New York City Police Pension Funds

(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, 2019 and 2018

MARKS PANETH

ACCOUNTANTS & ADVISORS

NEW YORK CITY POLICE PENSION FUNDS

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Marks Paneth LLP
685 Third Avenue
New York, NY 10017
P 212.503.8800
F 212.370.3759
markspaneth.com

MARKS PANETH
ACCOUNTANTS & ADVISORS

INDEPENDENT AUDITORS' REPORT

To the Board of Trustees of the
New York City Police Pension Funds

Report on the Combining Financial Statements

We have audited the accompanying combining statements of fiduciary net position of the New York City Police Pension Fund, New York City Police Officers' Variable Supplements Fund, and New York City Police Superior Officers' Variable Supplements Fund, which collectively comprise the New York City Police Pension Funds (the "Funds"), a fiduciary fund of the City of New York, as of June 30, 2019 and 2018 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 Police 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 audit 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, 2019 and 2018, 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 the 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

New York, N Y
October 24, 2019

This narrative discussion and analysis of the New York City Police Pension Funds ("POLICE" or the "Funds"), provides an overview of the Funds combining financial activities for the Fiscal Years ended June 30, 2019 and 2018. It is meant to assist the reader in understanding the Funds 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.

The Fund's administer: the New York City Police Pension Fund, Tiers 1, 2, 3, and 6 (Tier 3 Revised), in conjunction with the establishment of an administrative staff separate from the New York City Police Department, in accordance with Chapter 292 of the Laws of 2001 – Qualified Pension Plan ("QPP") – as set forth in the Administrative Code of the City of New York ("ACNY") § 13-214.1; the Police Superior Officers' Variable Supplements Fund ("PSOVSF"), as set forth in ACNY § 13-278; and the Police Officers' Variable Supplements Fund ("POVSF"), as set forth in ACNY § 12-268.

Overview of Basic Combining Financial Statements

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

- **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 control (assets), consumption of net position by the Funds that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the Funds have little or no discretion to avoid (liabilities), and acquisition of net position 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 values. 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** — includes the management discussion and analysis, and the notes to combining financial statements as required by the GASB.

FINANCIAL HIGHLIGHTS

The Funds net position restricted for benefits increased by $2.4 billion, or 5.6% to $44.9 billion in Fiscal Year 2019 compared to Fiscal Year 2018, and increased by $3.4 billion, or 9% to $42.6 billion in Fiscal Year 2018 compared to Fiscal Year 2017. The Funds net position restricted for benefits increased in Fiscal Years 2019 and 2018 due to an increase in assets, mainly related to the growth in our investments and the overall national economy.

Changes in Fiduciary Net Position
Years Ended June 30, 2019, 2018, and 2017
(In thousands)

	2019	2018	2017
Additions:			
Member contributions	$ 278,087	$ 267,031	$ 276,301
Employer contributions	2,558,256	2,415,153	2,293,840
Net investment income	2,861,543	3,964,010	4,286,894
Litigation income	2,276	1,838	8,057
Net receipts from other retirement systems	1,907	1,627	2,450
Total additions	5,702,069	6,649,659	6,867,542
Deductions:			
Benefit payments and withdrawals	3,282,070	3,197,971	2,984,833
Administrative expenses	29,005	21,146	18,917
Total deductions	3,311,075	3,219,117	3,003,750
Net increase in net position	2,390,994	3,430,542	3,863,792
Net position restricted for benefits			
Beginning of year	42,606,313	39,175,771	35,311,979
End of year	$ 44,997,307	$ 42,606,313	$ 39,175,771

During Fiscal Year 2019, member contributions increased 4.1% to $278.0 million as compared to Fiscal Year 2018 contributions of $267.0 million. This change was due to members increasing their deductions. During Fiscal Year 2018, member contributions decreased by 3.4% to $267.0 million as compared to the Fiscal Year 2017 contributions of $276.3 million. In accordance with the pension plan requirements, certain members, under certain conditions, may elect to increase or decrease their deductions.

Employer contributions in Fiscal Year 2019 were $2.56 billion, an increase of 5.9% from Fiscal Year 2018 contributions of $2.42 billion primarily due to changes in the actuarial methods and assumptions and an increase in the payment for the Initial Actuarial Liability established as of June 30, 2010. In Fiscal Year 2018, the contributions of $2.42 billion represented an increase of 5.3% from Fiscal Year 2017 contributions of $2.29 billion.

Benefit payments and withdrawals were $3.28 billion, $3.19 billion, and $2.98 billion, for the Fiscal Years ended June 30, 2019, 2018 and 2017, respectively. This is primarily due to an increase in the number of retirees eligible for benefits.

In Fiscal Year 2002, Chapter 292 of the New York State Laws of 2001 provided the Funds with corpus funding for administrative expenses. In Fiscal Years 2019, 2018, 2017, the administrative expenses were $29.0 million, $21.1 million, and in $18.9 million, respectively. This is due to an increase in operational expenses.

FIDUCIARY NET POSITION

In Fiscal Year 2019, the Funds experienced a 5.6% increase in the combined net position restricted for benefits due to an increase in assets compared to Fiscal Year 2018, when a 9.0% increase from Fiscal Year 2017 was noted.

Fiduciary Net Position
June 30, 2019, 2018 and 2017
(In thousands)

	2019	2018	2017
Cash	$ 26,127	$ 8,102	$ 110,372
Receivables	1,128,838	790,916	1,050,629
Investments — at fair value	45,251,365	43,021,858	39,413,442
Collateral from securities lending	3,851,420	4,927,493	3,916,225
Other assets	7,093	6,583	17,667
Total assets	50,264,843	48,754,952	44,508,335
Accounts payable and other liabilities	1,416,116	1,221,146	1,416,339
Securities lending	3,851,420	4,927,493	3,916,225
Total liabilities	5,267,536	6,148,639	5,332,564
Net position restricted for benefits	$ 44,997,307	$ 42,606,313	$ 39,175,771

Receivables and payables related to investment securities are primarily generated through the timing differences between the trade and settlement dates of investment securities purchased or sold.

Investment Summary
June 30, 2019
(In thousands)

Investments — At fair value:	**QPP**	**PSOVSF**	**POVSF**	**Combined**
Short-term investments:				
Commercial paper	$ 235,970	$ -	$ -	$ 235,970
Discount notes	162,145	6,492	5,927	174,564
Short-term investment fund	234,110	1,005	651	235,766
U.S. treasury bills and agencies	-	-	-	-
Debt securities:				
Bank loans	206,667	-	-	206,667
Corporate and other	3,696,453	-	-	3,696,453
Mortgage debt securities	861,533	-	-	861,533
Treasury inflation protected securities	1,412,234	-	-	1,412,234
U.S. government and agencies	4,618,579	-	-	4,618,579
Equity securities				
Domestic equity	12,958,661	811,896	613,984	14,384,541
International equity	259,640	-	-	259,640
Collective trust funds at NAV:				
Bank loans	536,357	-	-	536,357
Corporate and other	50,620	237,504	181,261	469,385
Domestic equity	87,942	89,563	66,139	243,644
International equity	5,984,252	687,831	516,950	7,189,033
Mortgage debt securities	204,347	247,255	188,703	640,305
Opportunistic fixed income	132,311	-	-	132,311
Treasury inflation protected securities	457,367	-	-	457,367
U.S. government and agency	25,958	347,758	265,406	639,122
Alternative Investments:				
Infrastructure	406,813	-	-	406,813
Opportunistic fixed income	1,223,141	-	-	1,223,141
Private equity	2,516,553	-	-	2,516,553
Private real estate	1,980,800	-	-	1,980,800
Hedge fund investment	2,730,587	-	-	2,730,587
Collateral from securities lending	3,733,667	67,906	49,847	3,851,420
Total investments	$ 44,716,707	$ 2,497,210	$ 1,888,868	$ 49,102,785

Investment Summary
June 30, 2018
(In thousands)

Investments — At fair value:	**QPP**	**PSOVSF**	**POVSF**	**Combined**
Short-term investments:				
Commercial paper	$ 360,326	$ -	$ 1,601	$ 361,927
Discount notes	1,999	-	-	1,999
Short-term investment fund	339,461	58	74	339,593
U.S. treasury bills and agencies	61,471	-	-	61,471
Debt securities:				
Bank loans	32,808	-	-	32,808
Corporate other	3,649,108	-	-	3,649,108
Mortgage debt securities	880,807	-	-	880,807
U.S. Government and agencies	5,388,302	-	-	5,388,302
Equity Securities				
Domestic equity	11,790,375	473,521	594,208	12,858,104
International equity	155,859	-	-	155,859
Collective trust funds at NAV:				
Bank loans	615,119	-	-	615,119
Corporate and other	75,491	160,196	202,785	438,472
Domestic equity	124,872	43,077	54,446	222,395
International equity	6,273,065	437,593	558,172	7,268,830
Mortgage debt securities	186,862	-	-	186,862
Treasury inflation protected securities	1,744,591	-	-	1,744,591
U.S. government and agency	69,204	363,579	460,240	893,023
Alternative Investments:				
Infrastructure	245,615	-	-	245,615
Opportunistic fixed income	1,177,112	-	-	1,177,112
Private equity	2,430,345	-	-	2,430,345
Private real estate	1,820,823	-	-	1,820,823
Hedge fund investment	2,248,693	-	-	2,248,693
Collateral from securities lending	4,832,615	38,372	56,506	4,927,493
Total investments	$ 44,504,923	$ 1,516,396	$ 1,928,032	$ 47,949,351

Due to the long-term nature of the Funds liabilities, the assets are invested with a long-term investment horizon. Assets are invested in a diversified portfolio of capital market securities. Investments in these assets are expected to produce higher returns, but are also subject to greater volatility and may produce negative returns. For example, the Russell 3000 Index, a broad measure of the United States stock market gained 8.98% and 14.78% in Fiscal Years 2019 and 2018, respectively. Also in 2019, the World ex-USA Custom BM Index gained 0.16% and gained 7.82% in 2018. In Fiscal Year 2019, the Emerging International Market gained 1.21%, while in Fiscal Year 2018 it gained 8.20%. The returns of the Funds have been consistent with the broad market trend. For the three-year period ended June 30, 2019, the overall rate of return on investments was a gain of 10.04%, for the five-year period the overall rate of return was a gain of 7.07%, and for the ten-year period there was a gain of 10.16%.

Assets are invested long-term for the benefit of the Funds participants and their beneficiaries. All investments are managed by registered investments advisors, pursuant to applicable laws and to guidelines issued by The Comptroller of the City of New York. Collectively, the investments utilize sixteen domestic equity managers, twenty-four international equity managers, twenty-two hedge fund managers, forty-six private real estate managers, thirteen infrastructure managers, one hundred ten private equity investment managers, fourteen fixed income managers, and forty-one other fixed income managers.

Assets are allocated in accordance with policy adopted periodically by the Funds Boards of Trustees. The percentage in each category is determined by a study indicating the probable rates of return and levels of risk for various asset allocations. The actual allocation may vary from this policy mix as fair values shift and as investments are added or terminated.

Contact information

This financial report is designed to provide a general overview of the New York City Police Pension Funds finances. Questions concerning any data provided in this report or requests for additional information should be directed to the Director of Accounting, New York City Police Pension Fund, 233 Broadway, 25th Floor, New York, NY 10279.

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NEW YORK CITY POLICE PENSION FUNDS
COMBINING STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2019
(In thousands)

	QPP	PSOVSF	POVSF	Eliminations	Total Funds
ASSETS:					
Cash	$ 23,690	$ 411	$ 2,026	$ -	$ 26,127
Receivables:					
Investments securities sold	865,477	12,469	9,491	-	887,437
Member loans	238,644	-	-	-	238,644
Transferable earnings FY 17	-	241,628	24,164	(265,792)	-
Transferable earnings FY 18	-	115,000	3,000	(118,000)	-
Transferable earnings FY 19	-	311,000	108,000	(419,000)	-
Accrued interest & dividends	2,294	228	235	-	2,757
Total Receivables	1,106,415	680,325	144,890	(802,792)	1,128,838
Investments - At Fair Value					
Short-term investments:					
Commercial paper	235,970	-	-	-	235,970
Discount notes	162,145	6,492	5,927	-	174,564
Short-term investment fund	234,110	1,005	651	-	235,766
U.S. treasury bills and agencies	-	-	-	-	-
Debt Securities:					
Bank loans	206,667	-	-	-	206,667
Corporate and other	3,696,453	-	-	-	3,696,453
Mortgage debt securities	861,533	-	-	-	861,533
Treasury inflation protected securities	1,412,234	-	-	-	1,412,234
U.S. government and agency	4,618,579	-	-	-	4,618,579
Equity Securities:					
Domestic equity	12,958,661	811,896	613,984	-	14,384,541
International equity	259,640	-	-	-	259,640
Collective Trust Funds:					
Bank loans	536,357	-	-	-	536,357
Corporate and other	50,620	237,504	181,261	-	469,385
Domestic equity	87,942	89,563	66,139	-	243,644
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Mortgage debt securities	204,347	247,255	188,703	-	640,305
Opportunistic fixed income	132,311	-	-	-	132,311
Treasury inflation protected securities	457,367	-	-	-	457,367
U.S. government and agency	25,958	347,758	265,406	-	639,122
Alternative Investments:					
Infrastructure	406,813	-	-	-	406,813
Opportunistic fixed income	1,223,141	-	-	-	1,223,141
Private equity	2,516,553	-	-	-	2,516,553
Private real estate	1,980,800	-	-	-	1,980,800
Hedge fund investment	2,730,587	-	-	-	2,730,587
Collateral from securities lending	3,733,667	67,906	49,847	-	3,851,420
Total Investments	44,716,707	2,497,210	1,888,868	-	49,102,785
Other assets	7,093	-	-	-	7,093
Total assets	45,853,905	3,177,946	2,035,784	(802,792)	50,264,843
LIABILITIES:					
Accounts payable	265,086	244	188	-	265,518
Payable for investment securities purchased	863,328	12,440	9,350	-	885,118
Accrued benefits payable	69,608	118,052	77,820	-	265,480
Transferable earnings FY 17	265,792	-	-	(265,792)	-
Transferable earnings FY 18	118,000	-	-	(118,000)	-
Transferable earnings FY 19	419,000	-	-	(419,000)	-
Collateral from securities lending	3,733,667	67,906	49,847	-	3,851,420
Total liabilities	5,734,481	198,642	137,205	(802,792)	5,267,536
Net position restricted for benefits:					
Benefits to be provided by QPP	40,119,424	-	-	-	40,119,424
Benefits to be provided by VSF	-	2,979,304	1,898,579	-	4,877,883
Total net position restricted for benefits	$ 40,119,424	$ 2,979,304	$ 1,898,579	$ -	$ 44,997,307

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

NEW YORK CITY POLICE PENSION FUNDS
COMBINING STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2018
(In thousands)

	QPP	PSOVSF	POVSF	Eliminations	TOTAL Funds
ASSETS:					
Cash	$ 4,789	$ 804	$ 2,509	$ -	$ 8,102
Receivables:					
Investment securities sold	546,611	3,807	516	-	550,934
Member loans (Note 7)	232,882	-	-	-	232,882
Transferrable earnings due from/to QPP to/from VSF	-	1,292,000	194,000	(1,486,000)	-
Accrued interest and dividends	5,754	507	839	-	7,100
Total receivables	785,247	1,296,314	195,355	(1,486,000)	790,916
INVESTMENTS — At Fair Value (Notes 2 and 3):					
Short-term investments:					
Commercial paper	360,326	-	1,601	-	361,927
Discount notes	1,999	-	-	-	1,999
Short-term investment fund	339,461	58	74	-	339,593
U.S. Treasury bills and agencies	61,471	-	-	-	61,471
Debt securities:					
Bank loans	32,808	-	-	-	32,808
Corporate and other	3,649,108	-	-	-	3,649,108
Mortgage debt securities	880,807	-	-	-	880,807
U.S. government and agency	5,388,302	-	-	-	5,388,302
Equity securities:					
Domestic equity	11,790,375	473,521	594,208	-	12,858,104
International equity	155,859	-	-	-	155,859
Collective trust funds at NAV:					
Bank loans	615,119	-	-	-	615,119
Corporate and other	75,491	160,196	202,785	-	438,472
Domestic equity	124,872	43,077	54,446	-	222,395
International equity	6,273,065	437,593	558,172	-	7,268,830
Mortgage debt securities	186,862	-	-	-	186,862
Treasury inflation protected securities	1,744,591	-	-	-	1,744,591
U.S. Government and agency	69,204	363,579	460,240	-	893,023
Alternative Investments:					
Infrastructure	245,615	-	-	-	245,615
Opportunistic fixed income	1,177,112	-	-	-	1,177,112
Private equity	2,430,345	-	-	-	2,430,345
Private real estate	1,820,823	-	-	-	1,820,823
Hedge fund investment	2,248,693	-	-	-	2,248,693
Collateral from securities lending	4,832,615	38,372	56,506	-	4,927,493
Total investments	44,504,923	1,516,396	1,928,032	-	47,949,351
Other assets	6,583	-	-	-	6,583
Total assets	45,301,542	2,813,514	2,125,896	(1,486,000)	48,754,952
LIABILITIES:					
Accounts payable	302,529	186	149	-	302,864
Payable for investment securities purchased	629,892	3,746	459	-	634,097
Accrued benefits payable	91,639	115,640	76,906	-	284,185
Transferrable Earnings Due from/to QPP to/from VSF FY 17/18	1,486,000	-	-	(1,486,000)	-
Securities lending (Note 2)	4,832,615	38,372	56,506	-	4,927,493
Total liabilities	7,342,675	157,944	134,020	(1,486,000)	6,148,639
Net position restricted for benefits:					
Benefits to be provided by QPP	37,958,867	-	-	-	37,958,867
Benefits to be provided by VSF	-	2,655,570	1,991,876	-	4,647,446
Total net position restricted for benefits	$ 37,958,867	$ 2,655,570	$ 1,991,876	$ -	$ 42,606,313

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

NEW YORK CITY POLICE PENSION FUNDS
COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2019
(In thousands)

	QPP	PSOVSF	POVSF	Eliminations	Total Funds
Additions:					
Contributions:					
Member contributions	$ 278,087	$ -	$ -	$ -	$ 278,087
Employer contributions	2,558,256	-	-	-	2,558,256
Total contributions	2,836,343	-	-	-	2,836,343
Investment income (Note 2):					
Interest income	548,925	20,198	19,067	-	588,190
Dividend income	494,434	34,196	30,837	-	559,467
Net appreciation (depreciation) in fair value of invest	1,772,808	122,481	54,392	-	1,949,681
Total investment income	2,816,167	176,875	104,296	-	3,097,338
Less investment expenses	249,849	1,313	1,122	-	252,284
Net income	2,566,318	175,562	103,174	-	2,845,054
Securities lending transactions:					
Securities lending income	17,063	645	573	-	18,281
Securities lending fees	1,679	60	53	-	1,792
Net securities lending income	15,384	585	520	-	16,489
Net investment income	2,581,702	176,147	103,694	-	2,861,543
Net receipts from other retirement systems	1,907				1,907
Transferrable earnings FY 17	39,836	99,628	-	(139,464)	-
Transferrable earnings FY 18	100,000	-	-	(100,000)	-
Transferrable earnings FY 19	-	311,000	108,000	(419,000)	-
Litigation income	2,201	35	40	-	2,276
Total additions	5,561,989	586,810	211,734	(658,464)	5,702,069
Deductions:					
Benefit payments and withdrawals (Note 1)	2,853,799	263,076	165,195		3,282,070
Transferrable earnings FY 17	99,628	-	39,836	(139,464)	-
Transferrable earnings FY 18	-	-	100,000	(100,000)	-
Transferrable earnings FY 19	419,000	-	-	(419,000)	-
Administrative expenses	29,005	-	-	-	29,005
Total deductions	3,401,432	263,076	305,031	(658,464)	3,311,075
Net increase (decrease) in net position	2,160,557	323,734	(93,297)	-	2,390,994
Net position restricted for benefits					
Beginning of year	37,958,867	2,655,570	1,991,876	-	42,606,313
End of year	$ 40,119,424	$ 2,979,304	$ 1,898,579	$ -	$ 44,997,307

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

NEW YORK CITY POLICE PENSION FUNDS
COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2018
(In thousands)

	QPP	PSOVSF	POVSF	Eliminations	TOTAL Funds
Additions:					
Contributions:					
Member contributions	$ 267,031	$ -	$ -	$ -	$ 267,031
Employer contributions	2,415,153	-	-	-	2,415,153
Total contributions	2,682,184	-	-	-	2,682,184
Investment income (Note 2):					
Interest income	517,469	7,682	14,619	-	539,770
Dividend income	485,726	15,955	26,532	-	528,213
Net appreciation in fair value of investments	3,190,498	14,903	(40,510)	-	3,164,891
Total investment income	4,193,693	38,540	641	-	4,232,874
Less investment expenses	(285,243)	(579)	(1,126)	-	(286,948)
Net income	3,908,450	37,961	(485)	-	3,945,926
Securities lending transactions:					
Securities lending income	18,703	525	866	-	20,094
Securities lending fees	(1,870)	(53)	(87)	-	(2,010)
Net securities lending income	16,833	472	779	-	18,084
Net investment income	3,925,283	38,433	294	-	3,964,010
Net receipts from other retirement systems	1,627	-	-	-	1,627
Transferrable earnings to QPP from VSF's FY 18	-	1,150,000	130,000	(1,280,000)	-
Litigation income	1,781	26	31	-	1,838
	-				
Total additions	6,610,875	1,188,459	130,325	(1,280,000)	6,649,659
Deductions:					
Benefit payments and withdrawals (Note 1)	2,774,387	260,268	163,316	-	3,197,971
Transferrable earnings to QPP from VSF's FY 18	1,280,000	-	-	(1,280,000)	-
Administrative expenses	21,146	-	-	-	21,146
Total deductions	4,075,533	260,268	163,316	(1,280,000)	3,219,117
Net increase in net position	2,535,342	928,191	(32,991)	-	3,430,542
Net position restricted for benefits					
Beginning of year	35,423,525	1,727,379	2,024,867	-	39,175,771
End of year	$ 37,958,867	$ 2,655,570	$ 1,991,876	$ -	$ 42,606,313

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

1. PLAN DESCRIPTION

The City of New York (“City”) maintains a number of pension plans 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 Police Pension Fund (“POLICE” or “Funds”), 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”), and the New York City Fire Pension Fund (“FIRE”). Each separate pension system or fund is a separate Public Employee Retirement System (“PERS”) with a separate oversight body and are financially independent of the others.

POLICE administers the New York City Police Pension Funds, Tiers 1, 2, 3, and Tier 6 (Tier 3 Revised), in conjunction with the establishment of an administrative staff separate from the New York City Police Department, in accordance with Chapter 292 of the Laws of 2001- Qualified Pension Plan (“QPP”); as set forth in Administrative Code of the City of New York (“ACNY”) § 13-214.1, the Police Superior Officers’ Variable Supplements Fund (“PSOVSF”), as set forth in ACNY § 13-278; and the Police Officers’ Variable Supplements Fund (“POVSF”), as set forth in ACNY § 13-268.

The QPP is a single-employer pension plan. The QPP provides pension benefits for full-time uniformed employees of the New York City Police Department (“Employer”). All full-time uniformed employees of the New York City Police Department become members of the QPP upon employment. 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 PSOVSF and the POVSF (collectively, “VSFs”) operate pursuant to the provisions of Title 13, Chapter 2 of the ACNY and provide supplemental benefits to retired Police Superior Officers (including Detectives, and Sergeants through Deputy Chiefs) and retired Police Officers, respectively. To be eligible to receive benefits from the VSFs, Police Superior Officers or Police Officers must retire on or after October 1, 1968 with 20 or more years of credited service, and be receiving a service retirement benefit from the QPP. 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 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.

POLICE is a fiduciary fund of the City and is included in the Pension and Other Employee Benefit Trust Funds section of the City’s Comprehensive Annual Financial Report (“CAFR”).

Board of Trustees

The QPP Board of Trustees consists of twelve members. The Trustees and their voting rights are as follows: the Police Commissioner, a representative of the Mayor, the Comptroller, and the Commissioner of Finance (one and one-half votes each); four specified officers of the Patrolmen’s Benevolent Association (one vote each); and the presidents of the Detectives’ Endowment Association, the Sergeants Benevolent Association, the Lieutenants Benevolent Association, and the Captains Endowment Association (one-half vote each).

The PSOVSF Board of Trustees consists of seven members. The Trustees and their voting rights are as follows: a representative of the Mayor, the Comptroller and the Commissioner of Finance (two votes each), and four representatives of the Police Superior Officers’ Associations who are the four members of the QPP Board of Trustees (one vote each).

The POVSF Board of Trustees consists of five members each with one vote: a representative of the Mayor, Comptroller, and Commissioner of Finance and two of the officers of the Patrolmen's Benevolent Association that are members of the QPP Board of Trustees.

Membership Data

At June 30, 2019, 2018, and 2017 the QPP's membership consisted of:

	QPP		
	2019*	2018	2017
Retirees and beneficiaries receiving benefits	53,441	50,124	49,799
Terminated vested members not yet receiving benefits	505	491	502
Other inactives**	2,248	1,940	1,822
Active members receiving salary	36,038	36,562	36,165
Total	92,232	89,117	88,288

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

At June 30, 2019, 2018, and 2017 the PSOVSF and POVSF membership consisted of:

	PSOVSF			POVSF		
	2019*	2018	2017	2019*	2018	2017
Retirees currently receiving payments	19,021	19,005	18,750	12,645	12,675	12,602
Active members**	12,434	12,721	12,646	23,702	23,841	23,519
Total	31,455	31,726	31,396	36,347	36,516	36,121

* Estimated figures
** Represents the number of actively employed Police Superior Officers and Police Officers, respectively, as of the June 30 valuation dates.

Summary of Benefits

QPP

The New York State Constitution provides that the pension rights of public employees are contractual and shall not be diminished or impaired. In 1973, amendments were made to the New York State Retirement and Social Security Law ("RSSL") to modify certain benefits for employees joining the QPP on or after the effective date of such amendments. These amendments, which affect employees who joined the QPP on and after July 1, 1973, established certain benefit limitations relating to eligibility for retirement, the salary base for benefits and maximum benefits. Recent laws, including but not limited to Chapter 372 of the Laws of 2000 which provides a revised definition of salary base to be used in the computation of certain benefits for Tier 2 members of the QPP and Chapter 589 of the Laws of 2001 which eliminated the Tier 2 maximum 30 years of service limitation, have lessened these limitations.

The QPP currently administers the following pension tiers: Tier 1, Tier 2, Tier 3, and Tier 6 (Tier 3 Revised). Membership is mandatory for uniformed employees of the New York City Police Department.

The QPP provides four main types of retirement benefits for all tiers: Vested Retirements, Service Retirements, Ordinary Disability Retirements ("ODR") (non-job related disabilities), and Accident Disability Retirements ("ADR") (job-related disabilities). Additionally, the QPP provides death benefits for all tiers.

Tier 1 is applicable to members appointed to the NYPD prior to July 1, 1973. Tier 2 is applicable to members appointed between July 1, 1973 and June 30, 2009. Benefits are generally the same for Tier 1 and Tier 2.

For Tier 1 and Tier 2 members, the QPP generally provides the following:

- A Vested Retirement Benefit is payable to Tier 1 and 2 members with at least five years of uniform service. Tier 1 and 2 members who commenced their membership with the QPP prior to February 4, 2000 must have 15 years of uniformed service to be eligible for a Vested Retirement Benefit. This benefit is generally comprised of a pension equal to 1/40 of their final average salary for every year of uniformed service and is reduced or increased based on the actuarial value of an account shortage or excess. The benefit can be increased for any purchased non-uniformed service.

- A Service Retirement Benefit provides an allowance of one-half of final average salary after 20 years or 25 years of credited service (as elected), with additional benefits equal to a specified percentage per year of service (currently approximately 1.67%) of actual earnings times the number of years of service in excess of the 20-year or 25-year minimum. These additional 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 eligibility for service retirement. ITHP represents amounts assumed 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 increase pension contributions made to the QPP.

- ODR benefits are contingent on the member's amount of credited service. Members with less than ten years of credited service are entitled to a pension equal to 1/3 of their final average salary, members with 10-20 years of credited service are entitled to a pension equal to 50% of their final average salary; and members with 20 or more years of credited service are entitled to a pension equal to 1/40 of their final average salary for every year of credited service. All ODR benefits are either reduced for the annuity value of an account deficit, or increased for the annuity value of an account excess.

- An ADR benefit provides a pension of three-fourths of final salary plus an increment as described above based on years of service in excess of the 20-year or 25-year minimum plus an annuity based on the member's contributions with accumulated interest and the amount accumulated under the ITHP program.

- Tier 1 and Tier 2 members 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 ("Actual Balance"), 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 Required Amount. The Required Amount is the sum of the Required Contributions which a member should have made during his or her first 20 years of credited service, plus statutory interest 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 the actuarial value of any Excess of Contributions or reduced by any Deficiency of Contributions. The collective value of Required Amount, Actual Balance, and outstanding member loans, as of June 30, 2017, is as follows:

  Annuities attributable to member contributions are reduced on an actuarial basis for any loans with unpaid balances outstanding at the date of retirement.

  Cost of Living Adjustments ("COLA") are automatically payable to members who are either: (1) at least age 62 and have been retired for at least 5 years or (2) at least age 55 and have been retired for at least 10 years. Additionally, COLA are payable to members who retired for disability after being retired for 5 or more years and to beneficiaries receiving accidental death benefits who have been receiving them for at least 5 years. Beginning September 2001, COLA benefits equal 50% of the increase in the CPI-U based on the year ending March 31, rounded to the next higher .1% not less than 1% nor greater than 3% of the first $18,000 of the sum of maximum pension allowance and prior COLA.

  In June of 2009, the Governor vetoed legislation that would have extended Tier 2 to members hired after June 30, 2009. As a result of the Governor's veto, QPP members hired on and after July 1, 2009 are covered under Tier 3, as governed by Article 14 of the RSSL. As a result of Chapter 18 of the Laws of 2012, there are certain limitations on Tier 3 benefits available to participants hired on and after April 1, 2012. In most New York State PERS, including the QPP, these changes are sometimes referred to as Tier 6 or Tier 3 Revised.

  For Tier 3/Tier 3 Revised members, the QPP generally provides the following:

  A Normal Service Retirement Benefit is earned after completion of 22 years of uniformed service.

- An Early Service Retirement Benefit is payable upon completion of 20 years or age 62 for Tier 3 or upon completion of 20 years for Tier 3 Revised and is payable as a pension equal to 2.1% of Final Average Salary plus 1/3% of Final Average Salary for each month in excess of 20 years of uniformed service, such benefit not to exceed 50% of Final Average Salary.

- A Vested Benefit payable to members with at least five years of uniformed service. The benefit is equal to 2.1% of final average salary for every year of uniformed service, payable upon attainment of eligibility for early age, or 55.

- An ODR retirement allowance is payable to a Non-Enhanced member who has at least 5 years of service and is in receipt of Social Security Disability Benefits. An ODR benefit is 1/3 of Final Average Salary or 2% of Final Average Salary for each year of credited service, whichever is greater and does not exceed 50% of Final Average Salary.

- An ADR retirement allowance is payable to a Non-Enhanced member who was disabled as the result of a line-of-duty accident not attributable to his own willful negligence. An ADR pension is 50% of a member's Final Average Salary.

  All of the above retirement allowances are reduced by one-half of the member's Social Security Benefit attributable to New York State public earnings at age 62, regardless of eligibility for Social Security, except for ODR retirees, in which case the Social Security Offset occurs immediately.

  Tier 3/Tier 3 Revised members are eligible for annual Escalation on the retirement allowance: (1) in full, if they have retired for service completing 25 or more years of police service (or elected to defer commencement of their benefit to that 25-year date) or on a reduced basis, by 1/36 for each month that their retirement precedes 25 years or (2) in full, if they have retired for disability and are Non-Enhanced members or (3) in full, to their beneficiary for accidental death benefits. Escalation is determined from the change in the CPI-U based on the prior year ending December 31, not greater than 3% nor less than -3% in the event of a decrease. Tier 3/Tier 3 Revised members, when eligible, receive the greater of the applicable increase from COLA or Escalation.

  VSFs

  VSF benefits are payable to members who retire for a Service pension, regardless of tier.

  The PSOVSF provides a guaranteed schedule of supplemental benefits for Police Superior Officers who retire (or have retired) as Police Superior Officers on Service Retirement with at least 20 years of credited service as follows:

- For a Police Superior Officer hired before July 1, 1988, who retires from service as a Police Superior Officer on or after October 1, 1988, the annual benefit was $5,000 in Calendar Year 1993. For those who retired during the Calendar 1993 the annual $5,000 benefit was prorated.

  The annual benefit increases $500 each year thereafter to a maximum of $12,000 in Calendar Year 2007 and thereafter.

  For those who were members of the QPP prior to July 1, 1988, and who retire after Calendar Year 1993, the annual benefit payment is the scheduled amount described above prorated in the year of retirement and the full amount thereafter.

- For those who become members of the QPP on or after July 1, 1988, the annual supplemental benefit is $2,500 for the first twelve months of retirement, which increases 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 444 of the Laws of 2001 ("Chapter 444/01") such that these members will receive the maximum $12,000 benefit beginning Calendar Year 2008.

  The POVSF provides a guaranteed schedule of supplemental benefits for Police Officers who retire (or have retired) as Police Officers on Service Retirement with at least 20 years of credited service as follows:

- For those who retired prior to July 1, 1988, the annual benefit was $2,500 in Calendar Year 1988. For those who retired during Calendar Year 1988, the annual $2,500 benefit payment was prorated. The annual benefit increases $500 each year thereafter to a maximum of $12,000 in Calendar Year 2007 and thereafter.

For those who were members of the QPP prior to July 1, 1988 and who retire after Calendar Year 1988, the annual benefit payment is the scheduled amount described above prorated in the year of retirement and the full amount thereafter.

- For those who become members of the QPP on or after July 1, 1988, the annual supplemental benefit is $2,500 for the first twelve months of retirement, which increases by $500 each year until a maximum of $12,000 is payable in the twentieth and later years of retirement. This was modified by Chapter 503 of the Laws of 1995 ("Chapter 503/95") such that these members will receive the maximum $12,000 benefit beginning Calendar Year 2008 and thereafter.

Chapter 503 of the Laws of 1995 ("Chapter 503/95") amended the ACNY in relation to the transfer of assets, liabilities and administration of certain pension funds in the New York City Police Department. In addition, this law permits certain active employees with prior service credit before entering the QPP to utilize their original dates of hire for determining eligibility for benefits from the PSOVSF and POVSF.

In addition to the VSF benefits discussed earlier, Chapter 216 of the Laws of 2002 ("Chapter 216/02") provides that all participants of the PSOVSF and POVSF who retire for service from the QPP on and after January 1, 2002, with more than 20 years of credited service are entitled to the Deferred Retirement Option Plan ("DROP"). The DROP, also known as "Banked Variable," represents the VSF payments that the member would have received had he retired for service upon reaching eligibility. The DROP payment is an eligible distribution that may be rolled over pursuant to IRS regulations. Members who retired for a disability or die in active service are not eligible for the VSF DROP.

Any increase in the amount of ad-hoc cost-of-living increases ("Supplementation") or automatic COLA payable from the QPP to a retiree of the PSOVSF under legislation enacted on or after January 1, 1993 or to a retiree of the POVSF under legislation enacted on or after January 1, 1988, will reduce benefits payable from the PSOVSF or POVSF 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 (2) January 1, 2008.

Chapter 3 of the Laws of 2013 ("Chapter 3/13") provides for the transfer of assets from the QPP to the PSOVSF and POVSF if assets of the PSOVSF and POVSF are insufficient to pay scheduled benefits.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting — The Funds use 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 by the QPP when the employer makes payroll deductions from QPP 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 combining 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 combining 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 quoted market value on the last trading day of the period, except for the Short-Term Investment Fund ("STIF") (a money market fund), International Investment funds ("IIF") and Alternative Investment funds ("ALTINVF"). The IIF are private funds of publicly traded securities which are managed by various investment managers on behalf of the Funds. Fair value is determined by POLICE 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 POLICE management based on information provided by the various GPs after review by an independent consultant and the custodian bank for the Funds.

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 the accrual basis.

Income Taxes — Income earned by the Funds is not subject to Federal income tax.

Accounts Payable — Accounts payable is principally comprised of amounts owed to the Funds' banks for overdrawn bank balances. The Funds' practice is to fully invest cash balances in 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 and these balances are routinely settled each day.

Accrued Benefits Payable — Accrued benefits payable represents benefits due and unpaid by the Funds as of the fiscal year end.

Securities Lending Transactions — State statutes and Board policies permit the Funds to lend its investments to broker-dealers and other entities for collateral, for the same securities in the future with a simultaneous agreement to return the collateral in the form of cash, treasury and U.S. Government securities. The Funds' agent lends the following types of securities: short-term securities, common stocks, long-term corporate bonds, U.S. Government and U.S. Government agency bonds, asset-backed securities, and international equities and bonds held in collective investment funds. In return, the Funds receive collateral in the form of cash, U.S. Treasury and U.S. Government agency securities at 100% to 105% of the principal plus accrued interest for reinvestment. At June 30, 2019 and 2018,management believes that the Funds had no credit risk exposure to borrowers because the amounts the Funds owed the borrowers equaled or exceeded the amounts the borrowers owed the Funds. The contracts with the Funds' Custodian require the Securities Lending Agent to Indemnify the Funds. In the situation when a borrower goes into default, the Agent will liquidate the collateral to purchase replacement securities. Any shortfall before the replacement securities cost and the collateral value is covered by the Agent. All securities loans can be terminated on demand within a period specified in each agreement by either the Funds or the borrowers. Cash collateral is invested by the securities lending agent using approved Lender's Investment guidelines. The weighted average maturity is 53.78 days. The securities lending program in which the Funds participate only allows pledging or selling securities in the case of borrower default.

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 statement of plan 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, the Funds 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, 2019 and 2018 was $3.7 billion and $4.8 billion, respectively for the QPP, $69.9 million and $40.9 million respectively for the PSOVSF, and $51.9 million and $60.3 million, respectively for the POVSF. Cash collateral received related to securities lending as of June 30, 2019 and 2018 was $3.7 billion and $4.8 billion, respectively for the QPP, $67.9 million and $38.4 million, respectively for the PSOVSF, and $49.8 million and $56.5 million, respectively for the POVSF.

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' combining financial statement as a result of the implementation of GASB 72.

3. INVESTMENTS AND DEPOSITS

The Comptroller of the City of New York (the "Comptroller") acts as an investment advisor to the Funds. In addition, the Funds employ several independent investment consultants as investment advisors. The Funds utilize 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.

Investment policy is approved by the respective Boards of Trustees of the Funds. The Funds' investment policy is implemented using a strategic allocation of assets that meets their objectives, while working within the confines of the ACNY and the RSSL. The ACNY authorizes the investment in assets, except equities, subject to the terms, conditions, limitations and restrictions imposed by law for investment by Savings Banks. Equity investments may be made only in stocks that meet the qualifications of the State RSSL. Short-term investments may be made in U.S. Government securities or other securities fully guaranteed by the U.S. Government, commercial paper rated A1 or P1 or fully collateralized repurchase agreements. Investments up to 25% of total assets held by the Funds may be made in instruments not expressly permitted by the State RSSL.

The Funds do not possess an investment risk policy statement nor does it actively manage assets to specified risk targets. Rather, investment risk management is an inherent function of the 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 Years 2019 and 2018 included securities in the following categories:

	2019	2018
U.S. Equity	31.0 %	29.9 %
Core U.S. Fixed	11.0	19.7
EAFE Markets	9.0	9.3
Private Equities	7.0	6.2
Emerging Market	6.0	6.6
Enhanced Yield Bonds	7.0	4.6
Real Assets	8.0	4.6
Infrastructure	2.0	0.6
Hedge Funds	6.0	5.7
REITS	0.0	0.0
TIPS	4.0	4.4
Opportunistic Fixed	5.0	3.0
Cash	0.0	1.0
Bank Loans	2.0	1.6
ETI	2.0	1.0
Convertible Bonds	0.0	1.8
Total	100.0 %	100.0 %

Concentrations — None of the Funds have any investments in any one entity that represent 5% or more of their fiduciary net position.

Credit Risk — The plausible risk of a loss or default resulting from a borrower's inability to repay a loan or fulfill its contractual debt obligations. Portfolios other than U.S. Government and related portfolios, have credit rating limitations. Investment Grade portfolios are limited to mostly ratings, of Baa2 and above, except that they are also permitted a 10% maximum exposure to Ba2 & B2 rated securities. While High Yield non-investment grade managers primarily invest in Ba2& B2 rated securities, they can also invest up to 10% of their portfolio in securities rated Caa2. The quality ratings of the Fund's investments, by percentage of the rated portfolio, as described by nationally recognized rating organizations, at June 30, 2019 and 2018 are as follows:

	Moody's Quality Ratings																		
Investment Type & Fair Value	**Aaa**	**Aa1**	**Aa2**	**Aa3**	**A1**	**A2**	**A3**	**Baa1**	**Baa2**	**Baa3**	**Ba1**	**Ba2**	**Ba3**	**B1**	**B2**	**B3**	**Caa & Below**	**NR**	**Total**
June 30, 2019																			
U.S. government	57.06%	0.02%	0.05%	0.01%	0.03%	0.01%	0.04%	0.02%	0.09%	0.01%	-	-	-	-	-	-	-	0.65%	57.99%
Corporate bonds	0.39%	0.23%	0.12%	0.17%	0.28%	1.27%	1.21%	1.56%	1.78%	2.34%	1.55%	2.44%	4.28%	3.53%	4.02%	3.40%	2.21%	8.09%	38.87%
Short term																			
Commercial paper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.14%	3.14%
Pooled fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
Discount notes & T-bills	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00%
Percent of rated oortfolio	57.45%	0.25%	0.17%	0.18%	0.31%	1.28%	1.25%	1.58%	1.87%	2.35%	1.55%	2.44%	4.28%	3.53%	4.02%	3.40%	2.21%	11.88%	100.00%

	Moody's Quality Ratings																		
Investment Type & Fair Value	**Aaa**	**Aa1**	**Aa2**	**Aa3**	**A1**	**A2**	**A3**	**Baa1**	**Baa2**	**Baa3**	**Ba1**	**Ba2**	**Ba3**	**B1**	**B2**	**B3**	Caa & **Below**	Not **Rated**	Total
June 30, 2018																			
U.S. government	60.56%	0.02%	0.03%	0.02%	0.01%	0.02%	0.07%	0.00%	0.08%	0.01%	0.00%	0.00%	-	-	-	-	-	0.94%	61.76%
Corporate bonds	0.66%	0.18%	0.10%	0.14%	0.30%	0.87%	1.38%	1.96%	2.19%	2.44%	1.84%	1.95%	3.34%	3.20%	2.62%	2.89%	1.87%	7.57%	35.50%
Short term																			
Commercial paper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.74%	2.74%
Pooled fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Discount notes & T-bills	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Percent of rated portfolio	61.22%	0.20%	0.13%	0.16%	0.31%	0.89%	1.45%	1.96%	2.27%	2.45%	1.84%	1.95%	3.34%	3.20%	2.62%	2.89%	1.87%	11.25%	100.00%

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, the Funds 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 Funds and are held by either the counterparty or the counterparty's trust department or agent but not in the name of the Funds.

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

All of the Funds' deposits are insured by the Federal Deposit Insurance Corporation and collateralized by securities held by a financial institution separate from the Funds' depository financial institution.

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Interest Rate Risk — The risk that the value of debt securities will be affected by fluctuations in market interest rates. Although there is no formal interest rate risk management policy, the duration of the portfolio, relative to the duration of the portfolio's benchmark, is monitored by the Bureau of Asset Management. The lengths of investment maturities (in years) of the Funds' investments, as shown by the percent of the rated portfolio, at June 30, 2019 and 2018, are as follows:

Years to Maturity

	Investment Maturities (in years)				
Investment Type June 30, 2019	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. government	57.99%	0.15%	16.70%	13.24%	27.90%
Corporate bonds	38.87%	0.86%	20.26%	11.26%	6.49%
Short-term:					
Commercial paper	3.14%	3.14%	-	-	-
Pooled fund	-	-	-	-	-
U.S. treasuries/agencies	-	-	-	-	-
Discount notes	-	-	-	-	-
Percent of rated portfolio	100.00 %	4.15 %	36.96 %	24.50 %	34.39 %

Years to Maturity

	Investment Maturities (in years)				
Investment Type June 30, 2018	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. government	61.76 %	0.59 %	25.77 %	11.10 %	24.30 %
Corporate bonds	35.50	1.28	16.23	11.50	6.49
Short-term:			-	-	-
Commercial paper	2.74	2.74	-	-	-
Pooled fund	-	-	-	-	-
U.S. treasuries/agencies	-	-	-	-	-
Discount notes	-	-	-	-	-
Percent of rated portfolio	100.00 %	4.61 %	42.00%	22.60 %	30.79 %

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 stock and/or bonds. The currency markets have proven to be good diversifiers in a total portfolio context; therefore, the Funds have 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. Foreign currency exposures of the Funds' investments as of June 30, 2019 and 2018, are as follows:

Trade Currency	6/30/2019 Fair Value	6/30/2018 Fair Value
Uae Dirham	$ 15,710,158	$ 13,608,747
Australian Dollar	187,089,778	165,760,871
Brazilian Real	180,559,159	140,653,421
Botswana Pula	1,068,369	961,392
Canadian Dollar	265,033,624	223,983,128
Swiss Franc	362,771,428	341,012,189
Chilean Peso	25,550,558	26,766,974
China	41,005	-
Yuan Renminbi	25,932,049	9,352,661
Colombian Peso	11,440,359	12,929,796
Czech Koruna	5,418,419	6,634,145
Danish Krona	105,286,653	102,356,384
Egyptian Pound	4,576,740	4,637,661
Euro Currency	1,751,804,568	1,575,862,199
Pound Sterling	787,235,785	786,781,425
Ghana Cedi	620,250	790,308
Hong Kong Dollar	837,125,362	801,111,924
Kuna	3,195,149	2,985,174
Hungarian Forint	10,982,779	7,646,261
Indonesian Rupiah	70,729,868	63,425,512
New Israeli Sheqel	15,082,550	13,218,304
Indian Rupee	263,333,850	267,824,955
Jordanian Dinar	2,895,648	3,020,601
Japanese Yen	915,577,072	913,356,143
Kenyan Shilling	3,347,362	3,718,179
South Korean Won	366,008,046	397,000,652
Kuwaiti Dinar	10,000,162	7,767,051
Moroccan Dirham	2,727,597	2,863,943
Mauritius Rupee	2,593,668	2,690,315
Mexican Peso (New)	66,772,024	72,521,638
Malaysian Ringgit	53,775,517	62,343,521
Nigerian Naira	2,449,603	2,737,994
Norwegian Krone	48,450,253	47,747,671
New Zealand Dollar	6,973,481	4,596,332
Omani Rial	2,772,280	3,047,494
Peruvian Nouveau Sol	1,883,505	2,015,445
Philippine Peso	30,985,951	29,138,201
Pakistan Rupee	2,874,804	6,585,052
Polish Zloty	46,708,781	42,233,118
Qatari Rial	19,670,421	20,307,553
Romanian Leu	3,902,121	3,401,849
Russian Ruble	2,870,937	2,425,013
Swedish Krona	103,455,298	102,995,564
Singapore Dollar	68,029,588	59,875,831
Thailand Baht	96,897,082	81,849,514
Tunisian Dinar	1,120,738	1,201,634
Turkish Lira	42,009,746	47,098,425
New Taiwan Dollar	275,289,768	292,483,109
South African Rand	144,203,985	158,318,405
	$ 7,254,833,894	$ 6,941,643,680

Securities Lending Transactions: *Credit Risk* — The quality ratings of investments held as collateral for Securities Lending by the Funds at June 30, 2019 and 2018, are as follows:

Securities lending Credit quality (in thousands) June 30, 2019	Moodys Quality Ratings											
	Aaa & Below	Aa & Below	A1	A2	A3	Baa2 & Below	Ba & Below	B & Below	Caa & Below	Ca & Below	NR	Total
Short-term												
Reverse repurchase agreements	$ -	$ -	$ 125,000	$ 205,320	$ 1,564,736	$ 34,200	$ -	$ -	$ -	$ -	$ 1,358,517	$ 3,287,773
Certificate of deposits	-	-	-	-	-	-	-	-	-	-	-	-
Commerical paper	-	-	-	-	-	-	-	-	-	-	-	-
Money market	55,352	-	-	-	-	-	-	-	-	-	6,048	61,400
Bank notes	-	-	-	-	-	-	-	-	-	-	-	-
US treasury	-	-	-	-	-	-	-	-	-	-	-	-
US agency	-	-	-	-	-	-	-	-	-	-	13,982	13,982
Time deposit	-	-	-	-	-	-	-	-	-	-	-	-
Cash or cash equivalent	-	-	369,691	-	-	-	-	-	-	-	-	369,691
Payable/receivable	-	-	-	-	-	-	-	-	-	-	-	-
Uninvested	-	-	-	-	-	-	-	-	-	-	821	821
Total	55,352	-	494,691	205,320	1,564,736	34,200	-	-	-	-	1,379,368	3,733,667
By percent	1.48%	0.00%	13.25%	5.50%	41.91%	0.92%	0.00%	0.00%	0.00%	0.00%	36.94%	100.00%

Securities lending Credit quality (in thousands) June 30, 2018	Moodys Quality Ratings											
	Aaa & Below	Aa & Below	A1	A2	A3	Baa & Below	Ba & Below	B & Below	Caa & Below	Ca & Below	Not Rated	Total
Short-term												
Reverse repurchase agreements	$ -	$ -	$ 125,000	$ 218,367	$ 1,359,993	$ 219,693	$ -	$ -	$ -	$ -	$ 2,408,236	$ 4,331,289
Certificate of deposits	-	-	-	-	-	-	-	-	-	-	-	-
Commerical paper	-	-	-	-	-	-	-	-	-	-	-	-
Money market	19,339	-	-	-	-	-	-	-	-	-	-	19,339
Bank notes	-	-	-	-	-	-	-	-	-	-	-	-
US treasury	-	-	-	-	-	-	-	-	-	-	-	-
US agency	-	-	-	-	-	-	-	-	-	-	5,733	5,733
Time deposit	-	-	-	-	-	-	-	-	-	-	-	-
Cash or cash equivalent	-	-	475,402	-	-	-	-	-	-	-	-	475,402
Payable/receivable	-	-	-	-	-	-	-	-	-	-	-	-
Uninvested	-	-	-	-	-	-	-	-	-	-	852	852
Total	19,339	-	600,402	218,367	1,359,993	219,693	-	-	-	-	2,414,821	4,832,615
By percent	0.40%	0.00%	12.42%	4.52%	28.14%	4.55%	0.00%	0.00%	0.00%	0.00%	49.97%	100.00%

Interest Rate Risk — The lengths of investment maturities (in years) of the collateral for Securities Lending held by the Funds at June 30, 2019 and 2018, are as follows:

Investment Type (In Thousands)	Investment Maturities (in years)				
June 30, 2019	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. government	$ -	$ -	$ -	$ -	$ -
Corporate bonds	-	-	-	-	-
Yankee bonds	-	-	-	-	-
Short-term:					
Repurchase agreements	-	-	-	-	-
Reverse repurchase agreements	3,386,883	3,386,883	-	-	-
Certificate of deposits	-	-	-	-	-
Commercial paper	-	-	-	-	-
Money market funds	69,625	69,625	-	-	-
Bank notes	-	-	-	-	-
U.S. treasury	-	-	-	-	-
U.S. agencies	17,894	17,894	-	-	-
Time deposit	-	-	-	-	-
Cash or cash equivalent	376,197	376,197	-	-	-
Uninvested	821	821	-	-	-
Total	$ 3,851,420	$ 3,851,420	$ -	$ -	$ -
Percent of securities lending portfolio	100.00 %	100.00 %	- %	- %	- %

Investment Type (In thousands)	Investment Maturities (in years)				
June 30, 2018	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. government	$ -	$ -	$ -	$ -	$ -
Corporate bonds	-	-	-	-	-
Yankee bonds	-	-	-	-	-
Short-term:					
Repurchase agreements	-	-	-	-	-
Reverse repurchase agreements	4,415,983	4,415,983	-	-	-
Certificate of deposits	-	-	-	-	-
Commercial paper	-	-	-	-	-
Money market funds	23,120	23,120	-	-	-
Bank notes	6,855	6,855	-	-	-
U.S. treasury	-	-	-	-	-
U.S. agencies	-	-	-	-	-
Time deposit	-	-	-	-	-
Cash or cash equivalent	480,659	480,659	-	-	-
Uninvested	877	877	-	-	-
Total	$ 4,927,494	$ 4,927,494	$ -	$ -	$ -
Percent of securities lending portfolio	100.00 %	100.00 %	- %	- %	- %

Rate of Return — For the years ended June 30, 2019 and 2018, the annual money-weighted rate of return on investments, net of investment expense, for the Funds were as follows:

	2019	2018
QPP	6.81 %	9.60 %
PSOVSF	9.27 %	4.42 %
POVSF	5.77 %	6.71 %

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 Funds 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.

GASB 72 – Level Inputs

The Funds categorize 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 Funds have the following recurring fair value measurements as of June 30, 2019 and June 30, 2018:

GASB 72 - Disclosure
(In thousands)

	2019			
	Level One	Level Two	Level Three	Total
Investments — At fair value				
Short-term investments:				
Commercial paper	$ -	$ 235,970	$ -	$ 235,970
Discount notes	-	174,564	-	174,564
Short-term investment fund	-	235,766	-	235,766
U.S. treasury bills and agencies	-	-	-	-
Debt securities:				-
Bank loans	-	206,667	-	206,667
Corporate and other	-	3,696,453	-	3,696,453
Mortgage debt securities	-	804,217	57,317	861,534
Treasury inflation protected securities	-	1,412,234	-	1,412,234
U.S. government and agency	-	4,618,579	-	4,618,579
Equity securities:				
Domestic equity	14,215,970	-	168,571	14,384,541
International equity	259,364	-	276	259,640
Collective trust funds:				
Bank loans	-	535,080	1,277	536,357
Corporate and other	-	469,386	-	469,386
Domestic equity	243,040	-	604	243,644
International equity	7,188,413	-	619	7,189,032
Mortgage debt securities	-	527,130	113,174	640,304
Opportunistic fixed income	-	129,855	2,456	132,311
Treasury inflation protected securities	-	457,367	-	457,367
U.S. government and agency	-	639,122	-	639,122
Alternative investments:				
Infrastructure	-	-	406,813	406,813
Opportunistic fixed income	-	-	1,223,141	1,223,141
Private equity	6,260	-	2,510,293	2,516,553
Private real estate	-	-	1,980,800	1,980,800
Total investments at fair value	$ 21,913,047	$ 14,142,390	$ 6,465,341	42,520,778
Alternative investments valued at net asset value				2,730,587
Total investments				$ 45,251,365

GASB 72 Disclosure
(In thousands)

	2018			
	Level One	Level Two	Level Three	Total
Investments — At fair value				
Short-term investments:				
Commercial paper	$ -	$ 361,927	$ -	$ 361,927
Discount notes	-	1,999	-	1,999
Short-term investment fund	-	339,594	-	339,594
U.S. treasury bills	61,471	-	-	61,471
Debt securities:				
Bank loans	-	32,808	-	32,808
U.S. government and agency	-	5,388,301	-	5,388,301
Mortgage debt securities	-	880,807	-	880,807
Corporate and other	-	3,595,983	53,125	3,649,108
Equity securities				
Domestic equity	12,857,167	-	936	12,858,103
International equity	155,858	-	1	155,859
Alternative investments				
Infrastructure			245,615	245,615
Opportunistic fixed income			1,177,112	1,177,112
Private equity	10,192		2,420,153	2,430,345
Private real estate			1,820,823	1,820,823
Collective trust funds:				
Bank loans	-	615,119	-	615,119
Corporate and other	-	438,465	8	438,473
Domestic equity	220,148	-	2,247	222,395
International equity	7,268,126	-	704	7,268,830
Mortgage debt security	-	86,741	100,121	186,862
Opportunistic fixed income	-	-	-	-
Treasury inflation protected securities	-	1,744,591	-	1,744,591
U.S. government and agency	-	893,023	-	893,023
Total investments at fair value	$ 20,572,962	$ 14,379,358	$ 5,820,845	40,773,165
Alternative investments valued at net asset value				2,248,693
Total investments				$ 43,021,858

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 of the fair value 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.

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 should be valued by the GP using one or more valuation methodologies outlined in FASB 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 FASB ASC 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 FASB ASC 820-10-35-59 have not been classified in the fair value hierarchy. The fair value quantities presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the entity's combining financial statements.

4. TRANSFER TO VARIABLE SUPPLEMENTS FUNDS

The ACNY provides that the QPP transfer to the VSFs an amount equal to certain excess earnings on 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 those 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") less any cumulative deficiencies. The VSFs also receive credit for investment earnings on VSF assets.

The calculation of the Hypothetical Fixed Income Security Earnings requires the determination of the Hypothetical Interest Rate ("HIR"), which is computed by the Comptroller.

For Fiscal Year 2019, the excess earnings of the QPP, inclusive of prior years' cumulative deficiencies, are estimated to be equal to $631 million. After application of the ABO Gate, a liability of $108 million to POVSF and a liability of $311 million to PSOVSF have been reported by the QPP as of and for the year ended June 30, 2019, respectively.

For Fiscal Year 2018, the excess earnings of the QPP, inclusive of prior years' cumulative deficiencies, are estimated to be equal to $2,439 million. After application of the ABO Gate, a liability of $30 million to POVSF and a liability of $1,150 million to PSOVSF have been reported by the QPP as of and for the year ended June 30, 2018, respectively.

In addition, under Chapter 3 of the Laws of 2013, if the assets of the POVSF or PSOVSF are less than the amount required to pay the retirees' guaranteed supplemental benefit payments, then an amount sufficient to pay such benefits shall be appropriated from the Contingent Reserve Fund of the QPP.

The amounts shown for the ABO, are the 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 VSFs on a going-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due and make comparisons among Variable Supplements Funds.

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

A comparison of the ABO as calculated by the Funds' Chief Actuary (the "Actuary") with the net position restricted for benefits for the POVSF and the PSOVSF as calculated by the Actuary as of June 30, 2018 and June 30, 2017, follows:

	POVSF		PSOVSF	
	2018	2017	2018	2017
	(In millions)			
Accumulated benefit obligation[1] for:				
Retirees currently receiving benefits	$ 1,509.9	$ 1,505.6	$ 2,302.0	$ 2,284.4
Active members	383.7	374.5	1,247.5	1,217.6
Total accumulated benefit obligation[2]	1,893.6	1,880.1	3,549.5	3,502.0
Net position held in trust for benefits[3]	1,991.9	2,024.9	2,655.6	1,727.4
Unfunded accumulated benefit obligation	$ (98.3)	$ (144.8)	$ 893.9	$ 1,774.6

[1] Based on actuarial assumptions adopted by the Board of Trustees of the QPP during Fiscal Year 2019.

[2] These total ABOs have been reduced by accrued benefits payable. This basis of reporting the total ABO is consistent with that used to report net position restricted for benefits in these combining financial statements, but may differ from the bases used for other purposes.

[3] See Note 2 for valuation of investments in the calculation of net position restricted for benefits.

For purposes of the June 30, 2018 and the June 30, 2017 actuarial valuations of the VSFs, Chapter 125/00 has been taken into account in the determination of the unfunded ABO relative to the Supplementation benefit increases that began Fiscal Year 2001 and to the automatic COLA benefits provided for Fiscal Year 2002 and each future year (Note 1).

Sections 13-270 and 13-280 of the ACNY provide that the Boards of Trustees of the POVSF and the PSOVSF shall adopt, upon the recommendation of the Actuary, actuarial assumptions as to interest rate, mortality of retirees and estimated number of active members of the QPP in service as of each June 30 who will retire for service with 20 or more years of service as Police Officers and Police Superior Officers, for use in making annual valuations of liabilities.

The following actuarial assumptions represent the recommendations of the Actuary that were used in the actuarial calculations to determine the preceding ABOs as of June 30, 2018 and June 30, 2017, respectively:

	June 30, 2018	June 30, 2017
Investment rate of return	7.0% per annum.[1, 2]	7.0% per annum.[1, 2]
Post-retirement mortality	Tables adopted by the Board of Trustees during Fiscal Year 2019.	Tables adopted by the Board of Trustees during Fiscal Year 2019.
Active service: withdrawal, death, disability	Tables adopted by the Board of Trustees during Fiscal Year 2019.	Tables adopted by the Board of Trustees during Fiscal Year 2019.
Service retirement	Tables adopted by the Board of Trustees during Fiscal Year 2019.	Tables adopted by the Board of Trustees during Fiscal Year 2019.
Percentage of all active POLICE members estimated to retire for service with 20 or more years of service as Police Officers	40%	40%
Percentage of all active Police Superior Officers estimated to retire for service with 20 or more years of service as Police Superior Officers	100%.	100%.
Cost-of-Living Adjustments[1]	1.5% per annum Auto Cola 2.5% per annum for Escalation.	1.5% per annum Auto Cola 2.5% per annum for Escalation.

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

2 Net of Investment Expenses.

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 — Tier 1 and Tier 2 members contribute by salary deductions on the basis of a normal rate of contribution, based on age and actuarial tables in effect at the time of membership. Member contribution rates are reduced by 5.0% under the ITHP program as defined earlier. Additionally, members may voluntarily increase their rates of contribution by 50% for the purpose of purchasing an additional annuity. Members are permitted to borrow up to 90% of their own contributions including accumulated interest.

Tier 3/Tier 3 Revised members contribute 3.0% of pensionable earnings until attainment of 25 years of credited service.

Employer Contributions — Statutory Contributions to the QPP, determined by 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, 2019, based on an actuarial valuation as of June 30, 2017 was $2,558.3 million and the Statutory Contribution for the year ended June 30, 2018, based on an actuarial valuation as of June 30, 2016 was $2,415.2 million. The Statutory Contributions for Fiscal Years 2019 and 2018 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 the Statutory Contributions.

6. NET PENSION LIABILITY

The components of the net pension liability of the Employer at June 30, 2019 and 2018 for the Funds were as follows:

		(in thousands)		
June 30, 2019	**QPP**	**POVSF**	**PSOVSF**	**TOTAL**
Total pension liability*	$ 49,089,967	$ 2,034,839	$ 3,872,625	$ 54,997,431
Fiduciary net position**	40,119,424	1,976,399	3,097,356	45,193,179
Employers' net pension liability	$ 8,970,543	$ 58,440	$ 775,269	$ 9,804,252
Fiduciary net position as a percentage of the total pension liability	81.73 %	97.13 %	79.98 %	82.17 %

		(in thousands)		
June 30, 2018	**QPP**	**POVSF**	**PSOVSF**	**TOTAL**
Total pension liability*	$ 48,379,197	$ 2,022,236	$ 3,754,205	$ 54,155,638
Fiduciary net position**	37,958,867	2,068,782	2,771,210	42,798,859
Employers' net pension liability	$ 10,420,330	$ (46,546)	$ 982,995	$ 11,356,779
Fiduciary net position as a percentage of the total pension liability	78.46 %	102.30 %	73.82 %	79.03 %

* Includes liabilities from Special Accidental Death Benefits pursuant to Section 208-f of the General Municipal Law.

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

Actuarial Methods and Assumptions

The total pension liability as of June 30, 2019 and 2018 were determined by actuarial valuations as of June 30, 2018 and June 30, 2016, 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.
COLAs	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 and beneficiaries were developed from an experience study of the QPP.

The Fiscal Year 2019 results reflect changes in the actuarial assumptions and methods since the prior year. The changes are primarily the result of an experience study performed by Bolton, Inc., which compared actual experience of the systems for the four and ten-year periods ending June 30, 2017 to that expected based on the prior set of actuarial assumptions and methods. These new actuarial assumptions and methods were adopted by the POLICE Retirement Board during Fiscal Year 2019.

Pursuant to Section 96 of the New York City Charter, a study of the actuarial assumptions used to value liabilities of the QPP is conducted every two years.

The obligations of the QPP to the POVSF and the PSOVSF are recognized through the Liability Valuation Method. Under this method the actuarial present value ("APV") of Future SKIM from the QPP to the POVSF and PSOVSF is included directly as an actuarial liability to the QPP. SKIM is all or a portion of the excess earnings on equity securities of the QPP which are transferable to the POVSF and PSOVSF. The APV of Future SKIM is computed as the excess, if any, of the APV of benefits of the POVSF and PSOVSF offset by the actuarial asset value of the POVSF and PSOVSF, respectively.

Expected Rate of Return on Investments

The long-term expected rate of return on the Funds' 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	Target Asset Allocation	Long-Term Expected Real Rate of Return
Public Markets:		
U.S. Public Market Equities	31.0%	6.5%
Developed Public Market Equities	9.0%	6.8%
Emerging Public Market Equities	6.0%	8.3%
Private Markets (Alternative Investments):		
Private Equity	7.0%	11.2%
Fixed Income (Core, TIPS, HY, Opportunistic, Convertibles)	31.0%	2.5%
Alternatives (real Assets, Hedge Funds)	16.0%	5.1%
	100.0%	

Discount Rate

The discount rate used to measure the total pension liability was 7.0%. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the rates applicable to the current Tier for each member and that City contributions will be made at rates as determined by the Actuary. Based on those assumptions, the Funds' fiduciary net position was projected to be available to make all projected future benefit payments of current active and non-active members. Therefore, the long-term expected rate of return on the Funds' 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 as of June 30, 2019, 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) **Net Pension Liability — June 30, 2019**	**1% Decrease** **(6.0%)**	**Discount Rate** **(7.0%)** **(In Thousands)**	**1% Increase** **(8.0%)**
QPP	$ 14,595,377	$ 8,970,543	$ 4,294,294
POVSF	273,140	58,440	(122,262)
PSOVSF	1,169,125	775,269	442,668
Total	$ 16,037,642	$ 9,804,252	$ 4,614,700

7. MEMBER LOANS

Tier 1 and 2 members are permitted to borrow up to 90% of their own contributions, including accumulated interest. Loans are repaid at the statutory interest rate of 4%. The balance of QPP member loans receivable at June 30, 2019 and 2018, is $238.6 million and $232.9 million, respectively. Upon termination of employment before retirement, certain members are entitled to refunds of their own contributions, including accumulated interest, less any loans outstanding. As a result of a review of all member accounts, there were no prior year loans due from retired or inactive employees that were deemed uncollectible in Fiscal Years 2018 and 2017.

8. RELATED PARTIES

Pursuant to statue and resolutions, the Comptroller has been appointed as custodian for the assets of the Funds. Securities are held by certain banks under custodial agreements with the Comptroller. The Comptroller also provides cash receipt and cash disbursement services to the Funds. Actuarial services are provided to the Funds by the New York City Office of the Actuary. The City's Corporation Counsel provides legal services to the Funds. Other administrative services are also provided by The City. The aforementioned services may be provided by employees or officers of the City who may also be participants in the Funds. The cost of providing such services amounted to $4,497,134 and $4,253,464 in Fiscal Years 2019 and 2018, respectively.

9. ADMINISTRATIVE AND INVESTMENT EXPENSES

Chapter 292 of the Laws of 2001 provides Corpus Funding of administrative expenses for the QPP commencing July 1, 2001, and allows for the appointment of an executive director for the QPP. In Fiscal Year 2019, total non-investment expenses attributable to the QPP were approximately $36.2 million, of which $29.0 million were paid from the assets of the QPP and $7.2 million were paid by The City on behalf of the QPP. In Fiscal Year 2018, total non-investment expenses attributable to the QPP were approximately $28.1 million, of which $21.1 million were paid from the assets of the QPP and $7.0 million were paid by The City on behalf of the QPP. Investment expenses charged to the investment earnings of the QPP, exclusive of expenses relating to securities-lending transactions, amounted to approximately $252 million in 2019 and $287 million in 2018.

In July 2010, the Fund renegotiated its lease agreement to rent office space. The agreement will expire in Fiscal Year 2031. The future minimum rental payments required under this operating lease are as follows:

Fiscal Years Ending June 30,	Amount
2020	$ 2,051,154
2021	2,219,742
2022 to 2025	8,878,968
2026	2,444,526
2027 to 2030	9,778,104
2031	52,570

Additionally, the Fund renegotiated its lease agreement to rent additional colocation space in 2019 pursuant to its Disaster Recovery and Business Continuity Plan. The original agreement was signed in February 2010 and terminates on July 14, 2024. The current rental payments required under this lease are as follows:

Fiscal Years Ending June 30,	Amount
2020	$ 432,378
2021	434,275
2022	435,632
2023	444,875
2024	445,617
2025	17,175

Rent expense under the lease agreements for each of the Fiscal Years ended June 30, 2019 and 2018, was approximately $2.7 million.

10. CONTINGENT LIABILITIES AND OTHER MATTERS

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

Other Matters — During Fiscal Years 2019 and 2018, certain events described below took place which, in the opinion of POLICE management, could have the effect of increasing benefits to members and/or their beneficiaries and therefore would increase the obligations of the Funds. The effect of such events has not been fully quantified. However, it is the opinion of POLICE management that such developments would not have a material effect on the Funds' combined net position restricted for benefits or cause changes in the Funds' combined net position restricted for benefits.

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 New York City Retirement Systems ("NYCRS") are conducted every two years. Refer to Note 6 for the results of the most recent actuarial studies for POLICE.

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

The most recently completed study was published by Bolton, Inc. dated June 2019. Bolton analyzed experience for the four and ten year periods ending June 30, 2017 and made recommendations with respect to the actuarial assumptions and methods based on their analysis. Based, in part, on these, recommendations, the Actuary proposed new assumptions and methods for use in determining Employer Contributions for Fiscal Years beginning on and after July 1, 2018. These assumptions and methods have been adopted by the Board of Trustees during Fiscal Year 2019.

Previously, Gabriel, Roeder, Smith & Company (GRS) published their study in October 2015.

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

Chapter 18 of the Laws of 2012 ("Chapter 18/12") placed certain limitations on the Tier 3 and Tier 4 benefits available to participants hired on and after April 1, 2012 in most New York State Public Employee Retirement Systems, including POLICE, and is generally referred to as Tier 6 (referred to by POLICE as Tier 3 Revised).

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 investment expenses and defined the amortization of Unfunded Actuarial Accrued Liabilities ("UAAL"). Also included in Chapter 3/13 is the requirement that POLICE transfers assets to the POVSF and PSOVSF whenever the assets of these VSFs are insufficient to pay benefits.

Chapter 55 of the Laws of 2013, while largely a budget bill, amends the retirement earnings limitations of Police Pension Fund retirees. This amendment allows a retired Police Pension Fund member to be employed after retirement, without earnings limitations, as a School Resource Officer.

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 Rescue, Recovery, and Clean-up Operations. This law also now allows vested members to apply for a WTC related Accident Disability Retirement prior to reaching their 20th anniversary of allowable police service.

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 the New York City Police Department and are 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 41 of the Laws of 2016 was enacted on May 31, 2016. This amendment 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.

Chapter 326 of the Laws of 2016 was enacted on September 11, 2016, which extends the deadline to file a Notice of Participation in the World Trade Center Rescue, Recovery, and Clean-up Operations to September 11, 2018. Proper filing of a Notice of Participation is a requirement for a member to be eligible for a World Trade Center disability or death benefit.

Chapter 59 of the Laws of 2017 ("Chapter 59/17") amended the Accidental Disability Retirement and Ordinary Disability Retirement benefits for Tier 3 and Tier 3 Revised members with dates of membership prior to April 1, 2017 who elect to participate in the Enhanced Disability Benefits. Tier 3 Revised members with dates of membership April 1, 2017 and later are mandated into the Enhanced Disability Benefits. Members electing or mandated into this benefit will pay an extra 1% of wages.

The following outlines the changes to Tier 3 and Tier 3 Revised provisions with the Enhanced Disability legislation:

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% 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 members appointed April 1, 2017 and later (i.e., the date 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/HHAT)
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 Ordinary Disability Retirement (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 have a FAS5 calculation.
   - The Tier 3 Original members who opt into the Tier 3 Enhanced benefit have the FAS5 applied for ODR or ADR, but their Three-Year Final Average Salary (FAS3) applied for Service or Vested retirements.

Chapter 61 of the Laws of 2017 permits POLICE members subject to Retirement and Social Security Law (“RSSL”) Article 14 (“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.

The following changes apply to **all** Tier 3 members (Original, Revised, Enhanced):

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 Tier 3 ADR retirees; the Tier 2 safeguard provisions contained in New York City Administrative Code § 13-254 apply. Therefore, **all** Tier 3 ADR retirees will be treated identically to Tier 2 ADR retirees for Safeguards purposes. This includes 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.

Litigation

A settlement agreement reached between the City of New York and the United States Attorney's Office in Goodman, et al. v. City of New York, et al. became effective on March 17, 2014. This case was filed by the United States Attorney's Office for the Southern District of New York pursuant to the Uniformed Services Employment and Reemployment Rights Act of 1994, 38 U.S.C. §§ 4301–35 ("USERRA"). The plaintiffs were a class of retired New York City Police Department ("NYPD") uniformed members of the service who performed active military service, while employed by the NYPD, on or after September 11, 2001. Active Military Service is defined as "active duty, active duty for training, initial active duty for training, inactive duty for training, full-time National Guard duty, a period for which a person is absent from a position of employment for the purpose of an examination to determine the fitness of the person to perform any such duty, and a period for which a person is absent from employment for the purpose of performing funeral honors duty."

USERRA requires military service members' pensions — as well as employer and employee contributions to pension plans — to be computed based on the rate of compensation the employees would have received but for their periods of military service. Pursuant to the Settlement Agreement in the Goodman case, the QPP must impute, for purposes of pension calculations, overtime and night-shift differential compensation that members would have earned had they not taken military leaves during their careers with the NYPD.

The QPP is required by the Settlement to recalculate the pensionable earnings and retirement allowances for all class members. Active members who went on military leaves between September 11, 2001 and the effective date of the Settlement may voluntary request a recalculation of their pensionable earnings. The QPP is required to compute pensionable earnings for all military leaves completed after the effective date in accordance with the Settlement.

SCHEDULE 1

NEW YORK CITY POLICE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2019	QPP*	POVSF	PSOVSF	TOTAL
Total pension liability:				
Service cost	$ 1,396,466	$ 41,454	$ 60,989	$ 1,498,909
Interest	3,386,097	138,805	258,094	3,782,996
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	(868,164)	133,399	(84,203)	(818,968)
Changes of assumptions	(349,830)	(136,776)	144,204	(342,402)
Benefit payments and withdrawals	(2,853,799)	(164,281)	(260,665)	(3,278,745)
Net change in total pension liability	710,770	12,601	118,419	841,790
Total pension liability — beginning	48,379,197	2,022,236	3,754,205	54,155,638
Total pension liability — ending (a)	49,089,967	2,034,837	3,872,624	54,997,428
Plan fiduciary net position:				
Employer contributions	2,558,256	-	-	2,558,256
Member contributions	278,087	-	-	278,087
Net investment income	2,581,702	103,694	176,148	2,861,544
Benefit payments and withdrawals	(2,853,799)	(164,281)	(260,665)	(3,278,745)
Administrative expenses	(29,005)	-	-	(29,005)
Other	4,108	40	35	4,183
Net change in plan fiduciary net position	2,539,349	(60,547)	(84,482)	2,394,320
Accrued Transfers from POLICE to POVSF and PSOVSF	(378,792)	(31,836)	410,628	-
Plan fiduciary net position — beginning	37,958,867	2,068,782	2,771,210	42,798,859
Plan fiduciary net position — ending (b) **	40,119,424	1,976,399	3,097,356	45,193,179
Employer's net pension liability — ending (a)-(b)	$8,970,543	$ 58,438	$ 775,268	$ 9,804,249
Plan fiduciary net position as a percentage of the total pension liability	81.73%	97.13%	79.98%	82.17%
Covered payroll	$4,047,772	n/a	n/a	$ 4,047,772
Employer's net pension liability as a percentage of covered payroll	221.62%	n/a	n/a	242.21%

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 final Funds' fiduciary net position.

** Includes liabilities from Special Accidental death benefits pursuant to Section 208-F of the General Municipal Law.

See Independent Auditors' Report.

SCHEDULE 1

NEW YORK CITY POLICE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2018	QPP*	POVSF	PSOVSF	TOTAL
Total pension liability:				
Service cost	$ 1,281,545	$ 57,875	$ 46,859	$ 1,386,279
Interest	3,257,275	137,689	254,151	3,649,115
Changes of benefit terms	90,363	10,231	4,077	104,671
Differences between expected and actual experience	(138,508)	(45,327)	39,715	(144,120)
Changes of assumptions	-	-	-	-
Benefit payments and withdrawals	(2,774,387)	(162,149)	(257,017)	(3,193,553)
Net change in total pension liability	1,716,288	(1,681)	87,785	1,802,392
Total pension liability — beginning	46,662,909	2,023,917	3,666,420	52,353,246
Total pension liability — ending (a)	48,379,197	2,022,236	3,754,205	54,155,638
Plan fiduciary net position:				
Employer contributions	2,415,153	-	-	2,415,153
Member contributions	267,031	-	-	267,031
Net investment income	3,925,283	294	38,433	3,964,010
Benefit payments and withdrawals	(2,774,387)	(162,149)	(257,017)	(3,193,553)
Administrative expenses	(21,146)	-	-	(21,146)
Other	3,408	31	26	3,465
Net change in plan fiduciary net position	3,815,342	(161,824)	(218,558)	3,434,960
Accrued Transfers from POLICE to POVSF and PSOVSF	(1,280,000)	130,000	1,150,000	-
Plan fiduciary net position — beginning	35,423,525	2,100,606	1,839,768	39,363,899
Plan fiduciary net position — ending (b) **	37,958,867	2,068,782	2,771,210	42,798,859
Employer's net pension liability — ending (a)-(b)	$10,420,330	$ (46,546)	$ 982,995	$ 11,356,779
Plan fiduciary net position as a percentage of the total pension liability	78.46%	102.30%	73.82%	79.03%
Covered payroll	$3,673,054	n/a	n/a	$ 3,673,054
Employer's net pension liability as a percentage of covered payroll	283.70%	n/a	n/a	309.19%

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 final Funds' fiduciary net position.

** Includes liabilities from Special Accidental death benefits pursuant to Section 208-F of the General Municipal Law.

See Independent Auditors' Report.

NEW YORK CITY POLICE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2017	QPP*	POVSF	PSOVSF	TOTAL
Total pension liability:				
Service cost	$ 1,221,506	$ 52,848	$ 46,062	$ 1,320,416
Interest	3,138,263	137,697	248,372	3,524,332
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	(632,751)	(16,264)	3,767	(645,248)
Changes of assumptions	-	-	-	-
Benefit payments and withdrawals	(2,571,999)	(159,063)	(255,938)	(2,987,000)
Net change in total pension liability	1,155,019	15,218	42,263	1,212,500
Total pension liability — beginning	45,507,890	2,008,699	3,624,157	51,140,746
Total pension liability — ending (a)	46,662,909	2,023,917	3,666,420	52,353,246
Plan fiduciary net position:				
Employer contributions	2,293,840	-	-	2,293,840
Member contributions	276,301	-	-	276,301
Net investment income	4,079,747	166,755	40,392	4,286,894
Benefit payments and withdrawals	(2,571,999)	(159,063)	(255,938)	(2,987,000)
Administrative expenses	(18,917)	-	-	(18,917)
Other	10,381	74	52	10,507
Net change in plan fiduciary net position	4,069,353	7,766	(215,494)	3,861,625
Accrued Transfers from POLICE to POVSF and PSOVSF	(2,128,438)	708,636	1,419,802	-
Plan fiduciary net position — beginning	33,482,610	1,384,204	635,460	35,502,274
Plan fiduciary net position — ending (b) **	35,423,525	2,100,606	1,839,768	39,363,899
Employer's net pension liability — ending (a)-(b)	$ 11,239,384	$ (76,689)	$ 1,826,652	$ 12,989,347
Plan fiduciary net position as a percentage of the total pension liability	75.91%	103.79%	50.18%	75.19%
Covered payroll	$ 3,509,985	n/a	n/a	$ 3,509,985
Employer's net pension liability as a percentage of covered payroll	320.21%	n/a	n/a	370.07%

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 final Funds' fiduciary net position.
** Includes liabilities from Special Accidental death benefits pursuant to Section 208-F of the General Municipal Law.

See Independent Auditors' Report.

NEW YORK CITY POLICE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2016	QPP*	POVSF	PSOVSF	TOTAL
Total pension liability:				
Service cost	$ 1,241,707	$ 53,625	$ 45,283	$ 1,340,615
Interest	3,059,499	136,591	245,309	3,441,399
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	216,334	13,273	3,854	233,461
Changes of assumptions	709,886	32,650	52,144	794,680
Benefit payments and withdrawals	(2,475,738)	(155,754)	(246,959)	(2,878,451)
Net change in total pension liability	2,751,688	80,385	99,631	2,931,704
Total pension liability — beginning	42,756,202	1,928,314	3,524,526	48,209,042
Total pension liability — ending (a)	45,507,890	2,008,699	3,624,157	51,140,746
Plan fiduciary net position:				
Employer contributions	2,393,940	-	-	2,393,940
Member contributions	249,921	-	-	249,921
Net investment income	644,318	(133,017)	(107,767)	403,534
Benefit payments and withdrawals	(2,475,738)	(155,754)	(246,959)	(2,878,451)
Administrative expenses	(18,478)	-	-	(18,478)
Other	6,479	147	130	6,756
Net change in plan fiduciary net position	800,442	(288,624)	(354,596)	157,222
Accrued Transfers from POLICE to POVSF and PSOVSF	326,195	(250,751)	(75,444)	-
Plan fiduciary net position — beginning	32,355,973	1,923,579	1,065,500	35,345,052
Plan fiduciary net position — ending (b) **	33,482,610	1,384,204	635,460	35,502,274
Employer's net pension liability — ending (a)-(b)	$ 12,025,280	$ 624,495	$ 2,988,697	$ 15,638,472
Plan fiduciary net position as a percentage of the total pension liability	73.58%	68.91%	17.53%	69.42%
Covered payroll	$ 3,540,326	n/a	n/a	$ 3,540,326
Employer's net pension liability as a percentage of covered payroll	339.67%	n/a	n/a	441.72%

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 final Funds' fiduciary net position.

** Includes liabilities from Special Accidental death benefits pursuant to Section 208-F of the General Municipal Law .

See Independent Auditors' Report.

NEW YORK CITY POLICE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2015	QPP*	POVSF	PSOVSF	TOTAL
Total pension liability:				
Service cost	$ 1,227,570	$ 54,502	$ 43,736	$ 1,325,808
Interest	2,875,649	131,185	238,391	3,245,225
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	(213,409)	(13,154)	11,145	- (215,418)
Changes of assumptions	-	-	-	-
Benefit payments and withdrawals	(2,360,484)	(151,333)	(234,967)	(2,746,784)
Net change in total pension liability	1,529,326	21,200	58,305	1,608,831
Total pension liability — beginning**	41,226,876	1,907,114	3,466,221	46,600,211
Total pension liability — ending (a)	42,756,202	1,928,314	3,524,526	48,209,042
Plan fiduciary net position:				
Employer contributions	2,309,619	-	-	2,309,619
Member contributions	241,102	-	-	241,102
Net investment income	1,018,506	61,019	18,695	1,098,220
Benefit payments and withdrawals	(2,360,484)	(151,333)	(234,967)	(2,746,784)
Administrative expenses	(17,903)	-	-	(17,903)
Reimbursement of benefit payments to PSOVSF from QPP	(313)	-	313	-
Other	4,554	25	37	4,616
Net change in plan fiduciary net position	1,195,081	(90,289)	(215,922)	888,870
Accrued Transfers from POLICE to POVSF and PSOVSF	(590,000)	330,000	260,000	-
Plan fiduciary net position — beginning	31,750,892	1,683,868	1,021,422	34,456,182
Plan fiduciary net position — ending (b) ***	32,355,973	1,923,579	1,065,500	35,345,052
Employer's net pension liability — ending (a)-(b)	$ 10,400,229	$ 4,735	$ 2,459,026	$ 12,863,990
Plan fiduciary net position as a percentage of the total pension liability	75.68%	99.75%	30.23%	73.32%
Covered payroll	$ 3,512,778	n/a	n/a	$ 3,512,778
Employer's net pension liability as a percentage of covered payroll	296.07%	n/a	n/a	366.21%

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 final Funds' fiduciary net position

** Revised.

*** Includes liabilities from Special Accidental death benefits pursuant to Section 208-F of the General Municipal Law.

See Independent Auditors' Report.

NEW YORK CITY POLICE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2014	QPP*	POVSF	PSOVSF	TOTAL
Total pension liability:				
Service cost	$ 1,206,036	$ 52,629	$ 43,088	$ 1,301,753
Interest	2,753,264	129,659	234,394	3,117,317
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	-	-	-	-
Changes of assumptions	-	-	-	-
Benefit payments and withdrawals	(2,305,609)	(147,153)	(229,461)	(2,682,223)
Net change in total pension liability	1,653,691	35,135	48,021	1,736,847
Total pension liability — beginning	39,259,678	1,871,979	3,418,199	44,549,856
Total pension liability — ending (a)	40,913,369	1,907,114	3,466,220	46,286,703
Plan fiduciary net position:				
Employer contributions	2,320,910	-	-	2,320,910
Member contributions	228,783	-	-	228,783
Net investment income	5,071,530	76,054	(101)	5,147,483
Benefit payments and withdrawals	(2,305,609)	(147,153)	(229,461)	(2,682,223)
Administrative expenses	(17,450)	-	-	(17,450)
Reimbursement of benefit payments to PSOVSF from QPP	(231,024)	-	231,024	-
Other	6,811	80	20	6,911
Net change in plan fiduciary net position	5,073,951	(71,019)	1,482	5,004,414
Accrued Transfers from POLICE to POVSF and PSOVSF	(2,310,000)	1,290,000	1,020,000	-
Plan fiduciary net position — beginning	28,986,941	464,887	(60)	29,451,768
Plan fiduciary net position — ending (b) ***	31,750,892	1,683,868	1,021,422	34,456,182
Employer's net pension liability — ending (a)-(b)	$ 9,162,477	$ 223,246	$ 2,444,798	$ 11,830,521
Plan fiduciary net position as a percentage of the total pension liability	77.61%	88.29%	29.47%	74.44%
Covered payroll	$ 3,420,312	n/a	n/a	$ 3,420,312
Employer's net pension liability as a percentage of covered payroll	267.88%	n/a	n/a	345.89%

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 final Funds' fiduciary net position.
*** Includes liabilities from Special Accidental death benefits pursuant to Section 208-F of the General Municipal Law.

See Independent Auditors' Report.

NEW YORK CITY POLICE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF EMPLOYER CONTRIBUTIONS
(In thousands)

	2019	2018	2017	2016	2015
Actuarially determined contribution	$ 2,558,256	$ 2,415,153	$ 2,293,840	$ 2,393,940	$ 2,309,619
Contributions in relation to the actuarially determined contribution	2,558,256	2,415,153	2,293,840	2,393,940	2,309,619
Contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -
Covered payroll	$ 4,047,772	$ 3,673,054	$ 3,509,985	$ 3,540,326	$ 3,512,778
Contributions as a percentage of covered payroll	63.202%	65.753%	65.352%	67.619%	65.749%

	2014	2013	2012	2011	2010
Actuarially determined contribution	$ 2,320,910	$ 2,424,690	$ 2,385,731	$ 2,083,633	$ 1,980,996
Contributions in relation to the actuarially determined contribution	2,320,910	2,424,690	2,385,731	2,083,633	1,980,996
Contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -
Covered payroll	$ 3,420,312	$ 3,459,872	$ 3,448,765	$ 3,252,706	$ 3,097,485
Contributions as a percentage of covered payroll	67.857%	70.080%	69.176%	64.058%	63.955%

See Independent Auditors' Report.

NEW YORK CITY POLICE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF EMPLOYER CONTRIBUTIONS
(In thousands)

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, 2017	June 30, 2016	June 30, 2015	June 30, 2014	June 30, 2013	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009- June 30, 2008
Actuarial cost method	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Frozen Initial Liability
Amortization method for Unfunded Actuarial Accrued Liabilities:									
Accrued Liabilities:	Increasing Dollar	Increasing Dollar	Increasing Dollar	Increasing Dollar	Increasing Dollar	Increasing Dollar	Increasing Dollar	Increasing Dollar	NA[1]
Accrued Liabilities:	Level Dollar	Level Dollar	Level Dollar	Level Dollar	Level Dollar	Level Dollar	Level Dollar	Level Dollar	NA[1]
Remaining amortization period:									
Initial Unfunded	15 years (closed)	16 years (closed)	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)	21 years (closed)	22 years (closed)	NA[1]
2011 Actuarial Gain/Loss	9 years (closed)	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA[1]
2012 Actuarial Gain/Loss	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA[1]
2013 Actuarial Gain/Loss	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA	NA[1]
2014 Actuarial Gain/Loss	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA	NA	NA[1]
2015 Actuarial Gain/Loss	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA	NA	NA	NA[1]
2016 Actuarial Gain/Loss	14 years (closed)	15 years (closed)	NA	NA	NA	NA	NA	NA	NA[1]
2017 Actuarial Gain/Loss	15 years (closed)	NA	NA	NA	NA	NA	NA	NA	NA[1]
2017 Assumptions/ Methods	20 years (closed)	NA	NA	NA	NA	NA	NA	NA	NA[1]
Actuarial Asset Valuation (AAV) Method[2]	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.	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.	Modified six-year moving average of market values with "Market Value Restart" as of June 30, 1999.
Actuarial assumptions:									
Assumed rate of return[3]	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	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	8.0% per annum, gross of investment expenses
Post-retirement mortality	Tables adopted by Board of Trustees during Fiscal Year 2019	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	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 2019	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	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[4]
Salary increases[3]	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.	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.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.
Cost-of-Living Adjustments[3]	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.	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.	1.3% per annum[3]

1 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.

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

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

See Independent Auditors' Report.

NEW YORK CITY POLICE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF INVESTMENT RETURNS
(In thousands)

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

Fiscal Year Ended	QPP	PSOVSF	POVSF
June 30, 2019	6.81%	9.27%	5.77%
June 30, 2018	9.60%	4.42%	6.71%
June 30, 2017	13.19%	12.85%	13.80%
June 30, 2016	1.18%	-1.06%	-0.33%
June 30, 2015	3.83%	5.16%	6.34%
June 30, 2014	17.693%	16.163%	19.444%

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

See Independent Auditors' Report.