New York City Board of Education Retirement System

(A fiduciary fund of The City of New York)

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

For the Years Ended June 30, 2018 and 2017

MARKS PANETH

ACCOUNTANTS & ADVISORS

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

TABLE OF CONTENTS

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

MARKS PANETH
ACCOUNTANTS & ADVISORS

INDEPENDENT AUDITORS' REPORT

To the Board of Trustees of the
New York City Board of Education Retirement System:

Report on the Combining Financial Statements

We have audited the accompanying combining statements of fiduciary net position of the New York City Board of Education Retirement System Qualified Pension Plan ("QPP") and the New York City Board of Education Retirement System Tax-Deferred Annuity ("TDA") Program, which collectively comprise the New York City Board of Education Retirement System, (the "Systems"), a fiduciary fund of The City of New York, as of June 30, 2018 and 2017, and the related combining statements of changes in fiduciary net position for the years then ended, and the related notes to the combining financial statements, which collectively comprise the Systems' basic combining financial statements as listed in the table of contents.

Management's Responsibility for the Combining Financial Statements

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

Auditors' Responsibility

Our responsibility is to express opinions on these combining financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the 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 Systems' 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 Systems' 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 Systems as of June 30, 2018 and 2017, and the changes in combining fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule 1, Schedule 2, and Schedule 3, as listed in the table of contents, be presented to supplement the basic combining financial statements. Such information, although not a part of the basic combining financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of 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

October 26, 2018

This narrative discussion and analysis of the New York City Board of Education Retirement Systems ("BERS" or the "System") financial performance provides an overview of the System's combining financial activities for the Fiscal Years ended June 30, 2018 and 2017. It is meant to assist the reader in understanding the System's combining financial statements by providing an overall review of the combining financial activities during the years, the effects of significant changes, and a comparison of the prior years' activities and results. This discussion and analysis is intended to be read in conjunction with the System's combining financial statements. The System administers the BERS Qualified Pension Plan (the "QPP") and the BERS Tax-Deferred Annuity Program (the "TDA Program").

OVERVIEW OF BASIC COMBINING FINANCIAL STATEMENTS

The following discussion and analysis is intended to serve as an introduction to the System's basic combining financial statements. The basic combining financial statements, which are prepared in accordance with Governmental Accounting Standards Board ("GASB") pronouncements and include the financial statements of the QPP and the TDA Program, are as follows:

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

- **The Combining Statements of Changes in Fiduciary Net Position**—presents the results of activities during the fiscal year. All changes affecting the assets/deferred outflow and liabilities/deferred inflow of the System 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 System's accounting policies, significant account balances and activities, material risks, obligations, contingencies and subsequent events, if any.

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

FINANCIAL HIGHLIGHTS

QPP Fiduciary Net Position

During Fiscal Year 2018, QPP's net position restricted for benefits stood at $4.67 billion, an increase of 13.99% from Fiscal year 2017. The increase in the net position during Fiscal Year 2018 was primarily due to an increase in the fair value of investments. Fair value of investments, which includes collateral from security lending, stood at $6.45 billion, an increase of 13.14% from Fiscal year 2017. Administrative expenses decreased by 14.68% from fiscal year 2017. Member contributions stood at $40.84 million, an increase of 2.58% from Fiscal Year 2017. Return on investments stood at 8.76%.

During Fiscal year 2017, QPP's net position restricted for benefits stood at $4.10 billion, an increase of 20.00% from Fiscal Year 2016. The increase in the net position during Fiscal Year 2017 was primarily due higher member contributions and investment returns. Member contributions increased by 3.21% from fiscal year 2016. Return from investments increased from 3.28% in fiscal year 2016 to 15.11% in fiscal year 2017.

QPP Fiduciary Net Position
June 30, 2018, 2017, and 2016

(In thousands)	**2018**	**2017**	**2016**
Assets:			
Cash	$ 2,106	$ 3,232	$ 327
Receivables	149,067	155,750	166,060
Investments, at fair value	6,067,189	5,332,614	4,526,973
Collateral from securities lending	390,140	374,943	477,623
Other	206,757	160,453	124,031
Total assets	6,815,259	6,026,992	5,295,014
Liabilities:			
Accounts payable	34,454	13,884	6,907
Other liability	-	-	-
Payable for investment securities purchased	115,140	92,173	103,213
Accrued benefits payable	9,747	9,943	7,357
Due to the TDA Program's Fixed return fund from the System	1,592,875	1,436,478	1,283,481
Payables for securities lending	390,140	374,943	477,623
Total liabilities	2,142,356	1,927,421	1,878,581
Net position restricted for benefits	$ 4,672,903	$ 4,099,571	$ 3,416,433

Total receivables decreased from $155.75 million in Fiscal year 2017 to $149.06 million in Fiscal Year 2018, a decrease of 4.29%. Receivables for investments were at $84.96 million in Fiscal Year 2018, a decrease of 13.90% from Fiscal Year 2017. Member loans increased by 4.39% to $50.03 million in Fiscal Year 2018.

At the close of Fiscal Year 2017, total receivables stood at $155.75 million, a decrease of 6.21% from Fiscal Year 2016.The decrease in the receivables was primarily caused by the decrease in the receivables for investment which went down by $20.38 million. Also included in these receivables are QPP member's outstanding loans for Fiscal Year 2017 and Fiscal Year 2016 which were at $47.93 million and $46.74 million respectively.

The QPP's receivables and payables for investments are primarily generated through the timing differences between the trade and settlement dates for investment securities purchased or sold.

The account "Due to the TDA Program's Fixed return fund from the System" represents a liability to the TDA program, since the TDA Program assets are pooled with QPP assets for investment purposes. The liability for Fiscal Year 2018 stood at $1.59 billion, an increase of 10.89% from Fiscal Year 2017. This liability includes the TDA member's account balances for deposits invested in fixed investment program.

Changes in QPP Fiduciary Net Position

During Fiscal Year 2018, the QPP member contributions increased to $40.84 million, an increase of 2.58% from Fiscal Year 2017.

Changes in QPP Program Fiduciary Net Position
Years Ended June 30, 2018, 2017, and 2016

(In thousands)	2018	2017	2016
Additions:			
Member contributions	$ 40,846	$ 39,821	$ 38,581
Employer contributions	318,643	288,233	265,532
Net investment income before securities lending transaction	561,877	856,632	160,828
Net securities lending income	3,700	5,878	3,316
TDA Program's interest income in the fixed return fund	(127,972)	(106,554)	(94,789)
Other - payments to other retirement systems & other revenues/expenses	51,024	(122,954)	(157,499)
Total additions	848,118	961,056	215,969
Deductions:			
Benefit payments and withdrawals	261,574	262,432	240,727
Administrative expenses	13,212	15,486	12,818
Total deductions	274,786	277,918	253,545
Net increase (decrease) in net position	573,332	683,138	(37,576)
Net position restricted for benefits:			
Beginning of year	4,099,571	3,416,433	3,454,009
End of year	$4,672,903	$4,099,571	$3,416,433

In Fiscal Year 2017, the QPP member contributions increased to $39.82 million, an increase of 3.21% from Fiscal Year 2016 contributions of $38.58 million.

Employer contributions received through the QPP Program for the Fiscal Years 2018 and 2017 were at $318.64 million and $288.23 million, an increase of 10.55% and 8.55% respectively. The employer contributions are made on a statutory basis based on the one – year lag methodology.

The net investment income, including the security lending income decreased from $862.51 million in Fiscal Year 2017, to $565.57 million in Fiscal Year 2018. Return on investments decreased from 15.11% in Fiscal Year 2017 to 8.76% in Fiscal year 2018.

The benefit payments and withdrawals decreased from $262.43 million in Fiscal Year 2017 to $261.57 million in Fiscal Year 2018, a decrease of 0.33%. During Fiscal Year 2017, plan benefits payments and withdrawals increased by 9.02%, from $240.72 million to $262.43 million. The increase in Fiscal Years 2017 was primarily due to an increase in the pension benefits to retirees, which went up 9.46%.

Administrative expenses decreased from $15.49 million in fiscal year 2017 to $13.21 million in fiscal year 2018, a decrease of 14.68%.

Interest to the TDA Program's fixed return fund represents the statutory interest credited on the TDA Program member account balances. The statutory rate of interest is currently 7.00% for UFT members and 8.25% for all other members. During Fiscal Year 2018, the interest to the TDA Program's fixed return fund stood at $127.97 million, an increase of $21.41 million from Fiscal Year 2017. The table below displays revenue (expenses) to the System due to any surplus or deficiency between the actual rate of return on the fixed investments and the statutory rate.

Net Investment Income (Loss) to the System from TDA Member Holdings in Fixed Return Fund:
Years Ended 2018, 2017, 2016 and 2015

(In thousands)	2018	2017	2016	2015
Net investment income	$ 559,753	$ 854,992	$ 164,435	$ 174,876
TDA percent of Fixed Assets (average)	25.13%	25.63%	25.03%	23.77%
Investment Income on account of TDA investment	$ 140,661	$ 219,121	$ 41,165	$ 41,568
Less: Statutory Interest to TDA	(127,972)	(106,554)	(94,789)	(85,104)
Revenue (Expense) to the System	$ 12,689	$ 112,567	$ (53,624)	$ (43,536)

TDA Program Fiduciary Net Position

During Fiscal Year 2018, the TDA program's net position restricted for benefits stood at $1.96 billion, a net increase of 9.40% from Fiscal Year 2017. The increase in Fiscal Year 2018 was primarily due to increase in the member contributions and the fair value of investments. Member contributions increased from $85.76 million to $89.97 million, a net increase of 4.90% from Fiscal Year 2017. Fair value of TDA variable investments stood at $518.04 million in Fiscal Year 2018, an increase of 11.85% from Fiscal Year 2017.

During Fiscal Year 2017, the TDA Program's net position restricted for benefits increased to $1.79 billion, a net increase of $169.61 million or 10.41% from Fiscal Year 2016. The increase in Fiscal Year 2017 was primarily due to an increase in member contributions, which went up by 10.72%.

TDA Program Fiduciary Net Position
June 30, 2018, 2017, and 2016

(In thousands)	**2018**	**2017**	**2016**
Assets:			
Cash	$ 355	$ 105	$ 205
Receivables	44,831	42,281	40,455
Due to the TDA Program's Fixed return fund from the System	1,592,875	1,436,478	1,283,481
Investments, at fair value	512,426	457,248	409,776
Collateral from securities lending	5,618	5,917	15,642
Other	-	-	-
Total assets	2,156,105	1,942,029	1,749,559
Liabilities:			
Accounts payable	$ -	$ -	$ -
Other liability	173,813	128,452	96,156
Payable for investment securities purchased	709	1,435	902
Accrued benefits payable	7,157	6,537	6,783
Payables for securities lending transactions	5,618	5,917	15,642
Total liabilities	187,297	142,341	119,483
Net position restricted for benefits	$ 1,968,808	$ 1,799,688	$ 1,630,076

Receivables from QPP towards TDA program increased by 10.89% in Fiscal Year 2018, from $1.43 billion in Fiscal year 2017 to $1.59 billion in Fiscal Year 2018. TDA program's member loan outstanding increased from $40.75 million in Fiscal Year 2017 to $43.56 million in Fiscal Year 2018, an increase of 6.90% from Fiscal Year 2017.

At the end of Fiscal Year 2017, the TDA Program's fair value of variable investment including collateral security lending stood at $463.16 million, an increase of 8.87% from Fiscal Year 2016. Receivable from QPP towards the TDA Program increased by 11.92% in Fiscal Year 2017, from $1.28 billion for Fiscal Year 2016 to $1.43 billion in Fiscal Year 2017.

Total receivables went from $40.45 million in Fiscal Year 2016 to $42.28 million at the end of Fiscal Year 2017. Included in these receivables, the TDA Program's member loans outstanding went from $38.92 million at the close of Fiscal Year 2016 to $40.75 million at the close of Fiscal Year 2017, a 4.72% increase.

The TDA Program's receivables and payables are primarily generated through the timing differences between the trade and settlement dates for investment securities purchased or sold within the variable return fund.

Changes in TDA Program Fiduciary Net Position

During Fiscal Year 2018, member contributions to the TDA Program increased to $89.97 million, a 4.90% increase from $85.77 million contribution in Fiscal Year 2017. The number of contributing members increased by 5.81%. Net investment income decreased from $75.73 million in Fiscal Year 2017 to $59.16 million in Fiscal Year 2018, a net decrease of $16.57 million.

During Fiscal Year 2017, member contributions to the TDA Program increased to $85.76 million, a 10.72% increase from the $77.45 million contributed in Fiscal Year 2016.

Changes in TDA Program Fiduciary Net Position
June 30, 2018, 2017, and 2016

(In thousands)	**2018**	**2017**	**2016**
Additions:			
Member contributions	$ 89,972	$ 85,765	$ 77,459
Net investment income before securities lending transaction	59,075	75,633	855
Net securities lending income	93	106	194
TDA Program's interest income in the fixed return fund	127,972	106,554	94,789
Other - payments to other retirement systems & other revenues/expenses	(54,240)	(48,113)	(3,541)
Total additions	222,872	219,945	169,756
Deductions:			
Benefit payments and withdrawals	53,668	50,208	50,189
Administrative expenses	84	125	850
Total deductions	53,752	50,333	51,039
Net increase in net position	169,120	169,612	118,717
Net position restricted for benefits:			
Beginning of year	1,799,688	1,630,076	1,511,359
End of year	$ 1,968,808	$ 1,799,688	$ 1,630,076

Benefit payments and withdrawals and administrative expenses stood at $53.67 million. The increase was due to an increase in the death benefit payments from $9.42 million in Fiscal Year 2017 to $10.85 million in Fiscal Year 2018.

The benefit payments and withdrawals experienced a $.019 million (0.04%) increase from Fiscal Year 2016 to Fiscal Year 2017.

Investment Summary

Investments held by BERS' QPP and TDA Programs (which includes the fixed fund and the variable fund programs), including collateral from securities lending transactions from both programs, are listed according to their investment classification in the following table:

Investment Summary
(In thousands)

Fair Value	**June 30, 2018**	**June 30, 2017**	**June 30, 2016**
Short-term Investments	$ 139,691	$ 57,514	$ 113,900
Debt Securities	1,542,859	1,111,952	890,152
U.S. Equity Securities	2,236,820	636,126	726,951
Alternative Investments	765,549	612,677	506,922
Collective Trust Funds	1,894,696	3,371,593	2,698,824
Promissory Notes	-	-	-
Collateral Securities Lending	395,758	380,860	493,265
Total	$ 6,975,373	$ 6,170,722	$ 5,430,014

Because the QPP's liabilities are of a long-term nature, the assets of the QPP and the TDA Programs 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. The system's investments increased by 13.04% in FY 2018, 13.64% in FY 2017, increased by 3.82% in Fiscal Year 2016.

CONTACT INFORMATION

This financial report is designed to provide a general overview of The New York City Board of Education Retirement System's finances. Questions concerning any data provided in this report or requests for additional information should be directed to the Director of Fiscal Operations, New York City Board of Education Retirement System, 65 Court Street, 16th Floor, and Brooklyn, New York 11201.

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

	QPP	TDA Program	Eliminations	TOTAL
ASSETS:				
Cash	$ 2,106	$ 355	$ -	$ 2,461
Receivables:				
Investment securities sold	84,962	400	-	85,362
Accrued interest and dividends	13,273	862	-	14,135
Member loans	50,038	43,569	-	93,607
Other	794	-	-	794
Total receivables	149,067	44,831	-	193,898
Investments — at fair value				
Fixed return funds:				
Short-term investments:				
Commercial paper	69,031	-	-	69,031
Short-term investment fund	56,088	-	-	56,088
Discount notes	9,331	-	-	9,331
Debt securities	1,531,460	-	-	1,531,460
Equity securities	1,687,635	-	-	1,687,635
Alternative Investments	765,549	-	-	765,549
Collective Trust Funds				
International Equity	1,167,563	-	-	1,167,563
Domestic Equity	152,372	-	-	152,372
Mortgage debt security	34,966	-	-	34,966
Treasury inflation protected securities	283,241	-	-	283,241
Fixed income	256,554	-	-	256,554
Collateral from securities lending	389,554	-	-	389,554
Variable return funds:				
Short-term investments	495	4,746	-	5,241
Debt securities	1,076	10,323	-	11,399
Equities	51,828	497,357	-	549,185
Collateral from securities lending	586	5,618	-	6,204
Total Investments	6,457,329	518,044	-	6,975,373
Due to the TDA Program's Fixed return fund from the System	-	1,592,875	(1,592,875)	-
Other assets	206,757	-	(173,813)	32,944
Total assets	6,815,259	2,156,105	(1,766,688)	7,204,676
LIABILITIES:				
Accounts payable	34,454	-	-	34,454
Other liability	-	173,813	(173,813)	-
Payable for investment securities purchased	115,140	709	-	115,849
Accrued benefits payable	9,747	7,157	-	16,904
Due to the TDA Program's Fixed return fund from the System	1,592,875	-	(1,592,875)	-
Payables for securities lending	390,140	5,618	-	395,758
Total liabilities	2,142,356	187,297	(1,766,688)	562,965
NET POSITION RESTRICTED FOR BENEFITS:				
Benefits to be provided by QPP Program (Qualified Pension Program)	4,672,903	-	-	4,672,903
Benefits to be provided by TDA Program	-	1,968,808	-	1,968,808
TOTAL NET POSITION RESTRICTED FOR BENEFITS:	$ 4,672,903	$ 1,968,808	$ -	$ 6,641,711

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

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

	QPP	TDA Program	Eliminations	TOTAL
ASSETS:				
Cash	$ 3,232	$ 105	$ -	$ 3,337
Receivables:				
Investment securities sold	98,675	906	-	99,581
Accrued interest and dividends	9,080	618	-	9,698
Member loans	47,935	40,757	-	88,692
Other	60	-	-	60
Total receivables	155,750	42,281	-	198,031
Investments — at fair value				
Fixed return funds:				
Short-term investments:				
Commercial paper	21,496	-	-	21,496
Short-term investment fund	30,587	-	-	30,587
Discount notes	-	-	-	-
Debt securities:	1,103,180	-	-	1,103,180
Equity securities	145,431	-	-	145,431
Alternative Investments	612,677	-	-	612,677
Collective Trust Funds				
International equity	1,251,628	-	-	1,251,628
Domestic Equity	1,738,135	-	-	1,738,135
Mortgage debt security	30,925	-	-	30,925
Treasury Inflation protected securities	236,943	-	-	236,943
Fixed Income	113,962	-	-	113,962
Collateral from securities lending	374,326	-	-	374,326
Variable return funds:				
Short term investments	513	4,918	-	5,431
Debt securities	828	7,944	-	8,772
Equities	46,309	444,386	-	490,695
Collateral from securities lending	617	5,917	-	6,534
Total investments	5,707,557	463,165	-	6,170,722
Due to the TDA Program's Fixed return fund from the System	-	1,436,478	(1,436,478)	-
Other assets	160,453	-	(128,452)	32,001
Total assets	6,026,992	1,942,029	(1,564,930)	6,404,091
LIABILITIES:				
Accounts payable	13,884	-	-	13,884
Other liability	-	128,452	(128,452)	-
Payable for investment securities purchased	92,173	1,435	-	93,608
Accrued benefits payable	9,943	6,537	-	16,480
Due to the TDA Program's Fixed return fund from the System	1,436,478	-	(1,436,478)	-
Payables for securities lending	374,943	5,917	-	380,860
Total liabilities	1,927,421	142,341	(1,564,930)	504,832
NET POSITION RESTRICTED FOR BENEFITS:				
Benefits to be provided by QPP Program (Qualified Pension Program)	4,099,571	-	-	4,099,571
Benefits to be provided by TDA Program	-	1,799,688	-	1,799,688
TOTAL NET POSITION RESTRICTED FOR BENEFITS:	$ 4,099,571	$ 1,799,688	$ -	$ 5,899,259

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

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

	QPP	TDA Program	TOTAL
ADDITIONS:			
Contributions			
Member contributions	$ 40,846	$ 89,972	$ 130,818
Employer contributions	318,643	-	318,643
Total contributions	359,489	89,972	449,461
Investment income			
Interest income	75,362	3,468	78,830
Dividend income	79,629	6,655	86,284
Net appreciation in fair value of investments	426,315	49,706	476,021
Total investment income	581,306	59,829	641,135
Less — investment expenses	(19,429)	(754)	(20,183)
Net investment income, before securities lending transactions	561,877	59,075	620,952
Securities lending transactions			
Securities lending income	3,995	103	4,098
Securities lending fees	(295)	(10)	(305)
Net securities lending income	3,700	93	3,793
Net investment income	565,577	59,168	624,745
Other — payments to other retirement systems & other revenues/expenses	51,024	(54,240)	(3,216)
TDA Program's interest income in the fixed return fund	(127,972)	127,972	-
Total additions	848,118	222,872	1,070,990
DEDUCTIONS:			
Benefit payments and withdrawals	261,574	53,668	315,242
Administrative expenses	13,212	84	13,296
Total deductions	274,786	53,752	328,538
NET INCREASE IN NET POSITION	573,332	169,120	742,452
NET POSITION RESTRICTED FOR BENEFITS:			
Beginning of year	4,099,571	1,799,688	5,899,259
End of year	$ 4,672,903	$ 1,968,808	$ 6,641,711

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

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

	QPP	TDA Program	TOTAL
ADDITIONS:			
Contributions			
Member contributions	$ 39,821	$ 85,765	$ 125,586
Employer contributions	288,233	-	288,233
Total contributions	328,054	85,765	413,819
Investment income			
Interest income	54,964	3,564	58,528
Dividend income	70,610	14,810	85,420
Net appreciation in fair value of investments	760,262	58,720	818,982
Total investment income	885,836	77,094	962,930
Less — investment expenses	(29,204)	(1,461)	(30,665)
Net investment income, before securities lending transactions	856,632	75,633	932,265
Securities lending transactions			
Securities lending income	6,118	117	6,235
Securities lending fees	(240)	(11)	(251)
Net securities lending income	5,878	106	5,984
Net investment income	862,510	75,739	938,249
Other — payments to other retirement systems & other revenues/expenses	(122,954)	(48,113)	(171,067)
TDA Program's interest income in the fixed return fund	(106,554)	106,554	-
Total additions	961,056	219,945	1,181,001
DEDUCTIONS:			
Benefit payments and withdrawals	262,432	50,208	312,640
Administrative expenses	15,486	125	15,611
Total deductions	277,918	50,333	328,251
NET INCREASE IN NET POSITION	683,138	169,612	852,750
NET POSITION RESTRICTED FOR BENEFITS:			
Beginning of year	3,416,433	1,630,076	5,046,509
End of year	$ 4,099,571	$ 1,799,688	$ 5,899,259

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

1. SYSTEM DESCRIPTION

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

BERS administers the BERS Qualified Pension Plan (the "QPP") and the BERS Tax-Deferred Annuity Program (the "TDA Program"). BERS is the fiduciary for the QPP and the TDA Program, which are included under BERS in the Pension and Other Employee Benefit Trust Funds section of the City's Comprehensive Annual Financial Report ("CAFR").

The QPP is a cost-sharing, multiple-employer PERS. The QPP provides pension benefits for non-pedagogical employees of the Department of Education and certain other specific schools and certain employees of the New York City School Construction Authority (collectively, the "Employer"). Substantially, all Department of Education non-pedagogical permanent employees, other than members of TRS, become members of the QPP on the first day of permanent employment. Employees classified as noncompetitive, exempt or provisional by Civil Service are eligible to enroll in the QPP voluntarily. Membership date is governed by the date of filing.

The QPP functions in accordance with existing State statutes and City laws, which establish and amend the benefit terms and the employer and member contribution requirements. It 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. Contributions are made by the employer and the members.

At June 30, 2018, June 30, 2017, June 30, 2016 and June 30, 2015, the QPP membership consisted of:

	2018*	**2017**	**2016**	**2015**
Retirees and beneficiaries receiving benefits	18,601	17,425	16,937	16,438
Terminated vested members not receiving benefits	1,572	1,528	851	237
Other inactives**	3,523	2,618	2,629	3,972
Active members receiving salary	29,484	25,794	25,864	24,903
Total	**53,180**	**47,365**	**46,281**	**45,550**

* Preliminary figures.
** Represent members who are no longer on payroll but not otherwise classified.

BERS is a fiduciary component unit of the City and is reported and is included in the City's Comprehensive Annual Financial Report as a Pension and Other Employee Benefit Trust fund.

The TDA Program was created and is administered pursuant to the Internal Revenue Code Section 403(b) and existing State statutes and City laws. Certain members of the QPP have the option to participate in the TDA Program, which provides a means of deferring income tax payments on their voluntary tax-deferred contributions until the period after retirement or upon withdrawal of contributions.

Contributions to the TDA Program are made by the members only. The TDA Program is maintained as a separate plan.

At June 30, 2018, June 30, 2017, June 30, 2016 and June 30, 2015, the TDA Program participants consisted of:

	2018	2017	2016	2015
Contributing members	17,899	16,917	16,113	15,736
Retired members with TDA balances	6,484	6,673	5,844	5,530

Summary of Benefits

QPP Benefits

The State Constitution provides that pension rights of public employees are contractual and shall not be diminished or impaired. In 1973, 1976, 1983 and 2012, significant amendments made to the State Retirement and Social Security Law ("RSSL") modified certain benefits for employees joining the QPP on or after the effective date of such amendments. As such, benefits under the QPP fall into various categories based on the year when an employee joined the QPP. A brief overview follows:

- Members who joined prior to July 1, 1973 ("Tier 1") are entitled to service retirement benefits of 55% of "final salary" (as defined within State statutes and City laws) after 25 years of qualifying service and attainment of age 55, a portion of which is provided from member contributions. Additional benefits equal to a specified percentage per year of service of "final salary" are payable for years in excess of the 25-year minimum. These additional benefits are increased, where applicable, by an annuity attributable to accumulated member contributions in excess of the minimum required balance and by any benefits attributable to the Increased-Take-Home Pay ("ITHP") contributions accumulated after the 25th year of member qualifying service. ITHP represents amounts contributed by the City in lieu of members' own contributions. These amounts reduce the contributions that members would have to make to the QPP during their service and thereby increase their take-home pay. Members have the choice of waiving their ITHP reduction, which would reduce their take-home pay, but provide them with increased benefits upon retirement. Tier 1 members contribute on the basis of a normal rate of contribution which is assigned by the QPP at membership and which is dependent upon age and actuarial tables in effect at the time of membership.

- In addition, these same members could elect a service retirement benefit with no minimum service requirement which provides an annual benefit for each year of service equal to a specified percentage (as described within State statutes and City laws) of "final salary", payable upon attainment of age 55. This benefit is increased, where applicable, by an annuity attributable to the member contributions and ITHP contributions.

- For all members who enrolled in the QPP prior to July 27, 1976, ("Tier 1" and "Tier 2"), ITHP contributions made on their behalf as well as their own contributions are invested, at their election, in either the fixed return fund or the variable return fund, or 50% of such contributions in each. These investment elections can be changed every two years. The QPP guaranteed a 7.5% return on member contributions or ITHP contributions to the fixed return fund until June 30, 1982, increased the guaranteed return to 8% as of July 1, 1982, and to 8.25% as of July 1, 1988, for members who enrolled in the QPP prior to July 27, 1976 (5% on member contributions for members enrolled on or after July 27, 1976). The variable return fund includes only member contributions and ITHP contributions made on their behalf as described above and is expressed in terms of units, which are valued monthly, based on investment experience.

- Certain members of Tier 1 and Tier 2 have the right to make voluntary member contributions ("Voluntary Contributions") in excess of their required member contributions ("Required Contributions"). The investment of the Voluntary Contributions and the Required Contributions is directed by each member. A member may invest: (1) in the QPP's fixed return fund, which is credited with interest at the Statutory Interest Rate (currently 8.25% (7.0% for UFT members)), and/or (2) in the QPP's variable return fund. At the time of retirement or refund of contributions, a member's aggregate balance of actual Required Contributions and Voluntary Contributions, including the actual accumulated earnings thereon, less the outstanding balance of any member loans ("Net Actual Contributions"), may exceed ("Excess of Contributions") or fall short of ("Deficiency of Contributions") the member's Expected Balance. The Expected Balance is the sum of the Required Contributions which a member should have made during his or her credited service, plus the earnings that would have accumulated thereon at the Statutory Interest rate. The amount of the member's retirement annuity or the refund of contributions that he or she is entitled to is increased by any Excess of Contributions or reduced by any Deficiency of Contributions. The total value of active members' Excess of Contributions, net of all Deficiencies of Contributions, is \$3.45 million and \$3.51 million, for the years ended June 30, 2018 and 2017, respectively. Actuarial estimates of the impacts of Excesses and Deficiencies are incorporated into calculation of the QPP's net pension liability (see Note 5).

- Members who joined after July 1, 1973 and before July 27, 1976 ("Tier 2") have provisions similar to Tier 1, except that the eligibility requirements for retirement and the salary base for benefits are different and there was a limitation on their maximum benefit. Also, certain members retiring prior to age 62 may have their benefit reduced by an age-based factor. This maximum benefit limitation was subsequently eliminated under Chapter 574 of the Laws of 2000 for all Tier 2 members who retired after December 8, 2000. Tier 2 members contribute on the basis of a normal rate of contribution which is assigned by the QPP at membership, and which is dependent upon age and actuarial tables in effect at the time of membership.

- Members who joined the QPP on or after July 27, 1976 and prior to September 1, 1983 ("Tier 3") were originally entitled to a retirement benefit upon the completion of ten years of service at age 62. The formula for this benefit was 1.67% of "Final Average Salary" ("FAS") per year of credited service for members with less than 20 years of service, or 2% of FAS per year of service for members with 20 to 30 years of service. Tier 3 benefits were reduced by one half of the primary Social Security benefit attributable to service with the employer and provided an annual cost-of-living escalator in pension benefits of not more than 3%. Tier 3 required member contributions of 3% of salary for a period not to exceed 30 years. After September 1, 1983, all Tier 3 members were mandated into the Tier 4 plan. However, these members retain their Tier 3 rights. Effective October 1, 2000, Tier 4 members with Tier 3 rights, like other Tier 4 members, are not required to make contributions once the tenth anniversary of their membership date has passed, or upon completion of ten years of credited service, whichever is earlier, and are eligible for a pension upon the completion of five years of credited service at age 62.

- Members who joined the QPP on or after September 1, 1983 and prior to April 1, 2012 ("Tier 4") are eligible for a pension upon the completion of five years of credited service at age 62. The annual benefit is 1.67% of FAS per year of service for members with less than 20 years of service, or 2% of FAS per year of service for members with 20 to 30 years of service, plus an addition of 1.5% of FAS per year of service for service in excess of 30 years of service. Tier 4 members were originally required to make contributions of 3% of salary until termination of service. As of October 1, 2000, these members are not required to make contributions after the tenth anniversary of their membership date or upon completion of ten years of credited service, whichever is earlier (Chapter 126 of Laws of 2000). Certain members retiring prior to age 62 have their benefit reduced by an age-based factor.

- Effective June 28, 1995, active Tier 2 and Tier 4 members, excluding those who hold a position represented by the recognized teacher organization for collective bargaining purposes (currently, the United Federation of Teachers or “UFT”), were eligible to enroll in an early retirement program permitting them to retire at age 55 with 25 years of credited service (“55/25”), with no age reduction factor to their retirement allowance, or at age 50 with 25 years of credited service in a physically taxing position (Chapter 96 of the Laws of 1995). Additionally, Tier 4 members in non-UFT positions who joined BERS on or after June 28, 1995 and before April 1, 2012 were mandated into an early retirement program permitting them to retire at age 57 with 5 years of credited service (“57/5”), with no age reduction factor to their retirement allowance, or at age 50 with 25 years of credited service in a physically taxing position. Participants in the 55/25 and 57/5 early retirement programs are required to remit additional contributions of 1.85%, or 3.83% for physically taxing positions.

- Effective February 27, 2008, active Tier 4 members who hold a position represented by the recognized teacher organization for collective bargaining purposes (currently, UFT) were eligible to enroll in an early retirement program permitting them to retire at age 55 with 25 years of credited service (“55/25 UFT”), with no age reduction factor to their retirement allowance (Chapter 19 of the Laws of 2008). Those choosing the age 55 retirement option are required to make additional contributions of 1.85% of salary from February 28, 2008 until June 29, 2008, or until they have accumulated 25 years of credited service, whichever is later. UFT members in eligible titles who joined after February 27, 2008, but before December 10, 2009 were automatically enrolled in the 55/27 retirement program. Participants in the 55/27 retirement may retire if they are at least age 55 as of their retirement date and have attained at least 27 years of credited service. These members are required to make additional plan contributions of 1.85% of salary until they have accumulated 27 years of credited service.

- UFT members in covered titles who joined the QPP after December 10, 2009 and prior to April 1, 2012 are covered by 55/27 UFT but are required to make contributions of 4.85% of salary until they have 27 years of credited service and contributions of 1.85% of salary thereafter (Chapter 504 of the Laws of 2009). Additionally, QPP benefits for this population vest in ten years, rather than five years, as for other Tier 4 members.

- Members who join the QPP on or after April 1, 2012 are subject to the provisions of Chapter 18 of the Laws of 2012 (“Chapter 18/12”), also known as “Tier 6”. BERS members in Tier 6 are eligible for a pension upon the completion of ten years of credited service at age 63. The annual benefit is 1.67% of FAS for the first 20 years of credited service, or 35% upon the attainment of 20 years of service plus an addition of 2% of FAS per year of service for service in excess of 20 years of service. Additionally, the FAS period is five years, rather than three, and a cap is imposed on the maximum permissible FAS. Tier 6 members are required to make Basic Member Contributions (“BMC”) until they separate from service or until they retire. The BMC rate is dependent on annual wages earned during a plan year and ranges from 3% for salaries less than $45,000 to 6% for salaries greater than $100,000. Tier 6 members become vested after ten years of service.

- Under all service retirement categories, annuities attributable to member contributions are reduced on an actuarial basis for any loans with unpaid balances outstanding at the date of retirement.

- Subject to certain conditions, members become fully vested as to QPP benefits upon the completion of five years of credited service, or ten years of credited service for Tier 4 55/27 UFT members who joined after December 10, 2009 and for Tier 6 members.

- The QPP provides death benefits and retirement benefits on the occurrence of accidental or ordinary disability.

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

TDA Program Benefits

Contributions to the TDA Program are made by the participants only and are voluntary. In order to contribute to the TDA Program, certain active members of the QPP are required to submit a salary reduction agreement and TDA enrollment request. A participant may elect to exclude an amount of his or her compensation from current taxable income (within the maximum allowed by the Internal Revenue Service) by contributing it to the TDA Program. The basic contribution limit, as of 2018 is $18,500 certain participants are permitted to make additional contributions, based on age or years of service. The additional contribution limit for 2018 is $6,000. Additionally, participants can elect to invest their contributions in either the fixed return fund or the variable return fund.

Benefits provided under the TDA Program are derived from participants' accumulated contributions and earnings on those contributions. No contributions are provided by the employer.

A participant may withdraw all or part of the balance of his or her account at the time of retirement, termination of employment, or under certain hardship conditions. Beginning January 1, 1989, the tax laws restricted withdrawals of TDA contributions and accumulated earnings thereon for reasons other than retirement or termination.

Contributions made after December 31, 1988, and investment earnings credited after that date, may only be withdrawn by active participants upon attainment of age 59½ or for reasons of hardship (as defined by Internal Revenue Service regulations). Hardship withdrawals are limited to contributions only.

Contributions made on or before December 31, 1989, and earnings credited on or before that date, may be withdrawn by active participants even before age 59½. A member who has received a withdrawal may not contribute to the TDA Program for the remainder of the current year.

If a member dies in active service or after retirement while his or her TDA account is in deferral, the full value of his or her account at the date of death is paid to the member's beneficiary(ies) or estate.

When a member resigns before attaining vested rights under the QPP, he or she may withdraw the value of his or her TDA Program account or leave the funds in the account for a period of up to five years after the date of resignation. If a member resigns after attaining vested rights under the QPP, he or she may leave his or her funds in the TDA Program account, accruing earnings until reaching the age at which minimum distributions are required by IRS regulations. Once a member withdraws from the QPP, participation in the TDA Program will cease, and the member will receive a refund of the value of his or her account in the TDA Program.

When a TDA Program participant applies to retire from the QPP and has a positive TDA Program account balance, the participant has three options:

a. The participant may withdraw the total balance, either by receiving it as a taxable distribution or by rolling it over into an Individual Retirement Account (IRA);

b. The participant may defer distribution of the account; or

c. The participant may elect to receive the balance of the account as a life annuity. The available benefit options depend on the member's Tier.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND SYSTEM ASSET MATTERS

Basis of Accounting—The QPP as well as the TDA Program use the accrual basis of accounting where the measurement focus is on a flow of economic resources. Revenues are recognized in the accounting period in which they are earned and expenses are recognized in the period incurred. Contributions from members are recognized when respective employers make payroll deductions from the QPP's members and the TDA Program participants. Employer contributions to the QPP are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of governing the QPP and the TDA Program.

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 BERS. Fair value is determined by BERS 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 BERS management based on information provided by the various GP's after review by an independent consultant and the custodian bank for the fund.

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

No investment in any one security represents 5% or more of QPP's net position restricted for benefits.

Investment Programs—The System's assets are invested in two investment programs. These are the fixed return fund, which is managed by BERS and the variable return fund (consisting primarily of equity securities), which is managed by TRS.

Under the fixed return program, members' TDA Program accounts are credited with the statutory rate of interest, currently 7% for UFT members and 8.25% for all other members. TDA Program members and certain Tier 1 and 2 QPP members may transfer their balances between the fixed return fund and the variable investment fund on a quarterly basis.

The QPP's assets within the variable return fund are co-invested with those assets of the TDA Program that are earmarked for the variable return fund. These financial statements reflect the QPP investment activity in the fixed return fund; as well as the variable return fund.

Income Taxes—Income earned by the QPP and the TDA Program is not subject to federal income tax until it is normally distributed. Other taxes apply in case of premature distributions.

Accounts Payable—Accounts payable is principally comprised of amounts owed by BERS for overdrawn bank balances. BERS's 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.

Interest (to) from TDA Program's Fixed Return Fund— The statutory interest credited on TDA Program member account balances invested in the fixed return fund is reported as the "Interest (to) from TDA Program's Fixed Return Fund."

Securities Lending Transactions—State statutes and Board policies permit the System 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 Systems' 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 System receives collateral in the form of cash, U.S. Treasury and U.S. Government agency securities at 102% to 105% of the principal plus accrued interest for reinvestment. At June 30, 2018 and 2017, management believes that the System had no credit risk exposure to borrowers because the amounts the System owed the borrowers equaled or exceeded the amounts the borrowers owed the System. The contracts with the System's Custodian require the Securities Lending Agent to Indemnify the System. 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 System or the borrowers. Cash collateral is invested by the securities lending agent using approved Lender's Investment guidelines.

The securities lending program in which the System participates 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 statements of fiduciary net position. Cash received as collateral on securities lending transactions and investments made with that cash are reported as assets. Securities received as collateral are also reported as assets if the government entity has the ability to pledge or sell them without a borrower default. Accordingly, the System 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 market value, the values reported by the QPP as of June 30, 2018 and 2017 are $400.62 million and $366.54 million, respectively. As of net position date, the maturities of the investments made with cash collateral on average exceed the maturities of the securities loans by approximately 24.95 days.

GASB Statement No. 72, *Fair Value Measurement and Application*. GASB 72 requires the System to use valuation techniques which are appropriate under the circumstances and are 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.

3. INVESTMENTS AND DEPOSITS

The Comptroller of the City of New York (the "Comptroller") acts as an investment advisor to BERS. In addition, BERS employs an independent investment consultant as an investment advisor. BERS utilizes several investment managers to manage the long-term debt and equity portfolios. The managers are regularly reviewed, with regard to both their investment performance and their adherence to investment guidelines.

The BERS investment policy statement was ratified by the Board of Trustees in January 2009 and amended in October 2011, January 2013, February 2015 and June 2016. It addresses investment objectives, investment philosophy and strategy, monitoring and evaluating performance, risk management, security lending protocol and rebalancing investment mix. Assets may be invested in fixed income, equity and other vehicles as permitted by New York State RSSL § 176-178(a) and Banking Law § 235, the New York City Administrative Code and the Legal Investments for New York Savings Banks list as published by the New York State Banking Department. However, investments up to 25% of total System assets may be made in instruments not expressly permitted by the RSSL.

The System does not possess an investment risk policy statement, nor does it actively manage its assets to specified risk targets. Rather, investment risk management is an inherent function of the System's asset allocation process. QPP and TDA Program assets are diversified over a broad range of asset classes and encompass multiple investment strategies aimed at limiting concentration risk.

State Street Bank and Trust Company is the primary custodian for the fixed return fund. The variable return fund assets are held in custody at Chase Bank.

Cash deposits are insured by the Federal Deposit Insurance Corporation for up to $250,000 per member of the System and are, therefore, fully insured.

Concentration of Credit Risk—The System does not have any investments in any one entity that represent 5% or more of the System's net position restricted for benefits.

The legal requirements for the System's investments are as follows:

a. Fixed income, equity and other investments may be made as permitted by New York State RSSL §§ 176-178(a) and Banking Law § 235, the New York City Administrative Code, and the Legal Investments for New York Savings Banks list as published by The New York State Banking Department, subject to Note 3(b).

b. Investments up to 25% of total pension fund assets may be made in instruments not expressly permitted by the State RSSL.

The information reflected in the credit ratings and in the years to maturity is derived from the Custodian's Risk and Performance Analytics Reporting System. Such information is prepared as a result of the Custodian's Risk Management Analysis.

Credit Risk—Portfolios other than U.S. Government and related portfolios have credit rating limitations. The quality ratings of investments of the fixed return fund, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2018 and 2017 are as follows:

Investment Type	**Moody's Quality**																	
Fixed Funds June 30, 2018	**Aaa**	**Aa1**	**Aa2**	**Aa3**	**A1**	**A2**	**A3**	**Baa1**	**Baa2**	**Baa3**	**Ba1**	**Ba2**	**Ba3**	**B1**	**B2**	**B3**	**Caa & Below**	**NR**	**Total**
U.S. Government	63.21%	0.03%	0.06%	0.01%	0.00%	0.01%	0.04%	0.00%	0.07%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.49%	63.92%
Corporate bonds	1.00	0.17	0.17	0.36	0.74	0.79	1.45	1.81	1.95	1.78	1.48	1.60	2.90	2.58	2.29	2.26	2.02	3.63	28.98
Short-term:																			
Commercial Paper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.27	3.27
Pooled fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.83	3.83
Discount notes and T-bills	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portfolio	64.21%	0.20%	0.23%	0.37%	0.74%	0.80%	1.49%	1.81%	2.02%	1.78%	1.48%	1.60%	2.90%	2.58%	2.29%	2.26%	2.02%	11.22%	100.00%

Investment Type	**Moody's Quality**																	
Fixed Funds June 30, 2017	**Aaa**	**Aa1**	**Aa2**	**Aa3**	**A1**	**A2**	**A3**	**Baa1**	**Baa2**	**Baa3**	**Ba1**	**Ba2**	**Ba3**	**B1**	**B2**	**B3**	**Caa & Below**	**NR**	**Total**
U.S. Government	36.79%	0.05%	0.03%	0.02%	- %	0.02%	0.13%	- %	0.15%	0.04%	- %	- %	- %	- %	- %	- %	- %	14.60%	51.83%
Corporate bonds	1.18	0.71	0.62	0.76	2.25	1.69	2.97	4.50	3.71	3.45	2.28	1.25	4.33	2.85	2.50	3.58	3.21	2.29	44.13
Short-term:																			
Commercial Paper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.52	1.52
Pooled Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.17	2.17
Discount notes and T-bills	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.35	0.35
Portfolio	37.97%	0.76%	0.65%	0.78%	2.25%	1.71%	3.10%	4.50%	3.86%	3.49%	2.28%	1.25%	4.33%	2.85%	2.50%	3.58%	3.21%	20.93%	100.00%

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

Investment Type	Moody's Quality																			
Variable Funds June 30, 2018	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	NR	Total
U.S. Government	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	0.54%	0.54%
Corporate bond	-	-	-	-	-	0.98	0.18	-	0.31	0.46	-	0.29	1.27	0.25	-	0.49	0.39	-	46.40	51.02
Yankee bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Municipal bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
U.S. Agencies	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Short-term:																				
Money Market	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48.33	48.33
Cash Equivalent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.11	0.11
Portfolio	0.00%	0.00%	0.00%	0.00%	0.00%	0.98%	0.18%	0.00%	0.31%	0.46%	0.00%	0.29%	1.27%	0.25%	0.00%	0.49%	0.39%	0.00%	95.38%	100.00%

Investment Type	Moody's Quality																			
Variable Funds June 30, 2017	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	NR	Total
U.S. Government	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %	- %
Corporate bonds	1.45	0.93	0.68	0.66	3.39	2.15	3.71	3.78	2.20	3.21	0.29	1.10	0.60	0.16	0.60	0.26	-	0.06	27.80	53.03
Yankee bonds	1.33	-	0.07	-	-	-	-	-	-	0.24	-	-	-	-		-	-	-	-	1.64
Municipal bonds	0.02	0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24
U.S Agencies	0.78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.78
Short-term:																				
Money Market	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44.31	44.31
Cash Equivalent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portfolio	3.58%	1.15%	0.75%	0.66%	3.39%	2.15%	3.71%	3.78%	2.20%	3.45%	0.29%	1.10%	0.60%	0.16%	0.60%	0.26%	0.00%	0.06%	72.11%	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 System 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 System and are held by either the counterparty or the counterparty's trust department or agent but not in the System's name.

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

All of the System's deposits are insured and are collateralized by securities held by a financial institution separate from the System's depository financial institution.

All of the System's securities are held by the System's custodial bank in the System's name.

Interest Rate Risk—Interest rate risk is the risk that the fair value of investments could be adversely affected by the change in interest rates. Duration limits are used to control the portfolios exposure to interest rate changes. In the investment grade core Fixed Income portfolios duration is limited to a range of one year shorter than the benchmark duration to 0.75 years longer than the duration of the benchmark indices. Duration range is a measure of the overall portfolio, while statements of the stated maturity reflect the specific maturities of the individual securities held. The System has no formal risk policy. The lengths of investment maturities for fixed return fund (in years), as shown by the percent of the rated portfolio, at June 30, 2018 and 2017 are as follows:

Years to Maturity	Investment Maturities				
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	63.92%	0.84%	28.84%	16.38%	17.86%
Corporate Bonds	28.98	0.68	10.65	11.83	5.82
Short-term:					
Commercial Paper	3.27	3.27	-	-	-
STIF	3.83	3.83	-	-	-
Portfolio	100.00%	8.62%	39.49%	28.21%	23.68%

Years to Maturity	Investment Maturities				
Investment Type June 30, 2017	**Fair Value**	**Less Than One Year**	**One to Five Years**	**Six to Ten Years**	**More Than Ten Years**
U.S Government	51.83%	0.02%	14.24%	14.56%	23.01%
Corporate Bonds	44.13	1.38	14.87	16.60	11.28
Short-term:					
Commercial Paper	1.52	1.52	-	-	-
Pooled Fund	2.17	2.17	-	-	-
Discount Notes, US Gov. & T-Bills	0.35	0.35	-	-	-
Portfolio	100.00%	5.44%	29.11%	31.16%	34.29%

The lengths of investment maturities (in years) of the variable return fund, as shown by the percent of the rated portfolio, at June 30, 2018 and 2017 are as follows:

Years to Maturity	Investment Maturities				
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	0.54%	0.54%	0.00%	0.00%	0.00%
Corporate bonds	51.02	2.89	27.60	15.20	5.33
Yankee Bonds	-	-	-	-	-
Municipal Bonds	-	-	-	-	-
U.S. Agencies	-	-	-	-	-
Short-term:					
Money Market	48.33	48.33	-	-	-
Cash Equivalent	0.11	0.11	-	-	-
Portfolio	100.00%	51.87%	27.60%	15.20%	5.33%

Years to Maturity	Investment Maturities				
Investment Type June 30, 2017	Fair Value	Less than One Year	One to Five Years	Six to Ten Years	More than Ten Years
U.S. Government	21.19%	0.73%	19.34%	1.12%	0.00%
Corporate bonds	41.79	3.75	28.81	4.93	4.30
Yankee Bonds	1.29	-	1.29	-	-
Municipal Bonds	0.19	-	0.19	-	-
U.S. Agencies	0.62	-	0.62	-	-
Short-term:					
Money Market	34.92	34.92	-	-	-
Cash Equivalent	-	-	-	-	-
Portfolio	100.00%	39.40%	50.25%	6.05%	4.30%

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 System has numerous managers that invest globally. In general, currency exposure is viewed as a benefit for its diversification reasons and not as an inherent risk within the portfolio. The System has no formal risk policy.

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

Trade Currency	**June 30, 2018**	**June 30, 2017**
Euro Currency	$ 263,722	$ 237,420
Hong Kong dollar	162,239	138,877
Japanese Yen	128,349	140,072
British Pnd sterling	112,793	113,439
South Korean won	80,477	79,634
Swiss Franc	51,079	58,996
Indian Rupee	46,999	49,722
New Taiwan dollar	44,247	46,490
South African rand	31,233	27,466
Brazilian Real	29,791	24,417
Swedish Krona	25,835	38,247
Thailand Baht	21,747	22,460
Danish Krone	20,724	21,164
Singapore Dollar	20,155	20,315
Turkish Lira	17,399	18,072
Norwegian Krone	16,844	14,219
Canadian Dollar	16,616	15,059
Indonesian Rupiah	14,414	13,619
Malaysian Ringgit	14,363	12,789
Australian Dollar	14,004	10,332
Polish Zloty	9,865	8,641
Mexican Nuevo peso	4,864	9,106
Qatari Rial	4,638	3,466
Philippine Peso	2,017	2,344
Chilean Peso	1,998	1,524
Uae Dirham	1,550	1,304
Colombian Peso	1,462	1,461
Israeli Shekel	1,406	2,306
Hungarian Forint	931	684
Renminbi Yuan	504	82
Czech Koruna	456	391
Egyptian Pound	428	519
Peruvian Nouveau sol	221	151
New Zealand dollar	113	2,250
Pakistan Rupee	108	179
Moroccan Dirham	1	1
Total	**$ 1,163,592**	**$ 1,137,218**

The foreign currency exposures of the variable return funds as of June 30, 2018 and 2017 are as follows (amounts in thousands of U.S. dollars):

Trade Currency	**June 30, 2018**	**June 30, 2017**
Euro Currency	$ 29,135	$ 7,211
Japanese Yen	20,342	3,859
British Pnd sterling	16,378	3,762
Swiss Franc	7,540	2,465
Australian Dollar	5,287	699
Hong Kong dollar	3,118	793
South Korean won	2,814	3,040
Indonesian Rupiah	1,965	1,894
Swedish Krona	1,933	198
Taiwan Dollar	1,571	1,829
Danish Krone	1,463	399
Singapore Dollar	1,391	587
South African rand	1,073	849
Canadian Dollar	866	1,160
Norwegian Krone	792	265
Thailand Baht	654	515
Brazilian Real	589	540
Malaysian Ringgit	472	450
Turkish Lira	369	429
Mexican Nuevo peso	254	276
Indian Rupee	236	113
Israeli Shekel	229	96
New Zealand dollar	162	32
Polish Zloty	138	78
Uae Dirham	88	75
Hungarian Forint	80	-
Chilean Peso	73	32
Philippine Peso	69	70
Egyptian Pound	8	3
Czech Koruna	4	4
Total	**$ 99,093**	**$ 31,723**

Securities Lending Transactions: *Credit Risk*— The quality ratings of investments held as collateral for Securities Lending are as follows:

Investment Type and Fair Value - Fixed Return Fund
Securities Lending Transactions
(In thousands)

June 30, 2018	Moody's Quality											
	Aaa	Aa	A1	A2	A3	Baa	Ba	B	Caa	Ca	NR	Total
U.S. Government	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Corporate bonds	-	-	-	-	-	-	-	-	-	-	-	-
Yankee bonds	-	-	-	-	-	-	-	-	-	-	-	-
Short-term:												
Reverse Repurchase Agreements	-	-	-	10,968	72,442	102,100	-	-	-	-	153,184	338,694
Money Market	11,560	-	-	-	-	-	-	-	-	-	-	11,560
Bank Notes	-	-	-	-	-	-	-	-	-	-	1,649	1,649
Cash or Cash Equivalent	-	-	37,651	-	-	-	-	-	-	-	-	37,651
Uninvested	-	-	-	-	-	-	-	-	-	-	-	-
Total	$ 11,560	$ -	$ 37,651	$ 10,968	$ 72,442	$ 102,100	$ -	$ -	$ -	$ -	$ 154,833	$ 389,554
Percentage of securities lending portfolio	2.97%	0.00%	9.66%	2.81%	18.60%	26.21%	0.00%	0.00%	0.00%	0.00%	39.75%	100.00%

Investment Type and Fair Value - Fixed Return Fund
Securities Lending Transactions
(In thousands)

June 30, 2017	Moody's Quality											
	Aaa	Aa	A1	A2	A3	Baa	Ba	B	Caa	Ca	NR	Total
U.S. Government	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Corporate bonds	-	-	-	-	-	-	-	-	-	-	-	-
Yankee bonds	-	-	-	-	-	-	-	-	-	-	-	-
Short-term:												
Reverse Repurchase Agreements	-	86,747	-	54,093	28,220	55,000	-	-	-	-	117,967	342,027
Money Market	-	-	-	-	-	-	-	-	-	-	-	-
Bank Notes	-	-	-	-	-	-	-	-	-	-	-	-
Cash or Cash Equivalent	-	-	31,972	-	-	-	-	-	-	-	-	31,972
Uninvested	-	-	-	-	-	-	-	-	-	-	327	327
Total	$ -	$ 86,747	$ 31,972	$ 54,093	$ 28,220	$ 55,000	$ -	$ -	$ -	$ -	$ 118,294	$ 374,326
Percentage of securities lending portfolio	0.00%	23.17%	8.54%	14.45%	7.54%	14.69%	0.00%	0.00%	0.00%	0.00%	31.61%	100.00%

Investment Type and Fair Value - Variable Return Fund
Securities Lending Transactions
(In thousands)

June 30, 2018	Moody's Quality																		
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa	NR	Total
U.S. Government	$ 842	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 842
Corporate bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yankee bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Short-term:																			
Repurchase Agreements	1,237	-	-	-	-	-	727	-	-	-	-	-	-	-	-	-	-	3,398	5,362
Uninvested	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	$ 2,079	$ -	$ -	$ -	$ -	$ -	$ 727	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,398	$ 6,204
By Percent	33.51%	0.00%	0.00%	0.00%	0.00%	0.00%	11.72%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	54.77%	100.00%

Investment Type and Fair Value - Variable Return Fund
Securities Lending Transactions
(In thousands)

June 30, 2017	Moody's Quality																		
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa	NR	Total
U.S. Government	$ 1,384	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 116	$ 1,500
Corporate bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yankee bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Short-term:																			
Repurchase Agreements	4,558	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	476	5,034
Uninvested	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	$ 5,942	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 592	$ 6,534
By Percent	90.94%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.06%	100.00%

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

Years to Maturity Fixed Return Fund (In thousands) June 30, 2018	**Investment Maturities (in years)** 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	338,694	338,694	-	-	-
Certificate of Deposits	-	-	-	-	-
Commercial Paper	-	-	-	-	-
Money Market	11,560	11,560	-	-	-
Bank Notes	1,649	1,649	-	-	-
US Treasury	-	-	-	-	-
US Agency	-	-	-	-	-
Time Deposit	-	-	-	-	-
Cash or Cash Equivalent	37,651	37,651	-	-	-
Uninvested	-	-	-	-	-
Total	$ 389,554	$ 389,554	$ -	$ -	$ -
By Percent	100.00%	100.00%	0.00%	0.00%	0.00%

Years to Maturity Fixed Return Fund (In thousands) June 30, 2017	**Investment Maturities (in years)** 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	342,027	342,027	-	-	-
Certificate of Deposits	-	-	-	-	-
Commercial Paper	-	-	-	-	-
Money Market	-	-	-	-	-
Bank Notes	-	-	-	-	-
US Treasury	-	-	-	-	-
US Agency	-	-	-	-	-
Time Deposit	-	-	-	-	-
Cash or Cash Equivalent	31,972	31,972	-	-	-
Uninvested	327	327	-	-	-
Total	$ 374,326	$ 374,326	$ -	$ -	$ -
By Percent	100.00%	100.00%	0.00%	0.00%	0.00%

Years to Maturity
Variable Return Fund
(in thousands)
June 30, 2018

	Investment Maturities (in years)				
	Fair Value	**Less than One Year**	**One to Five Years**	**Six to Ten Years**	**More than Ten Years**
U.S. Government	$ 842	$ 249	$ 431	$ 76	$ 86
Corporate Bonds	-	-	-	-	-
Yankee Bonds	-	-	-	-	-
Short Term					
Repurchase Agreements	5,362	5,362	-	-	-
Reverse Repurchase Agreements	-	-	-	-	-
Certificate of Deposits	-	-	-	-	-
Commercial Paper	-	-	-	-	-
Money Market	-	-	-	-	-
Bank Notes	-	-	-	-	-
US Treasury	-	-	-	-	-
US Agency	-	-	-	-	-
Time Deposit	-	-	-	-	-
Cash or Cash Equivalent	-	-	-	-	-
Uninvested	-	-	-	-	-
Total	$ 6,204	$ 5,611	$ 431	$ 76	$ 86
By Percent	100.00%	90.43%	6.95%	1.23%	1.39%

Years to Maturity
Variable Return Fund
(in thousands)
June 30, 2017

	Investment Maturities (in years)				
	Fair Value	**Less than One Year**	**One to Five Years**	**Six to Ten Years**	**More than Ten Years**
U.S. Government	$ 1,500	$ 208	$ 598	$ 377	$ 317
Corporate Bonds	-	-	-	-	-
Yankee Bonds	-	-	-	-	-
Short Term					
Repurchase Agreements	5,034	5,034	-	-	-
Reverse Repurchase Agreements	-	-	-	-	-
Certificate of Deposits	-	-	-	-	-
Commercial Paper	-	-	-	-	-
Money Market	-	-	-	-	-
Bank Notes	-	-	-	-	-
US Treasury	-	-	-	-	-
US Agency	-	-	-	-	-
Time Deposit	-	-	-	-	-
Cash or Cash Equivalent	-	-	-	-	-
Uninvested	-	-	-	-	-
Total	$ 6,534	$ 5,242	$ 598	$ 377	$ 317
By Percent	100.00%	80.22%	9.15%	5.77%	4.86%

For the years ended June 30, 2018 and 2017, the annual money-weighted rate of return on the System's fixed return fund investments, net of investment expense on the System's fixed return fund, was 10.31% and 15.33%. The money-weighted rate of return expresses investment performance, net of investment expense adjusted for the changing amounts invested.

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

The System categorizes its fair value measurements within the fair value hierarchy established by GAAP. 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 System has the following recurring fair value measurements as of June 30, 2018 and June 30, 2017:

Fixed Return Funds **GASB 72 Disclosure** **(in thousands)** **June 30, 2018**	**Level One**	**Level Two**	**Level Three**	**QPP Total**
INVESTMENTS — At fair value				
Short-term investments:				
Commercial paper	$ -	$ 69,031	$ -	$ 69,031
Discount notes	-	-	-	-
Short-term investment fund	-	56,088	-	56,088
U.S. Treasury bills and Agencies	3,699	5,632	-	9,331
Debt securities:				
Bank loans	-	5,691	-	5,691
Corporate and Other	-	455,064	-	455,064
Mortgage debt securities	-	193,178	-	193,178
U.S. Government and Agency	-	877,527	-	877,527
Equity securities	1,687,625	11	-	1,687,636
Alternative investments	-	-	765,549	765,549
Collective Pooled funds:				
Bank Loans	-	113,634	-	113,634
Corporate and Other	-	143,618	-	143,618
Domestic equity	151,429	-	943	152,372
International equity	1,167,550	-	13	1,167,563
Mortgage debt securities	-	9,777	25,189	34,966
Treasury inflation protected securities	-	282,543	-	282,543
	$ 3,010,303	$ 2,211,794	$ 791,694	$ 6,013,791

Fixed Return Funds
GASB 72 Disclosure
(in thousands)
June 30, 2017

	Level One	Level Two	Level Three	QPP Total
INVESTMENTS — At fair value				
Short-term investments:				
Commercial paper	$ -	$ 21,496	$ -	$ 21,496
Short-term investment fund	-	30,587	-	30,587
U.S. Govt, Discount notes & T-Bills	-	-	-	-
Debt securities:				
U.S. Government and Agency	-	595,874	-	595,874
Corporate and other	-	501,718	5,588	507,306
Equity securities	145,421	10	-	145,431
Alternative Investments	-	-	612,677	612,677
Collective trust funds:				
International equity	1,251,481	-	147	1,251,628
Domestic equity	1,738,135	-	-	1,738,135
Mortgage debt security	-	6,135	24,790	30,925
Treasury inflation protected securities	-	236,943	-	236,943
Fixed income	-	5,254	108,708	113,962
	$ 3,135,037	$ 1,398,017	$ 751,910	$ 5,284,964

Note: Collective Trust Funds are reported using NAV

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. Collective Trust funds are reported using NAV. The Debt and equity securities held in Collective Trust Funds are held in those funds on behalf of the pension system and there is no restriction on the use and or liquidation of those assets for the exclusive benefit of the funds participants.

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

Investments in non-public equity securities are valued by the GP using one or more valuation methodologies outlined in Accounting Standard Codification ("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.

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

Variable-Return Funds
GASB 72 Disclosure
As of June 30, 2018
(In thousands)

	Level 1	Level 2	Level 3	Total
Variable Return Funds:				
Short-term Investments	$ -	$ 5,241	$ -	$ 5,241
Debt Securities	-	11,399	-	11,399
Equities	536,582	12,544	59	549,185
Total	$ 536,582	$ 29,184	$ 59	$ 565,825

Variable-Return Funds
GASB 72 Disclosure
As of June 30, 2017
(In thousands)

	Level 1	Level 2	Level 3	Total
Variable Return Funds:				
Short-term Investments	$ -	$ 5,431	$ -	$ 5,431
Debt Securities	-	8,703	69	8,772
Equities	411,141	79,551	3	490,695
Total	$ 411,141	$ 93,685	$ 72	$ 504,898

Level One – Valued using prices quoted in active markets
Level Two – Valued using a matrix pricing technique: based on relationship to benchmark quoted prices
Level Three – Valued using discounted cash flow techniques

4. CONTRIBUTIONS AND ACTUARIAL ASSUMPTIONS

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, would ultimately be sufficient to accumulate assets to pay benefits when due.

Contributions to the TDA program are made on a voluntary basis by certain members of the QPP.

Member Contributions

- Members who joined the QPP prior to July 1, 1973 ("Tier 1") contribute on the basis of a normal rate of contribution which is assigned by the QPP at membership, and which is dependent upon age and actuarial tables in effect at the time of membership. Tier 1 members can also make Increased Take Home Pay ("ITHP") contributions, for which they can receive an additional annuity after retirement

- Members who joined after July 1, 1973 and before July 27, 1976 ("Tier 2") also contribute on the basis of a normal rate of contribution which is assigned by the QPP at membership, and which is dependent upon age and actuarial tables in effect at the time of membership. Note that the actuarial tables are different in Tier 2. Tier 2 members can also make ITHP contributions, for which they can receive an additional annuity after retirement.

- Members who joined after July 27, 1976 and before April 1, 2012 (“Tier 4”) contribute 3% of salary until the earlier of the 10th anniversary of their membership date, or upon the completion of 10 years of credited service. Certain Tier 4 members are enrolled in special early retirement plans and must therefore also make Additional Member Contributions (“AMC”), depending on the specific plan.

- Members who joined on or after April 1, 2012 (“Tier 6”) are required to make Basic Member Contributions (“BMC”) until they separate from service or until they retire. The BMC rate is dependent on annual wages earned during a plan year and ranges from 3% for salaries less than $45,000 to 6% for salaries greater than $100,000. Certain Tier 6 members are enrolled in special early retirement plans and must therefore also make Additional Member Contributions (“AMC”), depending on the specific plan.

Employer Contributions—Statutorily-required contributions (“Statutory Contributions”) to the QPP, determined by the System’s Chief Actuary of the Office of the Actuary (the “Actuary”) in accordance with State statutes and City laws, are generally funded by the employer within the appropriate fiscal year.

5. QPP NET PENSION LIABILITY

The components of the net pension liability of the Employers at June 30, 2018 and 2017 were as follows:

(In thousands)	2018	2017
Total pension liability	$ 5,174,287	$ 5,073,339
Fiduciary net position *	4,672,903	4,099,571
Employers’ net pension liability	$ 501,384	$ 973,768
Fiduciary net position as a percentage of the total pension liability	90.31 %	80.81 %

* Such amounts represent the preliminary Systems’ fiduciary net position and may differ from the final Systems’ fiduciary net position.

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

Projected Salary Increases*	In general, merit and promotion increases plus assumed general wage increases of 3.0% per annum.
Investment Rate of Return*	7.0% per annum, net of investment expenses.
COLAs*	1.5% per annum for Auto COLA 2.5% per annum for escalation.

*Developed assuming a long-term Consumer Price Inflation assumption of 2.5% per annum.

Mortality tables for Service and Disability pensioners were developed from an experience study of the QPP. The mortality tables for beneficiaries were also developed from an experience review.

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.

Expected Rate of Return on Investments—The long-term expected rate of return on QPP 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 QPP 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**
U.S. public market equities	30%	6.3%
International public market equities	13	7.0
Emerging public market equities	7	9.5
Private market equities	9	10.4
Fixed income (Core, TIPS, Opportunistic)	28	2.2
Alternatives (Real assets, Hedge funds)	13	5.5
Total	100.00%	

Discount Rate—The discount rate used to measure the total pension liability was 7%. 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 Employer contributions will be made at rates as determined by the Actuary. Based on those assumptions, the QPP's fiduciary net position was projected to be available to make all projected future benefit payments of current active and non-active QPP members. Therefore, the long-term expected rate of return on QPP 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 Employers, calculated using the discount rate of 7.0%, as well as what the Employers' net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.0 percent) or 1-percentage-point higher (8.0 percent) than the current rate:

(In thousands)	1% Decrease (6%)	Discount Rate (7%)	1% Increase (8%)
Employers' net pension liability—June 30, 2018	$ 1,142,066	$ 501,384	$ (43,968)

6. MEMBER LOANS

Members of the QPP are permitted to borrow up to 75% of their employee contribution account balances, including accumulated interest, subject to the limitations of Section 72 of the Internal Revenue Code. The balance of QPP member loans receivable at June 30, 2018 and 2017 is $50.03 million and $47.93 million, respectively. When a member withdraws from the QPP with an outstanding QPP loan balance, this outstanding QPP loan balance will be deducted from the refund of the member's contribution balance. When a member retires with an outstanding QPP loan balance, the member's retirement benefit will be reduced by the actuarial value of the amount of the outstanding QPP loan balance, unless this balance is paid off.

Members of the TDA Program are permitted to borrow up to 75% of their TDA Program account balances, including accumulated interest, subject to the limitations of Section 72 of the Internal Revenue Code. The balance of TDA Program member loans receivable at June 30, 2018 and 2017 is $43.56 million and $40.75 million, respectively.

7. RELATED PARTIES

The Comptroller has been appointed by law as custodian for the assets of the QPP and the TDA Program. QPP fixed return fund securities are held by certain banks under custodial agreements with the Comptroller. The Comptroller also provides cash receipt and cash disbursement services to the System. Actuarial services are provided to the System by the New York City Office of the Actuary. The City's Corporation Counsel provides legal services to the System. Other administrative services are also provided by the City. Costs of $1.48 million and $1.32 million were incurred on behalf of the System by other City agencies, primarily the Comptroller's Office for 2018 and 2017, respectively. The fixed return fund assets of the QPP are co-invested with those of the TDA Program. The variable return fund assets of the QPP are co-invested with those of the TDA Program and TRS (see Note 2). TRS holds the assets of the variable return fund.

8. ADMINISTRATIVE EXPENSES

In Fiscal Years 2018 and 2017, as per Chapter 307 of the New York State Laws of 2002, The Plan provided BERS with Corpus funding for administrative expenses in the amount of $13.30 million and $15.61 million, respectively.

9. CONTINGENT LIABILITIES AND OTHER MATTERS

Contingent Liabilities—The System has claims pending against it and has been named as a defendant in lawsuits and also has certain other contingent liabilities. Management of the System, on the advice of legal counsel, believes that such proceedings and contingencies will not have a material effect on the net position of the System or changes in the net position of the System. Under the existing State statutes and

City laws that govern the functioning of the System, increases in the obligations of the System to members and beneficiaries ordinarily result in increases in the obligations of the New York City Board of Education to the System.

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 5 for the results of the most recent actuarial audits for the QPP.

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.

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 PERS, including BERS. These changes are sometimes referred to as Tier 6.

Chapter 3 of the Laws of 2013 (“Chapter 3/13”) implemented changes in the actuarial procedures for determining Employer Contributions beginning Fiscal Year 2012. In particular, Chapter 3/13 continued the One-Year Lag Methodology (“OYLM”), employed the Entry Age Actuarial Cost Method (“EAACM”), established 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”).

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

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

Chapter 510 of the Laws of 2015 (“Chapter 510/15”) clarifies for Tier 6 the definition of multiple employers for the purpose of exclusion of wages and changes the plan year for contributions from plan year April 1 to March 31 to plan year January 1 to December 31.

Chapter 41 of the Laws of 2016 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, enacted on September 11, 2016, 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 438 of the Laws of 2016, enacted on November 14, 2016, amends Retirement and Social Security Law Section 43 to eliminate restrictions upon transferring between public retirement systems.

Chapter 71 of the Laws of 2017, enacted on June 29, 2017, continues for Fiscal Year 2018, the Actuarial Interest Rate assumption of 7.0% per annum used to determine employer contributions to the New York City Pension Funds and Retirement Systems. This act also extends through Fiscal Year 2018, the interest rate of 8.25% per annum to credit interest on Tier 1 and Tier 2 member contributions and Increased-Take-Home-Pay (ITHP) Reserves.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

	2018	2017	2016	2015	2014
Total pension liability:					
Service cost	$ 176,110	$ 168,625	$ 153,107	$ 147,898	$ 142,687
Interest	350,999	346,510	320,315	299,592	288,162
Change of benefit terms	-	-	-	-	-
Differences between expected and actual experience	(164,587)	19,938	(75,907)	50,148	-
Changes of assumptions	-	-	183,677	-	-
Benefit payments and withdrawals	(261,574)	(262,432)	(240,727)	(223,244)	(214,315)
Net change in total pension liability	100,948	272,641	340,465	274,394	216,534
Total pension liability—beginning	5,073,339	4,800,698	4,460,233	4,185,839	3,969,305
Total pension liability—ending (a)	5,174,287	5,073,339	4,800,698	4,460,233	4,185,839
Plan fiduciary net position:					
Employer contributions	318,643	288,233	265,532	258,099	214,590
Member contributions	40,846	39,821	38,581	39,564	37,193
Net investment income	565,577	862,510	164,144	177,166	875,453
Payment of interest on TDA program fixed return funds	(127,972)	(106,554)	(94,789)	(85,104)	(206,615)
Benefit payments and withdrawals	(261,574)	(262,432)	(240,727)	(223,244)	(214,315)
Administrative expenses	(13,212)	(15,486)	(12,818)	(10,956)	(9,776)
Other	51,024	(122,954)	(157,499)	(52,021)	(70,916)
Net change in plan fiduciary net position	573,332	683,138	(37,576)	103,504	625,614
Plan fiduciary net position—beginning	4,099,571	3,416,433	3,454,009	3,350,505	2,653,652
Plan fiduciary net position—ending (b)	4,672,903	4,099,571	3,416,433	3,454,009	3,279,266
BERS' net pension liability—ending (a)-(b)	$ 501,384	$ 973,768	$ 1,384,265	$ 1,006,224	$ 906,573
Plan fiduciary net position as a percentage of the total pension liability	90.31 %	80.81 %	71.17 %	77.44 %	78.34 %
Covered payroll[1]	$ 1,102,184	$ 1,052,171	$ 1,008,056	$ 1,016,822	$ 989,168
City's net pension liability as percentage of covered payroll	45.49 %	92.55 %	137.32 %	98.96 %	91.65 %

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

1. Projected Employee Payroll at Time 1.0 under One-Year Lag Methodology.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF EMPLOYERS' CONTRIBUTIONS
(In thousands)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined contribution	$ 318,643	$ 288,233	$ 265,532	$ 258,099	$ 214,590	$ 196,246	$ 213,651	$ 180,191	$ 147,349	$ 134,225
Contributions in relation to the actuarially determined contribution	318,643	288,233	265,532	258,099	214,590	196,246	213,651	180,191	147,349	134,225
Contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered payroll	$ 1,102,184	$ 1,052,171	$ 1,008,056	$ 1,016,822	$ 989,168	$ 886,186	$ 879,476	$ 880,656	$ 826,782	$ 755,516
Contributions as a percentage of covered-employee payroll	28.91 %	27.39 %	26.34 %	25.38 %	21.69 %	22.15 %	24.29 %	20.46 %	17.82 %	17.77 %

(Continued)

See Independent Auditors' Report.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
NOTES TO SCHEDULE OF EMPLOYERS' CONTRIBUTIONS

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

Valuation Dates	June 30, 2016	June 30, 2015	June 30, 2014	June 30, 2013	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009– June 30, 2007
Actuarial cost method	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Frozen Initial Liability[1]
Amortization method for unfunded actuarial accrued liabilities:								
Initial unfunded	Increasing dollar	Increasing dollar	Increasing dollar	Increasing dollar	Increasing dollar	Increasing dollar	Increasing dollar	NA[2]
Post-2010 unfundeds	Level dollar	Level dollar	Level dollar	Level dollar	Level dollar	Level dollar	Level dollar	NA[2]
Remaining amortization period:								
Initial unfunded	16 years (closed)	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)	21 years (closed)	22 years (closed)	NA[2]
2010 ERI	0 year (closed)	1 year (closed)	2 years (closed)	3 years (closed)	4 years (closed)	5 years (closed)		
2011 Actuarial gain/loss	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA[2]
2012 Actuarial gain/loss	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA[2]
2013 Actuarial gain/loss	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA	NA[2]
2014 Actuarial gain/loss	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA	NA	NA[2]
2015 Actuarial gain/loss	14 years (closed)	15 years (closed)	NA	NA	NA	NA	NA	NA[2]
2016 Actuarial gain/loss	15 years (closed)	NA	NA	NA	NA	NA	NA	NA[2]
Actuarial Asset Valuation (AAV) method[3]	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2010 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 2010 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 2010 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.

(Continued)

See Independent Auditors' Report.

(Continued)

Valuation Dates	June 30, 2016	June 30, 2015	June 30, 2014	June 30, 2013	June 30, 2012	June 30, 2011	June 30, 2010
Actuarial assumptions:							
Assumed rate of return[4]	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses
Post-retirement mortality	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2012	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
Active service: withdrawal, deatl disability, service retirement	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012
Salary increases[4]	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general increase: of 3.0% per year.	In general, merit and promotion increases plus assumed general increase of 3.0% per year.	In general, merit and promotion increases plus assumed general increase of 3.0% per year.	In general, merit and promotion increases plus assumed general increase of 3.0% per year.	In general, merit and promotion increases plus assumed general increas of 3.0% per year.	In general, merit and promotion increases plus assumed general increases of 3.0% per year.
Cost-of-living adjustments[4]	1.5% per annum for Auto COLA. 2.5% per annum for Escalation.	1.5% per annum for Auto COLA. 2.5% per annum fo Escalation.	1.5% per annum for Auto COLA. 2.5% per annum fo Escalation.	1.5% per annum for Auto COLA. 2.5% per annum fo Escalation.	1.5% per annum for Auto COLA. 2.5% per annum f Escalation.	1.5% per annum for Auto COLA. 2.5% per annum f Escalation.	1.5% per annum for Auto COLA. 2.5% per annum for Escalation.

1. Under this actuarial cost method, the Initial Liability was reestablished as of June 30, 1999, by the Entry Age Actuarial Cost Method but with the unfunded actuarial accrued liability (UAAL) not less than $0.

The financial results using this Frozen Initial Liability Actuarial Cost Method are the same as those that would be produced using the Aggregate Actuarial Cost Method.

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

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

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

See Independent Auditors' Report.

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

The following table displays annual money-weighted rate of return from fixed investments for each of the past five fiscal years:

Fiscal Year End	Money-Weighted Rate of Return
June 30, 2018	10.31%
June 30, 2017	15.33%
June 30, 2016	0.20%
June 30, 2015	3.15%
June 30, 2014	19.51%

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

See Independent Auditors' Report.