



Fiscal Year 2019
GASB 67/68 Report
For
The City of New York
And
The New York City
Retirement Systems

prepared by the
New York City
Office of the Actuary

2019



OFFICE OF THE ACTUARY

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SHERRY S. CHAN
CHIEF ACTUARY

September 27, 2019

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, 2019

Dear Comptroller Stringer:

This GASB67/68 Report is for the City of New York and the New York City Retirement Systems¹ (NYCRS) for Fiscal Year Ended June 30, 2019 (Report).

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 (GASB) Statement No. 68, as amended by GASB Statement No. 71 (GASB71), GASB Statement No. 73 (GASB73), GASB Statement No. 78 (GASB78), GASB Statement No. 82 (GASB 82), and GASB Statement No. 85 (GASB85) for Fiscal Year 2019.
2. This Report also presents information intended for use by each System for accounting and financial reporting under GASB Statement No. 67, as amended by GASB73, GASB82, and GASB85 for Fiscal Year 2019.

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

- The following Table provides a summary of the principal GASB67/68 results for Fiscal Year 2019 by NYCERS 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 2019						
QUALIFIED PENSION PLAN ONLY UNLESS OTHERWISE STATED						
(\$ Millions)						
	NYCERS*	TRS	BERS	POLICE*	FIRE*	TOTAL
Total Pension Liability (TPL)	\$ 87,516.5	\$ 73,346.9	\$ 5,266.1	\$ 54,997.4	\$ 23,266.8	\$ 244,393.7
Plan Fiduciary Net Position (PFNP)	\$ 68,994.6	\$ 57,990.2	\$ 4,991.8	\$ 45,193.2	\$ 15,208.3	\$ 192,378.1
Net Pension Liability (NPL)	\$ 18,521.9	\$ 15,356.7	\$ 274.3	\$ 9,804.2	\$ 8,058.5	\$ 52,015.6
PFNP as a % of TPL	78.8%	79.1%	94.8%	82.2%	65.4%	78.7%
Pension Expense	\$ 3,406.6	\$ 3,635.6	\$ 69.8	\$ 1,708.6	\$ 1,143.2	\$ 9,963.8

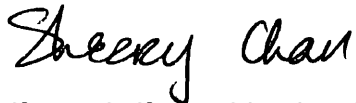
*Includes Variable Supplements Funds (VSFs)

- 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.
- 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.
- The results contained herein are based upon the Office of the Actuary's (OA) interpretation of GASB67, GASB68, GASB71, GASB73, GASB78, GASB82, and GASB85 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, 2018, a Measurement Date of June 30, 2019 and a Reporting Date of June 30, 2019 for Fiscal Year 2019. A Measurement Date and a Reporting Date of June 30, 2018 were used for Fiscal Year 2018 items.
- The Fiscal Year 2019 results reflect changes in the actuarial assumptions and methods since the prior year. The changes are primarily the result of an experience study performed by Bolton, Inc. which compared actual experience of the systems to that expected based on the prior set of actuarial assumptions and methods. These new actuarial assumptions and methods were adopted by each of the NYCERS retirement boards in early calendar year 2019.
- 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 NYCERS, investment decisions, and plan design.
- 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.

I, Sherry S. Chan, am the Chief Actuary for, and independent of, the New York City Retirement Systems and Pension Funds. I am a Fellow of the Society of Actuaries, an Enrolled Actuary under the Employee Retirement Income and Security Act of 1974, a Member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting 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,

A handwritten signature in black ink that reads "Sherry Chan". The signature is written in a cursive, flowing style.

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

SSC/mm

cc: New York City Office of the Actuary

Mr. Craig Chu
Mr. Michael Samet
Keith Snow, Esq.

Component Units

Mr. Robert Balducci – Water Finance Authority
Ms. Nicole Fleming – New York City Health and Hospitals Corporation
Mr. Dan Frydberg – New York City Housing Authority
Ms. Mary John – Housing Development Corporation
Mr. Raymond Orlando – New York City Department of Education
Mr. Kenneth Tirino – City University of New York
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. Rosa Charles
Mr. David Jeter
Ms. Berta Lara
Ms. Jaqueline Thompson
Mr. Leonel Ferreira

Marks Paneth, LLC

Ms. Rosanne Bowen
Ms. Hope Goldstein
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Grant Thornton

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Mr. Ben Kohnle
Mr. Chris Mancusi
Mr. Cosmo Saginario

New York City Office of Management and Budget

Mr. John Grathwol
Mr. Ken Godiner
Mr. Omair Hassan

New York City Retirement Systems

Mr. Charles Barkley – New York City Employees' Retirement System
Ms. Sunny Bavakutty – New York City Police Pension Fund
Mr. Albert Connolly – New York City Fire Pension Fund
Ms. Maureen Dale – New York City Fire Pension Fund
Mr. Jean-Daniel Desmornes – New York City Board of Education Retirement System
Mr. Patrick Dunn – New York City Fire Pension Fund
Ms. Chun Gong – 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
Mr. Stanley Thomas – New York City Police Pension Fund
Ms. Melanie Whinnery – New York City Employees' Retirement System

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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, 2018 (Lag) actuarial valuations of the New York City Retirement Systems¹ (NYCRS or Systems) to determine the Preliminary Fiscal Year 2020 employer pension contributions.

The Office of the Actuary (OA) 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, 2018 (Lag) actuarial valuations to determine the Preliminary Fiscal Year 2020 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, 2018 (LAG) ACTUARIAL VALUATIONS						
GROUP	NYCERS	TRS	BERS	POLICE	FIRE	TOTAL
Active	190,572	121,764	25,864	36,562	11,237	385,999
Active Off Payroll	28,483	9,416	6,006	1,940	35	45,880
Deferred Vested	21,389	16,433	1,937	491	68	40,318
Retired	154,116	86,295	18,041	50,124	16,593	325,169
Total	394,560	233,908	51,848	89,117	27,933	797,366

¹ New York City Employees' Retirement System (NYCERS)
 New York City Teachers' Retirement System (TRS)
 New York City Board of Education Retirement System (BERS)
 New York City Police Pension Fund (POLICE)
 New York 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, 2018.

Table I-2	
SALARIES OF ACTIVE MEMBERS	
System	June 30, 2018
NYCERS	14,459,118,057
TRS	10,404,403,684
BERS	1,264,079,158
POLICE	4,047,772,414
FIRE	1,302,871,992
Total	31,478,245,305

The census data used in the June 30, 2018 (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, 2019, 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 August 29, 2019 to Ms. Jacqueline Thompson summarizes these estimates of Fiscal Year 2019 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, 2019.

The SKIM amounts were estimated by the Actuary based on information provided by the Office of the Comptroller as of June 30, 2019 and on calculations performed by the Actuary for Fiscal Year 2019.

SECTION III: ACTUARIAL ASSUMPTIONS AND METHODS

As described in item 7 of the Executive Summary, the actuarial assumptions and methods used to value the NYCRS are changed from those used in the prior year and are provided in the following five reports:

- Proposed Changes in Actuarial Assumptions and Methods Used in Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2018 for the New York City Employees' Retirement System.
- Proposed Changes in Actuarial Assumptions and Methods Used in Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2018 for the New York City Teachers' Retirement System.
- Proposed Changes in Actuarial Assumptions and Methods Used in Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2018 for the New York City Board of Education Retirement System.
- Proposed Changes in Actuarial Assumptions and Methods Used in Determining Employer Contributions for Fiscal Year Beginning on and after July 1, 2018 for the New York City Police Pension Fund.
- Proposed Changes in Actuarial Assumptions and Methods Used in Determining Employer Contributions for Fiscal Years Beginning on and after July 1, 2018 for the New York City Fire Pension Fund.

These reports are available on the OA website (www.nyc.gov/actuary) under the Reports tab.

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 Normal 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 2018 and 2019.

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.

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, 2018 (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 provides a brief description of the significant assumptions used in the June 30, 2018 (Lag) actuarial valuation to determine the Preliminary Fiscal Year 2020 employer contributions:

Table III	
ACTUARIAL ASSUMPTIONS USED FOR DETERMINING PRELIMINARY FISCAL YEAR 2020 EMPLOYER CONTRIBUTIONS	
ITEM	PRELIMINARY FISCAL YEAR 2020 EMPLOYER CONTRIBUTIONS
Valuation Date	June 30, 2018 (Lag).
Assumed Rate of Return on Investments	7.0% per annum, net of Investment Expenses (4.0% per annum for benefits payable under the Variable Annuity Programs of TRS and BERS).
Post-Retirement Mortality	Tables adopted by the Boards of Trustees during Fiscal Year 2019.
Active Service: Withdrawal, Death, Disability, and Retirement	Tables adopted by the Boards of Trustees during Fiscal Year 2019.
World Trade Center Benefits	Estimates of Certain Obligations.
Salary Increases	Tables adopted by the Boards of Trustees during Fiscal Year 2019. In general, Merit and Promotion Increases plus assumed General Wage Increase of 3.0% per year.
Inflation	Consumer Price Index (CPI) of 2.5% per year.
Assumed Cost-of-Living Adjustments	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.

SECTION IV: SUMMARY OF PLAN PROVISIONS

A summary of the benefits is contained in the June 30, 2017 and the June 30, 2018 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, 2019), 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 NYCERS are performed annually using a June 30, XX-2 actuarial valuation date to determine Fiscal Year XX employer contributions (e.g. June 30, 2018 (Lag) actuarial valuations are used to determine Fiscal Year 2020 employer contributions). This is referred to as One-Year Lag Methodology (OYLM).

Due to the time needed to prepare June 30, 2019 actuarial valuations, primarily related to the collection of census data, the Actuary has developed the TPL at June 30, 2019 by rolling-forward certain results of the June 30, 2018 actuarial valuations of the NYCERS that were used to determine the Preliminary Fiscal Year 2020 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. 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 NYCERS. 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 2019 GASB67/68 results contained herein are based on June 30, 2018 actuarial valuations of each of the New York City Retirement Systems used to develop Preliminary Fiscal Year 2020 employer contributions under the One-Year Lag Methodology (OYLM). As described in Section V, these June 30, 2018 actuarial valuation results have been rolled-forward to the Measurement Date of June 30, 2019.

SECTION VIII: SENSITIVITY ANALYSIS

The following Table VIII presents the Net Pension Liability of each System, calculated as of the Measurement Date of June 30, 2019, 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			
SENSITIVITY ANALYSIS			
NET PENSION LIABILITY AS OF JUNE 30, 2019			
System	1% Decrease (6.0%)	Current Discount Rate (7.0%)	1% Increase (8.0%)
NYCERS	\$ 28,570,772,322	\$ 18,521,907,080	\$ 10,037,362,588
TRS	\$ 23,630,238,292	\$ 15,356,639,466	\$ 8,426,188,510
BERS	\$ 927,726,991	\$ 274,234,071	\$ (274,943,769)
POLICE	\$ 16,037,642,229	\$ 9,804,252,379	\$ 4,614,700,431
FIRE	\$ 10,635,272,054	\$ 8,058,513,189	\$ 5,894,110,270
Total	\$ 79,801,651,888	\$ 52,015,546,185	\$ 28,697,418,030

Appendix A

APPENDIX A

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Statement of Fiduciary Net Position

June 30, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ASSETS		
Cash	\$ 64,699	\$ 19,139
Receivables:		
Investment securities sold	1,177,445	494,566
Member loans	1,150,018	1,129,906
Accrued interest and dividends	338,691	326,006
Other receivables	0	0
Receivables due from NYCERS	<u>0</u>	<u>0</u>
Total receivables	\$ 2,666,154	\$ 1,950,478
Investments - at fair value		
Short-term investments:		
U.S. treasury bills and agencies	40,309	40,216
Commercial paper	608,362	644,809
Short-term investment fund	600,600	612,219
Discount notes	153,810	71,958
Short-term hedge fund	0	0
Debt securities:		
U.S. Government and agency	12,467,550	11,612,008
Corporate and other	7,322,397	6,082,292
Promissory notes	0	0
Equity securities	20,979,595	17,979,085
Alternative investments	11,021,419	10,176,771
Collective trust funds:		
International equity	13,129,539	13,315,724
Domestic equity	0	0
Mortgage debt securities	435,441	704,148
Treasury inflation protected securities	736,640	2,858,313
Fixed income	653,292	1,139,185
Collateral from securities lending	<u>6,406,505</u>	<u>9,918,700</u>
Total investments	\$ 74,555,459	\$ 75,155,428
Other assets	128,259	109,895
Total assets	<u>\$ 77,414,571</u>	<u>\$ 77,234,940</u>
LIABILITIES		
Accounts payable	464,094	468,665
Payables for investment securities purchased	1,406,303	1,023,260
Accrued benefits payable	454,936	377,156
Amount due to Variable Supplements Funds	4,581	4,995
Transferable earnings due from QPP to COVSF	153,411	234,000
Due to other retirement systems	617	1,412
Securities lending	6,406,505	9,918,700
Total liabilities	<u>\$ 8,890,447</u>	<u>\$ 12,028,188</u>
PLAN NET POSITION HELD IN TRUST FOR BENEFITS	<u>\$ 68,524,124</u>	<u>\$ 65,206,752</u>

VARIABLE SUPPLEMENTS FUND OF NYCERS

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

Statement of Fiduciary Net Position

June 30, 2019

(Dollar amounts in thousands)

	<u>COVSF</u>	<u>HPOVSF</u>	<u>HPSOVSF</u>	<u>TPOVSF</u>	<u>TPSOVSF</u>
ASSETS					
Cash	\$ 7,469	\$ 215	\$ 178	\$ 253	\$ 190
Receivables:					
Accrued interest	\$ 618	\$ 0	\$ 0	\$ 0	\$ 0
Receivables from QPP to VSFs	153,411	710	1,130	1,520	1,221
Other receivables	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total receivables	\$ 154,029	\$ 710	\$ 1,130	\$ 1,520	\$ 1,221
Investments - at fair value:					
Short-term investment fund	\$ 303,529	\$ 0	\$ 0	\$ 0	\$ 0
Accrued Transfer from QPP	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total assets	<u>\$ 465,027</u>	<u>\$ 925</u>	<u>\$ 1,308</u>	<u>\$ 1,773</u>	<u>\$ 1,411</u>
LIABILITIES					
Accounts Payable	\$ 0	\$ 0	\$ 0	\$ 22	\$ 0
Accrued Benefits Payable	\$ 48,799	\$ 925	\$ 1,308	\$ 1,751	\$ 1,411
Total Liabilities	<u>\$ 48,799</u>	<u>\$ 925</u>	<u>\$ 1,308</u>	<u>\$ 1,773</u>	<u>\$ 1,411</u>
Plan Net Position held in Trust for Benefits	<u>\$ 416,228</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>

Statement of Fiduciary Net Position

June 30, 2018

(Dollar amounts in thousands)

	<u>COVSF</u>	<u>HPOVSF</u>	<u>HPSOVSF</u>	<u>TPOVSF</u>	<u>TPSOVSF</u>
ASSETS					
Cash	\$ 1,917	\$ 134	\$ 121	\$ 171	\$ 139
Receivables:					
Accrued interest	\$ 365	\$ 0	\$ 0	\$ 0	\$ 0
Receivables from QPP to VSFs	234,000	812	1,202	1,657	1,324
Other receivables	<u>11</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total receivables	\$ 234,376	\$ 812	\$ 1,202	\$ 1,657	\$ 1,324
Investments - at fair value:					
Short-term investment fund	\$ 213,478	\$ 0	\$ 0	\$ 0	\$ 0
Accrued Transfer from QPP	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total assets	<u>\$ 449,771</u>	<u>\$ 946</u>	<u>\$ 1,323</u>	<u>\$ 1,828</u>	<u>\$ 1,463</u>
LIABILITIES					
Accounts Payable	\$ 0	\$ 0	\$ 0	\$ 22	\$ 0
Accrued Benefits Payable	\$ 47,529	\$ 946	\$ 1,323	\$ 1,806	\$ 1,463
Total Liabilities	<u>\$ 47,529</u>	<u>\$ 946</u>	<u>\$ 1,323</u>	<u>\$ 1,828</u>	<u>\$ 1,463</u>
Plan Net Position held in Trust for Benefits	<u>\$ 402,242</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Statement of Changes in Fiduciary Net Position

June 30, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ADDITIONS		
Contributions:		
Member Contributions	\$ 547,807	\$ 523,535
Employer Contributions	<u>3,692,711</u>	<u>3,377,024</u>
<i>Total contributions</i>	\$ 4,240,518	\$ 3,900,559
Investment income:		
Interest income	988,963	878,598
Dividend income	914,719	897,873
Net appreciation (depreciation) in fair value	<u>2,728,030</u>	<u>3,591,521</u>
Total investment income	\$ 4,631,712	\$ 5,367,992
Less:		
Investment expenses	240,544	241,818
Net income	4,391,168	5,126,174
Securities lending transactions:		
Securities lending income	45,331	30,089
Securities lending fees	<u>4,573</u>	<u>3,009</u>
Net securities lending income	40,758	27,080
<i>Net investment income</i>	4,431,926	5,153,254
Other:		
<i>Other Income</i>	3,258	3,410
Total additions	<u>\$ 8,675,702</u>	<u>\$ 9,057,223</u>
DEDUCTIONS		
Benefit payments and withdrawals	5,152,588	4,882,612
Payments to other retirement systems	9,769	9,055
Amount transferred to Variable Supplements Funds	10,489	10,897
Transferable earnings due from QPP to COVSF	103,411	205,000
Administrative expenses	<u>82,073</u>	<u>59,689</u>
Total deductions	<u>\$ 5,358,330</u>	<u>\$ 5,167,253</u>
INCREASE IN PLAN NET POSITION	3,317,372	3,889,970
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:		
Beginning of year	\$ 65,206,752	\$ 61,316,782
End of year	\$ 68,524,124	\$ 65,206,752

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, 2019

(Dollar amounts in thousands)

	<u>COVSE</u>	<u>HPOVSE</u>	<u>HPSOVSE</u>	<u>TPOVSE</u>	<u>TPSOVSE</u>
ADDITIONS					
Investment income:					
Interest income	\$ 6,304	\$ 0	\$ 0	\$ 0	\$ 0
Net appreciation (depreciation) in fair value	0	0	0	0	0
Total investment income	\$ 6,304	\$ 0	\$ 0	\$ 0	\$ 0
Reimbursement of benefit payments from QPP	0	1,722	2,522	3,446	2,799
Transferable earnings due from QPP to COVSF	103,411	NA	NA	NA	NA
Other Income	0	0	0	0	0
Total additions	<u>\$ 109,715</u>	<u>\$ 1,722</u>	<u>\$ 2,522</u>	<u>\$ 3,446</u>	<u>\$ 2,799</u>
DEDUCTIONS					
Benefit payments and withdrawals	95,729	1,722	2,522	3,446	2,799
Total deductions	<u>\$ 95,729</u>	<u>\$ 1,722</u>	<u>\$ 2,522</u>	<u>\$ 3,446</u>	<u>\$ 2,799</u>
INCREASE IN PLAN NET POSITION	13,986	0	0	0	0
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:					
Beginning of year	\$ 402,242	\$ 0	\$ 0	\$ 0	\$ 0
End of year	\$ 416,228	\$ 0	\$ 0	\$ 0	\$ 0

Statement of Changes in Fiduciary Net Position

June 30, 2018

(Dollar amounts in thousands)

	<u>COVSE</u>	<u>HPOVSE</u>	<u>HPSOVSE</u>	<u>TPOVSE</u>	<u>TPSOVSE</u>
ADDITIONS					
Investment income:					
Interest income	\$ 2,265	\$ 0	\$ 0	\$ 0	\$ 0
Net appreciation (depreciation) in fair value	0	0	0	0	0
Total investment income	\$ 2,265	\$ 0	\$ 0	\$ 0	\$ 0
Reimbursement of benefit payments from QPP	0	1,825	2,573	3,612	2,887
Transferable earnings due from QPP to COVSF	205,000	NA	NA	NA	NA
Other Income	12	0	0	0	0
Total additions	<u>\$ 207,277</u>	<u>\$ 1,825</u>	<u>\$ 2,573</u>	<u>\$ 3,612</u>	<u>\$ 2,887</u>
DEDUCTIONS					
Benefit payments and withdrawals	93,200	1,825	2,573	3,612	2,887
Total deductions	<u>\$ 93,200</u>	<u>\$ 1,825</u>	<u>\$ 2,573</u>	<u>\$ 3,612</u>	<u>\$ 2,887</u>
INCREASE IN PLAN NET POSITION	114,077	0	0	0	0
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:					
Beginning of year	\$ 288,165	\$ 0	\$ 0	\$ 0	\$ 0
End of year	\$ 402,242	\$ 0	\$ 0	\$ 0	\$ 0

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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 @ 6/30/2017	\$ 61,602,706,000	\$ 46,760,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 61,649,466,000
2. Net Accrued Benefits Payable	5,493,000	0	69,000	58,000	45,000	70,000	5,735,000
3. Accrued Transfers from NYCERS to COVSF	(285,924,000)	285,924,000	0	0	0	0	0
4. 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
5. Changes for the year:							
a. ER Contributions	3,377,024,000	0	0	0	0	0	3,377,024,000
b. EE Contributions	523,535,000	0	0	0	0	0	523,535,000
c. Net Investment Income	5,153,254,000	2,265,000	0	0	0	0	5,155,519,000
d. Benefit Payments ¹	(4,883,110,000)	(90,190,000)	(1,760,000)	(2,510,000)	(3,486,000)	(2,818,000)	(4,983,874,000)
e. Payments to Other Retirement Systems	(9,055,000)	0	0	0	0	0	(9,055,000)
f. Transfers to Variable Supplements Funds	(10,897,000)	0	1,825,000	2,573,000	3,612,000	2,887,000	0
g. Administrative Expenses	(59,689,000)	0	0	0	0	0	(59,689,000)
h. Other	3,410,000	12,000	0	0	0	0	3,422,000
i. Net Changes	\$ 4,094,472,000	\$ (87,913,000)	\$ 65,000	\$ 63,000	\$ 126,000	\$ 69,000	\$ 4,006,882,000
6. Plan Net Position @ 6/30/2018	\$ 65,411,752,000	\$ 244,771,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 65,656,523,000
7. Net Accrued Benefits Payable	4,995,000	0	134,000	121,000	171,000	139,000	5,560,000
8. Accrued Transfers from NYCERS to COVSF	(205,000,000)	205,000,000	0	0	0	0	0
9. Adjusted Market Value @ 6/30/2018	\$ 65,211,747,000	\$ 449,771,000	\$ 134,000	\$ 121,000	\$ 171,000	\$ 139,000	\$ 65,662,083,000
10. Changes for the year:							
a. ER Contributions	3,692,711,000	0	0	0	0	0	3,692,711,000
b. EE Contributions	547,807,000	0	0	0	0	0	547,807,000
c. Net Investment Income	4,431,926,000	6,304,000	0	0	0	0	4,438,230,000
d. Benefit Payments ²	(5,153,002,000)	(94,459,000)	(1,641,000)	(2,465,000)	(3,364,000)	(2,748,000)	(5,257,679,000)
e. Payments to Other Retirement Systems	(9,769,000)	0	0	0	0	0	(9,769,000)
f. Transfers to Variable Supplements Funds	(10,489,000)	0	1,722,000	2,522,000	3,446,000	2,799,000	0
g. Administrative Expenses	(82,073,000)	0	0	0	0	0	(82,073,000)
h. Other	3,258,000	0	0	0	0	0	3,258,000
i. Net Changes	\$ 3,420,369,000	\$ (88,155,000)	\$ 81,000	\$ 57,000	\$ 82,000	\$ 51,000	\$ 3,332,485,000
11. Plan Net Position @ 6/30/2019	\$ 68,627,535,000	\$ 361,616,000	\$ 0	\$ 0	\$ 0	\$ 0	\$ 68,989,151,000
12. Net Accrued Benefits Payable	4,581,000	0	215,000	178,000	253,000	190,000	5,417,000
13. Accrued Transfers from NYCERS to COVSF	(103,411,000)	103,411,000	0	0	0	0	0
14. Adjusted Market Value @ 6/30/2019	\$ 68,528,705,000	\$ 465,027,000	\$ 215,000	\$ 178,000	\$ 253,000	\$ 190,000	\$ 68,994,568,000

¹ Includes Net Accrued Benefits Payable of \$(498,000) for QPP, \$3,010,000 for COVSF, \$65,000 for HPOVSF, \$63,000 for HPSOVSF, \$126,000 for TPOVSF and \$69,000 for TPSOVSF.

² Includes Net Accrued Benefits Payable of \$(414,000) for QPP, \$1,270,000 for COVSF, \$81,000 for HPOVSF, \$57,000 for HPSOVSF, \$82,000 for TPOVSF and \$51,000 for TPSOVSF.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rates of Return</u>
U.S. Public Market Equities	29%	7.0%
International Public Market Equities	13%	7.1%
Emerging Public Market Equities	7%	9.4%
Private Market Equities	7%	10.5%
Fixed Income (Core, TIPS, HY, Opportunistic, Convertibles)	33%	2.2%
Alternatives (Real Assets, Hedge Funds)	<u>11%</u>	5.7%
Total	100%	

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.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Development of Asset (Gain) / Loss
June 30, 2018

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	Total
1. Assets							
a. Market Value 6/30/2017*	\$ 61,608,199,000	\$ 46,760,000	\$ 69,000	\$ 58,000	\$ 45,000	\$ 70,000	\$ 61,655,201,000
b. 2017 Accrued Transfers from NYCERS to COVSF	(285,924,000)	285,924,000	0	0	0	0	0
c. 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
d. Market Value 6/30/2018**	65,416,747,000	244,771,000	134,000	121,000	171,000	139,000	65,662,083,000
e. 2018 Accrued Transfers from NYCERS to COVSF	(205,000,000)	205,000,000	0	0	0	0	0
f. Adjusted Market Value @6/30/2018	65,211,747,000	449,771,000	134,000	121,000	171,000	139,000	65,662,083,000
2. Net Investment Income	5,153,254,000	2,265,000	0	0	0	0	5,155,519,000
3. Cash Flow (1.d. - 1.a. - 2.)	(1,344,706,000)	195,746,000	65,000	63,000	126,000	69,000	(1,148,637,000)
4. Expected Earnings (7% * 1.a. + 3.441% * 3.)	4,266,302,597	10,008,820	7,067	6,228	7,486	7,274	4,276,339,472
5. (Gain) / Loss (4. - 2.)	(886,951,403)	7,743,820	7,067	6,228	7,486	7,274	(879,179,528)
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.)	(177,390,281)	1,548,764	1,413	1,246	1,497	1,455	(175,835,906)
8. Deferred (Inflow) / Outflow of Resources (5. - 7.)	\$ (709,561,122)	\$ 6,195,056	\$ 5,654	\$ 4,982	\$ 5,989	\$ 5,819	\$ (703,343,622)

* Before Reflecting 2017 Accrued Transfers to VSFs.

** Before Reflecting 2018 Accrued Transfers to VSFs.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

**Development of Asset (Gain) / Loss
June 30, 2019**

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	Total
1. Assets							
a. Market Value 6/30/2018*	\$ 65,416,747,000	\$ 244,771,000	\$ 134,000	\$ 121,000	\$ 171,000	\$ 139,000	\$ 65,662,083,000
b. 2018 Accrued Transfers from NYCERS to COVSF	(205,000,000)	205,000,000	0	0	0	0	0
c. Adjusted Market Value @6/30/2018	65,211,747,000	449,771,000	134,000	121,000	171,000	139,000	65,662,083,000
d. Market Value 6/30/2019**	68,632,116,000	361,616,000	215,000	178,000	253,000	190,000	68,994,568,000
e. 2019 Accrued Transfers from NYCERS to COVSF	(103,411,000)	103,411,000	0	0	0	0	0
f. Adjusted Market Value @6/30/2019	68,528,705,000	465,027,000	215,000	178,000	253,000	190,000	68,994,568,000
2. Net Investment Income	4,431,926,000	6,304,000	0	0	0	0	4,438,230,000
3. Cash Flow (1.d. - 1.a. - 2.)	(1,216,557,000)	110,541,000	81,000	57,000	82,000	51,000	(1,105,745,000)
4. Expected Earnings (7% * 1.a. + 3.441% * 3.)	4,537,310,564	20,937,686	12,167	10,431	14,792	11,485	4,558,297,125
5. (Gain) / Loss (4. - 2.)	105,384,564	14,633,686	12,167	10,431	14,792	11,485	120,067,125
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.)	21,076,913	2,926,737	2,433	2,086	2,958	2,297	24,013,424
8. Deferred (Inflow) / Outflow of Resources (5. - 7.)	\$ 84,307,651	\$ 11,706,949	\$ 9,734	\$ 8,345	\$ 11,834	\$ 9,188	\$ 96,053,701

* Before Reflecting 2018 Accrued Transfers to VSFs.

** Before Reflecting 2019 Accrued Transfers to VSFs.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Roll-Forward of Entry Age Accrued Liabilities¹

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	Total
1. Disclosed EA Accrued Liability at 6/30/2018	\$ 81,812,947,318	\$ 1,400,401,764	\$ 14,456,856	\$ 20,078,841	\$ 29,598,360	\$ 22,295,378	\$ 83,299,778,517
2. Adjustment for Census Data Fix	680,000,000	0	0	0	0	0	680,000,000
3. Revised EA Accrued Liability at 6/30/2018	\$ 82,492,947,318	\$ 1,400,401,764	\$ 14,456,856	\$ 20,078,841	\$ 29,598,360	\$ 22,295,378	\$ 83,979,778,517
4. EA Normal Cost at 6/30/2018	2,009,185,297	21,807,362	0	0	0	0	2,030,992,659
5. Benefit Payments-FY 2019	(5,153,002,000)	(94,459,000)	(1,641,000)	(2,465,000)	(3,364,000)	(2,748,000)	(5,257,679,000)
6. Interest	5,737,834,484	96,304,305	955,513	1,320,698	1,956,130	1,466,118	5,839,837,248
7. Experience (Gain)/Loss-FY 2019	1,880,980,102	(27,412,260)	(387,522)	344,323	(1,441,293)	391,624	1,852,474,974
8. Changes of Assumptions-FY 2019	(933,376,672)	3,456,573	170,485	226,579	327,722	265,995	(928,929,318)
9. Roll-Forward EAAL at 6/30/2019	\$ 86,034,568,529	\$ 1,400,098,744	\$ 13,554,332	\$ 19,505,441	\$ 27,076,919	\$ 21,671,115	\$ 87,516,475,080

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

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

**Schedule of Employer Allocations
June 30, 2018**

Employer	2018 Actual Employer Contributions	Employer Allocation Percentage
Transit Operating	\$ 579,615,712	17.164%
Transit Non-Operating	153,689,581	4.551%
Transit Authority Transit Police	25,366,149	0.751%
Transit Authority CP Engineers	27,432,045	0.812%
Housing Authority Regular	154,409,873	4.572%
Housing Authority Housing Police	10,577,579	0.313%
Health and Hospitals Corporation	507,335,245	15.023%
Off-Track Betting	18,369,307	0.544%
Housing Development Corporation / REMIC	1,724,250	0.051%
State Courts	1,379,089	0.041%
School Construction Authority	1,682,329	0.050%
Water Finance Authority	111,490	0.003%
Senior Colleges	44,827,576	1.327%
Triborough Bridge and Tunnel Authority	38,998,208	1.155%
City	1,811,505,740	53.643%
Total	\$ 3,377,024,173	100.000%

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Net Pension Liability (NPL) by Source
June 30, 2018

Total Pension Liability

	TRANSIT OPERATING	TA NON- OPERATING	TA TP	TA CP Engineers	HA Regular	HA HP	HHC	QTB
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
Changes for the Year:								
Service Cost	334,305,355	88,640,391	14,627,320	15,815,425	89,049,411	6,096,340	292,604,833	10,595,555
Interest	963,808,419	255,551,860	42,170,830	45,596,157	256,731,070	17,575,858	843,585,055	30,547,179
Changes of Benefit Terms	7,551,946	2,002,383	330,431	357,270	2,011,623	137,716	6,609,933	239,353
Differences b/t Expected and Actual Experience	(302,524,030)	(80,213,637)	(13,236,748)	(14,311,904)	(80,583,772)	(5,516,781)	(264,787,841)	(9,588,270)
Changes of Assumptions	3,043,660	807,020	133,173	143,990	810,744	55,504	2,664,001	96,467
Benefit Payments	(855,432,133)	(226,816,106)	(37,428,894)	(40,469,057)	(227,862,719)	(15,599,526)	(748,727,391)	(27,112,275)
Net Changes	\$ 150,753,217	\$ 39,971,911	\$ 6,596,112	\$ 7,131,881	\$ 40,156,357	\$ 2,749,111	\$ 131,948,590	\$ 4,778,009
SubTotal	\$ 15,186,901,624	\$ 3,139,019,108	\$ 580,249,529	\$ 654,140,405	\$ 3,901,602,133	\$ 240,122,939	\$ 12,320,435,278	\$ 463,041,371
Changes in Proportionate Share	(889,327,639)	651,953,812	45,331,808	22,253,797	(93,136,259)	20,605,368	193,690,449	(9,890,576)
Balances at June 30, 2018	\$ 14,297,573,985	\$ 3,790,972,920	\$ 625,581,337	\$ 676,394,202	\$ 3,808,465,874	\$ 260,728,307	\$ 12,514,125,727	\$ 453,150,795

Plan Fiduciary Net Position¹

	TRANSIT OPERATING	TA NON- OPERATING	TA TP	TA CP Engineers	HA Regular	HA HP	HHC	QTB
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
Changes for the Year:								
Contributions - Employer	579,615,712	153,689,581	25,366,149	27,432,045	154,409,873	10,577,579	507,335,245	18,369,307
Contributions - Employee	89,859,547	23,826,078	3,931,748	4,251,104	23,936,020	1,638,665	78,650,663	2,848,030
Net Investment Income	884,893,281	234,627,670	38,717,948	41,862,814	235,710,329	16,136,774	774,513,619	28,046,023
Benefit Payments	(855,432,133)	(226,816,106)	(37,428,894)	(40,469,057)	(227,862,719)	(15,599,526)	(748,727,391)	(27,112,275)
Payments to Other Retirement Systems	(1,554,200)	(412,093)	(68,003)	(73,527)	(413,995)	(28,342)	(1,360,333)	(49,259)
Transfers to Variable Supplements Funds	0	0	0	0	0	0	0	0
Administrative Expenses	(10,245,020)	(2,716,446)	(448,264)	(484,675)	(2,728,981)	(186,827)	(8,967,078)	(324,708)
Other Changes	587,352	155,735	25,699	27,787	156,454	10,711	514,087	18,616
Net Changes	\$ 687,724,539	\$ 182,354,419	\$ 30,096,383	\$ 32,546,491	\$ 183,206,981	\$ 12,549,034	\$ 601,958,812	\$ 21,795,734
SubTotal	\$ 11,935,496,588	\$ 2,500,593,276	\$ 459,230,628	\$ 516,538,604	\$ 3,071,748,204	\$ 190,102,709	\$ 9,719,517,632	\$ 364,613,205
Changes in Proportionate Share	(665,259,619)	487,692,640	33,910,361	16,646,905	(69,670,377)	15,413,801	144,889,722	(7,398,623)
Balances at June 30, 2018	\$ 11,270,236,969	\$ 2,988,285,916	\$ 493,140,989	\$ 533,185,509	\$ 3,002,077,827	\$ 205,516,510	\$ 9,864,407,354	\$ 357,214,582

Net Pension Liability

	TRANSIT OPERATING	TA NON- OPERATING	TA TP	TA CP Engineers	HA Regular	HA HP	HHC	QTB
Balances at June 30, 2017	\$ 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
Changes for the Year:								
Service Cost	334,305,355	88,640,391	14,627,320	15,815,425	89,049,411	6,096,340	292,604,833	10,595,555
Interest	963,808,419	255,551,860	42,170,830	45,596,157	256,731,070	17,575,858	843,585,055	30,547,179
Changes of Benefit Terms	7,551,946	2,002,383	330,431	357,270	2,011,623	137,716	6,609,933	239,353
Differences b/t Expected and Actual experience	(302,524,030)	(80,213,637)	(13,236,748)	(14,311,904)	(80,583,772)	(5,516,781)	(264,787,841)	(9,588,270)
Changes of Assumptions	3,043,660	807,020	133,173	143,990	810,744	55,504	2,664,001	96,467
Contributions - Employer	(579,615,712)	(153,689,581)	(25,366,149)	(27,432,045)	(154,409,873)	(10,577,579)	(507,335,245)	(18,369,307)
Contributions - Employee	(89,859,547)	(23,826,078)	(3,931,748)	(4,251,104)	(23,936,020)	(1,638,665)	(78,650,663)	(2,848,030)
Net Investment Income	(884,893,281)	(234,627,670)	(38,717,948)	(41,862,814)	(235,710,329)	(16,136,774)	(774,513,619)	(28,046,023)
Benefit Payments	0	0	0	0	0	0	0	0
Payments to Other Retirement Systems	1,554,200	412,093	68,003	73,527	413,995	28,342	1,360,333	49,259
Transfers to Variable Supplements Funds	0	0	0	0	0	0	0	0
Administrative Expenses	(10,245,020)	(2,716,446)	(448,264)	(484,675)	(2,728,981)	(186,827)	(8,967,078)	(324,708)
Other Changes	(587,352)	(155,735)	(25,699)	(27,787)	(156,454)	(10,711)	(514,087)	(18,616)
Net Changes	\$ (536,971,322)	\$ (142,382,508)	\$ (23,500,271)	\$ (25,414,610)	\$ (143,050,624)	\$ (9,799,923)	\$ (470,010,222)	\$ (17,017,725)
SubTotal	\$ 3,251,405,036	\$ 638,425,832	\$ 121,018,901	\$ 137,601,801	\$ 829,853,929	\$ 50,020,230	\$ 2,600,917,646	\$ 98,428,166
Changes in Proportionate Share	(224,068,020)	164,261,172	11,421,447	5,606,892	(23,465,882)	5,191,567	48,800,727	(2,491,953)
Balances at June 30, 2018	\$ 3,027,337,016	\$ 802,687,004	\$ 132,440,348	\$ 143,208,693	\$ 806,388,047	\$ 55,211,797	\$ 2,649,718,373	\$ 95,936,213

¹ Balances at 6/30/2017 and 6/30/2018 are Adjusted Market Values - See Page 3.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Net Pension Liability (NPL) by Source
June 30, 2018

Total Pension Liability

	<u>HDC/REMIC</u>	<u>State Courts</u>	<u>SCA</u>	<u>WFA</u>	<u>Senior Colleges</u>	<u>TBTA</u>	<u>City Total</u>	<u>TOTAL</u>
Balances at June 30, 2017	\$ 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
Changes for the Year:								
Service Cost	993,333	798,562	973,856	58,431	25,846,143	22,496,078	1,044,811,361	1,947,712,394
Interest	2,863,798	2,302,269	2,807,645	168,459	74,514,902	64,856,602	3,012,210,152	5,615,290,255
Changes of Benefit Terms	22,439	18,039	21,999	1,320	583,863	508,186	23,602,251	43,998,752
Differences b/t Expected and Actual Experience	(898,900)	(722,645)	(881,275)	(52,876)	(23,389,034)	(20,357,449)	(945,484,534)	(1,762,549,696)
Changes of Assumptions	9,044	7,270	8,866	532	235,314	204,814	9,512,415	17,732,814
Benefit Payments	(2,541,776)	(2,043,388)	(2,491,937)	(149,516)	(66,136,008)	(57,563,745)	(2,673,499,529)	(4,983,874,000)
Net Changes	\$ 447,938	\$ 360,107	\$ 439,154	\$ 26,350	\$ 11,655,180	\$ 10,144,486	\$ 471,152,116	\$ 878,310,519
SubTotal	\$ 44,131,316	\$ 30,031,835	\$ 33,407,741	\$ 3,323,209	\$ 973,513,712	\$ 1,088,217,287	\$ 44,641,641,030	\$ 83,299,778,517
Changes in Proportionate Share	(1,648,429)	4,121,074	8,242,148	(824,216)	131,874,349	(126,104,845)	42,859,159	0
Balances at June 30, 2018	\$ 42,482,887	\$ 34,152,909	\$ 41,649,889	\$ 2,498,993	\$ 1,105,388,061	\$ 962,112,442	\$ 44,684,500,189	\$ 83,299,778,517

Plan Fiduciary Net Position¹

	<u>HDC/REMIC</u>	<u>State Courts</u>	<u>SCA</u>	<u>WFA</u>	<u>Senior Colleges</u>	<u>TBTA</u>	<u>City Total</u>	<u>TOTAL</u>
Balances at June 30, 2017	\$ 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
Changes for the Year:								
Contributions - Employer	1,724,250	1,379,089	1,682,329	111,490	44,827,576	38,998,208	1,811,505,567	3,377,024,000
Contributions - Employee	267,003	214,649	261,768	15,706	6,947,309	6,046,829	280,839,881	523,535,000
Net Investment Income	2,629,315	2,113,763	2,577,760	154,666	68,413,737	59,546,244	2,765,575,057	5,155,519,000
Benefit Payments	(2,541,776)	(2,043,388)	(2,491,937)	(149,516)	(66,136,008)	(57,563,745)	(2,673,499,529)	(4,983,874,000)
Payments to Other Retirement Systems	(4,618)	(3,713)	(4,528)	(272)	(120,160)	(104,585)	(4,857,372)	(9,055,000)
Transfers to Variable Supplements Funds	0	0	0	0	0	0	0	0
Administrative Expenses	(30,441)	(24,472)	(29,845)	(1,791)	(792,073)	(689,408)	(32,018,971)	(59,689,000)
Other Changes	1,745	1,403	1,711	103	45,410	39,524	1,835,663	3,422,000
Net Changes	\$ 2,045,478	\$ 1,637,331	\$ 1,997,258	\$ 130,386	\$ 53,185,791	\$ 46,273,067	\$ 2,149,380,296	\$ 4,006,882,000
SubTotal	\$ 34,737,593	\$ 23,843,648	\$ 26,649,432	\$ 2,599,577	\$ 772,700,669	\$ 852,736,385	\$ 35,190,974,850	\$ 65,662,083,000
Changes in Proportionate Share	(1,233,103)	3,082,761	6,165,522	(616,553)	98,648,322	(94,332,457)	32,060,698	0
Balances at June 30, 2018	\$ 33,504,490	\$ 26,926,409	\$ 32,814,954	\$ 1,983,024	\$ 871,348,991	\$ 758,403,928	\$ 35,223,035,548	\$ 65,662,083,000

Net Pension Liability

	<u>HDC/REMIC</u>	<u>State Courts</u>	<u>SCA</u>	<u>WFA</u>	<u>Senior Colleges</u>	<u>TBTA</u>	<u>City Total</u>	<u>TOTAL</u>
Balances at June 30, 2017	\$ 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
Changes for the Year:								
Service Cost	993,333	798,562	973,856	58,431	25,846,143	22,496,078	1,044,811,361	1,947,712,394
Interest	2,863,798	2,302,269	2,807,645	168,459	74,514,902	64,856,602	3,012,210,152	5,615,290,255
Changes of Benefit Terms	22,439	18,039	21,999	1,320	583,863	508,186	23,602,251	43,998,752
Differences b/t Expected and Actual experience	(898,900)	(722,645)	(881,275)	(52,876)	(23,389,034)	(20,357,449)	(945,484,534)	(1,762,549,696)
Changes of Assumptions	9,044	7,270	8,866	532	235,314	204,814	9,512,415	17,732,814
Contributions - Employer	(1,724,250)	(1,379,089)	(1,682,329)	(111,490)	(44,827,576)	(38,998,208)	(1,811,505,567)	(3,377,024,000)
Contributions - Employee	(267,003)	(214,649)	(261,768)	(15,706)	(6,947,309)	(6,046,829)	(280,839,881)	(523,535,000)
Net Investment Income	(2,629,315)	(2,113,763)	(2,577,760)	(154,666)	(68,413,737)	(59,546,244)	(2,765,575,057)	(5,155,519,000)
Benefit Payments	0	0	0	0	0	0	0	0
Payments to Other Retirement Systems	4,618	3,713	4,528	272	120,160	104,585	4,857,372	9,055,000
Transfers to Variable Supplements Funds	0	0	0	0	0	0	0	0
Administrative Expenses	30,441	24,472	29,845	1,791	792,073	689,408	32,018,971	59,689,000
Other Changes	(1,745)	(1,403)	(1,711)	(103)	(45,410)	(39,524)	(1,835,663)	(3,422,000)
Net Changes	\$ (1,597,540)	\$ (1,277,224)	\$ (1,558,104)	\$ (104,036)	\$ (41,530,611)	\$ (36,128,581)	\$ (1,678,228,180)	\$ (3,128,571,481)
SubTotal	\$ 9,393,723	\$ 6,188,187	\$ 6,758,309	\$ 723,632	\$ 200,813,043	\$ 235,480,902	\$ 9,450,666,180	\$ 17,637,695,517
Changes in Proportionate Share	(415,326)	1,038,313	2,076,626	(207,663)	33,226,027	(31,772,388)	10,798,461	0
Balances at June 30, 2018	\$ 8,978,397	\$ 7,226,500	\$ 8,834,935	\$ 515,969	\$ 234,039,070	\$ 203,708,514	\$ 9,461,464,641	\$ 17,637,695,517

¹ Balances at 6/30/2017 and 6/30/2018 are Adjusted Market Values - See Page 3.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Schedule of Employer Allocations
June 30, 2019

Employer	2019 Actual Employer Contributions	Employer Allocation Percentage
Transit Operating	\$ 644,284,588	17.4474652824%
Transit Non-Operating	184,203,347	4.9882948646%
Transit Authority Transit Police	26,231,545	0.7103599546%
Transit Authority CP Engineers	30,841,026	0.8351864074%
Housing Authority Regular	153,053,407	4.1447429517%
Housing Authority Housing Police	10,850,338	0.2938311719%
Health and Hospitals Corporation	515,453,890	13.9586822624%
Off-Track Betting	23,582,312	0.6386177437%
Housing Development Corporation / REMIC	2,003,454	0.0542542764%
State Courts	1,357,011	0.0367483605%
School Construction Authority	3,017,923	0.0817264727%
Water Finance Authority	78,400	0.0021231010%
Senior Colleges	45,285,139	1.2263383375%
Triborough Bridge and Tunnel Authority	45,114,858	1.2217270649%
City	2,007,354,440	54.3599017483%
Total	\$ 3,692,711,678	100.0000000000%

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Net Pension Liability (NPL) by Source
June 30, 2019

Total Pension Liability

	TRANSIT OPERATING	TA NON- OPERATING	TA TP	TA CP Engineers	HA Regular	HA HP	HHC	QTB
Balances at June 30, 2018	\$ 14,297,573,985	\$ 3,790,972,920	\$ 625,581,337	\$ 676,394,202	\$ 3,808,465,874	\$ 260,728,307	\$ 12,514,125,727	\$ 453,150,795
Adjustment for Census Data Fix	\$ 116,715,000	\$ 30,947,000	\$ 5,107,000	\$ 5,522,000	\$ 31,090,000	\$ 2,128,000	\$ 102,156,000	\$ 3,699,000
Balances at June 30, 2018 (Revised)	\$ 14,414,288,985	\$ 3,821,919,920	\$ 630,688,337	\$ 681,916,202	\$ 3,839,555,874	\$ 262,856,307	\$ 12,616,281,727	\$ 456,849,795
Changes for the Year:								
Service Cost	354,356,739	101,311,903	14,427,359	16,962,575	84,179,425	5,967,690	283,499,812	12,970,279
Interest	1,018,903,576	291,308,302	41,483,865	48,773,527	242,046,243	17,159,262	815,164,326	37,294,237
Changes of Benefit Terms	0	0	0	0	0	0	0	0
Differences b/ Expected and Actual Experience	323,209,928	92,406,914	13,159,240	15,471,619	76,780,326	5,443,149	258,581,096	11,830,234
Changes of Assumptions	(162,074,620)	(46,337,733)	(6,598,742)	(7,758,291)	(38,501,732)	(2,729,484)	(129,666,292)	(5,932,307)
Benefit Payments	(917,331,718)	(262,268,532)	(37,348,446)	(43,911,420)	(217,917,280)	(15,448,700)	(733,902,706)	(33,576,471)
Net Changes	\$ 617,063,905	\$ 176,420,854	\$ 25,123,276	\$ 29,538,010	\$ 146,586,982	\$ 10,391,917	\$ 493,676,236	\$ 22,585,972
SubTotal	\$ 15,031,352,890	\$ 3,998,340,774	\$ 655,811,613	\$ 711,454,212	\$ 3,986,142,856	\$ 273,248,224	\$ 13,109,957,963	\$ 479,435,767
Changes in Proportionate Share	238,053,716	367,239,058	(34,129,620)	19,471,492	(358,809,924)	(16,097,540)	(893,811,279)	79,459,972
Balances at June 30, 2019	\$ 15,269,406,606	\$ 4,365,579,832	\$ 621,681,993	\$ 730,925,704	\$ 3,627,332,932	\$ 257,150,684	\$ 12,216,146,684	\$ 558,895,739

Plan Fiduciary Net Position¹

	TRANSIT OPERATING	TA NON- OPERATING	TA TP	TA CP Engineers	HA Regular	HA HP	HHC	QTB
Balances at June 30, 2018	\$ 11,270,236,969	\$ 2,988,285,916	\$ 493,140,989	\$ 533,185,509	\$ 3,002,077,827	\$ 205,516,510	\$ 9,864,407,354	\$ 357,214,582
Adjustment for Census Data Fix	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Balances at June 30, 2018 (Revised)	\$ 11,270,236,969	\$ 2,988,285,916	\$ 493,140,989	\$ 533,185,509	\$ 3,002,077,827	\$ 205,516,510	\$ 9,864,407,354	\$ 357,214,582
Changes for the Year:								
Contributions - Employer	644,284,588	184,203,347	26,231,545	30,841,026	153,053,407	10,850,338	515,453,890	23,582,312
Contributions - Employee	95,578,436	27,326,228	3,891,402	4,575,210	22,705,192	1,609,628	76,466,639	3,498,393
Net Investment Income	774,358,638	221,391,999	31,527,409	37,067,494	183,953,225	13,040,903	619,518,424	28,343,324
Benefit Payments	(917,331,718)	(262,268,532)	(37,348,446)	(43,911,420)	(217,917,280)	(15,448,700)	(733,902,706)	(33,576,471)
Payments to Other Retirement Systems	(1,704,443)	(487,307)	(69,395)	(81,589)	(404,900)	(28,704)	(1,363,624)	(62,387)
Transfers to Variable Supplements Funds	0	0	0	0	0	0	0	0
Administrative Expenses	(14,319,658)	(4,094,043)	(583,014)	(685,463)	(3,401,715)	(241,156)	(11,456,309)	(524,133)
Other Changes	568,438	162,519	23,144	27,210	135,036	9,573	454,774	20,806
Net Changes	\$ 581,434,281	\$ 166,234,211	\$ 23,672,645	\$ 27,832,468	\$ 138,122,965	\$ 9,791,882	\$ 465,171,088	\$ 21,281,844
SubTotal	\$ 11,851,671,250	\$ 3,154,520,127	\$ 516,813,634	\$ 561,017,977	\$ 3,140,200,792	\$ 215,308,392	\$ 10,329,578,442	\$ 378,496,426
Changes in Proportionate Share	186,132,049	287,132,365	(26,703,852)	15,215,277	(280,553,298)	(12,580,844)	(698,845,917)	62,115,127
Balances at June 30, 2019	\$ 12,037,803,299	\$ 3,441,652,492	\$ 490,109,782	\$ 576,233,254	\$ 2,859,647,494	\$ 202,727,548	\$ 9,630,732,525	\$ 440,611,553

Net Pension Liability

	TRANSIT OPERATING	TA NON- OPERATING	TA TP	TA CP Engineers	HA Regular	HA HP	HHC	QTB
Balances at June 30, 2018	\$ 3,027,337,016	\$ 802,687,004	\$ 132,440,348	\$ 143,208,693	\$ 806,388,047	\$ 55,211,797	\$ 2,649,718,373	\$ 95,936,213
Adjustment for Census Data Fix	\$ 116,715,000	\$ 30,947,000	\$ 5,107,000	\$ 5,522,000	\$ 31,090,000	\$ 2,128,000	\$ 102,156,000	\$ 3,699,000
Balances at June 30, 2018 (Revised)	\$ 3,144,052,016	\$ 833,634,004	\$ 137,547,348	\$ 148,730,693	\$ 837,478,047	\$ 57,339,797	\$ 2,751,874,373	\$ 99,635,213
Changes for the Year:								
Service Cost	354,356,739	101,311,903	14,427,359	16,962,575	84,179,425	5,967,690	283,499,812	12,970,279
Interest	1,018,903,576	291,308,302	41,483,865	48,773,527	242,046,243	17,159,262	815,164,326	37,294,237
Changes of Benefit Terms	0	0	0	0	0	0	0	0
Differences b/ Expected and Actual experience	323,209,928	92,406,914	13,159,240	15,471,619	76,780,326	5,443,149	258,581,096	11,830,234
Changes of Assumptions	(162,074,620)	(46,337,733)	(6,598,742)	(7,758,291)	(38,501,732)	(2,729,484)	(129,666,292)	(5,932,307)
Contributions - Employer	(644,284,588)	(184,203,347)	(26,231,545)	(30,841,026)	(153,053,407)	(10,850,338)	(515,453,890)	(23,582,312)
Contributions - Employee	(95,578,436)	(27,326,228)	(3,891,402)	(4,575,210)	(22,705,192)	(1,609,628)	(76,466,639)	(3,498,393)
Net Investment Income	(774,358,638)	(221,391,999)	(31,527,409)	(37,067,494)	(183,953,225)	(13,040,903)	(619,518,424)	(28,343,324)
Benefit Payments	0	0	0	0	0	0	0	0
Payments to Other Retirement Systems	1,704,443	487,307	69,395	81,589	404,900	28,704	1,363,624	62,387
Transfers to Variable Supplements Funds	0	0	0	0	0	0	0	0
Administrative Expenses	(14,319,658)	(4,094,043)	(583,014)	(685,463)	(3,401,715)	(241,156)	(11,456,309)	(524,133)
Other Changes	(568,438)	(162,519)	(23,144)	(27,210)	(135,036)	(9,573)	(454,774)	(20,806)
Net Changes	\$ 35,629,624	\$ 10,186,643	\$ 1,450,631	\$ 1,705,542	\$ 8,464,017	\$ 600,035	\$ 28,505,148	\$ 1,304,128
SubTotal	\$ 3,179,681,640	\$ 843,820,647	\$ 138,997,979	\$ 150,436,235	\$ 845,942,064	\$ 57,939,832	\$ 2,780,379,521	\$ 100,939,341
Changes in Proportionate Share	51,921,667	80,106,693	(7,425,768)	4,256,215	(78,256,626)	(3,516,696)	(194,965,362)	17,344,845
Balances at June 30, 2019	\$ 3,231,603,307	\$ 923,927,340	\$ 131,572,211	\$ 154,692,450	\$ 767,685,438	\$ 54,423,136	\$ 2,585,414,159	\$ 118,284,186

¹ Balances at 6/30/2018 and 6/30/2019 are Adjusted Market Values - See Page 3.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Net Pension Liability (NPL) by Source
June 30, 2019

Total Pension Liability

	<u>HDC/REMIC</u>	<u>State Courts</u>	<u>SCA</u>	<u>WEA</u>	<u>Senior Colleges</u>	<u>TBTA</u>	<u>City Total</u>	<u>TOTAL</u>
Balances at June 30, 2018	\$ 42,482,887	\$ 34,152,909	\$ 41,649,889	\$ 2,498,993	\$ 1,105,388,061	\$ 962,112,442	\$ 44,684,500,189	\$ 83,299,778,517
Adjustment for Census Data Fix	\$ 347,000	\$ 279,000	\$ 340,000	\$ 20,000	\$ 9,024,000	\$ 7,854,000	\$ 364,772,000	\$ 680,000,000
Balances at June 30, 2018 (Revised)	\$ 42,829,887	\$ 34,431,909	\$ 41,989,889	\$ 2,518,993	\$ 1,114,412,061	\$ 969,966,442	\$ 45,049,272,189	\$ 83,979,778,517
Changes for the Year:								
Service Cost	1,101,900	746,357	1,659,859	43,120	24,906,842	24,813,187	1,104,045,612	2,030,992,659
Interest	3,168,361	2,146,044	4,772,693	123,986	71,616,163	71,346,872	3,174,529,791	5,839,837,248
Changes of Benefit Terms	0	0	0	0	0	0	0	0
Differences b/t Expected and Actual Experience	1,005,047	680,754	1,513,962	39,330	22,717,611	22,632,188	1,007,003,576	1,852,474,974
Changes of Assumptions	(503,984)	(341,366)	(759,181)	(19,722)	(11,391,816)	(11,348,981)	(504,965,067)	(928,929,318)
Benefit Payments	(2,852,516)	(1,932,111)	(4,296,916)	(111,626)	(64,476,933)	(64,234,487)	(2,858,069,138)	(5,257,679,000)
Net Changes	\$ 1,918,808	\$ 1,299,678	\$ 2,890,417	\$ 75,088	\$ 43,371,867	\$ 43,208,779	\$ 1,922,544,774	\$ 3,536,696,563
SubTotal	\$ 44,748,695	\$ 35,731,587	\$ 44,880,306	\$ 2,594,081	\$ 1,157,783,928	\$ 1,013,175,221	\$ 46,971,816,963	\$ 87,516,475,080
Changes in Proportionate Share	2,732,735	(3,570,717)	26,643,822	(736,018)	(84,535,842)	56,037,241	602,052,904	0
Balances at June 30, 2019	\$ 47,481,430	\$ 32,160,870	\$ 71,524,128	\$ 1,858,063	\$ 1,073,248,086	\$ 1,069,212,462	\$ 47,573,869,867	\$ 87,516,475,080

Plan Fiduciary Net Position¹

	<u>HDC/REMIC</u>	<u>State Courts</u>	<u>SCA</u>	<u>WEA</u>	<u>Senior Colleges</u>	<u>TBTA</u>	<u>City Total</u>	<u>TOTAL</u>
Balances at June 30, 2018	\$ 33,504,490	\$ 26,926,409	\$ 32,814,954	\$ 1,983,024	\$ 871,348,991	\$ 758,403,928	\$ 35,223,035,548	\$ 65,662,083,000
Adjustment for Census Data Fix	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Balances at June 30, 2018 (Revised)	\$ 33,504,490	\$ 26,926,409	\$ 32,814,954	\$ 1,983,024	\$ 871,348,991	\$ 758,403,928	\$ 35,223,035,548	\$ 65,662,083,000
Changes for the Year:								
Contributions - Employer	2,003,454	1,357,011	3,017,923	78,400	45,285,139	45,114,858	2,007,353,762	3,692,711,000
Contributions - Employee	297,209	201,310	447,703	11,630	6,717,967	6,692,706	297,787,347	547,807,000
Net Investment Income	2,407,930	1,630,977	3,627,209	94,228	54,427,716	54,223,057	2,412,617,467	4,438,230,000
Benefit Payments	(2,852,516)	(1,932,111)	(4,296,916)	(111,626)	(64,476,933)	(64,234,487)	(2,858,069,138)	(5,257,679,000)
Payments to Other Retirement Systems	(5,300)	(3,590)	(7,984)	(207)	(119,801)	(119,351)	(5,310,418)	(9,769,000)
Transfers to Variable Supplements Funds	0	0	0	0	0	0	0	0
Administrative Expenses	(44,528)	(30,160)	(67,075)	(1,742)	(1,006,493)	(1,002,708)	(44,614,803)	(82,073,000)
Other Changes	1,768	1,197	2,663	69	39,954	39,804	1,771,045	3,258,000
Net Changes	\$ 1,808,017	\$ 1,224,634	\$ 2,723,523	\$ 70,752	\$ 40,867,549	\$ 40,713,879	\$ 1,811,535,262	\$ 3,332,485,000
SubTotal	\$ 35,312,507	\$ 28,151,043	\$ 35,538,477	\$ 2,053,776	\$ 912,216,540	\$ 799,117,807	\$ 37,034,570,810	\$ 68,994,568,000
Changes in Proportionate Share	2,119,997	(2,796,670)	20,848,350	(588,952)	(66,109,702)	43,807,504	470,808,566	0
Balances at June 30, 2019	\$ 37,432,504	\$ 25,354,373	\$ 56,386,827	\$ 1,464,824	\$ 846,106,838	\$ 842,925,311	\$ 37,505,379,376	\$ 68,994,568,000

Net Pension Liability

	<u>HDC/REMIC</u>	<u>State Courts</u>	<u>SCA</u>	<u>WEA</u>	<u>Senior Colleges</u>	<u>TBTA</u>	<u>City Total</u>	<u>TOTAL</u>
Balances at June 30, 2018	\$ 8,978,397	\$ 7,226,500	\$ 8,834,935	\$ 515,969	\$ 234,039,070	\$ 203,708,514	\$ 9,461,464,641	\$ 17,637,695,517
Adjustment for Census Data Fix	\$ 347,000	\$ 279,000	\$ 340,000	\$ 20,000	\$ 9,024,000	\$ 7,854,000	\$ 364,772,000	\$ 680,000,000
Balances at June 30, 2018 (Revised)	\$ 9,325,397	\$ 7,505,500	\$ 9,174,935	\$ 535,969	\$ 243,063,070	\$ 211,562,514	\$ 9,826,236,641	\$ 18,317,695,517
Changes for the Year:								
Service Cost	1,101,900	746,357	1,659,859	43,120	24,906,842	24,813,187	1,104,045,612	2,030,992,659
Interest	3,168,361	2,146,044	4,772,693	123,986	71,616,163	71,346,872	3,174,529,791	5,839,837,248
Changes of Benefit Terms	0	0	0	0	0	0	0	0
Differences b/t Expected and Actual experience	1,005,047	680,754	1,513,962	39,330	22,717,611	22,632,188	1,007,003,576	1,852,474,974
Changes of Assumptions	(503,984)	(341,366)	(759,181)	(19,722)	(11,391,816)	(11,348,981)	(504,965,067)	(928,929,318)
Contributions - Employer	(2,003,454)	(1,357,011)	(3,017,923)	(78,400)	(45,285,139)	(45,114,858)	(2,007,353,762)	(3,692,711,000)
Contributions - Employee	(297,209)	(201,310)	(447,703)	(11,630)	(6,717,967)	(6,692,706)	(297,787,347)	(547,807,000)
Net Investment Income	(2,407,930)	(1,630,977)	(3,627,209)	(94,228)	(54,427,716)	(54,223,057)	(2,412,617,467)	(4,438,230,000)
Benefit Payments	0	0	0	0	0	0	0	0
Payments to Other Retirement Systems	5,300	3,590	7,984	207	119,801	119,351	5,310,418	9,769,000
Transfers to Variable Supplements Funds	0	0	0	0	0	0	0	0
Administrative Expenses	44,528	30,160	67,075	1,742	1,006,493	1,002,708	44,614,803	82,073,000
Other Changes	(1,768)	(1,197)	(2,663)	(69)	(39,954)	(39,804)	(1,771,045)	(3,258,000)
Net Changes	\$ 110,791	\$ 75,044	\$ 166,894	\$ 4,336	\$ 2,504,318	\$ 2,494,900	\$ 111,009,512	\$ 204,211,563
SubTotal	\$ 9,436,188	\$ 7,580,544	\$ 9,341,829	\$ 540,305	\$ 245,567,388	\$ 214,057,414	\$ 9,937,246,153	\$ 18,521,907,080
Changes in Proportionate Share	612,738	(774,047)	5,795,472	(147,066)	(18,426,140)	12,229,737	131,244,338	0
Balances at June 30, 2019	\$ 10,048,926	\$ 6,806,497	\$ 15,137,301	\$ 393,239	\$ 227,141,248	\$ 226,287,151	\$ 10,068,490,491	\$ 18,521,907,080

¹ Balances at 6/30/2018 and 6/30/2019 are Adjusted Market Values - See Page 3.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Schedule of Changes in Net Pension Liability and Related Ratios

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
1. Total Pension Liability							
a. Service Cost	\$ 2,030,992,659	\$ 1,947,712,394	\$ 1,920,457,666	\$ 1,899,994,413	\$ 1,832,487,270	\$ 1,807,063,169	\$ 1,754,430,261
b. Interest	5,839,837,248	5,615,290,255	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	43,998,752	0	0	0	0	0
d. Differences b/t Expected and Actual Experience	1,852,474,974	(1,762,549,696)	(238,253,928)	(817,971,278)	(288,598,641)	0	0
e. Changes of Assumptions	(928,929,318)	17,732,814	0	2,563,091,847	0	0	0
f. Benefit Payments	(5,257,679,000)	(4,983,874,000)	(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	\$ 3,536,696,563	\$ 878,310,519	\$ 2,582,333,100	\$ 4,523,572,813	\$ 2,290,767,938	\$ 2,714,841,055	\$ 2,619,061,488
2. Total Pension Liability - Beginning¹	\$ 83,979,778,517	\$ 82,421,467,998	\$ 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	\$ 87,516,475,080	\$ 83,299,778,517	\$ 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	\$ 3,692,711,000	\$ 3,377,024,000	\$ 3,328,193,000	\$ 3,365,454,000	\$ 3,160,258,000	\$ 3,114,068,000	\$ 3,046,845,000
b. Contributions - Employee	547,807,000	523,535,000	513,514,000	485,508,000	467,129,000	447,689,000	437,775,000
c. Net Investment Income	4,438,230,000	5,155,519,000	6,982,152,000	1,171,904,000	1,175,109,000	8,262,487,000	4,967,056,000
d. Benefit Payments	(5,257,679,000)	(4,983,874,000)	(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	(9,769,000)	(9,055,000)	(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	0	0
g. Administrative Expenses	(82,073,000)	(59,689,000)	(59,671,000)	(56,683,000)	(54,635,000)	(50,431,000)	(48,666,000)
h. Other Changes	3,258,000	3,422,000	3,266,000	2,928,000	(347,323,000)	4,881,000	5,072,000
i. Net Changes in Fiduciary Net Position	\$ 3,332,485,000	\$ 4,006,882,000	\$ 6,112,888,000	\$ 467,525,000	\$ 69,261,000	\$ 7,768,785,000	\$ 4,539,237,000
5. Plan Fiduciary Net Position - Beginning	\$ 65,662,083,000	\$ 61,655,201,000	\$ 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	\$ 68,994,568,000	\$ 65,662,083,000	\$ 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	\$ 18,521,907,080	\$ 17,637,695,517	\$ 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	78.8%	78.8%	74.8%	69.6%	73.1%	75.3%	67.2%
9. Covered Employee Payroll²	\$ 14,459,118,057	\$ 12,834,129,514	\$ 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	128.1%	137.4%	165.4%	196.9%	164.4%	147.9%	193.0%

¹ Revised Total Pension Liability at June 30, 2018 due to census data fix.

² Projected employee payroll at time 1.0 under previous roll-forward methodology through 2018. Actual employee payroll at valuation date (time = 0) beginning in 2019.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Schedule of Employer Contributions (\$ in thousands)

Fiscal Year Ended June 30	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially Determined Contribution	\$ 3,694,365	\$ 3,377,024	\$ 3,328,193	\$ 3,365,454	\$ 3,160,258	\$ 3,114,068	\$ 3,046,845	\$ 3,017,004	\$ 2,387,216	\$ 2,197,717
Contributions in relation to the Actuarially Determined Contribution	<u>\$ 3,692,711</u>	<u>\$ 3,377,024</u>	<u>\$ 3,328,193</u>	<u>\$ 3,365,454</u>	<u>\$ 3,160,258</u>	<u>\$ 3,114,068</u>	<u>\$ 3,046,845</u>	<u>\$ 3,017,004</u>	<u>\$ 2,387,216</u>	<u>\$ 2,197,717</u>
Contribution Deficiency (Excess)	1,654	0	0	0	0	0	0	0	0	0
Contributions as a percentage of Covered employee payroll ¹	25.539%	26.313%	26.508%	27.279%	25.662%	25.561%	25.486%	25.540%	20.820%	20.020%

¹ Projected employee payroll at time 1.0 under previous roll-forward methodology through 2018. Actual employee payroll at valuation date (time = 0) beginning in 2019.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Average Expected Remaining Service Lives

<u>Group</u>	<u># Count</u>	Average Expected Remaining Service Life <u>@ 6/30/2018</u>
Active	190,572	12.63
Active Off Payroll	28,483	0
Terminated Vested	21,389	0
Retired	<u>154,116</u>	<u>0</u>
Total	394,560	6.10

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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	Differences between Expected and Actual Experience	Recognition Period (Years)									
			2018	2019	2020	2021	2022	2023	2024	2025	
2015	\$ (288,598,641)	3.37	(31,685,904)								
2016	\$ (817,971,278)	3.33	(245,637,020)	(81,060,218)							
2017	\$ (238,253,928)	5.60	(42,545,344)	(42,545,344)	(42,545,344)	(42,545,344)	(25,527,208)				
2018	\$ (1,762,549,696)	6.01	(293,269,500)	(293,269,500)	(293,269,500)	(293,269,500)	(293,269,500)	(293,269,500)	(2,932,696)		
2019	\$ 1,852,474,974	6.10		303,684,422	303,684,422	303,684,422	303,684,422	303,684,422	303,684,422	30,368,442	
Net increase (decrease) in Pension Expense			\$ (613,137,768)	\$ (113,190,640)	\$ (32,130,422)	\$ (32,130,422)	\$ (15,112,286)	\$ 10,414,922	\$ 300,751,726	\$ 30,368,442	

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)
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	Changes in Assumptions	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024	2025
2016	\$ 2,563,091,847	3.33	769,697,251	254,000,094						
2017	0	0.00	0	0						
2018	17,732,814	6.01	2,950,551	2,950,551	2,950,551	2,950,551	2,950,551	2,950,551	29,508	
2019	(928,929,318)	6.10		(152,283,495)	(152,283,495)	(152,283,495)	(152,283,495)	(152,283,495)	(152,283,495)	(15,228,348)
Net increase (decrease) in Pension Expense			\$ 772,647,802	\$ 104,667,150	\$ (149,332,944)	\$ (149,332,944)	\$ (149,332,944)	\$ (149,332,944)	\$ (152,253,987)	\$ (15,228,348)

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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**

Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2018	2019	2020	2021	2022	2023
2014	\$ (4,972,903,346)	5	(994,580,666)					
2015	\$ 2,624,717,092	5	524,943,419	524,943,416				
2016	\$ 2,659,093,478	5	531,818,694	531,818,694	531,818,702			
2017	\$ (3,124,101,464)	5	(624,820,294)	(624,820,294)	(624,820,294)	(624,820,288)		
2018	\$ (879,179,528)	5	(175,835,906)	(175,835,906)	(175,835,906)	(175,835,906)	(175,835,904)	
2019	\$ 120,067,125	5		24,013,424	24,013,424	24,013,424	24,013,424	24,013,429
Net increase (decrease) in Pension Expense			\$ (738,474,753)	\$ 280,119,334	\$ (244,824,074)	\$ (776,642,770)	\$ (151,822,480)	\$ 24,013,429

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Proportionate Share at 6/30/2015

Transit Operating	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 19.501%	Proportionate Share at 6/30/2015 18.840%	Change in Proportionate Share		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	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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 2.497%	Proportionate Share at 6/30/2015 2.812%	Change in Proportionate Share		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	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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.645%	Proportionate Share at 6/30/2015 0.660%	Change in Proportionate Share		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	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
Total	23,193,360,966	149,597,178	153,076,182	3,479,004		1,032,346	1,032,346	1,032,346	381,966
TA CP Engineers	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.770%	Proportionate Share at 6/30/2015 0.728%	Change in Proportionate Share		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	39,840,522	37,667,403	(2,173,119)	3.37	(644,842)	(644,842)	(644,842)	(238,593)
Net Pension Liability	18,019,267,147	138,748,357	131,180,265	(7,568,092)	3.37	(2,245,725)	(2,245,725)	(2,245,725)	(830,917)
Total	23,193,360,966	178,588,879	168,847,668	(9,741,211)		(2,890,567)	(2,890,567)	(2,890,567)	(1,069,510)

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 4.714%	Proportionate Share at 6/30/2015 4.770%	Change in Proportionate Share		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	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
HA HP	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.307%	Proportionate Share at 6/30/2015 0.302%	Change in Proportionate Share		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	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)
HHC	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 13.991%	Proportionate Share at 6/30/2015 14.030%	Change in Proportionate Share		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	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	3,254,028,544	9,045,411		2,684,098	2,684,098	2,684,098	993,117
OTB	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.344%	Proportionate Share at 6/30/2015 0.362%	Change in Proportionate Share		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	17,798,883	18,730,220	931,337	3.37	276,361	276,361	276,361	102,254
Net Pension Liability	18,019,267,147	61,986,279	65,229,747	3,243,468	3.37	962,453	962,453	962,453	356,109
Total	23,193,360,966	79,785,162	83,959,967	4,174,805		1,238,814	1,238,814	1,238,814	458,363

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.054%	Proportionate Share at 6/30/2015 0.053%	Change in Proportionate Share		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	2,794,011	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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.034%	Proportionate Share at 6/30/2015 0.032%	Change in Proportionate Share		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	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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.048%	Proportionate Share at 6/30/2015 0.042%	Change in Proportionate Share		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	2,483,565	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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.005%	Proportionate Share at 6/30/2015 0.005%	Change in Proportionate Share		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	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		0	0	0	0

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 1.151%	Proportionate Share at 6/30/2015 1.221%	Change in Proportionate Share		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)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 1.090%	Proportionate Share at 6/30/2015 1.205%	Change in Proportionate Share		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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 54.849%	Proportionate Share at 6/30/2015 54.938%	Change in Proportionate Share		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

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 18.840%	Proportionate Share at 6/30/2016 18.312%	Change in Proportionate Share		2016	2017	2018	2019
Deferred Outflows 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)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 2.812%	Proportionate Share at 6/30/2016 3.179%	Change in Proportionate Share	2016		2017	2018	2019	
Deferred Outflows 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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.660%	Proportionate Share at 6/30/2016 0.672%	Change in Proportionate Share	2016		2017	2018	2019	
Deferred Outflows 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)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.728%	Proportionate Share at 6/30/2016 0.736%	Change in Proportionate Share	2016		2017	2018	2019	
Deferred Outflows 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
Total	22,124,884,244	161,069,157	162,839,148	1,769,991		531,529	531,529	531,529	175,404

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 4.770%	Proportionate Share at 6/30/2016 4.703%	Change in Proportionate Share		2016	2017	2018	2019
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)
HA HP	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.302%	Proportionate Share at 6/30/2016 0.294%	Change in Proportionate Share		2016	2017	2018	2019
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)
HHC	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 14.030%	Proportionate Share at 6/30/2016 14.789%	Change in Proportionate Share		2016	2017	2018	2019
Deferred Outflows of Resources	(2,099,773,673)	(294,598,246)	(310,535,528)	(15,937,282)	3.33	(4,785,971)	(4,785,971)	(4,785,971)	(1,579,369)
Deferred Inflows of Resources	3,983,883,832	558,938,902	589,176,580	30,237,678	3.33	9,080,384	9,080,384	9,080,384	2,996,526
Net Pension Liability	20,240,774,085	2,839,780,604	2,993,408,079	153,627,475	3.33	46,134,377	46,134,377	46,134,377	15,224,344
Total	22,124,884,244	3,104,121,260	3,272,049,131	167,927,871		50,428,790	50,428,790	50,428,790	16,641,501
OTB	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.362%	Proportionate Share at 6/30/2016 0.613%	Change in Proportionate Share		2016	2017	2018	2019
Deferred Outflows of Resources	(2,099,773,673)	(7,601,181)	(12,871,613)	(5,270,432)	3.33	(1,582,712)	(1,582,712)	(1,582,712)	(522,296)
Deferred Inflows of Resources	3,983,883,832	14,421,659	24,421,208	9,999,549	3.33	3,002,868	3,002,868	3,002,868	990,945
Net Pension Liability	20,240,774,085	73,271,602	124,075,945	50,804,343	3.33	15,256,559	15,256,559	15,256,559	5,034,666
Total	22,124,884,244	80,092,080	135,625,540	55,533,460		16,676,715	16,676,715	16,676,715	5,503,315

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.053%	Proportionate Share at 6/30/2016 0.053%	Change in Proportionate Share		2016	2017	2018	2019
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)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.032%	Proportionate Share at 6/30/2016 0.031%	Change in Proportionate Share		2016	2017	2018	2019
Deferred Outflows of Resources	(2,099,773,673)	(671,928)	(650,930)	20,998	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)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.042%	Proportionate Share at 6/30/2016 0.055%	Change in Proportionate Share		2016	2017	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
WEA	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.005%	Proportionate Share at 6/30/2016 0.005%	Change in Proportionate Share		2016	2017	2018	2019
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

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 1.221%	Proportionate Share at 6/30/2016 1.247%	Change in Proportionate Share		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)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 1.205%	Proportionate Share at 6/30/2016 1.266%	Change in Proportionate Share		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)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 54.938%	Proportionate Share at 6/30/2016 54.045%	Change in Proportionate Share		2016	2017	2018	2019
Deferred Outflows 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)

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017	Change in Proportionate Share		2017	2018	2019	2020	2021	2022
Deferred Outflows 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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017	Change in Proportionate Share	2017		2018	2019	2020	2021	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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017	Change in Proportionate Share	2017		2018	2019	2020	2021	2022	
Deferred Outflows 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)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016	Proportionate Share at 6/30/2017	Change in Proportionate Share	2017		2018	2019	2020	2021	2022	
Deferred Outflows of Resources	(5,495,499,634)	(40,446,877)	(43,139,672)	(2,692,795)	5.60	(480,856)	(480,856)	(480,856)	(480,856)	(480,856)	(288,515)
Deferred Inflows of Resources	3,077,409,462	22,649,734	24,157,664	1,507,930	5.60	269,273	269,273	269,273	269,273	269,273	161,565
Net Pension Liability	24,296,821,898	178,824,609	190,730,052	11,905,443	5.60	2,125,972	2,125,972	2,125,972	2,125,972	2,125,972	1,275,583
Total	21,878,731,726	161,027,466	171,748,044	10,720,578		1,914,389	1,914,389	1,914,389	1,914,389	1,914,389	1,148,633

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 4.703%	Proportionate Share at 6/30/2017 4.685%	Change in Proportionate Share		2017	2018	2019	2020	2021	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)
HA HP	(1)	(2)	(3)	(3) - (2)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.294%	Proportionate Share at 6/30/2017 0.288%	Change in Proportionate Share	Recognition Period (Years)	2017	2018	2019	2020	2021	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)
HHC	(1)	(2)	(3)	(3) - (2)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	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	Recognition Period (Years)	2017	2018	2019	2020	2021	2022
Deferred Outflows of Resources	(5,495,499,634)	(812,729,441)	(812,674,486)	54,955	5.60	9,813	9,813	9,813	9,813	9,813	5,890
Deferred Inflows of Resources	3,077,409,462	455,118,085	455,087,311	(30,774)	5.60	(5,495)	(5,495)	(5,495)	(5,495)	(5,495)	(3,299)
Net Pension Liability	24,296,821,898	3,593,256,990	3,593,014,022	(242,968)	5.60	(43,387)	(43,387)	(43,387)	(43,387)	(43,387)	(26,033)
Total	21,878,731,726	3,235,645,634	3,235,426,847	(218,787)		(39,069)	(39,069)	(39,069)	(39,069)	(39,069)	(23,442)
OTB	(1)	(2)	(3)	(3) - (2)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.613%	Proportionate Share at 6/30/2017 0.556%	Change in Proportionate Share	Recognition Period (Years)	2017	2018	2019	2020	2021	2022
Deferred Outflows of Resources	(5,495,499,634)	(33,687,413)	(30,554,978)	3,132,435	5.60	559,363	559,363	559,363	559,363	559,363	335,620
Deferred Inflows of Resources	3,077,409,462	18,864,520	17,110,397	(1,754,123)	5.60	(313,236)	(313,236)	(313,236)	(313,236)	(313,236)	(187,943)
Net Pension Liability	24,296,821,898	148,939,518	135,090,330	(13,849,188)	5.60	(2,473,069)	(2,473,069)	(2,473,069)	(2,473,069)	(2,473,069)	(1,483,843)
Total	21,878,731,726	134,116,625	121,645,749	(12,470,876)		(2,226,942)	(2,226,942)	(2,226,942)	(2,226,942)	(2,226,942)	(1,336,166)

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)
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)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	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		2017	2018	2019	2020	2021	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
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State Courts	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.031%	Proportionate Share at 6/30/2017 0.036%	Change in Proportionate Share		2017	2018	2019	2020	2021	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
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SCA	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.055%	Proportionate Share at 6/30/2017 0.040%	Change in Proportionate Share		2017	2018	2019	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	13,363,252	9,718,729	(3,644,523)	5.60	(650,808)	(650,808)	(650,808)	(650,808)	(650,808)	(390,483)
Total	21,878,731,726	12,033,302	8,751,493	(3,281,809)		(586,038)	(586,038)	(586,038)	(586,038)	(586,038)	(351,619)
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WFA	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.005%	Proportionate Share at 6/30/2017 0.004%	Change in Proportionate Share		2017	2018	2019	2020	2021	2022
Deferred Outflows of Resources	(5,495,499,634)	(274,775)	(219,820)	54,955	5.60	9,813	9,813	9,813	9,813	9,813	5,890
Deferred Inflows of Resources	3,077,409,462	153,870	123,096	(30,774)	5.60	(5,495)	(5,495)	(5,495)	(5,495)	(5,495)	(3,299)
Net Pension Liability	24,296,821,898	1,214,841	971,873	(242,968)	5.60	(43,387)	(43,387)	(43,387)	(43,387)	(43,387)	(26,033)
Total	21,878,731,726	1,093,936	875,149	(218,787)		(39,069)	(39,069)	(39,069)	(39,069)	(39,069)	(23,442)

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 1.247%	Proportionate Share at 6/30/2017 1.167%	Change in Proportionate Share		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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 1.266%	Proportionate Share at 6/30/2017 1.308%	Change in Proportionate Share		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)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 54.045%	Proportionate Share at 6/30/2017 53.591%	Change in Proportionate Share		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)

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Proportionate Share at 6/30/2018

Transit Operating	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 18.243%	Proportionate Share at 6/30/2018 17.164%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(1,023,697,345)	(186,753,107)	(175,707,412)	11,045,695	6.01	1,837,886	1,837,886	1,837,886	1,837,886	1,837,886	1,837,886	18,379
Deferred Inflows of Resources	1,402,610,637	255,878,259	240,744,090	(15,134,169)	6.01	(2,518,165)	(2,518,165)	(2,518,165)	(2,518,165)	(2,518,165)	(2,518,165)	(25,179)
Net Pension Liability	20,766,266,998	3,788,390,088	3,564,322,068	(224,068,020)	6.01	(37,282,532)	(37,282,532)	(37,282,532)	(37,282,532)	(37,282,532)	(37,282,532)	(372,828)
Total	21,145,180,290	3,857,515,240	3,629,358,746	(228,156,494)		(37,962,811)	(37,962,811)	(37,962,811)	(37,962,811)	(37,962,811)	(37,962,811)	(379,628)
TA Non-Operating	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 3.760%	Proportionate Share at 6/30/2018 4.551%	Change in Proportionate Share	2018		2019	2020	2021	2022	2023	2024	
Deferred Outflows of Resources	(1,023,697,345)	(38,491,020)	(46,588,466)	(8,097,446)	6.01	(1,347,329)	(1,347,329)	(1,347,329)	(1,347,329)	(1,347,329)	(1,347,329)	(13,472)
Deferred Inflows of Resources	1,402,610,637	52,738,160	63,832,810	11,094,650	6.01	1,846,032	1,846,032	1,846,032	1,846,032	1,846,032	1,846,032	18,458
Net Pension Liability	20,766,266,998	780,811,639	945,072,811	164,261,172	6.01	27,331,310	27,331,310	27,331,310	27,331,310	27,331,310	27,331,310	273,312
Total	21,145,180,290	795,058,779	962,317,155	167,258,376		27,830,013	27,830,013	27,830,013	27,830,013	27,830,013	27,830,013	278,298
TA TP	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 0.696%	Proportionate Share at 6/30/2018 0.751%	Change in Proportionate Share	2018		2019	2020	2021	2022	2023	2024	
Deferred Outflows of Resources	(1,023,697,345)	(7,124,934)	(7,687,967)	(563,033)	6.01	(93,683)	(93,683)	(93,683)	(93,683)	(93,683)	(93,683)	(935)
Deferred Inflows of Resources	1,402,610,637	9,762,170	10,533,606	771,436	6.01	128,359	128,359	128,359	128,359	128,359	128,359	1,282
Net Pension Liability	20,766,266,998	144,533,218	155,954,665	11,421,447	6.01	1,900,407	1,900,407	1,900,407	1,900,407	1,900,407	1,900,407	19,005
Total	21,145,180,290	147,170,454	158,800,304	11,629,850		1,935,083	1,935,083	1,935,083	1,935,083	1,935,083	1,935,083	19,352
TA CP Engineers	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 0.785%	Proportionate Share at 6/30/2018 0.812%	Change in Proportionate Share	2018		2019	2020	2021	2022	2023	2024	
Deferred Outflows of Resources	(1,023,697,345)	(8,036,024)	(8,312,422)	(276,398)	6.01	(45,990)	(45,990)	(45,990)	(45,990)	(45,990)	(45,990)	(458)
Deferred Inflows of Resources	1,402,610,637	11,010,494	11,389,198	378,704	6.01	63,012	63,012	63,012	63,012	63,012	63,012	632
Net Pension Liability	20,766,266,998	163,015,196	168,622,088	5,606,892	6.01	932,927	932,927	932,927	932,927	932,927	932,927	9,330
Total	21,145,180,290	165,989,666	171,698,864	5,709,198		949,949	949,949	949,949	949,949	949,949	949,949	9,504

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Proportionate Share at 6/30/2018

HA Regular	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 4.685%	Proportionate Share at 6/30/2018 4.572%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023	2024
	Deferred Outflows of Resources	(1,023,697,345)	(47,960,221)	(46,803,443)		1,156,778	6.01	192,476	192,476	192,476	192,476	192,476
Deferred Inflows of Resources	1,402,610,637	65,712,308	64,127,358	(1,584,950)	6.01	(263,719)	(263,719)	(263,719)	(263,719)	(263,719)	(263,719)	(2,636)
Net Pension Liability	20,766,266,998	972,899,609	949,433,727	(23,465,882)	6.01	(3,904,473)	(3,904,473)	(3,904,473)	(3,904,473)	(3,904,473)	(3,904,473)	(39,044)
Total	21,145,180,290	990,651,696	966,757,642	(23,894,054)		(3,975,716)	(3,975,716)	(3,975,716)	(3,975,716)	(3,975,716)	(3,975,716)	(39,758)
HA HP	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 0.288%	Proportionate Share at 6/30/2018 0.313%	Change in Proportionate Share	2018		2019	2020	2021	2022	2023	2024	
Deferred Outflows of Resources	(1,023,697,345)	(2,948,248)	(3,204,173)	(255,925)		6.01	(42,583)	(42,583)	(42,583)	(42,583)	(42,583)	(42,583)
Deferred Inflows of Resources	1,402,610,637	4,039,519	4,390,171	350,652	6.01	58,345	58,345	58,345	58,345	58,345	58,345	582
Net Pension Liability	20,766,266,998	59,806,849	64,998,416	5,191,567	6.01	863,821	863,821	863,821	863,821	863,821	863,821	8,641
Total	21,145,180,290	60,898,120	66,184,414	5,286,294		879,583	879,583	879,583	879,583	879,583	879,583	8,796
HHC	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 14.788%	Proportionate Share at 6/30/2018 15.023%	Change in Proportionate Share	2018		2019	2020	2021	2022	2023	2024	
Deferred Outflows of Resources	(1,023,697,345)	(151,384,363)	(153,790,052)	(2,405,689)		6.01	(400,281)	(400,281)	(400,281)	(400,281)	(400,281)	(400,281)
Deferred Inflows of Resources	1,402,610,637	207,418,061	210,714,196	3,296,135	6.01	548,442	548,442	548,442	548,442	548,442	548,442	5,483
Net Pension Liability	20,766,266,998	3,070,915,564	3,119,716,291	48,800,727	6.01	8,119,921	8,119,921	8,119,921	8,119,921	8,119,921	8,119,921	81,201
Total	21,145,180,290	3,126,949,262	3,176,640,435	49,691,173		8,268,082	8,268,082	8,268,082	8,268,082	8,268,082	8,268,082	82,681
OTB	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 0.556%	Proportionate Share at 6/30/2018 0.544%	Change in Proportionate Share	2018		2019	2020	2021	2022	2023	2024	
Deferred Outflows of Resources	(1,023,697,345)	(5,691,757)	(5,568,914)	122,843		6.01	20,440	20,440	20,440	20,440	20,440	20,440
Deferred Inflows of Resources	1,402,610,637	7,798,515	7,630,202	(168,313)	6.01	(28,005)	(28,005)	(28,005)	(28,005)	(28,005)	(28,005)	(283)
Net Pension Liability	20,766,266,998	115,460,445	112,968,492	(2,491,953)	6.01	(414,634)	(414,634)	(414,634)	(414,634)	(414,634)	(414,634)	(4,149)
Total	21,145,180,290	117,567,203	115,029,780	(2,537,423)		(422,199)	(422,199)	(422,199)	(422,199)	(422,199)	(422,199)	(4,229)

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Proportionate Share at 6/30/2018

HDC/REMIC	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 0.053%	Proportionate Share at 6/30/2018 0.051%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(1,023,697,345)	(542,560)	(522,086)	20,474	6.01	3,407	3,407	3,407	3,407	3,407	3,407	32
Deferred Inflows of Resources	1,402,610,637	743,384	715,331	(28,053)	6.01	(4,668)	(4,668)	(4,668)	(4,668)	(4,668)	(4,668)	(45)
Net Pension Liability	20,766,266,998	11,006,122	10,590,796	(415,326)	6.01	(69,106)	(69,106)	(69,106)	(69,106)	(69,106)	(69,106)	(690)
Total	21,145,180,290	11,206,946	10,784,041	(422,905)		(70,367)	(70,367)	(70,367)	(70,367)	(70,367)	(70,367)	(703)
State Courts	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Deferred Outflows of Resources	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 0.036%	Proportionate Share at 6/30/2018 0.041%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(1,023,697,345)	(368,531)	(419,716)	(51,185)	6.01	(8,517)	(8,517)	(8,517)	(8,517)	(8,517)	(8,517)	(83)
Deferred Inflows of Resources	1,402,610,637	504,940	575,070	70,130	6.01	11,669	11,669	11,669	11,669	11,669	11,669	116
Net Pension Liability	20,766,266,998	7,475,856	8,514,169	1,038,313	6.01	172,764	172,764	172,764	172,764	172,764	172,764	1,729
Total	21,145,180,290	7,612,265	8,669,523	1,057,258		175,916	175,916	175,916	175,916	175,916	175,916	1,762
SCA	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Deferred Outflows of Resources	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 0.040%	Proportionate Share at 6/30/2018 0.050%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(1,023,697,345)	(409,479)	(511,849)	(102,370)	6.01	(17,033)	(17,033)	(17,033)	(17,033)	(17,033)	(17,033)	(172)
Deferred Inflows of Resources	1,402,610,637	561,044	701,305	140,261	6.01	23,338	23,338	23,338	23,338	23,338	23,338	233
Net Pension Liability	20,766,266,998	8,306,507	10,383,133	2,076,626	6.01	345,528	345,528	345,528	345,528	345,528	345,528	3,458
Total	21,145,180,290	8,458,072	10,572,589	2,114,517		351,833	351,833	351,833	351,833	351,833	351,833	3,519
WFA	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Deferred Outflows of Resources	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 0.004%	Proportionate Share at 6/30/2018 0.003%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(1,023,697,345)	(40,948)	(30,711)	10,237	6.01	1,703	1,703	1,703	1,703	1,703	1,703	19
Deferred Inflows of Resources	1,402,610,637	56,104	42,078	(14,026)	6.01	(2,334)	(2,334)	(2,334)	(2,334)	(2,334)	(2,334)	(22)
Net Pension Liability	20,766,266,998	830,651	622,988	(207,663)	6.01	(34,553)	(34,553)	(34,553)	(34,553)	(34,553)	(34,553)	(345)
Total	21,145,180,290	845,807	634,355	(211,452)		(35,184)	(35,184)	(35,184)	(35,184)	(35,184)	(35,184)	(348)

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Proportionate Share at 6/30/2018

Senior College	(1)	(2)	(3)	(3) - (2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 1.167%	Proportionate Share at 6/30/2018 1.327%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(1,023,697,345)	(11,946,548)	(13,584,464)	(1,637,916)	6.01	(272,532)	(272,532)	(272,532)	(272,532)	(272,532)	(272,532)	(2,724)
Deferred Inflows of Resources	1,402,610,637	16,368,466	18,612,643	2,244,177	6.01	373,407	373,407	373,407	373,407	373,407	373,407	3,735
Net Pension Liability	20,766,266,998	242,342,336	275,568,363	33,226,027	6.01	5,528,457	5,528,457	5,528,457	5,528,457	5,528,457	5,528,457	55,285
Total	21,145,180,290	246,764,254	280,596,542	33,832,288		5,629,332	5,629,332	5,629,332	5,629,332	5,629,332	5,629,332	56,296
TBTA	(1)	(2)	(3)	(3) - (2)								
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 1.308%	Proportionate Share at 6/30/2018 1.155%	Change in Proportionate Share	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(1,023,697,345)	(13,389,961)	(11,823,704)	1,566,257	6.01	260,608	260,608	260,608	260,608	260,608	260,608	2,609
Deferred Inflows of Resources	1,402,610,637	18,346,147	16,200,153	(2,145,994)	6.01	(357,071)	(357,071)	(357,071)	(357,071)	(357,071)	(357,071)	(3,568)
Net Pension Liability	20,766,266,998	271,622,772	239,850,384	(31,772,388)	6.01	(5,286,587)	(5,286,587)	(5,286,587)	(5,286,587)	(5,286,587)	(5,286,587)	(52,866)
Total	21,145,180,290	276,578,958	244,226,833	(32,352,125)		(5,383,050)	(5,383,050)	(5,383,050)	(5,383,050)	(5,383,050)	(5,383,050)	(53,825)
City	(1)	(2)	(3)	(3) - (2)								
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 53.591%	Proportionate Share at 6/30/2018 53.643%	Change in Proportionate Share	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(1,023,697,345)	(548,609,644)	(549,141,966)	(532,322)	6.01	(88,572)	(88,572)	(88,572)	(88,572)	(88,572)	(88,572)	(890)
Deferred Inflows of Resources	1,402,610,637	751,673,066	752,402,426	729,360	6.01	121,358	121,358	121,358	121,358	121,358	121,358	1,212
Net Pension Liability	20,766,266,998	11,128,850,147	11,139,648,608	10,798,461	6.01	1,796,750	1,796,750	1,796,750	1,796,750	1,796,750	1,796,750	17,961
Total	21,145,180,290	11,331,913,569	11,342,909,068	10,995,499		1,829,536	1,829,536	1,829,536	1,829,536	1,829,536	1,829,536	18,283

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Proportionate Share at 6/30/2019

Transit Operating	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 17.164%	Proportionate Share at 6/30/2019 17.447%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(46,133,804)	(46,895,708)		(761,904)	6.10	(124,902)	(124,902)	(124,902)	(124,902)	(124,902)	(124,902)	(12,492)
Deferred Inflows of Resources	2,692,727,340	462,179,721	469,812,668		7,632,947	6.10	1,251,303	1,251,303	1,251,303	1,251,303	1,251,303	1,251,303	125,129
Net Pension Liability	18,317,695,517	3,144,049,259	3,195,973,566	(2,640)	51,921,667	6.10	8,511,749	8,511,749	8,511,749	8,511,749	8,511,749	8,511,749	851,173
Total	20,741,640,500	3,560,095,176	3,618,890,526	(2,640)	58,792,710		9,638,150	9,638,150	9,638,150	9,638,150	9,638,150	9,638,150	963,810
TA Non-Operating	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 4.551%	Proportionate Share at 6/30/2019 4.988%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(12,232,285)	(13,407,657)		(1,175,372)	6.10	(192,684)	(192,684)	(192,684)	(192,684)	(192,684)	(192,684)	(19,268)
Deferred Inflows of Resources	2,692,727,340	122,546,021	134,321,180		11,775,159	6.10	1,930,354	1,930,354	1,930,354	1,930,354	1,930,354	1,930,354	193,035
Net Pension Liability	18,317,695,517	833,638,323	913,740,665	4,351	80,106,693	6.10	13,132,245	13,132,245	13,132,245	13,132,245	13,132,245	13,132,245	1,313,223
Total	20,741,640,500	943,952,059	1,034,654,188	4,351	90,706,480		14,869,915	14,869,915	14,869,915	14,869,915	14,869,915	14,869,915	1,486,990
TA TP	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 0.751%	Proportionate Share at 6/30/2019 0.710%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(2,018,556)	(1,909,322)		109,234	6.10	17,907	17,907	17,907	17,907	17,907	17,907	1,792
Deferred Inflows of Resources	2,692,727,340	20,222,382	19,128,057		(1,094,325)	6.10	(179,398)	(179,398)	(179,398)	(179,398)	(179,398)	(179,398)	(17,937)
Net Pension Liability	18,317,695,517	137,565,893	130,121,574	18,551	(7,425,768)	6.10	(1,217,339)	(1,217,339)	(1,217,339)	(1,217,339)	(1,217,339)	(1,217,339)	(121,734)
Total	20,741,640,500	155,769,719	147,340,309	18,551	(8,410,859)		(1,378,830)	(1,378,830)	(1,378,830)	(1,378,830)	(1,378,830)	(1,378,830)	(137,879)
TA CP Engineers	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 0.812%	Proportionate Share at 6/30/2019 0.835%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(2,182,513)	(2,244,834)		(62,321)	6.10	(10,217)	(10,217)	(10,217)	(10,217)	(10,217)	(10,217)	(1,019)
Deferred Inflows of Resources	2,692,727,340	21,864,946	22,489,293		624,347	6.10	102,352	102,352	102,352	102,352	102,352	102,352	10,235
Net Pension Liability	18,317,695,517	148,739,688	152,986,903	9,000	4,256,215	6.10	697,740	697,740	697,740	697,740	697,740	697,740	69,775
Total	20,741,640,500	168,422,121	173,231,362	9,000	4,818,241		789,875	789,875	789,875	789,875	789,875	789,875	78,991

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Proportionate Share at 6/30/2019

HA Regular	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 4.572%	Proportionate Share at 6/30/2019 4.145%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(12,288,729)	(11,140,338)		1,148,391	6.10	188,261	188,261	188,261	188,261	188,261	188,261	18,825
Deferred Inflows of Resources	2,692,727,340	123,111,494	111,606,627		(11,504,867)	6.10	(1,886,044)	(1,886,044)	(1,886,044)	(1,886,044)	(1,886,044)	(1,886,044)	(188,603)
Net Pension Liability	18,317,695,517	837,485,039	759,221,394	7,019	(78,256,626)	6.10	(12,828,955)	(12,828,955)	(12,828,955)	(12,828,955)	(12,828,955)	(12,828,955)	(1,282,896)
Total	20,741,640,500	948,307,804	859,687,683	7,019	(88,613,102)		(14,526,738)	(14,526,738)	(14,526,738)	(14,526,738)	(14,526,738)	(14,526,738)	(1,452,674)
HA HP	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 0.313%	Proportionate Share at 6/30/2019 0.294%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(841,289)	(789,766)		51,523	6.10	8,446	8,446	8,446	8,446	8,446	8,446	847
Deferred Inflows of Resources	2,692,727,340	8,428,237	7,912,072		(516,165)	6.10	(84,617)	(84,617)	(84,617)	(84,617)	(84,617)	(84,617)	(8,463)
Net Pension Liability	18,317,695,517	57,334,387	53,823,099	(5,408)	(3,516,696)	6.10	(576,508)	(576,508)	(576,508)	(576,508)	(576,508)	(576,508)	(57,648)
Total	20,741,640,500	64,921,335	60,945,405	(5,408)	(3,981,338)		(652,679)	(652,679)	(652,679)	(652,679)	(652,679)	(652,679)	(65,264)
HHC	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 15.023%	Proportionate Share at 6/30/2019 13.959%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(40,379,173)	(37,518,475)		2,860,698	6.10	468,967	468,967	468,967	468,967	468,967	468,967	46,896
Deferred Inflows of Resources	2,692,727,340	404,528,428	375,869,254		(28,659,174)	6.10	(4,698,225)	(4,698,225)	(4,698,225)	(4,698,225)	(4,698,225)	(4,698,225)	(469,824)
Net Pension Liability	18,317,695,517	2,751,867,398	2,556,908,915	(6,879)	(194,965,362)	6.10	(31,961,535)	(31,961,535)	(31,961,535)	(31,961,535)	(31,961,535)	(31,961,535)	(3,196,152)
Total	20,741,640,500	3,116,016,653	2,895,259,694	(6,879)	(220,763,838)		(36,190,793)	(36,190,793)	(36,190,793)	(36,190,793)	(36,190,793)	(36,190,793)	(3,619,080)
OTB	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 0.544%	Proportionate Share at 6/30/2019 0.639%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(1,462,176)	(1,716,492)		(254,316)	6.10	(41,691)	(41,691)	(41,691)	(41,691)	(41,691)	(41,691)	(4,170)
Deferred Inflows of Resources	2,692,727,340	14,648,437	17,196,235		2,547,798	6.10	417,672	417,672	417,672	417,672	417,672	417,672	41,766
Net Pension Liability	18,317,695,517	99,648,264	116,980,054	13,055	17,344,845	6.10	2,843,417	2,843,417	2,843,417	2,843,417	2,843,417	2,843,417	284,343
Total	20,741,640,500	112,834,525	132,459,797	13,055	19,638,327		3,219,398	3,219,398	3,219,398	3,219,398	3,219,398	3,219,398	321,939

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Proportionate Share at 6/30/2019

HDC/REMIC	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 0.051%	Proportionate Share at 6/30/2019 0.054%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(137,079)	(145,826)		(8,747)	6.10	(1,434)	(1,434)	(1,434)	(1,434)	(1,434)	(1,434)	(143)
Deferred Inflows of Resources	2,692,727,340	1,373,291	1,460,920		87,629	6.10	14,365	14,365	14,365	14,365	14,365	14,365	1,439
Net Pension Liability	18,317,695,517	9,342,025	9,938,133	16,630	612,738	6.10	100,449	100,449	100,449	100,449	100,449	100,449	10,044
Total	20,741,640,500	10,578,237	11,253,227	16,630	691,620		113,380	113,380	113,380	113,380	113,380	113,380	11,340
State Courts	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 0.041%	Proportionate Share at 6/30/2019 0.037%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share	2019		2020	2021	2022	2023	2024	2025	
Deferred Outflows of Resources	(268,782,357)	(110,201)	(98,773)		11,428	6.10	1,873	1,873	1,873	1,873	1,873	1,873	190
Deferred Inflows of Resources	2,692,727,340	1,104,018	989,533		(114,485)	6.10	(18,768)	(18,768)	(18,768)	(18,768)	(18,768)	(18,768)	(1,877)
Net Pension Liability	18,317,695,517	7,510,255	6,731,453	4,755	(774,047)	6.10	(126,893)	(126,893)	(126,893)	(126,893)	(126,893)	(126,893)	(12,689)
Total	20,741,640,500	8,504,072	7,622,213	4,755	(877,104)		(143,788)	(143,788)	(143,788)	(143,788)	(143,788)	(143,788)	(14,376)
SCA	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 0.050%	Proportionate Share at 6/30/2019 0.082%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share	2019		2020	2021	2022	2023	2024	2025	
Deferred Outflows of Resources	(268,782,357)	(134,391)	(219,666)		(85,275)	6.10	(13,980)	(13,980)	(13,980)	(13,980)	(13,980)	(13,980)	(1,395)
Deferred Inflows of Resources	2,692,727,340	1,346,364	2,200,671		854,307	6.10	140,050	140,050	140,050	140,050	140,050	140,050	14,007
Net Pension Liability	18,317,695,517	9,158,848	14,970,406	(16,086)	5,795,472	6.10	950,077	950,077	950,077	950,077	950,077	950,077	95,010
Total	20,741,640,500	10,370,821	16,951,411	(16,086)	6,564,504		1,076,147	1,076,147	1,076,147	1,076,147	1,076,147	1,076,147	107,622
WFA	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 0.003%	Proportionate Share at 6/30/2019 0.002%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share	2019		2020	2021	2022	2023	2024	2025	
Deferred Outflows of Resources	(268,782,357)	(8,063)	(5,707)		2,356	6.10	386	386	386	386	386	386	40
Deferred Inflows of Resources	2,692,727,340	80,782	57,169		(23,613)	6.10	(3,871)	(3,871)	(3,871)	(3,871)	(3,871)	(3,871)	(387)
Net Pension Liability	18,317,695,517	549,531	388,903	13,562	(147,066)	6.10	(24,109)	(24,109)	(24,109)	(24,109)	(24,109)	(24,109)	(2,412)
Total	20,741,640,500	622,250	440,365	13,562	(168,323)		(27,594)	(27,594)	(27,594)	(27,594)	(27,594)	(27,594)	(2,759)

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Changes in Proportionate Share at 6/30/2019

Senior College	(1)	(2)	(3)	(4)	(3) - (2) + (4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 1.327%	Proportionate Share at 6/30/2019 1.226%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(3,566,742)	(3,296,181)		270,561	6.10	44,354	44,354	44,354	44,354	44,354	44,354	4,437
Deferred Inflows of Resources	2,692,727,340	35,732,492	33,021,948		(2,710,544)	6.10	(444,351)	(444,351)	(444,351)	(444,351)	(444,351)	(444,351)	(44,438)
Net Pension Liability	18,317,695,517	243,075,820	224,636,923	12,757	(18,426,140)	6.10	(3,020,679)	(3,020,679)	(3,020,679)	(3,020,679)	(3,020,679)	(3,020,679)	(302,066)
Total	20,741,640,500	275,241,570	254,362,690	12,757	(20,866,123)		(3,420,676)	(3,420,676)	(3,420,676)	(3,420,676)	(3,420,676)	(3,420,676)	(342,067)
TBTA	(1)	(2)	(3)	(4)	(3) - (2) + (4)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 1.155%	Proportionate Share at 6/30/2019 1.222%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(3,104,436)	(3,283,787)		(179,351)	6.10	(29,402)	(29,402)	(29,402)	(29,402)	(29,402)	(29,402)	(2,939)
Deferred Inflows of Resources	2,692,727,340	31,101,001	32,897,779		1,796,778	6.10	294,554	294,554	294,554	294,554	294,554	294,554	29,454
Net Pension Liability	18,317,695,517	211,569,383	223,792,244	6,876	12,229,737	6.10	2,004,875	2,004,875	2,004,875	2,004,875	2,004,875	2,004,875	200,487
Total	20,741,640,500	239,565,948	253,406,236	6,876	13,847,164		2,270,027	2,270,027	2,270,027	2,270,027	2,270,027	2,270,027	227,002
City	(1)	(2)	(3)	(4)	(3) - (2) + (4)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30						
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 53.643%	Proportionate Share at 6/30/2019 54.360%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share	Recognition Period (Years)	2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(268,782,357)	(144,182,920)	(146,109,825)		(1,926,905)	6.10	(315,884)	(315,884)	(315,884)	(315,884)	(315,884)	(315,884)	(31,601)
Deferred Inflows of Resources	2,692,727,340	1,444,459,727	1,463,763,935		19,304,208	6.10	3,164,624	3,164,624	3,164,624	3,164,624	3,164,624	3,164,624	316,464
Net Pension Liability	18,317,695,517	9,826,161,406	9,957,481,287	(75,543)	131,244,338	6.10	21,515,466	21,515,466	21,515,466	21,515,466	21,515,466	21,515,466	2,151,542
Total	20,741,640,500	11,126,438,213	11,275,135,397	(75,543)	148,621,641		24,364,206	24,364,206	24,364,206	24,364,206	24,364,206	24,364,206	2,436,405

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Components of Pension Expense for the Fiscal Year Ended June 30, 2018

<u>Component</u>	<u>Transit</u> <u>Operating</u>	<u>TA Non-</u> <u>Operating</u>	<u>TA TP</u>	<u>TA CP</u> <u>Engineers</u>	<u>HA Regular</u>	<u>HA HP</u>
a. Service Cost	\$ 334,305,355	\$ 88,640,391	\$ 14,627,320	\$ 15,815,425	\$ 89,049,411	\$ 6,096,340
b. Interest on the Total Pension Liability	963,808,419	255,551,860	42,170,830	45,596,157	256,731,070	17,575,858
c. Changes of Benefit Terms	7,551,946	2,002,383	330,431	357,270	2,011,623	137,716
d. Differences between Expected and Actual Experience	(105,238,966)	(27,903,900)	(4,604,665)	(4,978,679)	(28,032,659)	(1,919,121)
e. Changes of Assumptions	132,617,269	35,163,201	5,802,585	6,273,900	35,325,458	2,418,388
f. Employee Contributions	(89,859,547)	(23,826,078)	(3,931,748)	(4,251,104)	(23,936,020)	(1,638,665)
g. Projected Earnings on Pension Plan Investments	(733,990,907)	(194,616,209)	(32,115,309)	(34,723,877)	(195,514,241)	(13,384,943)
h. Differences between Projected and Actual Earnings on Plan Investments	(126,751,807)	(33,607,986)	(5,545,945)	(5,996,415)	(33,763,066)	(2,311,426)
i. Pension Plan Administrative Expenses	10,245,020	2,716,446	448,264	484,675	2,728,981	186,827
j. Other Changes in Fiduciary Net Position ¹	966,848	256,358	42,304	45,740	257,541	17,631
k. Changes in Proportionate Share	(92,571,530)	82,934,403	4,052,001	2,326,357	(7,704,502)	(13,684)
Total Pension Expense	\$ 301,082,100	\$ 187,310,869	\$ 21,276,068	\$ 20,949,449	\$ 97,153,596	\$ 7,164,921

<u>Component</u>	<u>HHC</u>	<u>OTB</u>	<u>HDC/REMIC</u>	<u>State Courts</u>	<u>SCA</u>	<u>WFA</u>
a. Service Cost	\$ 292,604,833	\$ 10,595,555	\$ 993,333	\$ 798,562	\$ 973,856	\$ 58,431
b. Interest on the Total Pension Liability	843,585,055	30,547,179	2,863,798	2,302,269	2,807,645	168,459
c. Changes of Benefit Terms	6,609,933	239,353	22,439	18,039	21,999	1,320
d. Differences between Expected and Actual Experience	(92,111,687)	(3,335,469)	(312,700)	(251,386)	(306,569)	(18,394)
e. Changes of Assumptions	116,074,879	4,203,204	394,050	316,786	386,324	23,179
f. Employee Contributions	(78,650,663)	(2,848,030)	(267,003)	(214,649)	(261,768)	(15,706)
g. Projected Earnings on Pension Plan Investments	(642,434,479)	(23,263,287)	(2,180,933)	(1,753,299)	(2,138,170)	(128,290)
h. Differences between Projected and Actual Earnings on Plan Investments	(110,941,062)	(4,017,303)	(376,622)	(302,775)	(369,237)	(22,154)
i. Pension Plan Administrative Expenses	8,967,078	324,708	30,441	24,472	29,845	1,791
j. Other Changes in Fiduciary Net Position ¹	846,246	30,644	2,873	2,310	2,817	169
k. Changes in Proportionate Share	59,650,920	14,485,937	(95,834)	253,891	476,741	(74,253)
Total Pension Expense	\$ 404,201,053	\$ 26,962,491	\$ 1,073,842	\$ 1,194,220	\$ 1,623,483	\$ (5,448)

<u>Component</u>	<u>Senior</u> <u>Colleges</u>	<u>TBTA</u>	<u>City Total</u>	<u>Total</u>
a. Service Cost	\$ 25,846,143	\$ 22,496,078	\$ 1,044,811,361	\$ 1,947,712,394
b. Interest on the Total Pension Liability	74,514,902	64,856,602	3,012,210,152	5,615,290,255
c. Changes of Benefit Terms	583,863	508,186	23,602,251	43,998,752
d. Differences between Expected and Actual Experience	(8,136,338)	(7,081,741)	(328,905,494)	(613,137,768)
e. Changes of Assumptions	10,253,036	8,924,082	414,471,461	772,647,802
f. Employee Contributions	(6,947,309)	(6,046,829)	(280,839,881)	(523,535,000)
g. Projected Earnings on Pension Plan Investments	(56,747,025)	(49,391,721)	(2,293,956,782)	(4,276,339,472)
h. Differences between Projected and Actual Earnings on Plan Investments	(9,799,560)	(8,529,383)	(396,140,012)	(738,474,753)
i. Pension Plan Administrative Expenses	792,073	689,408	32,018,971	59,689,000
j. Other Changes in Fiduciary Net Position ¹	74,750	65,061	3,021,708	5,633,000
k. Changes in Proportionate Share	6,013,785	3,239,182	(72,973,414)	0
Total Pension Expense	\$ 36,448,320	\$ 29,728,925	\$ 1,157,320,321	\$ 2,293,484,210

¹ Includes Payments to Other Retirement Systems.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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

Components of Pension Expense for the Fiscal Year Ended June 30, 2019

<u>Component</u>	<u>Transit Operating</u>	<u>TA Non- Operating</u>	<u>TA TP</u>	<u>TA CP Engineers</u>	<u>HA Regular</u>	<u>HA HP</u>
a. Service Cost ¹	\$ 471,071,739	\$ 132,258,903	\$ 19,534,359	\$ 22,484,575	\$ 84,179,425	\$ 5,967,690
b. Interest on the Total Pension Liability	1,018,903,576	291,308,302	41,483,865	48,773,527	242,046,243	17,159,262
c. Changes of Benefit Terms	0	0	0	0	0	0
d. Differences between Expected and Actual Experience	(19,748,898)	(5,646,283)	(804,061)	(945,353)	(4,691,461)	(332,589)
e. Changes of Assumptions	18,261,765	5,221,106	743,514	874,166	4,338,184	307,545
f. Employee Contributions	(95,578,436)	(27,326,228)	(3,891,402)	(4,575,210)	(22,705,192)	(1,609,628)
g. Projected Earnings on Pension Plan Investments	(795,307,308)	(227,381,301)	(32,380,317)	(38,070,278)	(188,929,699)	(13,393,698)
h. Differences between Projected and Actual Earnings on Plan Investments	48,873,724	13,973,178	1,989,856	2,339,519	11,610,226	823,078
i. Pension Plan Administrative Expenses	14,319,658	4,094,043	583,014	685,463	3,401,715	241,156
j. Other Changes in Fiduciary Net Position ²	1,136,004	324,788	46,252	54,379	269,864	19,131
k. Changes in Proportionate Share	(42,597,130)	73,445,792	1,757,023	3,829,617	(20,674,713)	(182,916)
Total Pension Expense	\$ 619,334,694	\$ 260,272,300	\$ 29,062,103	\$ 35,450,405	\$ 108,844,592	\$ 8,999,031

<u>Component</u>	<u>HHC</u>	<u>OTB</u>	<u>HDC/REMIC</u>	<u>State Courts</u>	<u>SCA</u>	<u>WFA</u>
a. Service Cost ¹	\$ 385,655,812	\$ 16,669,279	\$ 1,101,900	\$ 1,025,357	\$ 1,999,859	\$ 63,120
b. Interest on the Total Pension Liability	815,164,326	37,294,237	3,168,361	2,146,044	4,772,693	123,986
c. Changes of Benefit Terms	0	0	0	0	0	0
d. Differences between Expected and Actual Experience	(15,799,922)	(722,856)	(61,411)	(41,596)	(92,507)	(2,403)
e. Changes of Assumptions	14,610,155	668,423	56,786	38,463	85,541	2,222
f. Employee Contributions	(76,466,639)	(3,498,393)	(297,209)	(201,310)	(447,703)	(11,630)
g. Projected Earnings on Pension Plan Investments	(636,278,212)	(29,110,094)	(2,473,071)	(1,675,099)	(3,725,335)	(96,777)
h. Differences between Projected and Actual Earnings on Plan Investments	39,100,968	1,788,892	151,977	102,939	228,932	5,947
i. Pension Plan Administrative Expenses	11,456,309	524,133	44,528	30,160	67,075	1,742
j. Other Changes in Fiduciary Net Position ²	908,850	41,580	3,532	2,393	5,321	138
k. Changes in Proportionate Share	(11,320,279)	6,073,572	43,013	205,548	1,126,975	(101,847)
Total Pension Expense	\$ 527,031,368	\$ 29,728,773	\$ 1,738,406	\$ 1,632,899	\$ 4,020,851	\$ (15,502)

<u>Component</u>	<u>Senior Colleges</u>	<u>TBTA</u>	<u>City Total</u>	<u>Total</u>
a. Service Cost ¹	\$ 33,930,842	\$ 32,667,187	\$ 1,104,045,612	\$ 2,312,655,659
b. Interest on the Total Pension Liability	71,616,163	71,346,872	3,174,529,791	5,839,837,248
c. Changes of Benefit Terms	0	0	0	0
d. Differences between Expected and Actual Experience	(1,388,100)	(1,382,881)	(61,530,319)	(113,190,640)
e. Changes of Assumptions	1,283,573	1,278,747	56,896,960	104,667,150
f. Employee Contributions	(6,717,967)	(6,692,706)	(297,787,347)	(547,807,000)
g. Projected Earnings on Pension Plan Investments	(55,900,145)	(55,689,950)	(2,477,885,841)	(4,558,297,125)
h. Differences between Projected and Actual Earnings on Plan Investments	3,435,211	3,422,294	152,272,593	280,119,334
i. Pension Plan Administrative Expenses	1,006,493	1,002,708	44,614,803	82,073,000
j. Other Changes in Fiduciary Net Position ²	79,847	79,547	3,539,374	6,511,000
k. Changes in Proportionate Share	(346,815)	(134,657)	(11,123,183)	0
Total Pension Expense	\$ 46,999,102	\$ 45,897,161	\$ 1,687,572,443	\$ 3,406,568,626

¹ Includes adjustment for census data fix for those obligors that did not recognize the liabilities in their pension expense last year. Housing Regular, Housing Police, HDC and City already recognized this liability in Fiscal Year 2018.

² Includes Payments to Other Retirement Systems.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)
Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)
Pension Expense, Deferred Outflows of Resources, Deferred Inflows of Resources

	Fiscal Year Ending June 30, 2014		Fiscal Year Ending June 30, 2015		Fiscal Year Ending June 30, 2016		Fiscal Year Ending June 30, 2017		Fiscal Year Ending June 30, 2018		Fiscal Year Ending June 30, 2019	
Recognized Pension Expense	\$1,639,856,352		\$2,091,781,278		\$3,119,301,482		\$2,594,641,564		\$2,293,484,210		\$3,406,568,626	
Deferred Resources	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows
Differences between Expected and Actual Experience	\$ 0	\$ 0	\$ 0	\$ 202,961,062	\$ 0	\$ 572,334,258	\$ 0	\$ 195,708,584	\$ 0	\$ 1,469,280,196	\$ 1,548,790,552	\$ 0
Changes of Assumptions	0	0	0	0	1,793,394,596	0	0	0	14,782,263	0	0	776,645,823
Net Difference between Projected and Actual Earnings on Pension Plan Investments	0	3,978,322,676	2,099,773,673	0	2,127,274,784	0	0	2,499,281,170	0	703,343,622	96,053,701	0
Total	\$ 0	\$ 3,978,322,676	\$ 2,099,773,673	\$ 202,961,062	\$ 3,920,669,380	\$ 572,334,258	\$ 0	\$ 2,694,989,754	\$ 14,782,263	\$ 2,172,623,818	\$ 1,644,844,253	\$ 776,645,823

Reported amounts will be recognized in Pension Expense during:

Fiscal Year Ending June 30, 2014	(\$994,580,670)											
Fiscal Year Ending June 30, 2015	(\$994,580,670)		\$439,305,840									
Fiscal Year Ending June 30, 2016	(\$994,580,670)		\$439,305,840		\$1,055,878,925							
Fiscal Year Ending June 30, 2017	(\$994,580,670)		\$439,305,840		\$1,055,878,925		(\$667,365,638)					
Fiscal Year Ending June 30, 2018	(\$994,580,666)		\$493,257,515		\$1,055,878,925		(\$667,365,638)		(\$466,154,855)			
Fiscal Year Ending June 30, 2019			\$524,943,416		\$704,758,570		(\$667,365,638)		(\$466,154,855)			\$175,414,351
Fiscal Year Ending June 30, 2020					\$531,818,702		(\$667,365,638)		(\$466,154,855)			\$175,414,351
Fiscal Year Ending June 30, 2021							(\$667,365,632)		(\$466,154,855)			\$175,414,351
Fiscal Year Ending June 30, 2022							(\$25,527,208)		(\$466,154,853)			\$175,414,351
Fiscal Year Ending June 30, 2023									(\$290,318,949)			\$175,414,356
Fiscal Year Ending June 30, 2024									(\$2,903,188)			\$151,400,927
Fiscal Year Ending June 30, 2025												\$15,140,094

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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, 2019, the Obligors recognized Pension Expense for NYCERS of \$3,406,568,626.

At June 30, 2019, 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	\$ 1,548,790,552	\$ 1,286,628,592
Changes of Assumptions	11,831,712	776,645,823
Net Difference between Projected and Actual Earnings on Pension Plan Investments	<u>0</u>	<u>1,149,275,895</u>
Total	\$ 1,560,622,264	\$ 3,212,550,310

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions for NYCERS will be recognized in Pension Expense as follows:

Fiscal Year Ended <u>June 30</u>	<u>Amount</u>
2019	\$ 271,595,844
2020	(426,287,440)
2021	(958,106,136)
2022	(316,267,710)
2023	(114,904,593)
2024	148,497,739
2025	15,140,094

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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, 2018

Entity*	Deferred Outflows of Resources					Deferred Inflows of Resources					Pension Expense			
	Net Pension Liability	Differences Between Expected and Actual Experience	Change of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Change of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	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	\$ 3,027,337,016	\$ 0	\$ 46,133,804	\$ 0	\$ (224,219,306)	\$ (178,085,502)	\$ 292,389,367	\$ 0	\$ 169,790,353	\$ (12,744,148)	\$ 449,435,572	\$ 393,653,630	\$ (92,571,530)	\$ 301,082,100
TA Non-Operating	802,687,004	0	12,232,285	0	257,231,588	269,463,873	77,526,451	0	45,019,570	28,039,482	150,585,503	104,376,466	82,934,403	187,310,869
TA TP	132,440,348	0	2,018,556	0	14,675,649	16,694,205	12,793,312	0	7,429,070	1,342,196	21,564,578	17,224,067	4,052,001	21,276,068
TA CP Engineers	143,208,693	0	2,182,513	0	13,804,591	15,987,104	13,832,450	0	8,032,496	1,978,138	23,843,084	18,623,092	2,326,357	20,949,449
HA Regular	806,388,047	0	12,288,729	0	(25,658,661)	(13,369,932)	77,884,187	0	45,227,307	(1,739,627)	121,371,867	104,858,098	(7,704,502)	97,153,596
HA HP	55,211,797	0	841,289	0	3,372,138	4,213,427	5,331,966	0	3,096,270	(15,274)	8,412,962	7,178,605	(13,684)	7,164,921
HHC	2,649,718,373	0	40,379,173	0	61,473,391	101,852,564	255,917,354	0	148,611,074	3,549,448	408,077,876	344,550,133	59,650,920	404,201,053
OTB	95,936,213	0	1,462,176	0	(6,222,717)	(4,760,541)	9,267,060	0	5,381,377	(1,593,816)	13,054,621	12,476,554	14,485,937	26,962,491
HDC/REMIC	8,978,397	0	137,079	0	(369,605)	(232,526)	868,787	0	504,504	(17,067)	1,356,224	1,169,676	(95,834)	1,073,842
State Courts	7,226,500	0	110,201	0	1,779,889	1,890,090	698,436	0	405,582	217,229	1,321,247	940,329	253,891	1,194,220
SCA	8,834,935	0	134,391	0	(479,550)	(345,159)	851,752	0	494,612	(417,534)	928,830	1,146,742	476,741	1,623,483
WFA	515,969	0	8,063	0	(360,780)	(352,717)	51,105	0	29,677	(43,863)	36,919	68,805	(74,253)	(5,448)
Senior Colleges	234,039,070	0	3,566,742	0	16,114,328	19,681,070	22,605,493	0	13,126,998	(1,406,770)	34,325,721	30,434,535	6,013,785	36,448,320
TBTA	203,708,514	0	3,104,436	0	(19,419,289)	(16,314,853)	19,675,467	0	11,425,534	305,068	31,406,069	26,489,743	3,239,182	29,728,925
City	9,461,464,641	0	144,182,920	0	(91,721,666)	52,461,254	913,810,467	0	530,649,262	(17,453,462)	1,427,006,267	1,230,293,735	(72,973,414)	1,157,320,321
Total	\$ 17,637,695,517	\$ 0	\$ 268,782,357	\$ 0	\$ 0	\$ 268,782,357	\$ 1,703,503,654	\$ 0	\$ 989,223,686	\$ 0	\$ 2,692,727,340	\$ 2,293,484,210	\$ 0	\$ 2,293,484,210

* 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

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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, 2019

Entity*	Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense					
	Net Pension Liability	Differences Between Expected and Actual Experience	Change of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Change of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	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	\$ 3,231,603,307	\$ 270,224,694	\$ 2,064,334	\$ 0	\$ (118,578,762)	\$ 153,710,266	\$ 224,484,077	\$ 135,505,010	\$ 200,519,513	\$ (8,493,444)	\$ 552,015,156	\$ 661,931,824	\$ (42,597,130)	\$ 619,334,694
TA Non-Operating	923,927,340	77,258,240	590,201	0	267,662,380	345,510,821	64,180,828	38,741,384	57,329,270	21,209,586	181,461,068	186,826,508	73,445,792	260,272,300
TA TP	131,572,211	11,001,988	84,048	0	4,062,267	15,148,303	9,139,694	5,516,981	8,163,996	896,696	23,717,367	27,305,080	1,757,023	29,062,103
TA CP Engineers	154,692,450	12,935,288	98,817	0	14,301,826	27,335,931	10,745,747	6,486,440	9,598,596	1,486,749	28,317,532	31,620,788	3,829,617	35,450,405
HA Regular	767,685,438	64,193,387	490,394	0	(94,048,646)	(29,364,865)	53,327,448	32,189,973	47,634,532	(2,191,223)	130,960,730	129,519,305	(20,674,713)	108,844,592
HA HP	54,423,136	4,550,829	34,765	0	(436,418)	4,149,176	3,780,516	2,282,028	3,376,931	(25,408)	9,414,067	9,181,947	(182,916)	8,999,031
HHC	2,585,414,159	216,190,752	1,651,551	0	(152,331,736)	65,510,567	179,596,397	108,409,523	160,423,771	(812,120)	447,617,571	538,351,647	(11,320,279)	527,031,368
OTB	118,284,186	9,890,851	75,559	0	7,612,170	17,578,580	8,216,638	4,959,798	7,339,480	(1,323,684)	19,192,232	23,655,201	6,073,572	29,728,773
HDC/REMIC	10,048,926	840,285	6,419	0	289,722	1,136,426	698,051	421,364	623,531	(6,347)	1,736,599	1,695,393	43,013	1,738,406
State Courts	6,806,497	569,155	4,348	0	632,178	1,205,681	472,815	285,405	422,340	152,170	1,332,730	1,427,351	205,548	1,632,899
SCA	15,137,301	1,265,772	9,670	0	5,132,390	6,407,832	1,051,516	634,725	939,263	(243,123)	2,382,381	2,893,876	1,126,975	4,020,851
WFA	393,239	32,882	251	0	(417,710)	(384,577)	27,316	16,489	24,400	(34,317)	33,888	86,345	(101,847)	(15,502)
Senior Colleges	227,141,248	18,993,412	145,097	0	(4,172,751)	14,965,758	15,778,420	9,524,305	14,094,011	(1,174,541)	38,222,195	47,345,917	(346,815)	46,999,102
TBTA	226,287,151	18,921,993	144,551	0	(5,566,007)	13,500,537	15,719,090	9,488,492	14,041,015	176,529	39,425,126	46,031,818	(134,657)	45,897,161
City	10,068,490,491	841,921,024	6,431,707	0	75,859,097	924,211,828	699,410,039	422,183,906	624,745,246	(9,617,523)	1,736,721,668	1,698,695,626	(11,123,183)	1,687,572,443
Total	\$ 18,521,907,080	\$ 1,548,790,552	\$ 11,831,712	\$ 0	\$ 0	\$ 1,560,622,264	\$ 1,286,628,592	\$ 776,645,823	\$ 1,149,275,895	\$ 0	\$ 3,212,550,310	\$ 3,406,568,626	\$ 0	\$ 3,406,568,626

* Transit Operating - Transit Authority Operating
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 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
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NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM (NYCERS)

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, 2019**

Deferred Outflows of Resources				Deferred Inflows of Resources					
Net Pension Liability	Differences Between Expected and Actual Experience	Change of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Total Deferred Outflows of Resources Excluding Employer Specific Amounts	Differences Between Expected and Actual Experience	Change of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Total Deferred Inflows of Resources Excluding Employer Specific Amounts	Plan Pension Expense
<u>\$ 18,521,907,080</u>	<u>\$ 1,548,790,552</u>	<u>\$ 11,831,712</u>	<u>\$ 0</u>	<u>\$ 1,560,622,264</u>	<u>\$ 1,286,628,592</u>	<u>\$ 776,645,823</u>	<u>\$ 1,149,275,895</u>	<u>\$ 3,212,550,310</u>	<u>\$ 3,406,568,626</u>

Appendix B

APPENDIX B

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

Statement of Fiduciary Net Position - QPP Only
June 30, 2019 and June 30, 2018
(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ASSETS		
Cash	\$ 76,796	\$ 75,847
Receivables:		
Investment securities sold	2,305,855	839,544
Member loans	320,976	312,219
Accrued interest and dividends	290,228	273,387
Other	0	0
Total receivables	<u>\$ 2,917,059</u>	<u>\$ 1,425,150</u>
Investments - at fair value		
Pooled NYC Pension Fund Assets (Fixed-Return Fund):		
Short-term investments:		
Short-term investment fund	779,479	1,578,263
Commercial paper	567,394	6,487
Discount notes	203,555	111,733
U.S. Treasury bills and agencies	100,011	0
Debt securities:		
U.S. Government	11,074,088	13,288,993
Corporate	11,914,295	7,016,574
Treasury inflation protected securities	3,387,131	3,106,109
Equities:		
Domestic	24,374,505	20,536,514
Private equity	10,069,086	8,926,759
Private equity real estate	0	0
Mutual Funds:		
International equity	15,224,013	15,436,970
Fixed investment	0	1,848,081
Domestic equity	0	0
Mortgage debt security	0	555,508
Promissory Notes	0	0
Diversified Equity Funds:		
Short-term investments	123,852	135,558
Equity Securities	5,826,298	6,125,780
Corporate Bonds	120,152	127,150
Bond Funds:		
Short-term investments	775	849
Corporate Bonds	0	0
Equity Securities	62,502	70,562
International Equity Funds:		
Short-term investments	65	80
Equity Securities	11,131	12,076
Inflation Protection Funds:		
Short-term investments	13	3
Equity Securities	3,930	4,596
Socially Responsive Equity Funds:		
Short-term investments	410	453
Equity Securities	10,975	11,654
International - equity	985	716
Collateral from securities lending (Fixed and Variable-Return Funds)	<u>1,222,314</u>	<u>1,117,593</u>
Total Investments	<u>\$ 85,076,959</u>	<u>\$ 80,019,061</u>
Other assets	42,615	62,852
Total assets	<u>\$ 88,113,429</u>	<u>\$ 81,582,910</u>
LIABILITIES		
Accounts payable	646,918	643,567
Payables for investment securities purchased	2,574,584	1,568,064
Accrued benefits payable	77,154	13,858
Due to TDA Program	25,602,248	23,707,352
Securities lending	1,222,314	1,117,593
Total liabilities	<u>\$ 30,123,218</u>	<u>\$ 27,050,434</u>
Plan Net Position Held in Trust for Benefits	<u>\$ 57,990,211</u>	<u>\$ 54,532,476</u>

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

Statement of Changes in Fiduciary Net Position - QPP Only

June 30, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019		June 30, 2018	
	Fixed	Variable	Fixed	Variable
ADDITIONS				
Contributions:				
Member Contributions	\$ 216,875	\$ 330	\$ 194,921	\$ 320
Employer Contributions	3,696,686	0	3,889,710	0
Other Employer Contributions ¹	62,495	18	59,957	22
<i>Total contributions</i>	<u>\$ 3,976,056</u>	<u>\$ 348</u>	<u>\$ 4,144,588</u>	<u>\$ 342</u>
Investment income:				
Interest income	1,144,517	4,272	1,325,827	4,182
Dividend income	964,931	147,800	946,672	109,964
Net appreciation (depreciation) in fair value	3,478,612	270,483	3,603,325	620,488
<i>Total investment income</i>	<u>\$ 5,588,060</u>	<u>\$ 422,555</u>	<u>\$ 5,875,824</u>	<u>\$ 734,634</u>
Less:				
Investment expenses	299,763	1,674	348,905	1,763
<i>Net income</i>	<u>5,288,297</u>	<u>420,881</u>	<u>5,526,919</u>	<u>732,871</u>
Securities lending transactions:				
Securities lending income	12,452	964	15,416	1,238
Securities lending fees	(1,188)	(96)	(1,202)	(127)
<i>Net securities lending income</i>	<u>11,264</u>	<u>868</u>	<u>14,214</u>	<u>1,111</u>
<i>Net investment income</i>	<u>5,299,561</u>	<u>421,749</u>	<u>5,541,133</u>	<u>733,982</u>
Other:				
Net receipts from other retirement systems	1,222	0	(3,534)	0
Transfers between Funds	127,717	(127,717)	(83,387)	83,387
Litigation income	0	0	0	0
<i>Total Other</i>	<u>128,939</u>	<u>(127,717)</u>	<u>(86,921)</u>	<u>83,387</u>
<i>Total additions</i>	<u>\$ 9,404,556</u>	<u>\$ 294,380</u>	<u>\$ 9,598,800</u>	<u>\$ 817,711</u>
DEDUCTIONS				
Benefit payments and withdrawals	3,888,293	599,387	3,734,320	617,604
Interest to TDA Fixed Funds	1,716,679	0	1,595,462	0
TDA Rebalance	(27,449)	0	(32,704)	0
Administrative expenses	50,184	14,107	49,260	15,816
<i>Total deductions</i>	<u>\$ 5,627,707</u>	<u>\$ 613,494</u>	<u>\$ 5,346,338</u>	<u>\$ 633,420</u>
INCREASE IN PLAN NET POSITION	3,776,849	(319,114)	4,252,462	184,291
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:				
Beginning of year	\$ 48,172,801	\$ 6,359,675	\$ 43,920,339	\$ 6,175,384
End of year	\$ 51,949,650	\$ 6,040,561	\$ 48,172,801	\$ 6,359,675

¹ Includes amounts for employer's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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 @ 6/30/2017	\$ 43,920,339,000	\$ 6,175,384,000	\$ 50,095,723,000
2. Changes for the year:			
a. ER Contributions	3,889,710,000	0	3,889,710,000
b. Other Employer Contributions ¹	59,957,000	22,000	59,979,000
c. EE Contributions	194,921,000	320,000	195,241,000
d. Net Investment Income	5,541,133,000	733,982,000	6,275,115,000
e. Benefit Payments	(3,734,320,000)	(617,604,000)	(4,351,924,000)
f. Payment of Interest on TDA Fixed Funds	(1,595,462,000)	0	(1,595,462,000)
g. Administrative Expenses	(49,260,000)	(15,816,000)	(65,076,000)
h. Other ²	(54,217,000)	83,387,000	29,170,000
i. Net Changes	<u>4,252,462,000</u>	<u>184,291,000</u>	<u>4,436,753,000</u>
3. Plan Net Position @ 6/30/2018	<u>\$ 48,172,801,000</u>	<u>\$ 6,359,675,000</u>	<u>\$ 54,532,476,000</u>
4. Changes for the year:			
a. ER Contributions	3,696,686,000	0	3,696,686,000
b. Other Employer Contributions ¹	62,495,000	18,000	62,513,000
c. EE Contributions	216,875,000	330,000	217,205,000
d. Net Investment Income	5,299,561,000	421,749,000	5,721,310,000
e. Benefit Payments	(3,888,293,000)	(599,387,000)	(4,487,680,000)
f. Payment of Interest on TDA Fixed Funds	(1,716,679,000)	0	(1,716,679,000)
g. Administrative Expenses	(50,184,000)	(14,107,000)	(64,291,000)
h. Other ²	156,388,000	(127,717,000)	28,671,000
i. Net Changes	<u>\$ 3,776,849,000</u>	<u>\$ (319,114,000)</u>	<u>\$ 3,457,735,000</u>
5. Plan Net Position @ 6/30/2019	<u>\$ 51,949,650,000</u>	<u>\$ 6,040,561,000</u>	<u>\$ 57,990,211,000</u>

¹ Includes amounts for employer's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

² Includes TDA rebalance amount of (\$32,704,000) and (\$27,449,000) for Fiscal Years 2018 and 2019, respectively.

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
U.S. Public Market Equities	29%	5.6%
International Public Market Equities	12%	7.1%
Emerging Public Market Equities	9%	9.9%
Private Market Equities	6%	10.3%
Fixed Income (Core, TIPS, HY, Opportunistic, Convertibles)	33%	3.4%
Alternatives (Real Assets, Hedge Funds)	<u>11%</u>	6.3%
Total	100%	

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.

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

**Development of Asset (Gain) / Loss - QPP Only
June 30, 2018**

	Fixed	Variable	Total
1. Market Value 6/30/2017	\$ 43,920,339,000	\$ 6,175,384,000	\$ 50,095,723,000
2. Market Value 6/30/2018	48,172,801,000	6,359,675,000	54,532,476,000
3. Net Investment Income	5,541,133,000	733,982,000	6,275,115,000
4. Cash Flow (2. - 1. - 3.)	(1,288,671,000)	(549,691,000)	(1,838,362,000)
5. Projected Earnings¹ (7% * 1. + 3.441% * 4.)	3,030,080,561	733,982,000	3,764,062,561
6. (Gain) / Loss (5. - 3.)	(2,511,052,439)	0	(2,511,052,439)
7. Recognition Period	5 Years	5 Years	5 Years
8. Amount Recognized in Pension Expense (6. / 7.)	(502,210,488)	0	(502,210,488)
9. Deferred (Inflow) / Outflow of Resources (6. - 8.)	\$ (2,008,841,951)	\$ 0	\$ (2,008,841,951)

¹ Variable Funds Projected Earnings set equal to Variable Funds Net Investment Income.

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

**Development of Asset (Gain) / Loss - QPP Only
June 30, 2019**

	Fixed	Variable	Total
1. Market Value 6/30/2018	\$ 48,172,801,000	\$ 6,359,675,000	\$ 54,532,476,000
2. Market Value 6/30/2019	51,949,650,000	6,040,561,000	57,990,211,000
3. Net Investment Income	5,299,561,000	421,749,000	5,721,310,000
4. Cash Flow (2. - 1. - 3.)	(1,522,712,000)	(740,863,000)	(2,263,575,000)
5. Projected Earnings¹ (7% * 1. + 3.441% * 4.)	3,319,699,550	421,749,000	3,741,448,550
6. (Gain) / Loss (5. - 3.)	(1,979,861,450)	0	(1,979,861,450)
7. Recognition Period	5 Years	5 Years	5 Years
8. Amount Recognized in Pension Expense (6. / 7.)	(395,972,290)	0	(395,972,290)
9. Deferred (Inflow) / Outflow of Resources (6. - 8.)	\$ (1,583,889,160)	\$ 0	\$ (1,583,889,160)

¹ Variable Funds Projected Earnings set equal to Variable Funds Net Investment Income.

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

Roll-Forward of Entry Age Accrued Liabilities to June 30, 2019

	Fixed	Variable	Total
1. Disclosed EA Accrued Liability at 6/30/2018	\$ 64,403,133,608	\$ 8,840,797,733	\$ 73,243,931,341
2. EA Normal Cost at 6/30/2018	1,691,143,730	0	1,691,143,730
3. Benefit Payments-FY2019	(3,888,293,000)	(599,387,000)	(4,487,680,000)
4. Interest ¹	4,492,803,252	421,749,000	4,914,552,252
5. Experience (Gain)/Loss-FY2019	1,366,022,965	(2,554,269,709)	(1,188,246,744)
6. Changes of Assumptions-FY2019	(691,703,474)	(135,146,639)	(826,850,113)
7. Roll-Forward EAAL at 6/30/2019	\$ 67,373,107,081	\$ 5,973,743,385	\$ 73,346,850,466

¹ Interest on Variable Funds set equal to Variable Funds Net Investment Income.

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

**Schedule of Employer Allocations
June 30, 2018**

<u>Employer</u>	<u>2018 Actual Employer Contributions</u>	<u>Employer Allocation Percentage</u>
Department of Education ¹	\$ 3,734,445,107	96.009%
CUNY Senior Colleges	102,115,218	2.625%
CUNY Community Colleges	45,787,386	1.177%
Charter Schools	<u>7,362,216</u>	<u>0.189%</u>
Total	\$ 3,889,709,927	100.000%

¹ The Beginning with Children Charter School (BWC) closed in 2016. The employer contribution for BWC of \$594,701 has been included with the results for the Department of Education.

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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, 2018

Total Pension Liability

	<u>DEPT. OF ED.</u>	<u>SENIOR COLL.</u>	<u>COMM. COLL.</u>	<u>Charter Schools</u>	<u>TOTAL</u>
1. Balances at June 30, 2017	\$ 70,850,231,137	\$ 1,594,784,612	\$ 725,168,727	\$ 153,245,976	\$ 73,323,430,452
Adjustment for Beginning with Children ¹	10,998,516	0	0	(10,998,516)	0
Balances at June 30, 2017 (Revised)	\$ 70,861,229,653	\$ 1,594,784,612	\$ 725,168,727	\$ 142,247,460	\$ 73,323,430,452
2. Changes for the Year:					
a. Service Cost	1,379,281,419	37,711,191	16,908,980	2,715,206	1,436,616,796
b. Interest	4,869,078,078	133,126,373	59,691,330	9,585,099	5,071,480,880
c. Changes of Benefit Terms	0	0	0	0	0
d. Differences b/t Expected and Actual Experience	(2,146,447,085)	(58,686,411)	(26,313,869)	(4,225,422)	(2,235,672,787)
e. Changes of Assumptions	0	0	0	0	0
f. Benefit Payments	(4,178,238,714)	(114,238,005)	(51,222,145)	(8,225,136)	(4,351,924,000)
g. Net Changes	\$ (76,326,302)	\$ (2,086,852)	\$ (935,704)	\$ (150,253)	\$ (79,499,111)
3. SubTotal	\$ 70,784,903,351	\$ 1,592,697,760	\$ 724,233,023	\$ 142,097,207	\$ 73,243,931,341
4. Changes in Proportionate Share	\$ (464,137,310)	\$ 329,955,438	\$ 137,848,049	\$ (3,666,177)	\$ -
5. Balances at June 30, 2018	\$ 70,320,766,041	\$ 1,922,653,198	\$ 862,081,072	\$ 138,431,030	\$ 73,243,931,341

Plan Fiduciary Net Position

	<u>DEPT. OF ED.</u>	<u>SENIOR COLL.</u>	<u>COMM. COLL.</u>	<u>Charter Schools</u>	<u>TOTAL</u>
1. Balances at June 30, 2017	\$ 48,405,937,806	\$ 1,089,584,663	\$ 495,460,194	\$ 104,740,337	\$ 50,095,723,000
Adjustment for Beginning with Children ¹	7,501,090	0	0	(7,501,090)	0
Balances at June 30, 2017 (Revised)	\$ 48,413,438,896	\$ 1,089,584,663	\$ 495,460,194	\$ 97,239,247	\$ 50,095,723,000
2. Changes for the Year:					
a. Contributions - Employer	3,734,445,180	102,115,218	45,787,386	7,362,216	3,889,710,000
b. Contributions - Other Employer ²	57,585,238	1,574,449	705,953	113,360	59,979,000
c. Contributions - Employee	187,448,932	5,125,076	2,297,987	369,005	195,241,000
d. Net Investment Income	6,024,675,160	164,721,769	73,858,104	11,859,967	6,275,115,000
e. Benefit Payments	(4,178,238,714)	(114,238,005)	(51,222,145)	(8,225,136)	(4,351,924,000)
f. Payment of Interest on TDA Fixed Funds	(1,531,787,111)	(41,880,878)	(18,778,588)	(3,015,423)	(1,595,462,000)
g. Administrative Expenses	(62,478,816)	(1,708,245)	(765,945)	(122,994)	(65,076,000)
h. Other Changes	28,005,825	765,713	343,331	55,131	29,170,000
i. Net Changes	\$ 4,259,655,694	\$ 116,475,097	\$ 52,226,083	\$ 8,396,126	\$ 4,436,753,000
3. SubTotal	\$ 52,673,094,590	\$ 1,206,059,760	\$ 547,686,277	\$ 105,635,373	\$ 54,532,476,000
4. Changes in Proportionate Share	\$ (317,009,707)	\$ 225,417,735	\$ 94,160,966	\$ (2,568,994)	\$ -
5. Balances at June 30, 2018	\$ 52,356,084,883	\$ 1,431,477,495	\$ 641,847,243	\$ 103,066,379	\$ 54,532,476,000

Net Pension Liability

	<u>DEPT. OF ED.</u>	<u>SENIOR COLL.</u>	<u>COMM. COLL.</u>	<u>Charter Schools</u>	<u>TOTAL</u>
1. Balances at June 30, 2017	\$ 22,444,293,331	\$ 505,199,949	\$ 229,708,533	\$ 48,505,639	\$ 23,227,707,452
Adjustment for Beginning with Children ¹	3,497,426	0	0	(3,497,426)	0
Balances at June 30, 2017 (Revised)	\$ 22,447,790,757	\$ 505,199,949	\$ 229,708,533	\$ 45,008,213	\$ 23,227,707,452
2. Changes for the Year:					
a. Service Cost	1,379,281,419	37,711,191	16,908,980	2,715,206	1,436,616,796
b. Interest	4,869,078,078	133,126,373	59,691,330	9,585,099	5,071,480,880
c. Changes of Benefit Terms	0	0	0	0	0
d. Differences b/t Expected and Actual Experience	(2,146,447,085)	(58,686,411)	(26,313,869)	(4,225,422)	(2,235,672,787)
e. Changes of Assumptions	0	0	0	0	0
f. Contributions - Employer	(3,734,445,180)	(102,115,218)	(45,787,386)	(7,362,216)	(3,889,710,000)
g. Contributions - Other Employer ²	(57,585,238)	(1,574,449)	(705,953)	(113,360)	(59,979,000)
h. Contributions - Employee	(187,448,932)	(5,125,076)	(2,297,987)	(369,005)	(195,241,000)
i. Net Investment Income	(6,024,675,160)	(164,721,769)	(73,858,104)	(11,859,967)	(6,275,115,000)
j. Benefit Payments	0	0	0	0	0
k. Payment of Interest on TDA Fixed Funds	1,531,787,111	41,880,878	18,778,588	3,015,423	1,595,462,000
l. Administrative Expenses	62,478,816	1,708,245	765,945	122,994	65,076,000
m. Other Changes	(28,005,825)	(765,713)	(343,331)	(55,131)	(29,170,000)
n. Net Changes	\$ (4,335,981,996)	\$ (118,561,949)	\$ (53,161,787)	\$ (8,546,379)	\$ (4,516,252,111)
3. SubTotal	\$ 18,111,808,761	\$ 386,638,000	\$ 176,546,746	\$ 36,461,834	\$ 18,711,455,341
4. Changes in Proportionate Share	\$ (147,127,603)	\$ 104,537,703	\$ 43,687,083	\$ (1,097,183)	\$ -
5. Balances at June 30, 2018	\$ 17,964,681,158	\$ 491,175,703	\$ 220,233,829	\$ 35,364,651	\$ 18,711,455,341

¹ The Beginning with Children Charter School (BWC) closed in 2016. Balances for BWC have been included with the results for the Department of Education.

² Includes amounts for employer's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

**Schedule of Employer Allocations
June 30, 2019**

Employer	2019 Actual Employer Contributions	Employer Allocation Percentage
Department of Education	\$ 3,547,597,502	95.9669802957%
CUNY Senior Colleges	95,023,058	2.5704933915%
CUNY Community Colleges	46,144,383	1.2482636747%
Charter Schools	7,920,616	0.2142626381%
Total	\$ 3,696,685,559	100.000%

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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, 2019

Total Pension Liability

	<u>DEPT. OF ED.</u>	<u>SENIOR COLL.</u>	<u>COMM. COLL.</u>	<u>Charter Schools</u>	<u>TOTAL</u>
1. Balances at June 30, 2018	\$ 70,320,766,041	\$ 1,922,653,198	\$ 862,081,072	\$ 138,431,030	\$ 73,243,931,341
2. Changes for the Year:					
a. Service Cost	1,622,939,570	43,470,738	21,109,933	3,623,489	1,691,143,730
b. Interest	4,716,347,391	126,328,241	61,346,571	10,530,049	4,914,552,252
c. Changes of Benefit Terms	0	0	0	0	0
d. Differences b/t Expected and Actual Experience	(1,140,324,519)	(30,543,804)	(14,832,452)	(2,545,969)	(1,188,246,744)
e. Changes of Assumptions	(793,503,084)	(21,254,128)	(10,321,270)	(1,771,631)	(826,850,113)
f. Benefit Payments	(4,306,690,981)	(115,355,518)	(56,018,079)	(9,615,422)	(4,487,680,000)
g. Net Changes	\$ 98,768,377	\$ 2,645,529	\$ 1,284,703	\$ 220,516	\$ 102,919,125
3. SubTotal	\$ 70,419,534,418	\$ 1,925,298,727	\$ 863,365,775	\$ 138,651,546	\$ 73,346,850,466
4. Changes in Proportionate Share	\$ (30,776,884)	\$ (39,922,783)	\$ 52,196,316	\$ 18,503,351	\$ -
5. Balances at June 30, 2019	\$ 70,388,757,534	\$ 1,885,375,944	\$ 915,562,091	\$ 157,154,897	\$ 73,346,850,466

Plan Fiduciary Net Position

	<u>DEPT. OF ED.</u>	<u>SENIOR COLL.</u>	<u>COMM. COLL.</u>	<u>Charter Schools</u>	<u>TOTAL</u>
1. Balances at June 30, 2018	\$ 52,356,084,883	\$ 1,431,477,495	\$ 641,847,243	\$ 103,066,379	\$ 54,532,476,000
2. Changes for the Year:					
a. Contributions - Employer	3,547,597,943	95,023,058	46,144,383	7,920,616	3,696,686,000
b. Contributions - Other Employer ¹	59,991,838	1,606,893	780,327	133,942	62,513,000
c. Contributions - Employee	208,445,080	5,583,240	2,711,291	465,389	217,205,000
d. Net Investment Income	5,490,568,441	147,065,895	71,417,034	12,258,630	5,721,310,000
e. Benefit Payments	(4,306,690,981)	(115,355,518)	(56,018,079)	(9,615,422)	(4,487,680,000)
f. Payment of Interest on TDA Fixed Funds	(1,647,444,998)	(44,127,120)	(21,428,680)	(3,678,202)	(1,716,679,000)
g. Administrative Expenses	(61,698,131)	(1,652,596)	(802,521)	(137,752)	(64,291,000)
h. Other Changes	27,514,693	736,986	357,890	61,431	28,671,000
i. Net Changes	\$ 3,318,283,885	\$ 88,880,838	\$ 43,161,645	\$ 7,408,632	\$ 3,457,735,000
3. SubTotal	\$ 55,674,368,768	\$ 1,520,358,333	\$ 685,008,888	\$ 110,475,011	\$ 57,990,211,000
4. Changes in Proportionate Share	\$ (22,914,404)	\$ (29,723,792)	\$ 38,861,851	\$ 13,776,345	\$ -
5. Balances at June 30, 2019	\$ 55,651,454,364	\$ 1,490,634,541	\$ 723,870,739	\$ 124,251,356	\$ 57,990,211,000

Net Pension Liability

	<u>DEPT. OF ED.</u>	<u>SENIOR COLL.</u>	<u>COMM. COLL.</u>	<u>Charter Schools</u>	<u>TOTAL</u>
1. Balances at June 30, 2018	\$ 17,964,681,158	\$ 491,175,703	\$ 220,233,829	\$ 35,364,651	\$ 18,711,455,341
2. Changes for the Year:					
a. Service Cost	1,622,939,570	43,470,738	21,109,933	3,623,489	1,691,143,730
b. Interest	4,716,347,391	126,328,241	61,346,571	10,530,049	4,914,552,252
c. Changes of Benefit Terms	0	0	0	0	0
d. Differences b/t Expected and Actual Experience	(1,140,324,519)	(30,543,804)	(14,832,452)	(2,545,969)	(1,188,246,744)
e. Changes of Assumptions	(793,503,084)	(21,254,128)	(10,321,270)	(1,771,631)	(826,850,113)
f. Contributions - Employer	(3,547,597,943)	(95,023,058)	(46,144,383)	(7,920,616)	(3,696,686,000)
g. Contributions - Other Employer ¹	(59,991,838)	(1,606,893)	(780,327)	(133,942)	(62,513,000)
h. Contributions - Employee	(208,445,080)	(5,583,240)	(2,711,291)	(465,389)	(217,205,000)
i. Net Investment Income	(5,490,568,441)	(147,065,895)	(71,417,034)	(12,258,630)	(5,721,310,000)
j. Benefit Payments	0	0	0	0	0
k. Payment of Interest on TDA Fixed Funds	1,647,444,998	44,127,120	21,428,680	3,678,202	1,716,679,000
l. Administrative Expenses	61,698,131	1,652,596	802,521	137,752	64,291,000
m. Other Changes	(27,514,693)	(736,986)	(357,890)	(61,431)	(28,671,000)
n. Net Changes	\$ (3,219,515,508)	\$ (86,235,309)	\$ (41,876,942)	\$ (7,188,116)	\$ (3,354,815,875)
3. SubTotal	\$ 14,745,165,650	\$ 404,940,394	\$ 178,356,887	\$ 28,176,535	\$ 15,356,639,466
4. Changes in Proportionate Share	\$ (7,862,480)	\$ (10,198,991)	\$ 13,334,465	\$ 4,727,006	\$ -
5. Balances at June 30, 2019	\$ 14,737,303,170	\$ 394,741,403	\$ 191,691,352	\$ 32,903,541	\$ 15,356,639,466

¹ Includes amounts for employer's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

Schedule of Changes in Net Pension Liability and Related Ratios

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
1. Total Pension Liability							
a. Service Cost	\$ 1,691,143,730	\$ 1,436,616,796	\$ 1,386,673,964	\$ 1,274,307,859	\$ 1,223,157,877	\$ 1,205,662,452	\$ 1,170,546,070
b. Interest	4,914,552,252	5,071,480,880	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	0	0
d. Differences b/t Expected and Actual Experience	(1,188,246,744)	(2,235,672,787)	1,008,248,813	1,229,501,602	1,507,964,351	0	0
e. Changes of Assumptions	(826,850,113)	0	0	2,432,878,017	0	0	0
f. Benefit Payments	(4,487,680,000)	(4,351,924,000)	(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	\$ 102,919,125	\$ (79,499,111)	\$ 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	\$ 73,243,931,341	\$ 73,323,430,452	\$ 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	\$ 73,346,850,466	\$ 73,243,931,341	\$ 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	\$ 3,696,686,000	\$ 3,889,710,000	\$ 3,888,399,000	\$ 3,760,714,000	\$ 3,325,528,000	\$ 3,054,424,000	\$ 2,912,844,000
b. Contributions - Other Employer ¹	62,513,000	59,979,000	57,369,000	n/a	n/a	n/a	n/a
c. Contributions - Employee	217,205,000	195,241,000	180,076,000	173,696,000	158,590,000	154,962,000	154,698,000
d. Net Investment Income	5,721,310,000	6,275,115,000	8,133,280,000	960,267,000	1,611,929,000	9,435,906,000	5,721,112,000
e. Benefit Payments	(4,487,680,000)	(4,351,924,000)	(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	(1,716,679,000)	(1,595,462,000)	(1,466,615,000)	(1,354,207,000)	(1,248,988,000)	(1,147,923,000)	(1,047,979,000)
g. Administrative Expenses	(64,291,000)	(65,076,000)	(60,790,000)	(59,367,000)	(58,391,000)	(46,042,000)	(39,682,000)
h. Other Changes	28,671,000	29,170,000	(46,229,000)	1,233,000	329,000	404,000	(44,000)
i. Net Changes in Fiduciary Net Position	\$ 3,457,735,000	\$ 4,436,753,000	\$ 6,466,178,000	\$ (625,119,000)	\$ (235,275,000)	\$ 7,633,483,000	\$ 4,081,695,000
5. Plan Fiduciary Net Position - Beginning	\$ 54,532,476,000	\$ 50,095,723,000	\$ 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	\$ 57,990,211,000	\$ 54,532,476,000	\$ 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	\$ 15,356,639,466	\$ 18,711,455,341	\$ 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	79.1%	74.5%	68.3%	62.3%	68.0%	71.4%	60.9%
9. Covered Employee Payroll²	\$ 10,404,403,684	\$ 9,200,179,606	\$ 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	147.6%	203.4%	263.4%	319.4%	257.4%	222.8%	297.0%

¹ Includes amounts for employer's portion of Additional Member Contributions and supplemental contributions for the ASAF and ASF Funds.

² Projected employee payroll at time 1.0 under previous roll-forward methodology through 2018. Actual employee payroll at valuation date (time = 0) beginning in 2019.

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

Schedule of Employer Contributions (\$ in thousands)

Fiscal Year Ended June 30	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially Determined Contribution	\$ 3,696,686	\$ 3,889,710	\$ 3,888,399	\$ 3,702,569	\$ 3,270,007	\$ 2,998,694	\$ 2,855,640	\$ 2,673,078	\$ 2,468,973	\$ 2,484,074
Contributions in relation to the Actuarially Determined Contribution	<u>\$ 3,696,686</u>	<u>\$ 3,889,710</u>	<u>\$ 3,888,399</u>	<u>\$ 3,702,569</u>	<u>\$ 3,270,007</u>	<u>\$ 2,998,694</u>	<u>\$ 2,855,640</u>	<u>\$ 2,673,078</u>	<u>\$ 2,468,973</u>	<u>\$ 2,484,074</u>
Contribution Deficiency (Excess)	0	0	0	0	0	0	0	0	0	0
Contributions as a percentage of Covered employee payroll ¹	35.530%	42.279%	44.093%	44.846%	40.498%	37.652%	36.455%	33.747%	31.114%	31.604%

¹ Projected employee payroll at time 1.0 under previous roll-forward methodology through 2018. Actual employee payroll at valuation date (time = 0) beginning in 2019.

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

Average Expected Remaining Service Lives

<u>Group</u>	<u>Count</u>	Average Expected Remaining Service Life <u>@ 6/30/2018</u>
Active	121,764	15.12
Active Off Payroll	9,416	0.00
Term Vested	16,433	0.00
Retired	<u>86,295</u>	<u>0.00</u>
Total	233,908	7.87

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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	Differences between Expected and Actual Experience	Recognition Period (Years)											
			2018	2019	2020	2021	2022	2023	2024	2025	2026		
2015	\$ 1,507,964,351	3.88	342,012,533										
2016	1,229,501,602	3.84	320,182,709	268,953,475									
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	28,006,914				
2018	(2,235,672,787)	7.81	(286,257,719)	(286,257,719)	(286,257,719)	(286,257,719)	(286,257,719)	(286,257,719)	(286,257,719)	(286,257,719)	(231,868,754)		
2019	(1,188,246,744)	7.87		(150,984,339)	(150,984,339)	(150,984,339)	(150,984,339)	(150,984,339)	(150,984,339)	(150,984,339)	(150,984,339)	(131,356,371)	
Net increase (decrease) in Pension Expense			\$ 515,972,080	\$ (28,254,026)	\$ (297,207,501)	\$ (297,207,501)	\$ (297,207,501)	\$ (297,207,501)	\$ (409,235,144)	\$ (382,853,093)	\$ (131,356,371)		

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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**

<u>Year</u>	<u>Changes in Assumptions</u>	<u>Recognition Period (Years)</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
2016	\$ 2,432,878,017	3.84	633,561,984	532,192,065							
2017	0										
2018	0										
2019	(826,850,113)	7.87		(105,063,547)	(105,063,547)	(105,063,547)	(105,063,547)	(105,063,547)	(105,063,547)	(105,063,547)	(91,405,284)
Net increase (decrease) in Pension Expense			<u>\$ 633,561,984</u>	<u>\$ 427,128,518</u>	<u>\$ (105,063,547)</u>	<u>\$ (105,063,547)</u>	<u>\$ (105,063,547)</u>	<u>\$ (105,063,547)</u>	<u>\$ (105,063,547)</u>	<u>\$ (105,063,547)</u>	<u>\$ (91,405,284)</u>

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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**

Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2018	2019	2020	2021	2022	2023
2014	\$ (6,422,090,406)	5	(1,284,418,082)					
2015	1,385,375,562	5	277,075,112	277,075,114				
2016	1,886,427,168	5	377,285,434	377,285,434	377,285,432			
2017	(4,593,826,280)	5	(918,765,256)	(918,765,256)	(918,765,256)	(918,765,256)		
2018	(2,511,052,439)	5	(502,210,488)	(502,210,488)	(502,210,488)	(502,210,488)	(502,210,487)	
2019	(1,979,861,450)	5		(395,972,290)	(395,972,290)	(395,972,290)	(395,972,290)	(395,972,290)
Net increase (decrease) in Pension Expense			\$ (2,051,033,280)	\$ (1,162,587,486)	\$ (1,439,662,602)	\$ (1,816,948,034)	\$ (898,182,777)	\$ (395,972,290)

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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 Education	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	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		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	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)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 2.502%	Proportionate Share at 6/30/2015 2.540%	Change in Proportionate Share		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	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)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.921%	Proportionate Share at 6/30/2015 0.928%	Change in Proportionate Share		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	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
Charter Schools	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.223%	Proportionate Share at 6/30/2015 0.186%	Change in Proportionate Share		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	15,609,538	13,019,615	(2,589,923)	3.88	(667,506)	(667,506)	(667,506)	(587,405)
Net Pension Liability	17,816,440,111	39,730,662	33,138,578	(6,592,084)	3.88	(1,698,991)	(1,698,991)	(1,698,991)	(1,495,111)
Total	24,816,232,828	55,340,200	46,158,193	(9,182,007)		(2,366,497)	(2,366,497)	(2,366,497)	(2,082,516)

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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 Education	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	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		2016	2017	2018	2019
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)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 2.540%	Proportionate Share at 6/30/2016 2.779%	Change in Proportionate Share		2016	2017	2018	2019
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)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.928%	Proportionate Share at 6/30/2016 1.056%	Change in Proportionate Share		2016	2017	2018	2019
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
Charter Schools	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.186%	Proportionate Share at 6/30/2016 0.146%	Change in Proportionate Share		2016	2017	2018	2019
Deferred Outflows of Resources	(2,227,614,195)	(4,143,361)	(3,252,316)	891,045	3.84	232,043	232,043	232,043	194,916
Deferred Inflows of Resources	5,094,667,839	9,476,083	7,438,215	(2,037,868)	3.84	(530,696)	(530,696)	(530,696)	(445,780)
Net Pension Liability	20,785,703,677	38,661,409	30,347,126	(8,314,283)	3.84	(2,165,178)	(2,165,178)	(2,165,178)	(1,818,749)
Total	23,652,757,321	43,994,131	34,533,025	(9,461,106)		(2,463,831)	(2,463,831)	(2,463,831)	(2,069,613)

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 96.019%	Proportionate Share at 6/30/2017 96.627%	Change in Proportionate Share		2017	2018	2019	2020	2021	2022	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)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 2.779%	Proportionate Share at 6/30/2017 2.175%	Change in Proportionate Share		2017	2018	2019	2020	2021	2022	2023	2024
Deferred Outflows 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)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 1.056%	Proportionate Share at 6/30/2017 0.989%	Change in Proportionate Share		2017	2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(5,779,665,137)	(61,033,264)	(57,160,888)	3,872,376	7.20	537,830	537,830	537,830	537,830	537,830	537,830	537,830	107,566
Deferred Inflows of Resources	3,189,542,961	33,681,574	31,544,580	(2,136,994)	7.20	(296,805)	(296,805)	(296,805)	(296,805)	(296,805)	(296,805)	(296,805)	(59,359)
Net Pension Liability	26,371,232,108	278,480,211	260,811,486	(17,668,725)	7.20	(2,453,990)	(2,453,990)	(2,453,990)	(2,453,990)	(2,453,990)	(2,453,990)	(2,453,990)	(490,795)
Total	23,781,109,932	251,128,521	235,195,178	(15,933,343)		(2,212,965)	(2,212,965)	(2,212,965)	(2,212,965)	(2,212,965)	(2,212,965)	(2,212,965)	(442,588)
Charter Schools	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.146%	Proportionate Share at 6/30/2017 0.209%	Change in Proportionate Share		2017	2018	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(5,779,665,137)	(8,438,313)	(12,079,501)	(3,641,188)	7.20	(505,720)	(505,720)	(505,720)	(505,720)	(505,720)	(505,720)	(505,720)	(101,148)
Deferred Inflows of Resources	3,189,542,961	4,656,731	6,666,144	2,009,413	7.20	279,084	279,084	279,084	279,084	279,084	279,084	279,084	55,825
Net Pension Liability	26,371,232,108	38,501,999	55,115,875	16,613,876	7.20	2,307,483	2,307,483	2,307,483	2,307,483	2,307,483	2,307,483	2,307,483	461,495
Total	23,781,109,932	34,720,417	49,702,518	14,982,101		2,080,847	2,080,847	2,080,847	2,080,847	2,080,847	2,080,847	2,080,847	416,172

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

Changes in Proportionate Share
Changes in Proportionate Share at 6/30/2018

Department of Education	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 96.642%	Proportionate Share at 6/30/2018 96.009%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(2,965,117,022)	(2,865,548,392)	(2,846,779,202)	18,769,190	7.81	2,403,225	2,403,225	2,403,225	2,403,225	2,403,225	2,403,225	2,403,225	1,946,616
Deferred Inflows of Resources	3,273,472,580	3,163,549,369	3,142,828,289	(20,721,080)	7.81	(2,653,148)	(2,653,148)	(2,653,148)	(2,653,148)	(2,653,148)	(2,653,148)	(2,653,148)	(2,149,044)
Net Pension Liability	23,227,707,452	22,447,721,036	22,300,689,648	(147,031,388)	7.81	(18,826,042)	(18,826,042)	(18,826,042)	(18,826,042)	(18,826,042)	(18,826,042)	(18,826,042)	(15,249,095)
Total	23,536,063,010	22,745,722,013	22,596,738,735	(148,983,278)		(19,075,965)	(19,075,965)	(19,075,965)	(19,075,965)	(19,075,965)	(19,075,965)	(19,075,965)	(15,451,523)
CUNY Senior Colleges	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 2.175%	Proportionate Share at 6/30/2018 2.625%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(2,965,117,022)	(64,491,295)	(77,834,322)	(13,343,027)	7.81	(1,708,454)	(1,708,454)	(1,708,454)	(1,708,454)	(1,708,454)	(1,708,454)	(1,708,454)	(1,383,849)
Deferred Inflows of Resources	3,273,472,580	71,198,029	85,928,655	14,730,626	7.81	1,886,124	1,886,124	1,886,124	1,886,124	1,886,124	1,886,124	1,886,124	1,527,758
Net Pension Liability	23,227,707,452	505,202,637	609,727,321	104,524,684	7.81	13,383,442	13,383,442	13,383,442	13,383,442	13,383,442	13,383,442	13,383,442	10,840,590
Total	23,536,063,010	511,909,371	617,821,654	105,912,283		13,561,112	13,561,112	13,561,112	13,561,112	13,561,112	13,561,112	13,561,112	10,984,499
CUNY Community Colleges	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 0.989%	Proportionate Share at 6/30/2018 1.177%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(2,965,117,022)	(29,325,007)	(34,899,427)	(5,574,420)	7.81	(713,754)	(713,754)	(713,754)	(713,754)	(713,754)	(713,754)	(713,754)	(578,142)
Deferred Inflows of Resources	3,273,472,580	32,374,644	38,528,772	6,154,128	7.81	787,981	787,981	787,981	787,981	787,981	787,981	787,981	638,261
Net Pension Liability	23,227,707,452	229,722,027	273,390,117	43,668,090	7.81	5,591,305	5,591,305	5,591,305	5,591,305	5,591,305	5,591,305	5,591,305	4,528,955
Total	23,536,063,010	232,771,664	277,019,462	44,247,798		5,665,532	5,665,532	5,665,532	5,665,532	5,665,532	5,665,532	5,665,532	4,589,074
Charter Schools	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 0.194%	Proportionate Share at 6/30/2018 0.189%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023	2024	2025
Deferred Outflows of Resources	(2,965,117,022)	(5,752,327)	(5,604,071)	148,256	7.81	18,983	18,983	18,983	18,983	18,983	18,983	18,983	15,375
Deferred Inflows of Resources	3,273,472,580	6,350,537	6,186,863	(163,674)	7.81	(20,957)	(20,957)	(20,957)	(20,957)	(20,957)	(20,957)	(20,957)	(16,975)
Net Pension Liability	23,227,707,452	45,061,752	43,900,367	(1,161,385)	7.81	(148,705)	(148,705)	(148,705)	(148,705)	(148,705)	(148,705)	(148,705)	(120,450)
Total	23,536,063,010	45,659,962	44,483,159	(1,176,803)		(150,679)	(150,679)	(150,679)	(150,679)	(150,679)	(150,679)	(150,679)	(122,050)

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

Changes in Proportionate Share
Changes in Proportionate Share at 6/30/2019

Department of Education	(1)	(2)	(3)	(4)	(3)-(2)+(4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 96.009%	Proportionate Share at 6/30/2019 95.967%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025	2026
Deferred Outflows of Resources	(1,529,325,239)	(1,468,289,868)	(1,467,647,251)		642,617	7.87	81,654	81,654	81,654	81,654	81,654	81,654	81,654	71,039
Deferred Inflows of Resources	5,682,906,807	5,456,101,996	5,453,714,056		(2,387,940)	7.87	(303,423)	(303,423)	(303,423)	(303,423)	(303,423)	(303,423)	(303,423)	(263,979)
Net Pension Liability	18,711,455,341	17,964,681,158	17,956,818,660	18	(7,862,480)	7.87	(999,044)	(999,044)	(999,044)	(999,044)	(999,044)	(999,044)	(999,044)	(869,172)
Total	22,865,036,909	21,952,493,286	21,942,885,465	18	(9,607,803)		(1,220,813)	(1,220,813)	(1,220,813)	(1,220,813)	(1,220,813)	(1,220,813)	(1,220,813)	(1,062,112)
CUNY Senior Colleges	(1)	(2)	(3)	(4)	(3)-(2)+(4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 2.625%	Proportionate Share at 6/30/2019 2.570%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025	2026
Deferred Outflows of Resources	(1,529,325,239)	(40,144,788)	(39,311,204)		833,584	7.87	105,919	105,919	105,919	105,919	105,919	105,919	105,919	92,151
Deferred Inflows of Resources	5,682,906,807	149,176,304	146,078,744		(3,097,560)	7.87	(393,591)	(393,591)	(393,591)	(393,591)	(393,591)	(393,591)	(393,591)	(342,423)
Net Pension Liability	18,711,455,341	491,175,703	480,976,723	(11)	(10,198,991)	7.87	(1,295,933)	(1,295,933)	(1,295,933)	(1,295,933)	(1,295,933)	(1,295,933)	(1,295,933)	(1,127,460)
Total	22,865,036,909	600,207,219	587,744,263	(11)	(12,462,967)		(1,583,605)	(1,583,605)	(1,583,605)	(1,583,605)	(1,583,605)	(1,583,605)	(1,583,605)	(1,377,732)
CUNY Community Colleges	(1)	(2)	(3)	(4)	(3)-(2)+(4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 1.177%	Proportionate Share at 6/30/2019 1.248%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025	2026
Deferred Outflows of Resources	(1,529,325,239)	(18,000,158)	(19,090,011)		(1,089,853)	7.87	(138,482)	(138,482)	(138,482)	(138,482)	(138,482)	(138,482)	(138,482)	(120,479)
Deferred Inflows of Resources	5,682,906,807	66,887,813	70,937,661		4,049,848	7.87	514,593	514,593	514,593	514,593	514,593	514,593	514,593	447,697
Net Pension Liability	18,711,455,341	220,233,829	233,568,300	(6)	13,334,465	7.87	1,694,341	1,694,341	1,694,341	1,694,341	1,694,341	1,694,341	1,694,341	1,474,078
Total	22,865,036,909	269,121,484	285,415,950	(6)	16,294,460		2,070,452	2,070,452	2,070,452	2,070,452	2,070,452	2,070,452	2,070,452	1,801,296
Charter Schools	(1)	(2)	(3)	(4)	(3)-(2)+(4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30							
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 0.189%	Proportionate Share at 6/30/2019 0.214%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024	2025	2026
Deferred Outflows of Resources	(1,529,325,239)	(2,890,425)	(3,276,773)		(386,348)	7.87	(49,091)	(49,091)	(49,091)	(49,091)	(49,091)	(49,091)	(49,091)	(42,711)
Deferred Inflows of Resources	5,682,906,807	10,740,694	12,176,346		1,435,652	7.87	182,421	182,421	182,421	182,421	182,421	182,421	182,421	158,705
Net Pension Liability	18,711,455,341	35,364,651	40,091,658	(1)	4,727,006	7.87	600,636	600,636	600,636	600,636	600,636	600,636	600,636	522,554
Total	22,865,036,909	43,214,920	48,991,231	(1)	5,776,310		733,966	733,966	733,966	733,966	733,966	733,966	733,966	638,548

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

Components of Pension Expense for the Fiscal Year Ended June 30, 2018 - By Obligor

<u>Component</u>		<u>DEPT. OF ED.</u>		<u>SENIOR COLL.</u>		<u>COMM. COLL.</u>		<u>Charter Schools</u>		<u>Total</u>
a. Service Cost	\$	1,379,281,419	\$	37,711,191	\$	16,908,980	\$	2,715,206	\$	1,436,616,796
b. Interest on the Total Pension Liability		4,869,078,078		133,126,373		59,691,330		9,585,099		5,071,480,880
c. Differences between Expected and Actual Experience		495,379,635		13,544,267		6,072,991		975,187		515,972,080
d. Changes of Assumptions		608,276,525		16,631,002		7,457,025		1,197,432		633,561,984
e. Employee Contributions		(187,448,932)		(5,125,076)		(2,297,987)		(369,005)		(195,241,000)
f. Projected Earnings on Pension Plan Investments		(3,613,838,825)		(98,806,642)		(44,303,016)		(7,114,078)		(3,764,062,561)
g. Differences between Projected and Actual Earnings on Plan Investments		(1,969,176,541)		(53,839,624)		(24,140,662)		(3,876,453)		(2,051,033,280)
h. Pension Plan Administrative Expenses		62,478,816		1,708,245		765,945		122,994		65,076,000
i. Payment of Interest on TDA Fixed Funds		1,531,787,111		41,880,878		18,778,588		3,015,423		1,595,462,000
j. Other Changes in Fiduciary Net Position		(28,005,825)		(765,713)		(343,331)		(55,131)		(29,170,000)
k. Changes in Proportionate Share		(19,965,647)		10,471,580		11,730,807		(2,236,740)		0
Total Pension Expense	\$	3,127,845,814	\$	96,536,481	\$	50,320,670	\$	3,959,934	\$	3,278,662,899

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

Components of Pension Expense for the Fiscal Year Ended June 30, 2019 - By Obligor

<u>Component</u>	<u>DEPT. OF ED.</u>	<u>SENIOR COLL.</u>	<u>COMM. COLL.</u>	<u>Charter Schools</u>	<u>Total</u>
a. Service Cost	\$ 1,622,939,570	\$ 43,470,738	\$ 21,109,933	\$ 3,623,489	1,691,143,730
b. Interest on the Total Pension Liability	4,716,347,391	126,328,241	61,346,571	10,530,049	4,914,552,252
c. Differences between Expected and Actual Experience	(27,114,535)	(726,268)	(352,685)	(60,538)	(28,254,026)
d. Changes of Assumptions	409,902,341	10,979,310	5,331,690	915,177	427,128,518
e. Employee Contributions	(208,445,080)	(5,583,240)	(2,711,291)	(465,389)	(217,205,000)
f. Projected Earnings on Pension Plan Investments	(3,590,555,193)	(96,173,688)	(46,703,143)	(8,016,526)	(3,741,448,550)
g. Differences between Projected and Actual Earnings on Plan Investments	(1,115,700,104)	(29,884,234)	(14,512,157)	(2,490,991)	(1,162,587,486)
h. Pension Plan Administrative Expenses	61,698,131	1,652,596	802,521	137,752	64,291,000
i. Payment of Interest on TDA Fixed Funds	1,647,444,998	44,127,120	21,428,680	3,678,202	1,716,679,000
j. Other Changes in Fiduciary Net Position	(27,514,693)	(736,986)	(357,890)	(61,431)	(28,671,000)
k. Changes in Proportionate Share	(17,368,530)	4,393,758	12,145,792	828,980	0
Total Pension Expense	\$ 3,471,634,296	\$ 97,847,347	\$ 57,528,021	\$ 8,618,774	3,635,628,438

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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

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

	Fiscal Year Ending June 30, 2014		Fiscal Year Ending June 30, 2015		Fiscal Year Ending June 30, 2016		Fiscal Year Ending June 30, 2017		Fiscal Year Ending June 30, 2018		Fiscal Year Ending June 30, 2019	
Recognized Pension Expense	\$1,733,023,169		\$2,162,052,493		\$3,889,066,611		\$3,700,721,078		\$3,278,662,899		\$3,635,628,438	
Deferred Resources	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows
Due to Differences Between Expected and Actual Experience	0	0	1,119,313,745	0	909,318,893	0	868,214,256	0	0	1,949,415,068	0	1,037,262,405
Due to Chages of Assumptions	0	0	0	0	1,799,316,033	0	0	0	0	0	0	721,786,566
Due to Net Difference between Projected and Actual Earnings on Pension Plan Investments	0	5,137,672,325	1,108,300,450	0	1,509,141,734	0	0	3,675,061,024	0	2,008,841,951	0	1,583,889,160
Total	0	5,137,672,325	2,227,614,195	0	4,217,776,660	0	868,214,256	3,675,061,024	0	3,958,257,019	0	3,342,938,131

Reported amounts will be recognized in Pension Expense during:

Fiscal Year Ending June 30, 2014	(\$1,284,418,081)											
Fiscal Year Ending June 30, 2015	(\$1,284,418,081)		\$665,725,718									
Fiscal Year Ending June 30, 2016	(\$1,284,418,081)		\$665,725,718		\$1,331,030,127							
Fiscal Year Ending June 30, 2017	(\$1,284,418,081)		\$665,725,718		\$1,331,030,127		(\$778,730,699)					
Fiscal Year Ending June 30, 2018	(\$1,284,418,082)		\$619,087,645		\$619,087,645		(\$778,730,699)		(\$788,468,207)			
Fiscal Year Ending June 30, 2019			\$277,075,114		\$1,178,430,974		(\$778,730,699)		(\$788,468,207)			(\$652,020,176)
Fiscal Year Ending June 30, 2020					\$377,285,432		(\$778,730,699)		(\$788,468,207)			(\$652,020,176)
Fiscal Year Ending June 30, 2021							(\$778,730,699)		(\$788,468,207)			(\$652,020,176)
Fiscal Year Ending June 30, 2022							\$140,034,557		(\$788,468,206)			(\$652,020,176)
Fiscal Year Ending June 30, 2023							\$140,034,557		(\$286,257,719)			(\$652,020,176)
Fiscal Year Ending June 30, 2024							\$28,006,914		(\$286,257,719)			(\$256,047,886)
Fiscal Year Ending June 30, 2025									(\$231,868,754)			(\$256,047,886)
Fiscal Year Ending June 30, 2026												(\$222,761,655)

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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, 2019, the Obligors recognized Pension Expense for TRS of \$3,635,628,438.

At June 30, 2019, 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	\$ 588,145,142	\$ 2,700,419,754
Changes of Assumptions	0	721,786,566
Net Difference between Projected and Actual Earnings on Pension Plan Investments	<u>0</u>	<u>4,550,765,703</u>
Total	\$ 588,145,142	\$ 7,972,972,023

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for TRS will be recognized in Pension Expense as follows:

Fiscal Year Ended <u>June 30</u>	<u>Amount</u>
2019	\$ (763,712,994)
2020	(1,841,933,650)
2021	(2,219,219,082)
2022	(1,300,453,825)
2023	(798,243,338)
2024	(514,298,691)
2025	(487,916,640)
2026	(222,761,655)

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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, 2018**

Deferred Outflows of Resources

<u>Entity</u>	<u>Net Pension Liability</u>	<u>Differences Between Expected and Actual Experience</u>	<u>Change of Assumptions</u>	<u>Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments</u>	<u>Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions</u>	<u>Total Deferred Outflows of Resources</u>
Department of Education	\$ 17,964,681,158	\$ 957,337,589	\$ 510,952,279	\$ 0	\$ (33,996,251)	\$ 1,434,293,617
CUNY Senior Colleges	491,175,703	26,174,746	13,970,042	0	(11,434,343)	28,710,445
CUNY Community Colleges	220,233,829	11,736,257	6,263,901	0	36,385,308	54,385,466
Charter Schools	<u>35,364,651</u>	<u>1,884,582</u>	<u>1,005,843</u>	<u>0</u>	<u>9,045,286</u>	<u>11,935,711</u>
Total	<u>\$ 18,711,455,341</u>	<u>\$ 997,133,174</u>	<u>\$ 532,192,065</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 1,529,325,239</u>

Deferred Inflows of Resources

<u>Entity</u>	<u>Differences Between Expected and Actual Experience</u>	<u>Change of Assumptions</u>	<u>Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments</u>	<u>Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions</u>	<u>Total Deferred Inflows of Resources</u>
Department of Education	\$ 1,871,613,913	\$ 0	\$ 3,584,488,084	\$ 7,668,086	\$ 5,463,770,083
CUNY Senior Colleges	51,172,146	0	98,004,158	(12,412,987)	136,763,317
CUNY Community Colleges	22,944,615	0	43,943,198	2,687,682	69,575,495
Charter Schools	<u>3,684,394</u>	<u>0</u>	<u>7,056,299</u>	<u>2,057,219</u>	<u>12,797,912</u>
Total	<u>\$ 1,949,415,068</u>	<u>\$ 0</u>	<u>\$ 3,733,491,739</u>	<u>\$ 0</u>	<u>\$ 5,682,906,807</u>

Pension Expense

<u>Entity</u>	<u>Proportionate Share of Plan Pension Expense</u>	<u>Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions</u>	<u>Total Employer Pension Expense</u>
Department of Education	\$ 3,147,811,461	\$ (19,965,647)	\$ 3,127,845,814
CUNY Senior Colleges	86,064,901	10,471,580	96,536,481
CUNY Community Colleges	38,589,863	11,730,807	50,320,670
Charter Schools	<u>6,196,674</u>	<u>(2,236,740)</u>	<u>3,959,934</u>
Total	<u>\$ 3,278,662,899</u>	<u>\$ 0</u>	<u>\$ 3,278,662,899</u>

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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, 2019**

Deferred Outflows of Resources

<u>Entity</u>	<u>Net Pension Liability</u>	<u>Differences Between Expected and Actual Experience</u>	<u>Change of Assumptions</u>	<u>Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments</u>	<u>Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions</u>	<u>Total Deferred Outflows of Resources</u>
Department of Education	\$ 14,737,303,170	\$ 564,425,133	\$ 0	\$ 0	\$ (27,692,766)	\$ 536,732,367
CUNY Senior Colleges	394,741,403	15,118,232	0	0	(27,043,313)	(11,925,081)
CUNY Community Colleges	191,691,352	7,341,602	0	0	40,685,691	48,027,293
Charter Schools	<u>32,903,541</u>	<u>1,260,175</u>	<u>0</u>	<u>0</u>	<u>14,050,388</u>	<u>15,310,563</u>
Total	<u>\$ 15,356,639,466</u>	<u>\$ 588,145,142</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 588,145,142</u>

Deferred Inflows of Resources

<u>Entity</u>	<u>Differences Between Expected and Actual Experience</u>	<u>Change of Assumptions</u>	<u>Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments</u>	<u>Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions</u>	<u>Total Deferred Inflows of Resources</u>
Department of Education	\$ 2,591,511,293	\$ 692,676,771	\$ 4,367,232,425	\$ 6,210,844	\$ 7,657,631,333
CUNY Senior Colleges	69,414,111	18,553,476	116,977,132	(11,165,232)	193,779,487
CUNY Community Colleges	33,708,359	9,009,800	56,805,555	2,839,397	102,363,111
Charter Schools	<u>5,785,991</u>	<u>1,546,519</u>	<u>9,750,591</u>	<u>2,114,991</u>	<u>19,198,092</u>
Total	<u>\$ 2,700,419,754</u>	<u>\$ 721,786,566</u>	<u>\$ 4,550,765,703</u>	<u>\$ 0</u>	<u>\$ 7,972,972,023</u>

Pension Expense

<u>Entity</u>	<u>Proportionate Share of Plan Pension Expense</u>	<u>Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions</u>	<u>Total Employer Pension Expense</u>
Department of Education	\$ 3,489,002,826	\$ (17,368,530)	\$ 3,471,634,296
CUNY Senior Colleges	93,453,589	4,393,758	97,847,347
CUNY Community Colleges	45,382,229	12,145,792	57,528,021
Charter Schools	<u>7,789,794</u>	<u>828,980</u>	<u>8,618,774</u>
Total	<u>\$ 3,635,628,438</u>	<u>\$ 0</u>	<u>\$ 3,635,628,438</u>

NEW YORK CITY TEACHERS' RETIREMENT SYSTEM (TRS)

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, 2019**

Net Pension Liability	Deferred Outflows of Resources				Deferred Inflows of Resources				Plan Pension Expense
	Differences Between Expected and Actual Experience	Change of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Total Deferred Outflows of Resources Excluding Employer Specific Amounts	Differences Between Expected and Actual Experience	Change of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Total Deferred Inflows of Resources Excluding Employer Specific Amounts	
\$ 15,356,639,466	\$ 588,145,142	\$ 0	\$ 0	\$ 588,145,142	\$ 2,700,419,754	\$ 721,786,566	\$ 4,550,765,703	\$ 7,972,972,023	\$ 3,635,628,438

Appendix C

APPENDIX C

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

Statement of Fiduciary Net Position - QPP Only

June 30, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ASSETS		
Cash	\$ 3,694	\$ 2,106
Receivables:		
Investment securities sold	173,665	84,962
Member loans	50,586	50,038
Accrued interest and dividends	15,501	13,273
Other	626	794
Total receivables	<u>\$ 240,378</u>	<u>\$ 149,067</u>
Investments - at fair value		
Fixed Return Funds:		
Short-term investments:		
Commercial paper	46,954	69,031
Short-term investment fund	26,625	56,088
Discount notes	11,108	9,331
Debt securities	1,841,703	1,531,460
Equity securities	2,116,377	1,687,635
Alternative investments	892,479	765,549
Collective Trust Funds:		
International equity	1,096,779	1,167,563
Domestic equity	261,858	152,372
Mortgage debt security	20,203	34,966
Treasury inflation protected securities	0	283,241
Fixed income	123,051	256,554
Collateral from securities lending	411,646	389,554
Variable Return Funds:		
Short-term investments	467	495
Debt securities	1,095	1,076
Equities	53,088	51,828
Collateral from securities lending	<u>359</u>	<u>586</u>
Total Investments	6,903,792	\$ 6,457,329
Other assets	248,466	206,757
Total assets	<u><u>7,396,330</u></u>	<u><u>\$ 6,815,259</u></u>
LIABILITIES		
Accounts payable	43,333	34,454
Payables for investment securities purchased	182,667	115,140
Accrued benefits payable	10,034	9,747
Due to TDA Program from the System	1,756,459	1,592,875
Securities lending	412,005	390,140
Total liabilities	<u><u>2,404,498</u></u>	<u><u>\$ 2,142,356</u></u>
Plan Net Position Held in Trust for Benefits	<u><u>4,991,832</u></u>	<u><u>\$ 4,672,903</u></u>

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

Statement of Changes in Fiduciary Net Position - QPP Only

June 30, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019		June 30, 2018	
	Fixed	Variable	Fixed	Variable
ADDITIONS				
Contributions:				
Member Contributions	\$ 46,304	\$ 0	\$ 40,846	\$ 0
Employer Contributions	269,637	0	318,643	0
<i>Total contributions</i>	<u>\$ 315,941</u>	<u>\$ 0</u>	<u>\$ 359,489</u>	<u>\$ 0</u>
Investment income:				
Interest income	85,214	35	75,332	30
Dividend income	81,451	1,000	78,935	694
Net appreciation (depreciation) in fair value	265,605	2,874	421,135	5,180
<i>Total investment income</i>	<u>\$ 432,270</u>	<u>\$ 3,909</u>	<u>\$ 575,402</u>	<u>\$ 5,904</u>
Less:				
Investment expenses	31,170	50	19,384	45
<i>Net income</i>	<u>401,100</u>	<u>3,859</u>	<u>556,018</u>	<u>5,859</u>
Securities lending transactions:				
Securities lending income	2,124	0	3,995	0
Securities lending fees	(204)	0	(295)	0
<i>Net securities lending income</i>	<u>1,920</u>	<u>0</u>	<u>3,700</u>	<u>0</u>
<i>Net investment income</i>	<u>403,020</u>	<u>3,859</u>	<u>559,718</u>	<u>5,859</u>
Other:				
Net receipts from other retirement systems	35,595	29	51,058	(34)
Litigation income	0	0	0	0
<i>Total additions</i>	<u><u>\$ 754,556</u></u>	<u><u>\$ 3,888</u></u>	<u><u>\$ 970,265</u></u>	<u><u>\$ 5,825</u></u>
DEDUCTIONS				
Benefit payments and withdrawals	277,848	2,615	261,574	0
Payment of Interest on TDA Fixed Funds	141,695	0	127,972	0
Administrative expenses	17,357	0	13,212	0
<i>Total deductions</i>	<u><u>\$ 436,900</u></u>	<u><u>\$ 2,615</u></u>	<u><u>\$ 402,758</u></u>	<u><u>\$ 0</u></u>
INCREASE IN PLAN NET POSITION	317,656	1,273	567,507	5,825
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:				
Beginning of year	\$ 4,619,409	\$ 53,494	\$ 4,051,902	\$ 47,669
End of year	\$ 4,937,065	\$ 54,767	\$ 4,619,409	\$ 53,494

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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 @ 6/30/2017	\$ 4,051,902,000	\$ 47,669,000	\$ 4,099,571,000
2. Changes for the year:			
a. ER Contributions	318,643,000	0	318,643,000
b. EE Contributions	40,846,000	0	40,846,000
c. Net Investment Income	559,718,000	5,859,000	565,577,000
d. Benefit Payments	(261,574,000)	0	(261,574,000)
e. Payment of Interest on TDA Fixed Funds	(127,972,000)	0	(127,972,000)
f. Administrative Expenses	(13,212,000)	0	(13,212,000)
g. Other	51,058,000	(34,000)	51,024,000
h. Net Changes	<u>\$ 567,507,000</u>	<u>\$ 5,825,000</u>	<u>\$ 573,332,000</u>
3. Plan Net Position @ 6/30/2018	<u>\$ 4,619,409,000</u>	<u>\$ 53,494,000</u>	<u>\$ 4,672,903,000</u>
4. Changes for the year:			
a. ER Contributions	269,637,000	0	269,637,000
b. EE Contributions	46,304,000	0	46,304,000
c. Net Investment Income	403,020,000	3,859,000	406,879,000
d. Benefit Payments	(277,848,000)	(2,615,000)	(280,463,000)
e. Payment of Interest on TDA Fixed Funds	(141,695,000)	0	(141,695,000)
f. Administrative Expenses	(17,357,000)	0	(17,357,000)
g. Other	35,595,000	29,000	35,624,000
h. Net Changes	<u>\$ 317,656,000</u>	<u>\$ 1,273,000</u>	<u>\$ 318,929,000</u>
5. Plan Net Position @ 6/30/2019	<u>\$ 4,937,065,000</u>	<u>\$ 54,767,000</u>	<u>\$ 4,991,832,000</u>

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
U.S. Public Market Equities	30%	6.8%
International Public Market Equities	13%	7.4%
Emerging Public Market Equities	7%	10.3%
Private Market Equities	9%	10.8%
Fixed Income (Core, TIPS, HY, Opportunistic, Convertibles)	28%	2.4%
Alternatives (Real Assets, Hedge Funds)	<u>13%</u>	5.6%
Total	100%	

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.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

**Development of Asset (Gain) / Loss - QPP Only
June 30, 2018**

	Fixed	Variable	Total
1. Market Value 6/30/2017	\$ 4,051,902,000	\$ 47,669,000	\$ 4,099,571,000
2. Market Value 6/30/2018	4,619,409,000	53,494,000	4,672,903,000
3. Net Investment Income	559,718,000	5,859,000	565,577,000
4. Cash Flow (2. - 1. - 3.)	7,789,000	(34,000)	7,755,000
5. Projected Earnings¹ (7% * 1. + 3.441% * 4.)	283,901,159	5,859,000	289,760,159
6. (Gain) / Loss (5. - 3.)	(275,816,841)	0	(275,816,841)
7. Recognition Period	5 Years	5 Years	5 Years
8. Amount Recognized in Pension Expense (6. / 7.)	(55,163,368)	0	(55,163,368)
9. Deferred (Inflow) / Outflow of Resources (6. - 8.)	\$ (220,653,473)	\$ 0	\$ (220,653,473)

¹Variable Funds Projected Earnings set equal to Variable Funds Net Investment Income.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

**Development of Asset (Gain) / Loss - QPP Only
June 30, 2019**

	Fixed	Variable	Total
1. Market Value 6/30/2018	\$ 4,619,409,000	\$ 53,494,000	\$ 4,672,903,000
2. Market Value 6/30/2019	4,937,065,000	54,767,000	4,991,832,000
3. Net Investment Income	403,020,000	3,859,000	406,879,000
4. Cash Flow (2. - 1. - 3.)	(85,364,000)	(2,586,000)	(87,950,000)
5. Projected Earnings¹ (7% * 1. + 3.441% * 4.)	320,421,255	3,859,000	324,280,255
6. (Gain) / Loss (5. - 3.)	(82,598,745)	0	(82,598,745)
7. Recognition Period	5 Years	5 Years	5 Years
8. Amount Recognized in Pension Expense (6. / 7.)	(16,519,749)	0	(16,519,749)
9. Deferred (Inflow) / Outflow of Resources (6. - 8.)	\$ (66,078,996)	\$ 0	\$ (66,078,996)

¹Variable Funds Projected Earnings set equal to Variable Funds Net Investment Income.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

Roll-Forward of Entry Age Actuarial Accrued Liabilities to June 30, 2019

	Fixed		Variable		Total
1. Disclosed EA Accrued Liability at 6/30/2018	\$	5,142,724,815	\$	31,561,885	\$ 5,174,286,700
2. EA Normal Cost at 6/30/2018	\$	168,500,759	\$	0	\$ 168,500,759
3. Benefit Payments-FY2019	\$	(277,848,000)	\$	(2,615,000)	\$ (280,463,000)
4. Interest ¹	\$	362,225,041	\$	3,859,000	\$ 366,084,041
5. Experience (Gain)/Loss-FY2019	\$	164,148,221	\$	(11,988,135)	\$ 152,160,086
6. Changes of Assumptions-FY2019	\$	(314,183,128)	\$	(319,387)	\$ (314,502,515)
7. Roll-Forward EAAL at 6/30/2019	\$	5,245,567,708	\$	20,498,363	\$ 5,266,066,071

¹ Interest on Variable Funds set equal to Variable Funds Net Investment Income.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

**Schedule of Employer Allocations
June 30, 2018**

Employer	2018 Actual Employer Contributions	Employer Allocation Percentage
Department of Education (DOE) ¹	\$ 304,936,987	95.698%
School Construction Authority (SCA)	13,618,620	4.274%
Charter Schools	87,727	0.028%
Total	\$ 318,643,334	100.000%

¹The Beginning with Children Charter School (BWC) closed in 2016. The employer contribution for BWC of \$15,180 has been included with the results for the Department of Education.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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, 2018**

	Total Pension Liability			
	DOE	SCA	Charter Schools	TOTAL
1. Balances at June 30, 2017	\$ 4,833,618,300	\$ 237,660,548	\$ 2,059,773	\$ 5,073,338,621
Adjustment for Beginning with Children ¹	253,667	0	(253,667)	0
Balances at June 30, 2017 (Revised)	\$ 4,833,871,967	\$ 237,660,548	\$ 1,806,106	\$ 5,073,338,621
2. Changes for the Year:				
a. Service Cost	168,533,489	7,526,930	49,311	176,109,730
b. Interest	335,899,341	15,001,711	98,280	350,999,332
c. Changes of Benefit Terms	0	0	0	0
d. Differences b/t Expected and Actual Experience	(157,506,451)	(7,034,448)	(46,084)	(164,586,983)
e. Changes of Assumptions	0	0	0	0
f. Benefit Payments	(250,321,086)	(11,179,673)	(73,241)	(261,574,000)
g. Net Changes	\$ 96,605,293	\$ 4,314,520	\$ 28,266	\$ 100,948,079
3. SubTotal	\$ 4,930,477,260	\$ 241,975,068	\$ 1,834,372	\$ 5,174,286,700
4. Changes in Proportionate Share	\$ 21,211,626	\$ (20,826,054)	\$ (385,572)	\$ 0
5. Balances at June 30, 2018	\$ 4,951,688,886	\$ 221,149,014	\$ 1,448,800	\$ 5,174,286,700
	Plan Fiduciary Net Position			
	DOE	SCA	Charter Schools	TOTAL
6. Balances at June 30, 2017	\$ 3,905,862,220	\$ 192,044,449	\$ 1,664,331	\$ 4,099,571,000
Adjustment for Beginning with Children ¹	204,919	0	(204,919)	0
Balances at June 30, 2017 (Revised)	\$ 3,906,067,139	\$ 192,044,449	\$ 1,459,412	\$ 4,099,571,000
7. Changes for the Year:				
a. Contributions - Employer	304,936,653	13,618,620	87,727	318,643,000
b. Contributions - Employee	39,088,805	1,745,758	11,437	40,846,000
c. Net Investment Income	541,245,877	24,172,761	158,362	565,577,000
d. Benefit Payments	(250,321,086)	(11,179,673)	(73,241)	(261,574,000)
e. Administrative Expenses	(12,643,620)	(564,681)	(3,699)	(13,212,000)
f. Payment of Interest on TDA Fixed Funds	(122,466,645)	(5,469,523)	(35,832)	(127,972,000)
g. Other Changes	48,828,947	2,180,766	14,287	51,024,000
h. Net Changes	\$ 548,668,931	\$ 24,504,028	\$ 159,041	\$ 573,332,000
8. SubTotal	\$ 4,454,736,070	\$ 216,548,477	\$ 1,618,453	\$ 4,672,903,000
9. Changes in Proportionate Share	\$ 17,138,643	\$ (16,828,603)	\$ (310,040)	\$ 0
10. Balances at June 30, 2018	\$ 4,471,874,713	\$ 199,719,874	\$ 1,308,413	\$ 4,672,903,000
	Net Pension Liability			
	DOE	SCA	Charter Schools	TOTAL
11. Balances at June 30, 2017	\$ 927,756,080	\$ 45,616,099	\$ 395,442	\$ 973,767,621
Adjustment for Beginning with Children ¹	48,748	0	(48,748)	0
Balances at June 30, 2017 (Revised)	\$ 927,804,828	\$ 45,616,099	\$ 346,694	\$ 973,767,621
12. Changes for the Year:				
a. Service Cost	168,533,489	7,526,930	49,311	176,109,730
b. Interest	335,899,341	15,001,711	98,280	350,999,332
c. Changes of Benefit Terms	0	0	0	0
d. Differences b/t Expected and Actual Experience	(157,506,451)	(7,034,448)	(46,084)	(164,586,983)
e. Changes of Assumptions	0	0	0	0
f. Contributions - Employer	(304,936,653)	(13,618,620)	(87,727)	(318,643,000)
g. Contributions - Employee	(39,088,805)	(1,745,758)	(11,437)	(40,846,000)
h. Net Investment Income	(541,245,877)	(24,172,761)	(158,362)	(565,577,000)
i. Benefit Payments	0	0	0	0
j. Administrative Expenses	12,643,620	564,681	3,699	13,212,000
k. Payment of Interest on TDA Fixed Funds	122,466,645	5,469,523	35,832	127,972,000
l. Other Changes	(48,828,947)	(2,180,766)	(14,287)	(51,024,000)
l. Net Changes	\$ (452,063,638)	\$ (20,189,508)	\$ (130,775)	\$ (472,383,921)
13. SubTotal	\$ 475,741,190	\$ 25,426,591	\$ 215,919	\$ 501,383,700
14. Changes in Proportionate Share	\$ 4,072,983	\$ (3,997,451)	\$ (75,532)	\$ 0
15. Balances at June 30, 2018	\$ 479,814,173	\$ 21,429,140	\$ 140,387	\$ 501,383,700

¹The Beginning with Children Charter School (BWC) closed in 2016. Balances for BWC have been included with the results for the Department of Education.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

**Schedule of Employer Allocations
June 30, 2019**

<u>Employer</u>	<u>2019 Actual Employer Contributions</u>	<u>Employer Allocation Percentage</u>
Department of Education (DOE)	\$ 257,905,187	95.6491759812%
School Construction Authority (SCA)	11,689,168	4.3351562646%
Charter Schools	42,246	0.0156677542%
Total	\$ 269,636,601	100.000000000%

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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, 2019

	Total Pension Liability			
	DOE	SCA	Charter Schools	TOTAL
1. Balances at June 30, 2018	\$ 4,951,688,886	\$ 221,149,014	\$ 1,448,800	\$ 5,174,286,700
2. Changes for the Year:				
a. Service Cost	161,169,588	7,304,771	26,400	168,500,759
b. Interest	350,156,369	15,870,315	57,357	366,084,041
c. Changes of Benefit Terms	0	0	0	0
d. Differences b/t Expected and Actual Experience	145,539,868	6,596,378	23,840	152,160,086
e. Changes of Assumptions	(300,819,065)	(13,634,175)	(49,275)	(314,502,515)
f. Benefit Payments	(268,260,549)	(12,158,509)	(43,942)	(280,463,000)
g. Net Changes	\$ 87,786,211	\$ 3,978,780	\$ 14,380	\$ 91,779,371
3. SubTotal	\$ 5,039,475,097	\$ 225,127,794	\$ 1,463,180	\$ 5,266,066,071
4. Changes in Proportionate Share	\$ (2,526,293)	\$ 3,164,399	\$ (638,106)	\$ 0
5. Balances at June 30, 2019	\$ 5,036,948,804	\$ 228,292,193	\$ 825,074	\$ 5,266,066,071
	Plan Fiduciary Net Position			
	DOE	SCA	Charter Schools	TOTAL
6. Balances at June 30, 2018	\$ 4,471,874,713	\$ 199,719,874	\$ 1,308,413	\$ 4,672,903,000
7. Changes for the Year:				
a. Contributions - Employer	257,905,586	11,689,168	42,246	269,637,000
b. Contributions - Employee	44,289,394	2,007,351	7,255	46,304,000
c. Net Investment Income	389,176,411	17,638,840	63,749	406,879,000
d. Benefit Payments	(268,260,549)	(12,158,509)	(43,942)	(280,463,000)
e. Administrative Expenses	(16,601,828)	(752,453)	(2,719)	(17,357,000)
f. Payment of Interest on TDA Fixed Funds	(135,530,100)	(6,142,700)	(22,200)	(141,695,000)
g. Other Changes	34,074,063	1,544,356	5,581	35,624,000
h. Net Changes	\$ 305,052,977	\$ 13,826,053	\$ 49,970	\$ 318,929,000
8. SubTotal	\$ 4,776,927,690	\$ 213,545,927	\$ 1,358,383	\$ 4,991,832,000
9. Changes in Proportionate Share	\$ (2,281,516)	\$ 2,857,791	\$ (576,275)	\$ 0
10. Balances at June 30, 2019	\$ 4,774,646,174	\$ 216,403,718	\$ 782,108	\$ 4,991,832,000
	Net Pension Liability			
	DOE	SCA	Charter Schools	TOTAL
11. Balances at June 30, 2018	\$ 479,814,173	\$ 21,429,140	\$ 140,387	\$ 501,383,700
12. Changes for the Year:				
a. Service Cost	161,169,588	7,304,771	26,400	168,500,759
b. Interest	350,156,369	15,870,315	57,357	366,084,041
c. Changes of Benefit Terms	0	0	0	0
d. Differences b/t Expected and Actual Experience	145,539,868	6,596,378	23,840	152,160,086
e. Changes of Assumptions	(300,819,065)	(13,634,175)	(49,275)	(314,502,515)
f. Contributions - Employer	(257,905,586)	(11,689,168)	(42,246)	(269,637,000)
g. Contributions - Employee	(44,289,394)	(2,007,351)	(7,255)	(46,304,000)
h. Net Investment Income	(389,176,411)	(17,638,840)	(63,749)	(406,879,000)
i. Benefit Payments	0	0	0	0
j. Administrative Expenses	16,601,828	752,453	2,719	17,357,000
k. Payment of Interest on TDA Fixed Funds	135,530,100	6,142,700	22,200	141,695,000
l. Other Changes	(34,074,063)	(1,544,356)	(5,581)	(35,624,000)
l. Net Changes	\$ (217,266,766)	\$ (9,847,273)	\$ (35,590)	\$ (227,149,629)
13. SubTotal	\$ 262,547,407	\$ 11,581,867	\$ 104,797	\$ 274,234,071
14. Changes in Proportionate Share	\$ (244,777)	\$ 306,608	\$ (61,831)	\$ 0
15. Balances at June 30, 2019	\$ 262,302,630	\$ 11,888,475	\$ 42,966	\$ 274,234,071

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

Schedule of Changes in Net Pension Liability and Related Ratios

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
1. Total Pension Liability							
a. Service Cost	\$ 168,500,759	\$ 176,109,730	\$ 168,625,048	\$ 153,106,995	\$ 147,898,591	\$ 142,686,386	\$ 138,530,472
b. Interest	366,084,041	350,999,332	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	0	0
d. Differences b/t Expected and Actual Experience	152,160,086	(164,586,983)	19,938,359	(75,906,864)	50,147,724	0	0
e. Changes of Assumptions	(314,502,515)	0	0	183,677,129	0	0	0
f. Benefit Payments	(280,463,000)	(261,574,000)	(262,432,000)	(240,727,000)	(223,244,000)	(214,315,000)	(204,093,000)
g. Net Changes in Total Pension Liability	\$ 91,779,371	\$ 100,948,079	\$ 272,640,333	\$ 340,465,412	\$ 274,394,314	\$ 216,533,426	\$ 206,174,789
2. Total Pension Liability - Beginning	\$ 5,174,286,700	\$ 5,073,338,621	\$ 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	\$ 5,266,066,071	\$ 5,174,286,700	\$ 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	\$ 269,637,000	\$ 318,643,000	\$ 288,233,000	\$ 265,532,000	\$ 258,099,000	\$ 214,590,000	\$ 196,246,000
b. Contributions - Employer	46,304,000	40,846,000	39,821,000	38,581,000	39,564,000	37,193,000	39,056,000
c. Net Investment Income	406,879,000	565,577,000	862,510,000	164,144,000	177,166,000	875,453,000	660,827,000
d. Benefit Payments	(280,463,000)	(261,574,000)	(262,432,000)	(240,727,000)	(223,244,000)	(214,315,000)	(204,093,000)
e. Administrative Expenses	(17,357,000)	(13,212,000)	(15,486,000)	(12,818,000)	(10,956,000)	(9,776,000)	(8,927,000)
f. Payment of Interest on TDA Fixed Funds	(141,695,000)	(127,972,000)	(106,554,000)	(94,789,000)	(85,104,000)	(206,615,000)	(163,756,000)
g. Other Changes	35,624,000	51,024,000	(122,954,000)	(157,499,000)	(52,021,000)	(70,916,000)	(176,301,000)
h. Net Changes in Fiduciary Net Position	\$ 318,929,000	\$ 573,332,000	\$ 683,138,000	\$ (37,576,000)	\$ 103,504,000	\$ 625,614,000	\$ 343,052,000
5. Plan Fiduciary Net Position - Beginning	\$ 4,672,903,000	\$ 4,099,571,000	\$ 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	\$ 4,991,832,000	\$ 4,672,903,000	\$ 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	\$ 274,234,071	\$ 501,383,700	\$ 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	94.8%	90.3%	80.8%	71.2%	77.4%	78.3%	66.9%
9. Covered Employee Payroll ¹	\$ 1,264,079,158	\$ 1,102,183,933	\$ 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	21.7%	45.5%	92.5%	137.3%	99.0%	91.7%	148.5%

¹ Projected employee payroll at time 1.0 under previous roll-forward methodology through 2018. Actual employee payroll at valuation date (time = 0) beginning in 2019.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

Schedule of Employer Contributions (\$ in thousands)

Fiscal Year Ended June 30	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially Determined Contribution	\$ 269,637	\$ 318,643	\$ 288,233	\$ 265,532	\$ 258,099	\$ 214,590	\$ 196,246	\$ 213,651	\$ 180,191	\$ 147,349
Contributions in relation to the Actuarially Determined Contribution	<u>\$ 269,637</u>	<u>\$ 318,643</u>	<u>\$ 288,233</u>	<u>\$ 265,532</u>	<u>\$ 258,099</u>	<u>\$ 214,590</u>	<u>\$ 196,246</u>	<u>\$ 213,651</u>	<u>\$ 180,191</u>	<u>\$ 147,349</u>
Contribution Deficiency (Excess)	0	0	0	0	0	0	0	0	0	0
Contributions as a percentage of Covered Employee Payroll ¹	21.331%	28.910%	27.394%	26.341%	25.383%	21.694%	22.145%	24.293%	20.461%	17.822%

¹ Projected employee payroll at time 1.0 under previous roll-forward methodology through 2018. Actual employee payroll at valuation date (time = 0) beginning in 2019.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

Average Expected Remaining Service Lives

<u>Group</u>	<u>Count</u>	Average Expected Remaining Service Life <u>@ 6/30/2018</u>
Active	25,864	11.87
Active Off Payroll	6,006	0
Term Vested	1,937	0
Retired	<u>18,041</u>	<u>0</u>
Total	51,848	5.92

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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	Differences between Expected and Actual Experience	Recognition Period (Years)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
			2015	\$ 50,147,724	3.30	15,196,280	15,196,280	15,196,280	4,558,884	0	0	0
2016	\$ (75,906,864)	3.19		(23,795,255)	(23,795,255)	(23,795,255)	(4,521,099)	0	0	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	0	0
2018	\$ (164,586,983)	5.85				(28,134,527)	(28,134,527)	(28,134,527)	(28,134,527)	(28,134,527)	(23,914,348)	0
2019	\$ 152,160,086	5.92					25,702,717	25,702,717	25,702,717	25,702,717	25,702,717	23,646,501
Net increase (decrease) in Pension Expense			\$ 15,196,280	\$ (8,598,975)	\$ (4,742,426)	\$ (43,514,349)	\$ (3,096,360)	\$ 1,424,739	\$ 1,424,739	\$ (1,776,196)	\$ 1,788,369	\$ 23,646,501

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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	Changes in Assumptions	Recognition Period (Years)	2016	2017	2018	2019	2020	2021	2022	2023	2024
2016	\$ 183,677,129	3.19	57,579,037	57,579,037	57,579,037	10,940,018					
2017											
2018											
2019	\$ (314,502,515)	5.92				(53,125,425)	(53,125,425)	(53,125,425)	(53,125,425)	(53,125,425)	(48,875,390)
Net increase (decrease) in Pension Expense			<u>\$ 57,579,037</u>	<u>\$ 57,579,037</u>	<u>\$ 57,579,037</u>	<u>\$ (42,185,407)</u>	<u>\$ (53,125,425)</u>	<u>\$ (53,125,425)</u>	<u>\$ (53,125,425)</u>	<u>\$ (53,125,425)</u>	<u>\$ (48,875,390)</u>

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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**

Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2015	2016	2017	2018	2019	2020	2021	2022	2023
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			
2017	\$ (624,753,917)	5			(124,950,783)	(124,950,783)	(124,950,783)	(124,950,783)	(124,950,785)		
2018	\$ (275,816,841)	5				(55,163,368)	(55,163,368)	(55,163,368)	(55,163,368)	(55,163,369)	
2019	\$ (82,598,745)	5					(16,519,749)	(16,519,749)	(16,519,749)	(16,519,749)	(16,519,749)
Net increase (decrease) in Pension Expense			\$ 10,804,305	\$ 24,279,014	\$ (100,671,769)	\$ (155,835,137)	\$ (172,354,885)	\$ (183,159,193)	\$ (196,633,902)	\$ (71,683,118)	\$ (16,519,749)

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)
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)	(2)	(3)	(3)-(2)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 95.9638%	Proportionate Share at 6/30/2015 96.5724%	Change in Proportionate Share	Recognition Period (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)	(2)	(3)	(3)-(2)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 4.0287%	Proportionate Share at 6/30/2015 3.4105%	Change in Proportionate Share	Recognition Period (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	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)	(950,823)
Charter Schools	(1)	(2)	(3)	(3)-(2)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2014	Proportionate Share at 6/30/2014 0.0075%	Proportionate Share at 6/30/2015 0.0171%	Change in Proportionate Share	Recognition Period (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	64,239	146,465	82,226	3.30	24,917	24,917	24,917	7,475
Net Pension Liability	835,333,562	62,650	142,842	80,192	3.30	24,301	24,301	24,301	7,289
Total	1,691,854,030	126,889	289,307	162,418		49,218	49,218	49,218	14,764

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)
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)	(3)	(3)-(2)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 96.5724%	Proportionate Share at 6/30/2016 96.8080%	Change in Proportionate Share	Recognition Period (Years)	2016	2017	2018	2019
Deferred Outflows of Resources	(78,168,665)	(75,489,357)	(75,673,522)	(184,165)	3.19	(57,732)	(57,732)	(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)	(2)	(3)	(3)-(2)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 3.4105%	Proportionate Share at 6/30/2016 3.1787%	Change in Proportionate Share	Recognition Period (Years)	2016	2017	2018	2019
Deferred Outflows 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)	(213,333)
Charter Schools	(1)	(2)	(3)	(3)-(2)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30			
	Collective Amount at 6/30/2015	Proportionate Share at 6/30/2015 0.0171%	Proportionate Share at 6/30/2016 0.0133%	Change in Proportionate Share	Recognition Period (Years)	2016	2017	2018	2019
Deferred Outflows of Resources	(78,168,665)	(13,366)	(10,396)	2,970	3.19	931	931	931	177
Deferred Inflows of Resources	617,120,991	105,528	82,078	(23,450)	3.19	(7,351)	(7,351)	(7,351)	(1,397)
Net Pension Liability	1,006,223,876	172,065	133,827	(38,238)	3.19	(11,987)	(11,987)	(11,987)	(2,277)
Total	1,545,176,202	264,227	205,509	(58,718)		(18,407)	(18,407)	(18,407)	(3,497)

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)
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)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 96.8080%	Proportionate Share at 6/30/2017 95.2749%	Change in Proportionate Share		2017	2018	2019	2020	2021	2022
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	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)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
Deferred Outflows of Resources	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 3.1787%	Proportionate Share at 6/30/2017 4.6845%	Change in Proportionate Share		2017	2018	2019	2020	2021	2022
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
Charter Schools	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
Deferred Outflows of Resources	Collective Amount at 6/30/2016	Proportionate Share at 6/30/2016 0.0133%	Proportionate Share at 6/30/2017 0.0406%	Change in Proportionate Share		2017	2018	2019	2020	2021	2022
Deferred Outflows of Resources	(232,165,006)	(30,878)	(94,258)	(63,380)	5.17	(12,259)	(12,259)	(12,259)	(12,259)	(12,259)	(2,085)
Deferred Inflows of Resources	429,833,123	57,168	174,513	117,345	5.17	22,698	22,698	22,698	22,698	22,698	3,855
Net Pension Liability	1,384,265,288	184,107	562,012	377,905	5.17	73,096	73,096	73,096	73,096	73,096	12,425
Total	1,581,933,405	210,397	642,267	431,870		83,535	83,535	83,535	83,535	83,535	14,195

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)
Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)

Changes in Proportionate Share at 6/30/2018

Department of Education	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 95.2799%	Proportionate Share at 6/30/2018 95.698%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023
Deferred Outflows of Resources	(89,159,749)	(84,951,320)	(85,324,096)	(372,776)	5.85	(63,722)	(63,722)	(63,722)	(63,722)	(63,722)	(54,166)
Deferred Inflows of Resources	604,408,790	575,880,090	578,407,124	2,527,034	5.85	431,971	431,971	431,971	431,971	431,971	367,179
Net Pension Liability	973,767,621	927,804,816	931,876,138	4,071,322	5.85	695,953	695,953	695,953	695,953	695,953	591,557
Total	1,489,016,662	1,418,733,586	1,424,959,166	6,225,580		1,064,202	1,064,202	1,064,202	1,064,202	1,064,202	904,570
School Construction Authority	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 4.6845%	Proportionate Share at 6/30/2018 4.274%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023
Deferred Outflows of Resources	(89,159,749)	(4,176,688)	(3,810,688)	366,000	5.85	62,564	62,564	62,564	62,564	62,564	53,180
Deferred Inflows of Resources	604,408,790	28,313,530	25,832,432	(2,481,098)	5.85	(424,119)	(424,119)	(424,119)	(424,119)	(424,119)	(360,503)
Net Pension Liability	973,767,621	45,616,144	41,618,828	(3,997,316)	5.85	(683,302)	(683,302)	(683,302)	(683,302)	(683,302)	(580,806)
Total	1,489,016,662	69,752,986	63,640,572	(6,112,414)		(1,044,857)	(1,044,857)	(1,044,857)	(1,044,857)	(1,044,857)	(888,129)
Charter Schools	(1)	(2)	(3)	(3)-(2)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2017	Proportionate Share at 6/30/2017 0.0356%	Proportionate Share at 6/30/2018 0.028%	Change in Proportionate Share		2018	2019	2020	2021	2022	2023
Deferred Outflows of Resources	(89,159,749)	(31,741)	(24,965)	6,776	5.85	1,158	1,158	1,158	1,158	1,158	986
Deferred Inflows of Resources	604,408,790	215,170	169,234	(45,936)	5.85	(7,852)	(7,852)	(7,852)	(7,852)	(7,852)	(6,676)
Net Pension Liability	973,767,621	346,661	272,655	(74,006)	5.85	(12,651)	(12,651)	(12,651)	(12,651)	(12,651)	(10,751)
Total	1,489,016,662	530,090	416,924	(113,166)		(19,345)	(19,345)	(19,345)	(19,345)	(19,345)	(16,441)

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

Changes in Proportionate Share at 6/30/2019

Department of Education	(1)	(2)	(3)	(4)	(3)-(2)+(4)	Recognition Period (Years)	Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 95.698%	Proportionate Share at 6/30/2019 95.649%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share		2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(23,165,279)	(22,168,709)	(22,157,399)		11,310	5.92	1,910	1,910	1,910	1,910	1,910	1,760
Deferred Inflows of Resources	698,725,657	668,666,479	668,325,333		(341,146)	5.92	(57,626)	(57,626)	(57,626)	(57,626)	(57,626)	(53,016)
Net Pension Liability	501,383,700	479,814,173	479,569,377	19	(244,777)	5.92	(41,348)	(41,348)	(41,348)	(41,348)	(41,348)	(38,037)
Total	1,176,944,078	1,126,311,943	1,125,737,311	19	(574,613)		(97,064)	(97,064)	(97,064)	(97,064)	(97,064)	(89,293)
School Construction Authority	(1)	(2)	(3)	(4)	(3)-(2)+(4)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 4.274%	Proportionate Share at 6/30/2019 4.335%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share	Recognition Period (Years)	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(23,165,279)	(990,084)	(1,004,251)		(14,167)	5.92	(2,393)	(2,393)	(2,393)	(2,393)	(2,393)	(2,202)
Deferred Inflows of Resources	698,725,657	29,863,535	30,290,849		427,314	5.92	72,181	72,181	72,181	72,181	72,181	66,409
Net Pension Liability	501,383,700	21,429,140	21,735,767	(19)	306,608	5.92	51,792	51,792	51,792	51,792	51,792	47,648
Total	1,176,944,078	50,302,591	51,022,365	(19)	719,755		121,580	121,580	121,580	121,580	121,580	111,855
Charter Schools	(1)	(2)	(3)	(4)	(3)-(2)+(4)		Amount to Recognize in Pension Expense For the Fiscal Year Ended June 30					
	Collective Amount at 6/30/2018	Proportionate Share at 6/30/2018 0.028%	Proportionate Share at 6/30/2019 0.016%	Contributions in excess of Proportionate Share and Adjustments Due to Rounding	Change in Proportionate Share	Recognition Period (Years)	2019	2020	2021	2022	2023	2024
Deferred Outflows of Resources	(23,165,279)	(6,486)	(3,629)		2,857	5.92	483	483	483	483	483	442
Deferred Inflows of Resources	698,725,657	195,643	109,475		(86,168)	5.92	(14,555)	(14,555)	(14,555)	(14,555)	(14,555)	(13,393)
Net Pension Liability	501,383,700	140,387	78,556	0	(61,831)	5.92	(10,444)	(10,444)	(10,444)	(10,444)	(10,444)	(9,611)
Total	1,176,944,078	329,544	184,402	0	(145,142)		(24,516)	(24,516)	(24,516)	(24,516)	(24,516)	(22,562)

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

Components of Pension Expense for the Fiscal Year Ended June 30, 2018 - By Obligor

<u>Component</u>	<u>DOE</u>	<u>SCA</u>	<u>Charter Schools</u>	<u>Total</u>
a. Service Cost	\$ 168,533,489	\$ 7,526,930	\$ 49,311	\$ 176,109,730
b. Interest on the Total Pension Liability	335,899,341	15,001,711	98,280	350,999,332
c. Differences between Expected and Actual Experience	(41,642,362)	(1,859,803)	(12,184)	(43,514,349)
d. Changes of Assumptions	55,101,987	2,460,928	16,122	57,579,037
e. Employee Contributions	(39,088,805)	(1,745,758)	(11,437)	(40,846,000)
f. Projected Earnings on Pension Plan Investments	(277,294,677)	(12,384,349)	(81,133)	(289,760,159)
g. Differences between Projected and Actual Earnings on Plan Investments	(281,502,533)	(12,572,278)	(82,364)	(294,157,175)
h. Pension Plan Administrative Expenses	12,643,620	564,681	3,699	13,212,000
i. Payment of Interest on TDA Fixed Funds	122,466,645	5,469,523	35,832	127,972,000
j. Other Changes in Fiduciary Net Position	(48,828,947)	(2,180,766)	(14,287)	(51,024,000)
k. Changes in Proportionate Share	(1,558,611)	1,489,021	69,590	0
Total Pension Expense	\$ 4,729,147	\$ 1,769,840	\$ 71,429	\$ 6,570,416

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

Components of Pension Expense for the Fiscal Year Ended June 30, 2019 - By Obligor

<u>Component</u>	<u>DOE</u>	<u>SCA</u>	<u>Charter Schools</u>	<u>Total</u>
a. Service Cost	\$ 161,169,588	\$ 7,304,771	\$ 26,400	\$ 168,500,759
b. Interest on the Total Pension Liability	350,156,369	15,870,315	57,357	366,084,041
c. Differences between Expected and Actual Experience	(2,961,643)	(134,232)	(485)	(3,096,360)
d. Changes of Assumptions	(40,349,994)	(1,828,803)	(6,610)	(42,185,407)
e. Employee Contributions	(44,289,394)	(2,007,351)	(7,255)	(46,304,000)
f. Projected Earnings on Pension Plan Investments	(310,171,392)	(14,058,056)	(50,807)	(324,280,255)
g. Differences between Projected and Actual Earnings on Plan Investments	(164,856,027)	(7,471,854)	(27,004)	(172,354,885)
h. Pension Plan Administrative Expenses	16,601,828	752,453	2,719	17,357,000
i. Payment of Interest on TDA Fixed Funds	135,530,100	6,142,700	22,200	141,695,000
j. Other Changes in Fiduciary Net Position	(34,074,063)	(1,544,356)	(5,581)	(35,624,000)
k. Changes in Proportionate Share	(3,514,744)	3,470,886	43,858	0
Total Pension Expense	\$ 63,240,628	\$ 6,496,473	\$ 54,792	\$ 69,791,893

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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

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

	Fiscal Year Ending June 30, 2013		Fiscal Year Ending June 30, 2014		Fiscal Year Ending June 30, 2015		Fiscal Year Ending June 30, 2016		Fiscal Year Ending June 30, 2017		Fiscal Year Ending June 30, 2018		Fiscal Year Ending June 30, 2019	
Recognized Pension Expense	\$463,678,552		\$257,720,131		\$111,421,172		\$302,289,203		\$195,316,257		\$6,570,416		\$69,791,893	
Deferred Resources	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows
Due to Differences Between Expected and Actual Experience	0	0	0	0	34,951,444	0	0	52,111,609	16,081,810	0	0	136,452,456	126,457,369	0
Due to Chages of Assumptions	0	0	0	0	0	0	126,098,092	0	0	0	0	0	0	261,377,090
Due to Net Difference between Projected and Actual Earnings on Pension Plan Investments	0	404,309,763	0	553,288,146	43,217,221	0	53,898,834	0	0	499,803,134	0	220,653,473	0	66,078,996
Total	0	404,309,763	0	553,288,146	78,168,665	0	179,996,926	52,111,609	16,081,810	499,803,134	0	357,105,929	126,457,369	327,456,086

Reported amounts will be recognized in Pension Expense during:

Fiscal Year Ending June 30, 2013	(\$101,077,441)													
Fiscal Year Ending June 30, 2014	(\$101,077,441)		(\$138,322,036)											
Fiscal Year Ending June 30, 2015	(\$101,077,441)		(\$138,322,036)		\$26,000,585									
Fiscal Year Ending June 30, 2016	(\$101,077,441)		(\$138,322,036)		\$26,000,585		\$47,258,491							
Fiscal Year Ending June 30, 2017	(\$101,077,440)		(\$138,322,036)		\$26,000,585		\$47,258,491			(\$121,094,234)				
Fiscal Year Ending June 30, 2018			(\$138,322,038)		\$15,363,189		\$47,258,491			(\$121,094,234)		(\$83,297,895)		
Fiscal Year Ending June 30, 2019					\$10,804,306		\$19,893,628			(\$121,094,234)		(\$83,297,895)		(\$43,942,457)
Fiscal Year Ending June 30, 2020							\$13,474,707			(\$121,094,234)		(\$83,297,895)		(\$43,942,457)
Fiscal Year Ending June 30, 2021										(\$121,094,236)		(\$83,297,895)		(\$43,942,457)
Fiscal Year Ending June 30, 2022										\$655,614		(\$83,297,896)		(\$43,942,457)
Fiscal Year Ending June 30, 2023												(\$23,914,348)		(\$43,942,457)
Fiscal Year Ending June 30, 2024														(\$25,228,889)

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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, 2019, the Obligors recognized Pension Expense for BERS of \$69,791,893.

At June 30, 2019, 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	\$ 134,826,081	\$ 108,317,929
Changes of Assumptions	0	261,377,090
Net Difference between Projected and Actual Earnings on Pension Plan Investments	<u>0</u>	<u>467,995,962</u>
Total	\$ 134,826,081	\$ 837,690,981

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>
2019	\$ (217,636,652)
2020	\$ (234,859,879)
2021	\$ (248,334,588)
2022	\$ (126,584,739)
2023	\$ (67,856,805)
2024	\$ (25,228,889)

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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, 2018**

Deferred Outflows of Resources						
Entity	Net Pension Liability	Differences Between Expected and Actual Experience	Changes of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources
Department of Education	\$ 479,814,173	\$ 11,699,330	\$ 10,469,379	\$ 0	\$ (11,381,001)	\$ 10,787,708
School Construction Authority	21,429,140	522,508	467,576	0	\$ 11,154,190	12,144,274
Charter Schools	140,387	3,423	3,063	0	\$ 226,811	233,297
Total	<u>\$ 501,383,700</u>	<u>\$ 12,225,261</u>	<u>\$ 10,940,018</u>	<u>\$ 0</u>	<u>\$ 0</u>	<u>\$ 23,165,279</u>

Deferred Inflows of Resources						
Entity	Differences Between Expected and Actual Experience	Changes of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	
Department of Education	\$ 134,908,872	\$ 0	\$ 533,757,606	\$ (1,865,694)	\$ 666,800,784	
School Construction Authority	6,025,210	0	23,838,325	1,829,319	31,692,854	
Charter Schools	39,473	0	156,171	36,375	232,019	
Total	<u>\$ 140,973,555</u>	<u>\$ 0</u>	<u>\$ 557,752,102</u>	<u>\$ 0</u>	<u>\$ 698,725,657</u>	

Pension Expense			
Entity	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
Department of Education	\$ 6,287,758	\$ (1,558,611)	\$ 4,729,147
School Construction Authority	280,819	1,489,021	1,769,840
Charter Schools	1,839	69,590	71,429
Total	<u>\$ 6,570,416</u>	<u>\$ 0</u>	<u>\$ 6,570,416</u>

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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, 2019**

Deferred Outflows of Resources						
Entity	Net Pension Liability	Differences Between Expected and Actual Experience	Changes of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources
Department of Education	\$ 262,302,630	\$ 128,960,036	\$ 0	\$ 0	\$ (7,835,438)	\$ 121,124,598
School Construction Authority	11,888,475	5,844,921	0	0	\$ 7,811,992	13,656,913
Charter Schools	42,966	21,124	0	0	\$ 23,446	44,570
Total	\$ 274,234,071	\$ 134,826,081	\$ 0	\$ 0	\$ 0	\$ 134,826,081

Deferred Inflows of Resources						
Entity	Differences Between Expected and Actual Experience	Changes of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	
Department of Education	\$ 103,605,207	\$ 250,005,033	\$ 447,634,282	\$ (1,260,262)	\$ 799,984,260	
School Construction Authority	4,695,751	11,331,105	20,288,356	1,238,252	37,553,464	
Charter Schools	16,971	40,952	73,324	22,010	153,257	
Total	\$ 108,317,929	\$ 261,377,090	\$ 467,995,962	\$ 0	\$ 837,690,981	

Pension Expense			
Entity	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
Department of Education	\$ 66,755,372	\$ (3,514,744)	\$ 63,240,628
School Construction Authority	3,025,587	3,470,886	6,496,473
Charter Schools	10,934	43,858	54,792
Total	\$ 69,791,893	\$ 0	\$ 69,791,893

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM (BERS)

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, 2019**

Deferred Outflows of Resources				Deferred Inflows of Resources					
Net Pension Liability	Differences Between Expected and Actual Experience	Changes of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Total Deferred Outflows of Resources Excluding Employer Specific Amounts	Differences Between Expected and Actual Experience	Changes of Assumptions	Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Total Deferred Inflows of Resources Excluding Employer Specific Amounts	Plan Pension Expense
\$ 274,234,071	\$ 134,826,081	\$ 0	\$ 0	\$ 134,826,081	\$ 108,317,929	\$ 261,377,090	\$ 467,995,962	\$ 837,690,981	\$ 69,791,893

Appendix D

APPENDIX D

NEW YORK CITY POLICE PENSION FUND (POLICE)

- Page 1a - Statement of Fiduciary Net Position - POLICE
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- Page 2a - Statement of Changes in Fiduciary Net Position - POLICE
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- Page 12a - Components of Pension Expense - June 30, 2018
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NEW YORK CITY POLICE PENSION FUND (POLICE)

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

**Statement of Fiduciary Net Position
June 30, 2019 and June 30, 2018**

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ASSETS		
Cash	\$ 23,690	\$ 4,789
Receivables:		
Investment securities sold	865,477	546,611
Member loans	238,644	232,882
Transferable earnings due from VSFs	0	0
Accrued interest and dividends	2,294	5,754
Total receivables	<u>\$ 1,106,415</u>	<u>\$ 785,247</u>
Investments - at fair value		
Short-term investments:		
Commercial paper	235,970	0
Short-term investment fund	234,110	708,871
U.S. treasury bills and agencies	0	0
Discount notes	162,145	0
Debt securities:		
U.S. government and agency	4,618,579	9,951,525
Corporate and other	3,696,453	0
Equity securities	0	11,946,234
Alternative Investments	0	7,976,474
Bank Loans	206,667	0
Mortgage Debt Securities	861,533	0
Treasury Inflation Protected Securities	1,412,234	0
Equity Securities:		
Domestic Equity	12,958,661	0
International Equity	259,640	0
Collective trust funds:		
Fixed income	0	759,814
Domestic equity	87,942	124,872
International equity	5,984,252	6,273,065
Mortgage debt security	204,347	186,862
Treasury inflation protected securities	457,367	1,744,591
Collateral from securities lending	0	4,832,615
Bank Loans	536,357	0
Corporate and Other	50,620	0
U.S. Government and Agency	25,958	0
Opportunistic Fixed Income	132,311	0
Alternative Investments:		
Infrastructure	406,813	0
Opportunistic Fixed Income	1,223,141	0
Private Equity	2,516,553	0
Private Real Estate	1,980,800	0
Hedge Fund Investment	2,730,587	0
Collateral from securities lending	3,733,667	0
Total Investments	<u>\$ 44,716,707</u>	<u>\$ 44,504,923</u>
Other assets	7,093	6,583
Total assets	<u>\$ 45,853,905</u>	<u>\$ 45,301,542</u>
LIABILITIES		
Accounts payable	265,086	302,529
Payables for investment securities purchased	863,328	629,892
Accrued benefits payable	69,608	91,639
Accrued Transfers to VSFs	802,792	1,486,000
Securities lending	3,733,667	4,832,615
Total liabilities	<u>\$ 5,734,481</u>	<u>\$ 7,342,675</u>
Plan Net Position Held in Trust for Benefits	<u>\$ 40,119,424</u>	<u>\$ 37,958,867</u>

**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, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ASSETS		
Cash	\$ 2,026	\$ 2,509
Receivables:		
Investment securities sold	9,491	516
Accrued Transfers from QPP	135,164	194,000
Accrued interest and dividends	235	839
Total receivables	<u>\$ 144,890</u>	<u>\$ 195,355</u>
Investments - at fair value		
Short term investments:		
Commercial paper	0	0
Short-term investments fund	651	1,675
U.S. treasury bills and agencies	0	0
Discount notes	5,927	0
Debt securities:		
U.S. government and agency	0	0
Corporate and other	0	0
Equities Securities	0	0
Equity Securities:		
Domestic Equity	613,984	0
International Equity	0	0
Collective trust funds:		
Fixed income	0	663,025
Domestic equity	66,139	648,654
International equity	516,950	558,172
Mortgage Debt Securities	188,703	0
Collateral from securities lending	0	56,506
Corporate and other	181,261	0
U.S. Government and Agency	265,406	0
Alternative Investments:		
Collateral from securities lending	49,847	0
Total Investments	<u>\$ 1,888,868</u>	<u>\$ 1,928,032</u>
Other assets	0	0
Total assets	<u><u>\$ 2,035,784</u></u>	<u><u>\$ 2,125,896</u></u>
LIABILITIES		
Accounts payable	188	149
Payables for investment securities purchased	9,350	459
Transferable earnings due to QPP	0	0
Accrued benefits payable	77,820	76,906
Securities lending	49,847	56,506
Total liabilities	<u><u>\$ 137,205</u></u>	<u><u>\$ 134,020</u></u>
Plan Net Position Held in Trust for Benefits	<u><u>\$ 1,898,579</u></u>	<u><u>\$ 1,991,876</u></u>

**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, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ASSETS		
Cash	\$ 411	\$ 804
Receivables:		
Investment securities sold	12,469	3,807
Accrued Transfers from QPP	667,628	1,292,000
Accrued interest and dividends	228	507
Total receivables	<u>\$ 680,325</u>	<u>\$ 1,296,314</u>
Investments - at fair value		
Short-term investments:		
Commercial paper	0	0
Short-term investment fund	1,005	58
U.S. treasury bills and agencies	0	0
Discount notes	6,492	0
Debt securities:		
U.S. government and agency	0	0
Corporate and other	0	0
Equity Securities:		
Domestic Equity	811,896	0
International Equity	0	0
Collective trust funds:		
Fixed income	0	523,775
Domestic equity	89,563	516,598
International equity	687,831	437,593
Mortgage Debt Securities	247,255	0
Collateral from securities lending	0	38,372
Corporate and other	237,504	0
U.S. Government and Agency	347,758	0
Alternative Investments:		
Collateral from securities lending	67,906	0
Total Investments	<u>\$ 2,497,210</u>	<u>\$ 1,516,396</u>
Other assets	0	0
Total assets	<u><u>\$ 3,177,946</u></u>	<u><u>\$ 2,813,514</u></u>
LIABILITIES		
Accounts payable & accrued liabilities	244	186
Payables for investment securities purchased	12,440	3,746
Transferable earnings due to QPP	0	0
Accrued benefits payable	118,052	115,640
Securities lending	67,906	38,372
Total liabilities	<u><u>\$ 198,642</u></u>	<u><u>\$ 157,944</u></u>
Plan Net Position Held in Trust for Benefits	<u><u>\$ 2,979,304</u></u>	<u><u>\$ 2,655,570</u></u>

NEW YORK CITY POLICE PENSION FUND (POLICE)

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

Statement of Changes in Fiduciary Net Position

June 30, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ADDITIONS		
Contributions:		
Member Contributions	\$ 278,087	\$ 267,031
Employer Contributions	2,558,256	2,415,153
	<hr/>	<hr/>
<i>Total contributions</i>	\$ 2,836,343	\$ 2,682,184
Investment income:		
Interest income	548,925	517,469
Dividend income	494,434	485,726
Net appreciation (depreciation) in fair value	1,772,808	3,190,498
	<hr/>	<hr/>
Total investment income	\$ 2,816,167	\$ 4,193,693
Less:		
Investment expenses	249,849	285,243
Net income	2,566,318	3,908,450
Securities lending transactions:		
Securities lending income	17,063	18,703
Securities lending fees	(1,679)	(1,870)
	<hr/>	<hr/>
Net securities lending income	\$ 15,384	\$ 16,833
<i>Net investment income</i>	\$ 2,581,702	\$ 3,925,283
<i>Transferable earnings due from VSFs</i>	139,836	0
Other:		
Net receipts from other retirement systems	1,907	1,627
Litigation income	2,201	1,781
<i>Other total</i>	4,108	3,408
Total additions	<u>\$ 5,561,989</u>	<u>\$ 6,610,875</u>
DEDUCTIONS		
Benefit payments and withdrawals	2,853,799	2,774,387
Accrued Transfers to VSFs	518,628	1,280,000
Administrative expenses	29,005	21,146
Total deductions	<u>\$ 3,401,432</u>	<u>\$ 4,075,533</u>
INCREASE IN PLAN NET POSITION	2,160,557	2,535,342
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:		
Beginning of year	\$ 37,958,867	\$ 35,423,525
End of year	\$ 40,119,424	\$ 37,958,867

**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, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ADDITIONS		
Contributions:		
Member Contributions	\$ 0	\$ 0
Employer Contributions	0	0
	<hr/>	<hr/>
<i>Total contributions</i>	\$ 0	\$ 0
Investment income:		
Interest income	19,067	14,619
Dividend income	30,837	26,532
Net appreciation (depreciation) in fair value	54,392	(40,510)
	<hr/>	<hr/>
Total investment income	\$ 104,296	\$ 641
Less:		
Investment expenses	1,122	1,126
Net income	103,174	(485)
Securities lending transactions:		
Securities lending income	573	866
Securities lending fees	(53)	(87)
	<hr/>	<hr/>
Net securities lending income	\$ 520	\$ 779
<i>Net investment income</i>	103,694	294
<i>Other</i>	40	31
<i>Accrued Transfer from QPP</i>	108,000	130,000
Total additions	<hr/> <hr/> 211,734	<hr/> <hr/> 130,325
DEDUCTIONS		
Benefit payments and withdrawals	165,195	163,316
Transferable earnings due to QPP	139,836	0
Total deductions	<hr/> <hr/> 305,031	<hr/> <hr/> 163,316
INCREASE IN PLAN NET POSITION	(93,297)	(32,991)
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:		
Beginning of year	\$ 1,991,876	\$ 2,024,867
End of year	\$ 1,898,579	\$ 1,991,876

**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, 2019 and June 30, 2018**

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ADDITIONS		
Contributions:		
Member Contributions	\$ 0	\$ 0
Employer Contributions	0	0
	<hr/>	<hr/>
<i>Total contributions</i>	\$ 0	\$ 0
Investment income:		
Interest income	20,198	7,682
Dividend income	34,196	15,955
Net appreciation (depreciation) in fair value	122,482	14,903
	<hr/>	<hr/>
Total investment income	\$ 176,876	\$ 38,540
Less:		
Investment expenses	1,313	579
Net income	175,563	37,961
Securities lending transactions:		
Securities lending income	645	525
Securities lending fees	(60)	(53)
	<hr/>	<hr/>
Net securities lending income	\$ 585	\$ 472
<i>Net investment income</i>	176,148	38,433
<i>Other</i>	35	26
<i>Accrued Transfer from QPP</i>	410,628	1,150,000
Total additions	<hr/> <hr/>	<hr/> <hr/>
	586,811	1,188,459
DEDUCTIONS		
Benefit payments and withdrawals	263,077	260,268
Transferable earnings due to QPP	0	0
Total deductions	<hr/> <hr/>	<hr/> <hr/>
	263,077	260,268
INCREASE IN PLAN NET POSITION	323,734	928,191
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:		
Beginning of year	\$ 2,655,570	\$ 1,727,379
End of year	\$ 2,979,304	\$ 2,655,570

NEW YORK CITY POLICE PENSION FUND (POLICE)

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 @ 6/30/2017	\$ 37,551,963,000	\$ 1,316,231,000	\$ 307,577,000	\$ 39,175,771,000
2. Accrued Benefits Payable	0	75,739,000	112,389,000	188,128,000
3. Transferable Earnings	(2,128,438,000)	708,636,000	1,419,802,000	0
4. Adjusted Market Value @ 6/30/2017	35,423,525,000	2,100,606,000	1,839,768,000	39,363,899,000
5. Changes for the year:				
a. ER Contributions	2,415,153,000	0	0	2,415,153,000
b. EE Contributions	267,031,000	0	0	267,031,000
c. Net Investment Income	3,925,283,000	294,000	38,433,000	3,964,010,000
d. Benefit Payments ¹	(2,774,387,000)	(162,149,000)	(257,017,000)	(3,193,553,000)
e. Administrative Expenses	(21,146,000)	0	0	(21,146,000)
f. Other	3,408,000	31,000	26,000	3,465,000
g. Net Changes	<u>\$ 3,815,342,000</u>	<u>\$ (161,824,000)</u>	<u>\$ (218,558,000)</u>	<u>\$ 3,434,960,000</u>
6. Plan Net Position @ 6/30/2018	\$ 39,238,867,000	\$ 1,861,876,000	\$ 1,505,570,000	\$ 42,606,313,000
7. Accrued Benefits Payable	0	76,906,000	115,640,000	192,546,000
8. Transferable Earnings	(1,280,000,000)	130,000,000	1,150,000,000	0
9. Adjusted Market Value @ 6/30/2018	<u>\$ 37,958,867,000</u>	<u>\$ 2,068,782,000</u>	<u>\$ 2,771,210,000</u>	<u>\$ 42,798,859,000</u>
10. Changes for the year:				
a. ER Contributions	2,558,256,000	0	0	2,558,256,000
b. EE Contributions	278,087,000	0	0	278,087,000
c. Net Investment Income	2,581,702,000	103,694,000	176,148,000	2,861,544,000
d. Benefit Payments ²	(2,853,799,000)	(164,281,000)	(260,665,000)	(3,278,745,000)
e. Administrative Expenses	(29,005,000)	0	0	(29,005,000)
f. Other	4,108,000	40,000	35,000	4,183,000
g. Net Changes	<u>\$ 2,539,349,000</u>	<u>\$ (60,547,000)</u>	<u>\$ (84,482,000)</u>	<u>\$ 2,394,320,000</u>
11. Plan Net Position @ 6/30/2019	\$ 40,498,216,000	\$ 1,930,415,000	\$ 2,568,676,000	\$ 44,997,307,000
12. Accrued Benefits Payable	0	77,820,000	118,052,000	195,872,000
13. Transferable Earnings	(378,792,000)	(31,836,000)	410,628,000	0
14. Adjusted Market Value @ 6/30/2019	<u>\$ 40,119,424,000</u>	<u>\$ 1,976,399,000</u>	<u>\$ 3,097,356,000</u>	<u>\$ 45,193,179,000</u>

¹ Includes Net Accrued Benefits Payable of \$1,167,000 for POVSF and \$3,251,000 for PSOVSF.

² Includes Net Accrued Benefits Payable of \$914,000 for POVSF and \$2,412,000 for PSOVSF.

NEW YORK CITY POLICE PENSION FUND (POLICE)

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:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
U.S. Public Market Equities	31%	6.5%
Developed Public Market Equities	9%	6.8%
Emerging Public Market Equities	6%	8.3%
Private Market Equities	7%	11.2%
Fixed Income (Core, TIPS, HY, Opportunistic, Convertibles)	31%	2.5%
Alternatives (Real Assets, Hedge Funds)	<u>16%</u>	<u>5.1%</u>
Total	100%	

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.

NEW YORK CITY POLICE PENSION FUND (POLICE)

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

**Development of Asset (Gain) / Loss
June 30, 2018**

	QPP	POVSF	PSOVSF	Total
1. Assets				
a. Market Value 6/30/2017*	\$ 37,551,963,000	\$ 1,391,970,000	\$ 419,966,000	\$ 39,363,899,000
b. 2017 Transferable Earnings	(2,128,438,000)	708,636,000	1,419,802,000	0
c. Adjusted Market Value @6/30/2017	35,423,525,000	2,100,606,000	1,839,768,000	39,363,899,000
d. Market Value 6/30/2018**	39,238,867,000	1,938,782,000	1,621,210,000	42,798,859,000
e. 2018 Transferable Earnings	(1,280,000,000)	130,000,000	1,150,000,000	0
f. Adjusted Market Value @6/30/2018	37,958,867,000	2,068,782,000	2,771,210,000	42,798,859,000
2. Net Investment Income	3,925,283,000	294,000	38,433,000	3,964,010,000
3. Cash Flow (1.d. - 1.a. - 2.)	(2,238,379,000)	546,518,000	1,162,811,000	(529,050,000)
4. Projected Earnings (7% * 1.a. + 3.441% * 3.)	2,551,614,789	116,243,584	69,409,947	2,737,268,320
5. (Gain) / Loss (4. - 2.)	(1,373,668,211)	115,949,584	30,976,947	(1,226,741,680)
6. Recognition Period	5 Years	5 Years	5 Years	5 Years
7. Amount Recognized in Pension Expense (5. / 6.)	(274,733,642)	23,189,917	6,195,389	(245,348,336)
8. Deferred (Inflow) / Outflow of Resources (5. - 7.)	\$ (1,098,934,569)	\$ 92,759,667	\$ 24,781,558	\$ (981,393,344)

* Before Reflecting 2017 Transferable Earnings.

** Before Reflecting 2018 Transferable Earnings.

NEW YORK CITY POLICE PENSION FUND (POLICE)

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

**Development of Asset (Gain) / Loss
June 30, 2019**

	QPP	POVSF	PSOVSF	Total
1. Assets				
a. Market Value 6/30/2018*	\$ 39,238,867,000	\$ 1,938,782,000	\$ 1,621,210,000	\$ 42,798,859,000
b. 2018 Transferable Earnings	(1,280,000,000)	130,000,000	1,150,000,000	0
c. Adjusted Market Value @6/30/2018	37,958,867,000	2,068,782,000	2,771,210,000	42,798,859,000
d. Market Value 6/30/2019**	40,498,216,000	2,008,235,000	2,686,728,000	45,193,179,000
e. 2019 Transferable Earnings	(378,792,000)	(31,836,000)	410,628,000	0
f. Adjusted Market Value @6/30/2019	40,119,424,000	1,976,399,000	3,097,356,000	45,193,179,000
2. Net Investment Income	2,581,702,000	103,694,000	176,148,000	2,861,544,000
3. Cash Flow (1.d. - 1.a. - 2.)	(1,322,353,000)	(34,241,000)	889,370,000	(467,224,000)
4. Projected Earnings (7% * 1.a. + 3.441% * 3.)	2,701,218,523	134,536,507	144,087,922	2,979,842,952
5. (Gain) / Loss (4. - 2.)	119,516,523	30,842,507	(32,060,078)	118,298,952
6. Recognition Period	5 Years	5 Years	5 Years	5 Years
7. Amount Recognized in Pension Expense (5. / 6.)	23,903,305	6,168,501	(6,412,016)	23,659,790
8. Deferred (Inflow) / Outflow of Resources (5. - 7.)	\$ 95,613,218	\$ 24,674,006	\$ (25,648,062)	\$ 94,639,162

* Before Reflecting 2018 Transferable Earnings.

** Before Reflecting 2019 Transferable Earnings.

NEW YORK CITY POLICE PENSION FUND (POLICE)

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

Roll-Forward of Entry Age Accrued Liabilities to June 30, 2019

		QPP		POVSF		PSOVSF		Total
1. Disclosed EA Accrued Liability at 6/30/2018	\$	48,379,196,497	\$	2,022,236,650	\$	3,754,205,218	\$	54,155,638,365
2. EA Normal Cost at 6/30/2018		1,396,466,498		41,454,079		60,989,286		1,498,909,863
3. Benefit Payments-FY2019		(2,853,799,000)		(164,281,000)		(260,665,000)		(3,278,745,000)
4. Interest		3,386,097,186		138,805,442		258,094,133		3,782,996,761
5. Experience (Gain)/Loss - FY 2019		(868,163,702)		133,399,400		(84,202,519)		(818,966,821)
6. Changes of Assumptions-FY 2019		(349,830,356)		(136,775,707)		144,204,274		(342,401,789)
7. Roll-Forward EAAL at 6/30/2019	\$	49,089,967,123	\$	2,034,838,864	\$	3,872,625,392	\$	54,997,431,379

NEW YORK CITY POLICE PENSION FUND (POLICE)

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, 2018

	Total Pension Liability			
	QPP	POVSF	PSOVSE	TOTAL
1. Balances at June 30, 2017	\$ 46,662,908,678	\$ 2,023,917,167	\$ 3,666,420,257	\$ 52,353,246,102
2. Changes for the Year:				
a. Service Cost	1,281,545,193	57,874,880	46,858,861	1,386,278,934
b. Interest	3,257,274,942	137,689,204	254,151,028	3,649,115,174
c. Changes of Benefit Terms	90,362,746	10,230,978	4,077,370	104,671,094
d. Differences b/t Expected and Actual Experience	(138,508,062)	(45,326,579)	39,714,702	(144,119,939)
e. Changes of Assumptions	0	0	0	0
f. Benefit Payments	(2,774,387,000)	(162,149,000)	(257,017,000)	(3,193,553,000)
g. Net Changes	\$ 1,716,287,819	\$ (1,680,517)	\$ 87,784,961	\$ 1,802,392,263
3. Balances at June 30, 2018	\$ 48,379,196,497	\$ 2,022,236,650	\$ 3,754,205,218	\$ 54,155,638,365
	Plan Fiduciary Net Position ¹			
	QPP	POVSF	PSOVSE	TOTAL
4. Balances at June 30, 2017	\$ 35,423,525,000	\$ 2,100,606,000	\$ 1,839,768,000	\$ 39,363,899,000
5. Changes for the Year:				
a. Contributions - Employer	2,415,153,000	0	0	2,415,153,000
b. Contributions - Employee	267,031,000	0	0	267,031,000
c. Net Investment Income	3,925,283,000	294,000	38,433,000	3,964,010,000
d. Benefit Payments	(2,774,387,000)	(162,149,000)	(257,017,000)	(3,193,553,000)
e. Administrative Expenses	(21,146,000)	0	0	(21,146,000)
f. Other Changes	3,408,000	31,000	26,000	3,465,000
g. Net Changes	\$ 3,815,342,000	\$ (161,824,000)	\$ (218,558,000)	\$ 3,434,960,000
6. Transferable Earnings	(1,280,000,000)	130,000,000	1,150,000,000	0
7. Balances at June 30, 2018	\$ 37,958,867,000	\$ 2,068,782,000	\$ 2,771,210,000	\$ 42,798,859,000
	Net Pension Liability			
	QPP	POVSF	PSOVSE	TOTAL
8. Balances at June 30, 2017	\$ 11,239,383,678	\$ (76,688,833)	\$ 1,826,652,257	\$ 12,989,347,102
9. Changes for the Year:				
a. Service Cost	1,281,545,193	57,874,880	46,858,861	1,386,278,934
b. Interest	3,257,274,942	137,689,204	254,151,028	3,649,115,174
c. Changes of Benefit Terms	90,362,746	10,230,978	4,077,370	104,671,094
d. Differences b/t Expected and Actual Experience	(138,508,062)	(45,326,579)	39,714,702	(144,119,939)
e. Changes of Assumptions	0	0	0	0
f. Contributions - Employer	(2,415,153,000)	0	0	(2,415,153,000)
g. Contributions - Employee	(267,031,000)	0	0	(267,031,000)
h. Net Investment Income	(3,925,283,000)	(294,000)	(38,433,000)	(3,964,010,000)
i. Benefit Payments	0	0	0	0
j. Administrative Expenses	21,146,000	0	0	21,146,000
k. Other Changes	(3,408,000)	(31,000)	(26,000)	(3,465,000)
l. Net Changes	\$ (2,099,054,181)	\$ 160,143,483	\$ 306,342,961	\$ (1,632,567,737)
10. Transferable Earnings	1,280,000,000	(130,000,000)	(1,150,000,000)	0
11. Balances at June 30, 2018	\$ 10,420,329,497	\$ (46,545,350)	\$ 982,995,218	\$ 11,356,779,365

¹ Balances at 6/30/2017 and 6/30/2018 are Adjusted Market Values - See Page 3.

NEW YORK CITY POLICE PENSION FUND (POLICE)

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, 2019

	Total Pension Liability			
	QPP	POVSF	PSOVSF	TOTAL
1. Balances at June 30, 2018	\$ 48,379,196,497	\$ 2,022,236,650	\$ 3,754,205,218	\$ 54,155,638,365
2. Changes for the Year:				
a. Service Cost	1,396,466,498	41,454,079	60,989,286	1,498,909,863
b. Interest	3,386,097,186	138,805,442	258,094,133	3,782,996,761
c. Changes of Benefit Terms	0	0	0	0
d. Differences b/t Expected and Actual Experience	(868,163,702)	133,399,400	(84,202,519)	(818,966,821)
e. Changes of Assumptions	(349,830,356)	(136,775,707)	144,204,274	(342,401,789)
f. Benefit Payments	(2,853,799,000)	(164,281,000)	(260,665,000)	(3,278,745,000)
g. Net Changes	\$ 710,770,626	\$ 12,602,214	\$ 118,420,174	\$ 841,793,014
3. Balances at June 30, 2019	\$ 49,089,967,123	\$ 2,034,838,864	\$ 3,872,625,392	\$ 54,997,431,379
	Plan Fiduciary Net Position ¹			
	QPP	POVSF	PSOVSF	TOTAL
4. Balances at June 30, 2018	\$ 37,958,867,000	\$ 2,068,782,000	\$ 2,771,210,000	\$ 42,798,859,000
5. Changes for the Year:				
a. Contributions - Employer	2,558,256,000	0	0	2,558,256,000
b. Contributions - Employee	278,087,000	0	0	278,087,000
c. Net Investment Income	2,581,702,000	103,694,000	176,148,000	2,861,544,000
d. Benefit Payments	(2,853,799,000)	(164,281,000)	(260,665,000)	(3,278,745,000)
e. Administrative Expenses	(29,005,000)	0	0	(29,005,000)
f. Other Changes	4,108,000	40,000	35,000	4,183,000
g. Net Changes	\$ 2,539,349,000	\$ (60,547,000)	\$ (84,482,000)	\$ 2,394,320,000
6. Transferable Earnings	(378,792,000)	(31,836,000)	410,628,000	0
7. Balances at June 30, 2019	\$ 40,119,424,000	\$ 1,976,399,000	\$ 3,097,356,000	\$ 45,193,179,000
	Net Pension Liability			
	QPP	POVSF	PSOVSF	TOTAL
8. Balances at June 30, 2018	\$ 10,420,329,497	\$ (46,545,350)	\$ 982,995,218	\$ 11,356,779,365
9. Changes for the Year:				
a. Service Cost	1,396,466,498	41,454,079	60,989,286	1,498,909,863
b. Interest	3,386,097,186	138,805,442	258,094,133	3,782,996,761
c. Changes of Benefit Terms	0	0	0	0
d. Differences b/t Expected and Actual Experience	(868,163,702)	133,399,400	(84,202,519)	(818,966,821)
e. Changes of Assumptions	(349,830,356)	(136,775,707)	144,204,274	(342,401,789)
f. Contributions - Employer	(2,558,256,000)	0	0	(2,558,256,000)
g. Contributions - Employee	(278,087,000)	0	0	(278,087,000)
h. Net Investment Income	(2,581,702,000)	(103,694,000)	(176,148,000)	(2,861,544,000)
i. Benefit Payments	0	0	0	0
j. Administrative Expenses	29,005,000	0	0	29,005,000
k. Other Changes	(4,108,000)	(40,000)	(35,000)	(4,183,000)
l. Net Changes	\$ (1,828,578,374)	\$ 73,149,214	\$ 202,902,174	\$ (1,552,526,986)
10. Transferable Earnings	378,792,000	31,836,000	(410,628,000)	0
11. Balances at June 30, 2019	\$ 8,970,543,123	\$ 58,439,864	\$ 775,269,392	\$ 9,804,252,379

¹ Balances at 6/30/2018 and 6/30/2019 are Adjusted Market Values - See Page 3.

NEW YORK CITY POLICE PENSION FUND (POLICE)

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

Schedule of Changes in Net Pension Liability and Related Ratios

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
1. Total Pension Liability							
a. Service Cost	\$ 1,498,909,863	\$ 1,386,278,934	\$ 1,320,416,462	\$ 1,340,614,909	\$ 1,325,807,839	\$ 1,301,753,171	\$ 1,263,838,030
b. Interest	3,782,996,761	3,649,115,174	3,524,331,362	3,441,398,429	3,245,225,246	3,117,317,330	2,998,478,091
c. Changes of Benefit Terms	0	104,671,094	0	0	0	0	0
d. Differences b/t Expected and Actual Experience	(818,966,821)	(144,119,939)	(645,248,116)	233,461,664	(215,417,691)	0	0
e. Change of Assumptions	(342,401,789)	0	0	794,679,950	0	0	0
f. Benefit Payments	(3,278,745,000)	(3,193,553,000)	(2,987,000,000)	(2,878,451,000)	(2,746,784,000)	(2,682,223,000)	(2,525,475,000)
g. Net Changes	\$ 841,793,014	\$ 1,802,392,263	\$ 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	\$ 54,155,638,365	\$ 52,353,246,102	\$ 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	\$ 54,997,431,379	\$ 54,155,638,365	\$ 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	\$ 2,558,256,000	\$ 2,415,153,000	\$ 2,293,840,000	\$ 2,393,940,000	\$ 2,309,619,000	\$ 2,320,910,000	\$ 2,424,690,000
b. Contributions - Employee	278,087,000	267,031,000	276,301,000	249,921,000	241,102,000	228,783,000	229,675,000
c. Net Investment Income	2,861,544,000	3,964,010,000	4,286,894,000	403,534,000	1,098,220,000	5,147,483,000	3,101,564,000
d. Benefit Payments	(3,278,745,000)	(3,193,553,000)	(2,987,000,000)	(2,878,451,000)	(2,746,784,000)	(2,682,223,000)	(2,525,475,000)
e. Administrative Expenses	(29,005,000)	(21,146,000)	(18,917,000)	(18,478,000)	(17,903,000)	(17,450,000)	(17,548,000)
f. Other Changes	4,183,000	3,465,000	10,507,000	6,756,000	4,616,000	6,911,000	6,118,000
g. Net Changes	\$ 2,394,320,000	\$ 3,434,960,000	\$ 3,861,625,000	\$ 157,222,000	\$ 888,870,000	\$ 5,004,414,000	\$ 3,219,024,000
5. Plan Fiduciary Net Position - Beginning	\$ 42,798,859,000	\$ 39,363,899,000	\$ 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	\$ 45,193,179,000	\$ 42,798,859,000	\$ 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	\$ 9,804,252,379	\$ 11,356,779,365	\$ 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	82.2%	79.0%	75.2%	69.4%	73.3%	74.4%	66.1%
9. Covered Employee Payroll ¹	\$ 4,047,772,414	\$ 3,673,054,287	\$ 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	242.2%	309.2%	370.1%	441.7%	366.2%	345.9%	436.4%

¹ Projected employee payroll at time 1.0 under previous roll-forward methodology through 2018. Actual employee payroll at valuation date (time = 0) beginning in 2019.

NEW YORK CITY POLICE PENSION FUND (POLICE)

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

Schedule of Employer Contributions (\$ in thousands)

Fiscal Year Ended June 30	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
1. Actuarially Determined Contribution	\$ 2,558,256	\$ 2,415,153	\$ 2,293,840	\$ 2,393,940	\$ 2,309,619	\$ 2,320,910	\$ 2,424,690	\$ 2,385,731	\$ 2,083,633	\$ 1,980,996
2. Contributions in relation to the Actuarially Determined Contribution	<u>\$ 2,558,256</u>	<u>\$ 2,415,153</u>	<u>\$ 2,293,840</u>	<u>\$ 2,393,940</u>	<u>\$ 2,309,619</u>	<u>\$ 2,320,910</u>	<u>\$ 2,424,690</u>	<u>\$ 2,385,731</u>	<u>\$ 2,083,633</u>	<u>\$ 1,980,996</u>
3. Contribution Deficiency (Excess)	0	0	0	0	0	0	0	0	0	0
4. Contributions as a percentage of Covered Employee Payroll*	63.202%	65.753%	65.352%	67.619%	65.749%	67.857%	70.080%	69.176%	64.058%	63.955%

* Projected employee payroll at time 1.0 under previous roll-forward methodology through 2018. Actual employee payroll at valuation date (time = 0) beginning in 2019.

NEW YORK CITY POLICE PENSION FUND (POLICE)

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

Average Expected Remaining Service Lives

<u>Group</u>	<u># Count</u>	Average Expected Remaining Service Life <u>@ 6/30/2018</u>
Active	36,562	12.29
Active Off Payroll	1,940	0
Terminated Vested	491	0
Retired	<u>50,124</u>	<u>0</u>
Total	89,117	5.04

NEW YORK CITY POLICE PENSION FUND (POLICE)

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	Differences between Expected and Actual Experience	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024
2016	\$ 233,461,664	2.45	\$ 42,880,714						
2017	\$ (645,248,116)	3.89	\$ (165,873,552)	\$ (147,627,460)					
2018	\$ (144,119,939)	4.41	\$ (32,680,258)	\$ (32,680,258)	\$ (13,398,907)				
2019	\$ (818,966,821)	5.04	\$ (162,493,417)	\$ (162,493,417)	\$ (162,493,417)	\$ (162,493,417)	\$ (162,493,417)	\$ (162,493,417)	\$ (6,499,736)
Net increase (decrease) in Pension Expense			\$ (155,673,096)	\$ (361,047,227)	\$ (342,801,135)	\$ (195,173,675)	\$ (175,892,324)	\$ (162,493,417)	\$ (6,499,736)

NEW YORK CITY POLICE PENSION FUND (POLICE)

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	Changes in Assumptions	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024
2016	\$ 794,679,950	2.45	\$ 145,961,624						
2017	0	0	0						
2018	0	0	0						
2019	\$ (342,401,789)	5.04	\$ (67,936,863)	\$ (67,936,863)	\$ (67,936,863)	\$ (67,936,863)	\$ (67,936,863)	\$ (67,936,863)	\$ (2,717,474)
Net increase (decrease) in Pension Expense			\$ 145,961,624	\$ (67,936,863)	\$ (67,936,863)	\$ (67,936,863)	\$ (67,936,863)	\$ (67,936,863)	\$ (2,717,474)

NEW YORK CITY POLICE PENSION FUND (POLICE)

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**

Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2018	2019	2020	2021	2022	2023
2014	\$ (3,090,782,244)	5	\$ (618,156,448)					
2015	\$ 1,306,509,007	5	\$ 261,301,801	\$ 261,301,803				
2016	\$ 2,062,144,044	5	\$ 412,428,809	\$ 412,428,809	\$ 412,428,808			
2017	\$ (1,816,368,326)	5	\$ (363,273,666)	\$ (363,273,666)	\$ (363,273,666)	\$ (363,273,662)		
2018	\$ (1,226,741,680)	5	\$ (245,348,336)	\$ (245,348,336)	\$ (245,348,336)	\$ (245,348,336)	\$ (245,348,336)	
2019	\$ 118,298,952	5	\$	\$ 23,659,790	\$ 23,659,790	\$ 23,659,790	\$ 23,659,790	\$ 23,659,792
Net increase (decrease) in Pension Expense			\$ (553,047,840)	\$ 88,768,400	\$ (172,533,404)	\$ (584,962,208)	\$ (221,688,546)	\$ 23,659,792

NEW YORK CITY POLICE PENSION FUND (POLICE)

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

Components of Pension Expense for the Fiscal Year Ended June 30, 2018

<u>Component</u>	<u>Amount</u>
a. Service Cost	\$ 1,386,278,934
b. Interest on the Total Pension Liability	3,649,115,174
c. Changes of Benefit Terms	104,671,094
d. Differences between Expected and Actual Experience	(155,673,096)
e. Changes of Assumptions	145,961,624
f. Employee Contributions	(267,031,000)
g. Projected Earnings on Pension Plan Investments	(2,737,268,320)
h. Differences between Projected and Actual Earnings on Plan Investments	(553,047,840)
i. Pension Plan Administrative Expenses	21,146,000
j. Other Changes in Fiduciary Net Position	(3,465,000)
	<hr/>
Total Pension Expense	\$ 1,590,687,570

NEW YORK CITY POLICE PENSION FUND (POLICE)

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

Components of Pension Expense for the Fiscal Year Ended June 30, 2019

<u>Component</u>	<u>Amount</u>
a. Service Cost	\$ 1,498,909,863
b. Interest on the Total Pension Liability	3,782,996,761
c. Changes of Benefit Terms	0
d. Differences between Expected and Actual Experience	(361,047,227)
e. Changes of Assumptions	(67,936,863)
f. Employee Contributions	(278,087,000)
g. Projected Earnings on Pension Plan Investments	(2,979,842,952)
h. Differences between Projected and Actual Earnings on Plan Investments	88,768,400
i. Pension Plan Administrative Expenses	29,005,000
j. Other Changes in Fiduciary Net Position	(4,183,000)
	<hr/>
Total Pension Expense	\$ 1,708,582,982

NEW YORK CITY POLICE PENSION FUND (POLICE)

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

Pension Expense, Deferred Outflows and Inflows of Resources

Recognized Pension Expense	Fiscal Year Ending June 30, 2014		Fiscal Year Ending June 30, 2015		Fiscal Year Ending June 30, 2016		Fiscal Year Ending June 30, 2017		Fiscal Year Ending June 30, 2018		Fiscal Year Ending June 30, 2019	
	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows
	\$1,273,723,272		\$1,241,462,818		\$2,213,188,481		\$1,760,595,190		\$1,590,687,570		\$1,708,582,982	
Deferred Resources												
Due to Differences Between Expected and Actual Experience	0	0	0	127,492,103	138,171,189	0	0	479,374,564	0	111,439,681	0	656,473,404
Due to Chages of Assumptions	0	0	0	0	470,320,787	0	0	0	0	0	0	274,464,926
Due to Net Difference between Projected and Actual Earnings on Pension Plan Investments	0	2,472,625,795	1,045,207,206	0	1,649,715,235	0	0	1,453,094,660	0	981,393,344	94,639,162	0
Total	0	2,472,625,795	1,045,207,206	127,492,103	2,258,207,211	0	0	1,932,469,224	0	1,092,833,025	94,639,162	930,938,330

Reported amounts will be recognized in Pension Expense during:

Fiscal Year Ending June 30, 2014	(\$618,156,449)											
Fiscal Year Ending June 30, 2015	(\$618,156,449)		\$173,376,213									
Fiscal Year Ending June 30, 2016	(\$618,156,449)		\$173,376,213		\$832,078,447							
Fiscal Year Ending June 30, 2017	(\$618,156,449)		\$221,735,286		\$832,078,447		(\$529,147,218)					
Fiscal Year Ending June 30, 2018	(\$618,156,448)		\$261,301,801		\$601,271,147		(\$529,147,218)		(\$278,028,594)			
Fiscal Year Ending June 30, 2019			\$261,301,803		\$412,428,809		(\$529,147,218)		(\$278,028,594)		(\$206,770,490)	
Fiscal Year Ending June 30, 2020					\$412,428,808		(\$510,901,126)		(\$278,028,594)		(\$206,770,490)	
Fiscal Year Ending June 30, 2021							(\$363,273,662)		(\$278,028,594)		(\$206,770,490)	
Fiscal Year Ending June 30, 2022									(\$258,747,243)		(\$206,770,490)	
Fiscal Year Ending June 30, 2023											(\$206,770,488)	
Fiscal Year Ending June 30, 2024											(\$9,217,210)	
Fiscal Year Ending June 30, 2025												

NEW YORK CITY POLICE PENSION FUND (POLICE)

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, 2019, the City recognized Pension Expense for POLICE of \$1,708,582,982.

At June 30, 2019, 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	\$ 882,860,287
Changes of Assumptions	0	274,464,926
Net difference between Projected and Actual Earnings on Pension Plan Investments	0	955,524,366
Total	\$ 0	\$ 2,112,849,579

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>
2019	\$ (340,215,690)
2020	\$ (583,271,402)
2021	\$ (848,072,746)
2022	\$ (465,517,733)
2023	\$ (206,770,488)
2024	\$ (9,217,210)

Appendix E

APPENDIX E

NEW YORK CITY FIRE PENSION FUND (FIRE)

- Page 1a - Statement of Fiduciary Net Position - FIRE
- 1b - 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
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- Page 3 - Market Value of Assets

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- Page 5a - Development of Asset (Gain) / Loss - June 30, 2018
- 5b - Development of Asset (Gain) / Loss - June 30, 2019

- Page 6 - Roll-Forward of Entry Age Accrued Liabilities to June 30, 2019

- Page 7a - Changes in Net Pension Liability by Source - June 30, 2018
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- 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 - Increase (Decrease) in Pension Expense Arising from the Recognition of Changes 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, 2018
- 12b - Components of Pension Expense - June 30, 2019

- Page 13a - Pension Expense, Deferred Inflows/Outflows of Resources through June 30, 2019
- 13b - Pension Expense, Total Deferred Inflows/Outflows of Resources at June 30, 2019

NEW YORK CITY FIRE PENSION FUND (FIRE)

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

Statement of Fiduciary Net Position

June 30, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ASSETS		
Cash	\$ 6,770	\$ 2,883
Receivables:		
Investment securities sold	269,966	143,921
Member loans	23,052	25,248
Accrued interest and dividends	36,211	25,777
Accounts Receivables	225	129
Total receivables	<u>\$ 329,454</u>	<u>\$ 195,075</u>
Investments - at fair value		
Short-term investments:		
Commercial paper	254,839	237,589
Short-term investment fund	78,084	105,484
U.S. Treasury bills and agencies	0	0
Discount Notes	108,843	0
Debt securities:		
U.S. Government and agencies	1,513,791	3,029,091
Mortgage debt security	309,829	0
Corporate and other	1,469,495	0
Treasury inflation protected securities	462,901	0
Bank loans	102,820	0
Equity Securities:	4,256,999	3,848,728
Alternative Investments:	2,947,833	2,607,718
Collective Trust Funds:		
Bank loans	105,615	0
Corporate and other	32,299	0
International equity	2,368,346	2,264,395
Domestic equity	156,999	88,801
Fixed income	0	1,206,636
Mortgage debt security	107,129	99,102
Opportunistic fixed income	48,113	0
Treasury inflation protected securities	158,200	0
Collateral from securities lending	<u>774,084</u>	<u>1,140,436</u>
Total Investments	<u>\$ 15,256,219</u>	<u>\$ 14,627,980</u>
Other assets	2,573	2,899
Total assets	<u><u>\$ 15,595,016</u></u>	<u><u>\$ 14,828,837</u></u>
LIABILITIES		
Accounts payable	167,302	177,540
Payables for investment securities purchased	292,460	203,986
Accrued benefits payable	8,552	10,832
Transferable Earnings due from QPP to VSFs	15,000	29,000
Securities lending	774,084	1,140,436
Total liabilities	<u><u>\$ 1,257,398</u></u>	<u><u>\$ 1,561,794</u></u>
Plan Net Position Held in Trust for Benefits	<u><u>\$ 14,337,618</u></u>	<u><u>\$ 13,267,043</u></u>

**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, 2019 and June 30, 2018
(Dollar amounts in thousands)**

	June 30, 2019	June 30, 2018
ASSETS		
Cash	\$ 1,454	\$ 1,467
Receivables:		
Investment securities sold	0	0
Accrued interest and dividends	2	199
Accounts Receivables	0	0
Transferable Earnings Due from QPP	15,000	29,000
Total receivables	<u>\$ 15,002</u>	<u>\$ 29,199</u>
Investments - at fair value		
Short-term investments:		
Commercial paper	3,589	503
Short-term investment fund	218	21
U.S. Treasury bills and agency	0	0
Discount Notes	0	0
Debt securities:	0	0
Equity securities:	167,231	0
Alternative investments:	0	0
Collective trust funds:		
Corporate and other	49,380	0
International equity	145,185	156,502
Fixed income	0	183,616
Domestic equity	13,624	179,243
Mortgage debt security	51,407	0
U.S. Government and agency	72,303	0
Collateral from securities lending	10,296	16,842
Total Investments	<u>\$ 513,233</u>	<u>\$ 536,727</u>
Other assets	0	0
Total assets	<u><u>\$ 529,689</u></u>	<u><u>\$ 567,393</u></u>
LIABILITIES		
Accounts payable	125	44
Payables for investment securities purchased	0	0
Accrued benefits payable	19,953	20,427
Securities lending	10,296	16,842
Total liabilities	<u><u>\$ 30,374</u></u>	<u><u>\$ 37,313</u></u>
Plan Net Position Held in Trust for Benefits	<u><u>\$ 499,315</u></u>	<u><u>\$ 530,080</u></u>

**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, 2019 and June 30, 2018
(Dollar amounts in thousands)**

	June 30, 2019	June 30, 2018
ASSETS		
Cash	\$ 1,181	\$ 1,085
Receivables:		
Investment securities sold	1,801	0
Accrued interest and dividends	309	245
Accounts Receivables	1	33
Transferable Earnings Due from QPP	0	0
Total receivables	<u>\$ 2,111</u>	<u>\$ 278</u>
Investments - at fair value		
Short-term investments:		
Commercial paper	2,401	1,903
Short-term investment fund	128	118
U.S. Treasury bills and agency	0	0
Discount Notes	0	0
Debt securities:	0	0
Equity securities:	122,675	111,494
Alternative investments:	0	0
Collective trust funds:		
International equity	105,202	106,597
Fixed income	0	124,324
Domestic equity	9,587	10,050
U.S. Government and agency	110,088	0
Collateral from securities lending	<u>7,770</u>	<u>12,008</u>
Total Investments	<u>\$ 357,851</u>	<u>\$ 366,494</u>
Other assets	0	0
Total assets	<u><u>\$ 361,143</u></u>	<u><u>\$ 367,857</u></u>
LIABILITIES		
Accounts payable	105	50
Payables for investment securities purchased	1,882	87
Accrued benefits payable	9,008	9,079
Securities lending	7,770	12,008
Total liabilities	<u><u>\$ 18,765</u></u>	<u><u>\$ 21,224</u></u>
Plan Net Position Held in Trust for Benefits	<u><u>\$ 342,378</u></u>	<u><u>\$ 346,633</u></u>

NEW YORK CITY FIRE PENSION FUND (FIRE)**Governmental Accounting Standards Board Statements No. 67 and No. 68 (GASB 67/68)****Statement of Changes in Fiduciary Net Position****June 30, 2019 and June 30, 2018**

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ADDITIONS		
Contributions:		
Member Contributions	\$ 108,015	\$ 108,338
Employer Contributions	1,398,565	1,200,417
	<hr/>	<hr/>
<i>Total contributions</i>	\$ 1,506,580	\$ 1,308,755
Investment income:		
Interest income	181,067	168,451
Dividend income	170,140	159,918
Net appreciation (depreciation) in fair value	667,697	952,687
	<hr/>	<hr/>
<i>Total investment income</i>	\$ 1,018,904	\$ 1,281,056
Less:		
Investment expenses	89,976	96,936
	<hr/>	<hr/>
<i>Net income</i>	928,928	1,184,120
Securities lending transactions:		
Securities lending income	5,498	5,267
Securities lending fees	(537)	(527)
	<hr/>	<hr/>
<i>Net securities lending income</i>	\$ 4,961	\$ 4,740
	<hr/>	<hr/>
<i>Net investment income</i>	933,889	1,188,860
Other:		
Net receipts from other retirement systems	1,565	8,697
Litigation income	492	714
	<hr/>	<hr/>
<i>Other total</i>	2,057	9,411
	<hr/>	<hr/>
<i>Transferable Earnings due from VSFs to QPP</i>	14,000	0
	<hr/>	<hr/>
<i>Total additions</i>	<u>2,456,526</u>	<u>2,507,026</u>
DEDUCTIONS		
Benefit payments and withdrawals	1,376,090	1,308,467
Transferable Earnings due from QPP to VSFs	0	15,000
Administrative expenses	9,861	6,412
	<hr/>	<hr/>
<i>Total deductions</i>	<u>1,385,951</u>	<u>1,329,879</u>
	<hr/>	<hr/>
INCREASE IN PLAN NET POSITION	1,070,575	1,177,147
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:		
Beginning of year	\$ 13,267,043	12,089,896
	<hr/>	<hr/>
End of year	\$ 14,337,618	\$ 13,267,043

**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, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ADDITIONS		
Contributions:		
Member Contributions	\$ 0	\$ 0
Employer Contributions	0	0
<i>Total contributions</i>	\$ 0	\$ 0
Investment income:		
Interest income	5,301	4,584
Dividend income	8,470	8,123
Net appreciation (depreciation) in fair value	14,347	22,865
Total investment income	\$ 28,118	\$ 35,572
Less:		
Investment expenses	280	404
Net income	27,838	35,168
Securities lending transactions:		
Securities lending income	155	265
Securities lending fees	(14)	(27)
Net securities lending income	\$ 141	\$ 238
<i>Net investment income</i>	27,979	35,406
Other:		
Net receipts from other retirement systems	0	0
Litigation income	0	0
<i>Transferable Earnings due from QPP to FFVSF</i>	0	15,000
Total additions	27,979	50,406
DEDUCTIONS		
Benefit payments and withdrawals	44,744	46,572
Transferable Earnings due from FFVSF to QPP	14,000	0
Total deductions	58,744	46,572
INCREASE IN PLAN NET POSITION	(30,765)	3,834
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:		
Beginning of year	\$ 530,080	\$ 526,246
End of year	\$ 499,315	\$ 530,080

**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, 2019 and June 30, 2018

(Dollar amounts in thousands)

	June 30, 2019	June 30, 2018
ADDITIONS		
Contributions:		
Member Contributions	\$ 0	\$ 0
Employer Contributions	0	0
	0	0
<i>Total contributions</i>	\$ 0	\$ 0
Investment income:		
Interest income	3,604	3,103
Dividend income	5,973	5,448
Net appreciation (depreciation) in fair value	11,023	17,000
	11,023	17,000
Total investment income	\$ 20,600	\$ 25,551
Less:		
Investment expenses	219	248
	219	248
Net income	20,381	25,303
Securities lending transactions:		
Securities lending income	109	180
Securities lending fees	(10)	(18)
	99	162
Net securities lending income	\$ 99	\$ 162
<i>Net investment income</i>	20,480	25,465
Other:		
Net receipts from other retirement systems	0	0
Litigation income	0	0
<i>Transferable Earnings due from QPP to FOVSF</i>	0	0
Total additions	20,480	25,465
DEDUCTIONS		
Benefit payments and withdrawals	24,735	24,048
Total deductions	24,735	24,048
INCREASE IN PLAN NET POSITION	(4,255)	1,417
PLAN NET POSITION HELD IN TRUST FOR BENEFITS:		
Beginning of year	\$ 346,633	\$ 345,216
End of year	\$ 342,378	\$ 346,633

NEW YORK CITY FIRE PENSION FUND (FIRE)

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

Market Values of Assets

	QPP	FFVSF	FOVSF	Total
1. Plan Net Position @ 6/30/2017	\$ 12,135,639,000	\$ 502,332,000	\$ 323,387,000	12,961,358,000
2. Accrued Benefits Payable	0	20,831,000	9,121,000	29,952,000
3. Transferable Earnings due from QPP to VSFs	(45,743,000)	23,914,000	21,829,000	0
4. Adjusted Market Value @ 6/30/2017	12,089,896,000	547,077,000	354,337,000	12,991,310,000
5. Changes for the year:				
a. ER Contributions	1,200,417,000	0	0	1,200,417,000
b. EE Contributions	108,338,000	0	0	108,338,000
c. Net Investment Income	1,188,860,000	35,406,000	25,465,000	1,249,731,000
d. Benefit Payments ¹	(1,308,467,000)	(46,976,000)	(24,090,000)	(1,379,533,000)
e. Administrative Expenses	(6,412,000)	0	0	(6,412,000)
f. Other	9,411,000	0	0	9,411,000
g. Net Changes	\$ 1,192,147,000	\$ (11,570,000)	\$ 1,375,000	\$ 1,181,952,000
6. Plan Net Position @ 6/30/2018	\$ 13,282,043,000	\$ 515,080,000	\$ 346,633,000	\$ 14,143,756,000
7. Accrued Benefits Payable	0	20,427,000	9,079,000	29,506,000
8. Transferable Earnings due from QPP to VSFs	(15,000,000)	15,000,000	0	0
9. Adjusted Market Value @ 6/30/2018	<u>\$ 13,267,043,000</u>	<u>\$ 550,507,000</u>	<u>\$ 355,712,000</u>	<u>\$ 14,173,262,000</u>
10. Changes for the year:				
a. ER Contributions	1,398,565,000	0	0	1,398,565,000
b. EE Contributions	108,015,000	0	0	108,015,000
c. Net Investment Income	933,889,000	27,979,000	20,480,000	982,348,000
d. Benefit Payments ²	(1,376,090,000)	(45,218,000)	(24,806,000)	(1,446,114,000)
e. Administrative Expenses	(9,861,000)	0	0	(9,861,000)
f. Other	2,057,000	0	0	2,057,000
g. Net Changes	\$ 1,056,575,000	\$ (17,239,000)	\$ (4,326,000)	\$ 1,035,010,000
11. Plan Net Position @ 6/30/2019	\$ 14,323,618,000	\$ 513,315,000	\$ 342,378,000	\$ 15,179,311,000
12. Accrued Benefits Payable	0	19,953,000	9,008,000	28,961,000
13. Transferable Earnings due from VSFs to QPP	14,000,000	(14,000,000)	0	0
14. Adjusted Market Value @ 6/30/2019	<u>\$ 14,337,618,000</u>	<u>\$ 519,268,000</u>	<u>\$ 351,386,000</u>	<u>\$ 15,208,272,000</u>

¹ Includes Net Accrued Benefits Payable of -\$404,000 for FFVSF and -\$42,000 for FOVSF.

² Includes Net Accrued Benefits Payable of -\$474,000 for FFVSF and -\$71,000 for FOVSF.

NEW YORK CITY FIRE PENSION FUND (FIRE)

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:

<u>Asset Class</u>	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
U.S. Public Market Equities	31%	6.0%
International Public Market Equities	9%	6.8%
Emerging Public Market Equities	6%	9.7%
Private Market Equities	9%	9.5%
Fixed Income (Core, TIPS, HY, Opportunistic, Convertibles)	31%	2.6%
Alternatives (Real Assets, Hedge Funds)	<u>14%</u>	4.7%
Total	100%	

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.

NEW YORK CITY FIRE PENSION FUND (FIRE)

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

**Development of Asset (Gain) / Loss
June 30, 2018**

	QPP	FFVSF	FOVSF	Total
1. Assets				
a. Market Value 6/30/2017*	\$ 12,135,639,000	\$ 523,163,000	\$ 332,508,000	\$ 12,991,310,000
b. 2017 Transferable Earnings due from QPP to VSFs	(45,743,000)	23,914,000	21,829,000	0
c. Adjusted Market Value @6/30/2017	12,089,896,000	547,077,000	354,337,000	12,991,310,000
d. Market Value 6/30/2018**	13,282,043,000	535,507,000	355,712,000	14,173,262,000
e. 2018 Transferable Earnings due from QPP to VSFs	(15,000,000)	15,000,000	0	0
f. Adjusted Market Value @6/30/2018	13,267,043,000	550,507,000	355,712,000	14,173,262,000
2. Net Investment Income	1,188,860,000	35,406,000	25,465,000	1,249,731,000
3. Cash Flow (1.d. - 1.a. - 2.)	(42,456,000)	(23,062,000)	(2,261,000)	(67,779,000)
4. Projected Earnings (7% * 1.a. + 3.441% * 3.)	848,033,819	35,827,847	23,197,759	907,059,425
5. (Gain) / Loss (4. - 2.)	(340,826,181)	421,847	(2,267,241)	(342,671,575)
6. Recognition Period	5 Years	5 Years	5 Years	5 Years
7. Amount Recognized in Pension Expense (5. / 6.)	(68,165,236)	84,369	(453,448)	(68,534,315)
8. Deferred (Inflow) / Outflow of Resources (5. - 7.)	\$ (272,660,945)	\$ 337,478	\$ (1,813,793)	\$ (274,137,260)

* Before Reflecting 2017 Transferable Earnings due from QPP to VSFs.

** Before Reflecting 2018 Transferable Earnings due from QPP to VSFs.

NEW YORK CITY FIRE PENSION FUND (FIRE)

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

**Development of Asset (Gain) / Loss
June 30, 2019**

	QPP	FFVSF	FOVSF	Total
1. Assets				
a. Market Value 6/30/2018*	\$ 13,282,043,000	\$ 535,507,000	\$ 355,712,000	\$ 14,173,262,000
b. 2018 Transferable Earnings due from QPP to VSFs	(15,000,000)	15,000,000	0	0
c. Adjusted Market Value @6/30/2018	13,267,043,000	550,507,000	355,712,000	14,173,262,000
d. Market Value 6/30/2019**	14,323,618,000	533,268,000	351,386,000	15,208,272,000
e. 2019 Transferable Earnings due from VSFs to QPP	14,000,000	(14,000,000)	0	0
f. Adjusted Market Value @6/30/2019	14,337,618,000	519,268,000	351,386,000	15,208,272,000
2. Net Investment Income	933,889,000	27,979,000	20,480,000	982,348,000
3. Cash Flow (1.d. - 1.a. - 2.)	107,686,000	(30,218,000)	(24,806,000)	52,662,000
4. Projected Earnings (7% * 1.a. + 3.441% * 3.)	933,448,485	36,445,689	24,046,266	993,940,440
5. (Gain) / Loss (4. - 2.)	(440,515)	8,466,689	3,566,266	11,592,440
6. Recognition Period	5 Years	5 Years	5 Years	5 Years
7. Amount Recognized in Pension Expense (5. / 6.)	(88,103)	1,693,338	713,253	2,318,488
8. Deferred (Inflow) / Outflow of Resources (5. - 7.)	\$ (352,412)	\$ 6,773,351	\$ 2,853,013	\$ 9,273,952

* Before Reflecting 2018 Transferable Earnings due from QPP to VSFs.

** Before Reflecting 2019 Transferable Earnings due from VSFs to QPP.

NEW YORK CITY FIRE PENSION FUND (FIRE)

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

Roll-Forward of Entry Age Accrued Liabilities to June 30, 2019

	QPP	FFVSF	FOVSF	Total
1. Disclosed EA Accrued Liability at 6/30/2018	\$ 21,073,770,457	\$ 545,062,935	\$ 373,078,788	\$ 21,991,912,180
2. EA Normal Cost at 6/30/2018	467,492,657	10,961,502	6,373,623	484,827,782
3. Benefit Payments - FY 2019	(1,376,090,000)	(45,218,000)	(24,806,000)	(1,446,114,000)
4. Interest	1,460,537,161	37,365,759	25,708,094	1,523,611,014
5. Experience (Gain)/Loss - FY 2019	154,208,202	6,872,622	(20,300,459)	140,780,365
6. Changes of Assumptions - FY 2019	697,113,304	(64,235,477)	(61,109,979)	571,767,848
7. Roll-Forward EAAL at 6/30/2019	\$ 22,477,031,781	\$ 490,809,341	\$ 298,944,067	\$ 23,266,785,189

NEW YORK CITY FIRE PENSION FUND (FIRE)

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, 2018**

	Total Pension Liability			
	QPP	FFVSF	FOVSF	Total
1. Balances at June 30, 2017	\$ 20,384,621,780	\$ 557,072,604	\$ 372,535,147	\$ 21,314,229,531
2. Changes for the Year:				
a. Service Cost	419,209,126	12,234,129	4,925,447	436,368,702
b. Interest	1,422,179,694	37,220,824	25,208,297	1,484,608,815
c. Changes of Benefit Terms	14,335,161	(2,415,542)	(317,197)	11,602,422
d. Differences b/t Expected and Actual Experience	141,891,696	(12,073,080)	(5,182,906)	124,635,710
e. Changes of Assumptions	0	0	0	0
f. Benefit Payments	(1,308,467,000)	(46,976,000)	(24,090,000)	(1,379,533,000)
g. Net Changes	\$ 689,148,677	\$ (12,009,669)	\$ 543,641	\$ 677,682,649
3. Balances at June 30, 2018	\$ 21,073,770,457	\$ 545,062,935	\$ 373,078,788	\$ 21,991,912,180
	Plan Fiduciary Net Position¹			
	QPP	FFVSF	FOVSF	Total
4. Balances at June 30, 2017	\$ 12,089,896,000	\$ 547,077,000	\$ 354,337,000	\$ 12,991,310,000
5. Changes for the Year:				
a. Contributions - Employer	1,200,417,000	0	0	1,200,417,000
b. Contributions - Employee	108,338,000	0	0	108,338,000
c. Net Investment Income	1,188,860,000	35,406,000	25,465,000	1,249,731,000
d. Benefit Payments	(1,308,467,000)	(46,976,000)	(24,090,000)	(1,379,533,000)
e. Administrative Expenses	(6,412,000)	0	0	(6,412,000)
f. Other Changes	9,411,000	0	0	9,411,000
g. Net Changes	\$ 1,192,147,000	\$ (11,570,000)	\$ 1,375,000	\$ 1,181,952,000
6. Transferable Earnings due from QPP to VSFs	(15,000,000)	15,000,000	0	0
7. Balances at June 30, 2018	\$ 13,267,043,000	\$ 550,507,000	\$ 355,712,000	\$ 14,173,262,000
	Net Pension Liability			
	QPP	FFVSF	FOVSF	Total
8. Balances at June 30, 2017	\$ 8,294,725,780	\$ 9,995,604	\$ 18,198,147	\$ 8,322,919,531
9. Changes for the Year:				
a. Service Cost	419,209,126	12,234,129	4,925,447	436,368,702
b. Interest	1,422,179,694	37,220,824	25,208,297	1,484,608,815
c. Changes of Benefit Terms	14,335,161	(2,415,542)	(317,197)	11,602,422
d. Differences b/t Expected and Actual Experience	141,891,696	(12,073,080)	(5,182,906)	124,635,710
e. Changes of Assumptions	0	0	0	0
f. Contributions - Employer	(1,200,417,000)	0	0	(1,200,417,000)
g. Contributions - Employee	(108,338,000)	0	0	(108,338,000)
h. Net Investment Income	(1,188,860,000)	(35,406,000)	(25,465,000)	(1,249,731,000)
i. Benefit Payments	0	0	0	0
j. Administrative Expenses	6,412,000	0	0	6,412,000
k. Other Changes	(9,411,000)	0	0	(9,411,000)
l. Net Changes	\$ (502,998,323)	\$ (439,669)	\$ (831,359)	\$ (504,269,351)
10. Transferable Earnings due from QPP to VSFs	15,000,000	(15,000,000)	0	0
11. Balances at June 30, 2018	\$ 7,806,727,457	\$ (5,444,065)	\$ 17,366,788	\$ 7,818,650,180

¹ Balances at 6/30/2017 and 6/30/2018 are Adjusted Market Values - See Page 3.

NEW YORK CITY FIRE PENSION FUND (FIRE)

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, 2019**

	Total Pension Liability			
	OPP	FFVSF	FOVSF	Total
1. Balances at June 30, 2018	\$ 21,073,770,457	\$ 545,062,935	\$ 373,078,788	\$ 21,991,912,180
2. Changes for the Year:				
a. Service Cost	467,492,657	10,961,502	6,373,623	484,827,782
b. Interest	1,460,537,161	37,365,759	25,708,094	1,523,611,014
c. Changes of Benefit Terms	0	0	0	0
d. Differences b/t Expected and Actual Experience	154,208,202	6,872,622	(20,300,459)	140,780,365
e. Changes of Assumptions	697,113,304	(64,235,477)	(61,109,979)	571,767,848
f. Benefit Payments	(1,376,090,000)	(45,218,000)	(24,806,000)	(1,446,114,000)
g. Net Changes	\$ 1,403,261,324	\$ (54,253,594)	\$ (74,134,721)	\$ 1,274,873,009
3. Balances at June 30, 2019	\$ 22,477,031,781	\$ 490,809,341	\$ 298,944,067	\$ 23,266,785,189
	Plan Fiduciary Net Position¹			
	OPP	FFVSF	FOVSF	Total
4. Balances at June 30, 2018	\$ 13,267,043,000	\$ 550,507,000	\$ 355,712,000	\$ 14,173,262,000
5. Changes for the Year:				
a. Contributions - Employer	1,398,565,000	0	0	1,398,565,000
b. Contributions - Employee	108,015,000	0	0	108,015,000
c. Net Investment Income	933,889,000	27,979,000	20,480,000	982,348,000
d. Benefit Payments	(1,376,090,000)	(45,218,000)	(24,806,000)	(1,446,114,000)
e. Administrative Expenses	(9,861,000)	0	0	(9,861,000)
f. Other Changes	2,057,000	0	0	2,057,000
g. Net Changes	\$ 1,056,575,000	\$ (17,239,000)	\$ (4,326,000)	\$ 1,035,010,000
6. Transferable Earnings due from VSFs to QPP	14,000,000	(14,000,000)	0	0
7. Balances at June 30, 2019	\$ 14,337,618,000	\$ 519,268,000	\$ 351,386,000	\$ 15,208,272,000
	Net Pension Liability			
	OPP	FFVSF	FOVSF	Total
8. Balances at June 30, 2018	\$ 7,806,727,457	\$ (5,444,065)	\$ 17,366,788	\$ 7,818,650,180
9. Changes for the Year:				
a. Service Cost	467,492,657	10,961,502	6,373,623	484,827,782
b. Interest	1,460,537,161	37,365,759	25,708,094	1,523,611,014
c. Changes of Benefit Terms	0	0	0	0
d. Differences b/t Expected and Actual Experience	154,208,202	6,872,622	(20,300,459)	140,780,365
e. Changes of Assumptions	697,113,304	(64,235,477)	(61,109,979)	571,767,848
f. Contributions - Employer	(1,398,565,000)	0	0	(1,398,565,000)
g. Contributions - Employee	(108,015,000)	0	0	(108,015,000)
h. Net Investment Income	(933,889,000)	(27,979,000)	(20,480,000)	(982,348,000)
i. Benefit Payments	0	0	0	0
j. Administrative Expenses	9,861,000	0	0	9,861,000
k. Other Changes	(2,057,000)	0	0	(2,057,000)
l. Net Changes	\$ 346,686,324	\$ (37,014,594)	\$ (69,808,721)	\$ 239,863,009
10. Transferable Earnings due from VSFs to QPP	(14,000,000)	14,000,000	0	0
11. Balances at June 30, 2019	\$ 8,139,413,781	\$ (28,458,659)	\$ (52,441,933)	\$ 8,058,513,189

¹ Balances at 6/30/2018 and 6/30/2019 are Adjusted Market Values - See Page 3.

NEW YORK CITY FIRE PENSION FUND (FIRE)

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

Schedule of Changes in Net Pension Liability and Related Ratios

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
1. Total Pension Liability							
a. Service Cost	\$ 484,827,782	\$ 436,368,702	\$ 432,482,302	\$ 431,267,723	\$ 419,575,546	\$ 412,911,205	\$ 400,884,665
b. Interest	1,523,611,014	1,484,608,815	1,438,804,602	1,395,735,250	1,312,813,977	1,215,276,517	1,184,217,313
c. Changes of Benefit Terms	0	11,602,422	0	0	0	0	0
d. Differences b/t Expected and Actual Experience	140,780,365	124,635,710	134,478,099	323,609,267	171,347,136	0	0
e. Change of Assumptions	571,767,848	0	0	405,497,988	0	0	0
f. Benefit Payments	(1,446,114,000)	(1,379,533,000)	(1,335,343,000)	(1,359,095,000)	(1,220,441,000)	(1,171,998,000)	(1,135,469,000)
g. Net Changes	\$ 1,274,873,009	\$ 677,682,649	\$ 670,422,003	\$ 1,197,015,228	\$ 683,295,659	\$ 456,189,722	\$ 449,632,978
2. Total Pension Liability - Beginning	\$ 21,991,912,180	\$ 21,314,229,531	\$ 20,643,807,528	\$ 19,446,792,300	\$ 18,763,496,641	\$ 17,524,302,616	\$ 17,074,669,638
3. Total Pension Liability - Ending	\$ 23,266,785,189	\$ 21,991,912,180	\$ 21,314,229,531	\$ 20,643,807,528	\$ 19,446,792,300	\$ 17,980,492,338	\$ 17,524,302,616
4. Plan Fiduciary Net Position							
a. Contributions - Employer	\$ 1,398,565,000	\$ 1,200,417,000	\$ 1,061,170,000	\$ 1,054,478,000	\$ 988,784,000	\$ 969,956,000	\$ 962,173,000
b. Contributions - Employee	108,015,000	108,338,000	108,368,000	116,619,000	108,582,000	108,859,000	104,816,000
c. Net Investment Income	982,348,000	1,249,731,000	1,371,721,000	203,104,000	302,567,000	1,689,485,000	1,042,431,000
d. Benefit Payments	(1,446,114,000)	(1,379,533,000)	(1,335,343,000)	(1,359,095,000)	(1,220,441,000)	(1,171,998,000)	(1,135,469,000)
e. Administrative Expenses	(9,861,000)	(6,412,000)	0	0	0	0	0
f. Other Changes	2,057,000	9,411,000	47,284,000	43,673,000	41,201,000	39,980,000	38,965,000
g. Net Changes	\$ 1,035,010,000	\$ 1,181,952,000	\$ 1,253,200,000	\$ 58,779,000	\$ 220,693,000	\$ 1,636,282,000	\$ 1,012,916,000
5. Plan Fiduciary Net Position - Beginning	\$ 14,173,262,000	\$ 12,991,310,000	\$ 11,738,110,000	\$ 11,679,331,000	\$ 11,458,638,000	\$ 9,822,356,000	\$ 8,809,440,000
6. Plan Fiduciary Net Position - Ending	\$ 15,208,272,000	\$ 14,173,262,000	\$ 12,991,310,000	\$ 11,738,110,000	\$ 11,679,331,000	\$ 11,458,638,000	\$ 9,822,356,000
7. FIRE Net Pension Liability	\$ 8,058,513,189	\$ 7,818,650,180	\$ 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	65.4%	64.4%	61.0%	56.9%	60.1%	63.7%	56.0%
9. Covered Employee Payroll¹	\$ 1,302,871,992	\$ 1,164,528,195	\$ 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	618.5%	671.4%	726.3%	788.5%	698.7%	591.6%	681.6%

¹ Projected employee payroll at time 1.0 under previous roll-forward methodology through 2018. Actual employee payroll at valuation date (time = 0) beginning in 2019.

NEW YORK CITY FIRE PENSION FUND (FIRE)

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

Schedule of Employer Contributions (\$ in thousands)

Fiscal Year Ended June 30	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
1. Actuarially Determined Contribution	\$ 1,398,565	\$ 1,200,417	\$ 1,061,170	\$ 1,054,478	\$ 988,784	\$ 969,956	\$ 962,173	\$ 976,895	\$ 890,706	\$ 874,331
2. Contributions in relation to the Actuarially Determined Contribution	<u>\$ 1,398,565</u>	<u>\$ 1,200,417</u>	<u>\$ 1,061,170</u>	<u>\$ 1,054,478</u>	<u>\$ 988,784</u>	<u>\$ 969,956</u>	<u>\$ 962,173</u>	<u>\$ 976,895</u>	<u>\$ 890,706</u>	<u>\$ 874,331</u>
3. Contribution Deficiency (Excess)	0	0	0	0	0	0	0	0	0	0
4. Contributions as a percentage of Covered Employee Payroll*	107.345%	103.082%	92.604%	93.360%	88.940%	87.986%	85.154%	84.990%	82.248%	82.491%

* Projected employee payroll at time 1.0 under previous roll-forward methodology through 2018. Actual employee payroll at valuation date (time = 0) beginning in 2019.

NEW YORK CITY FIRE PENSION FUND (FIRE)

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

Average Expected Remaining Service Lives

<u>Group</u>	<u># Count</u>	Average Expected Remaining Service Life <u>@ 6/30/2018</u>
Active	11,237	13.60
Active Off Payroll	35	0
Terminated Vested	68	0
Retired	<u>16,593</u>	<u>0</u>
Total	<u>27,933</u>	<u>5.47</u>

NEW YORK CITY FIRE PENSION FUND (FIRE)

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	Differences between Expected and Actual Experience	Recognition Period (Years)	2018	2019	2020	2021	2022	2023	2024
2016	323,609,267	2.58	\$ 72,749,371						
2017	134,478,099	4.60	\$ 29,234,369	\$ 29,234,369	\$ 29,234,369	\$ 17,540,623			
2018	124,635,710	4.94	\$ 25,229,901	\$ 25,229,901	\$ 25,229,901	\$ 25,229,901	\$ 23,716,106		
2019	140,780,365	5.47	\$	\$ 25,736,813	\$ 25,736,813	\$ 25,736,813	\$ 25,736,813	\$ 25,736,813	\$ 12,096,300
Net increase (decrease) in Pension Expense			\$ 127,213,641	\$ 80,201,083	\$ 80,201,083	\$ 68,507,337	\$ 49,452,919	\$ 25,736,813	\$ 12,096,300

NEW YORK CITY FIRE PENSION FUND (FIRE)

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	Changes in Assumptions	Recognition Period (Years)								
			2018	2019	2020	2021	2022	2023	2024	
2016	\$ 405,497,988	2.58	\$ 91,158,462							
2017	0	0	0							
2018	0	0	0							
2019	571,767,848	5.47	\$ 104,527,943	\$ 104,527,943	\$ 104,527,943	\$ 104,527,943	\$ 104,527,943	\$ 104,527,943	\$ 49,128,133	
Net increase (decrease) in Pension Expense			\$ 91,158,462	\$ 104,527,943	\$ 104,527,943	\$ 104,527,943	\$ 104,527,943	\$ 104,527,943	\$ 49,128,133	

NEW YORK CITY FIRE PENSION FUND (FIRE)

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**

Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2018	2019	2020	2021	2022	2023
2014	(1,003,750,795)	5	\$ (200,750,159)					
2015	496,720,375	5	\$ 99,344,076	\$ 99,344,071				
2016	609,482,946	5	\$ 121,896,589	\$ 121,896,589	\$ 121,896,590			
2017	(554,131,607)	5	\$ (110,826,321)	\$ (110,826,321)	\$ (110,826,321)	\$ (110,826,323)		
2018	(342,671,575)	5	\$ (68,534,315)	\$ (68,534,315)	\$ (68,534,315)	\$ (68,534,315)	\$ (68,534,315)	
2019	11,592,440	5	\$	\$ 2,318,488	\$ 2,318,488	\$ 2,318,488	\$ 2,318,488	\$ 2,318,488
Net increase (decrease) in Pension Expense			\$ (158,870,130)	\$ 44,198,512	\$ (55,145,558)	\$ (177,042,150)	\$ (66,215,827)	\$ 2,318,488

NEW YORK CITY FIRE PENSION FUND (FIRE)

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

Components of Pension Expense for the Fiscal Year Ended June 30, 2018

<u>Component</u>	<u>Amount</u>
a. Service Cost	\$ 436,368,702
b. Interest on the Total Pension Liability	1,484,608,815
c. Changes of Benefit Terms	11,602,422
d. Differences between Expected and Actual Experience	127,213,641
e. Changes of Assumptions	91,158,462
f. Employee Contributions	(108,338,000)
g. Projected Earnings on Pension Plan Investments	(907,059,425)
h. Differences between Projected and Actual Earnings on Plan Investments	(158,870,130)
i. Pension Plan Administrative Expenses	6,412,000
j. Other Changes in Fiduciary Net Position	(9,411,000)
	(9,411,000)
Total Pension Expense	\$ 973,685,487

NEW YORK CITY FIRE PENSION FUND (FIRE)

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

Components of Pension Expense for the Fiscal Year Ended June 30, 2019

<u>Component</u>	<u>Amount</u>
a. Service Cost	\$ 484,827,782
b. Interest on the Total Pension Liability	1,523,611,014
c. Changes of Benefit Terms	0
d. Differences between Expected and Actual Experience	80,201,083
e. Changes of Assumptions	104,527,943
f. Employee Contributions	(108,015,000)
g. Projected Earnings on Pension Plan Investments	(993,940,440)
h. Differences between Projected and Actual Earnings on Plan Investments	44,198,512
i. Pension Plan Administrative Expenses	9,861,000
j. Other Changes in Fiduciary Net Position	<u>(2,057,000)</u>
Total Pension Expense	\$ 1,143,214,894

NEW YORK CITY FIRE PENSION FUND (FIRE)

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

Pension Expense, Deferred Outflows and Inflows of Resources

	Fiscal Year Ending June 30, 2014		Fiscal Year Ending June 30, 2015		Fiscal Year Ending June 30, 2016		Fiscal Year Ending June 30, 2017		Fiscal Year Ending June 30, 2018		Fiscal Year Ending June 30, 2019	
Recognized Pension Expense	\$507,507,195		\$663,750,858		\$1,139,052,037		\$1,071,143,838		\$973,685,487		\$1,143,214,894	
Deferred Resources	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows	Outflows	Inflows
Due to Differences Between Expected and Actual Experience	0	0	104,152,181	0	198,179,319	0	105,243,730	0	99,405,809	0	115,043,552	0
Due to Chages of Assumptions	0	0	0	0	248,328,225	0	0	0	0	0	467,239,905	0
Due to Net Difference between Projected and Actual Earnings on Pension Plan Investments	0	803,000,636	397,376,299	0	487,586,357	0	0	443,305,286	0	274,137,260	9,273,952	0
Total	0	803,000,636	501,528,480	0	934,093,901	0	105,243,730	443,305,286	99,405,809	274,137,260	591,557,409	0

Reported amounts will be recognized in Pension Expense during:

Fiscal Year Ending June 30, 2014	(\$200,750,159)											
Fiscal Year Ending June 30, 2015	(\$200,750,159)		\$166,539,031									
Fiscal Year Ending June 30, 2016	(\$200,750,159)		\$166,539,031		\$404,496,300							
Fiscal Year Ending June 30, 2017	(\$200,750,159)		\$136,301,302		\$404,496,300		(\$81,591,952)					
Fiscal Year Ending June 30, 2018	(\$200,750,159)		\$99,344,076		\$285,804,422		(\$81,591,952)		(\$43,304,414)			
Fiscal Year Ending June 30, 2019			\$99,344,071		\$121,896,589		(\$81,591,952)		(\$43,304,414)		\$132,583,244	
Fiscal Year Ending June 30, 2020					\$121,896,590		(\$81,591,952)		(\$43,304,414)		\$132,583,244	
Fiscal Year Ending June 30, 2021							(\$93,285,700)		(\$43,304,414)		\$132,583,244	
Fiscal Year Ending June 30, 2022									(\$44,818,209)		\$132,583,244	
Fiscal Year Ending June 30, 2023											\$132,583,244	
Fiscal Year Ending June 30, 2024											\$61,224,433	
Fiscal Year Ending June 30, 2025												

NEW YORK CITY FIRE PENSION FUND (FIRE)

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, 2019, the City recognized Pension Expense for FIRE of \$1,143,214,894.

At June 30, 2019, 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	\$ 235,994,452	\$ 0
Changes of Assumptions	467,239,905	0
Net difference between Projected and Actual Earnings on Pension Plan Investments	0	296,085,047
Total	\$ 703,234,357	\$ 296,085,047

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources related to Pensions for FIRE will be recognized in Pension Expense as follows:

Fiscal Year Ended <u>June 30</u>	<u>Amount</u>
2019	\$ 228,927,538
2020	129,583,468
2021	(4,006,870)
2022	87,765,035
2023	132,583,244
2024	61,224,433