New York City Employees' Retirement System

NYCERS
NYC Employees' Retirement System

(A Fiduciary Fund of the City of New York)

Combining Financial Statements and Supplementary Information (Together with Independent Auditors' Report)

For the Years Ended June 30, 2018 and 2017

MARKS PANETH
ACCOUNTANTS & ADVISORS

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM

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MARKS PANETH
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INDEPENDENT AUDITORS' REPORT

To the Board of Trustees of the
New York City Employees' Retirement System

Report on the Combining Financial Statements

We have audited the accompanying combining statements of fiduciary net position of the New York City Employees' Retirement Fund, New York City Correction Officers' Variable Supplements Fund, New York City Housing Police Officers' Variable Supplements Fund, New York City Housing Police Superior Officers' Variable Supplements Fund, New York City Transit Police Officers' Variable Supplements Fund, and New York City Transit Police Superior Officers' Variable Supplements Fund, which collectively comprise the New York City Employees' Retirement System (the "Funds"), a fiduciary fund of the City of New York, as of June 30, 2018 and 2017, and the related combining statements of changes in fiduciary net position for the years then ended, and the related notes to the combining financial statements, which collectively comprise the Funds' basic combining financial statements as listed in the table of contents.

Management's Responsibility for the Combining Financial Statements

Management is responsible for the preparation and fair presentation of these combining financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the combining financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these combining financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the combining financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the combining financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the combining financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Funds' preparation and fair presentation of the combining financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Funds' internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the combining financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the combining financial statements referred to above present fairly, in all material respects, the combining fiduciary net position of the Funds as of June 30, 2018 and 2017, and the changes in combining fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule 1, Schedule 2, and Schedule 3, as listed in the table of contents, be presented to supplement the basic combining financial statements. Such information, although not a part of the basic combining financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic combining financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic combining financial statements, and other knowledge we obtained during our audit of the basic combining financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Marks Paneth LLP

October 26, 2018

This narrative discussion and analysis of the New York City Employees' Retirement System's (NYCERS or the Fund) financial performance provides an overview of the Funds' combining financial activities for the Fiscal Years ended June 30, 2018 and 2017. It is meant to assist the reader in understanding NYCERS' combining financial statements by providing an overall review of the combining financial activities during the years and the effects of significant changes, as well as a comparison with the prior year's activity and results. This discussion and analysis is intended to be read in conjunction with the Funds' combining financial statements.

NYCERS administers the New York City Employees' Retirement System Qualified Pension Plan (the QPP), Correction Officers' Variable Supplements Fund (COVSF), Housing Police Officers' Variable Supplements Fund (HPOVSF), Housing Police Superior Officers' Variable Supplements Fund (HPSOVSF), Transit Police Officers' Variable Supplements Fund (TPOVSF), and the Transit Police Superior Officers' Variable Supplements Fund (TPSOVSF) (collectively, the Funds).

OVERVIEW OF BASIC COMBINING FINANCIAL STATEMENTS

The following discussion and analysis are intended to serve as an introduction to the Funds' basic combining financial statements. The basic combining financial statements, which are prepared in accordance with Governmental Accounting Standards Board (GASB) pronouncements and include the financial statements of each of the Funds, are:

- **The Combining Statements of Fiduciary Net Position —** presents the financial position of the Funds at fiscal year-end. It provides information about the nature and amounts of resources with present service capacity that the Funds presently controls (assets), consumption of net assets by the Funds that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the Funds has little or no discretion to avoid (liabilities), and acquisition of net assets by the Funds that is applicable to a future reporting period (deferred inflow of resources) with the difference between assets/deferred outflow of resources and liabilities/deferred inflow of resources being reported as net position. Investments are shown at fair value. All other assets and liabilities are determined on an accrual basis.

- **The Combining Statements of Changes in Fiduciary Net Position**— presents the results of activities during the fiscal year. All changes affecting the assets/deferred outflow and liabilities/deferred inflow of the Funds are reflected on an accrual basis when the activity occurred, regardless of the timing of the related cash flows. In that regard, changes in the fair values of investments are included in the year's activity as net appreciation (depreciation) in fair value of investments.

- **The Notes to Combining Financial Statements** — provide additional information that is essential to a full understanding of the data provided in the combining financial statements. The notes present information about the Funds' accounting policies, significant account balances and activities, material risks, obligations, contingencies, and subsequent events, if any.

- **Required Supplementary Information** — as required by the GASB includes the management discussion and analysis and information presented after the notes to the combining financial statements.

FINANCIAL HIGHLIGHTS

The Funds' combined net position restricted for benefits increased by $4 billion (6.5%) from $61.6 billion at June 30, 2017 to $65.6 billion at June 30, 2018. The main reason for the higher net position was an increase in return on the investment portfolio, primarily in the equity markets.

The Funds' combined net position restricted for benefits increased by $6.1 billion (11.0%) from $55.5 billion at June 30, 2016 to $61.6 billion at June 30, 2017. The main reason for the increase was an increase in return on the investment portfolio, especially in the international and domestic equity markets.

The cash balances were $22 million at June 30, 2018. The Funds' practice is to fully invest its day-end cash balances in a pooled short term investment fund. A typical benefit payment account would show an overdrawn balance, since funds are only deposited as outstanding benefit checks are presented to the banks for payments each day. These overdrawn balances are the main component of accounts payable.

Receivables for investment securities sold amounted to $495 million as of June 30, 2018, a decrease of $192 million (-28.0%) from $687 million as of June 30, 2017, which was a decrease of $726 million (-51.4%) from $1.4 billion as of June 30, 2016. Although trades typically do not settle until a few days after trade dates, sales of investment securities are reflected on trade dates. The resulting receivables are caused by these timing differences.

Fiduciary Net Position
June 30, 2018, 2017 and 2016
(in thousands)

	2018	2017	2016
Cash	$ 21,621	$ 172,223	$ 166,041
Receivables for investment securities sold	494,566	687,047	1,413,529
Receivables for member loans	1,129,906	1,102,986	1,081,783
Receivables for accrued earnings	326,371	301,717	280,765
Other receivables	11	12	11
Investments at fair value	65,450,206	60,784,591	54,756,585
Securities lending collateral	9,918,700	7,034,093	5,267,092
Other assets	109,895	93,948	84,632
Total assets	77,451,276	70,176,617	63,050,438
Accounts payable	468,687	209,227	177,909
Payable for investment securities purchased	1,023,260	955,572	1,794,940
Accrued benefits payable	430,223	371,690	314,386
Due to other retirement systems	1,412	1,088	1,590
Payables for securities lending transactions	9,918,700	7,034,093	5,267,092
Total liabilities	11,842,282	8,571,670	7,555,917
Net position restricted for pensions	$ 65,608,994	$ 61,604,947	$ 55,494,521

The receivables for member loans increased $27 million (2.4%), from $1.10 billion at June 30, 2017 to $1.13 billion at June 30, 2018. The principal reason for the increase was that the amount of loans issued was higher than that of fiscal year 2017.

The receivables for member loans increased $21 million (2.0%), from $1.08 billion at June 30, 2016 to $1.10 billion at June 30, 2017. The principal reason for the increase was that the amount of loans issued was higher than that of fiscal year 2016.

Fair value of investments, including securities lending collateral at June 30, 2018 was $75.4 billion, an increase of $7.6 billion (11.1%) from the June 30, 2017 investment value of $67.8 billion. The investment portfolio increased in value mainly due to favorable performance in the domestic and international equity sectors. Additionally, the amount of securities lending collateral held at June 30, 2018 increased $2.9 billion from the amount held at June 30, 2017.

Fair value of investments, including securities lending collateral at June 30, 2017 was $67.8 billion, an increase of $7.8 billion (13.0%) from the June 30, 2016 investment value of $60.0 billion. The increase was due to the fact that the amount of holdings of debt securities and international equity increased by $6.5 billion from $20.7 billion at June 30, 2016 to $27.2 billion at June 30 2017.

Other Assets increased $16 million (17.0%) from $94 million in Fiscal Year 2017 to $110 million in Fiscal Year 2018. This increase was due to an increase in the receivable resulted from unpaid employer pension contribution by New York City Off-Track Betting Corporation (OTB) for Fiscal Year 2018.

Other Assets increased $9 million (11.0%) from $85 million in Fiscal Year 2016 to $94 million in Fiscal Year 2017. This increase was due to an increase in the receivable resulted from unpaid employer pension contribution by New York City Off-Track Betting Corporation (OTB) for Fiscal Year 2017.

Payables for investment securities purchased amounted to $1.0 billion as of June 30, 2018, an increase of $67.7 million (7.1 %) from $956 million as of June 30, 2017, which was a decrease of $839 million (-46.8%) from $1.8 million as of June 30, 2016. Although trades typically do not settle until a few days after trade dates, purchases of investment securities are reflected on trade dates. The resulting payables are the result of those timing differences.

Accrued benefits payable increased $58 million (15.7%), from $372 million at June 30, 2017 to $430 million at June 30, 2018. The increase in payable was primarily due to the fact that collective bargaining cases were still being revised and pensioners were receiving upgraded benefits.

Accrued benefits payable at June 30, 2017 increased $58 million (18.2%), from $314 million at June 30, 2016 to $372 million at June 30, 2017. The increase in payable was primarily due to an ongoing revision of the benefit payment of current pensioners whose salaries were affected, retroactively, by the settlement of union contracts.

Changes in Fiduciary Net Position
Years Ended June 30, 2018, 2017, and 2016
(in thousands)

	2018	2017	2016
Additions:			
Member contributions	$ 523,535	$ 513,514	$ 485,508
Employer contributions	3,377,024	3,328,193	3,365,454
Investment earnings:			
Interest and dividend income	1,778,736	1,685,569	1,529,447
Net appreciation (depreciation) in fair value of investments	3,591,521	5,489,005	(174,204)
Net securities lending income	27,080	31,334	29,657
Investment expenses	(241,818)	(223,756)	(212,996)
Net investment income	5,155,519	6,982,152	1,171,904
Other income	3,422	3,266	2,928
Total additions	9,059,500	10,827,125	5,025,794
Deductions:			
Benefit payments and withdrawals	4,986,709	4,648,941	4,496,180
Payments to other retirement systems	9,055	8,087	7,440
Administrative expenses	59,689	59,671	56,683
Total deductions	5,055,453	4,716,699	4,560,303
Net increase in net position	4,004,047	6,110,426	465,491
Net position restricted for pensions:			
Beginning of year	61,604,947	55,494,521	55,029,030
End of year	$ 65,608,994	$ 61,604,947	$ 55,494,521

Employer contributions remained relatively level in Fiscal Year 2018, increasing by $49 million (1.5%). The increase was primarily due to the increase in the amortization payment of the initial unfunded actuarial accrued liability. Employer contributions remained relatively level in Fiscal Year 2017, decreasing by $37 million (-1.1 %). The decrease was primarily due to the net result of actuarial gains and losses.

Net investment income for Fiscal Year 2018 totaled $5.2 billion, compared to $7 billion in Fiscal Year 2017. Although gains in Fiscal Year 2018 did not reach levels achieved in Fiscal Year 2017, equity markets were relatively strong and accounted for a significant portion of the increase in the value of the portfolio.

Net investment income for Fiscal Year 2017 totaled $7 billion, compared to $1.2 billion in Fiscal Year 2016. This $5.8 billion increase in investment gains was a result of investment portfolio experiencing $5.5 billion appreciation in Fiscal Year 2017, as compared to the $174 million depreciation during Fiscal Year 2016. Domestic and international equity portfolios were comparatively the best performers on a percentage basis.

Investment expenses for Fiscal Year 2018 were $242 million, compared to $224 million in Fiscal Year 2017. The $18 million increase (8.1%) was primarily due to increases in the private equity, private real estate and international equity expenses.

Investment expenses for Fiscal Year 2017 were $224 million, compared to $213 million in Fiscal Year 2016. The $11 million increase (5.1%) was primarily due to increases in the private equity, private real estate and international equity expenses.

Benefit payments and withdrawals for the Fiscal Year ended June 30, 2018 totaled $5 billion, a $338 million (7.3%) increase from the $4.6 billion of Fiscal Year 2017. The increase is due to the increasing number of retirees and their corresponding higher average retirement allowances.

Benefit payments and withdrawals for the Fiscal Year ended June 30, 2017 totaled $4.6 billion, a $153 million (3.4%) increase from the $4.5 billion of Fiscal Year 2016. The increase is due to the increasing number of retirees and their corresponding higher average retirement allowances.

Administrative expenses remained level at $60 million in Fiscal Year 2018. Administrative expenses increased $3 million (5.3%), from $57 million in Fiscal Year 2016 to $60 million in Fiscal Year 2017. The increase was primarily due to the increase of employee salaries upon the settlement of union contracts, a project to modernize NYCERS' information technology systems, and the improvement of NYCERS' facilities.

Investments — The table below summarizes the NYCERS investment allocation.

Investment Summary
June 30, 2018
(in thousands)

Investments - At fair value:	QPP	COVSF	Combined
Short-term investments:			
Commercial paper	$ 644,809	$ -	$ 644,809
Discount notes	71,958	-	71,958
Short term investment fund	612,219	213,478	825,697
U.S. treasury bills and agencies	40,216	-	40,216
Debt securities:			
Bank loans	55,456	-	55,456
Corporate and other	5,848,844	-	5,848,844
Mortgage debt securities	1,856,281	-	1,856,281
U.S. government and agency	9,933,718	-	9,933,718
Equity securities:			
Domestic equity	17,979,085	-	17,979,085
Collective trust funds:			
Bank loans	1,107,139	-	1,107,139
Corporate and other	32,046	-	32,046
International equity	13,315,724	-	13,315,724
Mortgage debt securities	704,148	-	704,148
Treasury inflation protected securities	2,858,313	-	2,858,313
Alternative investments:			
Infrastructure	396,468	-	396,468
Opportunistic fixed income	1,850,722	-	1,850,722
Private equity	4,467,161	-	4,467,161
Private real estate	3,395,746	-	3,395,746
Hedge fund	66,675	-	66,675
Collateral from securities lending	9,918,700	-	9,918,700
Total	$ 75,155,428	$ 213,478	$ 75,368,906

INVESTMENT PERFORMANCE

Total portfolio performance (net of fees) for Fiscal Year 2018 was 8.56%, more than NYCERS' Policy benchmark, which had a rate of return of 7.84%. Domestic equities returned 14.71%, less than the Russell 3000 benchmark of 14.78%. International equity (non-US equities) holdings returned 11.15%, more than the World EX USA Custom benchmark of 7.82%. International equity (emerging markets) holdings returned 1.57%, less than the FTSE Custom NYCERS All Emerging benchmark of 2.30%. Fixed income securities returned 1.29%.

Investment Summary
June 30, 2017
(in thousands)

Investments -At fair value:	QPP	COVSF	Combined
Short-term investments:			
U.S. treasury bills and agencies	$ 49,816	$ -	$ 49,816
Commercial paper	422,635	-	422,635
Short-term investment fund	455,429	43,529	498,958
Discount notes	158,568	-	158,568
Debt securities:			
U.S. Government and agencies	7,299,927	-	7,299,927
Corporate and other	6,221,059	-	6,221,059
Equity securities	18,956,302	-	18,956,302
Alternative investments	9,258,955	-	9,258,955
Collective trust funds:			
International equity	13,360,204	-	13,360,204
Mortgage debt security	640,950	-	640,950
Treasury inflation protected securities	2,531,110	-	2,531,110
Fixed income	1,386,107	-	1,386,107
Collateral from securities lending	7,034,093	-	7,034,093
Total	$ 67,775,155	$ 43,529	$ 67,818,684

INVESTMENT PERFORMANCE

Total portfolio performance (net of fees) for Fiscal Year 2017 was 12.99%, more than NYCERS' Policy benchmark, which had a rate of return of 12.93%. Domestic equities returned 18.09%, less than the Russell 3000 benchmark of 18.51%. International equity holdings returned 22.69%, more than the MSCI AC World Index of 20.45%. Fixed income securities returned 3.14%.

CONTACT INFORMATION

This financial report is designed to provide a general overview of the New York City Employees' Retirement System's finances. Questions concerning any data provided in this report or requests for additional information should be directed to Michael Goldson, Director of Finance, New York City Employees' Retirement System, 335 Adams Street, Suite 2300, Brooklyn, NY 11201-3751.

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NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
COMBINING STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2018
(In thousands)

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	Eliminations	Total
ASSETS:								
Cash and cash equivalents	$ 19,139	$ 1,917	$ 134	$ 121	$ 171	$ 139	$ -	$ 21,621
RECEIVABLES:								
Investment securities sold	494,566	-	-	-	-	-	-	494,566
Member loans (Note 7)	1,129,906	-	-	-	-	-	-	1,129,906
Accrued interest and dividends	326,006	365	-	-	-	-	-	326,371
Other receivables	-	11	-	-	-	-	-	11
Receivables from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	-	-	812	1,202	1,657	1,324	(4,995)	-
COVSF	-	234,000	-	-	-	-	(234,000)	-
Total receivables	1,950,478	234,376	812	1,202	1,657	1,324	(238,995)	1,950,854
INVESTMENTS – At fair value (Notes 2 and 3):								
Short-term investments:								
Commercial paper	644,809	-	-	-	-	-	-	644,809
Discount notes	71,958	-	-	-	-	-	-	71,958
Short term investment fund	612,219	213,478	-	-	-	-	-	825,697
U.S. treasury bills and agencies	40,216	-	-	-	-	-	-	40,216
Debt securities:								
Bank Loans	55,456	-	-	-	-	-	-	55,456
Corporate and other	5,848,844	-	-	-	-	-	-	5,848,844
Mortgage debt securities	1,856,281	-	-	-	-	-	-	1,856,281
U.S. government and agency	9,933,718	-	-	-	-	-	-	9,933,718
Equity securities:								
Domestic equity	17,979,085	-	-	-	-	-	-	17,979,085
Collective trust funds:								
Bank Loans	1,107,139	-	-	-	-	-	-	1,107,139
Corporate and other	32,046	-	-	-	-	-	-	32,046
International equity	13,315,724	-	-	-	-	-	-	13,315,724
Mortgage debt securities	704,148	-	-	-	-	-	-	704,148
Treasury inflation protected securities	2,858,313	-	-	-	-	-	-	2,858,313
Alternative investments:								
Infrastructure	396,468	-	-	-	-	-	-	396,468
Opportunistic Fixed Income	1,850,722	-	-	-	-	-	-	1,850,722
Private Equity	4,467,161	-	-	-	-	-	-	4,467,161
Private Real Estate	3,395,746	-	-	-	-	-	-	3,395,746
Hedge Fund	66,675	-	-	-	-	-	-	66,675
Collateral from securities lending	9,918,700	-	-		-	-	-	9,918,700
Total investments	75,155,428	213,478	-	-	-	-	-	75,368,906
OTHER ASSETS	109,895	-	-	-	-	-	-	109,895
Total assets	77,234,940	449,771	946	1,323	1,828	1,463	(238,995)	77,451,276
LIABILITIES:								
Accounts payable	468,665	-	-	-	22	-	-	468,687
Payable for investment securities purchased	1,023,260	-	-	-	-	-	-	1,023,260
Accrued benefits payable	377,156	47,529	946	1,323	1,806	1,463	-	430,223
Payable from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	4,995	-	-	-	-	-	(4,995)	-
COVSF	234,000	-	-	-	-	-	(234,000)	-
Due to other retirement systems	1,412	-	-	-	-	-	-	1,412
Securities lending (Note 2)	9,918,700	-	-	-	-	-	-	9,918,700
Total liabilities	12,028,188	47,529	946	1,323	1,828	1,463	(238,995)	11,842,282
NET POSITION RESTRICTED FOR BENEFITS								
Benefits to be provided by QPP	65,206,752	-	-	-	-	-	-	65,206,752
Benefits to be provided by VSF		402,242	-	-	-	-	-	402,242
Total net position restricted for benefits	$ 65,206,752	$ 402,242	$ -	$ -	$ -	$ -	$ -	$ 65,608,994

The accompanying notes are an integral part of these combining financial statements.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
COMBINING STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2017
(In thousands)

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	Eliminations	Total
ASSETS:								
Cash and cash equivalents	$ 163,875	$ 8,106	$ 69	$ 58	$ 45	$ 70	$ -	$ 172,223
RECEIVABLES:								
Investment securities sold	687,047	-	-	-	-	-	-	687,047
Member loans (Note 7)	1,102,986	-	-	-	-	-	-	1,102,986
Accrued interest and dividends	301,680	37	-	-	-	-	-	301,717
Other receivables	-	12	-	-	-	-	-	12
Receivables from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	-	-	901	1,274	1,886	1,432	(5,493)	-
COVSF	-	281,000	-	-	-	-	(281,000)	-
Total receivables	2,091,713	281,049	901	1,274	1,886	1,432	(286,493)	2,091,762
INVESTMENTS – At fair value (Notes 2 and 3):								
Short-term investments:								
U.S. treasury bills and agencies	49,816	-	-	-	-	-	-	49,816
Commercial paper	422,635	-	-	-	-	-	-	422,635
Short-term investment fund	455,429	43,529	-	-	-	-	-	498,958
Discount notes	158,568	-	-	-	-	-	-	158,568
Debt securities:								
U.S. government and agency	7,299,927	-	-	-	-	-	-	7,299,927
Corporate and other	6,221,059	-	-	-	-	-	-	6,221,059
Equity securities	18,956,302	-	-	-	-	-	-	18,956,302
Alternative investments	9,258,955	-	-	-	-	-	-	9,258,955
Collective trust funds:								
International equity	13,360,204	-	-	-	-	-	-	13,360,204
Mortgage debt securities	640,950	-	-	-	-	-	-	640,950
Treasury inflation protected securities	2,531,110	-	-	-	-	-	-	2,531,110
Fixed income	1,386,107	-	-	-	-	-	-	1,386,107
Collateral from securities lending	7,034,093	-	-		-	-	-	7,034,093
Total investments	67,775,155	43,529	-	-	-	-	-	67,818,684
OTHER ASSETS	93,948	-	-	-	-	-	-	93,948
Total assets	70,124,691	332,684	970	1,332	1,931	1,502	(286,493)	70,176,617
LIABILITIES:								
Accounts payable	209,206	-	-	-	21	-	-	209,227
Payable for investment securities purchased	955,572	-	-	-	-	-	-	955,572
Accrued benefits payable	321,457	44,519	970	1,332	1,910	1,502	-	371,690
Payable from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	5,493	-	-	-	-	-	(5,493)	-
COVSF	281,000	-	-	-	-	-	(281,000)	-
Due to other retirement systems	1,088	-	-	-	-	-	-	1,088
Securities lending (Note 2)	7,034,093	-	-	-	-	-	-	7,034,093
Total liabilities	8,807,909	44,519	970	1,332	1,931	1,502	(286,493)	8,571,670
NET POSITION RESTRICTED FOR BENEFITS								
Benefits to be provided by QPP	61,316,782	-	-	-	-	-	-	61,316,782
Benefits to be provided by VSF		288,165	-	-	-	-	-	288,165
Total net position restricted for benefits	$ 61,316,782	$ 288,165	$ -	$ -	$ -	$ -	$ -	$ 61,604,947

The accompanying notes are an integral part of these combining financial statements.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2018
(In thousands)

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	ELIM	Total
ADDITIONS:								
Contributions:								
Member contributions	$ 523,535	$ -	$ -	$ -	$ -	$ -	$ -	$ 523,535
Employer contributions	3,377,024	-	-	-	-	-	-	3,377,024
Total contributions	3,900,559	-	-	-	-	-	-	3,900,559
Investment income (Note 2):								
Interest income	878,598	2,265	-	-	-	-	-	880,863
Dividend income	897,873	-	-	-	-	-	-	897,873
Net appreciation in fair value of investments	3,591,521	-	-	-	-	-	-	3,591,521
Total investment income	5,367,992	2,265	-	-	-	-	-	5,370,257
Less:								
Investment expenses	241,818	-	-	-	-	-	-	241,818
Net income	5,126,174	2,265	-	-	-	-	-	5,128,439
Securities lending transactions:								
Securities lending income	30,089	-	-	-	-	-	-	30,089
Less - securities lending fees	3,009	-	-	-	-	-	-	3,009
Net securities lending income	27,080	-	-	-	-	-	-	27,080
Net investment income	5,153,254	2,265	-	-	-	-	-	5,155,519
Other - other income	3,410	12	-	-	-	-	-	3,422
Transfer from QPP to:								-
VSFs (HPO, HPSO, TPO, TPSO)	-	-	1,825	2,573	3,612	2,887	(10,897)	-
COVSF	-	205,000	-	-	-	-	(205,000)	-
Total additions	9,057,223	207,277	1,825	2,573	3,612	2,887	(215,897)	9,059,500
DEDUCTIONS:								
Benefit payments and withdrawals (Note 1)	4,882,612	93,200	1,825	2,573	3,612	2,887	-	4,986,709
Payments to other retirement systems	9,055	-	-	-	-	-	-	9,055
Transfer from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	10,897	-	-	-	-	-	(10,897)	-
COVSF	205,000	-	-	-	-	-	(205,000)	-
Administrative expenses	59,689	-	-	-	-	-	-	59,689
Total deductions	5,167,253	93,200	1,825	2,573	3,612	2,887	(215,897)	5,055,453
NET INCREASE IN NET POSITION	3,889,970	114,077	-	-	-	-	-	4,004,047
NET POSITION RESTRICTED FOR BENEFITS:								
Beginning of year	61,316,782	288,165	-	-	-	-	-	61,604,947
End of year	$ 65,206,752	$ 402,242	$ -	$ -	$ -	$ -	$ -	$ 65,608,994

The accompanying notes are an integral part of these combining financial statements.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2017
(In thousands)

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	ELIM	Total
ADDITIONS:								
Contributions:								
Member contributions	$ 513,514	$ -	$ -	$ -	$ -	$ -	$ -	$ 513,514
Employer contributions	3,328,193	-	-	-	-	-	-	3,328,193
Total contributions	3,841,707	-	-	-	-	-	-	3,841,707
Investment income (Note 2):								
Interest income	753,789	300	-	-	-	-	-	754,089
Dividend income	931,480	-	-	-	-	-	-	931,480
Net appreciation in fair value of investments	5,489,457	(452)	-	-	-	-	-	5,489,005
Total investment income	7,174,726	(152)	-	-	-	-	-	7,174,574
Less:								
Investment expenses	223,756	-	-	-	-	-	-	223,756
Net income	6,950,970	(152)	-	-	-	-	-	6,950,818
Securities lending transactions:								
Securities lending income	33,703	-	-	-	-	-	-	33,703
Less - securities lending fees	2,369	-	-	-	-	-	-	2,369
Net securities lending income	31,334	-	-	-	-	-	-	31,334
Net investment income	6,982,304	(152)	-	-	-	-	-	6,982,152
Other - other income	3,266	-	-	-	-	-	-	3,266
Transfer from QPP to:								-
VSFs (HPO, HPSO, TPO, TPSO)	-	-	1,889	2,595	3,830	2,983	(11,297)	
COVSF	-	285,924	-	-	-	-	(285,924)	-
Total additions	10,827,277	285,772	1,889	2,595	3,830	2,983	(297,221)	10,827,125
DEDUCTIONS:								
Benefit payments and withdrawals (Note 1)	4,635,020	2,624	1,889	2,595	3,830	2,983	-	4,648,941
Payments to other retirement systems	8,087	-	-	-	-	-	-	8,087
Transfer from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	11,297	-	-	-	-	-	(11,297)	-
COVSF	285,924	-	-	-	-	-	(285,924)	-
Administrative expenses	59,671	-	-	-	-	-	-	59,671
Total deductions	4,999,999	2,624	1,889	2,595	3,830	2,983	(297,221)	4,716,699
NET INCREASE IN NET POSITION	5,827,278	283,148	-	-	-	-	-	6,110,426
NET POSITION RESTRICTED FOR BENEFITS:								
Beginning of year	55,489,504	5,017	-	-	-	-	-	55,494,521
End of year	$ 61,316,782	$ 288,165	$ -	$ -	$ -	$ -	$ -	$ 61,604,947

The accompanying notes are an integral part of these combining financial statements.

1. PLAN DESCRIPTION

The City of New York (The City) maintains a number of pension systems providing benefits for employees of its various agencies (as defined within New York State (State) statutes and City laws). The City's five major actuarially-funded pension systems are the New York City Employees' Retirement System (NYCERS), the Teachers' Retirement System of the City of New York ("TRS"), the New York City Board of Education Retirement System (BERS), the New York City Police Pension Fund (POLICE), and the New York City Fire Pension Fund (FIRE). Each pension system is a separate public employee retirement system (PERS) with a separate oversight body and is financially independent of the others.

NYCERS administers the New York City Employees' Retirement System Qualified Pension Plan (the QPP or Plan), Correction Officers' Variable Supplements Fund (COVSF), Housing Police Officers' Variable Supplements Fund (HPOVSF), Housing Police Superior Officers' Variable Supplements Fund (HPSOVSF), Transit Police Officers' Variable Supplements Fund (TPOVSF), and the Transit Police Superior Officers' Variable Supplements Fund (TPSOVSF), (collectively the Funds) which are included in the combining financial statements.

The QPP is a cost-sharing, multiple-employer PERS. The QPP provides a pension benefit for employees of The City and various related employers not covered by The City's four other main pension systems. The employers (collectively, the Employer), in addition to The City, principally include five authorities, four public benefit corporations, The City University of New York (CUNY) and the State. Substantially all employees of The City not covered by one of the other four pension systems are covered by the QPP. Permanent employees become QPP members within six months of their employment and may elect to become members earlier. All other employees may become members at their option.

The QPP functions in accordance with existing State statutes and City laws, which are the basis by which benefit terms and Employer and member contribution requirements are established and amended. The QPP combines features of a defined benefit pension plan with those of a defined contribution pension plan, but is considered a defined-benefit pension plan for financial reporting purposes.

The COVSF, HPOVSF, HPSOVSF, TPOVSF, and TPSOVSF (collectively, the VSFs) operate pursuant to the provisions of Title 13, Chapter 1 of the Administrative Code of the City of New York (ACNY) and provide supplemental benefits as follows:

COVSF: Retired Members of the Uniformed Correction Force (UCF). To be eligible to receive benefits, members of the UCF must retire, on or after July 1, 1999 with 20 or more years of service, and be receiving a service retirement benefit from the QPP.

HPOVSF: QPP retirees who retired for service, with 20 or more years of service as Housing Police Officers and who retired on or after July 1, 1987.

HPSOVSF: QPP retirees who retired for service, with 20 or more years of service as Housing Police Superior Officers and who retired on or after July 1, 1987.

TPOVSF: QPP retirees who retired for service, with 20 or more years of service as Transit Police Officers and who retired on or after July 1, 1987.

TPSOVSF: QPP retirees who retired for service, with 20 or more years of service as Housing Police Superior Officers and who retired on or after July 1, 1987.

Under current law, the VSFs are not to be construed as constituting a pension or retirement system. Instead, they provide defined supplemental payments, other than pension or retirement system allowances, in accordance with applicable statutory provisions. While The City guarantees these payments, the New York State Legislature has reserved to itself and the State of New York (the State) the right and power to amend, modify, or repeal the VSFs and the payments they provide. For financial reporting purposes, however, the VSFs are considered single-employer defined benefit pension plans.

NYCERS is a fiduciary component of The City and is in the Pension and Other Employee Benefit Trust Funds section of The City's Comprehensive Annual Financial Report (CAFR).

Boards of Trustees

The QPP's Board of Trustees consists of 11 members; the Mayor's representative is the Chairperson of the Board, Borough Presidents of Manhattan, the Bronx, Brooklyn, Queens, and Staten Island, the Comptroller of The City of New York, the Public Advocate, and Presidents of the three unions with the largest number of participating employees, which are District Council 37 – AFSCME, International Brotherhood of Teamsters, Local 237, and the Transport Workers Union Local 100. The Board of Trustees for the VSFs each have one vote (unless noted otherwise) and consist of the Mayor's representative, the Comptroller and the Commissioner of Finance. Additional trustees are: For the COVSF, an officer of The New York City Correction Officers' Benevolent Association (1 ½ vote) and a representative of the Correction Captains employee organization (1/2 vote). For the HPOVSF, two members of the association designated by the board, each of whom are entitled to cast one vote. For the HPSOVSF, two representatives of the housing police superior officers recognized employee organization, each of whom are entitled to cast one vote. For TPOVSF, two members of the association designated by the board, each of whom are entitled to cast one vote. For TPSOVSF, two representatives of the transit police superior officers recognized employee organization, each of whom are entitled to cast one vote.

At June 30, 2018 (preliminary), June 30, 2017 (preliminary), and June 30, 2016 the QPP's membership consisted of:

	2018	**2017**	**2016**
Retirees and beneficiaries receiving benefits	152,245	150,419	147,514
Terminated vested members not yet receiving benefits	17,791	8,417	8,895
Other inactives*	15,934	19,149	17,989
Active members receiving salary	195,847	186,898	185,481
Total	381,817	364,883	359,879

* Represents members who are no longer on payroll but not otherwise classified.

Note that 2016 data is final and supports the most recent actuarial valuation. 2017 and 2018 data is preliminary and may be subject to future adjustments as the data is refined.

At June 30, 2017 and 2016, the dates of the VSF's most recent actuarial valuations, membership consisted of:

	COVSF		HPOVSF		HPSOVSF		TPOVSF		TPSOVSF	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Retirees currently receiving payments	7,858	7,424	153	160	215	220	315	325	243	247
Active members	9,406	8,815	-	-	-	-	-	-	-	-
Total	17,264	16,239	153	160	215	220	315	325	243	247

The QPP provides three main types of retirement benefits: Service Retirements, Ordinary Disability Retirements (non-job-related disabilities) and Accident Disability Retirements (job-related disabilities) to members who are in different "Tiers." The members' Tiers are generally determined by the date of membership in the Plan.

The Service Retirement benefits provided by the QPP for employees who joined before July 1, 1973 (Tier 1), fall into four categories according to the level of benefits provided and the years of service required. Three of the four categories provide annual benefits of 50% to 55% of "final salary" (as defined within State statutes and City laws) after 20 or 25 years of service, with additional benefits equal to a specified percentage per year of service (currently 1.2% to 1.7%) of "final salary" payable for years in excess of the 20-year or 25-year minimum. These benefits are reduced on an actuarial basis for any loans with unpaid balances outstanding at the date of retirement. These benefits are increased, where applicable, by an annuity attributable to member contributions in excess of the required amount and by any benefits attributable to the Increased-Take-Home-Pay (ITHP) contributions accumulated after the 25th year of member's qualifying service. ITHP represents amounts contributed by The City in lieu of members' own contributions. These amounts reduce the contributions that members would have to make to the QPP during their service and thereby increase their take-home pay. Members have the choice of waiving their ITHP reduction, which would reduce their take-home pay but provide them with additional benefits upon retirement.

The fourth category has no minimum service requirement and instead provides an annual benefit for each year of service equal to a specified percentage (currently 0.7% to 1.53%) of "final salary."

The State Constitution provides that the pension rights of public employees are contractual and shall not be diminished or impaired. In 1973, 1976, 1983, and 2012, significant amendments made to the State Retirement and Social Security Law (RSSL) modified certain benefits for employees joining the Plan on or after the effective date of such amendments.

Members who joined on or after July 1, 1973 and before July 27, 1976 (Tier 2), have provisions similar to Tier 1, except that the eligibility for retirement and the salary base for benefits are different and there is a limitation on the maximum benefit. This maximum benefit limitation was subsequently eliminated under Chapter 574 of the Laws of 2000 for all Tier 2 members who retired after December 8, 2000.

Members who joined the QPP on or after July 27, 1976 and prior to September 1, 1983 (Tier 3), were later mandated into Tier 4, but could retain their Tier 3 rights. Tier 3 requires member contributions of salary for a period not to exceed 30 years, has benefits reduced by one half of the primary Social Security benefit attributable to service with the Employer, and provides for an automatic annual cost-of-living escalator in pension benefits of not more than 3.0%. Effective October 1, 2000, these members are not required to make contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier.

Members, who joined the QPP on or after September 1, 1983 and prior to April 1, 2012 (Tier 4), must make basic contributions of 3.0% of salary until termination of service. Effective October 1, 2000, these members, except for certain Transit Authority employees, are not required to make contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. Effective December 2000, certain Transit Authority members make basic contributions of 2.0% of salary in accordance with Chapter 10 of the Laws of 2000. Certain members also make additional member contributions. The annual benefit is 1.67% of "final average salary" per year of service for members with less than 20 years of service, 2% of "final average salary" per year of service for members with 20 to 30 years, plus 1.5% of "final average salary" per year of service for service in excess of 30 years.

The QPP also provides death benefits; and certain retirees also receive supplemental benefits.

Subject to certain conditions, members generally become fully vested as to benefits upon the completion of 5 years of service.

During the Spring 2000 session, the State Legislature approved and the State Governor (Governor) signed laws that provide automatic Cost-of-Living Adjustments (COLA) for certain retirees and beneficiaries (Chapter 125 of the Laws of 2000), additional service credits for certain Tier 1 and Tier 2 members and reduced member contributions for certain Tier 3 and Tier 4 members (Chapter 126 of the Laws of 2000).

Subsequent legislation, affecting members of Tiers 2, 3 and 4, has created various improved early retirement benefit programs under which eligible employees may elect to pay additional contributions. Members first employed after the effective date of such legislation are generally mandated into these programs.

Tier 6 — During March 2012, the Governor signed Chapter 18 of the Laws of 2012 (Chapter 18/12) that placed certain limitations on the Tier 3 and Tier 4 benefits available to participants in most New York State PERS who join a system on and after April 1, 2012, including NYCERS. In general, these changes, commonly referred to as Tier 6, increase the age requirement to 63 for most non-uniformed employees to retire and receive a full pension, require member contributions for all years of service for non-uniformed employees, institute progressive member contributions for non-uniformed employees, lengthen the final average salary (FAS) period from 3 to 5 years, cap FAS for non-uniformed employees to an amount equal to the Governor's salary, extend and harmonize the Tier 3 benefits for POLICE and FIRE to other uniformed forces and to DA Investigators and offer an optional defined-contribution plan to certain non-represented employees. Note that the 22-year retirement plans for Correction, Sanitation and DA Investigator members established under Chapter 18/12 are not considered Tier 6 plans.

Certain members of Tier 1 and Tier 2 have the right to make voluntary member contributions (Voluntary Contributions) in excess of their required member contributions (Required Contributions). Both the Voluntary Contributions and the Required Contributions are credited with interest at a statutory rate (currently 8.25% APR). At the time of retirement or refund of contributions, a member's aggregate balance of actual Required Contributions and Voluntary Contributions, including statutory interest, less the outstanding balance of any member loans (Net Actual Contributions), may exceed (Excess of Contributions) or fall short of (Deficiency of Contributions) the member's Expected Balance. The Expected Balance is the sum of the Required Contributions which a member should have made during his or her credited service, plus statutory earnings thereon. The amount of the member's retirement annuity or the refund of contributions that he or she is entitled to is increased by any Excess of Contributions or reduced by any Deficiency of Contributions. The total value of members' Excesses of Contributions, net of all Deficiencies of Contributions, has not been determined, for the years ended June 30, 2018 and 2017, respectively. Actuarial estimates of the impacts of Excesses and Deficiencies are incorporated into calculation of the QPP's net pension liability (see footnote 6).

<u>VSFs</u>

COVSF

The COVSF provides supplemental benefits, varying by calendar year according to a schedule and available Fund assets, for those NYCERS members who retire for service as UCF members with 20 (25) or more years of service on or after July 1, 1999. The annual scheduled amount is $8,500 for Calendar Year 2000. The annual scheduled amount increases $500 each year thereafter to a maximum of $12,000 for Calendar Year 2007 and thereafter. In the calendar year of retirement or death, the annual scheduled amount is prorated.

Chapter 255/00 provides that prior to Calendar Year 2019, when COVSF provides for a guaranteed schedule of defined supplemental benefits, benefits are payable in a calendar year only if there are sufficient Fund assets to pay that year's scheduled amounts to all who are entitled to it unless The City guarantee becomes effective. The City guarantee of benefits payable prior to Calendar Year 2019 comes into effect if the market value of assets of the Fund exceeds the actuarial present value of the defined schedule of benefits payable through Calendar Year 2018.

The Funds' Chief Actuary (the Actuary) has also determined that benefits were payable for Calendar Year 2000 through Calendar Year 2005. However, the Actuary determined that no benefits were payable for Calendar Years 2006 through 2013. Benefits were payable for Calendar Years 2014 and 2015. No benefits were payable for Calendar Year 2016. Benefits were payable for Calendar Year 2017 and are expected to be paid for Calendar Year 2018 due to the application of the City guarantee of benefits payable prior to Calendar Year 2019.

In the past, the New York State Legislature, in recognition of inflation, has increased retirement benefits to retirees of its public pension systems. Any increase in the amount of ad-hoc cost-of-living increases (Supplementation) or automatic COLA payable from NYCERS to a retiree of the Fund under legislation enacted on or after December 29, 1999 will reduce benefits payable from the Fund to such retiree by an amount equal to such increase until the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) January 1, 2007.

Chapter 125 of the Laws of 2000 (Chapter 125/00) provided Supplementation benefits from NYCERS for certain retirees who retired before Calendar Year 1997 effective September 2000. In addition, Chapter 125/00 provided future COLA increases from NYCERS beginning September 2001 and on each subsequent September to these retirees.

HPOVSF

For those Housing Police Officers who became members of NYCERS prior to July 1, 1988, and who retired between July 1, 1987 and December 31, 1991, the annual supplemental benefit was $4,500 for calendar year 1992. For those who retired during 1992, the benefit was a proportion of $4,500. The benefit increases $500 each year thereafter to a maximum of $12,000 in calendar year 2007 and thereafter.

For those who were members of NYCERS prior to July 1, 1988, and who retire after calendar year 1992, the benefit for the first year of retirement is a proportion of the annual scheduled amount as described above for the calendar year of retirement and the full amount thereafter.

For those Housing Police Officers who became members of NYCERS on or after July 1, 1988, the annual supplemental benefit is $2,500 for the first twelve months of retirement, increasing by $500 each year until a maximum of $12,000 is payable in the twentieth and later years of retirement. This was later modified by Chapter 719 of the Laws of 1994 as discussed below.

Chapter 375 of the Laws of 1993 (Chapter 375/93) provided that prior to calendar year 2007, the defined schedules of benefits are payable only if there are sufficient assets available in the Fund, or if the New York City (The City) guarantee comes into effect. The City guarantee of benefits comes into effect prior to calendar year 2007 if the market value of assets of the Fund exceeds the actuarial present value of the defined schedules of benefits payable through calendar year 2006 plus 15% of the assets of the Fund at that time.

Chapter 719 of the Laws of 1994 (Chapter 719/94), signed on August 2, 1994, made further changes to the Fund. Supplemental benefit payments became guaranteed. In addition, Housing Police Officers who became members on or after July 1, 1988, will receive the maximum $12,000 benefit beginning in calendar year 2008.

Chapter 255 of the Laws of 2000 (Chapter 255/00) provided that in the event that, for any calendar year covered by a payment guarantee, the assets of the Fund are not sufficient to pay benefits, an amount sufficient to pay such benefits shall be appropriated from the Contingent Reserve Fund of NYCERS and transferred to the Fund. The law also provided that transfers to the Fund for supplemental benefits could begin as early as calendar year 2001, if needed.

In the past, the New York State Legislature, in recognition of inflation, has increased retirement benefits to retirees of its public pension systems. Any increase in the amount of ad-hoc cost-of-living increases (Supplementation) or automatic COLA payable from NYCERS to a retiree of the Fund under legislation enacted on or after January 1, 1993 will reduce benefits payable from the Fund to such retiree by an amount equal to such increase until the following date:

- For a retiree with a date of membership before July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) January 1, 2007.

- For a retiree with a date of membership on or after July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) the earlier of (1) the first day of the month following the 19th anniversary of such retiree's date of retirement and January 1, 2008.

Chapter 119 of the Laws of 1995 (Chapter 119/95) provided additional benefits for Supplementation payable from NYCERS on and after December 1, 1996, for certain retirees of the Fund effective as enacted by the City Council on October 25, 1995.

Chapter 390 of the Laws of 1998 (Chapter 390/98) provided additional benefits for Supplementation payable from NYCERS on and after September 1, 1998 (with a second benefit increase commencing September 1, 1999).

Chapter 125 of the Laws of 2000 (Chapter 125/00) provided Supplementation benefits from NYCERS for certain retirees who retired before calendar year 1997 effective September 2000. In addition, Chapter 125/00 provided future COLA increases from NYCERS beginning September 2001 and on each subsequent September to eligible retirees.

HPSOVSF

For those Housing Police Superior Officers who became members of NYCERS prior to July 1, 1988 and who retired between July 1, 1987 and December 31, 1992, the annual supplemental benefit was $5,000 in calendar year 1993. For those who retired during 1993, the benefit was a proportion of $5,000. The benefit increases $500 each year thereafter to a maximum of $12,000 in calendar year 2007 and thereafter.

For those who were members of NYCERS prior to July 1, 1988 and who retired after calendar year 1993, the benefit for the first year of retirement is a proportion of the annual scheduled amount as described above for the calendar year of retirement and the full amount thereafter.

For those Housing Police Superior Officers who became members of NYCERS on or after July 1, 1988, the annual supplemental benefit is $2,500 for the first twelve months of retirement, increasing by $500 each year until a maximum of $12,000 is payable in the twentieth and later years of retirement.

Chapter 719 of the Laws of 1994 (Chapter 719/94) provided that after calendar year 2006 payments are guaranteed, while prior to calendar year 2007, the defined schedules of benefits are payable only if there are sufficient assets available in the Fund, or if The City guarantee comes into effect. The City guarantee of benefits comes into effect prior to calendar year 2007 if the market value of assets of the Fund exceeds the actuarial present value of the defined schedules of benefits payable through calendar year 2006 plus 15% of the assets of the Fund at that time.

Chapter 719/94 also provided that, whenever the guarantee of the defined schedules of benefits comes into effect, the Fund will then transfer 15% of the market value of its assets to The City's General Fund.

Based on the calculations of the Funds' Chief Actuary of the Office of the Actuary (the Actuary), The City guarantee of the defined schedules of benefits prior to calendar year 2007 had not yet come into effect as discussed more fully below.

Also, in conjunction with the April 30, 1995 merger of the Housing Police force into the New York City Police Department (the Merger), The City signed a letter of agreement with affected unions to ensure that the payment of benefits provided under the defined schedules prior to calendar year 2007 will be made. Thus, there will be no suspension of benefits prior to calendar year 2007 even if assets of the Fund become insufficient to pay these benefits.

Chapter 255 of the Laws of 2000 (Chapter 255/00) provided that in the event that, for any calendar year covered by a payment guarantee, the assets of the Fund are not sufficient to pay benefits, an amount sufficient to pay such benefits shall be appropriated from the Contingent Reserve Fund of NYCERS and transferred to the Fund. The law also provided that supplemental benefits become guaranteed commencing with calendar year 2001.

In the past, the New York State Legislature, in recognition of inflation, has increased retirement benefits to retirees of its public pension systems. Any increase in the amount of ad-hoc cost-of-living increases (Supplementation) or automatic COLAs payable from NYCERS to a retiree of the Fund under legislation enacted on or after January 1, 1994 will reduce benefits payable from the Fund to such retiree by an amount equal to such increase until the following date:

- For a retiree with a date of membership before July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) January 1, 2007.

- For a retiree with a date of membership on or after July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) the first day of the month following the 19th anniversary of such retiree's date of retirement.

Chapter 119 of the Laws of 1995 (Chapter 119/95) provided additional benefits for Supplementation from NYCERS payable on and after December 1, 1996 for certain retirees of the Fund, effective as enacted by The City Council on October 25, 1995.

Chapter 390 of the Laws of 1998 (Chapter 390/98) provided additional benefits for Supplementation payable from NYCERS on and after September 1, 1998 (with a second benefit increase commencing September 1, 1999).

Chapter 125 of the Laws of 2000 (Chapter 125/00) provided Supplementation benefits from NYCERS for certain retirees who retired before calendar year 1997 effective September 2000. In addition, Chapter 125/00 provided future COLA increases from NYCERS beginning September 2001 and on each subsequent September to eligible retirees.

TPOVSF

For those Transit Police Officers who became members of NYCERS prior to July 1, 1988 and who retired between July 1, 1987 and December 31, 1991, the annual supplemental benefit was $4,500 in Calendar Year 1992. For those who retired during 1992, the benefit was a proportion of $4,500. The benefit increases $500 each year thereafter to a maximum of $12,000 in Calendar Year 2007 and thereafter.

For those who were members of NYCERS prior to July 1, 1988, and who retired after Calendar Year 1992, the benefit for the first year of retirement is a proportion of the annual scheduled amount as described above for the calendar year of retirement and the full amount thereafter.

For those Transit Police Officers who became members of NYCERS on or after July 1, 1988, the annual supplemental benefit is $2,500 for the first 12 months of retirement, increasing by $500 each year until a maximum of $12,000 is payable in the twentieth and later years of retirement.

Chapter 577 of the Laws of 1992 (Chapter 577/92) also provided that prior to Calendar Year 2007, the defined schedules of benefits are payable only if there are sufficient assets available in the Fund, or if The City guarantee comes into effect. The City guarantee of benefits comes into effect prior to Calendar Year 2007 if the market value of assets of the Fund exceeds the actuarial present value of the defined schedules of benefits payable through Calendar Year 2006 plus 15% of the assets of the Fund at that time.

Chapter 577/92 also provided that, whenever the guarantee of the defined schedules of benefits comes into effect, the Fund will then transfer 15% of the market value of its assets to The City's General Fund.

As a result of calculations performed by the Funds' Chief Actuary of the Office of the Actuary (the Actuary) during November 1993, The City guarantee became effective.

Chapter 255 of the Laws of 2000 (Chapter 255/00) provided that in the event that, for any calendar year covered by a payment guarantee, the assets of the Fund are not sufficient to pay benefits, an amount sufficient to pay such benefits shall be appropriated from the Contingent Reserve Fund of NYCERS and transferred to the Fund. The law also provides that transfers to the Fund for supplemental benefits can begin as early as Calendar Year 2001, if needed.

In the past, the New York State Legislature, in recognition of inflation, has increased retirement benefits to retirees of its public pension systems. Any increase in the amount of ad-hoc cost-of-living increases (Supplementation) or automatic COLAs payable from NYCERS to a retiree of the Fund under legislation enacted on or after January 1, 1992 will reduce benefits payable from the Fund to such retiree by an amount equal to such increase until the following date:

- For a retiree with a date of membership before July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) January 1, 2007.

- For a retiree with a date of membership on or after July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) the first day of the month following the 19th anniversary of such retiree's date of retirement.

Chapter 119 of the Laws of 1995 (Chapter 119/95) provided additional benefits for Supplementation payable from NYCERS on and after December 1, 1996, for certain retirees of the Fund effective as enacted by the City Council on October 25, 1995.

Chapter 390 of the Laws of 1998 (Chapter 390/98) provided additional benefits for Supplementation payable from NYCERS on and after September 1, 1998 (with a second benefit increase commencing September 1, 1999).

Chapter 125 of the Laws of 2000 (Chapter 125/00) provided Supplementation benefits from NYCERS for certain retirees who retired before Calendar Year 1997 effective September 2000. In addition, Chapter 125/00 provided future COLA increases from NYCERS beginning September 2001 and on each subsequent September to eligible retirees.

TPSOVSF

For those Transit Police Superior Officers who became members of NYCERS prior to July 1, 1988, and who retired between July 1, 1987 and December 31, 1992, the annual supplemental benefit was $5,000 in calendar year 1993. For those who retired during 1993, the benefit was a proportion of $5,000. The benefit increases $500 each year thereafter to a maximum of $12,000 in calendar year 2007 and thereafter.

For those who were members of NYCERS prior to July 1, 1988, and who retired after calendar year 1993, the benefit for the first year of retirement is a proportion of the annual scheduled amount as described above for the calendar year of retirement and the full amount thereafter.

For those Transit Police Superior Officers who became members of NYCERS on or after July 1, 1988, the annual supplemental benefit is $2,500 for the first 12 months of retirement, increasing by $500 each year until a maximum of $12,000 is payable in the twentieth and later years of retirement.

Chapter 720 of the Laws of 1994 (Chapter 720/94) also provided that after Calendar Year 2006 payments are guaranteed, while prior to calendar year 2007, the defined schedules of benefits are payable only if there are sufficient assets available in the Fund, or if The City guarantee comes into effect. The City guarantee of benefits comes into effect prior to calendar year 2007 if the market value of assets of the Fund exceeds the actuarial present value of the defined schedules of benefits payable through calendar year 2006 plus 15% of the assets of the Fund at that time.

Chapter 720/94 also provided that whenever the guarantee of the defined schedules of benefits comes into effect, the Fund will then transfer 15% of the market value of its assets to The City's General Fund.

Based on the calculations of the Funds' Chief Actuary of the Office of the Actuary (the Actuary), the City guarantee of the defined schedules of benefits prior to calendar year 2007 had not yet come into effect as discussed more fully below.

Also, in conjunction with the April 2, 1995 merger of the Transit Police force into the New York City Police Department (the Merger), The City signed a letter of agreement with the affected unions to ensure that the payment of benefits provided under the defined schedules prior to calendar year 2007 will be made. Thus, there will be no suspension of benefits prior to calendar year 2007, even if assets of the Fund become insufficient to pay these benefits.

Chapter 255 of the Laws of 2000 (Chapter 255/00) provided that in the event that, for any calendar year covered by a payment guarantee, the assets of the Fund are not sufficient to pay benefits, an amount sufficient to pay such benefits shall be appropriated from the Contingent Reserve Fund of NYCERS and transferred to the Fund. The law also provided that supplemental benefits become guaranteed commencing with calendar year 2001.

In the past, the New York State Legislature, in recognition of inflation, has increased retirement benefits to retirees of its public pension systems. Any increase in the amount of ad-hoc cost-of-living increases (Supplementation) or automatic COLAs payable from NYCERS to a retiree of the Fund under legislation enacted on or after January 1, 1994 will reduce benefits payable from the Fund to such retiree by an amount equal to such increase until the following date:

- For a retiree with a date of membership before July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) January 1, 2007.

- For a retiree with a date of membership on or after July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) the first day of the month following the 19^{th} anniversary of such retiree's date of retirement.

Chapter 119 of the Laws of 1995 (Chapter 119/95) provided additional benefits for Supplementation from NYCERS payable on and after December 1, 1996, for certain retirees of the Fund effective as enacted by the City Council on October 25, 1995.

Chapter 390 of the Laws of 1998 (Chapter 390/98) provided additional benefits for Supplementation payable from NYCERS on and after September 1, 1998 (with a second benefit increase commencing September 1, 1999).

Chapter 125 of the Laws of 2000 (Chapter 125/00) provided Supplementation benefits from NYCERS for certain retirees who retired before Calendar Year 1997 effective September 2000. In addition, Chapter 125/00 provided future COLA increases from NYCERS beginning September 2001 and on each subsequent September to eligible retirees.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND PLAN ASSET MATTERS

Basis of Accounting — The Funds uses the accrual basis of accounting where the measurement focus is on the flow of economic resources. Revenues are recognized in the accounting period in which they are earned and expenses are recognized in the period incurred. Contributions from members are recognized when the employers makes payroll deductions from Plan members. Employer contributions are recognized when due and the employer has a legal obligation to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the Funds.

Use of Estimates — The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Equivalents — Cash Equivalents consist of financial instruments with original maturity dates of three months or less.

Investment Valuation — Investments are reported at fair value. Securities purchased pursuant to agreements to resell are carried at the contract price, exclusive of interest, at which the securities will be resold. Fair value is defined as the closing market value on the last trading day of the period, except for the Short-Term Investment Fund (STIF, a money market fund), International Investment Fund (IIF) and Alternative Investment Funds (ALTINVF). The IIF are private funds of publicly traded securities that are managed by various investment managers on behalf of the QPP. Fair value is determined by NYCERS management based on information provided by the various investment managers. The investment managers determine fair value using the last available quoted price for each security owned, adjusted by any contributions to or withdrawals from the fund during the period. The ALTINVF are investments for which exchange quotations are not readily available and are valued at estimated fair value, as determined in good faith by the General Partner (GP). These investments are initially valued at cost with subsequent adjustments that reflect third party transactions, financial operating results, and other factors deemed relevant by the GP. Fair value is determined by plan management based on information provided by the various GPs after review by an independent consultant and the custodian bank for NYCERS.

Purchases and sales of securities are reflected on the trade date. Dividend income is recorded on the ex-dividend date. Interest income is recorded as earned on an accrual basis.

Income Taxes — Income earned by the QPP and VSFs are not subject to Federal Income Tax.

Accounts Payable — Accounts payable is principally comprised of amounts owed to the QPP's banks for overdrawn bank balances. The QPP's practice is to fully invest the cash balances of most bank accounts on a daily basis. Overdrawn balances result primarily from outstanding benefit checks that are presented to the banks for payment on a daily basis. These balances are routinely settled each day.

Accrued Benefits Payable — Accrued benefits payable represent either: (1) benefits due and unpaid by the Funds as of year-end or (2) related to the VSFs, benefits deemed incurred and unpaid (an accrual for a portion of the current calendar year benefit) for the Fiscal Year ended on June 30.

Securities Lending Transactions — State statutes and Board policies permit the QPP to lend its investments to broker-dealers and other entities for collateral, with a simultaneous agreement to return the collateral for the same securities in the future. The QPP's custodian lends the following types of securities: Short-term securities, common stock, long-term corporate bonds, U.S. Government and U.S. Government agencies' bonds, asset-backed securities, and International Equities and bonds held in collective investment funds.

In return, it receives collateral in the form of cash and U.S. Treasury and U.S. Government agency securities at 102 percent to 105 percent of the principal plus accrued interest for reinvestment. At June 30, 2018, management believes the Plan had no credit risk exposure to borrowers because the amounts the Plan owed the borrowers equaled or exceeded the amounts the borrowers owed the Plan. The contracts with the Plan custodian require borrowers to indemnify the Plan if the borrowers fail to return the securities and if the collateral is inadequate to replace the securities loaned or fail to pay the QPP for income distributions by the securities' issuers while the securities are on loan. All securities loans can be terminated on demand within a period specified in each agreement by either the QPP or the borrowers. Cash collateral is invested in the lending agents' short-term investment pools, which have a weighted average maturity of 47 days. The securities lending program in which QPP participates only allows pledging or selling securities in the case of borrower default. The underlying fixed income securities have an average maturityof 5 years.

During Fiscal Year 2003, the value of certain securities, which had been purchased with cash collateral, became impaired because of the credit failure of the issuer. Accordingly, the carrying amount of the collateral reported in the QPP's statement of plan net position for Fiscal Year 2003 was reduced by $30 million to reflect this impairment and reflect the net realizable value of the securities purchased with collateral from securities lending transactions. In the Fiscal Years 2004 to 2009, the QPP received $20 million from distributions in bankruptcy proceedings from the defaulted issuer, as well as litigation settlements. The Plan has received an additional recoupment of $5,000 during Fiscal Year 2015. The remaining amount due of $1.7 million was written off as a loss.

GASB Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions*, requires that securities loaned as assets and related liabilities be reported in the statements of fiduciary net position. Cash received as collateral on securities lending transactions and investments made with that cash are reported as assets. Securities received as collateral are also reported as assets if the government entity has the ability to pledge or sell them without a borrower default. Accordingly, NYCERS recorded the investments purchased with the cash collateral as collateral from securities lending with a corresponding liability for securities lending.

Securities on loan are carried at fair value and the value as of June 30, 2018 and 2017 was $9.8 billion and $6.9 billion, respectively. Cash collateral received related to securities lending as of June 30, 2018 and 2017 was $9.9 billion and $7 billion, respectively. As of the date of the combining statements of fiduciary net position, the maturities of the investments made by the Plan with cash collateral, on average, exceed the maturities of the securities loans by approximately 30 days.

GASB Statement No. 72, *Fair Value Measurement and Application* requires the Funds to use valuation techniques which are appropriate under the circumstances and are either a market approach, a cost approach or income approach. GASB 72 establishes a hierarchy of inputs used to measure fair value consisting of three levels. Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs, and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability. GASB 72 also contains note disclosure requirements regarding the hierarchy of valuation inputs and valuation techniques that was used for the fair value measurements. There was no material impact on the Funds' financial statements as a result of the implementation of GASB 72.

3. INVESTMENTS AND DEPOSITS

The City Comptroller (the Comptroller) acts as an investment advisor to the Funds administered by NYCERS that have investments (the QPP and COVSF). In addition, the QPP employs an independent investment consultant as an investment advisor. The QPP utilizes several investment managers to manage the long-term debt and equity portfolios. The managers are regularly reviewed, with regard to both their investment performance and their adherence to investment guidelines. The COVSF investments are held in a short-term investment fund. The other VSFs do not hold investments. The investment policy is approved by the Board of Trustees of the funds within NYCERS. The Boards create the overall investment policy under which the system's funds are invested and, in defining the investment objectives, develops a framework under which specific objectives are established with regard to allocating the assets of the funds among various investment types.

The Funds do not possess an investment risk policy statement. Nor do they actively manage QPP assets to specified risk targets. Rather, investment risk management is an inherent function of our asset allocation process. Assets are diversified over a broad range of asset classes and encompass multiple investment strategies aimed at limiting concentration risk.

The asset allocation targeted for the funds in Fiscal Year 2018 and 2017 included the securities in the following categories:

	2018	2017
Domestic Equities	29.0%	29.0%
International Equity Fund	20.0%	20.0%
Domestic Fixed Income	33.0%	33.0%
Alternative Investments	18.0%	18.0%
Total	100.0%	100.0%

Concentrations – The QPP does not have any investments in any one entity that represents 5% or more of fiduciary net position. The COVSF only holds one investment in a short-term investment fund.

Credit Risk — Portfolios other than U.S. Government and related portfolios have credit rating limitations. Investment Grade portfolios are limited to mostly ratings of BBB and above except that they are also permitted a 10% maximum exposure to BB & B rated securities. While non-investment grade managers are primarily invested in BB & B rated securities, they can also invest up to 7% of their portfolio in securities rated CCC. Non-rated securities are considered to be non-investment grade. The quality ratings of QPP investments, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, are as follows:

June 30, 2018 — Moody's Quality Ratings

Investment Type (in percent)	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa & Below Caa1	Not Rated	Total
U.S. Government	61.01%	0.02%	0.04%	0.01%	0.02%	0.02%	0.09%	0.00%	0.11%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.58%	61.91%
Corporate bonds	0.77%	0.15%	0.12%	0.23%	0.54%	0.88%	1.78%	2.13%	2.26%	2.34%	1.53%	1.65%	2.86%	2.74%	2.18%	2.30%	1.52%	6.06%	32.04%
Commercial Paper	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.73%	2.73%
Pooled Fund	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.67%	2.67%
Discount Notes & T-Bills	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.48%	0.65%
Percent of Rated Portfolio	61.95%	0.17%	0.16%	0.24%	0.56%	0.90%	1.87%	2.13%	2.37%	2.34%	1.53%	1.66%	2.86%	2.74%	2.18%	2.30%	1.52%	12.52%	100.00%

June 30, 2017 — Moody's Quality Ratings

Investment Type (in percent)	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa & Below Caa1	Not Rated	Total
U.S. Government	36.64%	0.07%	0.07%	0.02%	0.01%	0.03%	0.12%	0.01%	0.08%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.90%	50.99%
Corporate bonds	0.84%	0.29%	0.28%	0.46%	1.43%	1.40%	2.65%	4.37%	4.08%	4.36%	2.44%	1.74%	3.55%	2.77%	2.14%	3.00%	1.95%	5.12%	42.87%
Commercial Paper	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.91%	2.91%
Pooled Fund	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.88%	2.88%
Discount Notes & T-Bills	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.35%	0.35%
Percent of Rated Portfolio	37.48%	0.36%	0.35%	0.48%	1.44%	1.43%	2.77%	4.38%	4.16%	4.40%	2.44%	1.74%	3.55%	2.77%	2.14%	3.00%	1.95%	25.16%	100.00%

*U.S.Treasury Bonds, Notes and Treasury-inflation protected securities are obligations of the U.S. government or explicitly guaranteed by the U.S. government and therefore not considered to have credit risk and are not included above.

The quality ratings of the COVSF investments, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2018 and 2017 are as follows:

COVSF-2018			Moody's Quality Ratings						
Investment Type	Aaa	Aa1	Ba3	B1	B2	B3	Caa & Below Caa1	Not Rated	Total
(in percent)									
U.S. Government	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Corporate bonds	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial Paper	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Pooled Fund	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%
Discount Notes & T-Bills	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent of Rated Portfolio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%

COVSF-2017			Moody's Quality Ratings						
Investment Type	Aaa	Aa1	Ba3	B1	B2	B3	Caa & Below Caa1	Not Rated	Total
(in percent)									
U.S. Government	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Corporate bonds	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial Paper	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Pooled Fund	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%
Discount Notes & T-Bills	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent of Rated Portfolio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%

* U.S. Treasury Bonds, Notes and Treasury-Inflation Protected Securities are obligations of the U.S. government explicitly guaranteed by the U.S. government and therefore not considered to have credit risk and are not included above.

Custodial Credit Risk — Deposits are exposed to custodial credit risk if they are uninsured and uncollateralized. Custodial credit risk is the risk that, in the event of a failure of the counterparty, NYCERS will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the QPP or respective VSF and are held by either the counterparty or the counterparty's trust department or agent but not in the QPP or respective VSF's name.

Consistent with NYCERS' investment policy, the investments are held by the NYCERS' custodian and registered in the name of NYCERS or its Funds.

Cash deposits are insured by the Federal Deposit Insurance Corporation for up to $250,000 per Plan member and are, therefore, insured up to such limit.

All of the NYCERS deposits are insured and or collateralized by securities held by a financial institution separate from NYCERS depository financial institution.

All of NYCERS' securities are held by NYCERS' custodial bank in NYCERS' name.

Interest Rate Risk — Interest rate risk is the risk that the fair value of investments could be adversely affected by the change in interest rates. Duration limits are used to control the portfolios exposure to interest rate changes. In the investment grade core fixed income portfolios duration is limited to a range of 0 to.75 years versus the duration of the benchmark indices. Duration range is a measure of the overall portfolio, while statements of the stated maturity reflect the specific maturities of the individual securities held. NYCERS has no formal risk policy. The lengths of investment maturities (in years) for QPP, as shown by the percent of the rated portfolio, are as follows:

Years to Maturity
Investment Type
(In Thousands)

		Investment Maturities (In Years)			
June 30, 2018	Fair Value	Less Than One Year	One to Five Years	Six to Ten Rated	More Than Ten Years
U.S. Government	61.91%	0.55%	27.02%	15.96%	18.38%
Corporate bonds	32.04%	0.89%	10.61%	13.78%	6.76%
Commerical paper	2.73%	2.73%	0.00%	0.00%	0.00%
Pooled funds	2.67%	2.67%	0.00%	0.00%	0.00%
Discount Notes & T-Bills	0.65%	0.65%	0.00%	0.00%	0.00%
Percent of rated portfolio	100.00%	7.49%	37.63%	29.74%	25.14%

Years to Maturity
Investment Type
(In Thousands)

		Investment Maturities (In Years)			
June 30, 2017	Fair Value	Less Than One Year	One to Five Years	Six to Ten Rated	More Than Ten Years
U.S. Government	50.99%	0.77%	11.87%	16.35%	22.00%
Corporate bonds	42.87%	1.36%	13.25%	18.03%	10.23%
Commerical paper	2.91%	2.91%	0.00%	0.00%	0.00%
Pooled funds	2.89%	2.89%	0.00%	0.00%	0.00%
Discount Notes & T-Bills	0.34%	0.34%	0.00%	0.00%	0.00%
Percent of rated portfolio	100.00%	8.27%	25.12%	34.38%	32.23%

The length of investment maturities (in years) of the COVSF investments, as shown, by the percent of the rated portfolio, at June 30, 2018 and 2017 are as follows:

Years to Maturity Investment Type June 30, 2018	Fair Value	Investment Maturities (In Years) Less Than One Year	One to Five Years	Six to Ten Rated	More Than Ten Years
U.S. Government	0.00%	0.00%	0.00%	0.00%	0.00%
Corporate bonds	0.00%	0.00%	0.00%	0.00%	0.00%
Short-term - Pooled Funds:	100.00%	100.00%	0.00%	0.00%	0.00%
Percent of rated portfolio	100.00%	100.00%	0.00%	0.00%	0.00%

Years to Maturity Investment Type June 30, 2017	Fair Value	Investment Maturities (In Years) Less Than One Year	One to Five Years	Six to Ten Rated	More Than Ten Years
U.S. Government	0.00%	0.00%	0.00%	0.00%	0.00%
Corporate bonds	0.00%	0.00%	0.00%	0.00%	0.00%
Short-term - Pooled Funds:	100.00%	100.00%	0.00%	0.00%	0.00%
Percent of rated portfolio	100.00%	100.00%	0.00%	0.00%	0.00%

Foreign Currency Risk — Foreign currency risk is the risk that changes in the exchange rates will adversely impact the fair value of an investment. Currency risk is present in underlying portfolios that invest in foreign stocks and/or bonds. The currency markets have proven to be good diversifiers in a total portfolio context; therefore, NYCERS has numerous managers that invest globally. In general, currency exposure is viewed as a benefit for its diversification reasons and not as an inherent risk within the portfolio. NYCERS has no formal risk policy.

In addition, the QPP has investments in foreign stocks and/or bonds denominated in foreign currencies. QPP's foreign currency exposures as of June 30, 2018 and 2017 are as follows (amounts in thousands of U.S. dollars):

Trade Currency	2018	2017
Euro Currency	$ 2,914,358	$ 2,717,126
Japanese Yen	1,729,233	1,674,327
Pound Sterling	1,478,130	1,381,640
South Korean Won	1,073,952	1,115,952
New Taiwan Dollar	758,874	817,601
Indian Rupee	702,405	692,019
Swiss Franc	666,898	716,251
South African Rand	496,456	459,367
Canadian Dollar	414,281	310,303
Hong Kong Dollar	359,346	418,353
Brazilian Real	357,039	358,508
Australian Dollar	272,974	293,234
Danish Krone	219,874	207,664
Thailand Baht	212,182	172,950
Swedish Krona	205,135	261,745
Malaysian Ringgit	192,798	197,197
Mexican Peso (New)	183,802	219,483
Indonesian Rupiah	141,677	148,173
Singapore Dollar	113,758	101,127
Turkish Lira	101,925	142,901
Polish Zloty	96,969	103,152
Norwegian Krone	94,687	70,838
Philippine Peso	73,780	85,489
Chilean Peso	69,165	67,333
Qatari Rial	50,418	40,140
Uae Dirham	35,351	35,817
Colombian Peso	31,677	30,195
Hungarian Forint	23,087	22,918
New Israeli Sheqel	20,823	25,389
Czech Koruna	15,776	16,192
Moroccan Dirham	12,281	12,626
New Zealand Dollar	8,099	16,311
Peruvian Nouveau Sol	4,703	4,000
Yuan Renminbi	3	3
Total	$ 13,131,916	$ 12,936,324

Securities Lending Transactions

Credit Risk — The quality ratings of investments held as collateral for Securities Lending of the QPP at June 30, 2018 and 2017 are as follows:

Investment Type and Fair Value of Securities Lending Transactions (In Thousands)

June 30, 2018	S&P Quality Ratings									
	AAA	AA	AA-	A+	A	A-	BBB+ & Below	CCC & Below	Not Rated	Total
Corporate bonds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Short-term:										
Reverse repurchase agreement	-	-	390,000	3,072,998	1,429,203	349,146	341,306	-	3,217,752	8,800,405
Money market	9,142	-	-	1,451	-	-	25,640	-	100,238	136,471
Bank notes	-	-	-	-	-	-	-	-	7,255	7,255
Cash or cash equivalents	-	-	-	972,818	-	-	-	-	-	972,818
Uninvested	-	-	-	-	-	-	-	-	1,751	1,751
Total	$ 9,142	$ -	$ 390,000	$ 4,047,267	$ 1,429,203	$ 349,146	$ 366,946	$ -	$ 3,326,996	$ 9,918,700
Percent of securities lending portfolio	0.09%	0.00%	3.93%	40.80%	14.41%	3.52%	3.70%	0.00%	33.54%	100.00%

Investment Type and Fair Value of Securities Lending Transactions (In Thousands)

June 30, 2017	S&P Quality Ratings									
	AAA	AA	AA-	A+	A	A-	BBB+ & Below	CCC & Below	Not Rated	Total
Corporate bonds	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Short-term:										
Reverse repurchase agreement	-	-	520,759	1,526,171	1,360,577	890,000	55,000	-	1,979,772	6,332,279
Money market	-	-	-	-	-	-	-	-	-	-
Bank notes	-	-	-	-	-	-	-	-	-	-
Cash or Cash equivalents	-	-	-	698,809	-	-	-	-	-	698,809
Uninvested	-	-	-	-	-	-	-	-	1,751	1,751
Payable/Receivable	-	-	-	-	-	-	-	-	1,254	1,254
Total	$ -	$ -	$ 520,759	$ 2,224,980	$ 1,360,577	$ 890,000	$ 55,000	$ -	$ 1,982,777	$ 7,034,093
Percent of securities lending portfolio	0.00%	0.00%	7.40%	31.63%	19.34%	12.65%	0.78%	0.00%	28.20%	100.00%

Interest Rate Risk — The lengths of investment maturities (in years) of the collateral for Securities Lending of the QPP are as follows:

Years to Maturity
Investment Type
(In thousands)

		Investment Maturities (In Years)			
Junes 30, 2018	**Fair Value**	**Less Than One Year**	**One to Five Years**	**Six to Ten Rated**	**More Than Ten Years**
Short-term:					
Reverse repurchase agreement	$ 8,800,405	$ 8,800,405	$ -	$ -	$ -
Money market	136,471	136,471	-	-	-
Bank notes	7,255	7,255	-	-	-
Cash	972,818	972,818	-	-	-
Uninvested	1,751	1,751	-	-	-
Total	$ 9,918,700	$ 9,918,700	$ -	$ -	$ -
Percent of securities lending portfolio	100.00 %	100.00 %	- %	- %	- %

Years to Maturity
Investment Type
(In thousands)

		Investment Maturities (In Years)			
Junes 30, 2017	**Fair Value**	**Less Than One Year**	**One to Five Years**	**Six to Ten Rated**	**More Than Ten Years**
Short-term:					
Reverse repurchase agreement	$ 6,332,279	$ 6,332,279	$ -	$ -	$ -
Money market	-	-	-	-	-
Bank notes	-	-	-	-	-
Cash	698,809	698,809	-	-	-
Uninvested	3,005	3,005	-	-	-
Total	$ 7,034,093	$ 7,034,093	$ -	$ -	$ -
Percent of securities lending portfolio	100.00 %	100.00 %	- %	- %	- %

Rate of Return – For the years ended June 30, 2018 and 2017, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, for the Funds were as follows:

	2018	**2017**
QPP	8.61%	12.99%
COVSF	1.63%	0.64%

The money-weighted rate of return expresses investment performance, net of investment expense adjusted for the changing amounts actually invested.

In Fiscal Year 2015, the Fund adopted GASB Statement No. 72 (GASB 72), *Fair Value Measurement and Application*. GASB 72 was issued to address accounting and financial reporting issues related to fair value measurements.

The Fund categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. The Fund has the following recurring fair value measurements as of June 30, 2018 and June 30, 2017:

	2018			
	Level One	Level Two	Level Three	Total
GASB 72 Disclosure				
(in thousands)				
INVESTMENTS – At fair value				
Short-term investments:				
Commercial paper	$ -	$ 644,809	$ -	$ 644,809
Discount notes	-	71,958	-	71,958
Short term investment fund	-	825,697	-	825,697
U.S. Treasury bills and agencies	39,936	280	-	40,216
Debt securities:				
Bank loans	-	55,456	-	55,456
Corporate and other	-	5,736,321	112,523	5,848,844
Mortgage debt securities	-	1,856,281	-	1,856,281
U.S. Government and agency	-	9,933,718	-	9,933,718
Equity securities:				
Domestic equity	17,979,085	-	-	17,979,085
International equity	-	-	-	-
Collective trusts funds:				
Bank loans	-	1,107,139	-	1,107,139
Corporate and other	-	32,046	-	32,046
Domestic equity		-	-	-
International equity	13,186,622		129,102	13,315,724
Mortgage debt securities	-	160,825	543,323	704,148
Opportunistic fixed income	-	-	-	-
Treasury inflation protected securities	-	2,858,313	-	2,858,313
Alternative investments:				
Infrastructure	-	-	396,468	396,468
Opportunistic fixed income	-	-	1,850,722	1,850,722
Private equity	14,242	-	4,452,919	4,467,161
Private real estate	-	-	3,395,746	3,395,746
Total investments	$ 31,219,885	$ 23,282,843	$ 10,880,803	65,383,531
Hedge fund investment measured at net asset value				66,675
Total				$ 65,450,206

	2017			
	Level One	Level Two	Level Three	Total
GASB 72 Disclosure				
(in thousands)				
INVESTMENTS – At fair value				
Short-term investments:				
Commercial Paper	$ -	$ 422,635	$ -	$ 422,635
Short-term investment fund	-	498,958	-	498,958
U.S. treasury bills and agencies	-	49,816	-	49,816
Discount notes	-	158,568	-	158,568
Short term hedge fund	-	-	-	-
Debt securities:				
U.S. government and agency	-	7,299,927		7,299,927
Corporate and other	-	6,040,386	180,673	6,221,059
Equity securities	18,954,811	85	1,406	18,956,302
Alternative investments	-	-	9,162,968	9,162,968
Collective trusts funds:				
International equity	13,357,564	1	2,639	13,360,204
Mortgage debt security	-	106,404	534,546	640,950
Domestic equity	-	-	-	-
Treasury inflation protected securities	-	2,531,110	-	2,531,110
Fixed income	-	353,538	1,032,569	1,386,107
Total investments	$ 32,312,375	$ 17,461,428	$ 10,914,801	60,688,604
Alternative investments valued at net asset value				95,987
Total				$ 60,784,591

Equity and Fixed Income Securities

Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets issued by pricing vendors for these securities. Debt and equity securities classified in Level 2 of the fair value hierarchy are valued using prices determined by the use of matrix pricing techniques maintained by the various pricing vendors for these securities. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Debt and equity securities classified in Level 3 are securities whose stated market price is unobservable by the market place, many of these securities are priced by the issuers or industry groups for these securities. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from various pricing sources by our custodian bank. Debt and equity securities held in Collective Trust Funds are held in those funds on behalf of the pension system and there is no restriction on the use and or liquidation of those assets for the exclusive benefit of the funds participants.

Alternative Investments

Alternative investments include private equity, real estate, opportunistic fixed Income, and infrastructure investments. These are investments for which exchange quotations are not readily available and are valued at estimated fair value, as determined in good faith by the General Partner (GP). These investments are initially valued at cost with subsequent adjustments that reflect third party transactions, financial operating results and other factors deemed relevant by the GP. The assets in our alternative investment program are classified as Level 3 assets. A more detailed explanation of the Level 3 valuation methodologies follows:

Investments in non-public equity securities are valued by the GP using one or more valuation methodologies outlined in ASC 820, depending upon the availability of data required by each methodology. In some cases, the GP may use multiple approaches to estimate a valuation range. For the immediate time period following a transaction, the determination of fair value for equity securities, in which no liquid trading market exists, can generally be approximated based on the transaction price (absent any significant developments)

Thereafter, or in the interim, if significant developments relating to such portfolio company or industry occur which may suggest a material change in value, the GP should value each investment by applying generally accepted valuation methods including: (1) the market approach (such as market transaction and comparable public company multiples, which are based on a measurement of the company's historical and projected financial performance with typical metrics including enterprise value/latest 12 months EBITDA or projected fiscal year EBITDA) or (2) the income or discounted cash flow approach.

In the market approach, valuation multiples that are relevant to the industry and company in the investments held should be considered and relied upon. Valuation multiples should be assessed and may be adjusted on a go-forward basis based on the business risk associated with the subject company in which the investment is held. In addition, the implied entry multiples should be considered as benchmarks in valuing unlisted equity. In circumstances where no financial performance metrics are available, the GP should rely on other non-financial related metrics applicable to relevant progress from the original investment date to the valuation date. In the income or discounted cash flow approach, forecasted cash flows that may be generated by the subject company are discounted to present value at an appropriate discount rate. These methodologies can be utilized to determine an enterprise value (Enterprise Valuation Methodologies) from which net debt is subtracted to estimate equity value.

The determination of fair value using these methodologies should take into consideration a range of factors, including but not limited to, the price at which the investment was acquired, the nature of the investment, local market conditions, trading values on public exchanges for comparable securities, current and projected operating performance and financing transactions subsequent to the acquisition of the investment. Because of the subjective nature of estimated fair value of the private investments, such value may differ significantly from the values that would have been used had a ready market existed for these investments. These financial instruments have been classified as Level 3 in the fair value hierarchy.

In accordance within the scope of paragraphs 820-10-15-4, alternative investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient in paragraph 820-10-35-59 have not been classified in the fair value hierarchy. The fair value quantities presented in the table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the entity's financial statements.

Certain alternative investments have additional future commitments. Others have redemption notice requirements and redemption restrictions. Management does not believe these commitments, notice requirements, and redemption restrictions have a material effect on the fair value of the portfolio of investments.

4. TRANSFER TO VARIABLE SUPPLEMENTS FUNDS

The Administrative Code of the City of New York (ACNY) provides that the QPP transfer to the VSFs an amount equal to certain excess earnings in equity investments, limited to the unfunded Accumulated Benefit Obligation (ABO) for each VSF. Excess earnings are defined as the amount by which earnings on equity investments of the QPP exceed what the earnings would have been had such funds been invested at a yield comparable to that available from fixed income securities (Hypothetical Fixed Income Security Earnings or HFISE), less any cumulative deficiencies of prior years' excess earnings that fell below the yield of fixed income investments.

The calculation of the Hypothetical Fixed Income Security Earnings requires the determination of the Hypothetical

Interest Rate (HIR), which is computed by the Comptroller.

Due to the merging of Housing Police and Transit Police into The City's Police Department, there are no active members of the Housing Police and Transit Police; therefore, excess earnings on equity investments from the QPP, if any, do not produce any transfers to the HPOVSF, HPSOVSF, TPOVSF and TPSOVSF (collectively, the Housing and Transit Police VSFs).

However, with the passage of Chapter 255/00, the QPP is required to transfer assets to the Housing and Transit Police VSFs whenever the assets of these VSFs are not sufficient to pay benefits. Such funding is provided through The City's annual required contributions to the QPP, which serves as the initial source of funding of VSF benefits. With respect to the benefits payable from HPSOVSF for Fiscal Years 2018 and 2017, the QPP was required to transfer approximately $2.6 million for each year. With respect to the benefits payable from TPSOVSF, for Fiscal Years 2018 and 2017, the QPP was required to transfer approximately $3.0 million for each year. With respect to the benefits payable from HPOVSF for Fiscal Years 2018 and 2017, the QPP was required to transfer approximately $1.9 million each year. With respect to the benefits payable from TPOVSF for Fiscal Years 2018 and 2017, the QPP was required to transfer approximately $3.8 million and $3.9 million, respectively.

With respect to the COVSF, for Fiscal Year 2018, the excess earnings of the QPP, inclusive of prior years' cumulative deficiencies exceeded zero and a liability and transfer of $205 million, is due from the QPP to COVSF as of and for the year end June 30, 2018. For Fiscal Year 2017, the excess earnings of the QPP, inclusive of prior years' cumulative deficiencies exceeded zero and a liability and transfer of $281 million was due from QPP to COVSF as of June 30, 2017.

The amount shown below as the ABO is a measure of the present value of scheduled supplemental benefits estimated to be payable in the future as a result of employee service-to-date. The ABO is calculated as the actuarial present value of credited projected benefits, prorated on service and is intended to help users assess the funded status of the Fund on an ongoing-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due and make a comparison among VSFs.

Actuarial valuations of the VSFs are performed annually as of June 30.

A comparison of the ABO as calculated by the Actuary, with the net position restricted for pensions for the COVSF, HPOVSF, HPSOVSF, TPOVSF and TPSOVSF as of June 30, 2017 and June 30, 2016 follows (in millions):

	COVSF		HPOVSF		HPSOVSF		TPOVSF		TPSOVSF		Total	
	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016
Accumulated benefit obligation												
Retirees currently receiving benefits	$1,027.4	$1,019.1	$13.9	$15.0	$19.9	$20.9	$29.1	$30.7	$22.3	$23.4	$1,112.7	$1,109.1
Active Members	315.0	338.2									315.0	338.2
Total accumulated benefit obligation	$1,342.4	$1,357.3	$13.9	$15.0	$19.9	$20.9	$29.1	$30.7	$22.3	$23.4	$1,427.7	$1,447.3
Net position held in trust for benefits	288.2	46.9									288.2	46.9
Unfunded accumulated benefit obligation	$1,054.2	$1,310.4	$13.9	$15.0	$19.9	$20.9	$29.1	$30.7	$22.3	$23.4	$1,139.5	$1,400.4

For purposes of the June 30, 2017 and June 30, 2016 actuarial valuations of the Fund, Chapter 125/00 has been taken into account in the determination of the unfunded ABO related to the Supplementation benefit increases that began Fiscal Year 2001 and the automatic COLA that began Fiscal Year 2002 (see Note 1).

The June 30, 2017 and June 30, 2016 ABOs decreased by approximately $12.9 million and $13.1 million respectively, in actuarial liabilities attributable to Chapter 125/00.

Section 13-194 of the ACNY provides that the Board of Trustees of NYCERS shall adopt, upon the recommendation of the Actuary, actuarial assumptions as to interest rate, mortality of retirees and estimated number of active UCF members of NYCERS as of each June 30 who are expected to retire from service with at least 20 or 25 years of service as UCF members, depending on the Plan for use in making annual valuations of liabilities.

The following actuarial assumptions represent the recommendations of the Actuary and were used in the actuarial calculations to determine the preceding ABOs as of June 30, 2017 and June 30, 2016:

	June 30, 2017	**June 30, 2016**
Investment rate of return	7.0% per annum.[1]	7.0% per annum.[1]
Post-retirement mortality	Tables adopted by NYCERS during Fiscal Year 2016 based on recent experience of UCF members of NYCERS for COVSF and on recent experience of POLICE for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.	Tables adopted by NYCERS during Fiscal Year 2016 based on recent experience of UCF members of NYCERS for COVSF and on recent experience of POLICE for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.
Active service: withdrawal death, and disability	Tables adopted by NYCERS during Fiscal Year 2012 based on recent experience of UCF members of NYCERS for COVSF. NA for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.	Tables adopted by NYCERS during Fiscal Year 2012 based on recent experience of UCF members of NYCERS for COVSF. NA for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.
Service retirement	Tables adopted by NYCERS during Fiscal Year 2012 based on recent experience of UCF members of NYCERS for COVSF. Varies from earliest age member is eligible to retire (age at completion of 20 years (25 years) of service) until age 63. Not applicable for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.	Tables adopted by NYCERS during Fiscal Year 2012 based on recent experience of UCF members of NYCERS for COVSF. Varies from earliest age member is eligible to retire (age at completion of 20 years (25 years) of service) until age 63. Not applicable for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.
COLA adjustments for future NYCERS' COLA benefits[1]	1.5% per annum for Auto COLA 2.5% per annum for Escalation.	1.5% per annum for Auto COLA 2.5% per annum for Escalation.

[1] Developed assuming a long-term Consumer Price Inflation assumption of 2.5% per year.

5. QPP CONTRIBUTIONS

The financial objective of the QPP is to fund members' retirement benefits during their active service and to establish Employer contribution rates which, expressed as a percentage of annualized covered payroll, will remain approximately level from year to year. The Employer contributes amounts that, together with Member Contributions and investment income, are intended to ultimately be sufficient to accumulate assets to pay benefits when due.

Member Contributions — Members, who joined prior to July 27, 1976, contribute by salary deductions based on a normal rate of contribution that is assigned by the Plan at membership. The member normal rate, which is dependent upon age and actuarial tables in effect at the time of membership, is determined to provide approximately one-fourth of the service retirement allowance at the earliest age for service retirement. For age at membership equal to 20, the member normal rate ranges between 5.80% and 9.10%. For age at membership equal to 40, the member normal rate ranges between 4.30% and 4.80%.

Members who joined on or after July 27, 1976 and before April 1, 2012, are mandated to contribute 3.0% of salary during all years of coverage except for Department of Correction members who contribute 3.0% for not more than 30 years. Effective October 1, 2000, certain members are not required to make contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. In addition, certain members who are Tier 2 or Tier 3 corrections officers and certain other Tier 2 and Tier 4 members contribute additional amounts ranging from 1.85% to 7.46% for improved early retirement benefits.

Members, who join on and after April 1, 2012 (Tier 6), are mandated to contribute Basic Member Contributions (BMC) until they separate from City service or until they retire. The BMC rate is dependent on annual wages earned during a plan year and ranges from 3.0% for salaries up to $45,000 and as much as 6.0% for salaries greater than $100,000.

In addition to the BMC, Tier 6 Special Plan members must contribute Additional Member Contributions (AMC). The AMC rate is plan-specific. Tier 6 Special Plan members must contribute AMC until they attain 30 years of service or retire, whichever comes first, except for TBTA 20/50 Plan members who must contribute AMC for 20 years.

Uniformed members of the Department of Correction, uniformed members of the Department of Sanitation and District Attorney (DA) Investigator members employed in a District Attorney office, who became employed in one of these titles on or after April 1, 2012, participate in a 22-year Plan. These members are required to contribute 3% of gross wages until the later of 25 years of service or until they retire, except DA Investigator members who must contribute 3% of gross wages until they retire.

Employer Contributions — Statutorily-required contributions (Statutory Contributions) to the QPP, determined by the Funds' Chief Actuary of the Office of the Actuary (the "Actuary") in accordance with State statutes and City laws, are generally funded by the Employer within the appropriate fiscal year. The Statutory Contribution for the year ended June 30, 2018, based on an actuarial valuation as of June 30, 2016 was $3,377,024 million, and the Statutory Contribution for the year ended June 30, 2017, based on an actuarial valuation as of June 30, 2015 was $3,328,193 million. The Statutory Contributions for Fiscal Years 2018 and 2017 were equal to the Actuarial Contributions. Refer to the Schedule of Employer Contributions in the accompanying required supplementary information for more information on the actuarial methods and assumptions applied by the Actuary to determine Statutory Contributions.

6. NET PENSION LIABILITY

The components of the net pension liability of the Employer at June 30, 2018 and 2017, for the Funds, were as follows (in thousands):

				(in thousands)			
June 30, 2018	**QPP**	**COVSF**	**HPOVSF**	**HPSOVSF**	**TPOVSF**	**TPSOVSF**	**TOTAL**
Total pension liability	$ 81,812,947	$ 1,400,402	$ 14,457	$ 20,079	$ 29,598	$ 22,295	$ 83,299,778
Fiduciary net position [1]	65,211,747	449,771	134	121	171	139	65,662,083
Employers' net pension liability	$ 16,601,200	$ 950,631	$ 14,323	$ 19,958	$ 29,427	$ 22,156	$ 17,637,695
Fiduciary net position as a percentage of the total pension liability	79.71%	32.12%	0.93%	0.60%	0.58%	0.62%	78.83%

				(in thousands)			
June 30, 2017	**QPP**	**COVSF**	**HPOVSF**	**HPSOVSF**	**TPOVSF**	**TPSOVSF**	**TOTAL**
Total pension liability	$ 80,897,611	$ 1,432,384	$ 15,685	$ 21,061	$ 30,950	$ 23,777	$ 82,421,468
Fiduciary net position [1]	61,322,275	332,684	69	58	45	70	61,655,201
Employers' net pension liability	$ 19,575,336	$ 1,099,700	$ 15,616	$ 21,003	$ 30,905	$ 23,707	$ 20,766,267
Fiduciary net position as a percentage of the total pension liability	75.80%	23.23%	0.44%	0.28%	0.15%	0.29%	74.80%

[1] Such amounts represent the preliminary Funds' fiduciary net position and may differ from the final Funds' fiduciary net position.

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Actuarial Methods and Assumptions

The total pension liability as of June 30, 2018 and 2017, were determined by actuarial valuations as of June 30, 2016 and June 30, 2015, respectively that were rolled forward to develop the total pension liability to the respective fiscal year end. The following actuarial assumptions were applied to all periods included in the measurement:

Projected Salary Increases	In general, merit and promotion increases, plus assumed General Wage Increases of 3.0% per annum
Investment Rate of Return	7.0% per annum, net of Investment Expenses
	1.5% per annum for Auto COLA. 2.5% per annum for Escalation.

The above assumptions were developed assuming a long-term Consumer Price Inflation assumption of 2.5% per annum.

Mortality tables for Service and Disability pensioners were developed from an experience study of the QPP's pensioners. Mortality tables for beneficiaries were also developed from an experience study of the QPP's beneficiaries.

Pursuant to Section 96 of the New York City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarially-funded NYCRS are conducted every two years.

The June 30, 2016 (Lag) actuarial valuation was used to determine the Fiscal Year 2018 Employer Contributions. There were no changes in actuarial assumptions and methods from the prior actuarial valuation.

The June 30, 2010 (Lag) actuarial valuation used to determine the Fiscal Year 2012 Employer Contributions was based on revised actuarial assumptions and methods proposed by the Actuary (the "2012 A&M"). The Board of Trustees of the Plan adopted those changes to the actuarial assumptions and methods that require Board approval during Fiscal Year 2012. The New York State Legislature and the Governor enacted Chapter 3 of the Laws of 2013 (Chapter 3/13) to provide for those changes in actuarial assumptions and methods that require legislation, including the Actuarial Interest Rate (AIR) assumption of 7.0% per annum, net of investment expenses, the Entry Age Actuarial Cost Method and the amortization of Unfunded Actuarial Accrued Liabilities.

Beginning with the June 30, 2010 (Lag) actuarial valuation under the 2012 A&M, the Entry Age Actuarial Cost Method ("EAACM") of funding is utilized by the Plan's Actuary to calculate the contribution required of the Employer.

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

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

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

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

The Fiscal Year 2018 and Fiscal Year 2017 Employer Contributions do not reflect any potential impact related to the bankruptcy filing on December 3, 2009 by the New York City Off-Track Betting Corporation (OTB) and to its shutdown on December 7, 2010. The results were developed herein assuming OTB is an ongoing concern.

The APV of projected benefits includes the obligations of the Plan to the HPOVSF, the HPSOVSF, the TPOVSF, the TPSOVSF and the COVSF (referred to collectively as the NYCERS VSFs), which are recognized through the Liability Valuation Method.

Under this method, the APV of Future SKIM from the Plan to the NYCERS VSFs is included directly as an actuarial liability of the Plan. SKIM is all or a portion of the excess earnings on equity securities of the Plan which are transferrable to the NYCERS VSFs. The APV of Future SKIM is computed as the excess, if any, of the APV of benefits of each individual NYCERS VSF offset by the AAV of that individual NYCERS VSF, respectively. Under the EAACM, a portion of the APV of Future SKIM is reflected in the APV of Future Normal Costs and a portion is reflected in the UAAL.

The concept in use for the Actuarial Asset Valuation Method (AAVM) for actuarial valuations on and after June 30, 2012 is the same as that in use for the June 30, 2009 (Lag) actuarial valuation.

In accordance with this AAVM, actual Unexpected Investment Returns (UIR) for Fiscal Years 2012, 2013, etc. are phased into the Actuarial Asset Value (AAV) beginning June 30, 2012, June 30, 2013, etc. at rates of 15%, 15%, 15%, 15%, 20%, and 20% per year (i.e., cumulative rates of, 15%, 30%, 45%, 60%, 80%, and 100% over a period of six years).

The Actuary reset the Actuarial Asset Value to the Market Value of Assets (MVA) as of June 30, 2011 (i.e., Market Value Restart).

For the June 30, 2010 (Lag) actuarial valuation, the AAV is defined to recognize Fiscal Year 2011 investment performance. The June 30, 2010 AAV is derived as equal to the June 30, 2011 MVA, discounted by the AIR assumption (adjusted for cash flow) to June 30, 2010.

Expected Rate of Return on Investments

The long-term expected rate of return on pension plan 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 investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Asset Allocation	Expected Real Rate of Return
U.S. Public Markets Equities	29%	6.3%
International Public Markets Equities	13%	7.0%
Emerging Public Markets Equities	7%	9.5%
Private Market Equities	7%	10.4%
Fixed Income (Core, TIPS, High Yield, Opportunistic, Convertibles)	33%	2.2%
Alternatives (Real Assets, Hedge Funds)	11%	5.5%
Total	100%	

Discount Rate

The discount rate used to measure the total pension liability as of June 30, 2018 and 2017 was 7.0% per annum. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that City's contributions will be made in accordance with the Statutory contributions determined by the Actuary. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The following presents the net pension liability of the Employer for the Plans, calculated using the discount rate of 7.0%; as well as what the Employer's net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower (6.0%) or 1-percentage point higher (8.0%) than the current rate.

(In thousands) **Employer net pension liability** **June 30, 2018**	**1%** **Decrease** **(6%)**	**Discount** **Rate** **(7%)**	**1%** **Increase** **(8%)**
QPP	$ 25,840,074	$ 16,601,200	$ 8,806,157
COVSF	1,105,539	950,631	820,634
HPOVSF	15,242	14,323	13,503
HPSOVSF	21,287	19,958	18,777
TPOVSF	31,320	29,428	27,740
TPSOVSF	23,606	22,156	20,864
Total	$ 27,037,068	$ 17,637,696	$ 9,707,675

7. MEMBER LOANS

In general, members are permitted to borrow up to 75% of their own contributions, including accumulated interest. The balance of member loans receivable at June 30, 2018 and 2017 is $1.1 billion and $1.1 billion, respectively.

8. RELATED PARTIES

The Comptroller of The City of New York has been appointed by law as custodian for the assets of NYCERS. Securities are held by certain banks under custodial agreements with the Comptroller. The Comptroller also provides cash receipt and cash disbursement services to NYCERS. Actuarial services are provided to NYCERS by the Office of the Actuary employed by the Boards of Trustees of The City's main pension systems. The City's Corporation Counsel provides legal services to NYCERS. Other administrative services are also provided by the City. The aforementioned services are provided by employees or officers of The City who may also be participants in NYCERS.

9. ADMINISTRATIVE AND INVESTMENT EXPENSES

Chapter 593 of the Laws of 1996, effective July 1, 1997, authorized the Board of Trustees to draw upon QPP assets to pay the administrative expenses incurred by the QPP. Prior to that year, The City had directly paid all QPP administrative expenses. Under Chapter 593/96, both the administrative and investment expenses were billed to the participating employers in the following year. Under Chapter 152 of the Laws of 2006, those expenses are billed in the second following fiscal year.

In Fiscal Year 2018, total non-investment expenses attributable to the Plan were approximately $67.5 million, of which $59.7 million was paid from the assets of the QPP and $7.8 million was incurred on behalf of the QPP by other City agencies. In Fiscal Year 2017, total non-investment expenses attributable to the Plan were approximately $67 million, of which $59.7 million was paid from the assets of the QPP and $7.3 million was incurred on behalf of the QPP by other City agencies.

Investment expenses, exclusive of fees related to securities lending transactions, for Fiscal Year 2018 were $244 million, of which $242 million was charged to the investment earnings of the Plan; and $2 million was incurred by the Comptroller's Office. Investment expenses, exclusive of fees related to securities lending transactions, for Fiscal Year 2017 were $226 million, of which $224 million was charged to the investment earnings of the Plan; and $2 million was incurred by the Comptroller's Office

During Fiscal Year 2000, the Plan entered into a new lease agreement to rent office space for its headquarters. The agreement expires in 2020, with options to renew the agreement through 2030. The future minimum rental payments required under this operating lease are shown in the table below.

Rent expenses, under the lease agreement, for the Fiscal Years ended June 30, 2018 and 2017, were approximately $4.5 million each.

During Fiscal Year 2006, the Plan entered into a new lease agreement to rent office space for a business recovery site in case its headquarters was not operational. The agreement expired in 2016, and the Plan exercised the options to renew the agreement through April 2021. The future minimum rental payments required under the renewed lease are shown in the table below.

Rent expenses, under the lease agreement, for the Fiscal Years ended June 30, 2018 and 2017, were approximately $1.2 million and $927 thousand, respectively.

	Headquarters		Business Recovery Site
Fiscal Years Ending	Minimum Rental Payments	Fiscal Years Ending	Minimum Rental Payments
2019	$ 4,535,366	2019	$ 1,262,087
2020	4,535,366	2020	1,290,507
		2021	1,319,538

10. CONTINGENT LIABILITIES AND OTHER MATTERS

Contingent Liabilities — The Fund has a number of claims pending against it and has been named as a defendant in a number of lawsuits and also has certain other contingent liabilities. Management of the Plan, on the advice of legal counsel, believes that such proceedings and contingencies will not have a material effect on the plan's net position or changes in the plan's net position. Under the State statutes and City laws that govern the functioning of the Fund, increases in the obligations of the Fund to members and beneficiaries ordinarily result in increases in the obligations of the employers to the Fund.

Actuarial Audit — Pursuant to Section 96 of the New York City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarially-funded NYCRS are conducted every two years. Refer to Note 5 for a discussion of the most recent actuarial studies for NYCRS.

Revised Actuarial Assumptions and Methods — In accordance with the ACNY and with appropriate practice, the Boards of Trustees of the five major actuarially-funded NYCRS are to periodically review and adopt actuarial assumptions as proposed by the Actuary for use in the determination of Employer Contributions.

OTB Bankruptcy — During December 2009, the New York City Off-Track Betting Corporation (OTB) filed a petition with the United States Bankruptcy Court of the Southern District of New York under Chapter 9 of the Bankruptcy Code.

The Fiscal Year 2018 and Fiscal Year 2017 employer contributions do not take into account OTB's filing. The Fiscal Year 2018 and Fiscal Year 2017 employer contributions, and the allocation to OTB, assumed that OTB was a going-concern. Any amounts due but unpaid by OTB for Fiscal Year 2017 and Fiscal Year 2017 are treated as a receivable that is expected to be paid in full.

New York State Legislation (only significant laws since Fiscal Year 2012 are included) —

Chapter 18 of the Laws of 2012 placed certain limitations on Tier 3 and Tier 4 benefits available to participants hired on and after April 1, 2012 in most New York State PERS, including NYCERS. Some of the provisions in this law are commonly referred to as Tier 6.

Chapter 3 of the Laws of 2013 (Chapter 3/13) implemented changes in the actuarial procedures for determining Employer Contributions beginning Fiscal Year 2012. In particular, Chapter 3/13 continued the One-Year Lag Methodology (OYLM), employed the Entry Age Actuarial Cost Method (EAACM), an Actuarial Interest Rate (AIR) assumption of 7.0% per annum, net of expenses and defined the amortization of Unfunded Actuarial Accrued Liabilities (UAAL).

Chapter 489 of the Laws of 2013 extended the Notice of Participation filing deadline to September 11, 2014 for vested members to file a sworn statement indicating participation in the World trade Center Rescue, Recovery, and Clean-up Operations.

Chapter 427 of the Laws of 2014 (Chapter 427/14) provides non-contributory retirement service credit for members called to active military duty on or after September 11, 2001 and prior to January 1, 2006 who did not receive their full salary from a participating employer and is otherwise eligible to receive retirement service credit for such service. Such member would not be required to make member contributions to receive such credit.

Chapter 510 of the Laws of 2015 clarifies for Tier 6 the definition of multiple employers for the purpose of exclusion of wages and changes the plan year for contributions from plan year April 1 to March 31 to plan year January 1 to December 31.

Chapter 41 of the Laws of 2016 removes the specified periods of time, medal requirements, and theaters of operation in which military service would had to have been rendered for a service purchase pursuant to New York State Retirement and Social Security Law ("RSSL") § 1000. Accordingly, for a member to be eligible to purchase service credit pursuant to RSSL § 1000 for pre-membership military service, the member need only have been honorably discharged from the military; all other requirements of RSSL § 1000 remain the same. This law is not retroactive and does not permit retired members to purchase service credit.

Petition for Retirement Benefit Enhancement, dated August 15, 2016 and signed by the Mayor on August 30, 2016, provides enhanced disability benefits for Accidental Disability Retirement and Ordinary Disability Retirement benefits for Sanitation Workers. Sanitation Workers who become 22-Year Plan members before January 1, 2017 have the option to elect participation in the Enhanced Disability Benefits. Sanitation Workers who become 22-Year Plan members on and after January 1, 2017 are mandated into the Enhanced Disability Benefits. Members electing or mandated into this benefit will pay an extra 1.3% of wages.

Petition for Retirement Benefit Enhancement, dated November 2, 2016 and signed by the Mayor on November 29, 2016, provides enhanced disability benefits for Accidental Disability Retirement and Ordinary Disability Retirement benefits for Correction Officers. Correction Officers who become 22-Year Plan members before January 1, 2017 have the option to elect participation in the Enhanced Disability Benefits. Correction Officers who become 22-Year Plan members on and after January 1, 2017 are mandated into the Enhanced Disability Benefits. Members electing or mandated into this benefit will pay an extra 0.8% of wages.

Petition for Retirement Benefit Enhancement, dated November 21, 2016 and signed by the Mayor on November 29, 2016, provides enhanced disability benefits for Accidental Disability Retirement and Ordinary Disability Retirement benefits for Wardens, including Assistant Deputy Wardens, Deputy Wardens and Deputy Wardens in Command (collectively, ADW/DWs). ADW/DWs who become 22-Year Plan members before January 1, 2017 have the option to elect participation in the Enhanced Disability Benefits. ADW/DWs who become 22-Year Plan members on and after January 1, 2017 are mandated into the Enhanced Disability Benefits. Members electing or mandated into this benefit will pay an extra 0.8% of wages.

Petition for Retirement Benefit Enhancement, dated November 25, 2016 and signed by the Mayor on November 29, 2016, provides enhanced disability benefits for Accidental Disability Retirement and Ordinary Disability Retirement benefits for Correction Captains. Correction Captains who become 22-Year Plan members before January 1, 2017 have the option to elect participation in the Enhanced Disability Benefits. Correction Captains who become 22-Year Plan members on and after January 1, 2017 are mandated into the Enhanced Disability Benefits. Members electing or mandated into this benefit will pay an extra 0.8% of wages.

Chapter 61 of the Laws of 2017 permits NYCERS uniformed correction/sanitation revised plan members and investigator revised plan members ("Eligible Members"), who would be ineligible for disability retirement benefits solely on account of being eligible for a normal service retirement benefit, to be eligible for disability benefits. It also relaxed the safeguards provisions regarding restrictions on post-retirement employment for Eligible Members who are awarded Accidental Disability Retirement ("ADR") and modified the process for reducing or eliminating an ADR benefit based on post-retirement earnings, making said process more difficult.

The following outlines the changes for the New York City uniformed correction/sanitation revised plan members (i.e., a 22-Year Plan member).

1. Member Contributions

- Tier 3 Enhanced Members contribute 3% of pensionable earnings PLUS an additional contribution rate to help fund the enhanced disability benefit. Currently, the additional contribution rate is 1.3% for Sanitation Workers and 0.8% for Correction Officers, ADW/AWs and Correction Captains that can be raised to 3% based on a financial analysis by the Office of the Actuary every three years. At no time can the total contribution rate exceed 6%.

- Taxability
  - Base Member Contributions
  - Pre-tax
  - Increased Member Contributions for Enhanced Disability Provisions
    - Pre-tax for Sanitation Workers appointed September 1, 2016 and later and for Correction Officers, ADW/DWs and Correction Captains appointed January 1, 2017 and later (i.e., the dates the respective new members are mandated into the Plan).
    - Post-tax for those who were eligible to elect the Enhanced Disability Plan provisions and elected such provisions.

2. Accidental Disability Retirement (ADR)

- The ADR benefit for Tier 3 Enhanced Members is 75% of their Five-Year Final Average Salary (FAS5).
- Tier 3 Enhanced Members have statutory presumptions (i.e. Heart)

3. Ordinary Disability Retirement (ODR)

- The ODR benefit for Tier3 Enhanced Members is the greater of:
  - 33 1/3% of FAS5; or
  - FAS5 multiplied by years of credited service (not greater than 22 years).

4. Escalation

- Tier 3 Enhanced Members who retire for ODR or ADR are not subject to escalation. Tier 3 Enhanced Members are subject to COLA, the same as Tier 1 and 2 members.

5. Social Security Offset

- Tier 3 Enhanced Members who retire for ODR or ADR are not subject to the Social Security offset.
- Tier 3 Enhanced Members who retire for a Service or Vested Retirement are subject to the Social Security offset.

6. Final Average Salary

- Tier 3 Enhanced Members are subject to a FAS5 calculation for ODR, ADR, Service and Vested Retirement.

The following changes apply to Eligible Members:

1. **Eligibility for ADR**
   - Members no longer cease to be eligible for ADR at 22 years, and can apply at any time as long as they are active.

2. **Safeguards**
   - RSSL § 507(d) no longer applies to ADR retirees. The safeguards in effect prior to April 1, 2012 apply to Uniformed Correction/Sanitation Revised Plan members and those in effect prior to July 1, 2009 apply to retired Investigator Revised Plan Members. The safeguards include earnings limitations and re-employment.
   - Safeguards remain unchanged for ODR retirees. Thus, they must continue to be in receipt of Social Security Disability benefits to maintain their receipt of pension benefits.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2018

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
Total pension liability:							
Service cost	$ 1,923,683	$ 24,029	$ -	$ -	$ -	$ -	$ 1,947,712
Interest	5,514,669	94,615	1,004	1,397	2,052	1,552	5,615,289
Changes of benefit terms							-
Differences between expected and actual							-
experience	(1,700,346)	(61,728)	(472)	131	83	(216)	(1,762,548)
Changes of assumptions	17,939	(206)	-	-	-	-	17,733
Changes of benefit terms	42,501	1,498	-	-	-	-	43,999
Benefit payments and withdrawals	(4,883,110)	(90,190)	(1,760)	(2,510)	(3,486)	(2,818)	(4,983,874)
Net change in total pension liabality	915,336	(31,982)	(1,228)	(982)	(1,351)	(1,482)	878,311
Total pension liability – beginning	80,897,611	1,432,384	15,685	21,061	30,950	23,777	82,421,468
Total pension liability – ending (a)	81,812,947	1,400,402	14,457	20,079	29,599	22,295	83,299,779
Plan fiduciary net position:							
Employer contributions	3,377,024	-	-	-	-	-	3,377,024
Member contributions	523,535	-	-	-	-	-	523,535
Net investment income	5,153,254	2,265	-	-	-	-	5,155,519
Benefit payments and withdrawals	(4,883,110)	(90,190)	(1,760)	(2,510)	(3,486)	(2,818)	(4,983,874)
Payments to Other Retirement Systems	(9,055)	-	-	-	-	-	(9,055)
Transfers to VSFs	(10,897)	-	1,825	2,573	3,612	2,887	-
Administrative Expenses	(59,689)	-	-	-	-	-	(59,689)
Other	3,410	12	-	-	-	-	6,832
Net change in plan fiducary net position	4,094,472	(87,913)	65	63	126	69	4,010,292
Accrued transfers to/from VSF's	(205,000)	205,000	-	-	-	-	-
Plan fiduciary net position - beginning	-	-	-	-	-	-	-
Plan fiduciary net position - ending (b) *	65,211,747	449,771	134	121	171	139	65,662,083
Employers' net pension liability - ending (a)-(b)	$ 16,601,200	$ 950,631	$ 14,323	$ 19,958	$ 29,428	$ 22,156	$ 17,637,696
Plan fiduciary net position as a percentage of the total pension liability	79.71%	32.12%	0.93%	0.60%	0.58%	0.62%	78.83%
Covered payroll	$ 12,834,130	N/A	N/A	N/A	N/A	N/A	$ 12,834,130
Employers' net pension liability as a percentage of covered payroll	129.35%	N/A	N/A	N/A	N/A	N/A	137.43%

Additionally, in accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.

*Such amounts represent the preliminary Funds' fiduciary net position and may differ from the Funds' final fiduciary net position.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2017

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
Total pension liability:							
Service cost	$ 1,897,067	$ 23,391	$ -	$ -	$ -	$ -	$ 1,920,458
Interest	5,446,543	93,708	1,088	1,464	2,151	1,654	5,546,608
Changes of benefit terms							-
Differences between expected and actual							-
experience	(221,856)	(16,615)	(51)	(216)	198	286	(238,254)
Changes of assumptions	-	-	-	-	-	-	-
Benefit payments and withdrawals	(4,635,251)	(30)	(1,850)	(2,581)	(3,814)	(2,953)	(4,646,479)
Net change in total pension liability	2,486,503	100,454	(813)	(1,333)	(1,465)	(1,013)	2,582,333
Total pension liability – beginning	78,411,108	1,331,930	16,498	22,394	32,415	24,790	79,839,135
Total pension liability – ending (a)	80,897,611	1,432,384	15,685	21,061	30,950	23,777	82,421,468
Plan fiduciary net position:							
Employer contributions	3,328,193	-	-	-	-	-	3,328,193
Member contributions	513,514	-	-	-	-	-	513,514
Net investment income	6,982,304	(152)	-	-	-	-	6,982,152
Benefit payments and withdrawals	(4,635,251)	(30)	(1,850)	(2,581)	(3,814)	(2,953)	(4,646,479)
Payments to Other Retirement Systems	(8,087)	-	-	-	-	-	(8,087)
Transfers to VSF's	(11,297)	-	1,889	2,595	3,830	2,983	-
Administrative expenses	(59,671)	-	-	-	-	-	(59,671)
Other	3,266	-	-	-	-	-	3,266
Net change in plan fiduciary net position	6,112,971	(182)	39	14	16	30	6,112,888
Accrued transfers to/from VSFs	(285,924)	285,924	-	-	-	-	-
Plan fiduciary net position – beginning	55,495,228	46,942	30	44	29	40	55,542,313
Plan fiduciary net position – ending (b) *	61,322,275	332,684	69	58	45	70	61,655,201
Employers' net pension liability – ending (a)-(b)	$ 19,575,336	$ 1,099,700	$ 15,616	$ 21,003	$ 30,905	$ 23,707	$ 20,766,267
Plan fiduciary net position as a percentage of the total pension liability	75.80%	23.23%	0.44%	0.28%	0.15%	0.29%	74.80%
Covered payroll	$ 12,555,242	N/A	N/A	N/A	N/A	N/A	$ 12,555,242
Employers' net pension liability as a percentage of covered payroll	155.91%	N/A	N/A	N/A	N/A	N/A	165.40%

Additionally, in accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.

*Such amounts represent the preliminary Funds' fiduciary net position and may differ from the Funds' final fiduciary net position.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2016

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
Total pension liability:							
Service cost	$ 1,875,969	$ 24,025	$ -	$ -	$ -	$ -	$ 1,899,994
Interest	5,276,141	89,794	1,145	1,553	2,251	1,720	5,372,604
Differences between expected and actual							-
experience	(793,016)	(25,259)	(195)	(57)	273	283	(817,971)
Changes of assumptions	2,539,112	21,269	479	625	915	692	2,563,092
Benefit payments and withdrawals	(4,402,729)	(79,917)	(1,968)	(2,643)	(3,932)	(2,957)	(4,494,146)
Net change in total pension liability	4,495,477	29,912	(539)	(522)	(493)	(262)	4,523,573
Total pension liability – beginning	73,915,631	1,302,018	17,037	22,916	32,908	25,052	75,315,562
Total pension liability – ending (a)	78,411,108	1,331,930	16,498	22,394	32,415	24,790	79,839,135
Plan fiduciary net position:							
Employer contributions	3,365,454	-	-	-	-	-	3,365,454
Member contributions	485,508	-	-	-	-	-	485,508
Net investment income	1,171,720	184	-	-	-	-	1,171,904
Benefit payments and withdrawals	(4,402,729)	(79,917)	(1,968)	(2,643)	(3,932)	(2,957)	(4,494,146)
Payments to Other Retirement Systems	(7,440)	-	-	-	-	-	(7,440)
Transfers to VSFs	(11,525)	-	1,968	2,648	3,945	2,964	-
Administrative Expenses	(56,683)	-	-	-	-	-	(56,683)
Other	2,928	-	-	-	-	-	2,928
Net change in plan fiduciary net position	547,233	(79,733)	-	5	13	7	467,525
Accrued transfers to/from VSFs	52,724	(52,724)	-	-	-	-	-
Plan fiduciary net position – beginning	54,895,271	179,399	30	39	16	33	55,074,788
Plan fiduciary net position – ending (b) *	55,495,228	46,942	30	44	29	40	55,542,313
Employers' net pension liability – ending (a)-(b)	$ 22,915,880	$ 1,284,988	$ 16,468	$ 22,350	$ 32,386	$ 24,750	$ 24,296,822
Plan fiduciary net position as a percentage of the total pension liability	70.77%	3.52%	0.18%	0.20%	0.09%	0.16%	69.57%
Covered payroll	$ 12,336,979	N/A	N/A	N/A	N/A	N/A	$ 12,336,979
Employers' net pension liability as a percentage of covered payroll	185.75%	N/A	N/A	N/A	N/A	N/A	196.94%

Additionally, in accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.

*Such amounts represent the preliminary Funds' fiduciary net position and may differ from the Funds' final fiduciary net position.

SCHEDULE 1

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2015

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
Total pension liability:							
Service cost	$ 1,808,955	$ 23,532	$ -	$ -	$ -	$ -	$ 1,832,487
Interest	4,976,487	87,727	1,184	1,588	2,288	1,741	5,071,015
Differences between expected and actual experience	(372,645)	84,301	(312)	131	(203)	129	(288,599)
Changes of assumptions	-	-	-	-	-	-	-
Benefit payments and withdrawals	(4,235,644)	(76,606)	(2,083)	(2,682)	(4,047)	(3,073)	(4,324,135)
Net change in total pension liability	2,177,153	118,954	(1,211)	(963)	(1,962)	(1,203)	2,290,768
Total pension liability – beginning	71,738,478	1,183,064	18,248	23,879	34,870	26,255	73,024,794
Total pension liability – ending (a)	73,915,631	1,302,018	17,037	22,916	32,908	25,052	75,315,562
Plan fiduciary net position:							
Employer contributions	3,160,258	-	-	-	-	-	3,160,258
Member contributions	467,129	-	-	-	-	-	467,129
Net investment income	1,175,099	10	-	-	-	-	1,175,109
Benefit payments and withdrawals	(4,235,644)	(76,606)	(2,083)	(2,682)	(4,047)	(3,073)	(4,324,135)
Payments to Other Retirement Systems	(7,142)	-	-	-	-	-	(7,142)
Transfers to VSFs	(11,918)	12	2,100	2,686	4,040	3,080	-
Administrative expenses	(54,635)	-	-	-	-	-	(54,635)
Other	4,140	-	-	-	-	-	4,140
Net change in plan fiduciary net position	497,287	(76,584)	17	4	(7)	7	420,724
Accrued transfers to VSFs	(30,000)	30,000	-	-	-	-	-
Plan fiduciary net position – beginning *	54,427,984	225,983	13	35	23	26	54,654,064
Plan fiduciary net position – ending (b) **	54,895,271	179,399	30	39	16 -	33	55,074,788
Employers' net pension liability – ending (a)-(b)	$ 19,020,360	$ 1,122,619	$ 17,007	$ 22,877	$ 32,892	$ 25,019	$ 20,240,774
Plan fiduciary net position as a percentage of the total pension liability	74.27%	13.78%	0.18%	0.17%	0.05%	0.13%	73.13%
Covered payroll	$ 12,314,958	N/A	N/A	N/A	N/A	N/A	$ 12,314,958
Employers' net pension liability as a percentage of covered payroll	154.45%	N/A	N/A	N/A	N/A	N/A	164.36%

Additionally, in accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.

* Includes an adjustment of $(351,463,000).

**Such amounts represent the preliminary Funds' fiduciary net position and may differ from the Funds' final fiduciary net position.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2014

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
Total pension liability:							
Service cost	$ 1,783,734	$ 23,329	$ -	$ -	$ -	$ -	$ 1,807,063
Interest	4,825,904	77,397	1,267	1,655	2,416	1,820	4,910,459
Changes of benefit terms	-	-	-	-	-	-	-
Differences between expected and actual experience	-	-	-	-	-	-	-
Changes of assumptions	-	-	-	-	-	-	-
Benefit payments and withdrawals	(3,990,569)	-	(2,187)	(2,782)	(4,054)	(3,089)	(4,002,681)
Net change in total pension liability	2,619,069	100,726	(920)	(1,127)	(1,638)	(1,269)	2,714,841
Total pension liability – beginning	69,119,408	1,082,338	19,169	25,006	36,508	27,524	70,309,953
Total pension liability – ending (a)	71,738,477	1,183,064	18,249	23,879	34,870	26,255	73,024,794
Plan fiduciary net position:							
Employer contributions	3,114,068	-	-	-	-	-	3,114,068
Member contributions	447,689	-	-	-	-	-	447,689
Net investment income	8,262,467	20	-	-	-	-	8,262,487
Benefit payments and withdrawals	(3,990,569)	-	(2,187)	(2,782)	(4,054)	(3,089)	(4,002,681)
Payments to Other Retirement Systems	(7,228)	-	-	-	-	-	(7,228)
Transfers to VSFs	(12,125)	-	2,168	2,797	4,070	3,090	-
Administrative rxpenses	(50,431)	-	-	-	-	-	(50,431)
Other	4,881	-	-	-	-	-	4,881
Net change in plan fiduciary net position	7,768,752	20	(19)	15	16	1	7,768,785
Accrued transfers to VSF's	(190,000)	190,000	-	-	-	-	
Plan fiduciary net position – beginning	47,200,695	35,963	32	20	7	25	47,236,742
Plan fiduciary net position – ending (b) *	54,779,447	225,983	13	35	23 -	26	55,005,527
Employers' net pension liability – ending (a)-(b)	$ 16,959,030	$ 957,081	$ 18,236	$ 23,844	$ 34,847	$ 26,229	$ 18,019,267
Plan fiduciary net position as a percentage of the total pension liability	76.36%	19.10%	0.07%	0.15%	0.07%	0.10%	75.32%
Covered payroll	$ 12,183,011	N/A	N/A	N/A	N/A	N/A	$ 12,183,011
Employers' net pension liability as a percentage of covered payroll	139.20%	N/A	N/A	N/A	N/A	N/A	147.90%

Additionally, in accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.

*Such amounts represent the preliminary Funds' fiduciary net position and may differ from the Funds' final fiduciary net position.

SCHEDULE 2

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF CITY CONTRIBUTIONS

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined contributions	$ 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	$ 2,150,438
Contributions in relation to the actuarially determined contributions	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	2,150,438
Contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered payroll	12,834,130	12,555,242	12,336,979	12,314,958	12,183,011	11,954,975	11,812,858	11,465,975	10,977,607	10,454,244
Contribution as a percentage of covered payroll	26.31 %	26.51 %	27.28 %	25.66 %	25.56 %	25.49 %	25.54 %	20.82 %	20.02 %	20.57 %

SCHEDULE 2

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF CITY CONTRIBUTIONS

Notes to Schedule:

The above actuarially determined contributions were developed using a One-Year Lag Methodology, under which the actuarial valuation determines the employer contribution for the second following fiscal year (e.g. Fiscal Year 2018 contributions were determined using an actuarial valuation as of June 30, 2016). The methods and assumptions used to determine the actuarially determined contributions are as follows:

Valuation Dates	June 30, 2016	June 30, 2015	June 30, 2014	June 30, 2013
Actuarial cost method	Entry Age	Entry Age	Entry Age	Entry Age
Amortization method for Unfunded Actuarial Accrued Liabilities:				
Initial Unfunded	Increasing Dollar	Increasing Dollar	Increasing Dollar	Increasing Dollar
Post-2010 Unfundeds	Level Dollar	Level Dollar	Level Dollar	Level Dollar
Remaining amortization period:				
Initial Unfunded	16 years (closed)	17 years (closed)	18 years (closed)	19 years (closed)
2010 ERI	NA	1 years (closed)	2 years (closed)	3 years (closed)
2011 Actuarial Gains/Losses	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)
2012 Actuarial Gains/Losses	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)
2013 Actuarial Gains/Losses	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)
2014 Actuarial Gains/Losses	13 years (closed)	14 years (closed)	15 years (closed)	NA
2015 Actuarial Gains/Losses	14 years (closed)	15 years (closed)	NA	NA
Actuarial Asset Valuation (AAV) Method [3]	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.
Actuarial assumptions: Assumed rate of return[4]	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses
Post-retirement mortality	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2012
Active service: withdrawal, death, disability, service retirement	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012
Salary increases[4]	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.
Cost-of-Living Adjustments[4]	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation

Valuation Dates	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009-June 30, 2007
Actuarial cost method	Entry Age	Entry Age	Entry Age	Frozen Initial Liability[1]
Amortization method for Unfunded Actuarial Accrued Liabilities:				
Initial Unfunded	Increasing Dollar	Increasing Dollar	Increasing Dollar	NA[2]
Post-2010 Unfundeds	Level Dollar	Level Dollar	Level Dollar	NA[2]
Remaining amortization period:				
Initial Unfunded	20 years (closed)	21 years (closed)	22 years (closed)	NA[2]
2010 ERI	4 years (closed)	5 years (closed)	NA	NA[2]
2011 Actuarial Gains/Losses	14 years (closed)	15 years (closed)	NA	NA[2]
2012 Actuarial Gains/Losses	15 years (closed)	NA	NA	NA[2]
2013 Actuarial Gains/Losses	NA	NA	NA	NA[2]
2014 Actuarial Gains/Losses	NA	NA	NA	NA[2]
2015 Actuarial Gains/Losses	NA	NA	NA	NA[2]
Actuarial Asset Valuation (AAV) Method [3]	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 1999.
Actuarial assumptions: Assumed rate of return[4]	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	8.0% per annum, gross investment expenses
Post-retirement mortality	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2006
Active service: withdrawal, death, disability, service retirement	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2006
Salary increases[4]	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.
Cost-of-Living Adjustments[4]	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.3% per annum

1 Under this actuarial cost method, the Initial Liability was reestablished as of June 30, 1999, by the Entry Age Actuarial Cost Method but with the unfunded actuarial accrued liability (UAAL) not less than $0. The financial results using this Frozen Initial Liability Actuarial Cost Method are the same as those that would be produced using the Aggregate Actuarial Cost Method.

2 In conjunction with Chapter 85 of the Laws of 2000, there is an amortization method. However, the June 30, 1999 UAAL for the QPP equaled $0 and no amortization period was required.

3 As of the June 30, 2014 (Lag) valuation, the AAV is constrained to be no more than 20% from the Market Value

4 Developed using a long-term Consumer Price Inflation assumption of 2.5% per year.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF INVESTMENT RETURNS

The following table displays annual money-weighted rate of return, net of investment expense, for the Funds for each of the past five fiscal years:

Fiscal year ended	QPP	COVSF
June 30, 2018	8.61%	1.63%
June 30, 2017	12.99%	0.64%
June 30, 2016	1.45%	0.19%
June 30, 2015	3.10%	0.03%
June 30, 2014	17.01%	0.06%

Note: In accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.