,414)	(16,207)	(30,613)	(180,076,000)		
f. Projected Earnings on Pension Plan Investments		(637,102)	(318,551)	(601,707)	(3,539,453,720)		
g. Differences between Projected and Actual Earnings on Plan Investments		(390,515)	(195,258)	(368,820)	(2,169,529,589)		
h. Pension Plan Administrative Expenses		10,942	5,471	10,334	60,790,000		
i. Payment of Interest on TDA Fixed Funds		263,991	131,995	249,325	1,466,615,000		
j. Other Changes in Fiduciary Net Position		8,321	4,161	7,859	46,229,000		
k. Changes in Proportionate Share		(176,126)	(28,565)	44,053	0		
<b>Total Pension Expense</b>	\$	490,003 \$	304,500 \$	673,177 \$	3,700,721,078		

NYC Office of the Actuary September 29, 2017

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2013, the Obligors recognized Pension Expense for TRS of \$3,041,839,656.

At June 30, 2013, the Obligors reported total Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for TRS from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between Expected and Actual Experience	\$	0	\$	0
Changes of Assumptions		0		0
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0	2,	482,827,189
Total	\$	0	\$ 2,	482,827,189

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2013	\$ (620,706,797)
2014	(620,706,797)
2015	(620,706,797)
2016	(620,706,797)
2017	(620,706,798)

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2014, the Obligors recognized Pension Expense for TRS of \$1,733,023,169.

For June 30, 2014, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for TRS from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources	
Differences between Expected and Actual Experience	\$	0	\$	0	
Changes of Assumptions		0		0	
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0	5,	137,672,325	
Total	\$	0	\$ 5,	137,672,325	

Fiscal Year	
Ended	
June 30	<u>Amount</u>
2014	\$ (1,284,418,081)
2015	(1,284,418,081)
2016	(1,284,418,081)
2017	(1,284,418,081)
2018	(1,284,418,082)

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2015, the Obligors recognized Pension Expense for TRS of \$2,162,052,493

For June 30, 2015, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for TRS from the following sources:

	Deferred Outflows of Resources	Inf	erred flows sources
Differences between Expected and Actual Experience	\$ 1,119,313,745	\$	0
Changes of Assumptions	0		0
Net Difference between Projected and Actual Earnings on Pension Plan Investments	 1,108,300,450		0
Total	\$ 2,227,614,195	\$	0

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2015	\$ 665,725,718
2016	\$ 665,725,718
2017	\$ 665,725,718
2018	\$ 619,087,645
2019	\$ 277,075,114

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2016, the Obligors recognized Pension Expense for TRS of \$3,889,066,611.

For June 30, 2016, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for TRS from the following sources:

	Deferred Outflows of Resources	In	ferred flows esources
Differences between Expected and Actual Experience	\$ 909,318,893	\$	0
Changes of Assumptions	1,799,316,033		0
Net Difference between Projected and Actual Earnings on Pension Plan Investments	 1,509,141,734		0
Total	\$ 4,217,776,660	\$	0

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2016	\$ 1,331,030,127
2017	\$ 1,331,030,127
2018	\$ 1,331,030,127
2019	\$ 1,178,430,974
2020	\$ 377,285,432

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2017, the Obligors recognized Pension Expense for TRS of \$3,700,721,078.

For June 30, 2017, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for TRS from the following sources:

	C	]	Deferred Inflows of Resources			
Differences between Expected and Actual Experience	\$	868,214,256	\$	0		
Changes of Assumptions		0		0		
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0		3,675,061,024		
Total	\$	868,214,256	\$	3,675,061,024		

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2017	\$ (778,730,699)
2018	\$ (778,730,699)
2019	\$ (778,730,699)
2020	\$ (778,730,699)
2021	\$ (778,730,699)
Thereafter	\$ 308.076.028

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2017, the Obligors recognized Pension Expense for TRS of \$3,700,721,078.

At June 30, 2017, the Obligors reported total Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for TRS from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources			
Differences between Expected and Actual Experience	\$ 1,799,362,973	\$	0		
Changes of Assumptions	\$ 1,165,754,049		0		
Net Difference between Projected and Actual Earnings on Pension Plan Investments	 	\$	3,273,472,580		
Total	\$ 2,965,117,022	\$	3,273,472,580		

Fiscal Year	
Ended	
<u>June 30</u>	Amount
2017	\$ (687,099,733)
2018	\$ (113,031,009)
2019	\$ 676,775,389
2020	\$ (401,445,267)
2021	\$ (778,730,699)
Thereafter	\$ 308,076,028

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Schedule of Pension Amounts by Employer As of and for the year ended June 30, 2016

			:	Deferred Outflows of Resource	es				Deferred Inflows	of Resources	Pension Expense			
Entity*	Net Pension Liability	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Between Investment Contributions Deferred Expected Earnings on and Proportionate Inflows and Actual Persion Plan Change of Share of of		Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense		
DOE	\$ 25,321,393,354	\$ 1,574,694,346	\$ 2,247,197,059	\$ 1,727,685,262	\$ (63,552,008)	\$ 5,486,024,659	\$ 0	\$ 3,062,567,257	\$ 0	\$ (5,387,345)	\$ 3,057,179,912	\$ 3,734,242,868	\$ (20,653,473)	\$ 3,713,589,395
CSC	732,856,540	45,575,101	65,038,801	50,002,993	50,315,509	210,932,404	0	88,637,399	0	3,937,539	92,574,938	108,077,162	17,151,833	125,228,995
CCC	278,480,211	17,318,210	24,714,276	19,000,777	25,341,789	86,375,052	0	33,681,574	0	2,108,808	35,790,382	41,068,546	8,331,968	49,400,514
BwC	2,109,699	131,199	187,229	143,945	(1,842,905)	(1,380,532)	0	255,163	0	(148,275)	106,888	311,125	(618,322)	(307,197)
Fut Lead	1,845,986	114,799	163,826	125,952	(169,323)	235,254	0	223,268	0	16,475	239,743	272,233	(130,283)	141,950
H Tubman	2,637,124	163,998	234,037	179,932	(240,489)	337,478	0	318,954	0	0	318,954	388,908	(127,918)	260,990
KIPP	4,746,822	295,197	421,266	323,877	(819,622)	220,718	0	574,118	0	32,951	607,069	700,031	(516,402)	183,629
KIPP AMP	263,713	16,400	23,404	17,993	(360,732)	(302,935)	0	31,895	0	0	31,895	38,891	(191,878)	(152,987)
KIPP Infinity	4,483,109	278,797	397,862	305,884	(1,393,842)	(411,299)	0	542,222	0	(16,476)	525,746	661,141	(701,189)	(40,048)
Opp	3,428,260	213,198	304,248	233,911	(1,504,257)	(752,900)	0	414,641	0	(181,225)	233,416	505,580	(357,757)	147,823
Ren	5,537,960	344,396	491,477	377,856	(623,303)	590,426	0	669,804	0	(32,950)	636,854	816,703	(251,110)	565,593
UFT	5,537,960	344,396	491,477	377,856	(3,450,237)	(2,236,508)	0	669,804	0	(214,176)	455,628	816,703	(1,312,420)	(495,717)
Univ Prep	3,164,548	196,798	280,844	215,918	(1,006,117)	(312,557)	0	382,745	0	(65,900)	316,845	466,687	(374,302)	92,385
Voice	2,109,699	131,199	187,229	143,945	(191,408)	270,965	0	255,163	0	(16,475)	238,688	311,125	(61,595)	249,530
Wildcat	2,637,123	163,998	234,037	179,932	(503,055)	74,912	0	318,954	0	(32,951)	286,003	388,908	(187,152)	201,756
Total	\$ 26,371,232,108	\$ 1,639,982,032	\$ 2,340,367,072	\$ 1,799,316,033	\$ 0	\$ 5,779,665,137	\$ 0	\$ 3,189,542,961	\$ 0	\$ 0	\$ 3,189,542,961	\$ 3,889,066,611	\$ 0	\$ 3,889,066,611

NYC Office of the Actuary September 29, 2017

<sup>\*</sup> DOE - Department of Education
CSC - CUNY Senior Colleges
CCC - CUNY Senior Colleges
CCC - CUNY Commanity Colleges
BwC - Beginning with Children Chanter School
Fut Lead - Future Leaders Charter School
HTbubuna - Harrier Tubrana Charter School
KFPP - KIPP Academy Charter School
KFP P AIP - KEP Ameriter School
KFP P Haffinity - KIPP Haffinity Charter School
Opp - Opportunity Charter School
Opp - Opportunity Charter School
Univ Prop - University Prep Charter High School
Univ Prop - University Prep Charter High School
Videc - Voice Charter School
Wildcat - Wildcat Charter School

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Schedule of Pension Amounts by Employer As of and for the year ended June 30, 2017

	_			Deferred Outflows of Resource	es		-		Deferred Inflows of	f Resources	Pension Expense											
Entity*	Net Pension Liability	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Change of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Between Investment Expected Earnings on and Actual Pension Plan Experience Investments		Between Projected Differences and Actual Between Investment Expected Earnings on and Actual Pension Plan		Between Projected Differences and Actual Between Investment Expected Earnings on and Actual Pension Plan		Between and Difference. Projected Between and Actual Employer Investment Contribution Earnings on and Proportion Pension Plan Change of Share of		Proportion and Differences Between Employer Total Contributions Deferred and Proportionate Inflows Change of Share of of		Net Difference Proportion Between and Differences Projected Between and Actual Employer Total Investment Contributions Deferred Earrings on Proportionate Inflows Pension Plan Change of Share of of		Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
DOE	\$ 22,444,293,331	\$ 1,738,670,459	S 0	\$ 1,126,433,165	\$ 113,765,496	\$ 2,978,869,120	\$ 0	\$ 3,163,058,350	s 0	\$ 26,769,366	\$ 3,189,827,716	\$ 3,575,895,752	\$ (571,646)	\$ 3,575,324,106								
CSC	505,199,949	39,136,145	0	25,355,151	(121,971,658)	(57,480,362)	0	71,198,029	0	(27,509,599)	43,688,430	80,490,684	(2,797,876)	77,692,808								
ccc	229,708,533	17,795,700	0	11,529,308	(787,641)	28,537,367	0	32,374,644	0	(1,968,276)	30,406,368	36,600,131	6,119,003	42,719,134								
BwC	3,497,426	269,904	0	174,863	609,485	1,054,252	0	491,021	0	252,321	743,342	555,108	(387,117)	167,991								
Fut Lead	2,787,223	215,924	0	139,890	1,227,914	1,583,728	0	392,817	0	259,520	652,337	444,086	34,864	478,950								
H Tubman	3,005,167	233,917	0	151,548	651,083	1,036,548	0	425,551	0	149,307	574,858	481,095	(28,830)	452,265								
KIPP	6,484,487	503,822	0	326,411	2,230,689	3,060,922	0	916,572	0	519,042	1,435,614	1,036,202	(186,109)	850,093								
KIPP AMP	913,924	71,975	0	46,630	594,800	713,405	0	130,939	0	149,308	280,247	148,030	(92,790)	55,240								
KIPP Infinity	5,556,412	431,847	0	279,781	1,095,007	1,806,635	0	785,633	0	337,711	1,123,344	888,174	(469,984)	418,190								
Opp	5,124,106	395,860	0	256,466	1,208,272	1,860,598	0	720,164	0	330,511	1,050,675	814,157	(60,494)	753,663								
Ren	7,420,364	575,796	0	373,041	2,439,471	3,388,308	0	1,047,511	0	526,115	1,573,626	1,184,233	112,213	1,296,446								
UFT	3,501,997	269,904	0	174,863	(3,589,710)	(3,144,943)	0	491,021	0	(437,378)	53,643	555,108	(1,510,596)	(955,488)								
Univ Prep	4,170,652	323,885	0	209,836	918,696	1,452,417	0	589,225	0	255,920	845,145	666,129	(176,126)	490,003								
Voice	2,083,989	161,943	0	104,918	130,539	397,400	0	294,613	0	39,096	333,709	333,065	(28,565)	304,500								
Wildcat	3,959,892	305,892	0	198,178	1,477,557	1,981,627	0	556,490	0	327,036	883,526	629,124	44,053	673,177								
Total	\$ 23,227,707,452	\$ 1,799,362,973	S 0	\$ 1,165,754,049	\$ 0	\$ 2,965,117,022	\$ 0	\$ 3,273,472,580	S 0	\$ 0	\$ 3,273,472,580	\$ 3,700,721,078	\$ 0	\$ 3,700,721,078								

\* DOE - Department of Education
CSC - CUNY Senior Colleges
CCC - CUNY Community Colleges
CCC - CUNY Community Colleges
EW- Beginning with Children Charter School
Fut Lead - Future Leaders Charter School
H Tohman - Harrier Tohman Charter School
KIPP - KIPP Academy Charter School
KIPP AIPP - KIPP Adel Charter School
KIPP Infinity - KIPP Infinity Charter School
Opp - Opportunity Charter School
Opp - Opportunity Charter School
Univ Prop - University Prop Charter High School
Voice - Voice Charter School
Univ Prop - University Prop Charter High School
Widcus - Widca Charter School
Widcus - Widca Charter School

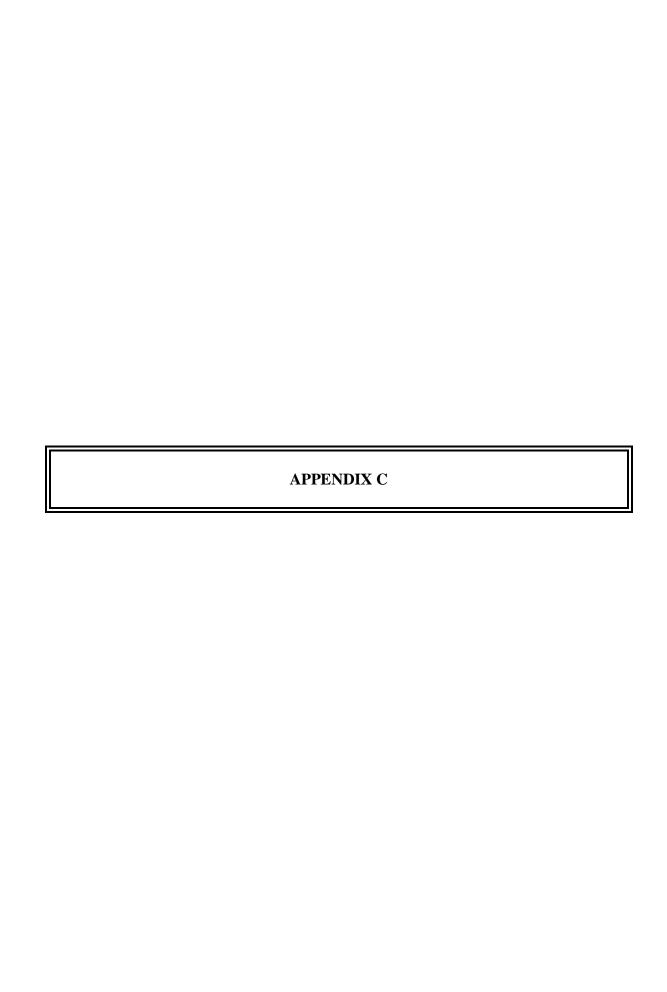
NYC Office of the Actuary September 29, 2017

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Schedule of Collective Pension Amounts As of and for the year ended June 30, 2017

	_	Deferred Outflows of Resources					Deferred Inflows of Resources										
			Net Diffe	erence				Total			1	Net Difference				Total	
			Betwee	een				Deferred				Between				Deferred	
			Projec	cted				Outflows of				Projected				Inflows of	
		Differences	and Ac	ctual				Resources	Diffe	rences		and Actual				Resources	
		Between	Investr	nent				Excluding	Bet	ween		Investment	Excluding			Excluding	
		Expected	Earnin	gs on				Employer	r Expected			Earnings on				Employer	Plan
Net Pens	sion	and Actual	Pension	Plan		Change of		Specific	and	Actual		Pension Plan	Char	nge of		Specific	Pension
Liabili	ity	Experience	Investn	nents		Assumptions	_	Amounts	Expe	rience		Investments	Assun	nptions		Amounts	 Expense
\$ 23,22	27,707,452	\$ 1,799,362,973	\$	0	\$	1,165,754,049	\$	2,965,117,022	\$	0	\$	3,273,472,580	\$	0	\$	3,273,472,580	\$ 3,700,721,078

NYC Office of the Actuary September 29, 2017



### **APPENDIX C**

### NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

Page 1	-	Statement of Fiduciary Net Position
Page 2	-	Statement of Changes in Fiduciary Net Position
Page 3	-	Market Value of Assets
Page 4	-	Long-Term Expected Rate of Return
Page 5a	-	Development of Asset (Gain) / Loss - June 30, 2016
Page 5b	-	Development of Asset (Gain) / Loss - June 30, 2017
Page 6	-	Roll-Forward of Entry Age Actuarial Accrued Liabilities
Page 7a	_	Schedule of Employer Allocations - June 30, 2016
Page 7b	_	Changes in Net Pension Liability by Source - June 30, 2016
Page 7c		Changes in Net Pension Liability by Source - June 30, 2016 - Summary
Page 7d	_	
-		
Page 7e		Changes in Net Pension Liability by Source - June 30, 2017
Page 7f	-	Changes in Net Pension Liability by Source - June 30, 2017 - Summary
Page 8	-	Schedule of Changes in Net Pension Liability and Related Ratios
Page 9	-	Schedule of Employer Contributions
Page 10	-	Average Expected Remaining Service Lives
Page 11a	-	Increase (Decrease) in Pension Expense Arising from the Recognition of Differences
		between Expected and Actual Experience
Page 11b	-	Increase (Decrease) in Pension Expense Arising from the Recognition of Changes in Assumptions
Page 11c	-	Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments
Page 12a	-	Changes in Proportionate Share - June 30, 2015
Page 12b	_	Changes in Proportionate Share - June 30, 2016
Page 12c		Changes in Proportionate Share - June 30, 2017
Page 13a	_	Components of Pension Expense - June 30, 2016
Page 13b	_	Components of Pension Expense - June 30, 2016 - Summary
Page 13c		Components of Pension Expense - June 30, 2017
Page 13d		Components of Pension Expense - June 30, 2017 - Summary
Page 14a	_	Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2013
Page 14b		Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2014
Page 14c		Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2015
_		
Page 14d		Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2016
Page 14e		Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2017
Page 14f	-	Pension Expense, Total Deferred Inflows/Outflows of Resources @ June 30, 2017
Page 15a		Schedule of Pension Amounts by Employer - June 30, 2016
Page 15b	-	Schedule of Pension Amounts by Employer - June 30, 2017
Page 15c	-	Schedule of Collective Pension Amounts - June 30, 2017

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Statement of Fiduciary Net Position - QPP Only June 30, 2017 and June 30, 2016

(Dollar amounts in thousands)

Member loans       47,935         Accrued interest and dividends       9,080         Other       60	327 19,062 46,748 247 3 66,060 71,888 35,933 0 79,762
Investment securities sold 98,675 11  Member loans 47,935  Accrued interest and dividends 9,080  Other 60	46,748 247 3 66,060 71,888 35,933 0 79,762
Member loans47,935Accrued interest and dividends9,080Other60	46,748 247 3 66,060 71,888 35,933 0 79,762
Member loans47,935Accrued interest and dividends9,080Other60	46,748 247 3 66,060 71,888 35,933 0 79,762
Other60	3 66,060 71,888 35,933 0 79,762
	71,888 35,933 0 79,762
Total receivables \$ 155,750 \$ 16	71,888 35,933 0 79,762
	35,933 0 79,762
Investments - at fair value	35,933 0 79,762
Fixed Return Funds:	35,933 0 79,762
Short-term investments:	35,933 0 79,762
	0 79,762
	79,762
Discount notes 0	
	91,144
•	06,922
Collective Trust Funds:	12.011
	42,911
	01,665
	28,956
	18,608
Fixed income 113,962 10	06,684
Collateral from securities lending 374,326 47	76,001
Variable Return Funds:	
Short-term investments 513	571
Debt securities 828	976
•	40,953
Collateral from securities lending	1,622
Total Investments \$ 5,707,557 \$ 5,00	04,596
Other assets 160,453 12	24,031
Total assets \$ 6,026,992 \$ 5,29	95,014
LIABILITIES	
Accounts payable 13,884	6,907
	03,213
Accrued benefits payable 9,943	7,357
	83,481
	77,623
Total liabilities \$ 1,927,421 \$ 1,87	78,581
Plan Net Position Held in Trust for Benefits \$ 4,099,571 \$ 3,41	16,433

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Statement of Changes in Fiduciary Net Position - QPP Only June 30, 2017 and June 30, 2016

(Dollar amounts in thousands)

	June 3 Fixed	0, 2017	Variable	June 3 Fixed	0, 2016	Variable
ADDITIONS						
Contributions:						
Member Contributions	\$ 39,804	\$	17	\$ 38,563	\$	18
Employer Contributions	 288,233		0	 265,532		0
Total contributions	\$ 328,037	\$	17	\$ 304,095	\$	18
Investment income:						
Interest income	54,905		60	44,740		42
Dividend income	69,098		1,513	50,527		801
Net appreciation (depreciation) in fair value	 754,163		6,097	 80,059		(1,045)
Total investment income	\$ 878,166	\$	7,670	\$ 175,326	\$	(202)
Less:						
Investment expenses	29,204		0	14,296		0
Net income	848,962		7,670	161,030		(202)
Securities lending transactions:						
Securities lending income	6,118		0	3,547		0
Securities lending fees	 (240)		0	 (231)		0
Net securities lending income	5,878		0	3,316		0
Net investment income	854,840		7,670	164,346		(202)
Other:						
Net receipts from other retirement systems	(122,954)		0	(157,499)		0
Litigation income	0		0	0		0
Total additions	\$ 1,059,923	\$	7,687	\$ 310,942	\$	(184)
DEDUCTIONS						
Benefit payments and withdrawals	259,827		2,605	237,206		3,521
Payment of Interest on TDA Fixed Funds	106,554		0	94,789		0
Administrative expenses	15,486		0	12,818		0
Total deductions	\$ 381,867	\$	2,605	\$ 344,813	\$	3,521
INCREASE IN PLAN NET POSITION	678,056		5,082	(33,871)		(3,705)
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:						
Beginning of year	\$ 3,373,846	\$	42,587	\$ 3,407,717	\$	46,292
End of year	\$ 4,051,902	\$	47,669	\$ 3,373,846	\$	42,587

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### **Market Values of Assets - QPP Only**

	Fixed	Variable	Total
1. Plan Net Position @ 6/30/2015	\$ 3,407,717,000	\$ 46,292,000	\$ 3,454,009,000
2. Changes for the year:			
a. ER Contributions	265,532,000	0	265,532,000
b. EE Contributions	38,563,000	18,000	38,581,000
c. Net Investment Income	164,346,000	(202,000)	164,144,000
d. Benefit Payments	(237,206,000)	(3,521,000)	(240,727,000)
e. Payment of Interest on TDA Fixed Funds	(94,789,000)	0	(94,789,000)
f. Administrative Expenses	(12,818,000)	0	(12,818,000)
g. Other	(157,499,000)	0	(157,499,000)
h. Net Changes	\$ (33,871,000)	\$ (3,705,000)	\$ (37,576,000)
3. Plan Net Position @ 6/30/2016	\$ 3,373,846,000	\$ 42,587,000	\$ 3,416,433,000
4. Changes for the year:			
a. ER Contributions	288,233,000	0	288,233,000
b. EE Contributions	39,804,000	17,000	39,821,000
c. Net Investment Income	854,840,000	7,670,000	862,510,000
d. Benefit Payments	(259,827,000)	(2,605,000)	(262,432,000)
e. Payment of Interest on TDA Fixed Funds	(106,554,000)	0	(106,554,000)
f. Administrative Expenses	(15,486,000)	0	(15,486,000)
g. Other	(122,954,000)	0	(122,954,000)
h. Net Changes	\$ 678,056,000	\$ 5,082,000	\$ 683,138,000
5. Plan Net Position @ 6/30/2017	\$ 4,051,902,000	\$ 47,669,000	\$ 4,099,571,000

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Long-Term Expected Rate of Return**

The Long-Term Expected Rate of Return (LTEROR) assumption on pension fund investments was determined using a Building-Block Method in which best-estimate ranges of Expected Real Rates of Return (i.e., Expected Returns, net of pension fund investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the LTEROR by weighting the Expected Real Rates of Return (RROR) by the Target Asset Allocation percentage and by adding Expected Inflation. The Target Asset Allocation and best estimates of Arithmetic Real Rates of Return for each major asset class are summarized in the following table:

		Long-Term
	Target	Expected
	Asset	Real Rate
Asset Class	Allocation	of Return
U.S. Public Market Equities	30.00%	5.70%
International Public Market Equities	13.00%	6.10%
Emerging Public Market Equities	7.00%	7.60%
Private Market Equities	9.00%	8.10%
Fixed Income (Core, TIPS, HY, Opportunistic, Convertibles)	28.00%	3.00%
Alternatives (Real Assets, Hedge Funds)	13.00%	4.70%
Total	100.00%	

The Discount Rate used to measure the Total Pension Liability was 7.0% per annum. The projection of Cash Flows used to determine the Discount Rate assumes that employee contributions will be made at the rates applicable to the current Tier for each member and that employer contributions will be made at rates as determined by the Actuary. Based on those assumptions, the pension fund's Fiduciary Net Position is projected to be available to make all projected future benefit payments of current active and non-active members. Therefore, the Long-Term Expected Rate of Return on pension fund investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Development of Asset (Gain) / Loss - QPP Only June 30, 2016

	Fixed		Variable	Variable	
1. Market Value 6/30/2015	\$ 3,407,717,000	\$	46,292,000	\$	3,454,009,000
2. Market Value 6/30/2016	3,373,846,000		42,587,000		3,416,433,000
3. Net Investment Income	164,346,000		(202,000)		164,144,000
4. Cash Flow (2 1 3.)	(198,217,000)		(3,503,000)		(201,720,000)
5. Projected Earnings* (7% * 1. + 3.441% * 4.)	231,719,543		(202,000)		231,517,543
6. (Gain) / Loss (5 3.)	67,373,543		0		67,373,543
7. Recognition Period	5 Years		5 Years		5 Years
8. Amount Recognized in Pension Expense (6. / 7.)	13,474,709		0		13,474,709
9. Deferred (Inflow) / Outflow of Resources (6 8.)	\$ 53,898,834	\$	0	\$	53,898,834

<sup>\*</sup> Variable Funds Projected Earnings set equal to Variable Funds Net Investment Income.

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Development of Asset (Gain) / Loss - QPP Only June 30, 2017

	Fixed		Variable	Variable	
1. Market Value 6/30/2016	\$ 3,373,846,000	\$	42,587,000	\$	3,416,433,000
2. Market Value 6/30/2017	4,051,902,000		47,669,000		4,099,571,000
3. Net Investment Income	854,840,000		7,670,000		862,510,000
4. Cash Flow (2 1 3.)	(176,784,000)		(2,588,000)		(179,372,000)
5. Projected Earnings* (7% * 1. + 3.441% * 4.)	230,086,083		7,670,000		237,756,083
6. (Gain) / Loss (5 3.)	(624,753,917)		0		(624,753,917)
7. Recognition Period	5 Years		5 Years		5 Years
8. Amount Recognized in Pension Expense (6. / 7.)	(124,950,783)		0		(124,950,783)
9. Deferred (Inflow) / Outflow of Resources (6 8.)	\$ (499,803,134)	\$	0	\$	(499,803,134)

<sup>\*</sup> Variable Funds Projected Earnings set equal to Variable Funds Net Investment Income.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Roll-Forward of Entry Age Actuarial Accrued Liabilities**

	Fixed Variable				Total	
1. Entry Age Accrued Liability (EAAL) at 6/30/2015	\$ 4,561,075,450	\$	24,705,074	\$	4,585,780,524	
2. Entry Age Normal Cost at 6/30/2015	153,899,159		0		153,899,159	
3. Benefit Payments-FY16	237,206,000		3,521,000		240,727,000	
4. Interest*	321,885,964		(202,000)		321,683,964	
5. Roll-Forward EAAL at 6/30/2016	\$ 4,799,654,573	\$	20,982,074	\$	4,820,636,647	
6. Entry Age Normal Cost at 6/30/2016	168,625,048		0		168,625,048	
7. Benefit Payments-FY17	259,827,000		2,605,000		262,432,000	
8. Interest*	338,838,926		7,670,000		346,508,926	
9. Roll-Forward EAAL at 6/30/2017	\$ 5,047,291,547	\$	26,047,074	\$	5,073,338,621	

<sup>\*</sup> Interest on Variable Funds set equal to Variable Funds Net Investment Income.

### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Schedule of Employer Allocations June 30, 2016

Employer	2016 Actual Employer Contributions		Employer Allocation Percentage	
Department of Education (DOE)	\$ 257,	,056,122	96.8080%	
School Construction Authority (SCA)	8,	,440,432	3.1787%	
Beginning with Children Charter School (BwCCS)		19,385	0.0073%	
Renaissance Charter School (REN)		14,693	0.0055%	
KIPP Charter School (KIPP)		1,400	0.0005%	
Total	\$ 265.	,532,032	100.0000%	

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016

		Total Pension Liability (a)		Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)	
1. Balances at June 30, 2015	\$	4,460,232,876	\$	3,454,009,000 \$	1,006,223,876	
2. Changes for the Year:						
a. Service Cost		153,106,995		0	153,106,995	
b. Interest		320,315,152		0	320,315,152	
c. Differences b/t Expected and Actual Experience		(75,906,864)		0	(75,906,864)	
d. Changes of Assumptions		183,677,129		0	183,677,129	
e. Contributions - Employer		0		265,532,000	(265,532,000)	
f. Contributions - Employee		0		38,581,000	(38,581,000)	
g. Net Investment Income		0		164,144,000	(164,144,000)	
h. Benefit Payments		(240,727,000)		(240,727,000)	0	
i. Administrative Expenses		0		(12,818,000)	12,818,000	
j. Payment of Interest on TDA Fixed Funds		0		(94,789,000)	94,789,000	
k. Other Changes		0		(157,499,000)	157,499,000	
l. Net Changes	\$	340,465,412	\$	(37,576,000) \$	378,041,412	
3. Balances at June 30, 2016	\$	4,800,698,288	\$	3,416,433,000 \$	1,384,265,288	

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Department of Education Balances at June 30, 2016

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	96.5724%	\$ 4,307,353,932	\$ 3,335,619,387	\$ 971,734,545
2. Changes for the Year:				
a. Service Cost		148,219,819	0	148,219,819
b. Interest		310,090,692	0	310,090,692
c. Differences b/t Expected and	d Actual Experience	(73,483,917)	0	(73,483,917)
d. Changes of Assumptions		177,814,156	0	177,814,156
e. Contributions - Employer		0	257,056,218	(257,056,218)
f. Contributions - Employee		0	37,349,495	(37,349,495)
g. Net Investment Income		0	158,904,523	(158,904,523)
h. Benefit Payments		(233,042,994)	(233,042,994)	0
i. Administrative Expenses		0	(12,408,849)	12,408,849
j. Payment of Interest on TDA	Fixed Funds	0	(91,763,335)	91,763,335
k. Other Changes		 0	(152,471,633)	152,471,633
l. Net Changes		\$ 329,597,756	\$ (36,376,575)	\$ 365,974,331
3. SubTotal		\$ 4,636,951,688	\$ 3,299,242,812	\$ 1,337,708,876
4. Changes in Proportionate Shar	e	 10,508,314	8,137,648	2,370,666
5. Balances at June 30, 2016	96.8080%	\$ 4,647,460,002	\$ 3,307,380,460	\$ 1,340,079,542

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source School Construction Authority Balances at June 30, 2016

		ŗ	Total Pension Liability	I	Plan Fiduciary Net Position	Net Pension Liability
			(a)		<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2015	3.4105%	\$	152,116,243	\$	117,798,977 \$	34,317,266
2. Changes for the Year:						
a. Service Cost			4,866,812		0	4,866,812
b. Interest			10,181,858		0	10,181,858
c. Differences b/t Expected and	d Actual Experience		(2,412,851)		0	(2,412,851)
d. Changes of Assumptions			5,838,545		0	5,838,545
e. Contributions - Employer			0		8,440,466	(8,440,466)
f. Contributions - Employee			0		1,226,374	(1,226,374)
g. Net Investment Income			0		5,217,645	(5,217,645)
h. Benefit Payments			(7,651,989)		(7,651,989)	0
<ol> <li>Administrative Expenses</li> </ol>			0		(407,446)	407,446
<ol><li>j. Payment of Interest on TDA</li></ol>	Fixed Funds		0		(3,013,058)	3,013,058
k. Other Changes			0		(5,006,421)	5,006,421
l. Net Changes		\$	10,822,375	\$	(1,194,429)	12,016,804
3. SubTotal		\$	162,938,618	\$	116,604,548	46,334,070
4. Changes in Proportionate Shar	e		(10,338,821)		(8,006,393)	(2,332,428)
5. Balances at June 30, 2016	3.1787%	\$	152,599,797	\$	108,598,155	44,001,642

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Beginning with Children Charter School Balances at June 30, 2016

		Т	Total Pension Liability (a)	]	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	0.0080%	\$	356,819	\$	276,321	\$ 80,498
2. Changes for the Year:						
a. Service Cost			11,177		0	11,177
b. Interest			23,383		0	23,383
c. Differences b/t Expected and	d Actual Experience		(5,541)		0	(5,541)
d. Changes of Assumptions			13,408		0	13,408
e. Contributions - Employer			0		19,384	(19,384)
f. Contributions - Employee			0		2,816	(2,816)
g. Net Investment Income			0		11,983	(11,983)
h. Benefit Payments			(17,573)		(17,573)	0
i. Administrative Expenses			0		(936)	936
j. Payment of Interest on TDA	Fixed Funds		0		(6,920)	6,920
k. Other Changes			0		(11,497)	11,497
l. Net Changes		\$	24,854	\$	(2,743)	\$ 27,597
3. SubTotal		\$	381,673	\$	273,578	\$ 108,095
4. Changes in Proportionate Shar	re		(31,222)		(24,178)	(7,044)
5. Balances at June 30, 2016	0.0073%	\$	350,451	\$	249,400	\$ 101,051

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Renaissance Charter School Balances at June 30, 2016

		7	Total Pension Liability	nn Fiduciary let Position	Net Pension Liability
			(a)	<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2015	0.0084%	\$	374,661	\$ 290,137	\$ 84,524
2. Changes for the Year:					
a. Service Cost			8,421	0	8,421
b. Interest			17,617	0	17,617
c. Differences b/t Expected and	d Actual Experience		(4,175)	0	(4,175)
d. Changes of Assumptions			10,102	0	10,102
e. Contributions - Employer			0	14,604	(14,604)
f. Contributions - Employee			0	2,122	(2,122)
g. Net Investment Income			0	9,028	(9,028)
h. Benefit Payments			(13,240)	(13,240)	0
i. Administrative Expenses			0	(705)	705
j. Payment of Interest on TDA	Fixed Funds		0	(5,213)	5,213
k. Other Changes			0	(8,662)	8,662
l. Net Changes		\$	18,725	\$ (2,066)	\$ 20,791
3. SubTotal		\$	393,386	\$ 288,071	\$ 105,315
4. Changes in Proportionate Shar	re		(129,350)	(100,168)	(29,182)
5. Balances at June 30, 2016	0.0055%	\$	264,036	\$ 187,903	\$ 76,133

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source KIPP Charter School Balances at June 30, 2016

		Total Pension Liability (a)	]	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2015	0.0007%	\$ 31,221	\$	24,178	\$ 7,043
2. Changes for the Year:					
a. Service Cost		766		0	766
b. Interest		1,602		0	1,602
c. Differences b/t Expected and	d Actual Experience	(380)		0	(380)
d. Changes of Assumptions		918		0	918
e. Contributions - Employer		0		1,328	(1,328)
f. Contributions - Employee		0		193	(193)
g. Net Investment Income		0		821	(821)
h. Benefit Payments		(1,204)		(1,204)	0
i. Administrative Expenses		0		(64)	64
j. Payment of Interest on TDA	Fixed Funds	0		(474)	474
k. Other Changes		0		(787)	787
l. Net Changes		\$ 1,702	\$	(187)	\$ 1,889
3. SubTotal		\$ 32,923	\$	23,991	\$ 8,932
4. Changes in Proportionate Shar	re	 (8,921)		(6,909)	(2,012)
5. Balances at June 30, 2016	0.0005%	\$ 24,002	\$	17,082	\$ 6,920

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)  $\,$ 

Changes in Net Pension Liability (NPL) by Source - By Obligor Balances as of June 30, 2016

				Т	otal Pensio	n Liabi	lity		
		DOE	SCA		BWCCS		REN	KIPP	TOTAL
1. Balances at June 30, 2015	\$	4,307,353,932	\$ 152,116,243	\$	356,819	\$	374,661	\$ 31,221	\$ 4,460,232,876
2. Changes for the Year:									
a. Service Cost		148,219,819	4,866,812		11,177		8,421	766	153,106,995
b. Interest		310,090,692	10,181,858		23,383		17,617	1,602	320,315,152
c. Differences b/t Expected and Actual Experience		(73,483,917)	(2,412,851)		(5,541)		(4,175)	(380)	(75,906,864)
d. Changes of Assumptions		177,814,156	5,838,545		13,408		10,102	918	183,677,129
e. Benefit Payments		(233,042,994)	(7,651,989)		(17,573)		(13,240)	(1,204)	(240,727,000)
f. Net Changes	\$	329,597,756	\$ 10,822,375	\$	24,854	\$	18,725	\$ 1,702	\$ 340,465,412
3. SubTotal	\$	4,636,951,688	\$ 162,938,618	\$	381,673	\$	393,386	\$ 32,923	\$ 4,800,698,288
4. Changes in Proportionate Share	\$	10,508,314	\$ (10,338,821)	\$	(31,222)	\$	(129,350)	\$ (8,921)	\$ 0
5. Balances at June 30, 2016	\$	4,647,460,002	\$ 152,599,797	\$	350,451	\$	264,036	\$ 24,002	\$ 4,800,698,288
				Plai	n Fiduciary	Net Po	sition		
		DOE	<u>SCA</u>		BWCCS		REN	KIPP	TOTAL
6. Balances at June 30, 2015	\$	3,335,619,387	\$ 117,798,977	\$	276,321	\$	290,137	\$ 24,178	\$ 3,454,009,000
7. Changes for the Year:									
a. Contributions - Employer		257,056,218	8,440,466		19,384		14,604	1,328	265,532,000
b. Contributions - Employee		37,349,495	1,226,374		2,816		2,122	193	38,581,000
c. Net Investment Income		158,904,523	5,217,645		11,983		9,028	821	164,144,000
d. Benefit Payments		(233,042,994)	(7,651,989)		(17,573)		(13,240)	(1,204)	(240,727,000)
e. Administrative Expenses f. Payment of Interest on TDA Fixed Funds		(12,408,849) (91,763,335)	(407,446) (3,013,058)		(936) (6,920)		(705) (5,213)	(64) (474)	(12,818,000) (94,789,000)
g. Other Changes		(152,471,633)	(5,006,421)		(11,497)		(8,662)	(787)	(157,499,000)
h. Net Changes	\$	(36,376,575)	\$ (1,194,429)	\$	(2,743)	\$	(2,066)	(187)	\$ (37,576,000)
8. SubTotal	\$	3,299,242,812	\$ 116,604,548	\$	273,578	\$	288,071	\$ 23,991	\$ 3,416,433,000
9. Changes in Proportionate Share	\$	8,137,648	\$ (8,006,393)	\$	(24,178)	\$	(100,168)	\$ (6,909)	\$ 0
10. Balances at June 30, 2016	\$	3,307,380,460	\$ 108,598,155	\$	249,400	\$	187,903	\$ 17,082	\$ 3,416,433,000
				N	Net Pension	Liablil	litv		
	-	DOE	SCA		BWCCS	234011	REN	KIPP	TOTAL
11. Balances at June 30, 2015	\$	971,734,545	\$ 34,317,266	\$	80,498	\$	84,524	\$ 7,043	\$ 1,006,223,876
12. Changes for the Year:									
a. Service Cost		148,219,819	4,866,812		11,177		8,421	766	153,106,995
b. Interest		310,090,692	10,181,858		23,383		17,617	1,602	320,315,152
c. Differences b/t Expected and Actual Experience		(73,483,917)	(2,412,851)		(5,541)		(4,175)	(380)	(75,906,864)
d. Changes of Assumptions		177,814,156	5,838,545		13,408		10,102	918	183,677,129
e. Contributions - Employer		(257,056,218)	(8,440,466)		(19,384)		(14,604)	(1,328)	(265,532,000)
f. Contributions - Employee		(37,349,495)	(1,226,374)		(2,816)		(2,122)	(193)	(38,581,000)
g. Net Investment Income h. Benefit Payments		(158,904,523)	(5,217,645)		(11,983)		(9,028) 0	(821)	(164,144,000)
Administrative Expenses		12,408,849	407,446		936		705	64	12,818,000
j. Payment of Interest on TDA Fixed Funds		91,763,335	3,013,058		6,920		5,213	474	94,789,000
k. Other Changes		152,471,633	5,006,421		11,497		8,662	787	157,499,000
l. Net Changes	\$	365,974,331	\$ 12,016,804	\$	27,597	\$	20,791	\$ 1,889	\$ 378,041,412
13. SubTotal	\$	1,337,708,876	\$ 46,334,070	\$	108,095	\$	105,315	\$ 8,932	\$ 1,384,265,288
14. Changes in Proportionate Share	\$	2,370,666	\$ (2,332,428)	\$	(7,044)	\$	(29,182)	\$ (2,012)	\$ 0
15. Balances at June 30, 2016	\$	1,340,079,542	\$ 44,001,642	\$	101,051	\$	76,133	\$ 6,920	\$ 1,384,265,288

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Schedule of Employer Allocations June 30, 2017

Employer	_ <u>C</u>	Employer Allocation Percentage	
Department of Education (DOE)	\$	274,613,972	95.2749%
School Construction Authority (SCA)		13,502,320	4.6845%
Beginning with Children Charter School (BwCCS)		14,351	0.0050%
Renaissance Charter School (REN)		101,955	0.0354%
KIPP Charter School (KIPP)		619	0.0002%
Total	\$	288,233,217	100.0000%

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2016	\$ 4,800,698,288	\$ 3,416,433,000 \$	1,384,265,288
2. Changes for the Year:			
a. Service Cost	168,625,048	0	168,625,048
b. Interest	346,508,926	0	346,508,926
c. Differences b/t Expected and Actual Experience	19,938,359	0	19,938,359
d. Changes of Assumptions	0	0	0
e. Contributions - Employer	0	288,233,000	(288,233,000)
f. Contributions - Employee	0	39,821,000	(39,821,000)
g. Net Investment Income	0	862,510,000	(862,510,000)
h. Benefit Payments	(262,432,000)	(262,432,000)	0
i. Administrative Expenses	0	(15,486,000)	15,486,000
j. Payment of Interest on TDA Fixed Funds	0	(106,554,000)	106,554,000
k. Other Changes	0	(122,954,000)	122,954,000
l. Net Changes	\$ 272,640,333	\$ 683,138,000 \$	(410,497,667)
3. Balances at June 30, 2017	\$ 5,073,338,621	\$ 4,099,571,000 \$	973,767,621

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Department of Education Balances at June 30, 2017

		Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
1. Balances at June 30, 2016	96.8080%	\$ 4,647,460,002	\$ 3,307,380,460	\$ 1,340,079,542
2. Changes for the Year:				
a. Service Cost		160,657,347	0	160,657,347
b. Interest		330,136,033	0	330,136,033
c. Differences b/t Expected and A	Actual Experience	18,996,252	0	18,996,252
d. Changes of Assumptions		0	0	0
e. Contributions - Employer		0	274,613,755	(274,613,755)
f. Contributions - Employee		0	37,939,417	(37,939,417)
g. Net Investment Income		0	821,755,539	(821,755,539)
h. Benefit Payments		(250,031,825)	(250,031,825)	0
<ol> <li>Administrative Expenses</li> </ol>		0	(14,754,271)	14,754,271
j. Payment of Interest on TDA F	ixed Funds	0	(101,519,217)	101,519,217
k. Other Changes		 0	(117,144,300)	117,144,300
1. Net Changes		\$ 259,757,807	\$ 650,859,098	\$ (391,101,291)
3. SubTotal		\$ 4,907,217,809	\$ 3,958,239,558	\$ 948,978,251
4. Changes in Proportionate Share		 (73,599,509)	(52,377,338)	(21,222,171)
5. Balances at June 30, 2017	95.2749%	\$ 4,833,618,300	\$ 3,905,862,220	\$ 927,756,080

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source School Construction Authority Balances at June 30, 2017

			Total Pension Liability		Plan Fiduciary Net Position	Net Pension Liability
1. Balances at June 30, 2016	3.1787%	\$	(a) 152,599,797	\$	(b) 108,598,155 \$	(a) - (b) 44,001,642
Ti Bulances at Game 50, 2010	0.170770	Ψ	102,000,101	Ψ	100,000,100 φ	11,001,012
2. Changes for the Year:						
a. Service Cost			7,899,240		0	7,899,240
b. Interest			16,232,211		0	16,232,211
c. Differences b/t Expected and A	Actual Experience		934,012		0	934,012
d. Changes of Assumptions			0		0	0
e. Contributions - Employer			0		13,502,320	(13,502,320)
f. Contributions - Employee			0		1,865,415	(1,865,415)
g. Net Investment Income			0		40,404,281	(40,404,281)
h. Benefit Payments			(12,293,627)		(12,293,627)	0
<ol> <li>Administrative Expenses</li> </ol>			0		(725,442)	725,442
j. Payment of Interest on TDA F	ixed Funds		0		(4,991,522)	4,991,522
k. Other Changes			0		(5,759,780)	5,759,780
l. Net Changes		\$	12,771,836	\$	32,001,645	(19,229,809)
3. SubTotal		\$	165,371,633	\$	140,599,800	24,771,833
4. Changes in Proportionate Share			72,288,915		51,444,649	20,844,266
5. Balances at June 30, 2017	4.6845%	\$	237,660,548	\$	192,044,449	45,616,099

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Beginning with Children Charter School Balances at June 30, 2017

		Total Pension Liability	an Fiduciary Net Position	Net Pension Liability
		(a)	<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2016	0.0073%	\$ 350,451	\$ 249,400	\$ 101,051
2. Changes for the Year:				
a. Service Cost		8,431	0	8,431
b. Interest		17,325	0	17,325
c. Differences b/t Expected and A	actual Experience	997	0	997
d. Changes of Assumptions		0	0	0
e. Contributions - Employer		0	14,351	(14,351)
f. Contributions - Employee		0	1,991	(1,991)
g. Net Investment Income		0	43,126	(43,126)
h. Benefit Payments		(13,122)	(13,122)	0
<ol> <li>Administrative Expenses</li> </ol>		0	(774)	774
j. Payment of Interest on TDA Fi	xed Funds	0	(5,328)	5,328
k. Other Changes		 0	(6,148)	6,148
l. Net Changes		\$ 13,631	\$ 34,096	\$ (20,465)
3. SubTotal		\$ 364,082	\$ 283,496	\$ 80,586
4. Changes in Proportionate Share		 (110,415)	(78,577)	(31,838)
5. Balances at June 30, 2017	0.0050%	\$ 253,667	\$ 204,919	\$ 48,748

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Renaissance Charter School Balances at June 30, 2017

		Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
		 (a)	<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2016	0.0055%	\$ 264,036	\$ 187,903	\$ 76,133
2. Changes for the Year:				
a. Service Cost		59,693	0	59,693
b. Interest		122,664	0	122,664
c. Differences b/t Expected and A	Actual Experience	7,058	0	7,058
d. Changes of Assumptions		0	0	0
e. Contributions - Employer		0	101,955	(101,955)
f. Contributions - Employee		0	14,097	(14,097)
g. Net Investment Income		0	305,329	(305,329)
h. Benefit Payments		(92,901)	(92,901)	0
i. Administrative Expenses		0	(5,482)	5,482
j. Payment of Interest on TDA Fi	ixed Funds	0	(37,720)	37,720
k. Other Changes		0	(43,526)	43,526
l. Net Changes		\$ 96,514	\$ 241,752	\$ (145,238)
3. SubTotal		\$ 360,550	\$ 429,655	\$ (69,105)
4. Changes in Proportionate Share		 1,435,410	1,021,515	413,895
5. Balances at June 30, 2017	0.0354%	\$ 1,795,960	\$ 1,451,170	\$ 344,790

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source KIPP Charter School Balances at June 30, 2017

		7	Fotal Pension Liability	n Fiduciary et Position	Net Pension Liability
			(a)	<b>(b)</b>	(a) - (b)
1. Balances at June 30, 2016	0.0005%	\$	24,002	\$ 17,082	\$ 6,920
2. Changes for the Year:					
a. Service Cost			337	0	337
b. Interest			693	0	693
c. Differences b/t Expected and A	Actual Experience		40	0	40
d. Changes of Assumptions			0	0	0
e. Contributions - Employer			0	619	(619)
f. Contributions - Employee			0	80	(80)
g. Net Investment Income			0	1,725	(1,725)
h. Benefit Payments			(525)	(525)	0
i. Administrative Expenses			0	(31)	31
j. Payment of Interest on TDA Fi	xed Funds		0	(213)	213
k. Other Changes			0	(246)	246
l. Net Changes		\$	545	\$ 1,409	\$ (864)
3. SubTotal		\$	24,547	\$ 18,491	\$ 6,056
4. Changes in Proportionate Share			(14,401)	(10,249)	(4,152)
5. Balances at June 30, 2017	0.0002%	\$	10,146	\$ 8,242	\$ 1,904

 $Governmental\ Accounting\ Standards\ Board\ Statements\ No.\ 67\ and\ No.\ 68\ (GASB\ 67/68)$ 

Changes in Net Pension Liability (NPL) by Source - By Obligor Balances as of June 30, 2017

					Т	otal Pensio	n Liabi	litv				
		DOE		SCA		BWCCS		REN	I	KIPP		TOTAL
1. Balances at June 30, 2016	\$	4,647,460,002	\$	152,599,797	\$	350,451	\$	264,036	\$	24,002	\$	4,800,698,288
2. Changes for the Year:												
a. Service Cost		160,657,347		7,899,240		8,431		59,693		337		168,625,048
b. Interest		330,136,033		16,232,211		17,325		122,664		693		346,508,926
c. Differences b/t Expected and Actual Experience		18,996,252		934,012		997		7,058		40		19,938,359
d. Changes of Assumptions		0		0		0		0		0		0
e. Benefit Payments		(250,031,825)		(12,293,627)		(13,122)		(92,901)	)	(525)		(262,432,000)
f. Net Changes	\$	259,757,807	\$	12,771,836	\$	13,631	\$	96,514	\$	545	\$	272,640,333
3. SubTotal	\$	4,907,217,809	\$	165,371,633	\$	364,082	\$	360,550	\$	24,547	\$	5,073,338,621
4. Changes in Proportionate Share	\$	(73,599,509)	\$	72,288,915	\$	(110,415)	\$	1,435,410	\$	(14,401)	\$	0
5. Balances at June 30, 2017	\$	4,833,618,300	\$	237,660,548	\$	253,667	\$	1,795,960	\$	10,146	\$	5,073,338,621
		Plan Fiduciary Net Position										
		DOE		<u>SCA</u>		BWCCS		REN		KIPP		TOTAL
6. Balances at June 30, 2016	\$	3,307,380,460	\$	108,598,155	\$	249,400	\$	187,903	\$	17,082	\$	3,416,433,000
7. Changes for the Year:												
a. Contributions - Employer		274,613,755		13,502,320		14,351		101,955		619		288,233,000
b. Contributions - Employee		37,939,417		1,865,415		1,991		14,097		80		39,821,000
c. Net Investment Income		821,755,539		40,404,281		43,126		305,329		1,725		862,510,000
d. Benefit Payments		(250,031,825)		(12,293,627)		(13,122)		(92,901)		(525)		(262,432,000)
e. Administrative Expenses		(14,754,271)		(725,442)		(774)		(5,482)		(31)		(15,486,000)
f. Payment of Interest on TDA Fixed Funds		(101,519,217)		(4,991,522)		(5,328)		(37,720)		(213)		(106,554,000)
g. Other Changes	_	(117,144,300)	ф	(5,759,780)	ф	(6,148)	ф	(43,526)		(246)	ф	(122,954,000)
h. Net Changes	\$	650,859,098	\$	32,001,645	\$	34,096	\$	241,752	\$	1,409	\$	683,138,000
8. SubTotal	\$	3,958,239,558	\$	140,599,800	\$	283,496	\$	429,655	\$	18,491	\$	4,099,571,000
9. Changes in Proportionate Share	\$	(52,377,338)	\$	51,444,649	\$	(78,577)	\$	1,021,515	\$	(10,249)	\$	0
10. Balances at June 30, 2017	\$	3,905,862,220	\$	192,044,449	\$	204,919	\$	1,451,170	\$	8,242	\$	4,099,571,000
					,	Net Pension	I iahlil	itv				
		DOE		SCA		BWCCS	Liubii	REN	I	KIPP		TOTAL
11. Balances at June 30, 2016	\$	1,340,079,542	\$	44,001,642	\$	101,051	\$	76,133		6,920	\$	1,384,265,288
12. Changes for the Year:												
a. Service Cost		160,657,347		7,899,240		8,431		59,693		337		168,625,048
b. Interest		330,136,033		16,232,211		17,325		122,664		693		346,508,926
c. Differences b/t Expected and Actual Experience		18,996,252		934,012		997		7,058		40		19,938,359
d. Changes of Assumptions		0		0		0		0		0		0
e. Contributions - Employer		(274,613,755)		(13,502,320)		(14,351)		(101,955)	)	(619)		(288,233,000)
f. Contributions - Employee		(37,939,417)		(1,865,415)		(1,991)		(14,097)	)	(80)		(39,821,000)
g. Net Investment Income		(821,755,539)		(40,404,281)		(43,126)		(305,329)	)	(1,725)		(862,510,000)
h. Benefit Payments		0		0		0		0		0		0
i. Administrative Expenses		14,754,271		725,442		774		5,482		31		15,486,000
j. Payment of Interest on TDA Fixed Funds		101,519,217		4,991,522		5,328		37,720		213		106,554,000
k. Other Changes	_	117,144,300		5,759,780	φ.	6,148		43,526		246		122,954,000
l. Net Changes	\$	(391,101,291)	\$	(19,229,809)	\$	(20,465)	\$	(145,238)	) \$	(864)	\$	(410,497,667)
13. SubTotal	\$	948,978,251	\$	24,771,833	\$	80,586	\$	(69,105)	\$	6,056	\$	973,767,621
14. Changes in Proportionate Share	\$	(21,222,171)	\$	20,844,266	\$	(31,838)	\$	413,895	\$	(4,152)	\$	0
15. Balances at June 30, 2017	\$	927,756,080	\$	45,616,099	\$	48,748	\$	344,790	\$	1,904	\$	973,767,621

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Schedule of Changes in Net Pension Liability and Related Ratios

	<u>2017</u>	<u>2016</u>	2015 (Revised)	<u>2014</u>	<u>2013</u>
1. Total Pension Liability					
a. Service Cost	\$ 168,625,048	\$ 153,106,995	\$ 147,898,591	\$ 142,686,386	\$ 138,530,472
b. Interest	346,508,926	320,315,152	299,591,999	288,162,040	271,737,317
c. Changes of Benefit Terms	0	0	0	0	0
d. Differences b/t Expected and Actual Experience	19,938,359	(75,906,864)	50,147,724	0	0
e. Changes of Assumptions	0	183,677,129	0	0	0
f. Benefit Payments	 (262,432,000)	(240,727,000)	(223,244,000)	(214,315,000)	(204,093,000)
g. Net Changes in Total Pension Liability	\$ 272,640,333	\$ 340,465,412	\$ 274,394,314	\$ 216,533,426	\$ 206,174,789
2. Total Pension Liability - Beginning	\$ 4,800,698,288	\$ 4,460,232,876	\$ 4,185,838,562	\$ 3,969,305,136	\$ 3,763,130,347
3. Total Pension Liability - Ending	\$ 5,073,338,621	\$ 4,800,698,288	\$ 4,460,232,876	\$ 4,185,838,562	\$ 3,969,305,136
4. Plan Fiduciary Net Position					
a. Contributions - Employer	\$ 288,233,000	\$ 265,532,000	\$ 258,099,000	\$ 214,590,000	\$ 196,246,000
b. Contributions - Employee	39,821,000	38,581,000	39,564,000	37,193,000	39,056,000
c. Net Investment Income	862,510,000	164,144,000	177,166,000	875,453,000	660,827,000
d. Benefit Payments	(262,432,000)	(240,727,000)	(223,244,000)	(214,315,000)	(204,093,000)
e. Administrative Expenses	(15,486,000)	(12,818,000)	(10,956,000)	(9,776,000)	(8,927,000)
f. Payment of Interest on TDA Fixed Funds	(106,554,000)	(94,789,000)	(85,104,000)	(206,615,000)	(163,756,000)
g. Other Changes	 (122,954,000)	(157,499,000)	(52,021,000)	(70,916,000)	(176,301,000)
h. Net Changes in Fiduciary Net Position	\$ 683,138,000	\$ (37,576,000)	\$ 103,504,000	\$ 625,614,000	\$ 343,052,000
5. Plan Fiduciary Net Position - Beginning	\$ 3,416,433,000	\$ 3,454,009,000	\$ 3,350,505,000	\$ 2,653,651,000	\$ 2,310,599,000
6. Plan Fiduciary Net Position - Ending	\$ 4,099,571,000	\$ 3,416,433,000	\$ 3,454,009,000	\$ 3,279,265,000	\$ 2,653,651,000
7. BERS' Net Pension Liability	\$ 973,767,621	\$ 1,384,265,288	\$ 1,006,223,876	\$ 906,573,562	\$ 1,315,654,136
8. Plan Fiduciary Net Position as a Percentage					
of Total Pension Liability	80.8%	71.2%	77.4%	78.3%	66.9%
9. Covered Employee Payroll <sup>1</sup>	\$ 1,052,171,260	\$ 1,008,055,944	\$ 1,016,822,150	\$ 989,160,097	\$ 886,178,191
10. BERS' Net Pension Liability as a Percentage					
of Covered Employee Payroll	92.5%	137.3%	99.0%	91.7%	148.5%

 $<sup>^{\</sup>rm 1}$  Projected Employee Payroll at Time 1.0 under One-Year Lag Methodology.

NYC Office of the Actuary September 29, 2017

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### **Schedule of Employer Contributions (\$ in thousands)**

Fiscal Year Ended June 30	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially Determined Contribution	\$ 288,233 \$	265,532 \$	258,099	\$ 214,590 \$	196,246 \$	213,651 \$	180,191 \$	147,349 \$	134,225 \$	143,100
Contributions in relation to the Actuarially Determined Contribution	<u>\$288,233</u> <u>\$</u>	265,532 \$	258,099	<u>\$ 214,590</u> <u>\$</u>	196,24 <u>6</u> \$	213,651 \$	180,191 \$	147,349 \$	134,225 \$	143,100
Contribution Deficency (Excess)	0	0	0	0	0	0	0	0	0	0
Contributions as a percentage of Covered Employee Payroll <sup>1</sup>	27.394%	26.341%	25.383%	21.694%	22.145%	24.293%	20.461%	17.822%	17.766%	19.627%

<sup>&</sup>lt;sup>1</sup> The Employer Rate of Contribution equals the Statutory Contribution as a percentage of the salaries of members who were on payroll or projected to be on payroll (under One-Year Lag Methodology) as of the preceding June 30 adjusted, where applicable, to be consistent with collective bargaining agreements estimated to be achieved.

NYC Office of the Actuary September 29, 2017

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## **Average Expected Remaining Service Lives**

		Future	Average Expected	Average Expected
		WorkLife	Remaining Service Life	Remaining Service Life
<u>Group</u>	Count	@ 6/30/2015	@ 6/30/2015	@ 6/30/2016
Active	24,903	260,331	10.45	9.45
Active/Inactive	3,972	0	0	0
Term Vested	237	0	0	0
Retired	<u>16,438</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	45,550	260,331	5.72	5.17

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience

Year	be	Differences tween Expected and Actual Experience	Recognition Period (Years)	2015	2016	2017	2018	2019	2020	2021	2022
										2021	
2015	\$	50,147,724	3.30	15,196,280	15,196,280	15,196,280	4,558,884	0	0	0	0
2016	\$	(75,906,864)	3.19		(23,795,255)	(23,795,255)	(23,795,255)	(4,521,099)	0	0	0
2017	\$	19,938,359	5.17			3,856,549	3,856,549	3,856,549	3,856,549	3,856,549	655,614
2018											
2019											
2020											
2021											
Net increase	(decr	rease) in Pension Ex	nense _	\$ 15.196.280 \$	(8.598.975) \$	(4.742.426) \$	(15.379.822) \$	(664,550) \$	3.856.549 \$	3.856.549 \$	655,614

NYC Office of the Actuary September 29, 2017

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Increase (Decrease) in Pension Expense Arising from the Recognition of Changes in Assumptions

	Changes in	Recognition Period	1				
Year	Assumption	s (Years)		2016	2017	2018	2019
2016	\$ 183,677	7,129 3.19		57,579,037	57,579,037	57,579,037	10,940,018
2017							
2018							
2019							
2020							
2021							
2022							
Net increase	(decrease) in Pensi	on Expense	\$	57,579,037	\$ 57,579,037	\$ 57,579,037	\$ 10,940,018

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

Differences between Projected and Actual Earnings on

2018 2019 Recognition

Pension Plan Period Investments 2013 2014 2015 2016 2017 2018 2019 2020 2021 Year (Years) 2013 (505,387,204) (101,077,441) (101,077,441) (101,077,441) (101,077,441) (101,077,440) 2014 \$ (691,610,182) 5 (138, 322, 036) (138, 322, 036) (138, 322, 036) (138, 322, 036) (138,322,038) 2015 \$ 54,021,526 5 10,804,305 10,804,305 10,804,305 10,804,305 10,804,306 2016 \$ 67,373,543 5 13,474,709 13,474,709 13,474,709 13,474,709 13,474,707 \$ (124,950,783) (124,950,783) (124,950,783) 2017 (624,753,917) 5 (124,950,783) (124,950,783)

Net increase (decrease) in Pension Expense \$ (101,077,441) \$ (239,399,477) \$ (228,595,172) \$ (215,120,463) \$ (340,071,245) \$ (238,993,807) \$ (100,671,768) \$ (111,476,076) \$ (124,950,783)

NYC Office of the Actuary September 29, 2017

#### $Governmental\ Accounting\ Standards\ Board\ Statements\ No.\ 67\ and\ No.\ 68\ (GASB\ 67/68)$

#### Changes in Proportionate Share at 6/30/2015

Department of Education	(1) Collective Amount	(2) Proportionate Share at 6/30/2014	(3) Proportionate Share at 6/30/2015	(3)-(2) Change in Proportionate	Recognition Period			in Pension Expe r Ended June 30		
	at 6/30/2014	95.9638%	96.5724%	Share	(Years)	2015	2016	2017	2018	
Deferred Outflows of Resources	0	0	0	0	3.30	0	0	0	0	
Deferred Inflows of Resources	(856,520,468)	(821,949,589)	(827,162,372)	(5,212,783)	3.30	(1,579,631)	(1,579,631)	(1,579,631)	(473,890)	
Net Pension Liability	(835,333,562)	(801,617,829)	(806,701,669)	(5,083,840)	3.30	(1,540,557)	(1,540,557)	(1,540,557)	(462,169)	
Total	(1,691,854,030)	(1,623,567,418)	(1,633,864,041)	(10,296,623)		(3,120,188)	(3,120,188)	(3,120,188)	(936,059)	
School Construction Authority	(1) Collective Amount at 6/30/2014	(2) Proportionate Share at 6/30/2014 4.0287%	(3) Proportionate Share at 6/30/2015 3.4105%	(3)-(2)  Change in  Proportionate  Share	Recognition Period (Years)		-	in Pension Expe r Ended June 30 2017		
Deferred Outflows of Resources	0	0	0	0	3.30	0	0	0	0	
Deferred Inflows of Resources	(856,520,468)	(34,506,640)	(29,211,631)	5,295,009	3.30	1,604,548	1,604,548	1,604,548	481,365	
Net Pension Liability	(835,333,562)	(33,653,083)	(28,489,051)	5,164,032	3.30	1,564,858	1,564,858	1,564,858	469,458	
Total	(1,691,854,030)	(68,159,723)	(57,700,682)	10,459,041		3,169,406	3,169,406 3,169,406 3,16		950,823	
Beginning with Children	(1) Collective Amount at 6/30/2014	(2) Proportionate Share at 6/30/2014 0.0071%	(3) Proportionate Share at 6/30/2015 0.0080%	(3)-(2)  Change in  Proportionate  Share	Recognition Period (Years)	Amount to Recognize in Pension Expe For the Fiscal Year Ended June 30 2015 2016 2017				
Deferred Outflows of Resources	0	0	0	0	3.30	0	0	0	0	
Deferred Inflows of Resources	(856,520,468)	(60,813)	(68,522)	(7,709)	3.30	(2,336)	(2,336)	(2,336)	(701)	
Net Pension Liability	(835,333,562)	(59,309)	(66,827)	(7,518)	3.30	(2,278)	(2,278)	(2,278)	(684)	
Total	(1,691,854,030)	(120,122)	(135,349)	(15,227)		(4,614)	(4,614)	(4,614)	(1,385)	
Renaissance	(1) Collective Amount at 6/30/2014	(2) Proportionate Share at 6/30/2014 0.0004%	(3) Proportionate Share at 6/30/2015 0.0084%	(3)-(2) Change in Proportionate Share	Recognition Period (Years)		-	o Recognize in Pension Expense e Fiscal Year Ended June 30 2016 2017 2:		
Deferred Outflows of Resources	0	0	0	0	3.30	0	0	0	0	
Deferred Inflows of Resources	(856,520,468)	(3,426)	(71,948)	(68,522)	3.30	(20,764)	(20,764)	(20,764)	(6,230)	
Net Pension Liability	(835,333,562)	(3,341)	(70,168)	(66,827)	3.30	(20,251)	(20,251)	(20,251)	(6,074)	
Total	(1,691,854,030)	(6,767)	(142,116)	(135,349)		(41,015)	(41,015)	(41,015)	(12,304)	
KIPP	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)						
	Collective Amount at 6/30/2014	Share at 6/30/2014 0.0000%	Share at 6/30/2015 0.0007%	Change in Proportionate Share	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30 2015 2016 2017				
Deferred Outflows of Resources	0	0	0	0	3.30	0	0	0	0	
Deferred Inflows of Resources	(856,520,468)	0	(5,995)	(5,995)	3.30	(1,817)	(1,817)	(1,817)	(544)	
Net Pension Liability	(835,333,562)	0	(5,847)	(5,847)	3.30	(1,772)	(1,772)	(1,772)	(531)	
Total	(1,691,854,030)	0	(11,842)	(11,842)		(3,589)	(3,589)	(3,589)	(1,075)	

#### $Governmental\ Accounting\ Standards\ Board\ Statements\ No.\ 67\ and\ No.\ 68\ (GASB\ 67/68)$

#### Changes in Proportionate Share at 6/30/2016

Department of Education	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
	Collective Amount	Share at 6/30/2015	Share at 6/30/2016	Change in Proportionate	Recognition Period	For	the Fiscal Year	in Pension Exper r Ended June 30	
Deferred Outflows of Resources	at 6/30/2015 78,168,665	<b>96.5724%</b> 75,489,357	<b>96.8080%</b> 75,673,522	Share 184,165	(Years) 3.19	<b>2016</b> 57,732	<b>2017</b> 57,732	<b>2018</b> 57,732	10,969
Deferred Inflows of Resources	(617,120,991)	(595,968,552)	(597,422,488)	(1,453,936)	3.19	(455,779)	(455,779)	(455,779)	(86,599)
Net Pension Liability	(1,006,223,876)	(971,734,546)	(974,105,211)	(2,370,665)	3.19	(743,155)	(743,155)	(743,155)	(141,200)
Total	(1,545,176,202)	(1,492,213,741)	(1,495,854,177)	(3,640,436)		(1,141,202)	(1,141,202)	(1,141,202)	(216,830)
School Construction Authority	(1) Collective Amount	(2) Proportionate Share at 6/30/2015	(3) Proportionate Share at 6/30/2016	(3)-(2) Change in Proportionate	Recognition Period	For	the Fiscal Year	in Pension Expe r Ended June 30	
Deferred Outflows	at 6/30/2015	3.4105%	3.1787%	Share	(Years)	2016	2017	2018	2019
of Resources	78,168,665	2,665,942	2,484,747	(181,195)	3.19	(56,801)	(56,801)	(56,801)	(10,792)
Deferred Inflows of Resources	(617,120,991)	(21,046,911)	(19,616,425)	1,430,486	3.19	448,428	448,428	448,428	85,202
Net Pension Liability	(1,006,223,876)	(34,317,265)	(31,984,838)	2,332,427	3.19	731,168	731,168	731,168	138,923
Total	(1,545,176,202)	(52,698,234)	(49,116,516)	3,581,718		1,122,795	1,122,795 1,122,795 1,122,7		213,333
Beginning with Children	(1) Collective Amount at 6/30/2015	(2) Proportionate Share at 6/30/2015 0.0080%	(3) Proportionate Share at 6/30/2016 0.0073%	(3)-(2)  Change in  Proportionate  Share	Recognition Period (Years)	Amount to Recognize in Pension Expe For the Fiscal Year Ended June 30 2016 2017 2018			
Deferred Outflows of Resources	78,168,665	6,253	5,706	(547)	3.19	(171)	(171)	(171)	(34)
Deferred Inflows of Resources	(617,120,991)	(49,370)	(45,050)	4,320	3.19	1,354	1,354	1,354	258
Net Pension Liability	(1,006,223,876)	(80,498)	(73,454)	7,044	3.19	2,208	2,208	2,208	420
Total	(1,545,176,202)	(123,615)	(112,798)	10,817		3,391	3,391	3,391	644
Renaissance	(1)	(2)	(3)	(3)-(2)					
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.0084%	Proportionate Share at 6/30/2016 0.0055%	Change in Proportionate Share	Recognition Period (Years)		-	in Pension Exper r Ended June 30 2018	
Deferred Outflows of Resources	78,168,665	6,566	4,299	(2,267)	3.19	(711)	(711)	(711)	(134)
Deferred Inflows of Resources	(617,120,991)	(51,838)	(33,942)	17,896	3.19	5,610	5,610	5,610	1,066
Net Pension Liability	(1,006,223,876)	(84,523)	(55,342)	29,181	3.19	9,148	9,148	9,148	1,737
Total	(1,545,176,202)	(129,795)	(84,985)	44,810		14,047	14,047	14,047	2,669
KIPP	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)					
	Collective Amount at 6/30/2015	Share at 6/30/2015 0.0007%	Share at 6/30/2016 0.0005%	Change in Proportionate Share	Recognition Period (Years)	Amoun For 2016			
Deferred Outflows of Resources	78,168,665	547	391	(156)	3.19	(49)	(49)	(49)	(9)
Deferred Inflows of Resources	(617,120,991)	(4,320)	(3,086)	1,234	3.19	387	387	387	73
Net Pension Liability	(1,006,223,876)	(7,044)	(5,031)	2,013	3.19	631	631	631	120
Total	(1,545,176,202)	(10,817)	(7,726)	3,091		969	969	969	184

#### $Governmental\ Accounting\ Standards\ Board\ Statements\ No.\ 67\ and\ No.\ 68\ (GASB\ 67/68)$

#### Changes in Proportionate Share at 6/30/2017

Department of Education	(1) Collective	(2) Proportionate Share	(3) Proportionate Share	(3)-(2) Change in	Recognition		A mount t	o Recognize in l	Pancion Evnan	asa.	
	Amount at 6/30/2016	at 6/30/2016 96.8080%	at 6/30/2017 95.2749%	Proportionate Share	Period (Years)	2017		e Fiscal Year E 2019		2020	2021
Deferred Outflows of Resources	232,165,006	224,754,299	221,194,978	(3,559,321)	5.17	(688,456)	(688,456)	(688,456)	(688,456)		(117,041)
Deferred Inflows of Resources	(429,833,123)	(416,112,850)	(409,523,077)	6,589,773	5.17	1,274,618	1,274,618	1,274,618	1,274,618	1,274,618	216,683
Net Pension Liability	(1,384,265,288)	(1,340,079,540)	(1,318,857,369)	21,222,171	5.17	4,104,869	4,104,869	4,104,869	4,104,869	4,104,869	697,826
Total	(1,581,933,405)	(1,531,438,091)	(1,507,185,468)	24,252,623		4,691,031	4,691,031	4,691,031	4,691,031	4,691,031	797,468
School Construction Authority	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)							
	Collective Amount at 6/30/2016	Share at 6/30/2016 3.1787%	Share at 6/30/2017 4.6845%	Change in Proportionate Share	Recognition Period (Years)	2017		o Recognize in l e Fiscal Year E 2019	_	2020	2021
Deferred Outflows of Resources	232,165,006	7,379,829	10,875,770	3,495,941	5.17	676,197	676,197	676,197	676,197	676,197	114,956
Deferred Inflows of Resources	(429,833,123)	(13,663,105)	(20,135,533)	(6,472,428)	5.17	(1,251,920)	(1,251,920)	(1,251,920)	(1,251,920)	(1,251,920)	(212,828)
Net Pension Liability	(1,384,265,288)	(44,001,641)	(64,845,907)	(20,844,266)	5.17	(4,031,773)	(4,031,773)	(4,031,773)	(4,031,773)	(4,031,773)	(685,401)
Total	(1,581,933,405)	(50,284,917)	(74,105,670)	(23,820,753)		(4,607,496)	(4,607,496)	(4,607,496)	(4,607,496)	(4,607,496)	(783,273)
Beginning with Children	(1) Collective Amount at 6/30/2016	(2) Proportionate Share at 6/30/2016 0.0073%	(3) Proportionate Share at 6/30/2017 0.0050%	(3)-(2) Change in Proportionate Share	Recognition Period (Years)	2017	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30 2018 2019 2020			use 2020	2021
Deferred Outflows of Resources	232,165,006	16,948	11,608	(5,340)	5.17	(1,033)	(1,033)	(1,033)	(1,033)	(1,033)	(175)
Deferred Inflows of Resources	(429,833,123)	(31,378)	(21,492)	9,886	5.17	1,912	1,912	1,912	1,912	1,912	326
Net Pension Liability	(1,384,265,288)	(101,051)	(69,213)	31,838	5.17	6,158	6,158	6,158	6,158	6,158	1,048
Total	(1,581,933,405)	(115,481)	(79,097)	36,384		7,037	7,037	7,037	7,037	7,037	1,199
Renaissance	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)							
	Collective Amount at 6/30/2016	Share at 6/30/2016 0.0055%	Share at 6/30/2017 0.0354%	Change in Proportionate Share	Recognition Period (Years)	2017		o Recognize in l e Fiscal Year E 2019	_	2020	2021
Deferred Outflows of Resources	232,165,006	12,769	82,186	69,417	5.17	13,427	13,427	13,427	13,427	13,427	2,282
Deferred Inflows of Resources	(429,833,123)	(23,641)	(152,161)	(128,520)	5.17	(24,859)	(24,859)	(24,859)	(24,859)	(24,859)	(4,225)
Net Pension Liability	(1,384,265,288)	(76,135)	(490,030)	(413,895)	5.17	(80,057)	(80,057)	(80,057)	(80,057)	(80,057)	(13,610)
Total	(1,581,933,405)	(87,007)	(560,005)	(472,998)		(91,489)	(91,489)	(91,489)	(91,489)	(91,489)	(15,553)
KIPP	(1)	(2) Proportionate	(3) Proportionate	(3)-(2)							
	Collective Amount at 6/30/2016	Share at 6/30/2016 0.0005%	Share at 6/30/2017 0.0002%	Change in Proportionate Share	Recognition Period (Years)	2017	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30 2018 2019 2020 2020			2021	
Deferred Outflows of Resources	232,165,006	1,161	464	(697)	5.17	(135)	(135)	(135)	(135)	(135)	(22)
Deferred Inflows of Resources	(429,833,123)	(2,149)	(860)	1,289	5.17	249	249	249	249	249	44
Net Pension Liability	(1,384,265,288)	(6,921)	(2,769)	4,152	5.17	803	803	803	803	803	137
Total	(1,581,933,405)	(7,909)	(3,165)	4,744		917	917	917	917	917	159

NYC Office of the Actuary September 29, 2017

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2016

Component		<b>Amount</b>
	4	1.0.10.00.
a. Service Cost	\$	153,106,995
b. Interest on the Total Pension Liability		320,315,152
c. Differences between Expected and Actual Experience		(8,598,975)
d. Changes of Assumptions		57,579,037
e. Employee Contributions		(38,581,000)
f. Projected Earnings on Pension Plan Investments		(231,517,543)
g. Differences between Projected and Actual Earnings on Plan Investments		(215,120,463)
h. Pension Plan Administrative Expenses		12,818,000
i. Payment of Interest on TDA Fixed Funds		94,789,000
j. Other Changes in Fiduciary Net Position		157,499,000
Total Pension Expense	\$	302,289,203

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Department of Education

Component	<u>Amount</u>
a. Service Cost	\$ 148,219,819
b. Interest on the Total Pension Liability	310,090,692
c. Differences between Expected and Actual Experience	(8,324,495)
d. Changes of Assumptions	55,741,114
e. Employee Contributions	(37,349,495)
f. Projected Earnings on Pension Plan Investments	(224,127,503)
g. Differences between Projected and Actual Earnings on Plan Investments	(208,253,817)
h. Pension Plan Administrative Expenses	12,408,849
i. Payment of Interest on TDA Fixed Funds	91,763,335
j. Other Changes in Fiduciary Net Position	 152,471,633
SubTotal	\$ 292,640,132
k. Changes in Proportionate Share	 4,261,390
<b>Total Pension Expense</b>	\$ 296,901,522

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2016 School Construction Authority

<u>Component</u>	<u>Amount</u>
a. Service Cost	\$ 4,866,812
b. Interest on the Total Pension Liability	10,181,858
c. Differences between Expected and Actual Experience	(273,336)
d. Changes of Assumptions	1,830,265
e. Employee Contributions	(1,226,374)
f. Projected Earnings on Pension Plan Investments	(7,359,248)
g. Differences between Projected and Actual Earnings on Plan Investments	(6,838,034)
h. Pension Plan Administrative Expenses	407,446
i. Payment of Interest on TDA Fixed Funds	3,013,058
j. Other Changes in Fiduciary Net Position	 5,006,421
SubTotal	\$ 9,608,868
k. Changes in Proportionate Share	 (4,292,201)
Total Pension Expense	\$ 5,316,667

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Beginning with Children

Component		<b>Amount</b>
	Φ.	11 177
a. Service Cost	\$	11,177
b. Interest on the Total Pension Liability		23,383
c. Differences between Expected and Actual Experience		(628)
d. Changes of Assumptions		4,203
e. Employee Contributions		(2,816)
f. Projected Earnings on Pension Plan Investments		(16,901)
g. Differences between Projected and Actual Earnings on Plan Investments		(15,704)
h. Pension Plan Administrative Expenses		936
i. Payment of Interest on TDA Fixed Funds		6,920
j. Other Changes in Fiduciary Net Position		11,497
SubTotal	\$	22,067
k. Changes in Proportionate Share		1,223
Total Pension Expense	\$	23,290

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 Renaissance

Component		<b>Amount</b>
	ф	0.421
a. Service Cost	\$	8,421
b. Interest on the Total Pension Liability		17,617
c. Differences between Expected and Actual Experience		(473)
d. Changes of Assumptions		3,167
e. Employee Contributions		(2,122)
f. Projected Earnings on Pension Plan Investments		(12,733)
g. Differences between Projected and Actual Earnings on Plan Investments		(11,832)
h. Pension Plan Administrative Expenses		705
i. Payment of Interest on TDA Fixed Funds		5,213
j. Other Changes in Fiduciary Net Position		8,662
SubTotal	\$	16,625
k. Changes in Proportionate Share		26,968
Total Pension Expense	\$	43,593

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 KIPP

Component	<b>Amount</b>
a. Service Cost	\$ 766
b. Interest on the Total Pension Liability	1,602
c. Differences between Expected and Actual Experience	(43)
d. Changes of Assumptions	288
e. Employee Contributions	(193)
f. Projected Earnings on Pension Plan Investments	(1,158)
g. Differences between Projected and Actual Earnings on Plan Investments	(1,076)
h. Pension Plan Administrative Expenses	64
i. Payment of Interest on TDA Fixed Funds	474
j. Other Changes in Fiduciary Net Position	 787
SubTotal	\$ 1,511
k. Changes in Proportionate Share	 2,620
Total Pension Expense	\$ 4,131

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Components of Pension Expense for the Fiscal Year Ended June 30, 2016 - By Obligor

Component	<u>DOE</u>	<u>SCA</u>	<b>BWCCS</b>	<u>REN</u>	<b>KIPP</b>	<u>Total</u>
a. Service Cost	\$ 148.219.819 \$	4,866,812 \$	11,177 \$	8,421 \$	766 \$	153,106,995
b. Interest on the Total Pension Liability	310,090,692	10,181,858	23,383	17,617	1,602	320,315,152
c. Differences between Expected and Actual Experience	(8,324,495)	(273,336)	(628)	(473)	(43)	(8,598,975)
d. Changes of Assumptions	55,741,114	1,830,265	4,203	3,167	288	57,579,037
e. Employee Contributions	(37,349,495)	(1,226,374)	(2,816)	(2,122)	(193)	(38,581,000)
f. Projected Earnings on Pension Plan Investments	(224,127,503)	(7,359,248)	(16,901)	(12,733)	(1,158)	(231,517,543)
g. Differences between Projected and Actual Earnings on Plan Investments	(208, 253, 817)	(6,838,034)	(15,704)	(11,832)	(1,076)	(215,120,463)
h. Pension Plan Administrative Expenses	12,408,849	407,446	936	705	64	12,818,000
i. Payment of Interest on TDA Fixed Funds	91,763,335	3,013,058	6,920	5,213	474	94,789,000
j. Other Changes in Fiduciary Net Position	152,471,633	5,006,421	11,497	8,662	787	157,499,000
k. Changes in Proportionate Share	 4,261,390	(4,292,201)	1,223	26,968	2,620	0
Total Pension Expense	\$ 296,901,522 \$	5,316,667 \$	23,290 \$	43,593 \$	4,131 \$	302,289,203

NYC Office of the Actuary September 29, 2017

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2017

<u>Component</u>		<b>Amount</b>
a. Service Cost	¢	169 625 049
	\$	168,625,048
b. Interest on the Total Pension Liability		346,508,926
c. Differences between Expected and Actual Experience		(4,742,426)
d. Changes of Assumptions		57,579,037
e. Employee Contributions		(39,821,000)
f. Projected Earnings on Pension Plan Investments		(237,756,083)
g. Differences between Projected and Actual Earnings on Plan Investments		(340,071,245)
h. Pension Plan Administrative Expenses		15,486,000
i. Payment of Interest on TDA Fixed Funds		106,554,000
j. Other Changes in Fiduciary Net Position		122,954,000
Total Pension Expense	\$	195,316,257

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Department of Education

Component	<u>Amount</u>
a. Service Cost	\$ 160,657,347
b. Interest on the Total Pension Liability	330,136,033
c. Differences between Expected and Actual Experience	(4,518,342)
d. Changes of Assumptions	54,858,370
e. Employee Contributions	(37,939,417)
f. Projected Earnings on Pension Plan Investments	(226,521,869)
g. Differences between Projected and Actual Earnings on Plan Investments	(324,002,539)
h. Pension Plan Administrative Expenses	14,754,271
i. Payment of Interest on TDA Fixed Funds	101,519,217
j. Other Changes in Fiduciary Net Position	 117,144,300
SubTotal	\$ 186,087,371
k. Changes in Proportionate Share	 (429,641)
Total Pension Expense	\$ 185,657,730

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2017 School Construction Authority

Component	<b>Amount</b>
a. Service Cost	\$ 7,899,240
b. Interest on the Total Pension Liability	16,232,211
c. Differences between Expected and Actual Experience	(222,159)
d. Changes of Assumptions	2,697,290
e. Employee Contributions	(1,865,415)
f. Projected Earnings on Pension Plan Investments	(11,137,684)
g. Differences between Projected and Actual Earnings on Plan Investments	(15,930,637)
h. Pension Plan Administrative Expenses	725,442
i. Payment of Interest on TDA Fixed Funds	4,991,522
j. Other Changes in Fiduciary Net Position	 5,759,780
SubTotal	\$ 9,149,590
k. Changes in Proportionate Share	 315,295
Total Pension Expense	\$ 9,464,885

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Beginning with Children

<u>Component</u>	<b>Amount</b>
a. Service Cost	\$ 8,431
b. Interest on the Total Pension Liability	17,325
c. Differences between Expected and Actual Experience	(237)
d. Changes of Assumptions	2,879
e. Employee Contributions	(1,991)
f. Projected Earnings on Pension Plan Investments	(11,888)
g. Differences between Projected and Actual Earnings on Plan Investments	(17,004)
h. Pension Plan Administrative Expenses	774
i. Payment of Interest on TDA Fixed Funds	5,328
j. Other Changes in Fiduciary Net Position	 6,148
SubTotal	\$ 9,765
k. Changes in Proportionate Share	 (5,814)
Total Pension Expense	\$ 3,951

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2017 Renaissance

Component	<b>Amount</b>
a. Service Cost	\$ 59,693
b. Interest on the Total Pension Liability	122,664
c. Differences between Expected and Actual Experience	(1,679)
d. Changes of Assumptions	20,383
e. Employee Contributions	(14,097)
f. Projected Earnings on Pension Plan Investments	(84,166)
g. Differences between Projected and Actual Earnings on Plan Investments	(120,385)
h. Pension Plan Administrative Expenses	5,482
i. Payment of Interest on TDA Fixed Funds	37,720
j. Other Changes in Fiduciary Net Position	 43,526
SubTotal	\$ 69,141
k. Changes in Proportionate Share	 118,457
Total Pension Expense	\$ 187,598

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Components of Pension Expense for the Fiscal Year Ended June 30, 2017 KIPP

<u>Component</u>		<b>Amount</b>
a. Service Cost	\$	337
b. Interest on the Total Pension Liability	·	693
c. Differences between Expected and Actual Experience		(9)
d. Changes of Assumptions		115
e. Employee Contributions		(80)
f. Projected Earnings on Pension Plan Investments		(476)
g. Differences between Projected and Actual Earnings on Plan Investments		(680)
h. Pension Plan Administrative Expenses		31
i. Payment of Interest on TDA Fixed Funds		213
j. Other Changes in Fiduciary Net Position		246
SubTotal	\$	390
k. Changes in Proportionate Share		1,703
<b>Total Pension Expense</b>	\$	2,093

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Components of Pension Expense for the Fiscal Year Ended June 30, 2017 - By Obligor

Component	<b>DOE</b>	<u>SCA</u>	<b>BWCCS</b>	<u>REN</u>	<u>KIPP</u>	<u>Total</u>
a. Service Cost	\$ 160.657.347 \$	7,899,240 \$	8,431 \$	59,693 \$	337 \$	168,625,048
b. Interest on the Total Pension Liability	330,136,033	16,232,211	17,325	122,664	693	346,508,926
c. Differences between Expected and Actual Experience	(4,518,342)	(222,159)	(237)	(1,679)	(9)	(4,742,426)
d. Changes of Assumptions	54,858,370	2,697,290	2,879	20,383	115	57,579,037
e. Employee Contributions	(37,939,417)	(1,865,415)	(1,991)	(14,097)	(80)	(39,821,000)
f. Projected Earnings on Pension Plan Investments	(226,521,869)	(11,137,684)	(11,888)	(84,166)	(476)	(237,756,083)
g. Differences between Projected and Actual Earnings on Plan Investments	(324,002,539)	(15,930,637)	(17,004)	(120,385)	(680)	(340,071,245)
h. Pension Plan Administrative Expenses	14,754,271	725,442	774	5,482	31	15,486,000
i. Payment of Interest on TDA Fixed Funds	101,519,217	4,991,522	5,328	37,720	213	106,554,000
j. Other Changes in Fiduciary Net Position	117,144,300	5,759,780	6,148	43,526	246	122,954,000
k. Changes in Proportionate Share	 (429,641)	315,295	(5,814)	118,457	1,703	0
Total Pension Expense	\$ 185,657,730 \$	9,464,885 \$	3,951 \$	187,598 \$	2,093 \$	195,316,257

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2013, the Obligors recognized Pension Expense for BERS of \$463,678,552.

## At June 30, 2013, the Obligors reported total Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for BERS from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources		
Differences between Expected and Actual Experience	\$	0	\$	0		
Changes of Assumptions		0		0		
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0	404,309,	,763		
Total	\$	0	\$ 404,309,	,763		

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2013	\$ (101,077,441)
2014	(101,077,441)
2015	(101,077,441)
2016	(101,077,441)
2017	(101,077,440)

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2014, the Obligors recognized Pension Expense for BERS of \$257,720,131.

For June 30, 2014, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for BERS from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between Expected and Actual Experience	\$	0	\$	0
Changes of Assumptions		0		0
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0	553,28	88,146
Total	\$	0	\$ 553,28	88,146

Fiscal Year	
Ended	
June 30	<u>Amount</u>
2014	\$ (138,322,036)
2015	(138,322,036)
2016	(138,322,036)
2017	(138,322,036)
2018	(138,322,038)

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2015, the Obligors recognized Pension Expense for BERS of \$111,421,172.

For June 30, 2015, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for BERS from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources	
Differences between Expected and Actual Experience	\$	34,951,444	\$	0	
Changes of Assumptions		0		0	
Net Difference between Projected and Actual Earnings on Pension Plan Investments		43,217,221		0	
Total	\$	78,168,665	\$	0	

Fiscal Year	
Ended	
June 30	<u>Amount</u>
2015	\$ 26,000,585
2016	26,000,585
2017	26,000,585
2018	15,363,189
2019	10,804,306

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2016, the Obligors recognized Pension Expense for BERS of \$302,289,203.

For June 30, 2016, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for BERS from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources		
Differences between Expected and Actual Experience	\$	0	\$	52,111,609		
Changes of Assumptions	1:	26,098,092		0		
Net Difference between Projected and Actual Earnings on Pension Plan Investments		53,898,834		0		
Total	\$ 1	79,996,926	\$	52,111,609		

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for BERS will be recognized in Pension Expense as follows:

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2016	\$ 47,258,491
2017	47,258,491
2018	47,258,491
2019	19,893,628
2020	13,474,707

E:---1 37---

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2017, the Obligors recognized Pension Expense for BERS of \$195,316,257.

For June 30, 2017, the Obligors determined Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for BERS from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources	
Differences between Expected and Actual Experience	\$	16,081,810	\$	0	
Changes of Assumptions		0		0	
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0		499,803,134	
Total	\$	16,081,810	\$	499,803,134	

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2017	\$ (121,094,234)
2018	(121,094,234)
2019	(121,094,234)
2020	(121,094,234)
2021	(121,094,234)
Thereafter	655,614

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2017, the Obligors recognized Pension Expense for BERS of \$195,316,257.

At June 30, 2017, the Obligors reported total Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for BERS from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between Expected and Actual Experience	\$	20,640,694	\$	28,316,354
Changes of Assumptions		68,519,055		0
Net Difference between Projected and Actual Earnings on Pension Plan Investments		0		576,092,436
Total	\$	89,159,749	\$	604,408,790

Fiscal Year		
Ended		
<u>June 30</u>	<u>Amount</u>	
2017	\$ (287,234,63	4)
2018	(196,794,59	2)
2019	(90,396,30	0)
2020	(107,619,52	7)
2021	(121,094,23	4)
Thereafter	655,61	4

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Schedule of Pension Amounts by Employer As of and for the year ended June 30, 2016

	_	Deferred Outflows of Resources					Deferred Inflows of Resources								Pension Expense					
Entity <sup>1</sup>	Net Pension Liability	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	l I	et Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Chang Assum		Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions		Total Deferred Inflows of Resources	1	Proportionate Share of Plan Pension Expense	Defe from I and Co	mortization of rred Amounts in Changes in Proportion I Differences Between Employer intributions Proportionate Share of ontributions		Total Employer Pension Expense
DOE	\$ 1,340,079,542	\$ 19,124,579	\$ 83,556,678	\$122,073,042	\$ 6,681,914	\$ 231,436,213	\$ 50,448,206	\$	365,664,642	\$	0	\$ 126,433	\$	416,239,281	\$	292,640,132	\$	4,261,390	\$	296,901,522
SCA	44,001,642	627,957	2,743,592	4,008,280	(6,703,546)	676,283	1,656,472		12,006,634		0	(124,394)		13,538,712		9,608,868		(4,292,201)		5,316,667
BwCCS	101,051	1,442	6,301	9,205	(1,803)	15,145	3,804		27,574		0	(376)		31,002		22,067		1,223		23,290
REN	76,133	1,087	4,747	6,935	21,000	33,769	2,866		20,775		0	(1,556)		22,085		16,625		26,968		43,593
KIPP	6,920	99	432	630	2,435	3,596	261		1,889		0	(107)		2,043		1,511		2,620		4,131
Total	\$ 1,384,265,288	\$ 19,755,164	\$ 86,311,750	\$126,098,092	\$ 0	\$ 232,165,006	\$ 52,111,609	\$	377,721,514	\$	0	\$ 0	\$	429,833,123	\$	302,289,203	\$	0	\$	302,289,203

<sup>&</sup>lt;sup>1</sup> DOE - Department of Education SCA - School Construction Authority BwCCS - Beginning with Children Charter School REN - Renaissance Charter School KIPP - KIPP Charter School

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Schedule of Pension Amounts by Employer As of and for the year ended June 30, 2017

	=	Deferred Outflows of Resources						Def	erred Inflows of R	Pension Expense				
Entity <sup>1</sup>	Net Pension Liability	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Plan Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Employer Pension Expense
DOE	\$ 927,756,080	\$ 19,665,401	\$ 0	\$ 65,281,461	\$ (20,069,665)	\$ 64,877,197	\$ 26,978,377	\$ 548,871,492	\$ 0	\$ (2,802,164)	\$ 573,047,705	\$ 186,087,371	\$ (429,641)	\$ 185,657,730
SCA	45,616,099	966,913	0	3,209,775	\$ 19,678,457	23,855,145	1,326,480	26,987,050	0	2,752,151	31,065,681	9,149,590	315,295	9,464,885
BwCCS	48,748	1,032	0	3,426	\$ (36,509)	(32,051)	1,416	28,805	0	(4,512)	25,709	9,765	(5,814)	3,951
REN	344,790	7,307	0	24,256	\$ 432,242	463,805	10,024	203,937	0	55,145	269,106	69,141	118,457	187,598
KIPP	1,904	41	0	137	\$ (4,525)	(4,347)	57	1,152	0	(620)	589	390	1,703	2,093
Total	\$ 973,767,621	\$ 20,640,694	\$ 0	\$ 68,519,055	\$ 0	\$ 89,159,749	\$ 28,316,354	\$ 576,092,436	\$ 0	\$ 0	\$ 604,408,790	\$ 195,316,257	\$ 0	\$ 195,316,257

<sup>&</sup>lt;sup>1</sup> DOE - Department of Education SCA - School Construction Authority BwCCS - Beginning with Children Charter School REN - Renaissance Charter School KIPP - KIPP Charter School

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

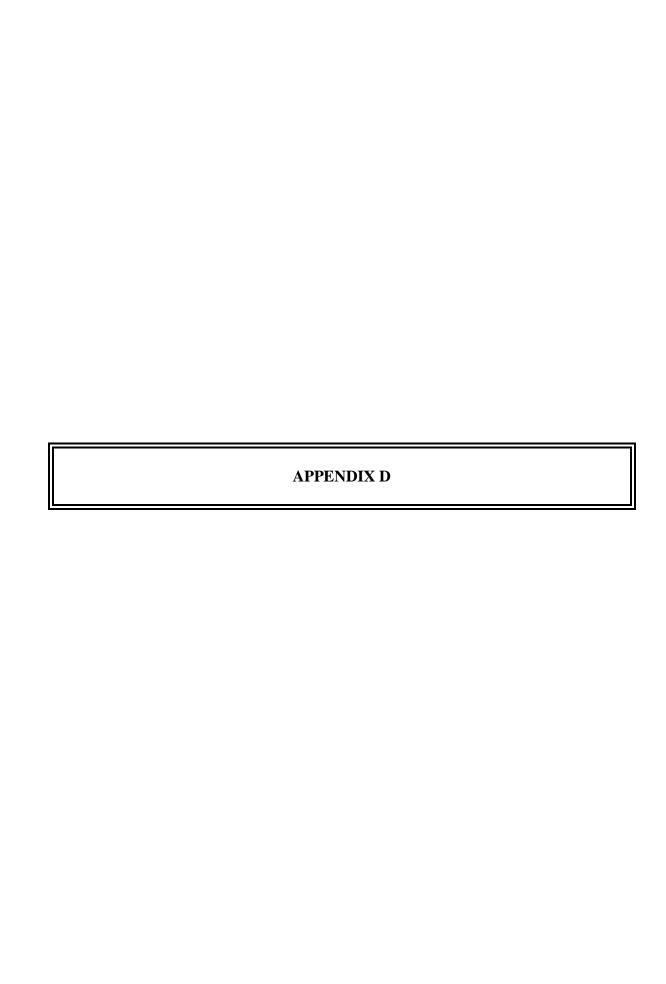
#### Schedule of Collective Pension Amounts As of and for the year ended June 30, 2017

Defermed Outflows of Deservation

	Deferred Outflows of Resources Deferred Inflows of Resources							
	Nat Diffarance		Total		Not Difforence		Total	
Differences	and Actual		Resources	Differences	and Actual		Resources	
Between Investment			Excluding	Between Investment			Excluding	
Expected	Earnings on		Employer	Expected	Earnings on		Employer	Plan
and Actual	Pension Plan	Changes of	Specific	and Actual	Pension Plan	Changes of	Specific	Pension
Experience	Investments	Assumptions	Amounts	Experience	Investments	Assumptions	Amounts	Expense
57.621 \$ 20.640.694	\$ 0	\$ 68.519.055	\$ 89.159.749	\$ 28.316.354	\$ 576.092.436	\$ 0	\$ 604,408,790	\$ 195,316,257
	Between Expected and Actual	Net Difference Between Projected Differences and Actual Between Investment Expected Earnings on and Actual Pension Plan Experience Investments	Between Projected Differences and Actual Between Investment Expected Earnings on and Actual Pension Plan Changes of Experience Investments Assumptions	Net Difference Between Projected Outflows of Differences and Actual Between Investment Excluding Expected Earnings on and Actual Pension Plan Experience Investments Assumptions Amounts	Net Difference Between Projected Outflows of Differences Between Investment Expected Earnings on Differences Differences Between Expected Earnings on Differences Between Expected Earnings on Differences Differences Excluding Between Expected Employer Expected Differences Differences Excluding Detween Expected Differences Differe	Net Difference Between Projected Outflows of Differences and Actual Between Investment Expected Earnings on and Actual Pension Plan Experience Investments Assumptions Amounts Protal Net Difference Between Projected Between Projected Projected Between Projected Between Projected Projected Between Projected Between Investments Excluding Between Investment Expected Earnings on Employer Expected Earnings on And Actual Pension Plan Experience Investments	Net Difference Between Projected Outflows of Differences Between Projected Differences and Actual Between Investment Expected Earnings on and Actual Pension Plan Experience Investments Assumptions Amounts Experience  Net Difference Between Projected Between Projected Between Projected Between Investment Excluding Between Investment Expected Earnings on Changes of Experience Investments Assumptions	Net Difference Between Projected Outflows of Differences Between Investment Excluding Expected Earnings on Differences Deferred Outflows of Differences Between Deferred Projected Outflows of Projected Inflows of Projected Inflows of Between Investment Excluding Between Investment Excluding Expected Earnings on Employer Expected Earnings on Employer Differences Assumptions Differences And Actual Pension Plan Changes of Specific Experience Investments Assumptions Amounts

NYC Office of the Actuary September 29, 2017

Defermed Inflores of Decourage



## APPENDIX D

## **NEW YORK CITY POLICE PENSION FUND (POLICE)**

Page 1a 1b 1c	- - -	Statement of Fiduciary Net Position - POLICE Statement of Fiduciary Net Position - POVSF Statement of Fiduciary Net Position - PSOVSF
Page 2a 2b 2c	- - -	Statement of Changes in Fiduciary Net Position - POLICE Statement of Changes in Fiduciary Net Position - POVSF Statement of Changes in Fiduciary Net Position - PSOVSF
Page 3	-	Market Value of Assets
Page 4	-	Long-Term Expected Rate of Return
Page 5a 5b	-	Development of Asset (Gain) / Loss - June 30, 2016 Development of Asset (Gain) / Loss - June 30, 2017
Page 6	-	Roll-Forward of Entry Age Actuarial Accrued Liabilities to June 30, 2017
Page 7a 7b	-	Changes in Net Pension Liability by Source - June 30, 2016 Changes in Net Pension Liability by Source - June 30, 2017
Page 8	-	Schedule of Changes in Net Pension Liability and Related Ratios
Page 9	-	Schedule of Employer Contributions
Page 10	-	Average Expected Remaining Service Lives
Page 11a	-	Increase (Decrease) in Pension Expense Arising from the Recognition of Difference between Expected and Actual Experience
11b	-	Increase (Decrease) in Pension Expense Arising from the Recognition of Changes in Assumptions
11c	-	Increase (Decrease) in Pension Expense Arising from the Recognition of Difference between Projected and Actual Earnings on Pension Plan Investments
Page 12a 12b	-	Components of Pension Expense - June 30, 2016 Components of Pension Expense - June 30, 2017
Page 13a 13b 13c 13d	- - -	Pension Expense, Total Deferred Inflows/Outflows of Resources at June 30, 2013 Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2014 Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2015 Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2016
13e 13f	-	Pension Expense, Deferred Inflows/Outflows of Resources at June 30, 2017  Pension Expense, Total Deferred Inflows/Outflows of Resources at June 30, 2017

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

	June 30, 2017	June 30, 2016
ASSETS		
Cash	\$ 107,908	\$ 116,153
Receivables:		
Investment securities sold	694,085	575,823
Member loans	234,570	251,861
Transferrable earnings due from VSFs	326,195	326,195
Accrued interest and dividends	3,238	66,102
Total receivables	\$ 1,258,088	\$ 1,219,981
Investments - at fair value		
Short-term investments:		
Commercial paper	0	75,098
Short-term investment fund	465,204	464,188
U.S. treasury bills and agencies	0	293,310
Discount notes	0	0
Debt securities:		
U.S. government and agency	7,702,198	6,870,189
Corporate and other	0	0
Equity securities	6,518,200	6,180,793
Alternative Investments	7,209,973	6,382,258
Collective trust funds:	.,,,	-,,
Fixed income	695,704	656,243
Domestic equity	6,785,844	5,803,115
International equity	6,588,906	5,402,281
Mortgage debt security	308,817	302,440
Treasury inflation protected securities	1,592,909	1,503,457
Promissory notes	0	0
Collateral from securities lending	3,853,421	2,945,709
Conactal from securities fending	 3,033,721	 2,743,707
Total Investments	\$ 41,721,176	\$ 36,879,081
Other assets	17,667	16,104
Total assets	\$ 43,104,839	\$ 38,231,319
LIABILITIES		
Accounts payable	468,980	260,836
Payables for investment securities purchased	556,363	837,047
Accrued benefits payable	84,111	115,117
Transferrable earnings due to VSFs	564,439	590,000
Accrued Transfers to VSFs	2,154,000	0
Securities lending	3,853,421	2,945,709
Total liabilities	\$ 7,681,314	\$ 4,748,709
Plan Net Position Held in Trust for Benefits	\$ 35,423,525	\$ 33,482,610

## NEW YORK CITY POLICE DEPARTMENT POLICE OFFICERS' VARIABLE SUPPLEMENTS FUND (POVSF)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

ASSETS	June 30, 2017	June 30, 2016
Cash	\$ 1,880	\$ 1,851
Receivables:		
Investment securities sold	100,709	65,948
Transferrable earnings due from QPP	300,637	330,000
Accrued Transfers from QPP	738,000	0
Accrued interest and dividends	199	2,317
Total receivables	\$ 1,139,545	\$ 398,265
Investments - at fair value		
Short term investments:		
Commercial paper	0	10,803
Short-term investments fund	8,551	5,710
U.S. treasury bills and agencies	0	4,551
Discount notes	0	0
Debt securities:		
U.S. government and agency	15	322,512
Corporate and other	0	0
Equities Securities	0	612,597
Collective trust funds:		
Fixed income	452,707	0
Domestic equity	444,732	0
International equity	404,825	338,978
Collateral from securities lending	 53,248	 97,014
Total Investments	\$ 1,364,078	\$ 1,392,165
Other assets	0	0
Accrued Transfer from QPP	0	0
Total assets	\$ 2,505,503	\$ 1,792,281
LIABILITIES		
Accounts payable	290	12,289
Payables for investment securities purchased	100,608	48,023
Transferrable earnings due to QPP	250,751	250,751
Accrued benefits payable	75,739	76,586
Securities lending	53,248	97,014
Total liabilities	\$ 480,636	\$ 484,663
Plan Net Position Held in Trust for Benefits	\$ 2,024,867	\$ 1,307,618

# NEW YORK CITY POLICE DEPARTMENT POLICE SUPERIOR OFFICERS' VARIABLE SUPPLEMENTS FUND (PSOVSF)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

ASSETS	June 30, 2017	June 30, 2016
Cash	\$ 584	\$ 863
Receivables:		
Investment securities sold	17,802	26,453
Transferrable earnings due from QPP	263,802	260,000
Accrued Transfers from QPP	1,416,000	0
Accrued interest and dividends	26	804
Total receivables	\$ 1,697,630	\$ 287,257
Investments - at fair value		
Short-term investments:		
Commercial paper	0	1,903
Short-term investment fund	4,755	2,045
U.S. treasury bills and agencies	0	258
Debt securities:		
U.S. government and agency	0	119,780
Corporate and other	0	0
Collective trust funds:		
Fixed income	77,417	0
Domestic equity	79,630	210,014
International equity	73,055	114,821
Collateral from securities lending	 9,556	 35,508
Total Investments	\$ 244,413	\$ 484,329
Other assets	0	0
Accrued Transfer from QPP	0	0
Total assets	\$ 1,942,627	\$ 772,449
LIABILITIES		
Accounts payable & accrued liabilities	64	6,273
Payables for investment securities purchased	17,795	19,764
Transferrable earnings due to QPP	75,444	75,444
Accrued benefits payable	112,389	113,709
Securities lending	9,556	35,508
Total liabilities	\$ 215,248	\$ 250,698
Plan Net Position Held in Trust for Benefits	\$ 1,727,379	\$ 521,751

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

	June 30, 2017	June 30, 2016
ADDITIONS		
Contributions:		
Member Contributions	\$ 276,301	\$ 249,921
Employer Contributions	 2,293,840	 2,393,940
Total contributions	\$ 2,570,141	\$ 2,643,861
Investment income:		
Interest income	400,562	416,038
Dividend income	485,237	449,480
Net appreciation (depreciation) in fair value	 3,418,739	 (85,518)
Total investment income	\$ 4,304,538	\$ 780,000
Less:		
Investment expenses	245,288	156,155
Net income	4,059,250	623,845
Securities lending transactions:		
Securities lending income	22,034	21,896
Securities lending fees	 (1,537)	 (1,423)
Net securities lending income	\$ 20,497	\$ 20,473
Net investment income	\$ 4,079,747	\$ 644,318
Other:		
Net receipts from other retirement systems	2,450	3,786
Transferrable earnings due from VSFs	25,562	326,195
Litigation income	7,931	2,693
Total additions	\$ 6,685,831	\$ 3,620,853
DEDUCTIONS		
Benefit payments and withdrawals	2,571,999	2,475,738
Accrued Transfers to VSFs	2,154,000	0
Administrative expenses	18,917	18,478
Total deductions	\$ 4,744,916	\$ 2,494,216
INCREASE IN PLAN NET POSITION	1,940,915	1,126,637
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:		
Beginning of year	\$ 33,482,610	\$ 32,355,973
End of year	\$ 35,423,525	\$ 33,482,610

## NEW YORK CITY POLICE DEPARTMENT POLICE OFFICERS' VARIABLE SUPPLEMENTS FUND (POVSF)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

	June 30, 2017	June 30, 2016
ADDITIONS		
Contributions:		
Member Contributions	\$ 0	\$ 0
Employer Contributions	 0	 0
Total contributions	\$ 0	\$ 0
Investment income:		
Interest income	7,892	11,930
Dividend income	24,359	25,507
Net appreciation (depreciation) in fair value	 134,327	 (170,921)
Total investment income	\$ 166,578	\$ (133,484)
Less:		
Investment expenses	561	437
Net income	166,017	(133,921)
Securities lending transactions:		
Securities lending income	792	967
Securities lending fees	 (54)	 (63)
Net securities lending income	\$ 738	\$ 904
Net investment income	166,755	(133,017)
Other:		
Litigation income	74	147
Accrued Transfer from QPP	738,000	0
Total additions	 904,829	 (132,870)
DEDUCTIONS		
Benefit payments and withdrawals	158,216	156,695
Transferrable earnings due to QPP	29,364	250,751
Total deductions	 187,580	 407,446
INCREASE IN PLAN NET POSITION	717,249	(540,316)
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:		
Beginning of year	\$ 1,307,618	\$ 1,847,934
End of year	\$ 2,024,867	\$ 1,307,618

# NEW YORK CITY POLICE DEPARTMENT POLICE SUPERIOR OFFICERS' VARIABLE SUPPLEMENTS FUND (PSOVSF)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

	June 30, 2017	June 30, 2016
ADDITIONS		
Contributions:		
Member Contributions	\$ 0	\$ 0
Employer Contributions	 0	 0
Total contributions	\$ 0	\$ 0
Investment income:		
Interest income	1,878	5,041
Dividend income	6,129	10,007
Net appreciation (depreciation) in fair value	 32,328	 (122,997)
Total investment income	\$ 40,335	\$ (107,949)
Less:		
Investment expenses	145	179
Net income	40,190	(108,128)
Securities lending transactions:		
Securities lending income	216	386
Securities lending fees	 (14)	 (25)
Net securities lending income	\$ 202	\$ 361
Net investment income	40,392	(107,767)
Other:		
Transferrable earnings due from QPP	3,802	0
Litigation income	52	130
Accrued Transfer from QPP	1,416,000	0
Total additions	 1,460,246	 (107,637)
DEDUCTIONS		
Benefit payments and withdrawals	254,618	249,790
Transferrable earnings due to QPP	0	75,444
Total deductions	 254,618	 325,234
INCREASE IN PLAN NET POSITION	1,205,628	(432,871)
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:		
Beginning of year	\$ 521,751	\$ 954,622
End of year	\$ 1,727,379	\$ 521,751

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Market Values of Assets**

		QPP	POVSF	PSOVSF	Total
1.	Plan Net Position @ 6/30/2015	\$ 32,945,973,000	\$ 1,517,934,000	\$ 694,622,000	\$ 35,158,529,000
2.	Accrued Benefits Payable	0	75,645,000	110,878,000	186,523,000
3.	Transferrable Earnings due from QPP to VSFs	(590,000,000)	330,000,000	260,000,000	0
4.	Adjusted Market Value @ 6/30/2015	32,355,973,000	1,923,579,000	1,065,500,000	35,345,052,000
5.	Changes for the year:				
	a. ER Contributions	2,393,940,000	0	0	2,393,940,000
	b. EE Contributions	249,921,000	0	0	249,921,000
	c. Net Investment Income	644,318,000	(133,017,000)	(107,767,000)	403,534,000
	d. Benefit Payments <sup>1</sup>	(2,475,738,000)	(155,754,000)	(246,959,000)	(2,878,451,000)
	e. Administrative Expenses	(18,478,000)	0	0	(18,478,000)
	f. Other	6,479,000	147,000	130,000	6,756,000
	g. Net Changes	\$ 800,442,000	\$ (288,624,000)	\$ (354,596,000)	\$ 157,222,000
6.	Plan Net Position @ 6/30/2016	\$ 33,156,415,000	\$ 1,558,369,000	\$ 597,195,000	\$ 35,311,979,000
7.	Accrued Benefits Payable	0	76,586,000	113,709,000	190,295,000
8.	Transferrable Earnings due from VSFs to QPP	326,195,000	(250,751,000)	(75,444,000)	0
9.	Adjusted Market Value @ 6/30/2016	\$ 33,482,610,000	\$ 1,384,204,000	\$ 635,460,000	\$ 35,502,274,000
10.	Changes for the year:				
	a. ER Contributions	2,293,840,000	0	0	2,293,840,000
	b. EE Contributions	276,301,000	0	0	276,301,000
	c. Net Investment Income	4,079,747,000	166,755,000	40,392,000	4,286,894,000
	d. Benefit Payments <sup>2</sup>	(2,571,999,000)	(159,063,000)	(255,938,000)	(2,987,000,000)
	e. Administrative Expenses	(18,917,000)	0	0	(18,917,000)
	f. Other	10,381,000	74,000	52,000	10,507,000
	g. Net Changes	\$ 4,069,353,000	\$ 7,766,000	\$ (215,494,000)	\$ 3,861,625,000
11.	Plan Net Position @ 6/30/2017	\$ 37,551,963,000	\$ 1,316,231,000	\$ 307,577,000	\$ 39,175,771,000
12.	Accrued Benefits Payable	0	75,739,000	112,389,000	188,128,000
13.	Transferrable Earnings due from QPP to VSFs	(2,128,438,000)	708,636,000	1,419,802,000	0
14.	Adjusted Market Value @ 6/30/2017	\$ 35,423,525,000	\$ 2,100,606,000	\$ 1,839,768,000	\$ 39,363,899,000

<sup>&</sup>lt;sup>1</sup> Includes Net Accrued Benefits Payable of \$941,000 for POVSF and \$2,831,000 for PSOVSF.

 $<sup>^{2}\,</sup>$  Includes Net Accrued Benefits Payable of -\$847,000 for POVSF and -\$1,320,000 for PSOVSF.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Long-Term Expected Rate of Return**

The Long-Term Expected Rate of Return (LTEROR) assumption on pension fund investments was determined using a Building-Block Method in which best-estimate ranges of Expected Real Rates of Return (i.e., Expected Returns, net of pension fund investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the LTEROR by weighting the Expected Real Rates of Return (RROR) by the Target Asset Allocation percentage and by adding Expected Inflation. The Target Asset Allocation and best estimates of Arithmetic Real Rates of Return for each major asset class are summarized in the following table:

Asset Class	Target Asset <u>Allocation</u>	Long-Term Expected Real Rate of Return
U.S. Public Market Equities	31.00%	5.70%
International Public Market Equities	9.00%	6.10%
Emerging Public Market Equities	6.00%	7.60%
Private Market Equities	7.00%	8.10%
Fixed Income (Core, TIPS, HY, Opportunistic, Convertibles)	31.00%	3.00%
Alternatives (Real Assets, Hedge Funds)	<u>16.00%</u>	4.70%
Total	100.00%	

The Discount Rate used to measure the Total Pension Liability was 7.0% per annum. The projection of Cash Flows used to determine the Discount Rate assumes that employee contributions will be made at the rates applicable to the current Tier for each member and that employer contributions will be made at rates as determined by the Actuary. Based on those assumptions, the pension fund's Fiduciary Net Position is projected to be available to make all projected future benefit payments of current active and non-active members. Therefore, the Long-Term Expected Rate of Return on pension fund investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Development of Asset (Gain) / Loss June 30, 2016

		QPP	POVSF	PSOVSF	Total
1.	Assets				
	a. Market Value 6/30/2015*	\$ 32,945,973,000	\$ 1,593,579,000	\$ 805,500,000	\$ 35,345,052,000
	b. 2015 Transferrable Earnings due from QPP to VSFs	(590,000,000)	330,000,000	260,000,000	0
	c. Adjusted Market Value @6/30/2015	32,355,973,000	1,923,579,000	1,065,500,000	35,345,052,000
	d. Market Value 6/30/2016**	33,156,415,000	1,634,955,000	710,904,000	35,502,274,000
	e. 2016 Transferrable Earnings due from VSFs to QPP	326,195,000	(250,751,000)	(75,444,000)	0
	f. Adjusted Market Value @6/30/2016	33,482,610,000	1,384,204,000	635,460,000	35,502,274,000
2.	Net Investment Income	644,318,000	(133,017,000)	(107,767,000)	403,534,000
3.	Cash Flow (1.d 1.a 2.)	(433,876,000)	174,393,000	13,171,000	(246,312,000)
4.	Projected Earnings (7% * 1.a. + 3.441% * 3.)	2,291,288,437	117,551,393	56,838,214	2,465,678,044
5.	(Gain) / Loss (4 2.)	1,646,970,437	250,568,393	164,605,214	2,062,144,044
6.	Recognition Period	5 Years	5 Years	5 Years	5 Years
7.	Amount Recognized in Pension Expense (5. / 6.)	329,394,087	50,113,679	32,921,043	412,428,809
8.	Deferred (Inflow) / Outflow of Resources (5 7.)	\$ 1,317,576,350	\$ 200,454,714	\$ 131,684,171	\$ 1,649,715,235

<sup>\*</sup> Before Reflecting 2015 Transferrable Earnings to VSFs.

 $<sup>\</sup>ast\ast$  Before Reflecting 2016 Transferrable Earnings to QPP.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Development of Asset (Gain) / Loss June 30, 2017

		QPP	POVSF	PSOVSF	Total
1.	Assets				
	a. Market Value 6/30/2016*	\$ 33,156,415,000	\$ 1,634,955,000	\$ 710,904,000	\$ 35,502,274,000
	b. 2016 Transferrable Earnings due from VSFs to QPP	326,195,000	(250,751,000)	(75,444,000)	0
	c. Adjusted Market Value @6/30/2016	33,482,610,000	1,384,204,000	635,460,000	35,502,274,000
	d. Market Value 6/30/2017**	37,551,963,000	1,391,970,000	419,966,000	39,363,899,000
	e. 2017 Transferrable Earnings due from QPP to VSFs	(2,128,438,000)	708,636,000	1,419,802,000	0
	f. Adjusted Market Value @6/30/2017	35,423,525,000	2,100,606,000	1,839,768,000	39,363,899,000
2.	Net Investment Income	4,079,747,000	166,755,000	40,392,000	4,286,894,000
3.	Cash Flow (1.d 1.a 2.)	315,801,000	(409,740,000)	(331,330,000)	(425,269,000)
4.	Projected Earnings (7% * 1.a. + 3.441% * 3.)	2,331,815,762	100,347,697	38,362,215	2,470,525,674
5.	(Gain) / Loss (4 2.)	(1,747,931,238)	(66,407,303)	(2,029,785)	(1,816,368,326)
6.	Recognition Period	5 Years	5 Years	5 Years	5 Years
7.	Amount Recognized in Pension Expense (5. / 6.)	(349,586,248)	(13,281,461)	(405,957)	(363,273,666)
8.	Deferred (Inflow) / Outflow of Resources (5 7.)	\$ (1,398,344,990)	\$ (53,125,842)	\$ (1,623,828)	\$ (1,453,094,660)

<sup>\*</sup> Before Reflecting 2016 Transferrable Earnings to QPP.

<sup>\*\*</sup> Before Reflecting 2017 Transferrable Earnings to VSFs.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Roll-Forward of Entry Age Actuarial Accrued Liabilities to June 30, 2017

		QPP	POVSF	PSOVSF	Total
1.	EA Accrued Liability at 6/30/2015	\$ 43,146,844,443.00	\$ 1,961,354,068.00	\$ 3,584,607,102.00	\$ 48,692,805,613
2.	EA Normal Cost at 6/30/2015	\$ 1,185,928,383.00	\$ 51,308,719.00	\$ 44,720,628.00	1,281,957,730
3.	Benefit Payments-FY16	\$ 2,475,738,000.00	\$ 155,754,000.00	\$ 246,959,000.00	2,878,451,000
4.	Interest	\$ 3,018,103,953.00	\$ 135,526,900.00	\$ 245,555,082.00	3,399,185,935
5.	Roll-Forward EAAL at 6/30/2016	\$ 44,875,138,779	\$ 1,992,435,687	\$ 3,627,923,812	\$ 50,495,498,278
6.	EA Normal Cost at 6/30/2016	1,221,506,234	52,847,981	46,062,247	1,320,416,462
7.	Benefit Payments-FY17	2,571,999,000	159,063,000	255,938,000	2,987,000,000
8.	Interest	3,138,262,665	137,696,499	248,372,198	3,524,331,362
9.	Roll-Forward EAAL at 6/30/2017	\$ 46,662,908,678	\$ 2,023,917,167	\$ 3,666,420,257	\$ 52,353,246,102

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016 Total

		 Total Pension Liability (a)	]	Plan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)			
1.	Balances at June 30, 2015	\$ 48,209,042,442	\$	35,345,052,000	\$	12,863,990,442		
2.	Changes for the Year:							
	a. Service Cost	1,340,614,909		0		1,340,614,909		
	b. Interest	3,441,398,429		0		3,441,398,429		
	c. Differences b/t Expected and Actual Experience	233,461,664		0		233,461,664		
	d. Changes of Assumptions	794,679,950		0		794,679,950		
	e. Contributions - Employer	0		2,393,940,000		(2,393,940,000)		
	f. Contributions - Employee	0		249,921,000		(249,921,000)		
	g. Net Investment Income	0		403,534,000		(403,534,000)		
	h. Benefit Payments	(2,878,451,000)		(2,878,451,000)		0		
	i. Administrative Expenses	0		(18,478,000)		18,478,000		
	j. Other Changes	0		6,756,000		(6,756,000)		
	k. Net Changes	\$ 2,931,703,952	\$	157,222,000	\$	2,774,481,952		
3.	Balances at June 30, 2016	\$ 51,140,746,394	\$	35,502,274,000	\$	15,638,472,394		

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016 QPP

		 Total Pension Liability (a)	Plan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)			
1.	Revised Balances at June 30, 2015	\$ 42,756,202,430	\$ 32,355,973,000	\$	10,400,229,430		
2.	Changes for the Year:						
	a. Service Cost	1,241,706,567	0		1,241,706,567		
	b. Interest	3,059,498,895	0		3,059,498,895		
	c. Differences b/t Expected and Actual Experience	216,334,147	0		216,334,147		
	d. Changes of Assumptions	709,885,998	0		709,885,998		
	e. Contributions - Employer	0	2,393,940,000		(2,393,940,000)		
	f. Contributions - Employee	0	249,921,000		(249,921,000)		
	g. Net Investment Income	0	644,318,000		(644,318,000)		
	h. Benefit Payments	(2,475,738,000)	(2,475,738,000)		0		
	i. Administrative Expenses	0	(18,478,000)		18,478,000		
	j. Other Changes	0	6,479,000		(6,479,000)		
	k. Net Changes	\$ 2,751,687,607	\$ 800,442,000	\$	1,951,245,607		
3.	Transferrable Earnings due from VSFs to QPP	0	326,195,000		(326,195,000)		
4.	Balances at June 30, 2016	\$ 45,507,890,037	\$ 33,482,610,000	\$	12,025,280,037		

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016 POVSF

		Total Pension Liability (a)			Plan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)		
1.	Balances at June 30, 2015	\$	1,928,313,650	\$	1,923,579,000	\$	4,734,650	
2.	Changes for the Year:							
	a. Service Cost		53,625,359		0		53,625,359	
	b. Interest		136,590,875		0		136,590,875	
	c. Differences b/t Expected and Actual Experience		13,273,367		0		13,273,367	
	d. Changes of Assumptions		32,650,048		0		32,650,048	
	e. Contributions - Employer		0		0		0	
	f. Contributions - Employee		0		0		0	
	g. Net Investment Income		0		(133,017,000)		133,017,000	
	h. Benefit Payments		(155,754,000)		(155,754,000)		0	
	i. Administrative Expenses		0		0		0	
	j. Other Changes		0		147,000		(147,000)	
	k. Net Changes	\$	80,385,649	\$	(288,624,000)	\$	369,009,649	
3.	Transferrable Earnings due from POVSF to QPP		0		(250,751,000)		250,751,000	
4.	Balances at June 30, 2016	\$	2,008,699,299	\$	1,384,204,000	\$	624,495,299	

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016 PSOVSF

		,	Total Pension Liability (a)	Plan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)		
1.	Balances at June 30, 2015	\$	3,524,526,362	\$ 1,065,500,000	\$	2,459,026,362	
2.	Changes for the Year:						
	a. Service Cost		45,282,983	0		45,282,983	
	b. Interest		245,308,659	0		245,308,659	
	c. Differences b/t Expected and Actual Experience		3,854,150	0		3,854,150	
	d. Changes of Assumptions		52,143,904	0		52,143,904	
	e. Contributions - Employer		0	0		0	
	f. Contributions - Employee		0	0		0	
	g. Net Investment Income		0	(107,767,000)		107,767,000	
	h. Benefit Payments		(246,959,000)	(246,959,000)		0	
	i. Administrative Expenses		0	0		0	
	j. Other Changes		0	130,000		(130,000)	
	k. Net Changes	\$	99,630,696	\$ (354,596,000)	\$	454,226,696	
3.	Transferrable Earnings due from PSOVSF to QPP		0	(75,444,000)		75,444,000	
4.	Balances at June 30, 2016	\$	3,624,157,058	\$ 635,460,000	\$	2,988,697,058	

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016

			Total Pensi	on Lia	bility	
		 QPP	POVSF		PSOVSF	TOTAL
1.	Balances at June 30, 2015	\$ 42,756,202,430	\$ 1,928,313,650	\$	3,524,526,362	\$ 48,209,042,442
2.	Changes for the Year:					
	a. Service Cost	1,241,706,567	53,625,359		45,282,983	1,340,614,909
	b. Interest	3,059,498,895	136,590,875		245,308,659	3,441,398,429
	c. Differences b/t Expected and Actual Experience	216,334,147	13,273,367		3,854,150	233,461,664
	d. Changes of Assumptions	709,885,998	32,650,048		52,143,904	794,679,950
	e. Benefit Payments  f. Net Changes	\$ (2,475,738,000) <b>2,751,687,607</b>	\$ (155,754,000) <b>80,385,649</b>	\$	(246,959,000) <b>99,630,696</b>	\$ (2,878,451,000) <b>2,931,703,952</b>
3.	Balances at June 30, 2016	\$ 45,507,890,037	\$ 2,008,699,299	\$	3,624,157,058	\$ 51,140,746,394
					1	
		 OPP	Plan Fiduciar POVSF	y Net P	PSOVSF	TOTAL
4.	Balances at June 30, 2015	\$ 32,355,973,000	\$ 1,923,579,000	\$	1,065,500,000	\$ 35,345,052,000
5.	Changes for the Year:					
	a. Contributions - Employer	2,393,940,000	0		0	2,393,940,000
	b. Contributions - Employee	249,921,000	0		0	249,921,000
	c. Net Investment Income	644,318,000	(133,017,000)		(107,767,000)	403,534,000
	d. Benefit Payments	(2,475,738,000)	(155,754,000)		(246,959,000)	(2,878,451,000)
	e. Administrative Expenses f. Other Changes	(18,478,000) 6,479,000	0 147,000		0 130,000	(18,478,000)
	g. Net Changes	\$ 800,442,000	\$ (288,624,000)	\$	(354,596,000)	\$ 6,756,000 157,222,000
_	The off well Free and a few WCF to OPP	227 107 000	(250 551 000)		(77 444 000)	0
6. 7.	Transferrable Earnings due from VSFs to QPP Balances at June 30, 2016	\$ 326,195,000 33,482,610,000	\$ (250,751,000) 1,384,204,000	\$	(75,444,000) 635,460,000	\$ 0 35,502,274,000
		 OPP	Net Pensio	n Liab	ility PSOVSF	TOTAL
8.	Balances at June 30, 2015	\$ 10,400,229,430	\$ 4,734,650	\$	2,459,026,362	\$ 12,863,990,442
9.	Changes for the Year:					
	a. Service Cost	1,241,706,567	53,625,359		45,282,983	1,340,614,909
	b. Interest	3,059,498,895	136,590,875		245,308,659	3,441,398,429
	c. Differences b/t Expected and Actual Experience	216,334,147	13,273,367		3,854,150	233,461,664
	d. Changes of Assumptions	709,885,998	32,650,048		52,143,904	794,679,950
	e. Contributions - Employer	(2,393,940,000)	0		0	(2,393,940,000)
	f. Contributions - Employee	(249,921,000)	0		0	(249,921,000)
	g. Net Investment Income	(644,318,000)	133,017,000		107,767,000	(403,534,000)
	h. Benefit Payments	0 18.478.000	0		0	0
	<ul><li>i. Administrative Expenses</li><li>j. Other Changes</li></ul>	(6,479,000)	(147,000)		(130,000)	18,478,000 (6,756,000)
	<ul><li>j. Other Changes</li><li>k. Net Changes</li></ul>	\$ 1,951,245,607	\$ 369,009,649	\$	454,226,696	\$ 2,774,481,952
10.	Transferrable Earnings due from VSFs to QPP	(326,195,000)	250,751,000		75,444,000	0
11.	Balances at June 30, 2016	\$ 12,025,280,037	\$ 624,495,299	\$	2,988,697,058	\$ 15,638,472,394

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017 Total

			Total Pension Liability (a)	]	Plan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)		
1.	Balances at June 30, 2016	\$	51,140,746,394	\$	35,502,274,000	\$	15,638,472,394	
2.	Changes for the Year:							
	a. Service Cost		1,320,416,462		0		1,320,416,462	
	b. Interest		3,524,331,362		0		3,524,331,362	
	c. Differences b/t Expected and Actual Experience		(645,248,116)		0		(645,248,116)	
	d. Changes of Assumptions		0		0		0	
	e. Contributions - Employer		0		2,293,840,000		(2,293,840,000)	
	f. Contributions - Employee		0		276,301,000		(276,301,000)	
	g. Net Investment Income		0		4,286,894,000		(4,286,894,000)	
	h. Benefit Payments		(2,987,000,000)		(2,987,000,000)		0	
	i. Administrative Expenses		0		(18,917,000)		18,917,000	
	j. Other Changes		0		10,507,000		(10,507,000)	
	k. Net Changes	\$	1,212,499,708	\$	3,861,625,000	\$	(2,649,125,292)	
3.	Balances at June 30, 2017	\$	52,353,246,102	\$	39,363,899,000	\$	12,989,347,102	

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017 QPP

		Total Pension Liability (a)			Plan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)			
1.	Balances at June 30, 2016	\$	45,507,890,037	\$	33,482,610,000	\$	12,025,280,037		
2.	Changes for the Year:								
	a. Service Cost		1,221,506,234		0		1,221,506,234		
	b. Interest		3,138,262,665		0		3,138,262,665		
	c. Differences b/t Expected and Actual Experience		(632,751,258)		0		(632,751,258)		
	d. Changes of Assumptions		0		0		0		
	e. Contributions - Employer		0		2,293,840,000		(2,293,840,000)		
	f. Contributions - Employee		0		276,301,000		(276,301,000)		
	g. Net Investment Income		0		4,079,747,000		(4,079,747,000)		
	h. Benefit Payments		(2,571,999,000)		(2,571,999,000)		0		
	i. Administrative Expenses		0		(18,917,000)		18,917,000		
	j. Other Changes		0		10,381,000		(10,381,000)		
	k. Net Changes	\$	1,155,018,641	\$	4,069,353,000	\$	(2,914,334,359)		
3.	Transferrable Earnings due from QPP to VSFs		0		(2,128,438,000)		2,128,438,000		
4.	Balances at June 30, 2017	\$	46,662,908,678	\$	35,423,525,000	\$	11,239,383,678		

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017 POVSF

			Total Pension Liability (a)	Plan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)		
1.	Balances at June 30, 2016	\$	2,008,699,299	\$ 1,384,204,000	\$	624,495,299	
2.	Changes for the Year:						
	a. Service Cost		52,847,981	0		52,847,981	
	b. Interest		137,696,499	0		137,696,499	
	c. Differences b/t Expected and Actual Experience		(16,263,612)	0		(16,263,612)	
	d. Changes of Assumptions		0	0		0	
	e. Contributions - Employer		0	0		0	
	f. Contributions - Employee		0	0		0	
	g. Net Investment Income		0	166,755,000		(166,755,000)	
	h. Benefit Payments		(159,063,000)	(159,063,000)		0	
	i. Administrative Expenses		0	0		0	
	j. Other Changes		0	74,000		(74,000)	
	k. Net Changes	\$	15,217,868	\$ 7,766,000	\$	7,451,868	
3.	Transferrable Earnings due from QPP to POVSF		0	708,636,000		(708,636,000)	
4.	Balances at June 30, 2017	\$	2,023,917,167	\$ 2,100,606,000	\$	(76,688,833)	

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017 PSOVSF

		Total Pension Liability (a)	Plan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)
1.	Balances at June 30, 2016	\$ 3,624,157,058	\$ 635,460,000	\$ 2,988,697,058
2.	Changes for the Year:			
	a. Service Cost	46,062,247	0	46,062,247
	b. Interest	248,372,198	0	248,372,198
	c. Differences b/t Expected and Actual Experience	3,766,754	0	3,766,754
	d. Changes of Assumptions	0	0	0
	e. Contributions - Employer	0	0	0
	f. Contributions - Employee	0	0	0
	g. Net Investment Income	0	40,392,000	(40,392,000)
	h. Benefit Payments	(255,938,000)	(255,938,000)	0
	i. Administrative Expenses	0	0	0
	j. Other Changes	0	52,000	(52,000)
	k. Net Changes	\$ 42,263,199	\$ (215,494,000)	\$ 257,757,199
3.	Transferrable Earnings due from QPP to PSOVSF	0	1,419,802,000	(1,419,802,000)
4.	Balances at June 30, 2017	\$ 3,666,420,257	\$ 1,839,768,000	\$ 1,826,652,257

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017

		Total Pension Liability							
		-	QPP		POVSF		PSOVSF		TOTAL
1.	Balances at June 30, 2016	\$	45,507,890,037	\$	2,008,699,299	\$	3,624,157,058	\$	51,140,746,394
2.	Changes for the Year:								
	a. Service Cost		1,221,506,234		52,847,981		46,062,247		1,320,416,462
	b. Interest		3,138,262,665		137,696,499		248,372,198		3,524,331,362
	<ul> <li>c. Differences b/t Expected and Actual Experience</li> </ul>		(632,751,258)		(16,263,612)		3,766,754		(645,248,116)
	d. Changes of Assumptions		0		0		0		0
	e. Benefit Payments		(2,571,999,000)		(159,063,000)		(255,938,000)		(2,987,000,000)
	f. Net Changes	\$	1,155,018,641	\$	15,217,868	\$	42,263,199	\$	1,212,499,708
3.	Balances at June 30, 2017	\$	46,662,908,678	\$	2,023,917,167	\$	3,666,420,257	\$	52,353,246,102
					Plan Fiduciar	y Net I			
			<u>QPP</u>		POVSF		<b>PSOVSF</b>		TOTAL
4.	Balances at June 30, 2016	\$	33,482,610,000	\$	1,384,204,000	\$	635,460,000	\$	35,502,274,000
5.	Changes for the Year:								
	a. Contributions - Employer		2,293,840,000		0		0		2,293,840,000
	b. Contributions - Employee		276,301,000		0		0		276,301,000
	c. Net Investment Income		4,079,747,000		166,755,000		40,392,000		4,286,894,000
	d. Benefit Payments		(2,571,999,000)		(159,063,000)		(255,938,000)		(2,987,000,000)
	e. Administrative Expenses		(18,917,000)		0		0		(18,917,000)
	f. Other Changes		10,381,000	_	74,000		52,000		10,507,000
	g. Net Changes	\$	4,069,353,000	\$	7,766,000	\$	(215,494,000)	\$	3,861,625,000
6.	Transferrable Earnings due from QPP to VSFs		(2,128,438,000)		708,636,000		1,419,802,000		0
7.	Balances at June 30, 2017	\$	35,423,525,000	\$	2,100,606,000	\$	1,839,768,000	\$	39,363,899,000
					Net Pensio	on Liab	oility		
			<u>OPP</u>		POVSF		PSOVSF		TOTAL
8.	Balances at June 30, 2016	\$	12,025,280,037	\$	624,495,299	\$	2,988,697,058	\$	15,638,472,394
9.	8								
	a. Service Cost		1,221,506,234		52,847,981		46,062,247		1,320,416,462
	b. Interest		3,138,262,665		137,696,499		248,372,198		3,524,331,362
	c. Differences b/t Expected and Actual Experience		(632,751,258)		(16,263,612)		3,766,754		(645,248,116)
	d. Changes of Assumptions		0		0		0		0
	e. Contributions - Employer		(2,293,840,000)		0		0		(2,293,840,000)
	f. Contributions - Employee		(276,301,000)		0		0		(276,301,000)
	g. Net Investment Income		(4,079,747,000)		(166,755,000)		(40,392,000)		(4,286,894,000)
	h. Benefit Payments		0		0		0		0
	i. Administrative Expenses		18,917,000		0		(52,000)		18,917,000
	j. Other Changes	<u> </u>	(10,381,000)	Φ.	(74,000)	•	(52,000)	Φ.	(10,507,000)
	k. Net Changes	\$	(2,914,334,359)	\$	7,451,868	\$	257,757,199	\$	(2,649,125,292)
	. Transferrable Earnings due from QPP to VSFs . Balances at June 30, 2017	\$	2,128,438,000 11,239,383,678	\$	(708,636,000) (76,688,833)	\$	(1,419,802,000) 1,826,652,257	\$	0 12,989,347,102
-11	Durances at bank 50, 2017	φ	11,407,000,070	Ψ	(10,000,033)	Ψ	1,020,002,207	Ψ	14,707,371,104

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Schedule of Changes in Net Pension Liability and Related Ratios

	<u>2017</u>	<u>2016</u>	2015 (Revised) <sup>1</sup>	<u>2014</u>	<u>2013</u>
1. Total Pension Liability					
a. Service Cost	\$ 1,320,416,462	\$ 1,340,614,909	\$ 1,325,807,839	\$ 1,301,753,171	\$ 1,263,838,030
b. Interest	3,524,331,362	3,441,398,429	3,245,225,246	3,117,317,330	2,998,478,091
c. Differences b/t Expected and Actual Experience	(645,248,116)	233,461,664	(215,417,691)	0	0
d. Changes of Assumptions	0	794,679,950	0	0	0
e. Benefit Payments	 (2,987,000,000)	(2,878,451,000)	 (2,746,784,000)	 (2,682,223,000)	(2,525,475,000)
f. Net Changes	\$ 1,212,499,708	\$ 2,931,703,952	\$ 1,608,831,394	\$ 1,736,847,501	\$ 1,736,841,121
2. Total Pension Liability - Beginning	\$ 51,140,746,394	\$ 48,209,042,442	\$ 46,600,211,048	\$ 44,549,855,738	\$ 42,813,014,617
3. Total Pension Liability - Ending	\$ 52,353,246,102	\$ 51,140,746,394	\$ 48,209,042,442	\$ 46,286,703,239	\$ 44,549,855,738
4. Plan Fiduciary Net Position					
a. Contributions - Employer	\$ 2,293,840,000	\$ 2,393,940,000	\$ 2,309,619,000	\$ 2,320,910,000	\$ 2,424,690,000
b. Contributions - Employee	276,301,000	249,921,000	241,102,000	228,783,000	229,675,000
c. Net Investment Income	4,286,894,000	403,534,000	1,098,220,000	5,147,483,000	3,101,564,000
d. Benefit Payments	(2,987,000,000)	(2,878,451,000)	(2,746,784,000)	(2,682,223,000)	(2,525,475,000)
e. Administrative Expenses	(18,917,000)	(18,478,000)	(17,903,000)	(17,450,000)	(17,548,000)
f. Other Changes	 10,507,000	6,756,000	 4,616,000	 6,911,000	6,118,000
g. Net Changes	\$ 3,861,625,000	\$ 157,222,000	\$ 888,870,000	\$ 5,004,414,000	\$ 3,219,024,000
5. Plan Fiduciary Net Position - Beginning	\$ 35,502,274,000	\$ 35,345,052,000	\$ 34,456,182,000	\$ 29,451,768,000	\$ 26,232,744,000
6. Plan Fiduciary Net Position - Ending	\$ 39,363,899,000	\$ 35,502,274,000	\$ 35,345,052,000	\$ 34,456,182,000	\$ 29,451,768,000
7. POLICE Net Pension Liability	\$ 12,989,347,102	\$ 15,638,472,394	\$ 12,863,990,442	\$ 11,830,521,239	\$ 15,098,087,738
8. Plan Fiduciary Net Position as a Percentage					
of Total Pension Liability	75.2%	69.4%	73.3%	74.4%	66.1%
9. Covered Employee Payroll <sup>2</sup>	\$ 3,509,985,075	\$ 3,540,326,198	\$ 3,512,777,844	\$ 3,420,312,390	\$ 3,459,871,779
10. POLICE Net Pension Liability as a Percentage					
of Covered Employee Payroll	370.1%	441.7%	366.2%	345.9%	436.4%

 $<sup>^{1}</sup>$  Special Accidental Death Benefits pursuant to Section 208-f of the General Municipal Law.

<sup>&</sup>lt;sup>2</sup> Projected Employee Payroll at Time 1.0 under One-Year Lag Methodology.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Schedule of Employer Contributions (\$ in thousands)**

Fi	scal Year Ended June 30	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
1.	Actuarially Determined Contribution	\$ 2,293,840 \$	2,393,940 \$	2,309,619 \$	2,320,910 \$	2,424,690 \$	2,385,731 \$	2,083,633 \$	1,980,996 \$	1,932,150 \$	1,797,824
2.	Contributions in relation to the Actuarially Determined Contribution	\$ 2,293,840 \$	2,393,940 \$	2,309,619 \$	2,320,910 \$	2,424,690 \$	2,385,731 \$	2,083,633 \$	1,980,996 \$	1,932,150 \$	1,797,824
3.	Contribution Deficiency (Excess)	0	0	0	0	0	0	0	0	0	0
4.	Contributions as a percentage of Covered Employee Payroll*	65.352%	67.619%	65.749%	67.857%	70.080%	69.176%	64.058%	63.955%	65.570%	64.267%

<sup>\*</sup> The Employer Rate of Contribution equals the Statutory Contribution as a percentage of the salaries of members who were on payroll or projected to be on payroll (under One-Year Lag Methodology) as of the preceding June 30 increased to reflect ove adjusted, where applicable, to be consistent with collective bargaining agreements estimated to be achieved.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## **Average Expected Remaining Service Lives**

			Average Expected	Average Expected
		Future WorkLife	Remaining Service Life	Remaining Service Life
<u>Group</u>	# Count	@ 6/30/2015	@ 6/30/2015	<u>@ 6/30/2016</u>
Active	34,435	366,160	10.63	9.63
Active/Inactive	1,484	0	0	0
Terminated Vested	546	0	0	0
Retired	48,703	0	0	0
Total	85,168	366,160	4.30	3.89

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience

	ì	Differences between Expected and Actual	Recognition Period							
Year		Experience	(Years)	2015	2016	2017	2018	2019	2020	2021
2015	\$	(215,417,691)	2.45	\$ (87,925,588) \$	(87,925,588) \$	(39,566,515)				
2016	\$	233,461,664	2.45	\$	95,290,475 \$	95,290,475 \$	42,880,714			
2017	\$	(645,248,116)	3.89		\$	(165,873,552) \$	(165,873,552) \$	(165,873,552) \$	(147,627,460)	
2018										
2019										
2020										
Net increase	(decr	ease) in Pension Expens	se	\$ (87,925,588) \$	7,364,887 \$	(110,149,592) \$	(122,992,838) \$	(165,873,552) \$	(147,627,460) \$	0

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Increase (Decrease) in Pension Expense Arising from the Recognition of Changes in Assumptions

	I	ncrease (Decrease)							
		Due to	Recognition						
		Changes in	Period						
Year		Assumptions	(Years)	2016	2017	2018	2019	2020	2021
2016	\$	794,679,950	2.45	\$ 324,359,163 \$	324,359,163 \$	145,961,624			
2017		0	0		0	0			
2018									
2019									
2020									
et increase	(decr	ease) in Pension Expens	se	\$ 324,359,163 \$	324,359,163 \$	145.961.624 \$	0 \$	0 \$	0

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

#### Differences between Projected and Actual

		Earnings on	Recognition									
		Pension Plan	Period									
Year		Investments	(Years)	2013	2014	2015	2016	2017	2018	2019	2020	2021
2013	\$	(1,261,230,122)	5	\$ (252,246,024) \$	(252,246,024) \$	(252,246,024) \$	(252,246,024) \$	(252,246,026)				
2014	\$	(3,090,782,244)	5	\$	(618,156,449) \$	(618,156,449) \$	(618,156,449) \$	(618,156,449) \$	(618,156,448)			
2015	\$	1,306,509,007	5		\$	261,301,801 \$	261,301,801 \$	261,301,801 \$	261,301,801 \$	261,301,803		
2016	\$	2,062,144,044	5			\$	412,428,809 \$	412,428,809 \$	412,428,809 \$	412,428,809 \$	412,428,808	
2017	\$	(1,816,368,326)	5				\$	(363,273,666) \$	(363,273,666) \$	(363,273,666) \$	(363,273,666) \$	(363,273,662)
2018												
2019												
2020												
Net increase	(decr	ease) in Pension Expen	se	\$ (252, 246, 024) \$	(870 402 473) \$	(609 100 672) \$	(196 671 863) \$	(559 945 531) \$	(307 699 504) \$	310 456 946 \$	49 155 142 \$	(363 273 662)

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2016

<u>Component</u>	<u>Amount</u>
a. Service Cost	\$ 1,340,614,909
b. Interest on the Total Pension Liability	3,441,398,429
c. Differences between Expected and Actual Experience	7,364,887
d. Changes of Assumptions	324,359,163
e. Employee Contributions	(249,921,000)
f. Projected Earnings on Pension Plan Investments	(2,465,678,044)
g. Differences between Projected and Actual Earnings on Plan Investments	(196,671,863)
h. Pension Plan Administrative Expenses	18,478,000
i. Other Changes in Fiduciary Net Position	 (6,756,000)
Total Pension Expense	\$ 2,213,188,481

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2017

Component	<u>Amount</u>
a. Service Cost	\$ 1,320,416,462
b. Interest on the Total Pension Liability	3,524,331,362
c. Differences between Expected and Actual Experience	(110,149,592)
d. Changes of Assumptions	324,359,163
e. Employee Contributions	(276,301,000)
f. Projected Earnings on Pension Plan Investments	(2,470,525,674)
g. Differences between Projected and Actual Earnings on Plan Investments	(559,945,531)
h. Pension Plan Administrative Expenses	18,917,000
i. Other Changes in Fiduciary Net Position	 (10,507,000)
Total Pension Expense	\$ 1,760,595,190

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2013, the City recognized Pension Expense for POLICE of \$1,951,491,219.

At June 30, 2013, the City reported total Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for POLICE from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources		
Differences between Expected and Actual Experience	\$	0	\$	0		
Changes of Assumptions		0		0		
Net difference between Projected and Actual Earnings on Pension Plan Investments		0		1,008,984,098		
Total	\$	0	\$	1,008,984,098		

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for POLICE will be recognized in Pension Expense as follows:

Fiscal Year		
Ended		
<u>June 30</u>	<u>Amount</u>	
2013	\$ (252,246,024)	)
2014	(252,246,024)	)
2015	(252,246,024)	)
2016	(252,246,024)	)
2017	(252,246,026)	)

\_\_\_\_

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2014, the City recognized Pension Expense for POLICE of \$1,273,723,272.

For June 30, 2014, the City determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for POLICE from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources		
Differences between Expected and Actual Experience	\$	0	\$	0		
Changes of Assumptions		0		0		
Net difference between Projected and Actual Earnings on Pension Plan Investments		0		2,472,625,795		
Total	\$	0	\$	2,472,625,795		

Fiscal Year	
Ended	
June 30	<u>Amount</u>
2014	\$ (618,156,449)
2015	(618,156,449)
2016	(618,156,449)
2017	(618,156,449)
2018	(618.156.448)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2015, the City recognized Pension Expense for POLICE of \$1,241,462,818.

For June 30, 2015, the City determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for POLICE from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources		
Differences between Expected and Actual Experience	\$	0	\$	127,492,103		
Changes of Assumptions		0		0		
Net difference between Projected and Actual Earnings on Pension Plan Investments		1,045,207,206		0		
Total	\$	1,045,207,206	\$	127,492,103		

Fiscal Year		
Ended		
<u>June 30</u>	<u>Amount</u>	
2015	\$ 173,376,21	3
2016	173,376,21	3
2017	221,735,28	6
2018	261,301,80	1
2019	261,301,80	3

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2016, the City recognized Pension Expense for POLICE of \$2,213,188,481.

For June 30, 2016, the City determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for POLICE from the following sources:

		Deferred Inflows of Resources		
Differences between Expected and Actual Experience	\$	138,171,189	\$	0
Changes of Assumptions		470,320,787		0
Net difference between Projected and Actual Earnings on Pension Plan Investments		1,649,715,235		0
Total	\$	2,258,207,211	\$	0

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2016	\$ 832,078,447
2017	832,078,447
2018	601,271,147
2019	412,428,809
2020	412,428,808

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2017, the City recognized Pension Expense for POLICE of \$1,760,595,190.

For June 30, 2017, the City determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for POLICE from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between Expected and Actual Experience	\$	0	\$	479,374,564
Changes of Assumptions		0		0
Net difference between Projected and Actual Earnings on Pension Plan Investments		0		1,453,094,660
Total	\$	0	\$	1,932,469,224

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2017	\$ (529,147,218)
2018	(529,147,218)
2019	(529,147,218)
2020	(510,901,126)
2021	(363,273,662)

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

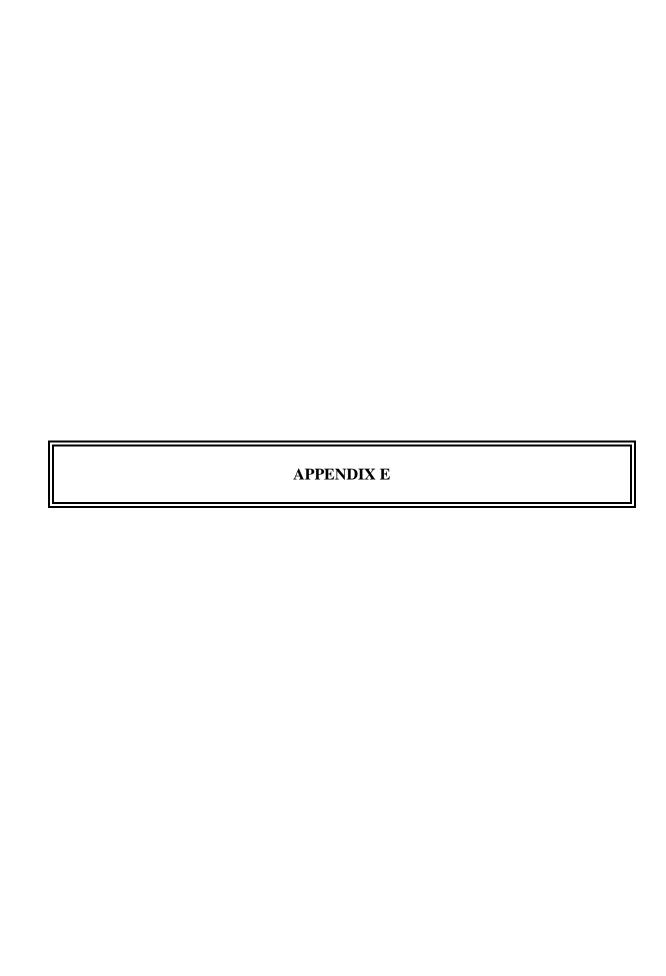
#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2017, the City recognized Pension Expense for POLICE of \$1,760,595,190.

At June 30, 2017, the City reported total Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for POLICE from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources	
Differences between Expected and Actual Experience	\$	0	\$	436,493,850	
Changes of Assumptions		145,961,624		0	
Net difference between Projected and Actual Earnings on Pension Plan Investments		0		311,361,078	
Total	\$	145,961,624	\$	747,854,928	

Fiscal Year	
Ended	
June 30	<u>Amount</u>
2017	\$ (345,735,960)
2018	(284,730,718)
2019	144,583,394
2020	(98,472,318)
2021	(363,273,662)



## **APPENDIX E**

## **NEW YORK CITY FIRE PENSION FUND (FIRE)**

Page 1a 1b	-	Statement of Fiduciary Net Position - FIRE Statement of Fiduciary Net Position - FFVSF
1c	-	Statement of Fiduciary Net Position - FOVSF
Page 2a	-	Statement of Changes in Fiduciary Net Position - FIRE
2b	-	Statement of Changes in Fiduciary Net Position - FFVSF
2c	-	Statement of Changes in Fiduciary Net Position - FOVSF
Page 3	-	Market Value of Assets
Page 4	-	Long-Term Expected Rate of Return
Page 5a	-	Development of Asset (Gain) / Loss - June 30, 2016
5b	-	Development of Asset (Gain) / Loss - June 30, 2017
Page 6	-	Roll-Forward of Entry Age Actuarial Accrued Liabilities to June 30, 2017
Page 7a	_	Changes in Net Pension Liability by Source - June 30, 2016
7b	-	Changes in Net Pension Liability by Source - June 30, 2017
Page 8	-	Schedule of Changes in Net Pension Liability and Related Ratios
Page 9	-	Schedule of Employer Contributions
Page 10	-	Average Expected Remaining Service Lives
Page 11a	-	Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience
11b	_	
110	-	in Assumptions
11c	-	Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments
Page 12a	-	Components of Pension Expense - June 30, 2016
12b	-	Components of Pension Expense - June 30, 2017
Page 13a	-	Pension Expense, Total Deferred Inflows/Outflows of Resources at June 30, 2013
13b	-	Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2014
13c	-	Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2015
13d	-	Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2016
13e	-	Pension Expense, Deferred Inflows/Outflows of Resources for June 30, 2017
13f	_	Pension Expense Total Deferred Inflows/Outflows of Resources at June 30, 2017

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

ACCEPTO	June 30, 2017	June 30, 2016
ASSETS Cash	\$ 37,035	\$ 37,457
Receivables:		
Investment securities sold	138,400	153,595
Member loans	26,951	26,917
Accrued interest and dividends	23,004	20,518
Accounts Receivables	178	0
Transferrable Earnings due from QPP to VSFs	0	0
Total receivables	\$ 188,533	\$ 201,030
Investments - at fair value		
Short-term investments:		
Commercial paper	136,416	52,525
Short-term investment fund	91,493	118,935
U.S. Treasury bills and agencies	0	25,998
Discount Notes	0	0
Debt securities:		
U.S. Government and agencies	2,219,638	999,671
Corporate and other	0	1,212,254
Equity Securities:	1,878,641	1,802,947
Alternative Investments:	2,391,376	2,117,856
Collective Trust Funds:		
International equity	2,232,054	1,966,228
Fixed income	575,442	401,512
Domestic equity	2,149,785	1,736,914
Mortgage debt security	89,229	86,107
Treasury inflation protected securities	543,317	547,146
Collateral from securities lending	 1,080,020	 854,211
Total Investments	\$ 13,387,411	\$ 11,922,304
Other assets	2,508	6,176
Total assets	\$ 13,615,487	\$ 12,166,967
LIABILITIES		
Accounts payable	147,979	89,435
Payables for investment securities purchased	147,296	215,792
Accrued benefits payable	15,680	18,893
Transferrable Earnings due from QPP to VSFs	134,616	88,873
Securities lending	1,080,020	854,211
Total liabilities	\$ 1,525,591	\$ 1,267,204
Plan Net Position Held in Trust for Benefits	\$ 12,089,896	\$ 10,899,763

## NEW YORK CITY FIRE DEPARTMENT FIREFIGHTERS' VARIABLE SUPPLEMENTS FUND (FFVSF)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

A CONTROL	June 30, 2017	June 30, 2016
ASSETS Cash	\$ 1,391	\$ 10,740
Receivables:		
Investment securities sold	33,517	12,433
Accrued interest and dividends	631	985
Accounts Receivables	0	0
Transferrable Earnings Due from QPP	83,653	59,739
Total receivables	\$ 117,801	\$ 73,157
Investments - at fair value		
Short-term investments:		
Commercial paper	0	6,953
Short-term investment fund	6,971	4,397
U.S. Treasury bills and agencies	0	0
Discount Notes	0	1,369
Debt securities:		
U.S. Government and agencies	0	93,304
Corporate and other	0	0
Equity securities:	0	0
Alternative investments:	0	0
Collective trust funds:		
International equity	142,644	85,780
Fixed income	154,461	26,885
Domestic equity	156,098	221,610
Mortgage debt security	0	0
Treasury inflation protected securities	1,316	10,394
Collateral from securities lending	 18,539	 37,719
Total Investments	\$ 480,029	\$ 488,411
Other assets	0	0
Total assets	\$ 599,221	\$ 572,308
LIABILITIES		
Accounts payable	96	0
Payables for investment securities purchased	33,509	10,514
Accrued benefits payable	20,831	21,225
Securities lending	18,539	37,719
Total liabilities	\$ 72,975	\$ 69,458
Plan Net Position Held in Trust for Benefits	\$ 526,246	\$ 502,850

## NEW YORK CITY FIRE DEPARTMENT FIRE OFFICERS' VARIABLE SUPPLEMENTS FUND (FOVSF)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Statement of Fiduciary Net Position June 30, 2017 and June 30, 2016

A CONTROL	June 30, 2017	June 30, 2016
ASSETS Cash	\$ 906	\$ 558
Receivables:		
Investment securities sold	24,791	11,636
Accrued interest and dividends	432	671
Accounts Receivables	33	0
Transferrable Earnings Due from QPP	50,963	29,134
Total receivables	\$ 76,219	\$ 41,441
Investments - at fair value		
Short-term investments:		
Commercial paper	0	3,603
Short-term investment fund	2,637	1,726
U.S. Treasury bills and agencies	0	0
Discount Notes	0	585
Debt securities:		
U.S. Government and agencies	1,263	33,721
Corporate and other	0	22,916
Equity securities:	0	0
Alternative investments:	0	0
Collective trust funds:		
International equity	93,185	52,725
Fixed income	100,957	17,541
Domestic equity	102,508	144,583
Mortgage debt security	0	0
Treasury inflation protected securities	1,544	6,593
Collateral from securities lending	12,294	 30,551
Total Investments	\$ 314,388	\$ 314,544
Other assets	0	0
Total assets	\$ 391,513	\$ 356,543
LIABILITIES		
Accounts payable	92	2,712
Payables for investment securities purchased	24,790	9,008
Accrued benefits payable	9,121	9,263
Securities lending	12,294	30,551
Total liabilities	\$ 46,297	\$ 51,534
Plan Net Position Held in Trust for Benefits	\$ 345,216	\$ 305,009

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

ADDVITIONS		June 30, 2017		June 30, 2016
ADDITIONS Contributions:				
Member Contributions	\$	108,368	\$	116,619
Employer Contributions	Φ	1,061,170	Ф	1,054,478
Employer Contributions		1,001,170		1,034,476
Total contributions	\$	1,169,538	\$	1,171,097
Investment income:				
Interest income		135,642		137,160
Dividend income		159,972		145,276
Net appreciation (depreciation) in fair value		1,067,973		(44,510)
Total investment income	\$	1,363,587	\$	237,926
Less:				
Investment expenses		84,438		46,321
Net income		1,279,149		191,605
Securities lending transactions:				
Securities lending income		6,150		6,196
Securities lending fees		(428)		(403)
Net securities lending income	\$	5,722	\$	5,793
Net investment income		1,284,871		197,398
Other:				
Net receipts from other retirement systems		44,999		42,786
Litigation income		2,285		887
Total additions		2,501,693		1,412,168
DEDUCTIONS				
Benefit payments and withdrawals		1,265,817		1,290,862
Transferrable Earnings due from QPP to VSFs		45,743		36,873
Transfertable Earnings due from Q11 to vors		13,7 13		30,073
Total deductions		1,311,560	_	1,327,735
INCREASE IN PLAN NET POSITION		1,190,133		84,433
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:				
Beginning of year	\$	10,899,763	\$	10,815,330
End of year	\$	12,089,896	\$	10,899,763

## NEW YORK CITY FIRE DEPARTMENT FIREFIGHTERS' VARIABLE SUPPLEMENTS FUND (FFVSF)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

	June 30, 2017	June 30, 2016
ADDITIONS		
Contributions:		
Member Contributions	\$ 0	\$ 0
Employer Contributions	 0	 0
Total contributions	\$ 0	\$ 0
Investment income:		
Interest income	4,600	4,796
Dividend income	7,504	7,957
Net appreciation (depreciation) in fair value	 34,802	 (8,428)
Total investment income	\$ 46,906	\$ 4,325
Less:		
Investment expenses	439	0
Net income	46,467	4,325
Securities lending transactions:		
Securities lending income	309	368
Securities lending fees	 (21)	 (24)
Net securities lending income	\$ 288	\$ 344
Net investment income	46,755	4,669
Other:		
Net receipts from other retirement systems	0	0
Litigation income	0	0
Transferrable Earnings due from QPP to FFVSF	23,914	18,739
Total additions	 70,669	 23,408
DEDUCTIONS		
Benefit payments and withdrawals	47,273	46,002
Total deductions	 47,273	 46,002
INCREASE IN PLAN NET POSITION	23,396	(22,594)
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:		
Beginning of year	\$ 502,850	\$ 525,444
End of year	\$ 526,246	\$ 502,850

## NEW YORK CITY FIRE DEPARTMENT FIRE OFFICERS' VARIABLE SUPPLEMENTS FUND (FOVSF)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Statement of Changes in Fiduciary Net Position June 30, 2017 and June 30, 2016

12222019		June 30, 2017		June 30, 2016
ADDITIONS				
Contributions:	ď	0	¢	0
Member Contributions	\$	0	\$	0
Employer Contributions		0		0
Total contributions	\$	0	\$	0
Investment income:				
Interest income		3,107		3,250
Dividend income		4,135		4,442
Net appreciation (depreciation) in fair value		32,860		(6,934)
Total investment income	\$	40,102	\$	758
Less:				
Investment expenses		247		0
Net income		39,855		758
Securities lending transactions:				
Securities lending income		257		298
Securities lending fees		(17)		(19)
Net securities lending income	\$	240	\$	279
Net investment income		40,095		1,037
Other:				
Net receipts from other retirement systems		0		0
Litigation income		0		0
Transferrable Earnings due from QPP to FOVSF		21,829		18,134
Total additions		61,924		19,171
DEDUCTIONS				
Benefit payments and withdrawals		21,717		21,567
		,,		
Total deductions		21,717		21,567
INCREASE IN PLAN NET POSITION		40,207		(2,396)
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:	ф	205 000	ø	205 405
Beginning of year	\$	305,009	\$	307,405
End of year	\$	345,216	\$	305,009

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Market Values of Assets**

1. 2. 3. 4.	Plan Net Position @ 6/30/2015 Accrued Benefits Payable Transferrable Earnings due from QPP to VSFs Adjusted Market Value @ 6/30/2015	\$	QPP 10,855,330,000 0 (40,000,000) 10,815,330,000	\$ FFVSF 495,444,000 21,630,000 30,000,000 547,074,000	\$ FOVSF 297,405,000 9,522,000 10,000,000 316,927,000	\$ <b>Total</b> 11,648,179,000 31,152,000 0 11,679,331,000
5.	Changes for the year:  a. ER Contributions b. EE Contributions c. Net Investment Income		1,054,478,000 116,619,000 197,398,000	0 0 4,669,000	0 0 1,037,000	1,054,478,000 116,619,000 203,104,000
	<ul><li>d. Benefit Payments <sup>1</sup></li><li>e. Other</li></ul>		(1,290,862,000) 43,673,000	(46,407,000)	 (21,826,000)	(1,359,095,000) 43,673,000
	f. Net Changes	\$	121,306,000	\$ (41,738,000)	\$ (20,789,000)	\$ 58,779,000
6. 7. 8. 9.	Plan Net Position @ 6/30/2016 Accrued Benefits Payable Transferrable Earnings due from QPP to VSFs Adjusted Market Value @ 6/30/2016	\$ \$	10,936,636,000 0 (36,873,000) 10,899,763,000	\$ 484,111,000 21,225,000 18,739,000 524,075,000	\$ 286,875,000 9,263,000 18,134,000 314,272,000	\$ 11,707,622,000 30,488,000 0 11,738,110,000
10.	Changes for the year:  a. ER Contributions b. EE Contributions c. Net Investment Income d. Benefit Payments <sup>2</sup> e. Other f. Net Changes	\$	1,061,170,000 108,368,000 1,284,871,000 (1,265,817,000) 47,284,000 1,235,876,000	\$ 0 0 46,755,000 (47,667,000) 0 (912,000)	\$ 0 0 40,095,000 (21,859,000) 0 18,236,000	\$ 1,061,170,000 108,368,000 1,371,721,000 (1,335,343,000) 47,284,000 1,253,200,000
11. 12. 13. 14.		\$ \$	12,135,639,000 0 (45,743,000) 12,089,896,000	\$ 502,332,000 20,831,000 23,914,000 547,077,000	\$ 323,387,000 9,121,000 21,829,000 354,337,000	\$ 12,961,358,000 29,952,000 0 12,991,310,000

 $<sup>^{\</sup>rm 1}$  Includes Net Accrued Benefits Payable of -\$405,000 for FFVSF and -\$259,000 for FOVSF.

 $<sup>^2\,</sup>$  Includes Net Accrued Benefits Payable of -\$394,000 for FFVSF and -\$142,000 for FOVSF.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Long-Term Expected Rate of Return**

The Long-Term Expected Rate of Return (LTEROR) assumption on pension fund investments was determined using a Building-Block Method in which best-estimate ranges of Expected Real Rates of Return (i.e., Expected Returns, net of pension fund investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the LTEROR by weighting the Expected Real Rates of Return (RROR) by the Target Asset Allocation percentage and by adding Expected Inflation. The Target Asset Allocation and best estimates of Arithmetic Real Rates of Return for each major asset class are summarized in the following table:

		Long-Term
	Target	Expected
	Asset	Real Rate
Asset Class	Allocation	of Return
U.S. Public Market Equities	31.00%	5.70%
International Public Market Equities	9.00%	6.10%
Emerging Public Market Equities	6.00%	7.60%
Private Market Equities	7.00%	8.10%
Fixed Income (Core, TIPS, HY, Opportunistic, Convertibles)	31.00%	3.00%
Alternatives (Real Assets, Hedge Funds)	<u>16.00%</u>	4.70%
Total	100.00%	

The Discount Rate used to measure the Total Pension Liability was 7.0% per annum. The projection of Cash Flows used to determine the Discount Rate assumes that employee contributions will be made at the rates applicable to the current Tier for each member and that employer contributions will be made at rates as determined by the Actuary. Based on those assumptions, the pension fund's Fiduciary Net Position is projected to be available to make all projected future benefit payments of current active and non-active members. Therefore, the Long-Term Expected Rate of Return on pension fund investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Development of Asset (Gain) / Loss June 30, 2016

	QPP	FFVSF	FOVSF	Total
1. Market Value 6/30/2015				
a. Market Value 6/30/2015*	\$ 10,855,330,000	\$ 517,074,000	\$ 306,927,000	\$ 11,679,331,000
b. 2015 Transferrable Earnings due from QPP to VSFs	(40,000,000)	30,000,000	10,000,000	0
c. Adjusted Market Value @6/30/2015	10,815,330,000	547,074,000	316,927,000	11,679,331,000
d. Market Value 6/30/2016**	10,936,636,000	505,336,000	296,138,000	11,738,110,000
e. 2016 Transferrable Earnings due from QPP to VSFs	(36,873,000)	18,739,000	18,134,000	0
f. Adjusted Market Value @6/30/2016	10,899,763,000	524,075,000	314,272,000	11,738,110,000
2. Net Investment Income	197,398,000	4,669,000	1,037,000	203,104,000
3. Cash Flow (1.d 1.a 2.)	(116,092,000)	(16,407,000)	(11,826,000)	(144,325,000)
4. Projected Earnings (7% * 1.a. + 3.441% * 3.)	755,878,374	35,630,615	21,077,957	812,586,946
5. (Gain) / Loss (4 2.)	558,480,374	30,961,615	20,040,957	609,482,946
6. Recognition Period	5 Years	5 Years	5 Years	5 Years
7. Amount Recognized in Pension Expense (5. / 6.)	111,696,075	6,192,323	4,008,191	121,896,589
8. Deferred (Inflow) / Outflow of Resources (5 7.)	\$ 446,784,299	\$ 24,769,292	\$ 16,032,766	\$ 487,586,357

<sup>\*</sup> Before Reflecting 2015 Transferrable Earnings due from QPP to VSFs.

<sup>\*\*</sup> Before Reflecting 2016 Transferrable Earnings due from QPP to VSFs.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Development of Asset (Gain) / Loss June 30, 2017

		QPP	FFVSF		FOVSF		Total
1.	Assets						
	a. Market Value 6/30/2016*	\$ 10,936,636,000	\$	505,336,000	\$ 296,138,000	\$	11,738,110,000
	b. 2016 Transferrable Earnings due from QPP to VSFs	(36,873,000)		18,739,000	18,134,000		0
	c. Adjusted Market Value @6/30/2016	10,899,763,000		524,075,000	314,272,000		11,738,110,000
	d. Market Value 6/30/2017**	12,135,639,000		523,163,000	332,508,000		12,991,310,000
	e. 2017 Transferrable Earnings due from QPP to VSFs	(45,743,000)		23,914,000	21,829,000		0
	f. Adjusted Market Value @6/30/2017	12,089,896,000		547,077,000	354,337,000		12,991,310,000
2.	Net Investment Income	1,284,871,000		46,755,000	40,095,000		1,371,721,000
3.	Cash Flow (1.d 1.a 2.)	(85,868,000)		(28,928,000)	(3,725,000)		(118,521,000)
4.	Projected Earnings (7% * 1.a. + 3.441% * 3.)	762,609,802		34,378,108	20,601,483		817,589,393
5.	(Gain) / Loss (4 2.)	(522,261,198)		(12,376,892)	(19,493,517)		(554,131,607)
6.	Recognition Period	5 Years		5 Years	5 Years		5 Years
7.	Amount Recognized in Pension Expense (5. / 6.)	(104,452,240)		(2,475,378)	(3,898,703)		(110,826,321)
8.	Deferred (Inflow) / Outflow of Resources (5 7.)	\$ (417,808,958)	\$	(9,901,514)	\$ (15,594,814)	\$	(443,305,286)

 $<sup>\ ^*</sup>$  Before Reflecting 2016 Transferrable Earnings due from QPP to VSFs.

<sup>\*\*</sup> Before Reflecting 2017 Transferrable Earnings due from QPP to VSFs.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Roll-Forward of Entry Age Actuarial Accrued Liabilities to June 30, 2017

		QPP	FFVSF	FOVSF	Total
1.	EA Accrued Liability at 6/30/2015	\$ 19,405,117,964	\$ 551,290,292	\$ 356,553,758	\$ 20,312,962,014
2.	EA Normal Cost at 6/30/2015	403,126,919	11,825,414	4,933,397	419,885,730
3.	Benefit Payments-FY16	1,290,862,000	46,407,000	21,826,000	1,359,095,000
4.	Interest	1,342,158,580	37,821,235	24,553,068	1,404,532,883
5.	Roll-Forward EAAL at 6/30/2016	\$ 19,859,541,463	\$ 554,529,941	\$ 364,214,223	\$ 20,778,285,627
6.	EA Normal Cost at 6/30/2016	415,220,727	12,180,176	5,081,399	432,482,302
7.	Benefit Payments-FY17	1,265,817,000	47,667,000	21,859,000	1,335,343,000
8.	Interest	1,375,676,590	38,029,487	25,098,525	1,438,804,602
9.	Roll-Forward EAAL at 6/30/2017	\$ 20,384,621,780	\$ 557,072,604	\$ 372,535,147	\$ 21,314,229,531

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016 Total

		Total Pension Liability (a)	Plan Fiduciary Net Position <sup>1</sup> (b)	et Position <sup>1</sup> Liability			
1.	Balances at June 30, 2015	\$ 19,446,792,300	\$ 11,679,331,000	\$	7,767,461,300		
2.	Changes for the Year:						
	a. Service Cost	431,267,723	0		431,267,723		
	b. Interest	1,395,735,250	0		1,395,735,250		
	c. Differences b/t Expected and Actual Experience	323,609,267	0		323,609,267		
	d. Changes of Assumptions	405,497,988	0		405,497,988		
	e. Contributions - Employer	0	1,054,478,000		(1,054,478,000)		
	f. Contributions - Employee	0	116,619,000		(116,619,000)		
	g. Net Investment Income	0	203,104,000		(203,104,000)		
	h. Benefit Payments	(1,359,095,000)	(1,359,095,000)		0		
	i. Administrative Expenses	0	0		0		
	j. Other Changes	0	43,673,000		(43,673,000)		
	k. Net Changes	\$ 1,197,015,228	\$ 58,779,000	\$	1,138,236,228		
3.	Balances at June 30, 2016	\$ 20,643,807,528	\$ 11,738,110,000	\$	8,905,697,528		

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016 QPP

		 Total Pension Liability (a)	Plan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)		
1.	Balances at June 30, 2015	\$ 18,544,307,581	\$	10,815,330,000	\$	7,728,977,581
2.	Changes for the Year:					
	a. Service Cost	414,613,582		0		414,613,582
	b. Interest	1,332,473,315		0		1,332,473,315
	c. Differences b/t Expected and Actual Experience	324,428,678		0		324,428,678
	d. Changes of Assumptions	386,534,111		0		386,534,111
	e. Contributions - Employer	0		1,054,478,000		(1,054,478,000)
	f. Contributions - Employee	0		116,619,000		(116,619,000)
	g. Net Investment Income	0		197,398,000		(197,398,000)
	h. Benefit Payments	(1,290,862,000)		(1,290,862,000)		0
	i. Administrative Expenses	0		0		0
	j. Other Changes	0		43,673,000		(43,673,000)
	k. Net Changes	\$ 1,167,187,686	\$	121,306,000	\$	1,045,881,686
3.	Transferrable Earnings due from QPP to VSFs	0		(36,873,000)		36,873,000
4.	Balances at June 30, 2016	\$ 19,711,495,267	\$	10,899,763,000	\$	8,811,732,267

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016 FFVSF

		1	Total Pension Liability (a)	lan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)		
1.	Balances at June 30, 2015	\$	548,104,085	\$ 547,074,000	\$	1,030,085	
2.	Changes for the Year:						
	a. Service Cost		11,652,250	0		11,652,250	
	b. Interest		38,716,381	0		38,716,381	
	c. Differences b/t Expected and Actual Experience		3,728,540	0		3,728,540	
	d. Changes of Assumptions		12,418,635	0		12,418,635	
	e. Contributions - Employer		0	0		0	
	f. Contributions - Employee		0	0		0	
	g. Net Investment Income		0	4,669,000		(4,669,000)	
	h. Benefit Payments		(46,407,000)	(46,407,000)		0	
	i. Administrative Expenses		0	0		0	
	j. Other Changes		0	0		0	
	k. Net Changes	\$	20,108,806	\$ (41,738,000)	\$	61,846,806	
3.	Transferrable Earnings due from QPP to FFVSF		0	18,739,000		(18,739,000)	
4.	Balances at June 30, 2016	\$	568,212,891	\$ 524,075,000	\$	44,137,891	

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016 FOVSF

		נ	Total Pension Liability (a)	lan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)		
1.	Balances at June 30, 2015	\$	354,380,634	\$ 316,927,000	\$	37,453,634	
2.	Changes for the Year:						
	a. Service Cost		5,001,891	0		5,001,891	
	b. Interest		24,545,554	0		24,545,554	
	c. Differences b/t Expected and Actual Experience		(4,547,951)	0		(4,547,951)	
	d. Changes of Assumptions		6,545,242	0		6,545,242	
	e. Contributions - Employer		0	0		0	
	f. Contributions - Employee		0	0		0	
	g. Net Investment Income		0	1,037,000		(1,037,000)	
	h. Benefit Payments		(21,826,000)	(21,826,000)		0	
	i. Administrative Expenses		0	0		0	
	j. Other Changes		0	0		0	
	k. Net Changes	\$	9,718,736	\$ (20,789,000)	\$	30,507,736	
3.	Transferrable Earnings due from QPP to FOVSF		0	18,134,000		(18,134,000)	
4.	Balances at June 30, 2016	\$	364,099,370	\$ 314,272,000	\$	49,827,370	

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2016

					Total Pensi	on Lia	bility		
			<u>QPP</u>		FFVSF		FOVSF		<u>Total</u>
1.	Balances at June 30, 2015	\$	18,544,307,581	\$	548,104,085	\$	354,380,634	\$	19,446,792,300
2.	Changes for the Year:								
	a. Service Cost		414,613,582		11,652,250		5,001,891		431,267,723
	b. Interest		1,332,473,315		38,716,381		24,545,554		1,395,735,250
	c. Differences b/t Expected and Actual Experience		324,428,678		3,728,540		(4,547,951)		323,609,267
	d. Change of Assumptions		386,534,111		12,418,635		6,545,242		405,497,988
	e. Benefit Payments  f. Net Changes	\$	(1,290,862,000) 1,167,187,686	\$	<u>(46,407,000)</u> <b>20,108,806</b>	\$	(21,826,000) <b>9,718,736</b>	\$	(1,359,095,000) 1,197,015,228
		Ψ						Ψ	
3.	Balances at June 30, 2016	\$	19,711,495,267	\$	568,212,891	\$	364,099,370	\$	20,643,807,528
					Plan Fiduciar	y Net l	Position <sup>1</sup>		
			QPP		<b>FFVSF</b>		<b>FOVSF</b>		<u>Total</u>
4.	Balances at June 30, 2015	\$	10,815,330,000	\$	547,074,000	\$	316,927,000	\$	11,679,331,000
5.	Changes for the Year:								
	a. Contributions - Employer		1,054,478,000		0		0		1,054,478,000
	b. Contributions - Employee		116,619,000		0		0		116,619,000
	c. Net Investment Income		197,398,000		4,669,000		1,037,000		203,104,000
	d. Benefit Payments		(1,290,862,000)		(46,407,000)		(21,826,000)		(1,359,095,000)
	e. Administrative Expenses		0		0		0		0
	f. Other Changes	\$	43,673,000	\$	(41,738,000)	\$	(20.780.000)	\$	43,673,000
	g. Net Changes	Þ	121,306,000	Þ	(41,738,000)	Þ	(20,789,000)	Þ	58,779,000
6.	Transferrable Earnings due from QPP to VSFs		(36,873,000)		18,739,000		18,134,000		0
7.	Balances at June 30, 2016	\$	10,899,763,000	\$	524,075,000	\$	314,272,000	\$	11,738,110,000
					Net Pensio	n Lial	nility		
			QPP		FFVSF	2344,	FOVSF		Total
8.	Balances at June 30, 2015	\$	7,728,977,581	\$	1,030,085	\$	37,453,634	\$	7,767,461,300
9.	Changes for the Year:								
	a. Service Cost		414,613,582		11,652,250		5,001,891		431,267,723
	b. Interest		1,332,473,315		38,716,381		24,545,554		1,395,735,250
	c. Differences b/t Expected and Actual Experience		324,428,678		3,728,540		(4,547,951)		323,609,267
	d. Change of Assumptions		386,534,111		12,418,635		6,545,242		405,497,988
	e. Contributions - Employer		(1,054,478,000)		0		0		(1,054,478,000)
	f. Contributions - Employee		(116,619,000)		0		0		(116,619,000)
	g. Net Investment Income		(197,398,000)		(4,669,000)		(1,037,000)		(203,104,000)
	h. Benefit Payments		0		0		0		0
	i. Administrative Expenses		0		0		0		0
	j. Other Changes	Φ.	(43,673,000)	Ф.	0	ф.	0	ф.	(43,673,000)
	k. Net Changes	\$	1,045,881,686	\$	61,846,806	\$	30,507,736	\$	1,138,236,228
	. Transferrable Earnings due from QPP to VSFs		36,873,000		(18,739,000)		(18,134,000)		0
11	. Balances at June 30, 2016	\$	8,811,732,267	\$	44,137,891	\$	49,827,370	\$	8,905,697,528

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2015 and 6/30/2016 are Adjusted Market Values - See Page 1.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017 Total

1	Balances at June 30, 2016		<u> </u>	Total Pension Liability (a) 20,643,807,528	Net Pension Liability (a) - (b)  \$ 8,905,697,528		
1.	Dalance	es at June 50, 2010	Ψ	20,043,007,320	\$ 11,738,110,000	Ψ	0,703,077,320
2.	Change	es for the Year:					
	a.	Service Cost		432,482,302	0		432,482,302
	b.	Interest		1,438,804,602	0		1,438,804,602
	c.	Differences b/t Expected and Actual Experience		134,478,099	0		134,478,099
	d.	Changes of Assumptions		0	0		0
	e.	Contributions - Employer		0	1,061,170,000		(1,061,170,000)
	f.	Contributions - Employee		0	108,368,000		(108,368,000)
	g.	Net Investment Income		0	1,371,721,000		(1,371,721,000)
	h.	Benefit Payments		(1,335,343,000)	(1,335,343,000)		0
	i.	Administrative Expenses		0	0		0
	j.	Other Changes		0	47,284,000		(47,284,000)
	k.	Net Changes	\$	670,422,003	\$ 1,253,200,000	\$	(582,777,997)
3.	Balance	es at June 30, 2017	\$	21,314,229,531	\$ 12,991,310,000	\$	8,322,919,531

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017 QPP

			Total Pension Liability (a)	Net Pension Liability (a) - (b)		
1.	Balance	es at June 30, 2016	\$ 19,711,495,267	\$ 10,899,763,000	\$	8,811,732,267
2.	Change	es for the Year:				
	a.	Service Cost	415,220,727	0		415,220,727
	b.	Interest	1,375,676,590	0		1,375,676,590
	c.	Differences b/t Expected and Actual Experience	148,046,196	0		148,046,196
	d.	Changes of Assumptions	0	0		0
	e.	Contributions - Employer	0	1,061,170,000		(1,061,170,000)
	f.	Contributions - Employee	0	108,368,000		(108,368,000)
	g.	Net Investment Income	0	1,284,871,000		(1,284,871,000)
	h.	Benefit Payments	(1,265,817,000)	(1,265,817,000)		0
	i.	Administrative Expenses	0	0		0
	j.	Other Changes	0	47,284,000		(47,284,000)
	k.	Net Changes	\$ 673,126,513	\$ 1,235,876,000	\$	(562,749,487)
3.	Transfe	errable Earnings due from QPP to VSFs	0	(45,743,000)		45,743,000
4.	Balance	es at June 30, 2017	\$ 20,384,621,780	\$ 12,089,896,000	\$	8,294,725,780

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017 FFVSF

		<u> </u>	Fotal Pension Liability (a)	lan Fiduciary Net Position <sup>1</sup> (b)	Net Pension Liability (a) - (b)
1.	Balances at June 30, 2016	\$	568,212,891	\$ 524,075,000	\$ 44,137,891
2.	Changes for the Year:				
	a. Service Cost		12,180,176	0	12,180,176
	b. Interest		38,029,487	0	38,029,487
	c. Differences b/t Expected and Actual Experience		(13,682,950)	0	(13,682,950)
	d. Changes of Assumptions		0	0	0
	e. Contributions - Employer		0	0	0
	f. Contributions - Employee		0	0	0
	g. Net Investment Income		0	46,755,000	(46,755,000)
	h. Benefit Payments		(47,667,000)	(47,667,000)	0
	i. Administrative Expenses		0	0	0
	j. Other Changes		0	0	0
	k. Net Changes	\$	(11,140,287)	\$ (912,000)	\$ (10,228,287)
3.	Transferrable Earnings due from QPP to FFVSF		0	23,914,000	(23,914,000)
4.	Balances at June 30, 2017	\$	557,072,604	\$ 547,077,000	\$ 9,995,604

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

## Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017 FOVSF

		<u> </u>	Fotal Pension Liability (a)	n Plan Fiduciary Net Position <sup>1</sup> (b)			Net Pension Liability (a) - (b)		
1.	Balances at June 30, 2016	\$	364,099,370	\$	314,272,000	\$	49,827,370		
2.	Changes for the Year:								
	a. Service Cost		5,081,399		0		5,081,399		
	b. Interest		25,098,525		0		25,098,525		
	c. Differences b/t Expected and Actual Experience		114,853		0		114,853		
	d. Changes of Assumptions		0		0		0		
	e. Contributions - Employer		0		0		0		
	f. Contributions - Employee		0		0		0		
	g. Net Investment Income		0		40,095,000		(40,095,000)		
	h. Benefit Payments		(21,859,000)		(21,859,000)		0		
	i. Administrative Expenses		0		0		0		
	j. Other Changes		0		0		0		
	k. Net Changes	\$	8,435,777	\$	18,236,000	\$	(9,800,223)		
3.	Transferrable Earnings due from QPP to FOVSF		0		21,829,000		(21,829,000)		
4.	Balances at June 30, 2017	\$	372,535,147	\$	354,337,000	\$	18,198,147		

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Changes in Net Pension Liability (NPL) by Source Balances at June 30, 2017

	Total Pension Liability									
		QPP	FOVSF		Total					
1. Balances at June 30, 2016	\$	19,711,495,267	\$	<u>FFVSF</u> 568,212,891	\$	364,099,370	\$	20,643,807,528		
2. Changes for the Year:										
a. Service Cost		415,220,727		12,180,176		5,081,399		432,482,302		
b. Interest		1,375,676,590		38,029,487		25,098,525		1,438,804,602		
c. Differences b/t Expected and Actual Experience		148,046,196		(13,682,950)		114,853		134,478,099		
d. Change of Assumptions		0		0		0		0		
e. Benefit Payments		(1,265,817,000)		(47,667,000)		(21,859,000)		(1,335,343,000)		
f. Net Changes	\$	673,126,513	\$	(11,140,287)	\$	8,435,777	\$	670,422,003		
3. Balances at June 30, 2017	\$	20,384,621,780	\$	557,072,604	\$	372,535,147	\$	21,314,229,531		
			Position <sup>1</sup>							
		<u>QPP</u>		<u>FFVSF</u>		<b>FOVSF</b>		<u>Total</u>		
4. Balances at June 30, 2016	\$	10,899,763,000	\$	524,075,000	\$	314,272,000	\$	11,738,110,000		
5. Changes for the Year:										
<ul> <li>a. Contributions - Employer</li> </ul>		1,061,170,000		0		0		1,061,170,000		
<ul> <li>b. Contributions - Employee</li> </ul>		108,368,000		0		0		108,368,000		
c. Net Investment Income		1,284,871,000		46,755,000		40,095,000		1,371,721,000		
d. Benefit Payments		(1,265,817,000)		(47,667,000)		(21,859,000)		(1,335,343,000)		
e. Administrative Expenses		0		0		0		0		
f. Other Changes		47,284,000		0		0		47,284,000		
g. Net Changes	\$	1,235,876,000	\$	(912,000)	\$	18,236,000	\$	1,253,200,000		
6. Transferrable Earnings due from QPP to VSFs		(45,743,000)		23,914,000		21,829,000		0		
7. Balances at June 30, 2017	\$	12,089,896,000	\$	547,077,000	\$	354,337,000	\$	12,991,310,000		
			bility							
		OPP		FFVSF	II LIG	FOVSF		Total		
8. Balances at June 30, 2016	\$	8,811,732,267	\$	44,137,891	\$	49,827,370	\$	8,905,697,528		
9. Changes for the Year:										
a. Service Cost		415,220,727		12,180,176		5,081,399		432,482,302		
b. Interest		1,375,676,590		38,029,487		25,098,525		1,438,804,602		
c. Differences b/t Expected and Actual Experience		148,046,196		(13,682,950)		114,853		134,478,099		
d. Change of Assumptions		0		0		0		0		
e. Contributions - Employer		(1,061,170,000)		0		0		(1,061,170,000)		
f. Contributions - Employee		(108,368,000)		0		0		(108,368,000)		
g. Net Investment Income		(1,284,871,000)		(46,755,000)		(40,095,000)		(1,371,721,000)		
h. Benefit Payments		0		0		0		0		
i. Administrative Expenses		0		0		0		0		
j. Other Changes		(47,284,000)		0		0		(47,284,000)		
k. Net Changes	\$	(562,749,487)	\$	(10,228,287)	\$	(9,800,223)	\$	(582,777,997)		
10. Transferrable Earnings due from QPP to VSFs		45,743,000		(23,914,000)		(21,829,000)		0		
11. Balances at June 30, 2017	\$	8,294,725,780	\$	9,995,604	\$	18,198,147	\$	8,322,919,531		

 $<sup>^{\</sup>rm 1}$  Balances at 6/30/2016 and 6/30/2017 are Adjusted Market Values - See Page 1.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Schedule of Changes in Net Pension Liability and Related Ratios

		<u>2017</u>	<u>2017</u>			2015 (Revised) 1	2014			<u>2013</u>
<ul> <li>1. Total Pension Liability</li> <li>a. Service Cost</li> <li>b. Interest</li> <li>c. Differences b/t Expected and Actual Experience</li> <li>d. Change of Assumptions</li> </ul>	\$	432,482,302 1,438,804,602 134,478,099 0	\$	431,267,723 1,395,735,250 323,609,267 405,497,988	\$	419,575,546 1,312,813,977 171,347,136	\$	412,911,205 1,215,276,517 0	\$	400,884,665 1,184,217,313 0
e. Benefit Payments		(1,335,343,000)		(1,359,095,000)		(1,220,441,000)		(1,171,998,000)		(1,135,469,000)
f. Net Changes	\$	670,422,003	\$	1,197,015,228	\$	683,295,659	\$	456,189,722	\$	449,632,978
<ul><li>2. Total Pension Liability - Beginning</li><li>3. Total Pension Liability - Ending</li></ul>	<b>\$</b> <b>\$</b>	20,643,807,528 21,314,229,531	\$ \$	19,446,792,300 20,643,807,528	\$ \$	18,763,496,641 19,446,792,300	\$ \$	17,524,302,616 17,980,492,338	<b>\$</b> <b>\$</b>	17,074,669,638 17,524,302,616
<ul> <li>4. Plan Fiduciary Net Position</li> <li>a. Contributions - Employer</li> <li>b. Contributions - Employee</li> <li>c. Net Investment Income</li> <li>d. Benefit Payments</li> <li>e. Administrative Expenses</li> <li>f. Other Changes</li> </ul>	\$	1,061,170,000 108,368,000 1,371,721,000 (1,335,343,000) 0 47,284,000	\$	1,054,478,000 116,619,000 203,104,000 (1,359,095,000) 0 43,673,000	\$	988,784,000 108,582,000 302,567,000 (1,220,441,000) 0 41,201,000	\$	969,956,000 108,859,000 1,689,485,000 (1,171,998,000) 0 39,980,000	\$	962,173,000 104,816,000 1,042,431,000 (1,135,469,000) 0 38,965,000
g. Net Changes	\$	1,253,200,000	\$	58,779,000	\$	220,693,000	\$	1,636,282,000	\$	1,012,916,000
<ul><li>5. Plan Fiduciary Net Position - Beginning</li><li>6. Plan Fiduciary Net Position - Ending</li></ul>	\$ \$	11,738,110,000 12,991,310,000	<b>\$</b>	11,679,331,000 11,738,110,000	\$ \$	11,458,638,000 11,679,331,000	<b>\$</b>	9,822,356,000 11,458,638,000	<b>\$</b>	8,809,440,000 9,822,356,000
7. FIRE Net Pension Liability	\$	8,322,919,531	\$	8,905,697,528	\$	7,767,461,300	\$	6,521,854,338	\$	7,701,946,616
8. Plan Fiduciary Net Position as a Percentage of Total Pension Liability		61.0%		56.9%		60.1%		63.7%		56.0%
9. Covered Employee Payroll <sup>2</sup>	\$	1,145,919,396	\$	1,129,469,957	\$	1,111,744,091	\$	1,102,396,453	\$	1,129,926,037
10. FIRE Net Pension Liability as a Percentage of Covered Employee Payroll		726.3%		788.5%		698.7%		591.6%		681.6%

 $<sup>^{1}</sup>$  Special Accidental Death Benefits pursuant to Section 208-f of the General Municipal Law.

<sup>&</sup>lt;sup>2</sup> Projected Employee Payroll at Time 1.0 under One-Year Lag Methodology.

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### **Schedule of Employer Contributions (\$ in thousands)**

Fiscal Year Ended June 30		2017	2017 2016 2015		2014	2013	2012	2011	2010	2009	2008
1.	Actuarially Determined Contribution	\$ 1,061,170	\$ 1,054,478 \$	988,784 \$	969,956 \$	962,173 \$	976,895 \$	890,706 \$	874,331 \$	843,751 \$	780,202
2.	Contributions in relation to the Actuarially Determined Contribution	\$ 1,061,170	\$ 1,054,478 \$	988,784 \$	969,956 \$	962,173 \$	976,895 \$	890,706 \$	874,331 \$	843,751 \$	780,202
3.	Contribution Deficiency (Excess)	0	0	0	0	0	0	0	0	0	0
4.	Contributions as a percentage of Covered Employee Payroll*	92.604%	93.360%	88.940%	87.986%	85.154%	84.990%	82.248%	82.491%	83.238%	82.608%

<sup>\*</sup> The Employer Rate of Contribution equals the Statutory Contribution as a percentage of the salaries of members who were on payroll or projected to be on payroll (under One-Year Lag Methodology) as of the preceding June 30 increased to reflect overtime earnings and adjusted, where applicable, to be consistent with collective bargaining agreements estimated to be achieved.

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### **Average Expected Remaining Service Lives**

			Average Expected	Average Expected
		Future WorkLife	Remaining Service Life	Remaining Service Life
<u>Group</u>	# Count	@ 6/30/2015	@ 6/30/2015	@ 6/30/2016
Active	10,780	137,412	12.75	11.75
Active/Inactive	18	0	0	0
Terminated Vested	32	0	0	0
Retired	16,710	0	0	0
Total	27,540	137,412	4.99	4.60

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience

Year	b	Differences etween Expected and Actual Experience	Recognition Period (Years)		2015	2016	2017	2018	2019	2020	2021
2015	-\$	171,347,136	2.55	\$	67,194,955	67,194,955	36,957,226	2010	2017	2020	2021
2016	Ψ	323,609,267	2.58	Ψ	07,174,755	\$ 125,429,948	125,429,948	\$ 72,749,371			
2017		134,478,099	4.60			- , - ,	\$ 29,234,369	29,234,369 \$	29,234,369	\$ 29,234,369 \$	17,540,623
2018											
2019											
2020											
Net increase	(deci	rease) in Pension Exper	nse	\$	67,194,955	\$ 192,624,903	\$ 191,621,543	\$ 101,983,740 \$	29,234,369	\$ 29,234,369 \$	17,540,623

NYC Office of the Actuary September 29, 2017

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

# Increase (Decrease) in Pension Expense Arising from the Recognition of Changes in Assumptions

Year	due to	e/(Decrease) Changes umptions	Recognition Period (Years)	2016	2017	2018	2019	2020
2016	\$	405,497,988	2.58	\$ 157,169,763 \$	157,169,763 \$	91,158,462		
2017		0	0		0	0		
2018								
2019								
2020								
Net increase	(decrease)	in Pension Exp	ense	\$ 157,169,763 \$	157,169,763 \$	91,158,462 \$	0 \$	0

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

Differences between Projected and Actual Earnings on

		Earnings on Pension Plan	Recognition Period									
Year		Investments	(Years)	2013	2014	2015	2016	2017	2018	2019	2020	2021
2013	\$	(426,785,812)	5	\$ (85,357,162) \$	(85,357,162) \$	(85,357,162) \$	(85,357,162) \$	(85,357,164)				
2014		(1,003,750,795)	5	\$	(200,750,159) \$	(200,750,159) \$	(200,750,159) \$	(200,750,159) \$	(200,750,159)			
2015		496,720,375	5		\$	99,344,076 \$	99,344,076 \$	99,344,076 \$	99,344,076 \$	99,344,071		
2016		609,482,946	5			\$	121,896,589 \$	121,896,589 \$	121,896,589 \$	121,896,589 \$	121,896,590	
2017		(554,131,607)	5				\$	(110,826,321) \$	(110,826,321) \$	(110,826,321) \$	(110,826,321) \$	(110,826,323)
2018												
2019												
2020												
Net increase (	lecre	ease) in Pension Expe	ense	\$ (85,357,162) \$	(286,107,321) \$	(186,763,245) \$	(64.866.656) \$	(175,692,979) \$	(90,335,815) \$	110.414.339 \$	11.070,269 \$	(110.826,323)

NYC Office of the Actuary September 29, 2017

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

### Components of Pension Expense for the Fiscal Year Ended June 30, 2016

Component		<b>Amount</b>
a. Service Cost	\$	431,267,723
b. Interest on the Total Pension Liability	Ψ	1,395,735,250
c. Differences between Expected and Actual Experience		192,624,903
d. Changes of Assumptions		157,169,763
e. Employee Contributions		(116,619,000)
f. Projected Earnings on Pension Plan Investments		(812,586,946)
g. Differences between Projected and Actual Earnings on Plan Investments		(64,866,656)
h. Pension Plan Administrative Expenses		0
i. Other Changes in Fiduciary Net Position		(43,673,000)
<b>Total Pension Expense</b>	\$	1,139,052,037

# Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

## Components of Pension Expense for the Fiscal Year Ended June 30, 2017

Component	<u>Amount</u>
a. Service Cost	\$ 432,482,302
b. Interest on the Total Pension Liability	1,438,804,602
c. Differences between Expected and Actual Experience	191,621,543
d. Changes of Assumptions	157,169,763
e. Employee Contributions	(108, 368, 000)
f. Projected Earnings on Pension Plan Investments	(817,589,393)
g. Differences between Projected and Actual Earnings on Plan Investments	(175,692,979)
h. Pension Plan Administrative Expenses	0
i. Other Changes in Fiduciary Net Position	 (47,284,000)
Total Pension Expense	\$ 1,071,143,838

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2013, the City recognized Pension Expense for FIRE of \$740,318,628.

At June 30, 2013, the City reported total Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for FIRE from the following sources:

	Defe Outf of Reso	lows	C	Deferred Inflows of Resources
Differences between Expected and Actual Experience	\$	0	\$	0
Changes of Assumptions		0		0
Net difference between Projected and Actual Earnings on Pension Plan Investments		0		341,428,650
Total	\$	0	\$	341,428,650

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2013	\$ (85,357,162)
2014	(85,357,162)
2015	(85,357,162)
2016	(85,357,162)
2017	(85,357,164)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2014, the City recognized Pension Expense for FIRE of \$507,507,195.

For June 30, 2014, the City determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for FIRE from the following sources:

	Deferred Outflows of Resources			Deferred Inflows of Resources		
Differences between Expected and Actual Experience	\$	0	\$	0		
Changes of Assumptions		0		0		
Net difference between Projected and Actual Earnings on Pension Plan Investments		0		803,000,636		
Total	\$	0	\$	803,000,636		

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2014	\$ (200,750,159)
2015	(200,750,159)
2016	(200,750,159)
2017	(200,750,159)
2018	(200,750,159)

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2015, the City recognized Pension Expense for FIRE of \$663,750,858.

For June 30, 2015, the City determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for FIRE from the following sources:

	•	Deferred Inflows of Resources		
Differences between Expected and Actual Experience	\$	104,152,181	\$	0
Changes of Assumptions		0		0
Net difference between Projected and Actual Earnings on Pension Plan Investments		397,376,299		0
Total	\$	501,528,480	\$	0

Fiscal Year	
Ended	
June 30	<u>Amount</u>
2015	\$ 166,539,031
2016	166,539,031
2017	136,301,302
2018	99,344,076
2019	99,344,071

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2016, the City recognized Pension Expense for FIRE of \$1,139,052,037.

For June 30, 2016, the City determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for FIRE from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between Expected and Actual Experience	\$	198,179,319	\$	0
Changes of Assumptions		248,328,225		0
Net difference between Projected and Actual Earnings on Pension Plan Investments		487,586,357		0
Total	\$	934,093,901	\$	0

Fiscal Year	
Ended	
June 30	<u>Amount</u>
2016	\$ 404,496,300
2017	404,496,300
2018	285,804,422
2019	121,896,589
2020	121.896.590

Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2017, the City recognized Pension Expense for FIRE of \$1,071,143,838.

For June 30, 2017, the City determined Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for FIRE from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between Expected and Actual Experience	\$	105,243,730	\$	0
Changes of Assumptions		0		0
Net difference between Projected and Actual Earnings on Pension Plan Investments		0		443,305,286
Total	\$	105,243,730	\$	443,305,286

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2017	\$ (81,591,952)
2018	(81,591,952)
2019	(81,591,952)
2020	(81,591,952)
2021	(93,285,700)

#### Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

#### Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

For the Fiscal Year ended June 30, 2017, the City recognized Pension Expense for FIRE of \$1,071,143,838.

At June 30, 2017, the City reported total Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for FIRE from the following sources:

	Deferred Outflows of Resources		Deferred Inflows of Resources	
Differences between Expected and Actual Experience	\$	177,993,101	\$	0
Changes of Assumptions		91,158,462		0
Net difference between Projected and Actual Earnings on Pension Plan Investments		0		79,677,530
Total	\$	269,151,563	\$	79,677,530

Fiscal Year	
Ended	
<u>June 30</u>	<u>Amount</u>
2017	\$ 173,098,327
2018	102,806,387
2019	139,648,708
2020	40,304,638
2021	(93,285,700)