

Teachers' Retirement System of The City of New York



A Fiduciary Fund of The City of New York

**Combining Financial Statements
Supplemental Schedules
(Together with Independent Auditors' Report)
For the Years Ended June 30, 2017 and June 30, 2016**

MARKS PANETH

ACCOUNTANTS & ADVISORS

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

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INDEPENDENT AUDITORS' REPORT

To the Retirement Board of the
Teachers' Retirement System of The City of New York:

Report on the Combining Financial Statements

We have audited the accompanying combining statements of fiduciary net position of the Teachers' Retirement System of The City of New York Qualified Pension Plan ("QPP") and the Teachers' Retirement System of The City of New York Tax-Deferred Annuity ("TDA") Program, which collectively comprise the Teachers' Retirement System of The City of New York, (the "Systems"), a fiduciary fund of The City of New York, as of June 30, 2017 and 2016, 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, 2017 and 2016, 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.

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October 27, 2017

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

This narrative discussion and analysis of the Teachers' Retirement System of The City of New York's ("TRS" or the "System") financial performance provides an overview of the System's combining financial activities for the Fiscal Years ended June 30, 2017 and 2016. It is meant to assist the reader in understanding TRS' combining financial statements by providing an overall review of the combining financial activities during the years and the effects of significant changes, as well as a comparison with prior years' activity and results. This discussion and analysis is intended to be read in conjunction with the System's combining financial statements. TRS administers the TRS Qualified Pension Plan ("QPP") and the TRS Tax-Deferred Annuity ("TDA") Program. The QPP is a cost-sharing, multiple-employer defined-benefit pension plan. The QPP provides pension benefits to City public school teachers and certain other personnel, participating Charter Schools and participating City University of New York ("CUNY") teachers and other personnel. The TDA Program is a tax-deferred annuity program described in Internal Revenue Code section 403(b) and is available as a supplemental savings option to QPP members.

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 Programs, 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 of accounting.
- **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 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 ("RSI")** — as required by GASB, the RSI includes the management discussion and analysis (this section) and information presented following the notes to the combining financial statements.

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

HIGHLIGHTS AND RECENT DEVELOPMENTS

Employer Information

Employers that participate in TRS include the Department of Education ("DOE"), City University of New York ("CUNY") both Junior and Senior Colleges, and New York City Charter Schools that elect to participate. All employers may participate in the QPP and the TDA Program.

The following schedule provides the 2017 QPP summary information of the employer groups.

	Members Active	Contribution Employer	Contribution Member	Members Retired	Pension Payments
DOE	114,000	\$ 3.8 billion	\$ 168 million	82,500	\$ 4.0 billion
CUNY	7,300	\$ 123 million	\$ 11 million	2,600	\$ 127 million
Charter Schools	600	\$ 8.2 million	\$ 1.1 million	less than 50	\$ 1.3 million

UFT Contract

On June 30, 2014, the United Federation of Teachers ("UFT"), the primary union for the DOE's employees, ratified its new collective bargaining agreement. The contract is retroactive to November 2009 and, following a February 13, 2015 arbitration decision, runs through November 2018. The contract provides for retroactive and future wage increases. The wage increases impact employer and member contributions, as well as annual retirement payments to retirees.

FINANCIAL HIGHLIGHTS

QPP Fiduciary Net Position

The QPP's net position restricted for benefits is held in trust for the payment of future benefits to members and pensioners. The QPP's net position restricted for benefits was \$50.1 billion, \$43.6 billion, and \$44.3 billion as of June 30, 2017, 2016, and 2015, respectively. The System's employer contributions amounted to \$3.9 billion, \$3.8 billion, and \$3.3 billion, for Fiscal Years 2017, 2016, and 2015, respectively. The QPP's benefit payments totaled \$4.2 billion, \$4.1 billion and \$4.0 billion, for Fiscal Years 2017, 2016, and 2015, respectively.

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

QPP Fiduciary Net Position

June 30, 2017, 2016, and 2015

(In thousands)

	2017	2016	2015
Cash	\$ 101,499	\$ 5,157	\$ 22,674
Receivables for investments sold	989,725	1,772,521	2,766,976
Receivables for accrued interest and dividends	164,163	151,330	145,968
Member loan receivables	298,146	275,704	257,043
Investments, at fair value	72,404,290	64,406,187	64,756,689
Collateral from securities lending	1,610,321	1,858,682	1,863,922
Other assets	<u>38,932</u>	<u>49,873</u>	<u>27,855</u>
Total assets	<u>75,607,076</u>	<u>68,519,454</u>	<u>69,841,127</u>
Accounts payable	529,059	417,408	391,945
Payable for investments purchased	1,353,803	2,308,523	4,616,284
Accrued benefits payable	13,987	12,563	14,979
Investments due to TDA Program	22,004,183	20,292,733	18,699,332
Payable for securities lending	<u>1,610,321</u>	<u>1,858,682</u>	<u>1,863,923</u>
Total liabilities	<u>25,511,353</u>	<u>24,889,909</u>	<u>25,586,463</u>
Net position restricted for benefits	<u>\$ 50,095,723</u>	<u>\$ 43,629,545</u>	<u>\$ 44,254,664</u>

Cash balances amounted to \$101.5 million at June 30, 2017, an increase of \$96.3 million (1,868.2%) from June 30, 2016. As of June 30, 2016, cash balances amounted to \$5.2 million, a decrease of \$17.5 million (-77.3%) from June 30, 2015. Cash balances consist of accounts used for advance funding of the System's investment managers' accounts, accounts used to process reimbursement transfers between the System's investment programs, and bank accounts associated with the collections of loan insurance premiums and loan service charges. Also, Private Equity investment managers of the TRSNYC Pension Fund typically have the largest cash balances at month-end. Private Equity's large cash balance is due to the monthly investment cycle for Private Equity accounts where cash from assets sold during the month is reinvested following month-end. The \$96.3 million increase in the QPP's cash balance at year-end resulted mainly from large Private Equity sales in the month of June.

Receivables for investment securities sold amounted to \$989.7 million at June 30, 2017, a decrease of \$782.8 million (-44.2%) from June 30, 2016. Receivables for investment securities sold amounted to \$1.8 billion at June 30, 2016, a decrease of \$994.5 million (-35.9%) from June 30, 2015. These balances are principally composed of receivables for securities that have been sold but have not yet settled (*i.e.*, the cash has not been collected). The decreases resulted primarily from timing differences between trade and settlement dates. Trades typically do not settle until a few days after the trade date.

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

Receivables for accrued interest and dividends amounted to \$164.2 million as of June 30, 2017, an increase of \$12.8 million (8.5%) from June 30, 2016. Receivables for accrued interest and dividends amounted to \$151.3 million as of June 30, 2016, an increase of \$5.4 million (3.7%) from June 30, 2015. Changes in accrued earnings are impacted primarily by the cumulative value of the interest or dividend bearing securities, as well as by changes in discount rates, and interest-payable dates.

At June 30, 2017, member loan receivables amounted to \$298.1 million, an increase of \$22.4 million (8.1%) from the previous year. At June 30, 2016, member loan receivables amounted to \$275.7 million, an increase of \$18.7 million (7.3%) from the previous year. The increases primarily reflect the 7% interest accrued on loans receivables for Tiers III, IV, and VI members as new loans have kept pace with loan repayments.

Investments at June 30, 2017 were \$72.4 billion compared to \$64.4 billion at June 30, 2016, an increase of \$8.0 billion (12.4%) from June 30, 2016. The \$8.0 billion increase is the result of \$8.1 billion in net investment income less \$171.9 million of net decrease in the year-over-year amounts of payables for investment securities purchased and investment receivables sold. More generally, investments as of June 30, 2017, in comparison with investment values as of June 30, 2016 reflect the annual movement in equity and fixed income markets. Equity investments accounted for close to 60% of the QPP's total investment portfolio, Alternative Investments, including private equity, accounted for close to 10%, with the balance being fixed income investments. For the twelve-month period ended June 30, 2017, the Russell 3000 Index, a broad measure of U.S. equity markets, returned 18.5%. The Morgan Stanley Capital International Index for Europe, Australasia, and Far East ("MSCI EAFE") Index returned 20.83%. The NYC Core + 5, a composite index maintained by New York City's Office of the Comptroller and a broad measure of the U.S. fixed income markets, returned -0.2%. Investments at June 30, 2016 were \$64.4 billion compared to \$64.8 billion at June 30, 2015, a decrease of \$350.5 million (-0.5%) from June 30, 2015. For the twelve-month period ended June 30, 2016, the Russell 3000 Index returned 2.1%, the MSCI EAFE" Index returned -3.3%, and the NYC Core + 5 returned 7.2%.

Other assets at June 30, 2017 totaled \$38.9 million, a \$10.9 million (-21.9%) decrease from June 30, 2016. Other assets at June 30, 2016 totaled \$49.9 million, a \$22.0 million (79.0%) increase from June 30, 2015. The year-over-year changes in other assets were primarily due to a \$21.6 million decrease in receivables from employer contributions, mainly from the City University of New York (CUNY) paid by September 2016 and a \$7.7 million increase in pension payroll reimbursements due from the TDA Program.

Accounts payable at June 30, 2017 amounted to \$529.1 million, a \$111.7 million (26.7%) increase from June 30, 2016. The QPP's practice is to fully invest its day-end cash balances in a pooled short-term fund. A typical benefit payment account would show an overdrawn balance due to depositories since funds deposited as outstanding benefit checks are presented to the bank for payment each day. These balances due to depositories are one of the main components (28.3%) of accounts payable. Other main components of accounts payable include accrued investment expenses (45.7%), reserve for expenses (16.4%), unclaimed funds (5.4%), and other payables (4.2%). The \$111.7 million increase in accounts payable was primarily due to a \$16.0 million net increase in balances due to depositories and a \$96.1 million increase in accrued investment expenses. Accounts payable at June 30, 2016 amounted to \$417.4 million, a \$25.5 million (6.5%) increase from June 30, 2015. Balances due to depositories were a main component (32.0%) of accounts payable. Other main components of accounts payable included accrued investment expenses (35.0%), reserve for expenses (21.2%), unclaimed funds (7.1%), and other payables (4.7%). The \$25.5 million increase in accounts payable was primarily due to a \$30.1 million increase in accrued investment expenses and a \$4.0 million net decrease in balances due to depositories.

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

Payables for investments purchased at June 30, 2017 amounted to \$1.4 billion, a \$954.7 million (-41.4%) decrease from June 30, 2016. Payables for investments purchased at June 30, 2016 amounted to \$2.3 billion, a \$2.3 billion (-50.0%) decrease from June 30, 2015. Investments purchased are accounted for on a trade-date basis. The increase resulted from timing differences between settlement dates and trade dates, similar to receivables for investments sold discussed earlier.

Accrued benefits payable at June 30, 2017 amounted to \$14.0 million, a \$1.4 million (11.3%) increase from June 30, 2016. The \$1.4 million increase is primarily attributed to an increase of pending benefits payable to new retirees at year-end. Accrued benefits payable at June 30, 2016 amounted to \$12.6 million, a \$2.4 million (-16.1%) decrease from June 30, 2015. The \$2.4 million decrease is primarily attributed to a decrease of pending survivor benefits payable to beneficiaries at year-end.

Investments due to the TDA Program reflect the TDA Program's share of assets of the TRS NYC Pension Fund/Fixed Fund investments. Assets in the TDA Program's Fixed Return Fund are pooled with the QPP assets as System assets in the TRS NYC Pension Fund for investment purposes only. The amounts owned by the TDA Program are equal to member contributions, inter-fund transfers from other TDA program's passport funds, and earnings applied in accordance with statutory-interest rates (7% for members of the UFT and 8.25% for certain other participants). See note 2 for a full description of the TDA Fixed Return Fund investment program.

**QPP Changes in Fiduciary Net Position
Years Ended June 30, 2017, 2016, and 2015
(In thousands)**

	2017	2016	2015
Additions:			
Member contributions	\$ 180,076	\$ 173,696	\$ 158,590
Employer contributions	3,945,768	3,760,714	3,325,528
Net receipts from other retirement systems	(2,291)	1,233	329
Net securities lending income	17,446	17,347	20,300
Net investment income	8,115,834	942,920	1,591,629
Payment of statutory-interest to TDA Program	<u>(1,466,615)</u>	<u>(1,354,207)</u>	<u>(1,248,988)</u>
Total additions	<u>10,790,218</u>	<u>3,541,703</u>	<u>3,847,388</u>
Deductions:			
Administrative expenses	60,790	59,367	58,391
TDA Rebalance	43,938	-	-
Benefits payments and withdrawals	<u>4,219,312</u>	<u>4,107,455</u>	<u>4,024,272</u>
Total deductions	<u>4,324,040</u>	<u>4,166,822</u>	<u>4,082,663</u>
Net (decrease) increase in net position	<u>\$ 6,466,178</u>	<u>\$ (625,119)</u>	<u>\$ (235,275)</u>
Net position restricted for benefits			
Beginning of year	<u>43,629,545</u>	<u>44,254,664</u>	<u>44,489,939</u>
End of year	<u>\$ 50,095,723</u>	<u>\$ 43,629,545</u>	<u>\$ 44,254,664</u>

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

TRS received \$180.1 million in member contributions in Fiscal Year 2017, a \$6.4 million (3.7%) increase from Fiscal Year 2016. The \$6.4 million increase was primarily due to salary increases resulting from the 2014 UFT contract and a larger active Tier VI membership. TRS received \$173.7 million in member contributions in Fiscal Year 2016, a \$15.1 million (9.5%) increase from Fiscal Year 2015. The \$15.1 million increase was primarily due to salary increases resulting from the 2014 UFT contract, increased active membership as a five-year hiring freeze ended in June 2014, and a \$2.6 million increase in prior service purchases.

Employer contributions during Fiscal Year 2017 were \$3.9 billion, a \$185.1 million (4.9%) increase from Fiscal Year 2016. This is primarily due to increases in the amortization payments for the 2010 initial unfunded liability and a net actuarial loss. Employer contributions during Fiscal Year 2016 were \$3.8 billion, a \$435.2 million (13.1%) increase from Fiscal Year 2015. The increase in contributions in Fiscal Year 2016 were primarily due to a change in the post-retirement mortality rates and increases in the amortization payments for the 2010 initial unfunded liability and a net actuarial loss. The June 30, 2015 (Lag) actuarial valuation and June 30, 2014 (Lag) actuarial valuation were used to determine Fiscal Year 2017 and 2016 employer contributions, respectively.

The QPP's net investment income for Fiscal Year 2017 was \$8.1 billion, a \$7.2 billion (760.7%) increase from Fiscal Year 2016. The QPP's net investment income of \$8.1 billion consisted of \$1.9 billion in dividend and interest income plus a net gain of \$6.5 billion on the appreciation in fair value of the QPP's investments less \$313.8 million in net investment expenses. Net investment income for the QPP portion of the TRSNYC Pension Fund, QPP portion of the Diversified Equity Fund, QPP portion of the Bond Fund, QPP portion of the International Equity Fund, QPP portion of the Inflation Protection Fund, and QPP portion of the Socially Responsive Fund totaled \$7.3 billion, \$796.9 million, \$906.6 thousand, \$2.3 million, \$84.2 thousand, and \$1.7 million, respectively. The QPP's net investment income for Fiscal Year 2016 was \$942.9 million, a \$648.7 million (-40.8%) decrease from Fiscal Year 2015. The QPP's net investment income of \$942.9 million consisted of \$1.8 billion in dividend and interest income less a net loss of \$598.4 million on the depreciation in fair value of the QPP's investments less \$215.1 million in net investment expenses. Net investment income for the QPP portion of the TRSNYC Pension Fund, QPP portion of the Diversified Equity Fund, QPP portion of the Bond Fund, QPP portion of the International Equity Fund, QPP portion of the Inflation Protection Fund, and QPP portion of the Socially Responsive Fund totaled \$964.8 million, -\$23.2 million, \$1.6 million, -\$523.4 thousand, \$99.5 thousand, and \$197.2 thousand, respectively.

Payments of statutory-interest due to the TDA from its investment in the TRSNYC Pension Fund Assets (Fixed Return Fund) during Fiscal Year 2017 were \$1.5 billion, an increase of \$112.4 million (8.3%) from Fiscal Year 2016. Payments of statutory-interest due to the TDA from its investment in the TRSNYC Pension Fund Assets (Fixed Return Fund) during Fiscal Year 2016 were \$1.4 billion, an increase of \$105.2 million (8.4%) from Fiscal Year 2015.

For Fiscal Year 2017, the QPP's effective net investment income for the QPP portion of the TRSNYC Pension Fund increased due to investment returns attributable to the TDA Program's TRSNYC Pension Fund assets. The TDA Fixed Return Fund program resulted in approximately \$951.1 million more assets accruing to the QPP's Contingent Reserve Fund of Employer's Contributions, as a result of the TDA Program's investment returns being above the Statutory Rates. For Fiscal Year 2016, the QPP's effective net investment income for the QPP portion of the TRSNYC Pension Fund decreased due to investment returns attributable to the TDA Program's TRSNYC Pension Fund assets. The TDA Fixed Return Fund program resulted in approximately \$1.0 billion fewer assets accruing to the QPP's Contingent Reserve Fund of Employer's Contributions, as a result of the TDA Program's investment returns being below the Statutory Rates. The table below displays the TDA Program's impact on the QPP's Contingent Reserve Fund of Employer's Contributions for Fiscal Years 2017, 2016, and 2015.

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

Revenue (Expense) to Contingent Reserve Fund

TRSNYC Pension Fund Assets (QPP)*

Years Ended 2017, 2016, and 2015

(in Thousands)

	2017	2016	2015
Net Investment Income	\$ 7,327,841	\$ 981,061	\$ 1,457,153
TDA percent of Fixed Assets as of June 30	33.30%	32.69%	30.26%
TDA percent of Fixed Assets 6/30/14:			28.78%
TDA percent of Fixed Assets (average)	32.99%	31.47%	29.52%
Investment Income on account of TDA Investment	\$ 2,417,743	\$ 308,775	\$ 430,152
Less Statutory Interest to TDA	<u>(1,466,615)</u>	<u>(1,354,207)</u>	<u>(1,248,988)</u>
Revenue (Expense) to QPP Contingent Reserve	<u>\$ 951,128</u>	<u>\$ (1,045,432)</u>	<u>\$ (818,836)</u>

*Includes security-lending income

Administrative expenses during Fiscal Year 2017 were \$60.8 million, an increase of \$1.4 million (2.4%) and \$2.4 million (4.1%) from Fiscal Years 2016 and 2015, respectively. In Fiscal Year 2014, the System began a phased implementation to replace its outdated IBM A/S 400 computer system with a system based on Microsoft's .NET programming framework. Sagitec, an outside vendor and a provider of Pension Database Systems, and Cognizant, a software testing company, have been assisting with this multi-year project. In Fiscal Year 2017, the System updated its member enrollment process, enhanced its enterprise content management and member website platforms, and continued with other implementation initiatives. The change in administrative expenses also reflects the annual update in the System's administrative expenses attributed to the QPP. (See Note 8.) The QPP's total administrative expenses for Fiscal Year 2017 accounted for 64.1% of the System's administrative expenditures. The balance of \$34.0 million (35.9%) includes \$33.0 million expensed to the TDA Program and also \$1.0 million charged against incoming loan service charge revenues. Administrative expenses during Fiscal Year 2016 were \$59.4 million, an increase of \$976.0 thousand (1.7%) from Fiscal Year 2015. As of June 30, 2016, the System updated its person demographics, customer relationship management, enterprise content management, and member website platforms. The QPP's total administrative expenses for Fiscal Year 2016 accounted for 64.2% of the System's administrative expenditures. The balance of \$33.0 million (35.8%) includes \$32.6 million expensed to the TDA Program and also \$420.5 thousand charged against incoming loan service charge revenues. The System's administrative expenditures have been \$94.9 million, \$92.4 million, and \$84.4 million, for Fiscal Years 2017, 2016, and 2015, respectively.

The TDA rebalance during Fiscal Year 2017 resulted in \$43.9 million transfers from the TRSNYC Pension Fund to the TDA Fixed Return Program. The Administrative Code of the City of New York under sections 13-582 and 13-577 provide for certain internal transfer of funds. These transfers are intended to rebalance estimated actuarial liabilities with reported assets. In Fiscal Year 2017, following liability reviews conducted by the Actuary of the City of New York and in concert with the Office of the Comptroller of the City of New York, \$43.9 million was transferred due to a deficit in the TDA Program's Variable Annuity and Pension Reserve Funds. Also, \$3.8 billion was transferred to fully fund the QPP Program's Variable Annuity and Pension Reserve Funds. The \$3.8 billion transfer reduced the investments held by the QPP's TRSNYC Pension Fund and increased the investments held by the QPP Program's variable-return funds but did not impact net investments held by the QPP plan (see Note 2, Intra-Fund Payables).

Benefit payments and withdrawals during Fiscal Year 2017 were \$4.2 billion, a \$111.9 million (2.7%) increase from Fiscal Year 2016. The \$111.9 million increase in benefit payments and withdrawals was primarily due to a \$110.3 million (2.7%) increase in payments to retirees. In total, benefit payments and withdrawals distributed during Fiscal Year 2017 were composed of 98.4% retirement benefits and 1.6% in refund/withdrawals and survivor benefits. Benefit payments and withdrawals during Fiscal Year 2016

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

were \$4.1 billion, an \$83.2 million (2.1%) increase from Fiscal Year 2015. The \$83.2 million increase in benefit payments and withdrawals was primarily due to a \$103.9 million (2.6%) increase in payments to retirees. In total, benefit payments and withdrawals distributed during Fiscal Year 2016 were composed of 98.3% retirement benefits and 1.7% in refund/withdrawals and survivor benefits.

TDA Program Financial Highlights — The TDA Program's net position restricted for benefits was \$31.1 billion, \$28.4 billion, and \$27.3 billion, as of June 30, 2017, 2016, and 2015, respectively. Member contributions amounted to \$743.7 million, \$717.6 million, and \$662.6 million, for Fiscal Years 2017, 2016, and 2015, respectively. Benefit payments and withdrawals totaled \$1.0 billion, \$917.2 million, and \$861.3 million, for Fiscal Years 2017, 2016, and 2015, respectively. Below is a summary of the TDA program's net position and changes in net position.

**TDA Program's Fiduciary Net Position
June 30, 2017, 2016, and 2015**

(In thousands)	2017	2016	2015
Cash	\$ 3,952	\$ 4,699	\$ 3,316
Receivables for investments sold	23,956	29,686	89,541
Receivables for accrued interest and dividends	12,777	13,282	12,471
Member loan receivables	376,016	367,864	361,073
Investments, at fair value	8,838,152	7,946,654	8,470,979
Investment in TRSNYC Pension Fund	22,004,183	20,292,733	18,699,332
Collateral from securities lending	108,414	282,602	574,835
Other assets	16,296	13,429	3,725
Total assets	31,383,746	28,950,949	28,215,272
Accounts payable	96,908	103,283	117,700
Payable for investment securities purchased	43,416	29,597	93,595
Accrued benefits payable	82,915	91,127	95,560
Payable for securities lending transactions	108,414	282,602	574,835
Total liabilities	331,653	506,609	881,690
Net position held in trust for benefits	\$ 31,052,093	\$ 28,444,340	\$ 27,333,582

Cash balances amounted to \$4.0 million at June 30, 2017, a decrease of \$747.0 thousand (-15.9%) from June 30, 2016. Cash balances amounted to \$4.7 million at June 30, 2016, an increase of \$1.4 million (41.7%) from June 30, 2015. Cash balances consist of accounts used to reimburse the funds of the Variable-Annuity Program or accounts used for advance funding of the variable-return funds' investment managers.

Receivables for investment securities sold at June 30, 2017 amounted to \$24.0 million, a decrease of \$5.7 million (-19.3%) from June 30, 2016. Receivables for investment securities sold at June 30, 2016 amounted to \$29.7 million, a decrease of \$59.9 million (-66.9%) from June 30, 2015. These balances are principally composed of receivables for securities that have been sold but have not yet settled (*i.e.*, the cash has not been collected). The year-over-year changes resulted from timing differences in trading and settlement dates. Trades typically do not settle until a few days after the trade date.

Receivables for accrued earnings at June 30, 2017 were \$12.8 million, a decrease of \$505 thousand (-3.8%) from June 30, 2016. Receivables for accrued earnings at June 30, 2016 were \$13.3 million, an increase of \$811 thousand (6.5%) from June 30, 2015. Changes in accrued earnings are impacted by the cumulative value of the interest or dividend-bearing securities, discount rates, and interest payable dates at fiscal year-end.

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

Member loan receivables at June 30, 2017 amounted to \$376.0 million, an increase of \$8.2 million (2.2%) from June 30, 2016. For Fiscal Year 2017, loan disbursements amounted to \$186.7 million and principal and interest payments amounted to \$192.3 million. Member loan receivables at June 30, 2016 amounted to \$367.9 million, an increase of \$6.8 million (1.9%) from June 30, 2015. For Fiscal Year 2016, loan disbursements amounted to \$176.4 million and principal and interest payments amounted to \$186.8 million.

The variable-return funds' investments at June 30, 2017, including collateral received for securities lending, were \$8.9 billion, an increase of \$717.3 million (8.7%) from June 30, 2016. The variable-return funds' investments at June 30, 2016, including collateral received for securities lending, were \$8.2 billion, a decrease of \$816.6 million (-9.0%) from June 30, 2015.

Assets of the TDA Program's Fixed Return Fund invested in the TRSNYC Pension Fund at June 30, 2017 were \$22.0 billion, an increase of \$1.7 billion (8.4%) from June 30, 2016. In addition to the 7% statutory return for Fiscal Year 2017, contributions, withdrawals and investment transfers to (from) the Fixed Return Fund totaled \$515.6 million, -\$760.7 million and \$515.0 million, respectively. Assets of the TDA Program's Fixed Return Fund invested in the TRSNYC Pension Fund at June 30, 2016 were \$20.3 billion, an increase of \$1.6 billion (8.5%) from June 30, 2015. In addition to the 7% statutory return for Fiscal Year 2016, contributions, withdrawals and investment transfers to (from) the Fixed Return Fund totaled \$484.5 million, -\$677.6 million and \$402.0 million, respectively.

Other assets at June 30, 2017 were \$16.3 million, an increase of \$2.9 million (21.4%) over June 30, 2016. Other assets at June 30, 2016 were \$13.4 million, an increase of \$9.7 million (260.5%) over June 30, 2015. Other assets primarily represent assets already allocated for future administrative expenses.

Accounts payable at June 30, 2017 amounted to \$96.9 million, compared to \$103.3 million at June 30, 2016, a decrease of -6.2%. Accounts payable at June 30, 2016 amounted to \$103.3 million, compared to \$117.7 million at June 30, 2015, a decrease of -12.3%. The TDA Program's accounts payable balance primarily represents a reserve fund to pay the TDA Program's investment and administrative expenses.

Payables for investment securities purchased at June 30, 2017 amounted to \$43.4 million, an increase of \$13.8 million (46.7%) from June 30, 2016. Payables for investment securities purchased at June 30, 2016 amounted to \$29.6 million, a decrease of \$64.0 million (-68.4%) from June 30, 2015. Investments purchased are accounted for on a trade-date basis. The changes resulted from timing differences in settlement and trade dates, similar to receivables for investments sold discussed earlier.

Accrued benefits payable at June 30, 2017 amounted to \$82.9 million, a decrease of \$8.2 million (-9.0%) from June 30, 2016. Accrued benefits payable at June 30, 2016 amounted to \$91.1 million, a decrease of \$4.4 million (-4.6%) from June 30, 2015. Changes in accrued benefits payable are attributed to changes in TDA withdrawal amounts processed in July and August (an estimate is used for August) after year-end.

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

**Changes in TDA Program's Fiduciary Net Position
Years Ended June 30, 2017, 2016, and 2015
(In Thousands)**

	2017	2016	2015
Additions:			
Member contributions	\$ 743,663	\$ 717,566	\$ 662,601
Receipt of statutory-interest for portion of investment in TRSNYC Pension Fund	1,466,615	1,354,207	1,248,988
Net investment income	1,396,698	(14,858)	432,200
Net securities lending income	1,802	3,664	3,432
Total additions	<u>3,608,778</u>	<u>2,060,579</u>	<u>2,347,221</u>
Deductions:			
Administrative expenses	33,032	32,632	25,783
TDA rebalance	(43,938)		
Benefits payments	1,011,931	917,189	861,345
Total deductions	<u>1,001,025</u>	<u>949,821</u>	<u>887,128</u>
Net increase in net position	<u>\$ 2,607,753</u>	<u>\$ 1,110,758</u>	<u>\$ 1,460,093</u>
Net position restricted for benefits			
Beginning of year	<u>28,444,340</u>	<u>27,333,582</u>	<u>25,873,489</u>
End of year	<u>\$ 31,052,093</u>	<u>\$ 28,444,340</u>	<u>\$ 27,333,582</u>

TRS's TDA Program received \$743.7 million in member contributions during Fiscal Year 2017, an increase of \$26.1 million (3.6%) from Fiscal Year 2016. The primary increase is due to growth in contributing memberships. TRS's TDA Program received \$717.6 million in member contributions during Fiscal Year 2016, an increase of \$55.0 million (8.3%) from Fiscal Year 2015. The primary increase is due to growth in contributing memberships.

Receipts of statutory-interest for the TDA Program's Fixed Return Fund portion in investments in the TRSNYC Pension Fund assets for Fiscal Year 2017 were \$1.5 billion, an increase of \$112.4 million (8.3%) from Fiscal Year 2016. Receipts of statutory-interest for the TDA Program's Fixed Return Fund portion in investments in the TRSNYC Pension Fund assets for Fiscal Year 2016 were \$1.4 billion, an increase of \$105.2 million (8.4%) from Fiscal Year 2015. Annual statutory-interest paid to the Fixed Return Fund exceeds a 7% rate (of prior year-end TDA Program's Fixed Return Fund value) when contributions and net investment transfers exceed withdrawals; see above "Investments in the TRSNYC Pension Fund" in the TDA Program's Fiduciary Net Position table.

Net investment income for the TDA Program's variable-return funds for Fiscal Year 2017 increased \$1.4 billion (gain) from Fiscal Year 2016. Net investment income for the TDA Program's variable-return funds for Fiscal Year 2016 decreased \$447.1 million (-103.4%) from Fiscal Year 2015. Net investment gain / losses primarily reflect the appreciation/depreciation in fair value of the TDA Program's variable-return fund investments, including both realized and unrealized gains and losses.

Administrative expenses for the Fiscal Year ended June 30, 2017 totaled \$33.0 million, an increase of \$400 thousand (1.2%) from Fiscal Year 2016. Administrative expenses for the Fiscal Year ended June 30, 2016 totaled \$32.6 million, an increase of \$6.8 million (26.6%) from Fiscal Year 2015. Similar to the QPP administrative expenses, the increase primarily reflects the System's continued efforts to modernize its pension database. The TDA Program accounted for a portion of the System's total administrative expenses; see QPP administrative expenses above and Note 8.

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

The TDA rebalance during Fiscal Year 2017 resulted in a \$43.9 million transfer from the TRSNYC Pension Fund to the TDA's Variable Annuity Program. The Administrative Code of the City of New York under sections 13-582 and 13-577 provide for certain internal transfer of funds. These transfers are intended to rebalance estimated actuarial liabilities with reported assets; see Note 2, Intra-Fund Payables.

Benefit payments and withdrawals for the Fiscal Year ended June 30, 2017 totaled \$1.0 billion, an increase of \$94.7 million (10.3%) from Fiscal Year 2016. Benefit payments and withdrawals for the Fiscal Year ended June 30, 2016 totaled \$917.2 million, an increase of \$55.8 million (6.5%) from Fiscal Year 2015. Benefit payments and withdrawals consist primarily of total and partial withdrawals.

Cash Flow

Monthly contributions, loan repayments, and interest and dividends earned on investments less benefit payments, new loans, and investment and administrative expenses account for the System's non-investment cash flow. The table below provides a three-year summary.

Cash Flow Review (In thousands)	June 30, 2017		June 30, 2016		June 30, 2015	
	QPP	TDA	QPP	TDA	QPP	TDA
Contributions	\$ 4,125,844	\$ 743,663	\$ 3,934,410	\$ 717,566	\$ 3,484,118	\$ 662,601
Contributions — Loan adj.	-	(157)	-	(195)	-	(118)
Loan repayments (cash)	131,640	192,340	122,050	186,774	114,940	177,613
401(a) receipts/(payments)	(2,291)	-	1,233	-	329	-
Interest income	932,169	34,368	860,223	33,469	758,526	32,627
Interest income — Loan adj.	(20,450)	(26,192)	(19,857)	(25,701)	(17,743)	(25,070)
Dividend income	981,087	138,237	896,208	128,383	889,231	126,867
Investment expenses (net)	(313,801)	5,518	(215,068)	5,645	(202,961)	(2,758)
Benefits/withdrawals	(4,219,312)	(1,011,931)	(4,107,455)	(917,189)	(4,024,272)	(861,345)
Withdrawals — Loan adj.	16,559	13,069	19,639	9,221	28,250	12,058
New loans	(149,750)	(186,684)	(140,000)	(176,403)	(141,771)	(176,125)
Administrative expenses	(60,790)	(33,032)	(59,367)	(32,632)	(58,391)	(25,783)
	<u>\$ 1,420,905</u>	<u>\$ (130,801)</u>	<u>\$ 1,292,016</u>	<u>\$ (71,062)</u>	<u>\$ 830,256</u>	<u>\$ (79,433)</u>

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

Investments

TRS investment funds include both QPP and TDA Program assets. The table below details the QPP and TDA Program's portions of the funds.

**TRS Investment Funds
by Plan Percentage**

	June 30, 2017 QPP	June 30, 2017 TDA	June 30, 2016 QPP	June 30, 2016 TDA	June 30, 2015 QPP	June 30, 2015 TDA
TRSNYC Pension Fund	66.7%	33.3%	67.3%	32.7%	69.7%	30.3%
Variable-Return Funds:						
Diversified equity*	41.4%	55.2%	22.1%	73.4%	25.2%	70.6%
Bond	22.1%	77.9%	7.5%	92.5%	10.9%	89.1%
International equity	9.7%	90.3%	8.0%	92.0%	10.2%	89.8%
Inflation protection	8.8%	91.2%	8.9%	91.1%	11.1%	88.9%
Socially responsive equity	7.4%	92.6%	6.5%	93.5%	7.5%	92.5%

* Remaining portion is held by Board of Education Retirement System.

To rate investment performance, both the TRSNYC Pension Fund assets and variable-return funds' investments are monitored with extensive benchmarks.

In addition to other indices, the "policy index" is used to monitor the complete TRS NYC Pension Fund. As of June 30, 2017, the policy index includes the following:

TRSNYC Pension Fund Policy Index as of June 30, 2017*

<u>Investment Type</u>	<u>Benchmark</u>	<u>Percent</u>
U.S. Equity	Russell 3000	33.1%
International Develop EAFE Markets	MSCI EAFE IMI Net	11.8%
Emerging Markets	FTSE Custom NYC Teachers Emerging Markets	9.0%
International Emerging Managers FoF	NYC Blended Custom Benchmark for FoF	0.5%
Private Equity	Russell 3000 + 300 b.p per annum	5.0%
Private Real Estate - Core	NFI - ODCE Net	2.2%
Private Real Estate - Non Core	NFI - ODCE Net + 200 bps	1.3%
Infrastructure	CPI + 4%	0.6%
US Treasury Long Duration	Citigroup Treasury 10+	10.9%
Mortgage	Citigroup Mortgage Index	4.4%
ETI	ETI Custom Benchmark	0.9%
Investment Grade Credit	NYC - Investment Grade Credit	5.2%
High Yield	Citigroup BB&B	6.2%
Bank Loans	Credit Suisse Leveraged Loan	2.0%
TIPS	Lehman US TIPS	4.4%
Opportunistic Fixed	OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum	2.5%
		100.0%

*Source: Teachers' Retirement System of New York City Performance Overview as of June 30, 2017, prepared by State Street

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2017 AND 2016**

Variable-return funds are monitored using the Russell 3000, Standard & Poor's 500, MSCI EAFE, Barclays 1-5 Year Government/Credit, Barclays Capital US TIPS, CPI + 5% indices, as well as numerous other indices.

TRS earns additional investment income by lending its investment securities. The borrowers provide collateral to TRS that is valued in excess of the securities loaned, and the collateral is invested in short-term interest-bearing funds. For the Fiscal Year ended June 30, 2017, net securities lending income amounted to \$19.2 million, a decrease of \$1.7 million from Fiscal Year 2016. For the Fiscal Year ended June 30, 2016, net securities lending income amounted to \$21.0 million compared with \$23.7 million for Fiscal Year 2015. (See Note 2.)

Investments held by TRS, including collateral from securities-lending transactions, are listed according to their investment classification in the following table:

**Investment Summary (by Asset Class)
(in thousands)**

	2017	2016	2015
Short-term investments	\$ 1,249,819	\$ 2,314,459	\$ 3,945,043
Debt securities	16,326,740	15,196,888	15,495,329
Equity securities	51,172,993	43,392,606	44,328,798
Alternative investments	7,523,885	6,872,850	6,002,260
Fixed income	4,969,005	4,576,038	3,456,238
Collateral from securities lending	<u>1,718,735</u>	<u>2,141,284</u>	<u>2,438,757</u>
Total	<u>\$ 82,961,177</u>	<u>\$ 74,494,125</u>	<u>\$ 75,666,425</u>

**Investment Summary (by Plan)
(in thousands)**

	2017	2016	2015
TRSNYC Pension Fund			
QPP	\$ 44,080,037	\$ 41,782,211	\$ 43,103,440
TDA	<u>22,004,183</u>	<u>20,292,733</u>	<u>18,699,332</u>
Total	66,084,220	62,074,944	61,802,772

Variable-Return Funds

QPP	6,320,070	2,331,243	2,953,917
TDA	<u>8,838,152</u>	<u>7,946,654</u>	<u>8,470,979</u>
Total	15,158,222	10,277,897	11,424,896

Collateral for Security Lending

QPP Pension Fund	1,530,310	1,774,456	1,663,710
QPP Variable-Return Funds	80,011	84,226	200,212
TDA Variable-Return Funds	<u>108,414</u>	<u>282,602</u>	<u>574,835</u>
Total	1,718,735	2,141,284	2,438,757

Total Investments	<u>\$ 82,961,177</u>	<u>\$ 74,494,125</u>	<u>\$ 75,666,425</u>
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CONTACT INFORMATION

This financial report is designed to provide a general overview of the Teachers' Retirement System's finances. Questions concerning any data provided in this report or requests for additional information should be directed to Mr. Paul J. Raucci, Chief Accountant, Teachers' Retirement System of The City of New York, 55 Water Street, New York, NY 10041.

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TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
COMBINING STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2017
(In Thousands)

ASSETS:	QPP	TDA	Eliminations	Total
Cash	\$ 101,499	\$ 3,952	\$ -	\$ 105,451
Receivables:				
Investment securities sold	989,725	23,956	-	1,013,681
Accrued interest and dividends	164,163	12,777	-	176,940
Member loans (Note 6)	298,146	376,016	-	674,162
Total receivables	<u>1,452,034</u>	<u>412,749</u>	<u>-</u>	<u>1,864,783</u>
Investments — at fair value (Notes 2 and 3):				
TRSNYC Pension Fund Assets (Fixed-Return Fund):				
Short-term investment:				
Commercial paper	230,093	-	-	230,093
Short-term investment fund	557,945	-	-	557,945
Discount notes	282,248	-	-	282,248
Debt securities:				
U.S. Government	7,947,669	-	-	7,947,669
Corporate and Other	7,753,224	-	-	7,753,224
Equity securities	21,086,002	-	-	21,086,002
Alternative Investments	7,523,885	-	-	7,523,885
Collective Trust Funds:				
International equity	15,734,149	-	-	15,734,149
Mortgage debt security	495,540	-	-	495,540
Treasury inflation protected securities	2,682,432	-	-	2,682,432
Fixed income	1,791,033	-	-	1,791,033
Collateral from securities lending (Fixed-Return Fund)	1,530,310	-	-	1,530,310
Diversified Equity Fund:				
Short-term investments	65,825	87,693	-	153,518
Equity securities	6,031,258	7,978,749	-	14,010,007
Debt securities	106,307	141,623	-	247,930
Bond Fund:				
Short-term investments	3,576	12,643	-	16,219
Debt securities	83,333	294,584	-	377,917
International Equity Fund:				
Short-term investments	53	490	-	543
International equity	12,436	115,770	-	128,206
Inflation Protection Fund:				
Short-term investments	23	240	-	263
Equity securities	4,761	49,088	-	53,849
Socially Responsive Equity Fund:				
Short-term investments	662	8,328	-	8,990
Equity securities	11,320	142,456	-	153,776
International equity	516	6,488	-	7,004
Collateral from securities lending (Variable-Return Funds)	80,011	108,414	-	188,425
Total investments	<u>74,014,611</u>	<u>8,946,566</u>	<u>-</u>	<u>82,961,177</u>
TDA Investment in TRSNYC Pension Fund	-	22,004,183	(22,004,183)	-
Other assets	38,932	16,296	(27,165)	28,063
Total assets	<u>75,607,076</u>	<u>31,383,746</u>	<u>-</u>	<u>84,959,474</u>
LIABILITIES:				
Accounts payable	529,059	96,908	(27,165)	598,802
Payable for investment securities purchased	1,353,803	43,416	-	1,397,219
Accrued benefits payable	13,987	82,915	-	96,902
Due to TDA Program's Fixed Return Fund	22,004,183	-	(22,004,183)	-
Securities lending (Note 2)	1,610,321	108,414	-	1,718,735
Total liabilities	<u>25,511,353</u>	<u>331,653</u>	<u>(22,031,348)</u>	<u>3,811,658</u>
NET POSITION RESTRICTED FOR BENEFITS				
Benefits to be provided by QPP	50,095,723	-	-	50,095,723
Benefits to be provided by TDA Program	-	31,052,093	-	31,052,093
Total net position restricted for benefits	<u>\$ 50,095,723</u>	<u>\$ 31,052,093</u>	<u>\$ -</u>	<u>\$ 81,147,816</u>

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
COMBINING STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2016
(In Thousands)

	QPP	TDA	Eliminations	Total
ASSETS:				
Cash	\$ 5,157	\$ 4,699	\$ -	\$ 9,856
Receivables:			-	
Investment securities sold	1,772,521	29,686	-	1,802,207
Accrued interest and dividends	151,330	13,282	-	164,612
Member loans (Note 6)	275,704	367,864	-	643,568
Total receivables	<u>2,199,555</u>	<u>410,832</u>	<u>-</u>	<u>2,610,387</u>
Investments — at fair value (Notes 2 and 3):				
TRSNYC Pension Fund Assets (Fixed-Return Fund):				
Short-term investment:				
Commercial paper	1,070,574	-	-	1,070,574
Short-term investment fund	1,025,446	-	-	1,025,446
Discount notes	83,294	-	-	83,294
Debt securities:				
U.S. Government	5,924,318	-	-	5,924,318
Corporate and Other	8,730,691	-	-	8,730,691
Equity securities	22,284,584	-	-	22,284,584
Alternative Investments	6,872,850	-	-	6,872,850
Collective Trust Funds:				
International equity	11,507,149	-	-	11,507,149
Mortgage debt security	485,191	-	-	485,191
Treasury inflation protected securities	2,399,270	-	-	2,399,270
Fixed income	1,691,577	-	-	1,691,577
Collateral from securities lending (Fixed-Return Fund)	1,774,456	-	-	1,774,456
Diversified Equity Fund:				
Short-term investments	29,570	98,420	-	127,990
Equity securities	2,206,416	7,129,279	-	9,335,695
Debt securities	50,541	168,221	-	218,762
Bond Fund:				
Short-term investments	432	5,291	-	5,723
Debt securities	24,393	298,724	-	323,117
International Equity Fund:				
Short-term investments	75	859	-	934
International equity	8,012	91,945	-	99,957
Inflation Protection Fund:				
Short-term investments	12	119	-	131
Equity securities	3,960	40,403	-	44,363
Socially Responsive Equity Fund:				
Short-term investments	24	343	-	367
Equity securities	7,650	110,765	-	118,415
International equity	158	2,285	-	2,443
Collateral from securities lending (Variable-Return Funds)	84,226	282,602	-	366,828
Total investments	<u>66,264,869</u>	<u>8,229,256</u>	<u>-</u>	<u>74,494,125</u>
TDA Investment in TRSNYC Pension Fund	-	20,292,733	(20,292,733)	-
Other assets	49,873	13,429	(21,022)	42,280
Total assets	<u>68,519,454</u>	<u>28,950,949</u>	<u>(20,313,755)</u>	<u>77,156,648</u>
LIABILITIES:				
Accounts payable	417,408	103,283	(21,022)	499,669
Payable for investment securities purchased	2,308,523	29,597	-	2,338,120
Accrued benefits payable	12,563	91,127	-	103,690
Due to TDA Program's Fixed Return Fund	20,292,733	-	(20,292,733)	-
Securities lending (Note 2)	1,858,682	282,602	-	2,141,284
Total liabilities	<u>24,889,909</u>	<u>506,609</u>	<u>(20,313,755)</u>	<u>5,082,763</u>
NET POSITION RESTRICTED FOR BENEFITS				
Benefits to be provided by QPP	43,629,545		-	43,629,545
Benefits to be provided by TDA Program		28,444,340	-	28,444,340
Total net position restricted for benefits	<u>\$ 43,629,545</u>	<u>\$ 28,444,340</u>	<u>\$ -</u>	<u>\$ 72,073,885</u>

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
JUNE 30, 2017
(In Thousands)

	QPP	TDA	Total
ADDITIONS:			
Contributions:			
Member contributions (Note 4)	\$ 180,076	\$ 743,663	\$ 923,739
Employer contributions	3,888,399	-	3,888,399
Other employer contributions	57,369	-	57,369
Total contributions	<u>4,125,844</u>	<u>743,663</u>	<u>4,869,507</u>
Investment income (Note 2):			
Interest income	932,169	34,368	966,537
Dividend income	981,087	138,237	1,119,324
Net appreciation in fair value of investments	6,516,379	1,218,575	7,734,954
Total investment income	<u>8,429,635</u>	<u>1,391,180</u>	<u>9,820,815</u>
Less:			
Investment expenses	316,180	12,478	328,658
Net (decrease) in variable expense provision	<u>(2,379)</u>	<u>(17,996)</u>	<u>(20,375)</u>
Net investment income	<u>8,115,834</u>	<u>1,396,698</u>	<u>9,512,532</u>
Securities lending transactions:			
Securities lending income	18,806	2,014	20,820
Less - securities lending fees	<u>(1,360)</u>	<u>(212)</u>	<u>(1,572)</u>
Net securities lending income	<u>17,446</u>	<u>1,802</u>	<u>19,248</u>
Total additions	<u>12,259,124</u>	<u>2,142,163</u>	<u>14,401,287</u>
DEDUCTIONS:			
Benefit payments and withdrawals	4,219,312	1,011,931	5,231,243
Administrative expenses (Note 8)	<u>60,790</u>	<u>33,032</u>	<u>93,822</u>
Other:			
Net receipts to other retirement systems	2,291	-	2,291
Statutory-interest for TDA Program's Fixed Return Fund	1,466,615	(1,466,615)	-
TDA Rebalance	<u>43,938</u>	<u>(43,938)</u>	<u>-</u>
Total deductions	<u>5,792,946</u>	<u>(465,590)</u>	<u>5,327,356</u>
NET INCREASE IN NET POSITION	6,466,178	2,607,753	9,073,931
NET POSITION RESTRICTED FOR BENEFITS:			
Beginning of year	43,629,545	28,444,340	72,073,885
End of year	<u>\$ 50,095,723</u>	<u>\$ 31,052,093</u>	<u>\$ 81,147,816</u>

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
JUNE 30, 2016
(In Thousands)

	QPP	TDA	Total
ADDITIONS:			
Contributions:			
Member contributions (Note 4)	\$ 173,696	\$ 717,566	\$ 891,262
Employer contributions	3,702,569	-	3,702,569
Other employer contributions	58,145	-	58,145
Total contributions	<u>3,934,410</u>	<u>717,566</u>	<u>4,651,976</u>
Investment income (Note 2):			
Interest income	860,223	33,469	893,692
Dividend income	896,208	128,383	1,024,591
Net (depreciation) in fair value of investments	(598,443)	(182,355)	(780,798)
Total investment income	<u>1,157,988</u>	<u>(20,503)</u>	<u>1,137,485</u>
Less:			
Investment expenses	222,163	12,062	234,225
Net (decrease) in variable expense provision	<u>(7,095)</u>	<u>(17,707)</u>	<u>(24,802)</u>
Net investment income	<u>942,920</u>	<u>(14,858)</u>	<u>928,062</u>
Securities lending transactions:			
Securities lending income	18,742	4,054	22,796
Less securities lending fees	(1,395)	(390)	(1,785)
Net securities lending income	<u>17,347</u>	<u>3,664</u>	<u>21,011</u>
Net receipts from other retirement systems	<u>1,233</u>	<u>-</u>	<u>1,233</u>
Total additions	<u>4,895,910</u>	<u>706,372</u>	<u>5,602,282</u>
DEDUCTIONS:			
Benefit payments and withdrawals	4,107,455	917,189	5,024,644
Administrative expenses (Note 8)	59,367	32,632	91,999
Statutory-interest for TDA Program's Fixed Return Fund	1,354,207	(1,354,207)	-
Total deductions	<u>5,521,029</u>	<u>(404,386)</u>	<u>5,116,643</u>
NET INCREASE (DECREASE) IN NET POSITION	(625,119)	1,110,758	485,639
NET POSITION RESTRICTED FOR BENEFITS:			
Beginning of year	<u>44,254,664</u>	<u>27,333,582</u>	<u>71,588,246</u>
End of year	<u>\$ 43,629,545</u>	<u>\$ 28,444,340</u>	<u>\$ 72,073,885</u>

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
NOTES TO COMBINING FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 2017 AND 2016

1. PLAN DESCRIPTION

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

TRS administers the TRS Qualified Pension Plan (the "QPP") and the TRS Tax-Deferred Annuity Program (the "TDA Program").

The QPP is a cost-sharing, multiple-employer pension plan. The QPP provides pension benefits for certain City public school teachers and certain other school and college teachers. The employers, in addition to The City, are The City University of New York ("CUNY") and twelve Charter Schools (collectively, the "Employers"). Substantially all teachers in the public schools of The City become members of the QPP, and certain other specified school and college personnel may become members on the first day of permanent employment.

The QPP functions in accordance with State and City laws, which establish benefit terms and Employer and member contribution requirements for the QPP. The QPP is a tax-qualified retirement plan under 401(a) of the Internal Revenue Code ("IRC") that has received a favorable determination letter from the Internal Revenue Service ("IRS"). The QPP combines features of a defined-benefit pension plan with those of a defined-contribution pension plan, but is a defined-benefit pension plan for financial reporting purposes. Contributions are made by the Employers and the members.

The TDA Program was established and is administered pursuant to IRC Section 403(b) and NYC Administrative Code section 13-582 and became effective February 1, 1970. Members of the QPP have the option to participate in the TDA Program, which provides a means of deferring income tax payments on members' voluntary contributions until after retirement or upon withdrawal of contributions. Contributions to the TDA Program are made by the members only and are voluntary. Benefits provided under the TDA Program are derived from members' accumulated contributions and earnings thereon. The TDA Program is a defined-contribution pension plan for financial reporting purposes.

The QPP and TDA Program are fiduciary funds of The City and are included in the Pension and Other Employee Benefit Trust Funds section of The City's Comprehensive Annual Financial Report ("CAFR").

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
NOTES TO COMBINING FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 2017 AND 2016**

Board of Trustees

The Teachers' Retirement Board, a seven-trustee Board, sets policy and oversees TRS' operations. Three TRS Board trustees are elected from and by the TRS membership. These trustees serve three-year terms. The Mayor appoints two Board trustees, one of whom must be a member of the Panel for Educational Policy. The City Comptroller and the Chair of the Panel for Education Policy are the other two Board trustees, each of which may designate a representative to act on his or her behalf.

Membership Data

At June 30, 2015 and June 30, 2014, the dates of the QPP's most recent completed actuarial valuations, the QPP's membership consisted of:

	2015	2014
Retirees and beneficiaries receiving benefits	82,777	80,419
Terminated vested members not yet receiving benefits	13,482	12,349
Other inactives*	7,347	8,702
Active members receiving salaries	<u>114,652</u>	<u>111,726</u>
Total	<u><u>218,258</u></u>	<u><u>213,196</u></u>

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

At June 30, 2015 and June 30, 2014, member participation of the TDA Program consisted of:

	2015	2014
Retirees receiving a TDA annuity	2,991	3,036
Retirees or Inactive members with TDA deferral	50,854	49,594
Active members contributing to TDA	<u>81,184</u>	<u>77,705</u>
Total	<u><u>135,029</u></u>	<u><u>130,335</u></u>

Summary of Benefits

QPP Plan

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

- Members who joined prior to July 1, 1973 ("Tier I") are entitled to service retirement benefits of 50% of "final salary" (as defined within State and City laws) after 20 years of service; a portion is provided from member contributions, plus additional benefits equal to specified percentages (as defined within State and City laws) per year of service of "final salary" for years in excess of the

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
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20-year minimum. These 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 Increased-Take-Home-Pay ("ITHP") contributions [accumulated after the twentieth year of member qualifying service]. ITHP represents amounts contributed by The City to members' QPP accounts 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.

In addition, these same members could elect a service retirement benefit with no minimum service requirement that 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 on attainment of age 55. This benefit is increased, where applicable, by an annuity attributable to the member's contributions and by any benefits attributable to the Employers' contributions with respect to such service under the ITHP contributions.

- Members who joined the QPP after June 30, 1973 and before July 27, 1976 ("Tier II") have provisions similar to Tier I, except that the eligibility for retirement and the salary base for benefits are different and there is a limitation on the maximum benefit. This maximum limitation was subsequently eliminated under Chapter 574 of the Laws of 2000 for all Tier II members who retired after December 8, 2000. Members retiring prior to the age of 62 without 30 years of credited service are subject to an age-reduction factor in their retirement allowance. Effective February 27, 2008, active members were eligible to enroll in a 55 retirement age minimum and 25 credited years of service retirement option ("55/25 retirement option") enabling them to eliminate any age-reduction factor in their retirement allowance (Chapter 19 of Laws of 2008). Those choosing the 55/25 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.

For Tier I and II members enrolled in the QPP prior to July 27, 1976, ITHP contributions made on their behalf, as well as their own contributions are invested, at their election, in the Fixed Return Fund or in variable-return funds. Members can elect to invest in multiples of 5% and change their elections on a quarterly basis. Members receive statutory returns, currently 8.25%, on member contributions or ITHP contributions to the Fixed Return Fund ("Fixed Annuity Program").

Certain members of Tier I and Tier II have the right to make voluntary member contributions ("Voluntary Contributions") in excess of their required member contributions ("Required Contributions"). Both the investment of the Voluntary Contributions and the Required Contributions are directed by each member. A member may invest in: (1) the QPP's Fixed Return Fund in which it is credited with interest at the Statutory-Interest Rate (currently 8.25% for Tier I and Tier II contributions and 7.0% for UFT members and 8.25% for non-UFT members for TDA Contributions) and/or (2) in one or more of the QPP's variable-return funds (see note 2—Investment Programs). 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 \$62.5 and \$68.0 million, for the years ended June 30, 2017 and 2016,

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respectively. Actuarial estimates of the impact of Excesses and Deficiencies are incorporated into calculation of the QPP's net pension liability.

The variable-return funds include only member contributions and ITHP contributions made on their behalf, as described above, and are expressed in terms of units that are valued monthly based on investment experience. At retirement, monthly annuities attributable to member Voluntary Excess Contributions and ITHP contributions can be paid in both fixed and variable amounts, based on the member's election, which can be changed quarterly. Other benefits are paid only in fixed amounts. Monthly annuities attributable to investments in the variable-return funds are not fixed in amount, but are based on investment experience through the preceding month.

- Members who joined the QPP on or after July 27, 1976 and prior to September 1, 1983 ("Tier III") were later mandated into Tier IV. However, these members retain their Tier III rights. Tier III requires member contributions of 3.0% of salary for a ten-year period (Chapter 126 of the Laws of 2000) and generally provides for reducing benefits by one-half of the primary Social Security benefit attributable to service with the Employer and for an annual cost-of-living escalator in pension benefits of not more than 3.0%. Members retiring prior to the age of 62 without 30 years of credited service are subject to an age-reduction factor in their retirement allowance.
- Members who joined the QPP on or after September 1, 1983 ("Tier IV") were required to make contributions of 3.0% 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 completion of ten years of credited service, whichever is earlier (Chapter 126 of the Laws of 2000). The annual benefit is approximately 1.67% of "final average salary" per year of service for members with less than 20 years of service and 2.0% of "final average salary" per year of service for members with 20 to 30 years of service, plus a 1.5% addition of "final average salary" per year of service for service in excess of 30 years of service. Members retiring prior to the age of 62 without 30 years of credited service experience an age-reduction factor in their retirement allowance. Effective February 27, 2008, active members were eligible to enroll in a 55 retirement age minimum and 25 credited years of service retirement option enabling them to eliminate any age-reduction factor in their retirement allowance. 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. Members joining after February 27, 2008 are automatically enrolled in a 55 retirement age minimum and 27 credited years of service retirement program ("55/27 retirement program"). These members are required to make additional plan contributions of 1.85% of salary until they have accumulated 27 years of credited service.

Members under the 55/27 retirement program who joined after December 10, 2009, but before April 1, 2012, were 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.

- Members who join on and after April 1, 2012 ("Tier VI") are required to make contributions of 3.0% per year through March 31, 2013. Thereafter, contributions range from 3.0% to 6.0% in accordance with a schedule based on salary. Member contributions continue until retirement. Salary is limited to the New York State Governor's salary. Tier VI members are generally eligible to retire with unreduced benefits beginning at age 63 or with reduced benefits beginning at age 55, if vested.

Members enrolled in the QPP on or after July 27, 1976 ("Tier III, IV, and VI") who resign or otherwise terminate from service prior to eligibility for a benefit, are refunded all of their member contributions with 5.0% interest (RSSL, Article 15). Tier III, IV, and VI members who work for the Department of Education also receive a monthly supplemental contribution. The monthly

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
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supplemental contribution of \$550 per year for supervisors and administrators and \$400 per year for other eligible members is credited to the members' Annuity Savings Accumulation Fund ("ASAF").

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 and eligible for benefits upon the completion of five years of service. After December 10, 2009, new members who belong to the UFT, and all Tier VI members, become fully vested upon the completion of ten years of service.

The QPP provides death benefits, and retirement benefits on the occurrence of accidental or ordinary disability. In terms of payment options of the retirement annuity, the QPP provides a number of options depending on whether retirement payments, following death, will continue to an assigned beneficiary.

During the spring 2000 session, the State Legislature approved and the State Governor ("Governor") authorized automatic Cost-of-Living Adjustments ("COLAs") for certain retirees and beneficiaries (Chapter 125 of the Laws of 2000). COLA is payable to all members who are either: (1) at least age 62 and have been retired for at least 5 years or (2) at least age 55 and have been retired for at least 10 years. Additionally, COLA is payable to members who retired for disability after being retired for 5 or more years and beneficiaries receiving accidental death benefits who have been receiving them for at least 5 years. COLA is one-half of the increase in the CPI-U based on the year ending March 31, rounding to the next higher 0.1%, not less than 1% nor greater than 3% of the first \$18,000 of the sum of the maximum retirement allowance and prior COLA.

TDA Program

The TDA Program is administered by the TRS Board. Contributions to the TDA Program are made by the members only and are voluntary. To participate in the Program, active members of the QPP are required to submit a salary-reduction agreement and enrollment request. Members may choose to stop contributions at any time. A participant may elect to exclude an amount (within the maximum allowed by the IRS) of compensation from current taxable income by contributing it to the TDA Program. This maximum amount is calculated based on various individual factors. Members can elect to invest in the Fixed Return Fund or the variable-return funds.

A participant may withdraw all or part of the balance of his/her account prior to or at the time of retirement. As of January 1, 1989, the tax laws restrict withdrawals of tax-deferred annuity contributions and accumulated earnings thereon for reasons other than retirement or termination. Contributions made after December 31, 1988 and investment earnings credited after December 31, 1988 may only be withdrawn upon attainment of age 59½ or for reasons of hardship (as defined by IRS regulations). However, hardship withdrawals are limited to contributions only and if hardship withdrawal occurs, the member is not able to contribute for a six-month period.

If a member dies while an in-service employee, the full value of his/her TDA Program account at the date of death is paid to the member's beneficiary or estate.

When a member resigns before attaining vested rights under the QPP, (s)he may withdraw the value of the account or may leave the account in the TDA Program for a period of up to seven school years after the date of resignation, provided (s)he does not withdraw his/her account from the QPP. If a member resigns after attaining vested rights under the QPP, (s)he may leave his/her account in the TDA Program, provided the member does not withdraw his/her QPP funds. Once a withdrawal is made from the QPP, the member's participation in the TDA Program is automatically terminated, and the value of the account in the TDA Program will be paid out to the member. Upon

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death, TDA balances are paid to the assigned beneficiaries or may be invested on behalf of the beneficiaries in the TDA Program's variable-return funds.

At retirement, several payment options are available to those who annuitize their TDA Program funds. Generally, payment options similar to the QPP are available under the TDA Program.

See "Investments" below for a discussion of TDA investment programs.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting — The QPP and the TDA Program use the accrual basis of accounting where the measurement focus is on the flow of economic resources. Revenues are recognized in the accounting period in which they are earned, and expenses are recognized in the period incurred. Contributions from members are recognized when the Employers make payroll deductions from members' salary. Employer contributions to the QPP are recognized when due and the employer has a legal obligation to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the 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 (the "IIF"), and Alternative Investment Funds (the "ALTINVF"). The IIF are private funds of publicly traded securities that are managed by various investment managers on behalf of the QPP and the TDA Program. Fair value is determined by TRS 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 the New York City Office of the Comptroller or TRS management based on information provided by the various GPs after review by an independent consultant and the custodial bank, State Street, for the System's TRSNYC Pension Fund assets.

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.

Investment Programs — Prior to July 1, 2008, investments were composed of the assets of the following investment programs: the TRSNYC Pension Fund (which includes a component, the Fixed Return Fund, which was previously referred to as the Fixed Annuity Program) and two variable-return funds — the Diversified Equity Fund and the Stable-Value Fund. As of July 1, 2008, the investment programs were expanded to include three new variable-return funds — the International Equity Fund, the Inflation Protection Fund and the Socially Responsive Equity Fund. As of January 1, 2012, the Stable-Value Fund became the Bond Fund. The Bond Fund objective is to seek current income by investing primarily in a portfolio of high-quality bonds. The six investment programs are collectively referred to as the TRS Passport Funds.

All investment programs excluding the TRSNYC Pension Fund are referred to as the variable-return funds. The TRSNYC Pension Fund includes System investments from QPP employer contributions, QPP Tier I and II members' and ITHP contributions, QPP Tier III, IV, and VI members' contributions and ASAF contributions, and TDA Program member contributions invested in the Fixed Return Fund. Investing in variable-return funds is available for both QPP Tier I and II members' and ITHP contributions and TDA program investments.

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In the Fixed Return Fund, deposits from members' TDA Program accounts are invested along with QPP assets, and TDA Program accounts are credited with a fixed rate of return, determined by the New York State Legislature ("Statutory-Interest Rates"). Payment of the Statutory-Interest is an obligation of The City (NYC Admin. Code section 13-533). The Statutory-Interest Rates are as follows:

- 7% for TDA investments by members who are serving in (or resigned/retired from) titles represented by the United Federation of Teachers. The crediting rate of 7% has been in effect since December 11, 2009. The prior crediting rate of 8.25% had been in effect since July 1, 1988 to December 11, 2009.
- 8.25% for TDA investments by all other members. This crediting rate has been in effect since July 1, 1988.

TDA Program assets are pooled with QPP assets for investment purposes only. NYC Administrative Code section 13-582, subdivision [k], provides for the maintenance of TDA accounts in the Annuity Savings Funds ("Fixed Return Fund") and Variable Annuity Programs ("variable-return funds"), which are distinct from similar funds for the QPP. This is in accordance with requirements that assets of the TDA Program be accounted for separately from assets of the QPP Plan. Statutory Rates received by funds invested in the QPP Plan's and the TDA Plan's Annuity Savings Fund ("Fixed Return Fund") are set, respectively, by NYC Administrative Code sections 13-638.2 and 13-582 [d].

Assets in the TDA Fixed Return Fund are invested with assets of the QPP, on a pro rata basis consistent with the QPP's asset allocation policy. Earnings on these investments over (or under) the Statutory Rates are considered by the Actuary in determining employer contribution obligations. Earnings over the Statutory Rates accrue to the benefit of the QPP. Earnings under the Statutory Rates are considered by the Actuary in determining employer contributions to the QPP, such that the City is ultimately responsible for any deficiency. For financial reporting purposes, TDA fixed return assets invested alongside QPP assets are reflected as a receivable due from the QPP equal in amount to the aggregate original principal amounts contributed by TDA Program members to the fixed return program, plus accrued interest at the Statutory Rate adjusted for withdrawals and transfers to or from variable funds. This receivable is reported by the TDA Program as an Investment in the Fixed Return Fund and the corresponding liability is reported by the QPP as Fixed Return Funds Due to TDA.

Assets of the variable-return funds of the QPP and the TDA Program Diversified Equity Fund are co-invested along with certain assets of the BERS. These financial statements reflect the QPP's and TDA Program's variable-return funds' proportionate shares of Diversified Equity Fund investments and the related activity.

Investment Presentation — The TDA Program Fixed Return Fund's portion of TRSNYC Pension Fund assets are shown as commingled with the QPP's portion of TRSNYC Pension Fund assets, and an offsetting liability is used to show the TDA Program's share of the funds.

Fair Value Measurement — Government Accounting Standards Board ("GASB") Statement No. 72, *Fair Value Measurement and Application* requires the System to use valuation techniques which are appropriate under the circumstances and are either a market approach, a cost approach, or income approach. GASB 72 establishes a hierarchy of inputs used to measure fair value consisting of three levels. Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs, and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or

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liability. GASB 72 also contains note disclosure requirements regarding the hierarchy of valuation inputs and valuation techniques that were used for the fair value measurements.

Other Employer Contributions — Include amounts for Contingent Reserve Funds for half (or employer's portion) of Additional Member Contributions (Chapter 19 1.85%), buyback payments for outside and military service, and DOE supplemental contributions for the ASAF and ASF funds. The employer portion of Additional Member Contributions is not part of the employer's appropriation amount and also not recoverable by member upon member's resignation.

Investment Expenses — The variable-return funds maintain a reserve for administrative and investment expenses. The reserve is currently \$86,637,932 for QPP and \$61,098,894 for TDA. The expense reserve, as well as investment expenses for 2017, were reduced by \$2,379,262 for QPP and \$17,995,764 for TDA. Similarly, in Fiscal Year 2016 the reserve for administrative and investment expenses totaled \$88,345,953 for QPP and \$78,789,567 for TDA. The expense reserve, as well as investment expenses for 2016, were reduced by \$7,095,378 for QPP and \$17,706,802 for TDA.

Income Taxes — Income earned by the QPP and TDA Program is not subject to Federal income tax.

Accounts Payable — Accounts payable is principally comprised of amounts owed to the System's banks for overdrawn bank balances due to depositories, unclaimed funds, reserves for investment and administrative expenses for the variable-return funds, and investment expenses accrued to the QPP and TDA Program. The System's practice is to fully invest its day-end cash balances in a pooled short-term fund. A typical benefit payment bank account would show an overdrawn balance, since funds are only deposited as outstanding benefit checks are presented to the banks for payment each day.

Intra-fund Payables — The QPP and TDA Program assets are reflected as of year-end, and intra-fund payables between the TRS NYC Pension Fund and the Variable-Return Funds are excluded. The Administrative Code of the City of New York (ACNY) Sections 13-577 and 13-582 provide for certain internal transfers of funds. These transfers are intended to rebalance estimated actuarial liabilities with reported assets. In Fiscal Year 2016, the System anticipated a substantial rebalancing from the QPP TRS NYC Pension Fund to the Variable-Return Program. In Fiscal Year 2017, \$3.8 billion was transferred from the QPP TRS NYC Pension Fund to the Variable-Return funds including \$43.9 million transferred from the QPP to the TDA Program.

Payment of Statutory-Interest on the TDA Program Fixed Return Fund — The fixed interest, credited to TDA Program member account balances invested in the Fixed Return Fund (7.0% APR for UFT members after December 10, 2009 8.25% APR for non-UFT members and for UFT members prior to December 10, 2009), owed and transferred to the TDA Program is reported as a transfer payment (or receipt) of interest on the TDA Program Fixed Return Funds in the QPP and TDA Program.

Inter-Plan Eliminations — Included on the Combining Statements of Fiduciary Net Position and the Combining Changes in Fiduciary Net Position is an elimination column, the purpose of which is to remove from the statement any transactions involving dealings between the entities being reported. The eliminations include offsetting payables and receivables associated with the TDA Program's investment in the TRS NYC Pension Fund. In addition, payables and receivables between the QPP, the TDA Program, and the System's administrative expense fund are eliminated.

Securities-Lending Transactions — State statutes and Board policies permit the Funds to lend their 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.

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Government securities. The Funds' agent lends the following types of securities: short-term securities, common stocks, long-term corporate bonds, U.S. Government and U.S. Government agency bonds, asset-backed securities, and international equities and bonds held in collective investment funds. In return, the Funds receive collateral in the form of cash, U.S. Treasury and U.S. Government agency securities at 100% to 105% of the principal plus accrued interest for reinvestment. At June 30, 2017 and 2016, management believes that the Funds had no credit risk exposure to borrowers because the amounts the Funds owed the borrowers equaled or exceeded the amounts the borrowers owed the Funds. The contracts with the Funds' Custodian require the Securities Lending Agent to Indemnify the Funds. In the situation when a borrower goes into default, the Agent will liquidate the collateral to purchase replacement securities. Any shortfall before the replacement securities cost and the collateral value is covered by the Agent. All securities loans can be terminated on demand within a period specified in each agreement by either the Funds or the borrowers. Cash collateral is invested by the securities lending agent using approved Lender's Investment guidelines. The weighted average maturity is 13.1 days for State Street's TRSNYC Pension Fund investments and 2.4 days for JP Morgan Chase's Variable-Return Fund investments. The securities-lending program in which the Funds participate only allows pledging or selling securities in the case of borrower default.

During Fiscal Year 2017, net earnings from the securities-lending program were \$19.2 million. Net earnings from QPP were \$17.4 million including \$16.1 million from TRSNYC Pension Fund and \$1.3 million from variable-return funds. The TDA net earnings from the Variable-Return funds securities-lending program amounted to \$ 1.8 million.

During Fiscal Year 2016, net earnings from the securities-lending program were \$21.0 million. Earnings from the NYC Pension Fund securities-lending program were \$16.3 million, and earnings from the variable-return funds securities-lending program were \$ 4.7 million.

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. As of the balance sheet date, the maturities of the investments made with cash collateral on average exceed the maturities of the securities loans by approximately 12.1 days for State Street's TRSNYC Pension Fund investments and 1.4 days for JP Morgan Chase's Variable-Return Fund investments. Securities received as collateral are also reported as assets if the government entity has the ability to pledge or sell them with a borrower default. Accordingly, the System records the investments purchased with the cash collateral from securities lending with a corresponding liability for securities lending. Securities on loan are carried at fair value; as of June 30, 2017 and 2016, the values on loan by the TRSNYC Pension Fund were \$1.5 billion and \$1.8 billion, respectively, and the values on loan by the variable-return funds were \$183.4 million and \$357.0 million, respectively. Cash collateral received related to securities lending as of June 30, 2017 and 2016 was \$1.5 billion and \$1.8 billion, respectively, for the TRSNYC Pension Fund, and \$188.4 million and \$366.8 million, respectively, for the variable-return funds.

3. INVESTMENTS AND DEPOSITS

The Comptroller of The City of New York (the "Comptroller") acts as an investment advisor to TRS and employs an independent consultant for the TRSNYC Pension Fund. In addition, TRS employs an independent investment consultant as an investment advisor for its variable-return funds. TRS 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.

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The State Retirement and Social Security Law ("RSSL") and Administrative Code of the City of New York ("NYCAC") authorize the investments of assets subject to the terms, conditions, limitations, and restrictions imposed by law for investments by savings bank and domestic life insurance companies. The State Retirement and Social Security Law §§ 176-178(a), Banking Law § 235 and the ACNY establish the criteria for permissible equity investments. Investments up to 25% of total assets of the QPP and the TDA Program may be made in instruments not expressly permitted by the State RSSL.

QPP and TDA Program assets are diversified over a range of investments, and multiple strategies are used to limit overall risk.

TRS possesses investment policy statements for its QPP and TDA Program, and investment risk management is an inherent function of the asset allocation process. The System's assets are diversified over a broad range of asset classes and encompass multiple investment strategies aimed at limiting concentration risk. The asset allocation per investment program and targeted for Fiscal Year 2017 and 2016 included securities in the following categories. It is worth noting that the TRSNYC Pension Fund primarily holds QPP assets, and the returns from this fund impact the funding of the QPP, a defined-benefit plan. The variable-return funds primarily relate to the TDA Program, a defined-contribution plan.

**TRSNYC Pension Fund
Target Asset Allocations**

Investment Type	Asset Allocation Percentages	
	2017	2016
Common stock	33.1%	33.7%
International investments – Non U.S.	12.2%	9.0%
International investments – Emerging Markets	9.1%	8.8%
Common stock – REITS	0.0%	3.0%
Alternative investments – Real Estate	3.5%	3.6%
Alternative investments – Private Equity	5.0%	5.0%
Alternative investments – Infrastructure	0.6%	0.0%
Alternative investments – Opportunistic Fixed Income	2.5%	2.4%
Fixed income	34.0%	34.5%
Total	100.0%	100.0%

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Investment Type	Asset Allocation	
	Percentages	
	2017	2016
Diversified Equity (Variable A):		
Common stock – Passive	55.0%	50.0%
Common stock – Active	15.0%	20.0%
Common stock – Defensive	10.0%	15.0%
International investments	20.0%	15.0%
Bond Fund (Variable B):		
Fixed Income	100.0%	100.0%
International Equity (Variable C):		
International Investments	100.0%	100.0%
Inflation Protection Equity (Variable D):		
Inflation Protection Fidelity Strategic Real Return Mutual Fund	100.0%	100.0%
Socially Responsible (Variable E):		
Socially Responsible NB SRF	100.0%	100.0%

State Street is currently the custodian for essentially all securities of the TRSNYC Pension Fund. JPMorgan Chase is currently the custodian for essentially all securities of the variable-return programs.

The information reflected in the Credit Ratings and in the Years to Maturity is derived from the Custodians' Risk and Performance Analytics Reporting System.

Concentrations — The System's investment programs do not have any investments in any one entity that represent 5% or more of the assets in the QPP or TDA Program's net position.

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Credit Risk — Portfolios other than U.S. Government and related portfolios have credit rating limitations. Investment Grade portfolios are limited to mostly ratings of BBB- and above except that they are also permitted a 10% maximum exposure to BB & B rated securities. While non-investment grade managers are primarily invested in BB & B rated securities, they can also invest up to 7% of their portfolios in securities rated CCC or lower. Unrated securities, excluding short-term securities, are considered to be non-investment grade. The quality ratings of the TRSNYC Pension Fund, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2017 and 2016, are as follows:

Investment Type (in percent) Pension Fund June 30, 2017	S&P Quality Ratings																CCC+ & Below	Not Rated	Total	
	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-				
U.S. Government	0.01%	1.12%	0.02%	0.03%	0.04%	0.00%	0.00%	0.12%	0.07%	0.07%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	46.36%	47.85%	
Corporate bonds	0.30%	0.19%	0.21%	0.78%	0.77%	2.00%	2.55%	6.07%	4.75%	5.31%	3.49%	2.67%	4.19%	3.50%	2.67%	2.07%	1.09%	4.01%	46.62%	
Short term																				
Commercial Paper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.23%	1.23%
Pooled Fund	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.99%	2.99%
Discount Notes and Treasury-Bills	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.31%	1.31%
Percent of Rated Portfolio	0.31%	1.31%	0.23%	0.81%	0.81%	2.00%	2.55%	6.19%	4.82%	5.38%	3.49%	2.68%	4.19%	3.50%	2.67%	2.07%	1.09%	55.90%	100.00%	

Investment Type (in percent) Pension Fund June 30, 2016	S&P Quality Ratings																CCC+ & Below	Not Rated	Total	
	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-				
U.S. Government	0.01%	0.82%	0.03%	0.00%	0.03%	0.00%	0.00%	0.16%	0.11%	0.01%	0.09%	0.02%	0.01%	0.00%	0.00%	0.00%	0.00%	35.14%	36.43%	
Corporate bonds	0.51%	0.71%	0.48%	0.99%	1.19%	2.70%	4.42%	6.68%	6.08%	6.51%	3.59%	2.97%	3.27%	2.69%	2.18%	1.62%	1.41%	3.84%	51.84%	
Short-term:																				
Commercial paper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.42%	6.42%
Pooled funds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.21%	5.21%
Discount Notes and Treasury-Bills	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10%	0.10%
Percent of Rated Portfolio	0.52%	1.53%	0.51%	0.99%	1.22%	2.70%	4.42%	6.84%	6.19%	6.52%	3.68%	2.99%	3.28%	2.69%	2.18%	1.62%	1.41%	50.71%	100.00%	

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The quality ratings of the variable-return fund investments, both QPP and TDA, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2017 and 2016 are as follows:

Investment Type Variable Funds June 30, 2017	S&P Quality Ratings																CCC & Below	Not Rated	Total
	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-			
Government*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corporate bonds	2.05%	0.54%	0.41%	1.20%	1.81%	3.25%	2.54%	6.53%	4.13%	3.18%	2.19%	1.02%	1.96%	1.80%	0.57%	0.72%	0.32%	18.81%	53.03%
Yankee bonds	0.71%	0.62%	-	0.07%	-	-	-	0.24%	-	-	-	-	-	-	-	-	-	-	1.64%
Municipal Bonds	0.22%	0.02%	-	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24%
U.S. Agencies	-	0.78%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.78%
Short-term: Money Market Funds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44.31%	44.31%
Percent of rated portfolio	<u>2.98%</u>	<u>1.96%</u>	<u>0.41%</u>	<u>1.27%</u>	<u>1.81%</u>	<u>3.25%</u>	<u>2.54%</u>	<u>6.77%</u>	<u>4.13%</u>	<u>3.18%</u>	<u>2.19%</u>	<u>1.02%</u>	<u>1.96%</u>	<u>1.80%</u>	<u>0.57%</u>	<u>0.72%</u>	<u>0.32%</u>	<u>63.12%</u>	<u>100.00%</u>

Variable Funds June 30, 2016	S&P Quality Ratings																CCC & Below	Not Rated	Total
	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-			
Government*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Corporate bonds	2.35 %	0.03 %	0.39 %	0.94%	2.06%	1.24%	3.52%	5.48 %	3.39 %	3.53 %	2.94 %	1.63 %	1.37 %	0.98 %	1.68 %	0.15%	- %	19.43 %	51.11 %
Yankee bonds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06 %	0.06%
Municipal Bonds	-	0.04 %	0.21 %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25%
U.S. Agencies	-	1.37 %	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.37%
Short-term: Money Market Funds	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47.21%	47.21%
Percent of rated portfolio	<u>2.35%</u>	<u>1.44%</u>	<u>0.60%</u>	<u>0.94%</u>	<u>2.06%</u>	<u>1.24%</u>	<u>3.52%</u>	<u>5.48%</u>	<u>3.39%</u>	<u>3.53%</u>	<u>2.94%</u>	<u>1.63%</u>	<u>1.37%</u>	<u>0.98%</u>	<u>1.68%</u>	<u>0.15%</u>	<u>0.00%</u>	<u>66.70%</u>	<u>100.00%</u>

* U.S. Treasury Bonds and other securities that are obligations of the U.S. government or explicitly guaranteed by the U.S. government are not considered by JP Morgan Chase, the Variable-Return Funds Custodian, to have credit risk and are not included above.

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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 QPP and TDA Program will not be able to recover the value of their 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 or QPP and TDA Program, and are held by either the counterparty or the counterparty's trust department or agent, but not in the System's name.

Investments are held by the TRS NYC Pension Fund and variable-return funds' custodians and registered in the System's or QPP and TDA Program's name.

All of the System's deposits are insured by the Federal Deposit Insurance Corporation or collateralized by securities held by a financial institution separate from their respective depository financial institution.

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. TRS possesses investment policy statements for its QPP and TDA Program, and investment risk management is an inherent function of the asset allocation process.

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The lengths of investment maturities (in years) of TRSNYC Pension Fund investments, both QPP and TDA, as shown by the percent of the rated portfolio, at June 30, 2017 and 2016, are as follows:

Years to Maturity

June 30, 2017		Investment Maturities				
Investment Type	Fair	Less than	One to Five	Six to Ten	More than	
Pension Fund	Value	One Year	Years	Years	Ten Years	
U.S. Government	47.85 %	0.93 %	8.38 %	7.75 %	30.79 %	
Corporate	46.62	1.76	14.74	20.36	9.76	
Short-term:						
Commercial paper	1.23	1.23	-	-	-	
Pooled funds	2.99	2.99	-	-	-	
Discount Notes and Treasury	<u>1.31</u>	<u>1.31</u>	<u>-</u>	<u>-</u>	<u>-</u>	
Percent of rated portfolio	<u>100.00 %</u>	<u>8.22 %</u>	<u>23.12 %</u>	<u>28.11 %</u>	<u>40.55 %</u>	

June 30, 2016		Investment Maturities				
Investment Type	Fair	Less than	One to Five	Six to Ten	More than	
Pension Fund	Value	One Year	Years	Years	Ten Years	
U.S. Government	36.44 %	2.31 %	4.41 %	4.66 %	25.06 %	
Corporate	51.84	1.01	17.37	20.62	12.84	
Short-term:						
Commercial paper	6.42	6.42	-	-	-	
Pooled funds	5.21	5.21	-	-	-	
Discount Notes and Treasury	<u>0.10</u>	<u>0.10</u>	<u>-</u>	<u>-</u>	<u>-</u>	
Percent of rated portfolio	<u>100.00 %</u>	<u>15.05 %</u>	<u>21.78 %</u>	<u>25.28 %</u>	<u>37.90 %</u>	

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The lengths of investment maturities (in years) of the variable-return funds', both QPP and TDA, investments, as shown by the percent of the rated portfolio, at June 30, 2017 and 2016, are as follows:

Years to Maturity

June 30, 2017		Investment Maturities				
Investment Type	Fair	Less than	One to Five	Six to Ten	More than	
Variable Funds	Value	One Year	Years	Years	Ten Years	
Government	21.19 %	0.73 %	19.34 %	1.12 %	- %	
Corporate	41.79	3.75	28.81	4.93	4.30	
Yankee bonds	1.29	-	1.29	-	-	
Municipal bonds	0.19	-	0.19	-	-	
US Agency	0.62	-	0.62	-	-	
Short term:						
Money market	34.92	34.92	-	-	-	
Percent of rated portfolio	<u>100.00 %</u>	<u>39.40 %</u>	<u>50.25 %</u>	<u>6.05 %</u>	<u>4.30 %</u>	

June 30, 2016		Investment Maturities				
Investment Type	Fair	Less than	One to Five	Six to Ten	More than	
Variable Funds	Value	One Year	Years	Years	Ten Years	
Government	24.27 %	0.14 %	23.53 %	0.60 %	- %	
Corporate	38.71	2.23	26.60	5.14	4.74	
Yankee bonds	0.05	-	0.05	-	-	
Municipal bonds	0.18	0.16	0.02	-	-	
US Agency	1.04	-	1.04	-	-	
Short term:						
Money market	35.75	35.75	-	-	-	
Percent of rated portfolio	<u>100.00 %</u>	<u>38.28 %</u>	<u>51.24 %</u>	<u>5.74 %</u>	<u>4.74 %</u>	

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 TRS NYC Pension Fund 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.

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In addition, the TRSNYC Pension Fund and variable-return funds have investments in foreign stocks and/or bonds denominated in foreign currencies. Foreign currency exposures as of June 30, 2017 and 2016 are as follows (amounts in thousands of U.S. dollars):

Trade Currency (in thousands)	Pension Fund June 30, 2017	Variable-Return Funds June 30, 2017	Pension Fund June 30, 2016	Variable-Return Funds June 30, 2016
Euro Currency	\$ 2,768,970	\$ 203,980	\$ 1,751,683	\$ 171,952
Japanese Yen	1,896,715	109,155	1,211,772	101,422
British Pnd Sterling	1,540,467	106,423	1,047,296	103,393
South Korean Won	1,311,912	86,007	986,412	78,366
New Taiwan Dollar	1,036,049	51,731	827,942	50,026
Indian Rupee	945,837	53,586	762,247	51,387
Swiss Franc	789,798	69,747	542,480	59,634
South African Rand	578,274	24,009	531,048	26,115
Brazilian Real	484,833	15,283	381,188	20,695
Hong Kong Dollar	470,622	22,440	347,719	20,397
Canadian Dollar	313,530	32,829	97,285	22,110
Australian Dollar	306,102	19,785	197,137	20,122
Mexican Nuevo Peso	302,743	7,815	259,357	9,085
Swedish Krona	271,809	5,607	160,037	7,659
Indonesian Rupiah	227,390	3,187	171,225	-
Danish Krone	219,133	11,278	127,833	3,778
Thai Baht	192,893	14,567	168,968	6,499
Malaysian Ringgit	182,270	12,742	195,511	10,561
Turkish Lira	160,477	12,131	113,853	9,708
Singapore Dollar	135,264	16,597	103,043	16,518
Philippines Peso	130,522	1,993	126,656	1,607
Polish Zloty	122,453	2,213	108,411	3,371
Chilean Peso	95,645	893	85,709	29
Norwegian Krone	81,229	7,498	50,548	5,433
Colombian Peso	45,587	-	40,404	-
UAE Dirham	39,763	2,134	39,394	2,555
Hungarian Forint	38,518	-	34,102	-
Czech Koruna	22,318	113	25,097	6
Egyptian Pound	22,244	79	24,020	137
New Zealand Dollar	20,702	909	12,438	309
Qatari Rial	20,609	-	22,834	-
Israeli Shekel	17,907	2,713	6,328	3,495
Peruvian Nuevo Sol	9,845	-	10,324	-
Total	\$ 14,802,430	\$ 897,444	\$ 10,570,301	\$ 806,369

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Securities Lending Transactions

Credit Risk — The quality ratings of investments held as collateral for Securities Lending by the TRSNYC Pension Fund at June 30, 2017 and 2016 are as follows (in thousands):

**Investment Type and Fair Value
of Securities Lending Transactions
(in thousands)
June 30, 2017**

	S&P Quality Ratings											Total
	AAA+ & Below	AA+ & AA	AA-	A+	A	A-	BBB+ & Below	BB+ & Below	B+ & Below	CCC & Below	Not Rated	
Government	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate	-	-	-	-	-	-	-	-	-	-	-	-
Short-term:	-	-	-	-	-	-	-	-	-	-	-	-
Repurchase agreements	-	-	-	-	-	-	-	-	-	-	-	-
Reverse repurchase agreements	-	-	76,444	81,905	306,983	42,240	-	-	-	-	709,696	1,217,268
Certificates of deposit	-	-	-	-	-	-	-	-	-	-	-	-
Commercial paper	-	-	-	-	-	-	-	-	-	-	-	-
Money market	8,000	-	-	-	-	-	-	-	-	-	-	8,000
Bank notes	-	-	-	-	-	-	-	-	-	-	-	-
U.S. agency	-	-	-	-	-	-	-	-	-	-	149,982	149,982
Time deposit	-	-	-	-	-	-	-	-	-	-	-	-
Cash equivalents	-	-	-	152,222	-	-	-	-	-	-	-	152,222
Payable/Receivable	-	-	-	-	-	-	-	-	-	-	1,572	1,572
Uninvested	-	-	-	-	-	-	-	-	-	-	1,266	1,266
Total	\$ 8,000	\$ -	\$ 76,444	\$ 234,127	\$ 306,983	\$ 42,240	\$ -	\$ -	\$ -	\$ -	\$ 862,516	\$ 1,530,310
Percent of Securities Lending Portfolio	0.52 %	- %	5.00 %	15.30 %	20.06 %	2.76 %	- %	- %	- %	- %	56.36 %	100.00 %

	S&P Quality Ratings											Total
	AAA+ & Below	AA+ & AA	AA-	A+	A	A-	BBB+ & Below	BB+ & Below	B+ & Below	CCC & Below	Not Rated	
Government	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate	-	-	-	-	-	-	-	-	-	-	-	-
Short-term:	-	-	-	-	-	-	-	-	-	-	-	-
Repurchase agreements	-	-	-	-	-	-	-	-	-	-	-	-
Reverse repurchase agreements	-	-	88,509	98,832	464,066	-	115,981	-	-	-	476,572	1,243,960
Certificates of deposit	-	-	-	-	-	-	-	-	-	-	-	-
Commercial paper	-	-	-	-	-	-	-	-	-	-	-	-
Money market	70,361	-	-	-	-	-	-	-	-	-	-	70,361
Bank notes	-	-	-	-	-	-	-	-	-	-	-	-
U.S. agency	-	-	-	-	-	-	-	-	-	-	280,470	280,470
Time deposit	-	-	-	-	-	-	-	-	-	-	-	-
Cash equivalents	-	-	-	-	176,681	-	-	-	-	-	-	176,681
Payable/Receivable	-	-	-	-	-	-	-	-	-	-	1,572	1,572
Uninvested	-	-	-	-	-	-	-	-	-	-	1,412	1,412
Total	\$ 70,361	\$ -	\$ 88,509	\$ 98,832	\$ 640,747	\$ -	\$ 115,981	\$ -	\$ -	\$ -	\$ 760,026	\$ 1,774,456
Percent of Securities Lending Portfolio	3.96 %	- %	4.99 %	5.57 %	36.11 %	- %	6.54 %	- %	- %	- %	42.83 %	100.00 %

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
NOTES TO COMBINING FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 2017 AND 2016

The quality ratings of investments held as collateral for Securities Lending under the variable-return funds at June 30, 2017 and 2016 are as follows (in thousands):

**Investment Type and Fair Value of
Securities Lending Transactions
(In thousands)
June 30, 2017**

	S&P Quality Ratings							Total
	AAA	AA+	AA & Below	BBB+ & Below	CCC & Below	Short Term	Not Rated	
Government	\$ -	\$ 43,264	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 43,264
Corporate	-	-	-	-	-	-	-	-
Short-term:								
Repurchase agreements	29,961	115,200	-	-	-	-	-	145,161
Reversal purchase agreements	-	-	-	-	-	-	-	-
Certificates of deposit	-	-	-	-	-	-	-	-
Commercial paper	-	-	-	-	-	-	-	-
Variable rate demand notes	-	-	-	-	-	-	-	-
U.S. treasury	-	-	-	-	-	-	-	-
U.S. agency	-	-	-	-	-	-	-	-
Time deposit	-	-	-	-	-	-	-	-
Uninvested	-	-	-	-	-	-	-	-
Total	\$ 29,961	\$ 158,464	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 188,425
Percent of securities lending portfolio	15.90 %	84.10 %	- %	- %	- %	- %	- %	100.00 %

June 30, 2016

	S&P Quality Ratings							Total
	AAA	AA+	AA & Below	BBB+ & Below	CCC & Below	Short Term	Not Rated	
Government	\$ -	\$ 102,928	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 102,928
Corporate	-	-	-	-	-	-	-	-
Short-term:								
Repurchase agreements	201,775	62,078	-	-	-	-	-	263,853
Reversal purchase agreements	-	-	-	-	-	-	-	-
Certificates of deposit	-	-	-	-	-	-	-	-
Commercial paper	-	-	-	-	-	-	-	-
Variable rate demand notes	-	-	-	-	-	-	-	-
U.S. treasury	-	-	-	-	-	-	-	-
U.S. agency	-	-	-	-	-	-	-	-
Time deposit	-	-	-	-	-	-	-	-
Uninvested	-	-	-	-	-	-	47	47
Total	\$ 201,775	\$ 165,006	\$ -	\$ -	\$ -	\$ -	\$ 47	\$ 366,828
Percent of securities lending portfolio	55.01 %	44.98 %	- %	- %	- %	- %	0.01 %	100.00 %

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Interest Rate Risk — The lengths of investment maturities (in years) of the collateral for Securities Lending held by the TRSNYC Pension Fund at June 30, 2017 and 2016 are as follows (in thousands):

Years to Maturity

Investment Type June 30, 2017	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
Government	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate	-	-	-	-	-
Short-term:	-	-	-	-	-
Repurchase agreements	-	-	-	-	-
Reverse repurchase agreements	1,217,268	1,217,268	-	-	-
Certificates of deposit	-	-	-	-	-
Commercial paper	-	-	-	-	-
Money market	8,000	8,000	-	-	-
Bank notes	-	-	-	-	-
U.S. agency	149,982	149,982	-	-	-
Time deposit	-	-	-	-	-
Cash equivalents	152,222	152,222	-	-	-
Payable/Receivable	1,572	1,572	-	-	-
Uninvested	1,266	1,266	-	-	-
Total	\$ 1,530,310	\$ 1,530,310	\$ -	\$ -	\$ -
Percent of Securities Lending Portfolio	100.00 %	100.00 %	- %	- %	- %

Investment Type June 30, 2016	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
Government	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate	-	-	-	-	-
Short-term:	-	-	-	-	-
Repurchase agreements	-	-	-	-	-
Reverse repurchase agreements	1,243,960	1,243,960	-	-	-
Certificates of deposit	-	-	-	-	-
Commercial paper	-	-	-	-	-
Money market	70,361	70,361	-	-	-
Bank notes	-	-	-	-	-
U.S. agency	280,470	280,470	-	-	-
Time deposit	-	-	-	-	-
Cash equivalents	176,681	176,681	-	-	-
Payable/Receivable	1,572	1,572	-	-	-
Uninvested	1,412	1,412	-	-	-
Total	\$ 1,774,456	\$ 1,774,456	\$ -	\$ -	\$ -
Percent of Securities Lending Portfolio	100.00 %	100.00 %	- %	- %	- %

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
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The lengths of investment maturities (in years) of the collateral for Securities Lending held under the variable-return funds at June 30, 2017 and 2016 are as follows (in thousands):

Years to Maturity

Investment Type (in thousands) June 30, 2017	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
Government	\$ 43,264	\$ 6,007	\$ 17,249	\$ 10,856	\$ 9,152
Corporate	-	-	-	-	-
Short-term:					
Repurchase agreements	145,161	145,161	-	-	-
Reversal purchase agreements	-	-	-	-	-
Certificates of deposit	-	-	-	-	-
Commercial paper	-	-	-	-	-
Variable rate demand notes	-	-	-	-	-
U.S. treasury	-	-	-	-	-
U.S. agency	-	-	-	-	-
Time deposit	-	-	-	-	-
Uninvested	-	-	-	-	-
Totals	\$ 188,425	\$ 151,168	\$ 17,249	\$ 10,856	\$ 9,152
Percent of securities lending portfolio	<u>100.00 %</u>	<u>80.23 %</u>	<u>9.15 %</u>	<u>5.76 %</u>	<u>4.86 %</u>

Investment Type (in thousands) June 30, 2016	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
Government	\$ 102,928	\$ 26,913	\$ 33,418	\$ 23,393	\$ 19,204
Corporate	-	-	-	-	-
Short-term:					
Repurchase agreements	263,853	263,853	-	-	-
Reversal purchase agreements	-	-	-	-	-
Certificates of deposit	-	-	-	-	-
Commercial paper	-	-	-	-	-
Variable rate demand notes	-	-	-	-	-
U.S. treasury	-	-	-	-	-
U.S. agency	-	-	-	-	-
Time deposit	-	-	-	-	-
Uninvested	47	47	-	-	-
Totals	\$ 366,828	\$ 290,813	\$ 33,418	\$ 23,393	\$ 19,204
Percent of securities lending portfolio	<u>100.00 %</u>	<u>79.28 %</u>	<u>9.11 %</u>	<u>6.38 %</u>	<u>5.23 %</u>

Rate of Return — For the years ended June 30, 2017 and 2016, the annual money-weighted rate of return on the TRSNYC Pension Fund was 12.50% and 1.66%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense adjusted for the changing amounts actually invested.

In Fiscal Year 2015, the 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.

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
NOTES TO COMBINING FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 2017 AND 2016

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. The System has the following recurring fair value measurements as of June 30, 2017 and June 30, 2016:

GASB 72 Disclosure (Pension Fund)
(In thousands)

	2017			Total
	Level One	Level Two	Level Three	
INVESTMENTS — At fair value				
Short-term investments:				
Commercial paper	\$ -	\$ 230,093	\$ -	\$ 230,093
Short-term investment fund	-	557,945	-	557,945
Discount notes	-	282,248	-	282,248
Debt securities:				
U.S. Government	-	7,947,669	-	7,947,669
Corporate and other	-	7,588,353	164,871	7,753,224
Equity securities	21,084,444	135	1,423	21,086,002
Alternative investments	-	-	7,523,885	7,523,885
Collective trust funds:				
International equity	15,407,833	315,906	10,410	15,734,149
Mortgage debt security	-	95,737	399,803	495,540
Treasury inflation protected securities	-	2,682,432	-	2,682,432
Fixed income	595	195,193	1,595,245	1,791,033
Collateral from securities lending	-	1,530,310	-	1,530,310
	<u>\$ 36,492,872</u>	<u>\$ 21,426,021</u>	<u>\$ 9,695,637</u>	<u>\$ 67,614,530</u>
Total Pension Fund investments				

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
NOTES TO COMBINING FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 2017 AND 2016

GASB 72 Disclosure (Pension Fund)
(In thousands)

	2016			
	Level One	Level Two	Level Three	Total
INVESTMENTS — At fair value				
Short-term investments:				
Commercial paper	\$ -	\$ 1,070,574	\$ -	\$ 1,070,574
Short-term investment fund	-	1,025,446	-	1,025,446
U.S. treasury bills and agencies	-	-	-	-
Discount notes	-	83,294	-	83,294
Debt securities:				
U.S. government and agency	-	5,924,318	-	5,924,318
Corporate and other	-	8,559,905	170,786	8,730,691
Equity securities	22,284,584	-	-	22,284,584
Alternative investments	-	-	6,872,850	6,872,850
Collective trust funds:				
International equity	11,014,289	492,860	-	11,507,149
Fixed income	9,873	233,348	1,448,356	1,691,577
Domestic equity	-	-	-	-
Mortgage debt security	-	97,606	387,585	485,191
Treasury inflation protected securities	-	2,399,270	-	2,399,270
Collateral from securities lending	-	1,774,456	-	1,774,456
	<u>\$ 33,308,746</u>	<u>\$ 21,661,077</u>	<u>\$ 8,879,577</u>	<u>\$ 63,849,400</u>
Total Pension Fund investments	<u>\$ 33,308,746</u>	<u>\$ 21,661,077</u>	<u>\$ 8,879,577</u>	<u>\$ 63,849,400</u>

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 hierarchy are securities whose stated market price is unobservable by the marketplace; many of these securities are priced by the issuers or industry groups for these securities. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from various pricing sources by our custodian bank.

Alternative Investments

Alternative investments include Private Equity, Real Estate, Opportunistic Fixed Income, and Infrastructure Investments. These are investments for which exchange quotations are not readily available and are valued at estimated fair value, as determined in good faith by the General Partner (GP). These investments are initially valued at cost, with subsequent adjustments that reflect third-party transactions, financial operating results, and other factors deemed relevant by the GP. The assets in our Alternative Investment program are classified as Level 3 assets. A more detailed explanation of the Level 3 valuation methodologies follows:

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

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
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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 redemption restrictions have a material effect on the fair value of the portfolio investments.

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Variable-Return Funds

GASB 72 Disclosure

As of June 30, 2017

(in thousands)

	2017			Total
	Level One	Level Two	Level Three	
Diversified Equity Fund:				
Short-term investments	\$ -	\$ 153,518	\$ -	\$ 153,518
Equity securities	11,620,340	2,389,568	99	14,010,007
Debt Securities	-	245,983	1,947	247,930
Bond Fund:				
Short-term investments	-	16,219	-	16,219
Debt Securities	-	377,917	-	377,917
International Equity Fund:				
Short-term investments	-	543	-	543
International equity	107,420	20,785	1	128,206
Inflation Protection Fund:				
Short-term investments	-	263	-	263
Equity securities	53,849	-	-	53,849
Socially Responsive Equity Fund:				
Short-term investments	-	8,990	-	8,990
Equity securities	153,776	-	-	153,776
International equity	7,004	-	-	7,004
Collateral from securities lending (Variable-Return Funds)	-	188,425	-	188,425
Total Variable-Return Funds Investments	<u>\$ 11,942,389</u>	<u>\$ 3,402,211</u>	<u>\$ 2,047</u>	<u>\$ 15,346,647</u>

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
NOTES TO COMBINING FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 2017 AND 2016

Variable-Return Funds

GASB 72 Disclosure

As of June 30, 2016

(in thousands)

	2016			
	Level One	Level Two	Level Three	Total
Diversified Equity Fund:				
Short-term investments	\$ -	\$ 127,990	\$ -	\$ 127,990
Equity securities	8,238,607	1,096,641	447	9,335,695
Debt Securities	-	218,762	-	218,762
Bond Fund:				
Short-term investments	-	5,723	-	5,723
Debt Securities	-	323,117	-	323,117
International Equity Fund:				
Short-term investments	-	934	-	934
International equity	89,751	10,201	5	99,957
Inflation Protection Fund:				
Short-term investments	-	131	-	131
Equity securities	44,363	-	-	44,363
Socially Responsive Equity Fund:				
Short-term investments	-	367	-	367
Equity securities	118,415	-	-	118,415
International equity	2,443	-	-	2,443
Collateral from securities lending (Variable-Return Funds)	-	366,828	-	366,828
Total Variable-Return Funds Investments	\$ 8,493,579	\$ 2,150,694	\$ 452	\$ 10,644,725

Equity securities classified in Level 1 of the fair value hierarchy (above) are valued using prices quoted in active markets for those securities.

Equity and debt securities classified in Level 2 of the fair value hierarchy (above) are valued using a matrix pricing technique. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices.

Securities are classified in Level 3 (above) when inputs to the valuation methodology are unobservable and significant to the fair value measurement. Instruments are often based on internally developed models of the custodian's, in which there are few, if any, external observations. Generally, Level 3 includes distressed securities or alternative investments.

4. QPP CONTRIBUTIONS

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

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
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YEARS ENDED JUNE 30, 2017 AND 2016

Member Contributions — Members who joined prior to July 27, 1976 contribute by salary deductions on the basis of a normal rate of contribution that is assigned by the QPP at membership. This member normal rate, which is dependent upon age, years of prior service, and actuarial tables in effect at the time of membership, is determined so as to provide approximately one-fourth of the service retirement allowance at the earliest age for service retirement. For age at membership equal to 20 and with no prior service, the member normal rate is equal to 4.6%. For age at membership equal to 40 with no prior service, the member normal rate is equal to 3.6%.

Members who joined on or after July 27, 1976 are mandated to contribute 3% of salary. Effective October 1, 2000, these members are not required to make contributions after the tenth anniversary of their membership date or completion of ten years of credited service, whichever is earlier.

Effective February 27, 2008, active members were eligible to enroll in a 55 retirement age minimum and 25 credited years of service retirement option ("55/25 retirement option") enabling them to eliminate any age-reduction factor in their retirement allowance. Those choosing the age 55/25 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. Members joining after February 27, 2008 are automatically enrolled in a 55 retirement age minimum and 27 credited years of service retirement program ("55/27 retirement program"). These members are required to make additional pension contributions of 1.85% of salary until they have accumulated 27 years of credited service. Chapter 504 of the Laws of 2009 ("Chapter 504/09") provides that individuals joining after December 10, 2009, who participate in the 55/27 retirement program, are required to make pension contributions of 4.85% of salary until they have 27 years of credited service and contributions of 1.85% of salary thereafter.

Also, under Chapter 504/09, all members represented by the UFT who join the QPP on and after December 10, 2009 will become vested after ten years of credited service.

Under Chapter 18 of the Laws of 2012, members who join on and after April 1, 2012 are automatically enrolled in Tier VI. These members are required to make contributions ranging from 3.0% (based on a salary of \$45,000 and less) to 6.0% (based on a salary above \$100,000) until separation from service or retirement.

Employer Contributions — Statutorily-required contributions ("Statutory Contributions") to the QPP, determined by the City's Chief Actuary of the Office of the Actuary (the "Actuary") in accordance with the State statutes and City laws, are generally funded by the Employers within the appropriate fiscal year. These contributions consider any expected deficiencies between the statutory rates of interest on TDA Program deposits in the Fixed Return Fund and on statutory rates of interest credited to QPP members and actual investment earnings on such funds. The Statutory Contribution for the year ended June 30, 2017, based on an actuarial valuation as of June 30, 2015, was \$3,888 million, and the Statutory Contribution for the year ended June 30, 2016, based on an actuarial valuation as of June 30, 2014, was \$3,703 million. The Statutory Contributions for Fiscal Years 2017 and 2016 were equal to the Actuarial Contributions. Refer to the Schedule of Employers' Contributions in the accompanying required supplementary information for more information on the actuarial methods and assumptions applied by the Actuary to determine the Statutory Contributions.

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
NOTES TO COMBINING FINANCIAL STATEMENTS
YEARS ENDED JUNE 30, 2017 AND 2016**

5. QPP NET PENSION LIABILITY

The components of the net pension liability of the Employers at June 30, 2017 and 2016 were as follows:

	(in millions)	
	2017	2016
Total pension liability	\$73,323	\$70,001
Fiduciary net position *	\$50,096	\$43,630
Employers' net pension liability	\$23,227	\$26,371
Fiduciary net position as a percentage of the total pension liability	68.3%	62.3%

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

Actuarial Methods and Assumptions

The total pension liability as of June 30, 2017 and 2016 were determined by actuarial valuations as of June 30, 2015 and June 30, 2014, 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 and the predecessor QPP's pensioners. The mortality tables for beneficiaries were developed from an experience review.

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

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 allocations and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

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YEARS ENDED JUNE 30, 2017 AND 2016

Asset Class	Target Asset Allocation	Long-Term Expected Real Rate of Return
U.S. Public Markets Equities	29.00%	5.70%
International Public Markets Equities	12.00%	6.10%
Emerging Public Markets Equities	9.00%	7.60%
Private Market Equities	6.00%	8.10%
Fixed Income (Core, TIPS, High Yield, Opportunistic, Convertibles)	33.00%	3.00%
Alternatives (Real Assets, Hedge Funds)	11.00%	4.70%
Total	100.00%	

Discount Rate

The discount rate used to measure the total pension liability was 7.0%. The projections 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 one-percentage point lower (6.0%) or one-percentage point higher (8.0%) than the current rate:

(in thousands)	1% Decrease (6%)	Discount Rate (7%)	1% Increase (8%)
Employers' Net Pension Liability — June 30, 2017	\$ 30,901,066	\$ 23,227,707	\$ 16,811,033

6. MEMBER LOANS

The balance of member loans receivable for the QPP at June 30, 2017 and 2016 is \$298.1 million and \$275.7 million, respectively. QPP members are permitted to borrow up to 75% of their own contributions, including accumulated interest. Outstanding loan balances are insured in order to protect members' balances in case of death. In return for insurance coverage, Tiers III, IV, and VI members supplement their loan interest payments of 7.0% APR with a 0.2% ("APR") insurance fee. Tiers I and II members pay loan interest payments of 6.0% APR and are not subject to the insurance fee. Upon termination of employment before retirement, certain QPP members are entitled to refunds of their own contributions, including accumulated interest, less any loans outstanding.

The balance of member loans receivable for the TDA Program at June 30, 2017 and 2016 is \$376.0 million and \$367.9 million, respectively. Members of the TDA Program are permitted to borrow up to

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
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YEARS ENDED JUNE 30, 2017 AND 2016

75% of their own contributions, including accumulated interest. TDA Program members supplement their member loans' interest payments (7.0% for UFT, 8.25% for all other members) with a 0.3% ("APR") insurance fee. This fee funds a reserve, which is used to repay members' loan balances outstanding in case of death. Upon termination of employment before retirement, members are entitled to refunds of their own contributions, including accumulated interest, less any loans outstanding.

7. RELATED PARTIES

The Comptroller has been appointed by law as custodian for the assets of the QPP and TDA Program with discretionary authority. Securities are held by certain banks under custodial agreements with the Comptroller. The Comptroller, the Financial Information Services Agency ("FISA"), and the Office of Payroll Administration ("OPA") provide cash receipt and cash disbursement services and financial services; the Office of Management and Budget ("OMB") provides budget review services; and the City's Corporation Counsel provides legal services to TRS. The cost of providing such services amounted to \$10.9 million and \$7.7 million in Fiscal Years 2017 and 2016, respectively. In addition, actuarial services are provided to TRS by the New York City Office of the Actuary. The City also provides other administrative services.

8. ADMINISTRATIVE EXPENSES

Chapter 593 of the Laws of 1996 ("Chapter 593/96"), effective July 1, 1996, authorized the Board of Trustees to draw upon its assets to pay the administrative expenses incurred by TRS. Prior to Fiscal Year 1997, The City and Variable Annuity Programs had paid all administrative expenses. After Chapter 593/96, administrative expenses incurred by the System, net of loan service charge revenue reserves, is attributed to the QPP and the variable-return funds of the TDA Program. The cost sharing is weighted and depends on an assessment of the prior year's administrative activities. Total TRS administrative expenses, attributable to the QPP and TDA Program, amounted to \$93.8 million and \$92.0 million for Fiscal Years 2017 and 2016, respectively. In addition to TRS' administrative expenses, other City agencies attribute the cost for services rendered by them during the fiscal year; see note 7 above.

9. CONTINGENT LIABILITIES AND OTHER MATTERS

Contingent Liabilities — The QPP and TDA Program have certain contingent liabilities. TRS management, on advice from legal counsel, believes that such proceedings and contingencies will not have a material effect on the fiduciary net position of the QPP or cause changes in its fiduciary net position. Under the State statutes and City laws that govern the functioning of the QPP, increases in the obligation of the QPP to members and beneficiaries ordinarily result in increases in the obligations of the Employers to the QPP.

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 ("QPP Net Pension Liability") 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. The most recent reports were issued by Segal and Hay in February 2012 and by Gabriel, Roeder, Smith & Company (GRS) in October 2015. A current study is being undertaken by Bolton Partners.

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
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YEARS ENDED JUNE 30, 2017 AND 2016

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

Chapter 18 of the Laws of 2012 ("Chapter 18/12") placed certain limitations on the Tier III and Tier IV benefits available to participants hired on and after April 1, 2012 in most New York State PERS, including TRS. These changes are sometimes referred to as Tier VI.

Chapter 3 of the Laws of 2013 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 expenses, continued it and other interest rates until June 30, 2016, and defined the amortization of Unfunded Actuarial Accrued Liabilities ("UAAL").

Chapter 489 of the Laws of 2013 ("Chapter 489/13") 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 who are otherwise eligible to receive retirement service credit for such service. Such members would not be required to make member contributions to receive such credit.

Chapter 510 of the Laws of 2015 clarifies for Tier VI 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 have 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.

Investment Fund Change —

As of January 1, 2018, following notice to participants in Fiscal Year 2017, the System's Bond Fund will become the Balanced Fund. The Balanced Fund will be a moderately conservative balanced investment option that includes exposure to both stocks and bonds.

* * * * *

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS
(In Thousands)**

SCHEDULE 1

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability:				
Service cost	\$ 1,386,674	\$ 1,274,308	\$ 1,223,158	\$ 1,205,662
Interest	5,147,042	4,131,177	4,027,139	4,407,702
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	1,008,249	1,229,501	1,507,964	-
Changes of assumptions	-	2,432,878	-	-
Benefit payments/withdrawals	(4,219,312)	(4,107,455)	(4,024,272)	(3,818,248)
Net change in total pension liability	3,322,653	4,960,409	2,733,989	1,795,116
Total pension liability – beginning	70,000,777	65,040,368	62,306,379	60,511,262
Total pension liability – ending (a)	<u>73,323,430</u>	<u>70,000,777</u>	<u>65,040,368</u>	<u>62,306,378</u>
Plan fiduciary net position:				
Contributions - Employer	3,888,399	3,760,714	3,325,528	3,054,424
Contributions - Other Employer*	57,369	n/a	n/a	n/a
Contributions - Employee	180,076	173,696	158,590	154,962
Net investment income	8,133,280	960,267	1,611,929	9,435,906
Benefit payments/withdrawals	(4,219,312)	(4,107,455)	(4,024,272)	(3,818,248)
Payment of Interest on TDA Fixed Funds	(1,466,615)	(1,354,207)	(1,248,988)	(1,147,923)
Administrative expenses	(60,790)	(59,367)	(58,391)	(46,042)
Other Changes	(46,229)	1,233	329	404
Net change in plan fiduciary net position	6,466,178	(625,119)	(235,275)	7,633,483
Plan fiduciary net position – beginning	43,629,545	44,254,664	44,489,939	36,856,456
Plan fiduciary net position – ending (b)**	<u>50,095,723</u>	<u>43,629,545</u>	<u>44,254,664</u>	<u>44,489,939</u>
Employer's net pension liability – ending (a)-(b)	<u>\$ 23,227,707</u>	<u>\$ 26,371,232</u>	<u>\$ 20,785,704</u>	<u>\$ 17,816,440</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>68.30%</u>	<u>62.30%</u>	<u>68.04%</u>	<u>71.41%</u>
Covered Employee Payroll	<u>\$ 8,818,537</u>	<u>\$ 8,256,100</u>	<u>\$ 8,074,522</u>	<u>\$ 7,996,942</u>
TRS' Net Pension Liability as a Percentage of covered-employee payroll	<u>263.40%</u>	<u>319.42%</u>	<u>257.42%</u>	<u>222.79%</u>

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

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

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

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF EMPLOYERS' CONTRIBUTIONS**

(In Thousands)

SCHEDULE 2

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>
Actuarially determined contribution	\$ 3,888,399	\$ 3,702,569	\$ 3,270,007	\$ 2,998,694	\$ 2,855,640	\$ 2,673,078	\$ 2,468,973	\$ 2,484,074	\$ 2,223,644	\$ 1,916,520
Contributions in relation to the actuarially determined contribution	<u>3,888,399</u>	<u>3,702,569</u>	<u>3,270,007</u>	<u>2,998,694</u>	<u>2,855,640</u>	<u>2,673,078</u>	<u>2,468,973</u>	<u>2,484,074</u>	<u>2,223,644</u>	<u>1,916,520</u>
Contribution deficiency (excess)	<u>\$ -</u>									
Covered-employee payroll	\$ 8,818,537	\$ 8,256,100	\$ 8,074,522	\$ 7,996,942	\$ 7,833,329	\$ 7,920,935	\$ 7,935,248	\$ 7,859,999	\$ 7,221,499	\$ 6,998,174
Contributions as a percentage of covered-employee payroll ¹	44.093%	44.846%	40.498%	37.498%	36.455%	33.747%	31.114%	31.604%	30.792%	27.386%

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

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 2017 contributions were determined using an actuarial valuation as of June 30, 2015). The methods and assumptions used to determine the actuarially determined contributions are as follows:

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF EMPLOYERS' CONTRIBUTIONS**

(In Thousands)

SCHEDULE 2 (CONTINUED)

Valuation Dates	June 30, 2015	June 30, 2014	June 30, 2013	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009- June 30, 2006
Actuarial cost method	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	NA ²
Post-2010 Unfunded	Level Dollar	Level Dollar	Level Dollar	Level Dollar	Level Dollar	Level Dollar	NA ²
Remaining amortization period:							
Initial Unfunded	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)	21 years (closed)	22 years (closed)	NA ²
2010 ERI	1 year (closed)	2 years (closed)	3 years (closed)	4 years (closed)	5 years (closed)	NA	NA ²
2011 Actuarial Gain/Loss	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA ²
2012 Actuarial Gain/Loss	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA ²
2013 Actuarial Gain/Loss	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA	NA ²
2014 Actuarial Gain/Loss	14 years (closed)	15 years (closed)	NA	NA	NA	NA	NA ²
2015 Actuarial Gain/Loss	15 years (closed)	NA	NA	NA	NA	NA	NA ²
Actuarial Asset Valuation (AAV) Method	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 1999.

See Independent Auditors' report.

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF EMPLOYERS' CONTRIBUTIONS**

(In Thousands)

SCHEDULE 2 (CONTINUED)

Valuation Dates	June 30, 2015	June 30, 2014	June 30, 2013	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009- June 30, 2006
Actuarial assumptions:							
Assumed rate of return ³	net of investment expenses	of investment expenses	gross of investment expenses	gross of investment expenses ³			
Post-retirement mortality	Tables adopted by Retirement Board						
Active service: withdrawal, death, disability, service retirement	Tables adopted by Retirement Board during Fiscal Year 2012	Tables adopted by Retirement Board during Fiscal Year 2012	Tables adopted by Retirement Board during Fiscal Year 2012	Tables adopted by Retirement Board during Fiscal Year 2012	Tables adopted by Retirement Board during Fiscal Year 2012	Tables adopted by Retirement Board during Fiscal Year 2006	Tables adopted by Retirement Board during Fiscal Year 2000
Salary increases ³	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year. ³
Cost-of-Living Adjustments ³	1.5% per annum for Auto Cola. 2.5% per annum for Escalation.	1.5% per annum for Auto Cola. 2.5% per annum for Escalation.	1.5% per annum for Auto Cola. 2.5% per annum for Escalation.	1.5% per annum for Auto Cola. 2.5% per annum for Escalation.	1.5% per annum for Auto Cola. 2.5% per annum for Escalation.	1.5% per annum for Auto Cola. 2.5% per annum for Escalation.	1.3% per annum ³

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

See Independent Auditors' report.

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

SCHEDULE 3

The following table displays the annual money-weighted rate of return, net of investment expense, for TRSNYC Pension Fund investments for each of the past four fiscal years:

Fiscal Year-Ended	Money-weighted Rate of Return
June 30, 2017	12.50%
June 30, 2016	1.66%
June 30, 2015	2.81%
June 30, 2014	17.60%

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