

Teachers' Retirement System of the City of New York



A Fiduciary Fund of The City of New York

**Combining Financial Statements
and Supplementary Information
(Together with Report of Independent Certified
Public Accountants)**

For the Years Ended June 30, 2022 and 2021

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GRANT THORNTON LLP

757 Third Ave., 9th Floor
New York, NY 10017-2013

D +1 212 599 0100

F +1 212 370 4520

REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

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

Opinion

We have audited the combining financial statements of Teachers' Retirement System of the City of New York Qualified Pension Plan and the Teachers' Retirement System of the City of New York Tax-Deferred Annuity Program, which collectively comprise the Teachers' Retirement System of the City of New York (the "System"), which comprise the combining statements of fiduciary net position as of June 30, 2022 and 2021 and the related combining statements of changes in fiduciary net position for the years then ended, and the related notes to combining financial statements, which collectively comprise the System's basic combining financial statements.

In our opinion, the accompanying combining financial statements present fairly, in all material respects, the combining fiduciary net position of the System as of June 30, 2022 and 2021, and the changes in the combining fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for opinion

We conducted our audits of the financial statements in accordance with auditing standards generally accepted in the United States of America (US GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the System and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of management for the financial statements

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

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Plan's ability to continue as a going concern for one year after the date the financial statements are available to be issued.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the combining financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the combining financial statements.

In performing an audit in accordance with US GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the combining financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 System's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the combining financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the System's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required supplementary information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, schedule 1 - schedule of changes in the employer's net pension liability and related ratios for each of the nine years in the period ended June 30, 2022, schedule 2 - schedules of employer contributions for each of the ten years in the period ended June 30, 2022, and schedule 3 - schedule of investment returns for each of the nine years in the period ended June 30, 2022, be presented to supplement the basic combining financial statements. Such information is the responsibility of management and, although not a required part of the basic combining financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic combining financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with US GAAS. These limited

procedures 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.

Grant Thornton LLP

New York, New York
October 26, 2022

Teachers' Retirement System of the City of New York
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

June 30, 2022 and 2021

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, 2022 and 2021. 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 New York City ("The City" or "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 COMBINING FINANCIAL STATEMENTS

The following discussion and analysis is intended to serve as an introduction to the System's combining financial statements. The combining financial statements, which are prepared in conformity with Generally Accepted Accounting Principles ("GAAP") as prescribed by Government Accounting Standards Board ("GASB"), include the financial statements of the QPP and the TDA Programs and 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 combining financial statements. The notes present information about the System's accounting policies, significant account balances and activities, material risks, obligations, contingencies, and subsequent events, if any.
- **Required Supplementary Information ("RSI") (Unaudited)** – as required by GASB, the RSI includes the management discussion and analysis (this section) and information presented following the notes to combining financial statements.

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

HIGHLIGHTS AND RECENT DEVELOPMENTS

Employer Information

Employers that participate in TRS include the New York City Department of Education (“DOE”), 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 2022 QPP summary information of the employer groups.

Contributions Employers and Contributions Members

	<u>Members Active</u>	<u>Contribution Employer</u>	<u>Contribution Member</u>	<u>Members Retired</u>	<u>Pension Payments</u>
DOE	116,000	\$ 3.2 billion	\$ 257 million	90,000	\$ 4.6 billion
CUNY	8,000	\$ 143 million	\$ 14.9 million	2,700	\$ 144 million
Charter Schools	500	\$ 6.6 million	\$ 1.8 million	Less than 50	\$ 2.5 million

United Federation of Teachers (“UFT”) Contract

Negotiation sessions between the DOE and the UFT, the primary union for the DOE's employees, began on October 13, 2022. The most recent collective bargaining agreement between the DOE and the UFT was ratified in October 2018 and ran from February 14, 2019 to September 13, 2022. In addition to workplace improvements, the 2018 agreement included wage increases and upward adjustments to starting and top salary amounts. Contractual wages impact employer contributions, member contributions, and payments to retirees.

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

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 \$64.0 billion, \$78.3 billion, and \$59.3 billion as of June 30, 2022, 2021, and 2020, respectively. The System's employer contributions amounted to \$3.4 billion, \$3.2 billion, and \$3.7 billion for Fiscal Years 2022, 2021, and 2020, respectively. The QPP's benefit payments totaled \$4.9 billion, \$4.7 billion, and \$4.6 billion for Fiscal Years 2022, 2021, and 2020, respectively. Below is a summary of the QPP's net position and changes in net position.

QPP Fiduciary Net Position

June 30, 2022, 2021, and 2020

(In thousands)

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Cash	\$ 86,489	\$ 74,742	\$ 48,488
Receivables for investments sold	1,544,209	3,560,628	1,889,299
Receivables for accrued interest and dividends	339,801	304,145	289,845
Member loan receivables	301,958	310,380	323,805
Investments, at fair value	96,153,573	110,210,315	87,842,740
Collateral from securities lending	828,300	1,242,351	1,391,240
Other assets	<u>166,039</u>	<u>46,194</u>	<u>63,899</u>
Total assets	<u>99,420,369</u>	<u>115,748,755</u>	<u>91,849,316</u>
Accounts payable	308,685	349,820	299,648
Payable for investments purchased	2,230,369	5,723,528	3,096,888
Accrued benefits payable	44,285	49,585	88,957
Investments due to TDA Program	31,868,042	30,036,173	27,653,633
Payable for securities lending	828,300	1,242,351	1,391,240
Other liabilities	<u>131,260</u>	<u>-</u>	<u>-</u>
Total liabilities	<u>35,410,941</u>	<u>37,401,457</u>	<u>32,530,366</u>
Net position restricted for benefits	<u>\$ 64,009,428</u>	<u>\$ 78,347,298</u>	<u>\$ 59,318,950</u>

Cash balances amounted to \$86.5 million at June 30, 2022, an increase of \$11.7 million (15.7%) from June 30, 2021. Cash balances amounted to \$74.7 million at June 30, 2021, an increase of \$26.3 million (54.2%) from June 30, 2020. Cash balances consist of advances to 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. As of June 30, 2022, the largest cash balances consisted of the International and Private Equity investment manager, with \$49.8 million and \$20.9 million, respectively. Large cash balances held by an investment manager are due to a recent sale or the general investment cycle. For example, Private Equity's investment cycle generally begins with cash from assets sold during the month and ends with subsequent purchases following month-end.

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

Receivables for investment securities sold amounted to \$1.5 billion at June 30, 2022, a decrease of \$2.0 billion (-56.6%) from June 30, 2021. Receivables for investment securities sold amounted to \$3.6 billion at June 30, 2021, an increase of \$1.7 billion (88.5%) from June 30, 2020. 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 changes resulted primarily from timing differences between trade and settlement dates occurring around fiscal year-end. Trades typically do not settle until a few days after the trade date.

Receivables for accrued interest and dividends amounted to \$339.8 million as of June 30, 2022, an increase of \$35.7 million (11.7%) from June 30, 2021. Receivables for accrued interest and dividends amounted to \$304.1 million as of June 30, 2021, an increase of \$14.3 million (4.9%) from June 30, 2020. 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, 2022, member loan receivables amounted to \$302.0 million, a decrease of \$8.4 million (-2.7%) from the previous year. At June 30, 2021, member loan receivables amounted to \$310.4 million, a decrease of \$13.4 million (-4.2 %) from the previous year.

Investments at June 30, 2022 were \$96.2 billion, a decrease of \$14.1 billion (-12.8%) from June 30, 2021. Investments at June 30, 2021 were \$110.2 billion, an increase of \$22.4 billion (25.5%) from June 30, 2020. As of June 30, 2022, the QPP's total investment portfolio, including both the TRSNYC Pension and Variable-Return Funds, consisted of 46% equity investments, 35% fixed income securities and 19% alternative investments. The alternative investments consisted of private equity (8%), private real estate investments (6%), opportunistic-fixed income (3%), and infrastructure securities (2%). The \$14.1 billion annual decrease in investments is the result of \$10.9 billion in net investment loss, a \$1.5 billion net decrease in the year-over-year payables for investment securities purchased and investment securities sold and \$1.3 billion of QPP payments in excess of QPP contributions. More generally, investments as of June 30, 2022, in comparison with investment values as of June 30, 2021, reflect the equity and fixed income markets' annual returns. For the year ended June 30, 2022, the Russell 3000 Index, a broad measure of U.S. equity markets, returned (-13.9%). The Morgan Stanley Capital International ("MSCI") World Index Custom Benchmark excluding the United States returned (-17.73%). The NYC Custom Structured Index returned (-9.75%). The Dow Jones U.S. Select Real Estate Securities Index returned (-6.4%). For the year ended June 30, 2021, the Russell 3000 Index, a broad measure of U.S. equity markets, returned 44.2%. The Morgan Stanley Capital International ("MSCI") World Index Custom Benchmark excluding the United States returned 34.82%. The NYC Custom Structured Index returned (-2.88%). The Dow Jones U.S. Select Real Estate Securities Index returned 40.0%.

Other assets at June 30, 2022 totaled \$166.0 million, a \$119.8 million (259.4%) increase from June 30, 2021. The year-over-year increase in other assets, as of June 30, 2022, was primarily due to recognition of \$127.8 million lease assets less an \$8.0 million decrease in amounts due from the TDA Program. Other assets at June 30, 2021 totaled \$46.2 million, a \$17.7 million (-27.7%) decrease from June 30, 2020. The year-over-year decrease in other assets, as of June 30, 2021, was primarily due to a \$23.2 million decrease in amounts due from the TDA Program, less a \$9.1 million increase in amounts due from Corpus Expenses.

Accounts payable at June 30, 2022 amounted to \$308.7 million, a \$41.1 million (-11.8%) decrease from June 30, 2021. Accounts payable as of June 30, 2022 consisted of balances due to depositories (49.7%), reserve for expenses (18.0%), accrued investment expenses (15.1%), unclaimed funds (8.2%), and other payables (9.0%). Accounts payable at June 30, 2021 amounted to \$349.8 million, a \$50.2 million (16.7%) increase from June 30, 2020. Accounts payable as of June 30, 2021 consisted of balances due to depositories (44.6%), reserve for expenses (18.4%), accrued investment expenses (16.1%), unclaimed funds (7.3%), and other payables (13.6%).

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

Payables for investment securities purchased at June 30, 2022 amounted to \$2.2 billion, a \$3.5 billion (-61.0%) decrease from June 30, 2021. Payables for investment securities purchased at June 30, 2021 amounted to \$5.7 billion, a \$2.6 billion (84.8%) increase from June 30, 2020. 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 investment securities sold (discussed earlier).

Accrued benefits payable at June 30, 2022 amounted to \$44.3 million, a \$5.3 million (-10.7%) decrease from June 30, 2021. The \$5.3 million decrease is primarily attributed to a decrease of pending death benefits due to beneficiaries at year-end. Accrued benefits payable at June 30, 2021 amounted to \$49.6 million, a \$39.4 million (-44.3%) decrease from June 30, 2020.

Investments due to the TDA Program reflect the TDA Program's share of assets of the TRSNYC 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 TRSNYC 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 members). See Note 2 for a full description of the TDA Fixed-Return Fund investment program.

Other liabilities represent amounts due to vendors for the underlying leased assets measured at the present value of the future payments. At June 30, 2022, other liabilities amounted to \$131.3 million.

QPP Changes in Fiduciary Net Position

Years ended June 30, 2022, 2021, and 2020

(In thousands)

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Additions:			
Member contributions	\$ 273,686	\$ 247,751	\$ 226,920
Employer contributions	3,364,379	3,193,270	3,652,570
Net receipts from other retirement systems	(2,993)	(5,550)	(2,798)
Net securities lending income	4,932	6,396	10,510
Net investment income	<u>(10,858,794)</u>	<u>22,356,592</u>	<u>3,900,677</u>
Total additions	<u>(7,218,790)</u>	<u>25,798,459</u>	<u>7,787,879</u>
Deductions:			
Administrative expenses	71,490	68,100	64,532
TDA Rebalance	(2,537)	4,175	(42,651)
Benefits payments and withdrawals	4,909,488	4,699,448	4,591,086
Payment of statutory interest to TDA Program	<u>2,140,639</u>	<u>1,998,388</u>	<u>1,846,173</u>
Total deductions	<u>7,119,080</u>	<u>6,770,111</u>	<u>6,459,140</u>
Net (decrease) increase in net position	(14,337,870)	19,028,348	1,328,739
Net position restricted for benefits			
Beginning of year	<u>78,347,298</u>	<u>59,318,950</u>	<u>57,990,211</u>
End of year	<u>\$ 64,009,428</u>	<u>\$ 78,347,298</u>	<u>\$ 59,318,950</u>

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

TRS received \$273.7 million in member contributions in Fiscal Year 2022, a \$25.9 million (10.5%) increase from Fiscal Year 2021. TRS received \$247.8 million in member contributions in Fiscal Year 2021, a \$20.8 million (9.2%) increase from Fiscal Year 2020. The \$25.9 million increase in Fiscal Year 2022 and the \$20.8 million increase in Fiscal Year 2021 were both primarily due to UFT salary increases and a larger active Tier VI membership.

Employer contributions during Fiscal Year 2022, including other employer contributions, were \$3.4 billion, a \$171.1 million (5.4%) increase from Fiscal Year 2021. Employer contributions during Fiscal Year 2021, including other employer contributions, were \$3.2 billion, a \$459.3 million (-12.6%) decrease from Fiscal Year 2020. The Fiscal Year 2022 increase in employer contributions was primarily due to changes in actuarial methods. (See Note 5.) The June 30, 2020 (Lag) actuarial valuation and June 30, 2019 (Lag) actuarial valuation were used to determine Fiscal Year 2022 and 2021 employer contributions, respectively.

The QPP's net investment income for Fiscal Year 2022 was -\$10.9 billion, a \$33.2 billion (loss) decrease from Fiscal Year 2021. The QPP's net investment income of -\$10.9 billion consisted of \$2.7 billion in dividend and interest income less a net loss of \$13.0 billion on the appreciation in fair value of the QPP's investments and \$535.3 million in investment expenses. Net investment income (loss) for the QPP portion of the TRSNYC Pension Fund, QPP portion of the Diversified Equity Fund, QPP portion of the Balanced Fund, QPP portion of the International Equity Fund, QPP portion of the Sustainable Equity Fund, QPP portion of the U.S. Equity Index Fund, and QPP portion of the International Equity Index Fund totaled -\$9.8 billion, -\$1.1 billion, -\$3.4 million, -\$1.9 million, -\$3.0 million, -\$546.4 thousand, and -\$25.0 thousand, respectively. The QPP's net investment income for Fiscal Year 2021 was \$22.4 billion, a \$18.5 billion (473.1%) increase from Fiscal Year 2020. The QPP's net investment income of \$22.4 billion consisted of \$2.3 billion in dividend and interest income plus a net gain of \$20.5 billion on the appreciation in fair value of the QPP's investments less \$405.7 million in 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 Balanced Fund, QPP portion of the International Equity Fund, QPP portion of the Sustainable Equity Fund, QPP portion of the U.S. Equity Index Fund, and QPP portion of the International Equity Index Fund totaled \$20.1 billion, \$2.3 billion, \$7.7 million, \$3.6 million, \$5.0 million, \$1.5 million, and \$79.2 thousand, respectively.

For Fiscal Year 2022, 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 \$5.3 billion less 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. For Fiscal Year 2021, 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 \$4.3 billion 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. The table below displays the TDA Program's impact on the QPP's Contingent Reserve Fund of Employer's Contributions for Fiscal Years 2022, 2021, and 2020.

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

Revenue (Expense) to Contingent Reserve Fund

TRSNYC Pension Fund Assets (QPP)*

Years ended June 30, 2022, 2021, and 2020

(In thousands)

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Net investment income	\$ (9,762,620)	\$ 20,059,992	\$ 3,759,578
TDA percent of fixed assets as of June 30	35.11%	29.18%	33.67%
TDA percent of fixed assets as of 6/30/19:			32.95%
TDA percent of fixed assets (average)	32.14%	31.42%	33.31%
Investment income on account of TDA investment	\$ (3,138,080)	\$ 6,303,326	\$ 1,252,282
Less statutory interest to TDA	<u>(2,140,639)</u>	<u>(1,998,388)</u>	<u>(1,846,173)</u>
 Revenue (expense) to QPP contingent reserve	 <u>\$ (5,278,719)</u>	 <u>\$ 4,304,938</u>	 <u>\$ (593,891)</u>

*Includes security-lending income

Administrative expenses during Fiscal Year 2022 were \$71.5 million, an increase of \$3.4 million (5.0%) from Fiscal Year 2021. The System continues its phased implementation to replace its legacy 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 2022, the System continued with the implementation of certain new pension payroll modules and development of active account modules. The change in administrative expenses also reflects the annual update in the System's administrative expenses attributed to the QPP. (See Note 8.) In addition, Fiscal Year 2022 QPP and TDA administrative expense increased \$3.5 million and \$1.8 million respectively, due to recognition of interest and amortization expenses as required by GASB No. 87. The QPP's total administrative expenses for Fiscal Year 2022 accounted for 78.2% of the System's administrative expenditures. The balance of \$19.9 million (21.8%) was expensed to the TDA Program. Administrative expenses during Fiscal Year 2021 were \$68.1 million, an increase of \$3.6 million (5.5%) from Fiscal Year 2020. The QPP's total administrative expenses for Fiscal Year 2021 accounted for 78.8% of the System's administrative expenditures. The balance of \$18.3 million (21.2%) was expensed to the TDA Program. Less GASB No. 87 recognition, the System's administrative expenditures have been \$86.0 million, \$86.4 million, and \$88.5 million for Fiscal Years 2022, 2021, and 2020, respectively.

The TDA rebalance during Fiscal Year 2022 resulted in \$2.5 million in transfers to the QPP TRSNYC Pension Fund from the TDA Program. The Administrative Code of The City of New York under sections 13-582 and 13-577 provides for certain internal transfer of funds. These transfers are intended to rebalance estimated actuarial liabilities with reported assets and follow liability reviews conducted by the Actuary of The City of New York. Also, \$41.5 million was transferred from the QPP Program's Variable-Return Funds to the QPP TRSNYC Pension Fund. The \$41.5 million transfer increased the investments held by QPP's TRSNYC Pension Fund and decreased the investments held by the QPP Program's Variable-Return Funds but did not impact net investments held by the QPP (see Note 2, Intra-Fund Payable/Receivable). The TDA rebalance during Fiscal Year 2021 resulted in \$4.2 million in transfers from the TRSNYC Pension Fund to the TDA Program due to a surplus in the TDA Program's Variable Annuity and Pension Reserve Funds.

Benefit payments and withdrawals during Fiscal Year 2022 were \$4.9 billion, a \$210.0 million (4.5%) increase from Fiscal Year 2021. The \$210.0 million increase in benefit payments and withdrawals was primarily due to a \$205.1 million (4.5%) increase in payments to retirees. In total, benefit payments and withdrawals distributed during Fiscal Year 2022 were composed of 97.8% in retirement benefits and 2.2%

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

in refund/withdrawals and survivor benefits. Benefit payments and withdrawals during Fiscal Year 2021 were \$4.7 billion, a \$108.4 million (2.4%) increase from Fiscal Year 2020. The \$108.4 million increase in benefit payments and withdrawals was primarily due to a \$140.0 million (3.1%) increase in payments to retirees, and a \$30.0 million (-28.5%) decrease in death benefit payments. In total, benefit payments and withdrawals distributed during Fiscal Year 2021 were composed of 97.8% in retirement benefits and 2.2% in refund/withdrawals and survivor benefits.

Payments of statutory interest due to the TDA from its investment in the TRSNYC Pension Fund Assets (Fixed-Return Fund) during Fiscal Year 2022 were \$2.1 billion, an increase of \$142.3 million (7.1%) from Fiscal Year 2021. Payments of statutory interest due to the TDA from its investment in the TRSNYC Pension Fund Assets (Fixed-Return Fund) during Fiscal Year 2021 were \$2.0 billion, an increase of \$152.2 million (8.2%) from Fiscal Year 2020.

TDA Program Financial Highlights – The TDA Program's net position restricted for benefits was \$42.2 billion, \$43.0 billion, and \$37.0 billion as of June 30, 2022, 2021, and 2020, respectively. Member contributions amounted to \$1.1 billion, \$1.1 billion, and \$1.0 billion for Fiscal Years 2022, 2021, and 2020, respectively. Benefit payments and withdrawals totaled \$1.9 billion, \$1.0 billion, and \$1.4 billion for Fiscal Years 2022, 2021, and 2020, 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, 2022, 2021, and 2020

(In thousands)

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Cash	\$ 9,983	\$ 7,222	\$ 7,477
Receivables for investments sold	2,473	5,275	8,378
Receivables for accrued interest and dividends	21,565	21,013	18,164
Member loan receivables	418,199	410,153	401,243
Investments, at fair value	10,451,408	13,014,474	9,427,396
Investment in TRSNYC Pension Fund	31,868,042	30,036,173	27,653,633
Collateral from securities lending	529,602	542,063	54,770
Other assets	43,495	8,781	18,454
Total assets	<u>43,344,767</u>	<u>44,045,154</u>	<u>37,589,515</u>
Accounts payable	43,330	52,205	83,749
Payable for investment securities purchased	6,306	2,605	15,402
Accrued benefits payable	526,673	488,806	412,069
Payable for securities lending transactions	529,602	542,063	54,770
Other liabilities	34,787	-	-
Total liabilities	<u>1,140,698</u>	<u>1,085,679</u>	<u>565,990</u>
Net position held in trust for benefits	<u>\$ 42,204,069</u>	<u>\$ 42,959,475</u>	<u>\$ 37,023,525</u>

Cash balances amounted to \$10.0 million at June 30, 2022, an increase of \$2.8 million (38.2%) from June 30, 2021. Cash balances amounted to \$7.2 million at June 30, 2021, a decrease of \$255.0 thousand (-3.4%) from June 30, 2020. Cash balances consist of accounts used to reimburse the funds of the Variable-Annuity Program and accounts used for advance funding of the Variable-Return Funds' investment managers.

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

Receivables for investment securities sold at June 30, 2022 amounted to \$2.5 million, a decrease of \$2.8 million (-53.1%) from June 30, 2021. Receivables for investment securities sold at June 30, 2021 amounted to \$5.3 million, a decrease of \$3.1 million (-37.0%) from June 30, 2020. 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, 2022 were \$21.6 million, an increase of \$552.0 thousand (2.6%) from June 30, 2021. Receivables for accrued earnings at June 30, 2021 were \$21.0 million, an increase of \$2.8 million (15.7%) from June 30, 2020. 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.

Member loan receivables at June 30, 2022 amounted to \$418.2 million, an increase of \$8.0 million (2.0%) from June 30, 2021. There were 24,294 new TDA loan issues in Fiscal Year 2022 compared to 22,376 in Fiscal Year 2021, an increase of 1,918 (8.6%) from Fiscal Year 2021. For Fiscal Year 2022, loan disbursements amounted to \$220.1 million, and principal and interest payments amounted to \$231.3 million. Member loan receivables at June 30, 2021 amounted to \$410.2 million, an increase of \$8.9 million (2.2%) from June 30, 2020. There were 22,376 new TDA loan issues in Fiscal Year 2021 compared to 17,286 in Fiscal Year 2020, an increase of 5,090 (29.5%) from Fiscal Year 2020. For Fiscal Year 2021, loan disbursements amounted to \$212.1 million, and principal and interest payments amounted to \$224.3 million.

The Variable-Return Funds' investments at June 30, 2022, including collateral received for securities lending, were \$11.0 billion, a decrease of \$2.6 billion (-19.0%) from June 30, 2021. The Variable-Return Funds' investments at June 30, 2021, including collateral received for securities lending, were \$13.6 billion, an increase of \$4.1 billion (43.0%) from June 30, 2020.

Assets of the TDA Program's Fixed-Return Fund invested in the TRSNYC Pension Fund at June 30, 2022 were \$31.9 billion, an increase of \$1.8 billion (6.1%) from June 30, 2021. In addition to the 7% statutory return for UFT members [and 8.25% for non-UFT members] for Fiscal Year 2022, contributions, withdrawals, and investment transfers to (from) the Fixed-Return Fund totaled \$735.1 million, -\$1.5 billion, and \$362.8 million, respectively. Assets of the TDA Program's Fixed-Return Fund invested in the TRSNYC Pension Fund at June 30, 2021 were \$30.0 billion, an increase of \$2.4 billion (8.6%) from June 30, 2020. In addition to the 7% statutory return for UFT members [and 8.25% for non-UFT members] for Fiscal Year 2021, contributions, withdrawals and investment transfers to (from) the Fixed-Return Fund totaled \$742.0 million, -\$828.7 million, and \$437.1 million, respectively.

Other assets at June 30, 2022 were \$43.5 million, an increase of \$34.7 million (395.3%) from June 30, 2021. The year-over-year increase in other assets, as of June 30, 2022, was primarily due to recognition of \$33.9 million of leased assets. Other assets at June 30, 2021 were \$8.8 million, a decrease of \$9.7 million (-52.4%) over June 30, 2020. Besides leased assets, other assets primarily represent assets already allocated for future administrative expenses.

Accounts payable at June 30, 2022 amounted to \$43.3 million, a decrease of \$8.9 million (-17.0%) from June 30, 2021. Accounts payable at June 30, 2021 amounted to \$52.2 million, a decrease of \$31.5 million (-37.7%) from June 30, 2020. 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, 2022 amounted to \$6.3 million, an increase of \$3.7 million (142.1%) from June 30, 2021. Payables for investment securities purchased at June 30, 2021 amounted to \$2.6 million, a decrease of \$12.8 million (-83.1%) from June 30, 2020. 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).

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

Accrued benefits payable at June 30, 2022 amounted to \$526.7 million, an increase of \$37.9 million (7.8%) from June 30, 2021. Accrued benefits payable at June 30, 2021 amounted to \$488.8 million, an increase of \$76.7 million (18.6%) from June 30, 2020. Both fiscal years increases are primarily attributed to increases of benefits due to beneficiaries at year-end.

Other liabilities represent amounts due to vendors for the underlying leased assets measured at the present value of the future payments. At June 30, 2022 other liabilities amounted to \$34.8 million.

Changes in TDA Program's Fiduciary Net Position

Years ended June 30, 2022, 2021, and 2020

(In Thousands)

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Additions:			
Member contributions	\$ 1,088,219	\$ 1,060,833	\$ 1,029,758
Net investment income	(2,088,612)	3,909,235	326,442
Net securities lending income	1,568	1,699	1,171
Total additions	<u>(998,825)</u>	<u>4,971,767</u>	<u>1,357,371</u>
Deductions:			
Administrative expenses	19,872	18,290	23,957
TDA rebalance	2,537	(4,175)	42,651
Benefits payments and withdrawals	1,874,811	1,020,090	1,446,806
Receipt of statutory interest for portion of investment in TRSNYC Pension Fund	<u>(2,140,639)</u>	<u>(1,998,388)</u>	<u>(1,846,173)</u>
Total deductions	<u>(243,419)</u>	<u>(964,183)</u>	<u>(332,759)</u>
Net increase in net position	(755,406)	5,935,950	1,690,130
Net position restricted for benefits			
Beginning of year	<u>42,959,475</u>	<u>37,023,525</u>	<u>35,333,395</u>
End of year	<u>\$ 42,204,069</u>	<u>\$ 42,959,475</u>	<u>\$ 37,023,525</u>

TRS's TDA Program received \$1.1 billion in member contributions during Fiscal Year 2022, an increase of \$27.4 million (2.6%) from Fiscal Year 2021. TRS's TDA Program received \$1.1 billion in member contributions during Fiscal Year 2021, an increase of \$31.1 million (3.0%) from Fiscal Year 2020.

Net investment income for the TDA Program's Variable-Return Funds for Fiscal Year 2022 decreased by \$6.0 billion (loss) from Fiscal Year 2021. Net investment income for the TDA Program's Variable-Return Funds for Fiscal Year 2021 increased by \$3.6 billion (1,097.5%) from Fiscal Year 2020. Net investment gains/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.

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

Administrative expenses for the Fiscal Year ended June 30, 2022 totaled \$19.9 million, an increase of \$1.6 million (8.7%) from Fiscal Year 2021. Administrative expenses for the Fiscal Year ended June 30, 2021 totaled \$18.3 million, a decrease of \$5.7 million (-23.7%) from Fiscal Year 2020. Fiscal Year 2022 TDA administrative expenses includes a \$1.8 million expense due to recognition of future lease expenses as required by GASB No. 87. The TDA Program accounted for a portion of the System's total administrative expenses; see QPP administrative expenses above and Note 8.

The TDA rebalance during Fiscal Year 2022 resulted in a \$2.5 million transfer from the TDA Program to the TRSNYC Pension Fund. The TDA rebalance during Fiscal Year 2021 resulted in a \$4.2 million transfer to the TDA Program from the TRSNYC Pension Fund. The Administrative Code of the City of New York under sections 13-582 and 13-577 provides for certain internal transfers of funds. These transfers are intended to rebalance estimated actuarial liabilities with reported assets; see Note 2, Intra-Fund Payable/Receivable.

Benefit payments and withdrawals for the Fiscal Year ended June 30, 2022 totaled \$1.9 billion, an increase of \$854.7 million (83.8%) from Fiscal Year 2021. The increase was due to Fiscal Year 2022 disbursements of required minimum withdrawals, previously temporarily suspended due to the CARES Act of 2020. Benefit payments and withdrawals for the Fiscal Year ended June 30, 2021 totaled \$1.0 billion, a decrease of \$426.7 million (-29.5%) from Fiscal Year 2020. The decrease was due to the CARES Act of 2020 provision that suspended required minimum withdrawals in 2020.

Receipts of statutory interest for the TDA Program's Fixed-Return Fund portion in investments in the TRSNYC Pension Fund assets for Fiscal Year 2022 were \$2.1 billion, an increase of \$142.3 million (7.1%) from Fiscal Year 2021. Receipts of statutory interest for the TDA Program's Fixed-Return Fund portion in investments in the TRSNYC Pension Fund assets for Fiscal Year 2021 were \$2.0 billion, an increase of \$152.2 million (8.2%) from Fiscal Year 2020.

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, 2022 QPP	June 30, 2022 TDA	June 30, 2021 QPP	June 30, 2021 TDA	June 30, 2020 QPP	June 30, 2020 TDA
Contributions	\$ 3,638,065	\$ 1,088,219	\$ 3,441,021	\$ 1,060,833	\$ 3,879,490	\$ 1,029,758
Contributions - Loan adj.	-	(21)	-	(87)	-	(207)
Loan repayments (cash)	142,132	231,268	148,284	224,288	146,168	216,254
401(a) receipts (payments)	(2,993)	-	(5,550)	-	(2,798)	-
Interest income	1,412,618	22,992	1,197,604	30,357	1,094,140	32,127
Interest income - Loan adj.	(18,433)	(29,633)	(14,341)	(28,119)	(14,901)	(28,573)
Dividend income	1,238,843	198,217	1,075,166	159,751	1,125,180	166,496
Investment expenses (net)	(535,284)	(24,194)	(405,713)	(13,732)	(290,871)	(563)
Benefits/withdrawals	(4,909,488)	(1,874,811)	(4,699,448)	(1,020,090)	(4,591,086)	(1,446,806)
Withdrawals - Loan adj.	22,905	11,145	10,208	7,828	14,239	7,946
New loans	(137,894)	(220,082)	(130,464)	(212,148)	(147,950)	(192,358)
Administrative expenses	(71,490)	(19,872)	(68,100)	(18,290)	(64,532)	(23,957)
Admin exp- GASB87 adj.	3,491	1,851	-	-	-	-
	<u>\$ 782,472</u>	<u>\$ (614,921)</u>	<u>\$ 548,667</u>	<u>\$ 190,591</u>	<u>\$ 1,147,079</u>	<u>\$ (239,883)</u>

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

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, 2022 QPP	June 30, 2022 TDA	June 30, 2021 QPP	June 30, 2021 TDA	June 30, 2020 QPP	June 30, 2020 TDA
TRSNYC Pension Fund	64.9%	35.1%	70.8%	29.2%	66.3%	33.7%
Variable-Return Funds:						
Diversified Equity Fund*	34.8%	60.8%	36.3%	59.5%	37.9%	58.1%
Balance Fund**	7.9%	92.1%	9.6%	90.4%	12.1%	87.9%
International Equity Fund	4.3%	95.7%	4.5%	95.5%	5.7%	94.3%
Sustainable Equity Fund***	3.1%	96.9%	3.3%	96.7%	4.3%	95.7%
U.S. Equity Index Fund****	4.6%	95.4%	6.9%	93.1%	12.8%	87.2%
International Equity Index Fund****	3.0%	97.0%	1.0%	99.0%	1.9%	98.1%

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

** Bond Fund prior to January 1, 2018.

*** Socially Responsive Equity Fund prior to October 1, 2019.

**** New funds established as of January 1, 2020.

To rate investment performance, both the TRSNYC Pension Fund assets and Variable-Return Funds' investments are monitored with various benchmarks.

In addition to other indices, the "policy index" is a custom benchmark for the complete TRSNYC Pension Fund. As of June 30, 2022, the policy index includes the following percentage weights:

TRSNYC Pension Fund Policy Index as of June 30, 2022*

Investment Type	Benchmark	Percent
U.S. Equity	Russell 3000	26.2%
International Developed EAFE Markets	MSCI World ex USA IMI Net	9.6
Int'l Active - Global	MSCI World Net Dividends Index	1.0
Emerging Markets	MSCI Custom TRS Emerging Markets (Net)	9.3
International Emerging Managers FoF	NYC Blended Custom Benchmark for FoF	0.7
Private Equity	Russell 3000 + 300 b.p. per annum	7.0
Private Real Estate - Core	NFI - ODCE Net	3.0
Private Real Estate - Non Core	NFI - ODCE Net + 200 bps	2.0
Infrastructure	CPI + 4%	1.8
U.S. Treasury Short Term	FTSE US Government Bond 1-3 Years Index	2.7
U.S. Treasury Intermediate	USBIG TSY AGN 1-10Y	9.3
U.S. Treasury Long Duration	FTSEUS Government Bond 10+ Years Index	3.3
Mortgage	Bloomberg U.S. Mortgage Backed Securities	5.2
ETI	ETI Custom Benchmark	0.7
Investment Grade Corporate	NYC Custom IGC Benchmark	5.9
High Yield	Bloomberg U.S. HY 2% Issuer Cap	5.3
TIPS	Bloomberg Global Inf-Linked: US TIPS	3.6
Opportunistic Fixed	OFI - JPMGHY/CSFB 50/50 Blend Plus 300 b.p. per annum	3.4
		<u>100.0%</u>

* Source: Teachers' Retirement System of New York City Performance Overview as of June 30, 2022, prepared by State Street Bank and Trust Company ("State Street").

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

Variable-Return Funds are benchmarked using the Russell 3000 Index, Dow Jones U.S. Total Stock Market Index, MSCI ACWI ex USA IMI Net Index, FTSE Global All Cap Index, Bloomberg U.S. 1-5 Year Government/Credit Float Adjusted Index, 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, 2022, net securities lending income amounted to \$6.5 million, a decrease of \$1.6 million from Fiscal Year 2021. For the Fiscal Year ended June 30, 2021, net securities lending income amounted to \$8.1 million, a decrease of \$3.6 million from Fiscal Year 2020. (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)

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Short-term investments	\$ 3,083,489	\$ 3,219,653	\$ 3,519,502
Debt securities	31,150,798	35,378,973	28,073,127
Equity securities	54,492,993	70,549,286	54,912,360
Alternative investments	17,877,701	14,076,877	10,765,147
Collateral from securities lending	<u>1,357,902</u>	<u>1,784,414</u>	<u>1,446,010</u>
Total	<u>\$ 107,962,883</u>	<u>\$ 125,009,203</u>	<u>\$ 98,716,146</u>

Investment Summary (by Plan)

(In thousands)

	<u>2022</u>	<u>2021</u>	<u>2020</u>
TRSNYC Pension Fund:			
QPP	\$ 58,902,644	\$ 72,900,195	\$ 54,488,989
TDA	31,868,042	30,036,173	27,653,633
Total	<u>90,770,686</u>	<u>102,936,368</u>	<u>82,142,622</u>

Variable-Return Funds:

QPP	5,382,887	7,273,947	5,700,118
TDA	10,451,408	13,014,474	9,427,396
Total	<u>15,834,295</u>	<u>20,288,421</u>	<u>15,127,514</u>

Collateral for Security Lending

QPP Pension Fund	525,316	911,346	1,355,516
QPP Variable-Return Funds	302,984	331,005	35,724
TDA Variable-Return Funds	<u>529,602</u>	<u>542,063</u>	<u>54,770</u>

Total	<u>1,357,902</u>	<u>1,784,414</u>	<u>1,446,010</u>
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Total investments	<u>\$ 107,962,883</u>	<u>\$ 125,009,203</u>	<u>\$ 98,716,146</u>
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Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) – CONTINUED

June 30, 2022 and 2021

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, New York 10041.

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Teachers' Retirement System of the City of New York
COMBINING STATEMENT OF FIDUCIARY NET POSITION

June 30, 2022
(In thousands)

	QPP	TDA	Eliminations	Total
ASSETS				
Cash	\$ 86,489	\$ 9,983	\$ -	\$ 96,472
Receivables:				
Investments securities sold	1,544,209	2,473	-	1,546,682
Accrued interest and dividends	339,801	21,565	-	361,366
Member loans (Note 6)	301,958	418,199	-	720,157
Total receivables	<u>2,185,968</u>	<u>442,237</u>	<u>-</u>	<u>2,628,205</u>
Investments - at fair value (Notes 2 and 3):				
TRSNYC Pension Fund Assets (Fixed-Return Fund):				
Short-term investment:				
Commercial paper	453,349	-	-	453,349
Short-term investment fund	812,986	-	-	812,986
Discount notes	52,418	-	-	52,418
U.S. treasury bills and agencies	1,551,644	-	-	1,551,644
Debt securities:				
U.S. government	13,757,296	-	-	13,757,296
Corporate and other	13,989,550	-	-	13,989,550
Treasury inflation-protected securities	3,403,952	-	-	3,403,952
Equity securities:				
Domestic equity	23,674,370	-	-	23,674,370
International equity	15,197,420	-	-	15,197,420
Alternative investments	17,877,701	-	-	17,877,701
Collateral from securities lending (Fixed-Return Fund)	525,316	-	-	525,316
Variable-Return Funds:				
Diversified Equity Fund:				
Short-term investments	95,485	105,160	-	200,645
Equity securities	5,217,721	9,120,327	-	14,338,048
Debt securities	-	-	-	-
Balanced Fund:				
Short-term investments	105	1,224	-	1,329
Equity securities	42,523	495,497	-	538,020
International Equity Fund:				
Short-term investments	106	2,359	-	2,465
International equity	8,524	191,240	-	199,764
Sustainable Equity Fund:				
Short-term investments	267	8,386	-	8,653
Equity securities	13,620	427,040	-	440,660
U.S. Equity Index Fund:				
Equity securities	4,092	85,585	-	89,677
International Equity Index Fund:				
Equity securities	444	14,590	-	15,034
Collateral from securities lending (Variable-Return Funds)	302,984	529,602	-	832,586
Total investments	<u>96,981,873</u>	<u>10,981,010</u>	<u>-</u>	<u>107,962,883</u>
TDA investment in TRSNYC Pension Fund	-	31,868,042	(31,868,042)	-
Other assets	166,039	43,495	(15,787)	193,747
Total assets	<u>99,420,369</u>	<u>43,344,767</u>	<u>(31,883,829)</u>	<u>110,881,307</u>
LIABILITIES				
Accounts payable	308,685	43,330	(15,787)	336,228
Payable for investment securities purchased	2,230,369	6,306	-	2,236,675
Accrued benefits payable	44,285	526,673	-	570,958
Due to TDA program's Fixed-Return Fund	31,868,042	-	(31,868,042)	-
Securities lending (Note 2)	828,300	529,602	-	1,357,902
Other liabilities	131,260	34,787	-	166,047
Total liabilities	<u>35,410,941</u>	<u>1,140,698</u>	<u>(31,883,829)</u>	<u>4,667,810</u>
Net position restricted for benefits:				
Benefits to be provided by QPP	64,009,428	-	-	64,009,428
Benefits to be provided by TDA Program	-	42,204,069	-	42,204,069
Total net position restricted for benefits	<u>\$ 64,009,428</u>	<u>\$ 42,204,069</u>	<u>\$ -</u>	<u>\$ 106,213,497</u>

The accompanying notes are an integral part of this combining financial statement.

Teachers' Retirement System of the City of New York
COMBINING STATEMENT OF FIDUCIARY NET POSITION

June 30, 2021
(In thousands)

	QPP	TDA	Eliminations	Total
ASSETS				
Cash	\$ 74,742	\$ 7,222	\$ -	\$ 81,964
Receivables:				
Investments securities sold	3,560,628	5,275	-	3,565,903
Accrued interest and dividends	304,145	21,013	-	325,158
Member loans (Note 6)	310,380	410,153	-	720,533
Total receivables	<u>4,175,153</u>	<u>436,441</u>	<u>-</u>	<u>4,611,594</u>
Investments - at fair value (Notes 2 and 3):				
TRSNYC Pension Fund Assets (Fixed-Return Fund):				
Short-term investment:				
Commercial paper	867,918	-	-	867,918
Short-term investment fund	1,028,743	-	-	1,028,743
U.S. treasury bills and agencies	1,090,552	-	-	1,090,552
Debt securities:				
U.S. government	14,889,426	-	-	14,889,426
Corporate and other	16,435,107	-	-	16,435,107
Treasury inflation-protected securities	3,594,216	-	-	3,594,216
Equity securities:				
Domestic equity	30,992,669	-	-	30,992,669
International equity	19,960,860	-	-	19,960,860
Alternative investments	14,076,877	-	-	14,076,877
Collateral from securities lending (Fixed-Return Fund)	911,346	-	-	911,346
Variable-Return Funds:				
Diversified Equity Fund:				
Short-term investments	110,049	112,971	-	223,020
Equity securities	6,901,203	11,301,600	-	18,202,803
Debt securities	174,484	285,740	-	460,224
Balanced Fund:				
Short-term investments	231	2,177	-	2,408
Equity securities	55,650	523,351	-	579,001
International Equity Fund:				
Short-term investments	114	2,396	-	2,510
International equity	10,881	229,166	-	240,047
Sustainable Equity Fund:				
Short-term investments	149	4,353	-	4,502
Equity securities	16,272	476,586	-	492,858
U.S. Equity Index Fund:				
Equity securities	4,797	64,485	-	69,282
International Equity Index Fund:				
Equity securities	117	11,649	-	11,766
Collateral from securities lending (Variable-Return Funds)	331,005	542,063	-	873,068
Total investments	<u>111,452,666</u>	<u>13,556,537</u>	<u>-</u>	<u>125,009,203</u>
TDA investment in TRSNYC Pension Fund	-	30,036,173	(30,036,173)	-
Other assets	46,194	8,781	(26,300)	28,675
Total assets	<u>115,748,755</u>	<u>44,045,154</u>	<u>(30,062,473)</u>	<u>129,731,436</u>
LIABILITIES				
Accounts payable	349,820	52,205	(26,300)	375,725
Payable for investment securities purchased	5,723,528	2,605	-	5,726,133
Accrued benefits payable	49,585	488,806	-	538,391
Due to TDA program's Fixed-Return Fund	30,036,173	-	(30,036,173)	-
Securities lending (Note 2)	1,242,351	542,063	-	1,784,414
Total liabilities	<u>37,401,457</u>	<u>1,085,679</u>	<u>(30,062,473)</u>	<u>8,424,663</u>
Net position restricted for benefits:				
Benefits to be provided by QPP	78,347,298	-	-	78,347,298
Benefits to be provided by TDA Program	-	42,959,475	-	42,959,475
Total net position restricted for benefits	<u>\$ 78,347,298</u>	<u>\$ 42,959,475</u>	<u>\$ -</u>	<u>\$ 121,306,773</u>

The accompanying notes are an integral part of this combining financial statement.

Teachers' Retirement System of the City of New York

COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

Year ended June 30, 2022

(In thousands)

	<u>QPP</u>	<u>TDA</u>	<u>Total</u>
Additions			
Contributions:			
Member contributions (Note 4)	\$ 273,686	\$ 1,088,219	\$ 1,361,905
Employer contributions	3,303,798	-	3,303,798
Other employer contributions	60,581	-	60,581
Total contributions	<u>3,638,065</u>	<u>1,088,219</u>	<u>4,726,284</u>
Investment income (loss) (Note 2):			
Interest income	1,412,618	22,992	1,435,610
Dividend income	1,238,843	198,217	1,437,060
Net (depreciation) appreciation in fair value of investments	<u>(12,974,971)</u>	<u>(2,285,627)</u>	<u>(15,260,598)</u>
Total investment (loss) income	<u>(10,323,510)</u>	<u>(2,064,418)</u>	<u>(12,387,928)</u>
Less:			
Investment expenses	544,879	27,002	571,881
Net decrease in variable expense provision	<u>(9,595)</u>	<u>(2,808)</u>	<u>(12,403)</u>
Net investment (loss) income	<u>(10,858,794)</u>	<u>(2,088,612)</u>	<u>(12,947,406)</u>
Securities lending transactions:			
Securities lending income	7,057	1,742	8,799
Less - securities lending fees	<u>(2,125)</u>	<u>(174)</u>	<u>(2,299)</u>
Net securities lending income	<u>4,932</u>	<u>1,568</u>	<u>6,500</u>
Other:			
Net receipts from other retirement systems	<u>(2,993)</u>	-	<u>(2,993)</u>
Total additions	<u>(7,218,790)</u>	<u>(998,825)</u>	<u>(8,217,615)</u>
Deductions			
Benefit payments and withdrawals	4,909,488	1,874,811	6,784,299
Administrative expenses (Note 8)	71,490	19,872	91,362
Other:			
Statutory interest for TDA Program's Fixed-Return Fund	2,140,639	(2,140,639)	-
TDA rebalance	<u>(2,537)</u>	<u>2,537</u>	-
Total deductions	<u>7,119,080</u>	<u>(243,419)</u>	<u>6,875,661</u>
Net (decrease) increase in net position	(14,337,870)	(755,406)	(15,093,276)
Net position restricted for benefits			
Beginning of year	<u>78,347,298</u>	<u>42,959,475</u>	<u>121,306,773</u>
End of year	<u>\$ 64,009,428</u>	<u>\$ 42,204,069</u>	<u>\$ 106,213,497</u>

The accompanying notes are an integral part of this combining financial statement.

Teachers' Retirement System of the City of New York

COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

Year ended June 30, 2021

(In thousands)

	<u>QPP</u>	<u>TDA</u>	<u>Total</u>
Additions			
Contributions:			
Member contributions (Note 4)	\$ 247,751	\$ 1,060,833	\$ 1,308,584
Employer contributions	3,131,607	-	3,131,607
Other employer contributions	61,663	-	61,663
Total contributions	<u>3,441,021</u>	<u>1,060,833</u>	<u>4,501,854</u>
Investment income (Note 2):			
Interest income	1,197,604	30,357	1,227,961
Dividend income	1,075,166	159,751	1,234,917
Net appreciation in fair value of investments	20,489,535	3,732,859	24,222,394
Total investment income	<u>22,762,305</u>	<u>3,922,967</u>	<u>26,685,272</u>
Less:			
Investment expenses	415,229	15,912	431,141
Net decrease in variable expense provision	(9,516)	(2,180)	(11,696)
Net investment income	<u>22,356,592</u>	<u>3,909,235</u>	<u>26,265,827</u>
Securities lending transactions:			
Securities lending income	7,252	1,891	9,143
Less - securities lending fees	(856)	(192)	(1,048)
Net securities lending income	<u>6,396</u>	<u>1,699</u>	<u>8,095</u>
Other:			
Net receipts from other retirement systems	(5,550)	-	(5,550)
Total additions	<u>25,798,459</u>	<u>4,971,767</u>	<u>30,770,226</u>
Deductions			
Benefit payments and withdrawals	4,699,448	1,020,090	5,719,538
Administrative expenses (Note 8)	68,100	18,290	86,390
Other:			
Statutory interest for TDA Program's Fixed-Return Fund	1,998,388	(1,998,388)	-
TDA rebalance	4,175	(4,175)	-
Total deductions	<u>6,770,111</u>	<u>(964,183)</u>	<u>5,805,928</u>
Net increase in net position	19,028,348	5,935,950	24,964,298
Net position restricted for benefits			
Beginning of year	<u>59,318,950</u>	<u>37,023,525</u>	<u>96,342,475</u>
End of year	<u>\$ 78,347,298</u>	<u>\$ 42,959,475</u>	<u>\$ 121,306,773</u>

The accompanying notes are an integral part of this combining financial statement.

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS

June 30, 2022 and 2021

NOTE 1 – SYSTEM AND PLAN DESCRIPTIONS

The City of New York (“The City” or “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 Funds (“POLICE”), and the New York City Fire Pension Funds (“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 City public school teachers, certain other school employees, and college teachers. The Employers, in addition to The City, are the City University of New York (“CUNY”) and several 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 section 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 New York City Administrative Code (“NYCAC”) 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 Annual Comprehensive Financial Report (“ACFR”).

Board of Trustees (“TRS Board”)

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 New York City Comptroller (“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.

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED
June 30, 2022 and 2021

Membership Data

The QPP's and TDA Program's membership, at June 30, 2022 and June 30, 2021, consisted of:

	QPP	
	2022*	2021
Retirees and beneficiaries receiving benefits	92,000	89,997
Terminated vested members not yet receiving benefits	16,000	15,128
Terminated non-vested members**	4,000	4,574
Active members receiving salary	124,000	123,211
Total	<u>236,000</u>	<u>232,910</u>

	TDA Program	
	2022*	2021
Retirees receiving a TDA annuity	2,800	2,724
Retirees or Inactive members with TDA deferral	63,000	60,594
Active members with TDA	100,000	96,790
Total	<u>165,800</u>	<u>160,108</u>

* Preliminary

** As of June 30, 2020, members that are on leave with insufficient service for vesting and assumed to not return to active service are classified as terminated non-vested members.

The QPP's and TDA Program's membership, at June 30, 2020 and June 30, 2019, the dates of the membership data used in determining Fiscal Year 2022 and Fiscal Year 2021 employer contributions, consisted of:

	QPP	
	2020	2019
Retirees and beneficiaries receiving benefits	89,536	88,507
Terminated vested members not yet receiving benefits	15,502	13,410
Terminated non-vested members** / Other inactives***	5,604	8,174
Active members	124,276	123,336
Total	<u>234,918</u>	<u>233,427</u>

	TDA Program	
	2020	2019
Retirees receiving a TDA annuity	2,755	2,827
Retirees or inactive members with TDA deferral	59,636	57,730
Active members with TDA	95,111	93,600
Total	<u>157,502</u>	<u>154,157</u>

*** Prior to June 30, 2020, represents members who are no longer on payroll but not otherwise classified.

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

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 New York 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 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 20th 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

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

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 United Federation of Teachers ("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 \$33.8 million and \$39.9 million, for the years ended June 30, 2022 and 2021, respectively. Actuarial estimates of the impact of Excesses and Deficiencies are incorporated into the 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 10-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 10th anniversary of their membership date or completion of 10 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 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.

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

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 joined 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. As of April 9, 2022, Tier VI members are vested after five years of service (Chapter 56 of the Laws of 2022).

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. Monthly supplemental contributions totaling \$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 10 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 five 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 five or more years and beneficiaries receiving accidental death benefits who have been receiving them for at least five years. COLA is one-half of the increase in the Consumer Price Index for All Urban Consumers (“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 TDA 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 of compensation (within the maximum allowed by the IRS) 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 their account prior to or at the time of retirement. As of January 1, 1989, the tax laws restricted withdrawals of tax-deferred annuity contributions and accumulated earnings thereon for reasons other than retirement or termination. Contributions made after

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

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). Hardship withdrawals are limited to (post 88) contribution only. Previously, if a hardship withdrawal occurred, the member was not able to contribute for a six-month period. The Budget Act of 2018 authorized the plan to remove the six-month restriction beginning no later than January 2020.

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 the member does not withdraw their account from the QPP. If a member resigns after attaining vested rights under the QPP, (s)he may leave the account in the TDA Program, provided the member does not withdraw their 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 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. The option for new beneficiaries to invest in the TDA Program's Variable-Return Funds was statutorily rescinded in August 2021.

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.

NOTE 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. Benefit payments and withdrawals are recognized when due and payable in accordance with the terms of the QPP and the TDA Program.

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

Investment Valuation – Investments are reported at fair value. Fair value is defined as the quoted market price at the end of the last trading day for the specified period, except for Alternative investments, which are considered long-term and illiquid in nature. Alternative investments consist of limited partnership structures invested in privately held investments for which exchange quotations are not readily available, and are valued at estimated fair value. Fair value at fiscal year-end is based on the fair value of net assets reported in the most recently available partnership's capital account statements from the general partner, adjusted for any subsequent contributions, distributions, management fees and changes in values of foreign currency. They include investments held within Private Equity, Real Estate, Opportunistic Fixed Income, and Infrastructure.

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

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.

Fair Value Measurement – Government Accounting Standards Board (“GASB”) Statement No. 72, *Fair Value Measurement and Application* (“GASB 72”), describes fair value as an exit price, requiring investments to be categorized under a fair value hierarchy prescribed by GASB. GASB 72 establishes a hierarchy of inputs used to measure fair value consisting of three levels based on market price observability. Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs, and typically reflect management’s estimates of assumptions that market participants would use in pricing the asset or liability. GASB 72 also contains note disclosure requirements regarding the hierarchy of valuation inputs and valuation techniques that were used for the fair value measurements.

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.

Investment Programs – Prior to July 1, 2008, investments were comprised of the assets of the following investment programs: the TRSNYC Pension Fund (which includes 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. On January 1, 2012, the Stable-Value Fund became the Bond Fund. On January 1, 2018, the Bond Fund became the Balanced Fund. The Balanced Fund’s objective is to seek current income and some capital appreciation by investing in a portfolio that includes both stocks and bonds. As of October 1, 2019, the Socially Responsive Equity Fund became the Sustainable Equity Fund. On January 1, 2020, the investment programs were expanded to include two new Variable-Return Funds – U.S. Equity Index Fund and International Equity Index Fund. The investment objective of the U.S. Equity Index Fund is to track the total return of the broad U.S. equity market, including large-, mid-, and small-capitalization stocks. The investment objective of the International Equity Index Fund is to track the total return of non-U.S. equity markets, including developed markets and emerging markets. As of April 1, 2020, the Inflation Protection Fund was discontinued. The TRS investment programs are collectively referred to as 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.

In the Fixed-Return Fund, deposits from members’ TDA Program accounts are invested along with QPP assets and TDA Program accounts and 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 (NYCAC 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 UFT. The crediting rate of 7% has been in effect since December 11, 2009. The prior crediting rate of 8.25% had been in effect from 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.

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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 and the TDA Program’s Annuity Savings Fund (“Fixed-Return Fund”) are set, respectively, by NYCAC 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 City’s Chief Actuary of the Office of the Actuary (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.

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 The New York City Department of Education (“DOE”) supplemental contributions for the ASAF and Annuity Savings Fund (“ASF”). The Employer portion of Additional Member Contributions is not part of the employer’s appropriation amount and also not recoverable by the member upon the member’s resignation.

Investment Expenses – The Variable-Return Funds maintain a reserve for administrative and investment expenses. As of June 30, 2022, the reserve was \$55.5 million for QPP and \$28.4 million for TDA. The expense reserve and net investment expenses for 2022 were reduced by \$9.6 million for QPP and \$2.8 million for TDA. As of June 30, 2021, the reserve was \$64.6 million for QPP and \$30.2 million for TDA. The expense reserve and net investment expenses for 2021 were reduced by \$9.5 million for QPP and \$2.2 million 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 due to depositories, unclaimed payments, 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 no balance, since funding only occurs when benefit payment checks are presented to the bank for payment each day.

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Intra-fund Payable/Receivable – At fiscal year-end, intra-fund payables/receivables between the TRSNYC Pension Fund and the Variable-Return Funds are excluded from QPP and TDA Program assets. The NYCAC 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 2022, \$41.5 million was transferred from the QPP Variable-Return Funds to the QPP TRSNYC Pension Fund. In addition, in Fiscal Year 2022, \$2.5 million was transferred from the TDA to the QPP Program.

In Fiscal Year 2021, \$38.7 million was transferred from the QPP Variable-Return Funds to the QPP TRSNYC Pension Fund. In addition, in Fiscal Year 2021, \$4.2 million was transferred from the QPP to the TDA Program.

Payment of Statutory-Interest on the TDA Program's 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), and owed and transferred to the TDA Program, is reported as a transfer payment of interest by the QPP and transfer receipt of interest for the TDA Program.

Inter-Plan Eliminations – Included on the Combining Statements of Fiduciary Net Position and the Combining Statements of Changes in Fiduciary Net Position is an elimination column, the purpose of which is to remove from the statement any transactions involving dealings between reported entities. The eliminations include offsetting payables and receivables associated with the TDA Program's investment in the TRSNYC 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, U.S. Treasury, and U.S. Government securities. The Funds' agent lends the following types of securities: short-term securities, common stocks, long-term corporate bonds, U.S. Government and U.S. Government agency bonds, asset-backed securities, 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, 2022 and 2021, management believes that the Funds had no credit risk exposure to borrowers because the fair value of collateral held by the System equaled or exceeded the fair value of securities lent to the borrowers. Also, the contracts with the Funds' Securities Lending Agent (the "Agent") require the Agent to indemnify the Funds as follows: 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 3.5 days for collateral investments under State Street's TRSNYC Pension Fund investments and 1.0 days for JPMorgan 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 2022, net earnings from the securities-lending program were \$6.5 million. Net earnings from QPP were \$4.9 million, including \$4.0 million from TRSNYC Pension Fund and \$897.9 thousand from Variable-Return Funds. The TDA net earnings from the Variable-Return Funds securities-lending program amounted to \$1.6 million.

During Fiscal Year 2021, net earnings from the securities-lending program were \$8.1 million. Net earnings from QPP were \$6.4 million, including \$5.4 million from TRSNYC Pension Fund and \$1.0 million from Variable-Return Funds. The TDA net earnings from the Variable-Return Funds securities-lending program amounted to \$1.7 million.

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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 Combining 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 0.8 days for State Street's TRSNYC Pension Fund investments and 0.0 days for JPMorgan 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, 2022 and 2021, the values on loan by the TRSNYC Pension Fund were \$546.0 million and \$1.0 billion, respectively, and the values on loan by the Variable-Return Funds were \$811.9 million and \$853.0 million, respectively. Collateral received related to securities lending as of June 30, 2022 and 2021 was \$562.5 million and \$1.1 billion, respectively, for the TRSNYC Pension Fund, and \$832.6 million and \$873.1 million, respectively, for the Variable-Return Funds.

New Accounting Standards Adopted – GASB Statement No. 98, *The Annual Comprehensive Financial Report*, establishes the term Annual Comprehensive Financial Report and its acronym ACFR. The new term replaces comprehensive annual financial report and its acronym in generally accepted accounting principles for state and local governments. The System, beginning in fiscal year 2021, had decided to early implement this pronouncement and has applied the change as of the issuance of this report.

GASB Statement No. 87, *Leases*, establishes a single model for lease accounting based on the principle that leases are financings of the right to use of an underlying asset. It requires recognition of lease assets and liability for certain leases and associated inflows or outflows of resources based on the provision of the lease contract. The purpose of this Statement is to standardize comparability of financial statements and enhancing the consistency of the information about leasing activities of governments (see Note 8, Administrative Expenses).

GASB Statement No. 97, *Certain Component Unit Criteria, and Accounting and Financial reporting for Internal Revenue Code Section 457 Deferred Compensation Plans* ("GASB 97"), clarifies component unit criteria for a potential component unit in the absence of a governing board in determining financial accountability; limits the applicability of financial burden criteria in paragraph 7 of GASB Statement No. 84; and classifies Section 457 Deferred Compensation plans as either a pension plan or other employee benefit plan. The adoption of GASB Statement No. 97 did not have a significant impact on these financial statements.

NOTE 3 – INVESTMENTS AND DEPOSITS

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 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.

RSSL and NYCAC authorize the investment 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.

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QPP and TDA Program assets are diversified over a range of investments, and multiple strategies are used in an effort 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 Years 2022 and 2021 included securities in the following categories. 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 *	
	2022	2021
Common stock	24.8%	28.4%
International investments - Non-U.S.	10.4%	10.5%
International investments - Emerging markets	9.6%	9.6%
Alternative investments - Real estate	5.8%	3.7%
Alternative investments - Private equity	8.6%	6.2%
Alternative investments - Infrastructure	1.9%	1.2%
Alternative investments - Opportunistic fixed income	3.6%	2.9%
Fixed income	35.3%	37.5%
Total	100.0%	100.0%

* Represents adjusted target policy percentages.

Variable-Return Funds Target Asset Allocations Investment Type	Asset Allocation Percentages	
	2022	2021
Diversified Equity (Variable A):		
Common stock - Passive	62.0%	55.0%
Common stock - Active	15.0%	15.0%
Common stock - Defensive	0.0%	10.0%
International investments	23.0%	20.0%
Balanced Fund (formerly Bond Fund - Variable B):		
Fixed Income	70.0%	70.0%
Equity	30.0%	30.0%
International Equity (Variable C):		
International Investments	100.0%	100.0%
Sustainable Equity (former Socially Responsible - Variable E):		
Sustainable Equity BA SEF	100.0%	100.0%
U.S. Equity Index (established January 1, 2020 - Variable F):		
U.S. Equity Index Fund	100.0%	100.0%
International Equity Index (established January 1, 2020 - Variable G):		
International Equity Index Fund	100.0%	100.0%

State Street is currently the custodial bank for the securities of the TRSNYC Pension Fund. JPMorgan Chase is currently the custodial bank for the securities of the Variable-Return programs.

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NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

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 – In accordance with RSSL § 177, the System's investment programs do not have investments in any individual company that may represent more than 2% of the QPP or TDA Program total net assets or 5% of the company's total outstanding shares. The above concentration exclusion does not apply to obligations of the United States, or those for which the faith of the United States is pledged to provide payment of the interest and principal.

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Credit Risk – The possibility of a loss or default resulting from a borrower’s inability to repay a loan or fulfill its contractual debt obligations. Portfolios, other than U.S. Government and related portfolios, have credit rating limitations. Investment Grade portfolios are limited to mostly ratings, of BBB/Baa2 and above, except that they are also permitted a 10% maximum exposure to BB & B/Ba2 & B2 rated securities. While high yield non-investment grade managers primarily invest in BB & B/Ba2 & B2 rated securities, they can also invest up to 10% of their portfolio in securities rated CCC/Caa2.

The quality ratings of the TRSNYC Pension Fund investments, by percentage of the rated portfolio, as described by nationally recognized rating organizations, at June 30, 2022 and 2021, are as follows:

Investment Type Pension Fund June 30, 2022 (In percent)	Moody's Quality Ratings																	Caa1 & Below	Not Rated	Total
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3				
U.S. government	39.52%	0.01%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	0.93%	40.46%	
Corporate bonds	22.63%	0.02%	0.10%	0.16%	1.13%	1.84%	1.70%	2.22%	2.66%	2.57%	1.21%	1.71%	1.99%	2.06%	1.99%	1.64%	1.60%	3.35%	50.58%	
Short term:																				
Commercial paper	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	1.31%	1.31%
Discount notes and T-bills	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	4.41%	4.41%
Pooled fund	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	3.24%	3.24%
Percent of rated portfolio	<u>62.15%</u>	<u>0.03%</u>	<u>0.10%</u>	<u>0.16%</u>	<u>1.13%</u>	<u>1.84%</u>	<u>1.70%</u>	<u>2.22%</u>	<u>2.66%</u>	<u>2.57%</u>	<u>1.21%</u>	<u>1.71%</u>	<u>1.99%</u>	<u>2.06%</u>	<u>1.99%</u>	<u>1.64%</u>	<u>1.60%</u>	<u>13.24%</u>	<u>100.00%</u>	

Investment Type Pension Fund June 30, 2021 (In percent)	Moody's Quality Ratings																	Caa1 & Below	Not Rated	Total
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3				
U.S. government	37.81%	0.03%	-%	-%	0.02%	-%	-%	0.01%	0.07%	0.01%	-%	-%	-%	-%	-%	-%	-%	1.09%	39.04%	
Corporate bonds	22.73%	0.15%	0.20%	0.15%	0.75%	2.14%	1.76%	2.33%	3.10%	2.61%	1.36%	1.65%	2.10%	2.28%	1.98%	1.90%	2.26%	2.83%	52.28%	
Short term:																				
Commercial paper	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	2.27%	2.27%
Discount notes and T-bills	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	2.78%	2.78%
Pooled fund	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	3.63%	3.63%
Percent of rated portfolio	<u>60.54%</u>	<u>0.18%</u>	<u>0.20%</u>	<u>0.15%</u>	<u>0.77%</u>	<u>2.14%</u>	<u>1.76%</u>	<u>2.34%</u>	<u>3.17%</u>	<u>2.62%</u>	<u>1.36%</u>	<u>1.65%</u>	<u>2.10%</u>	<u>2.28%</u>	<u>1.98%</u>	<u>1.90%</u>	<u>2.26%</u>	<u>12.60%</u>	<u>100.00%</u>	

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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, 2022 and 2021, are as follows:

Investment Type Variable-Return Funds June 30, 2022 (In percent)	Moody's Quality Ratings																	Total		
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1 & Below		Not Rated	
Corporate	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	
Short term:																				
U.S. Treasury bills	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	
Money market funds	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	
Percent of rated portfolio	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>100.00%</u>	<u>100.00%</u>

Investment Type Variable-Return Funds June 30, 2021 (In percent)	Moody's Quality Ratings																	Total	
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1 & Below		Not Rated
Corporate	-%	-%	-%	-%	-%	0.14%	-%	1.25%	1.13%	0.72%	-%	0.84%	-%	0.87%	-%	-%	-%	60.45%	65.40%
Short term:																			
U.S. Treasury bills	0.12%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%
Money market funds	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%
Percent of rated portfolio	<u>0.12%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>0.14%</u>	<u>-%</u>	<u>1.25%</u>	<u>1.13%</u>	<u>0.72%</u>	<u>-%</u>	<u>0.84%</u>	<u>-%</u>	<u>0.87%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	<u>94.93%</u>	<u>100.00%</u>

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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 or depository financial institution, the Fund will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are not registered in the name of the Funds and are held by either the counterparty or the counterparty's trust department or agent but not in the name of the Funds. Consistent with the Funds' investment policy, investments are held by the custodians of the TRSNYC Pension Fund and Variable-Return Funds and registered in the System's or QPP and TDA Program's name.

Generally, the System is the sole account owner of the custodial account. However, the Diversified Equity Fund is co-invested along with certain assets of BERS. Also, as of June 30, 2022, 0.6% of the TRSNYC Pension Fund assets were held in NYC commingled trust accounts owned 100% by The City's pension systems and related funds.

All of the System's deposits are insured by the Federal Deposit Insurance Corporation ("FDIC") or are collateralized by securities held by a financial institution separate from the Funds' depository financial institution. However, the Fund's cash balances can exceed FDIC insured limits. Non-invested cash is swept into the custodial bank's short-term investment intraday account, which is not FDIC insured.

Interest Rate Risk – Interest rate risk is the risk that the value of debt securities will be affected by fluctuations in market interest rates. The duration of the portfolio, relative to the duration of the portfolio's benchmark, is monitored by the Comptroller's Bureau of Asset Management.

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June 30, 2022 and 2021

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, 2022 and 2021, are as follows:

Investment Type TRSNYC Pension Fund June 30, 2022	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. government	40.46%	0.11%	26.25%	6.53%	7.57%
Corporate bonds	50.58%	0.31%	17.65%	12.45%	20.17%
Short term:					
Commercial paper	1.31%	1.31%	-%	-%	-%
Discount notes and treasury bills	4.41%	4.41%	-%	-%	-%
Pooled funds	3.24%	3.24%	-%	-%	-%
Percent of rated portfolio	<u>100.00%</u>	<u>9.38%</u>	<u>43.90%</u>	<u>18.98%</u>	<u>27.74%</u>

Investment Type TRSNYC Pension Fund June 30, 2021	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. government	39.02%	-%	24.63%	6.11%	8.28%
Corporate bonds	52.29%	0.19%	15.98%	13.61%	22.51%
Short term:					
Commercial paper	2.28%	2.28%	-%	-%	-%
Discount notes and treasury bills	2.78%	2.78%	-%	-%	-%
Pooled funds	3.63%	3.63%	-%	-%	-%
Percent of rated portfolio	<u>100.00%</u>	<u>8.88%</u>	<u>40.61%</u>	<u>19.72%</u>	<u>30.79%</u>

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NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED
June 30, 2022 and 2021

The lengths of investment maturities (in years) of the Variable-Return Funds for QPP and TDA, as shown by the percent of the rated portfolio at June 30, 2022 and 2021, are as follows:

Investment Type Variable-Return Funds June 30, 2022	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
Corporate bonds	-%	-%	-%	-%	-%
Short term:					
U.S. treasury bills	-%	-%	-%	-%	-%
Money market funds	100.00%	100.00%	-%	-%	-%
Percent of rated portfolio	100.00%	100.00%	-%	-%	-%

Investment Type Variable-Return Funds June 30, 2021	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
Corporate bonds	65.40%	1.74%	47.68%	14.20%	1.78%
Short term:					
U.S. treasury bills	0.12%	0.12%	-%	-%	-%
Money market funds	34.48%	34.48%	-%	-%	-%
Percent of rated portfolio	100.00%	36.34%	47.68%	14.20%	1.78%

Foreign Currency Risk – Foreign currency risk is the risk that changes in the exchange rates will adversely impact the fair value of an investment. Currency risk is present in underlying portfolios that invest in foreign stocks and/or bonds. The currency markets have proven to be effective diversifiers in a total portfolio context; therefore, the TRSNYC 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. In addition, the TRSNYC Variable-Return Funds have investments in foreign stocks and/or bonds denominated in foreign currencies.

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

Foreign currency exposures as of June 30, 2022 and 2021, are as follows:

Trade Currency (in thousands)	Pension Fund June 30, 2022	Variable-Return Funds June 30, 2022	Pension Fund June 30, 2021	Variable-Return Funds June 30, 2021
Euro Currency	\$ 4,247,372	\$ 764,184	\$ 5,288,835	\$ 900,568
Hong Kong Dollar	2,319,755	284,169	2,871,758	278,805
Japanese Yen	1,514,993	481,602	2,033,567	551,608
British Pound Sterling	1,250,952	389,827	1,630,961	418,876
Indian Rupee	1,061,362	129,449	1,209,648	129,047
New Taiwan Dollar	1,047,773	104,419	1,425,501	133,473
South Korean Won	985,851	162,763	1,514,184	200,064
Swiss Franc	783,479	220,379	1,060,872	224,007
Canadian Dollar	539,810	67,925	543,778	90,768
Brazilian Real	399,482	48,899	437,951	54,757
Australian Dollar	338,665	120,804	470,171	129,060
Danish Krone	331,315	55,862	429,059	71,691
Chinese Yuan (Offshore)	249,250	-	255,441	-
Indonesian Rupiah	197,797	23,663	158,395	14,925
Swedish Krona	186,758	66,412	272,588	82,261
Singapore Dollar	185,121	40,884	168,072	30,592
South African Rand	184,427	57,889	272,607	41,611
Chinese Yuan Renminbi	154,595	33,747	203,122	37,586
Thai Baht	152,332	21,554	118,343	15,910
Mexican Nuevo Peso	125,461	35,504	142,919	21,830
Polish Zloty	78,890	13,853	167,807	12,067
Malaysian Ringgit	68,896	9,889	75,121	3,710
Norwegian Krone	58,494	18,147	119,825	22,097
Qatari Rial	48,624	-	12,175	-
UAE Dirham	44,405	12,155	17,383	7,292
Philippines Peso	33,281	537	40,081	31
Israeli Shekel	31,104	6,879	22,815	5,734
Turkish Lira	28,798	9,180	29,282	5,795
Chilean Peso	22,038	711	39,859	955
Hungarian Forint	13,202	1,367	32,682	224
New Zealand Dollar	12,028	6,241	10,042	9,176
Kuwaiti Dinar	10,887	-	6,135	-
Czech Koruna	6,049	3,699	7,209	51
Colombian Peso	3,390	-	4,270	-
Russian Ruble	1,793	8,634	46,415	3,310
Egyptian Pound	1,002	6,940	1,344	6,150
Peruvian Nuevo Sol	44	63	-	-
Pakistan Rupee	7	-	838	-
Saudi Arabian Ryal	-	10,879	-	18,160
	\$ 16,719,482	\$ 3,219,109	\$ 21,141,055	\$ 3,522,191

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

Securities Lending Transactions

Credit Risk – The quality ratings of investments held as collateral for Securities Lending by the TRSNYC Pension Fund at June 30, 2022 and 2021 are as follows:

Investment Type and Fair Value of
Securities Lending Transactions - TRSNYC Pension Fund

June 30, 2022 (In thousands)	Moody's Quality Ratings						Total
	Aaa & Below	A1	A2	A3	Baa2	Not Rated	
Short term:							
Reverse repurchase agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 124,727	\$ 124,727
Money market	267,664	-	-	-	-	86,136	353,800
U.S. agency	-	-	-	-	-	-	-
Cash or cash equivalent	-	53,170	-	-	-	-	53,170
Uninvested	-	-	-	-	-	(6,381)	(6,381)
Total	\$ 267,664	\$ 53,170	\$ -	\$ -	\$ -	\$ 204,482	\$ 525,316
Percent of securities lending portfolio	50.95%	10.12%	-%	-%	-%	38.93%	100.00%

Uninvested securities are due to late collateral settlements where the cash positions changed after cash-collateral investments were made. As of June 30, 2022, the System had a greater amount of cash-collateral investments than amount in open loans which resulted in an overinvestment of \$6.4 million.

June 30, 2021 (In thousands)	Moody's Quality Ratings						Total
	Aaa & Below	A1	A2	A3	Baa2	Not Rated	
Short term:							
Reverse repurchase agreements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 121,000	\$ 121,000
Money market	508,615	-	-	-	-	165,144	673,759
U.S. agency	-	-	-	-	-	34,954	34,954
Cash or cash equivalent	-	92,365	-	-	-	-	92,365
Uninvested	-	-	-	-	-	(10,732)	(10,732)
Total	\$ 508,615	\$ 92,365	\$ -	\$ -	\$ -	\$ 310,366	\$ 911,346
Percent of securities lending portfolio	55.81%	10.13%	-%	-%	-%	34.06%	100.00%

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

The quality ratings of investments held as collateral for Securities Lending under the Variable-Return Funds at June 30, 2022 and 2021 are as follows:

Investment Type and Fair Value of Securities Lending Transactions - Variable-Return Funds June 30, 2022 (In thousands)		Moody's Quality Ratings			Total
		Aaa	A3	Not Rated	
Government	\$ 712,403	\$ -	\$ -	\$ -	\$ 712,403
Short term:					
Repurchase agreements	81,289	-	32,748	-	114,037
U.S. treasury	6,147	-	-	-	6,147
Uninvested	-	-	-	-	-
Total	\$ 799,839	\$ -	\$ 32,748	\$ -	\$ 832,587
Percent of securities lending portfolio	<u>96.07%</u>	<u>-%</u>	<u>3.93%</u>	<u>-</u>	<u>100.00%</u>
Investment Type and Fair Value of Securities Lending Transactions - Variable-Return Funds June 30, 2021 (In thousands)		Moody's Quality Ratings			Total
		Aaa	A3	Not Rated	
Government	\$ 710,023	\$ -	\$ -	\$ -	\$ 710,023
Short term:					
Repurchase agreements	-	-	131,050	-	131,050
U.S. treasury	31,975	-	-	-	31,975
Uninvested	-	-	20	-	20
Total	\$ 741,998	\$ -	\$ 131,070	\$ -	\$ 873,068
Percent of securities lending portfolio	<u>84.99%</u>	<u>-%</u>	<u>15.01%</u>	<u>-</u>	<u>100.00%</u>

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED
June 30, 2022 and 2021

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, 2022 and 2021 are as follows:

Years to Maturity Investment Type TRSNYC Pension Fund		Investment Maturities				
June 30, 2022 (In thousands)	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years	
Short term:						
Reverse repurchase agreement	\$ 124,727	\$ 124,727	\$ -	\$ -	\$ -	
Money market	353,800	353,800	-	-	-	
U.S. agency	-	-	-	-	-	
Cash equivalents	53,170	53,170	-	-	-	
Uninvested	(6,381)	(6,381)	-	-	-	
Total	<u>\$ 525,316</u>	<u>\$ 525,316</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	
Percent of securities lending portfolio	<u>100.00%</u>	<u>100.00%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	

Years to Maturity Investment Type TRSNYC Pension Fund		Investment Maturities				
June 30, 2021 (In thousands)	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years	
Short term:						
Reverse repurchase agreement	\$ 121,000	\$ 121,000	\$ -	\$ -	\$ -	
Money market	673,759	673,759	-	-	-	
U.S. agency	34,954	34,954	-	-	-	
Cash equivalents	92,365	92,365	-	-	-	
Uninvested	(10,732)	(10,732)	-	-	-	
Total	<u>\$ 911,346</u>	<u>\$ 911,346</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	
Percent of securities lending portfolio	<u>100.00%</u>	<u>100.00%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>	

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

The lengths of investment maturities (in years) of the collateral for Securities Lending held under the Variable-Return Funds at June 30, 2022 and 2021 are as follows:

Years to Maturity Investment Type Variable-Return Funds		Investment Maturities				
June 30, 2022 (In thousands)	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years	
Government	\$ 712,403	\$ 76,085	\$ 324,425	\$ 156,505	\$ 155,388	
Short term:						
Repurchase agreements	114,037	114,037	-	-	-	
U.S. treasury	6,147	6,147	-	-	-	
Uninvested	-	-	-	-	-	
Total	<u>\$ 832,587</u>	<u>\$ 196,269</u>	<u>\$ 324,425</u>	<u>\$ 156,505</u>	<u>\$ 155,388</u>	
Percent of securities lending portfolio	<u>100.00%</u>	<u>23.57%</u>	<u>38.97%</u>	<u>18.80%</u>	<u>18.66%</u>	

Years to Maturity Investment Type Variable-Return Funds		Investment Maturities				
June 30, 2021 (In thousands)	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years	
Government	\$ 710,023	\$ 76,148	\$ 357,414	\$ 155,185	\$ 121,276	
Short term:						
Repurchase agreements	131,050	131,050	-	-	-	
U.S. treasury	31,975	31,975	-	-	-	
Uninvested	20	20	-	-	-	
Total	<u>\$ 873,068</u>	<u>\$ 239,193</u>	<u>\$ 357,414</u>	<u>\$ 155,185</u>	<u>\$ 121,276</u>	
Percent of securities lending portfolio	<u>100.00%</u>	<u>27.40%</u>	<u>40.94%</u>	<u>17.77%</u>	<u>13.89%</u>	

Rate of Return – For the years ended June 30, 2022 and 2021, the annual money-weighted rate of return on the TRSNYC Pension Fund was (-9.72%) and 24.8%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense adjusted for the changing amounts actually invested.

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

In Fiscal Year 2015, the System adopted GASB 72. GASB 72 was issued to address accounting and financial reporting issues related to fair value measurements.

The System categorizes its fair value measurements within the fair value hierarchy established by 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, 2022 and June 30, 2021:

GASB 72 - Disclosure (TRSNYC Pension Fund) (In thousands)	2022			
	Level 1	Level 2	Level 3	Total
Investments - at fair value (Notes 2 and 3):				
Short-term investments:				
Commercial paper	\$ -	\$ 453,349	\$ -	\$ 453,349
Discount notes	-	52,418	-	52,418
Short-term investment fund	-	812,986	-	812,986
U.S. Treasury bills and agencies	-	1,551,644	-	1,551,644
Debt securities:				
U.S. government	-	13,757,296	-	13,757,296
Corporate and other	-	13,558,337	431,213	13,989,550
Treasury inflation-protected securities	-	3,403,952	-	3,403,952
Equity securities:				
Domestic equity	23,668,902	37	5,431	23,674,370
International equity	15,197,392	-	28	15,197,420
Alternative investments	865	216,701	17,660,135	17,877,701
Total pension fund investments	<u>\$ 38,867,159</u>	<u>\$ 33,806,720</u>	<u>\$ 18,096,807</u>	<u>\$ 90,770,686</u>
GASB 72 - Disclosure (TRSNYC Pension Fund) (In thousands)	2021			
	Level 1	Level 2	Level 3	Total
Investments - at fair value (Notes 2 and 3):				
Short-term investments:				
Commercial paper	\$ -	\$ 867,918	\$ -	\$ 867,918
Short-term investment fund	-	1,028,743	-	1,028,743
U.S. Treasury bills and agencies	-	1,090,552	-	1,090,552
Debt securities:				
U.S. government	-	14,885,336	4,090	14,889,426
Corporate and other	-	16,200,968	234,139	16,435,107
Treasury inflation-protected securities	-	3,594,216	-	3,594,216
Equity securities:				
Domestic equity	30,977,695	6,576	8,398	30,992,669
International equity	19,816,594	-	144,266	19,960,860
Alternative investments	22,602	235,533	13,818,742	14,076,877
Total pension fund investments	<u>\$ 50,816,891</u>	<u>\$ 37,909,842</u>	<u>\$ 14,209,635</u>	<u>\$ 102,936,368</u>

Equity and Debt Securities and Short-Term Investments

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, equity securities, and short-term investments 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 the System's custodian bank.

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED
June 30, 2022 and 2021

Alternative Investments

Alternative investments include Private Equity, Real Estate, Opportunistic Fixed Income, and Infrastructure Investments.

Alternative investments by Asset Class (in thousands)	2022	2021
Infrastructure	\$ 1,699,055	\$ 1,236,015
Opportunistic fixed income	3,211,829	2,891,031
Private equity	7,724,308	6,182,170
Private real estate	5,242,509	3,767,661
	\$ 17,877,701	\$ 14,076,877

These are mainly investments for which exchange quotations are not readily available. They are valued at Net Asset Value (“NAV”) calculated by the GP’s time-lagged valuation policy, and involve estimation. Alternative investments are mainly illiquid and typically not sold or redeemed.

Investments in non-public equity securities are valued by the GP or by the fund administrator using one or more valuation methodologies outlined in GASB 72, depending upon the availability of data required by each methodology. In some cases, the GP may use multiple approaches to estimate a valuation range.

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. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will generally be liquidated within 10 years but in some cases can take longer.

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

Alternative investments are not fully funded upon subscribing to the investment. The GP can draw down or call for capital as the fund goes into more investments or when the need arises, such as expenses associated with the partnership. The residual balance of uncalled capital is also known as “unfunded commitments,” which are restricted to the maximum amount of the limited partners’ total committed amount. The total unfunded commitments for the alternative investments as of June 30, 2022 and 2021 amounted to \$10.9 billion and \$10.3 billion, respectively.

GASB 72 - Disclosure (Variable-Return Funds)
June 30, 2022
(In thousands)

	2022			
	Level 1	Level 2	Level 3	Total
Investments - at fair value				
Diversified Equity Fund:				
Short-term investments	\$ -	\$ 200,645	\$ -	\$ 200,645
Equity securities	14,123,601	212,001	2,446	14,338,048
Debt securities	-	-	-	-
Balanced Fund:				
Short-term investments	-	1,329	-	1,329
Equity securities	538,020	-	-	538,020
International Equity Fund:				
Short-term investments	-	2,465	-	2,465
International equity	185,939	13,647	178	199,764
Sustainable Equity Fund:				
Short-term investments	-	8,653	-	8,653
Equity securities	440,660	-	-	440,660
U.S. Equity Index Fund:				
Equity securities	-	89,677	-	89,677
International equity index fund:				
Equity securities	-	15,034	-	15,034
Total Variable-Return Funds investments	\$ 15,288,220	\$ 543,451	\$ 2,624	\$ 15,834,295

GASB 72 - Disclosure (Variable-Return Funds)
June 30, 2021
(In thousands)

	2021			
	Level 1	Level 2	Level 3	Total
Investments - at fair value				
Diversified Equity Fund:				
Short-term investments	\$ -	\$ 223,020	\$ -	\$ 223,020
Equity securities	17,362,473	519,461	320,869	18,202,803
Debt securities	-	460,224	-	460,224
Balanced Fund:				
Short-term investments	-	2,408	-	2,408
Equity securities	579,001	-	-	579,001
International Equity Fund:				
Short-term investments	-	2,510	-	2,510
International equity	228,965	6,851	4,231	240,047
Sustainable Equity Fund:				
Short-term investments	-	4,502	-	4,502
Equity securities	492,858	-	-	492,858
U.S. Equity Index Fund:				
Equity securities	-	69,282	-	69,282
International equity index fund:				
Equity securities	-	11,766	-	11,766
Total Variable-Return Funds investments	\$ 18,663,297	\$ 1,300,024	\$ 325,100	\$ 20,288,421

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

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

Equity, short-term investments, 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, in which there are few, if any, external observations. Generally, Level 3 includes distressed securities or alternative investments.

NOTE 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.

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%.

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

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 10th anniversary of their membership date or completion of 10 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.

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 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, 2022, based on an actuarial valuation as of June 30, 2020, was \$3.3 billion, and the Statutory Contribution for the year ended June 30, 2021, based on an actuarial valuation as of June 30, 2019, was \$3.1 billion. The Statutory Contributions for Fiscal Years 2022 and 2021 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.

NOTE 5 – QPP NET PENSION LIABILITY

The components of the net pension liability of the Employers at June 30, 2022 and 2021 were as follows:

	<u>2022</u>	<u>2021</u>
	<u>(in millions)</u>	
Total pension liability	\$ 78,721	\$ 78,418
Fiduciary net position *	<u>64,010</u>	<u>78,347</u>
Employers' net pension liability	<u>\$ 14,711</u>	<u>\$ 71</u>
Fiduciary net position as a percentage of the total pension liability	<u>81.3%</u>	<u>99.9%</u>

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

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

Actuarial Methods and Assumptions

The total pension liability as of June 30, 2022 and 2021 was calculated from the actuarial valuations as of June 30, 2021 (Preliminary) and June 30, 2020 (Updated Preliminary), 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 increase 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 AutoCOLA. 2.5% per annum for Escalation.

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

The fiscal year 2021 results reflect changes in the actuarial assumptions and methods from the prior year. These changes reflect refinements and improvements to the actuarial assumptions and methods under the judgement of the Chief Actuary.

The fiscal year 2022 results reflect a change in the plan provisions from the prior year. This change reflects the enactment of Chapter 56 of the Laws of 2022.

Pursuant to Section 96 of the New York City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarially-funded NYCERS are conducted every two years. The most recent of these studies was performed by Bolton, Inc. and included experience through June 30, 2017. Milliman is performing the current experience study that covers the period through June 30, 2021.

On January 17, 2019, the Actuary Issued a Report titled "Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for fiscal years beginning on and after July 1, 2018 for the New York City Teachers' Retirement System." The actuarial assumptions and methods described in that report are referred to as the "2019 A&M."

On July 23, 2021, the Actuary issued a memorandum titled "Proposed Changes to Actuarial Assumptions and Methods." The actuarial assumptions and methods described in that memorandum amend certain assumptions and methods from the 2019 A&M. This revised set of actuarial assumptions and methods are referred to as the "Revised 2021 A&M."

The June 30, 2021 total pension liability was calculated from the Updated Preliminary June 30, 2020 actuarial valuation, which was based on the Revised 2021 A&M.

The June 30, 2022 total pension liability was calculated from the Preliminary June 30, 2021 actuarial valuation (adjusted for Chapter 56 of the Laws of 2022 and certain other post-valuation refinements), which was based on the Revised 2021 A&M.

The Entry Age Normal ("EAN") cost method of funding is utilized by the System's Actuary to calculate the contribution required of the Employer.

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

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

The excess, if any, of the AL over the Actuarial Value of Asset (“AVA”) is the Unfunded Accrued Liability (“UAL”).

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

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

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 as of June 30, 2022 and 2021:

Asset Class	As of June 30, 2022		As of June 30, 2021	
	Target Asset Allocation	Long-Term Expected Real Rate of Return	Target Asset Allocation	Long-Term Expected Real Rate of Return
Public Markets				
U.S. public market equities	25.0%	5.3%	25.0%	4.9%
Developed public market equities	10.0	5.7%	10.0	6.6%
Emerging public market equities	9.5	7.1%	9.5	9.1%
Fixed income	32.5	1.4%	32.5	1.5%
Private Markets (Alternative Investments)				
Private equity	7.0	10.8%	7.0	9.5%
Private real estate	7.0	8.0%	7.0	6.7%
Infrastructure	4.0	7.7%	4.0	5.0%
Opportunistic-fixed income	5.0	6.0%	5.0	6.0%
Total	<u>100.0%</u>		<u>100.0%</u>	

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

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

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 as of June 30, 2022 and 2021:

	<u>1% Decrease (6.0%)</u>	<u>Discount Rate (7.0%)</u>	<u>1% Increase (8.0%)</u>
		(In thousands)	
Employers' net pension liability -			
June 30, 2022	\$ 23,662,403	\$ 14,711,335	\$ 7,192,331
June 30, 2021	\$ 8,727,197	\$ 71,173	\$ (7,201,879)

NOTE 6 – MEMBER LOANS

The balance of member loans receivable for the QPP at June 30, 2022 and June 30, 2021 was \$302.0 million and \$310.4 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 6.0% APR with a 0.1% 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, 2022 and June 30, 2021 was \$418.2 million and \$410.2 million, respectively. Members of the TDA Program are permitted to borrow up to 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.

NOTE 7 – RELATED PARTIES

The Comptroller has been appointed by law as custodian for assets of the QPP and TDA Program with discretionary authority. Securities are held by certain banks under custodial agreements with the Comptroller. The Comptroller, and the NYC Financial Information Services Agency and Office of Payroll Administration ("FISA-OPA"), provide cash receipt and cash disbursement services and financial services; the Office of Actuary ("OA") provides actuarial 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 \$12.8 million and \$12.6 million in Fiscal Years 2022 and 2021, respectively. The City also provides other administrative services.

NOTE 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 are 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 \$91.4 million and \$86.4 million for Fiscal Years 2022 and 2021, respectively. In addition to TRS' administrative expenses, other City agencies attribute the cost for services rendered by them during

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED

June 30, 2022 and 2021

the fiscal year; see Note 7 above. Fiscal Year 2022 Administrative expense includes \$5.3 million due to recognition of interest and amortization expenses as required by GASB No. 87.

In accordance with GASB Statement No. 87, *Leases*, beginning July 1, 2021, the System recognized lease assets and liabilities for office space and mailing system. These lease agreements began in 2015 and 2019, respectively.

In November 2015, the System amended and extended its lease agreement for office space. The agreement will expire on May 31, 2039.

At June 30, 2022, the right to use the office space (asset) amounted to \$161.6 million, net of annual amortization in the amount of \$9.5 million. The office space interest expense under the lease agreement for the year ended June 30, 2022 amounted to \$3.6 million.

At June 30, 2022, the future minimum principal and interest payments required under the lease contracts are as follows (in thousands):

	Beginning Balance	Annual Year-end Interest Accrual	Total Annual Payment	Ending Balance
2023	\$ 166,047	\$ 3,509	\$ (9,540)	\$ 160,016
2024	160,016	3,378	(9,579)	153,815
2025	153,815	3,224	(11,156)	145,883
2026	145,883	3,051	(11,156)	137,778
2027	137,778	2,874	(11,155)	129,497
2028-2032	129,497	11,478	(58,727)	82,248
2033-2037	82,248	5,823	(63,511)	24,560
2037-2039	24,560	489	(25,049)	-

NOTE 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.

DOE Class Action – In 1996, a class action was brought against The City Board of Education and the State under Title VII of the Civil Rights Act of 1964 alleging that the use by the Board of Education of two teacher certification examinations mandated by the State had a disparate impact on minority candidates. In 2006, the United States Court of Appeals for the Second Circuit dismissed the claims against the State. In December 2012, the District Court decided a controlling legal question against The City. On February 4, 2013, the Second Circuit affirmed the District Court's decision. The District Court has appointed a Special Master to oversee claimants' individualized hearings both as to damages and eligibility for Board of Education employment. The hearings relate to members of the class that took the Liberal Arts and Science Test ("LAST") from 1996 to 2004. On June 5, 2015, the Court ruled that a second version of LAST, LAST-2, that was administered from 2004 to 2014, violated Title VII because it did not measure skills necessary to do the job. In August 2015, the Court found that the State's new teacher certification test, the Academic Literacy Skills Test ("ALST"), administered since Spring 2014, was not discriminatory and evaluated skills necessary to do the job. Hearings to determine each claimant's damages, including pension damages, are ongoing. Currently, approximately 5,300 LAST and LAST-2 class members have submitted

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED
June 30, 2022 and 2021

claim forms and may be eligible for damages. While some final judgments have been entered, it is too early to permit an accurate estimation of the ultimate potential cost to The City.

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 recently completed study was published by Bolton, Inc., dated June 2019. Bolton analyzed experience for the 4- and 10-year periods ended June 30, 2017 and made recommendations with respect to the actuarial assumptions and methods based on their analysis. Based, in part, on these recommendations, the Actuary proposed new assumptions and methods for use in determining Employer Contributions for Fiscal Years beginning on and after July 1, 2018. These assumptions and methods were adopted by the Board of Trustees during Fiscal Year 2019 (See Note 5 for more information).

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

Chapter 18 of the Laws of 2012 (“Chapter 18/12”) placed certain limitations on the Tier 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 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.

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED
June 30, 2022 and 2021

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

Chapter 266 of the Laws of 2018 extends the time for members or eligible beneficiaries to file a Notice of Participation in World Trade Center Rescue, Recovery, and Cleanup Operations to September 11, 2022. This law was signed on September 7, 2018, and shall be deemed to have been in full force and effect on and after September 11, 2001.

Chapter 89 of the Laws of 2020 provides death benefits to statutory beneficiaries of members whose death was a result of or was contributed to by Coronavirus Disease ("COVID-19"). This law provides an Accidental Death Benefit to the eligible beneficiaries of a member or a retiree who retired after March 1, 2020, where such member reported for work outside their home and contracted COVID-19 within 45 days after reporting for work, and whose death was caused by COVID-19 or where COVID-19 contributed to such member's death and where such death occurred before January 1, 2021. Amounts payable are reduced by payments of any ordinary death benefits or option benefit paid to another statutory beneficiary. Chapter 78 of 2021 extended the deadline for statutory beneficiaries of members who die prior to January 1, 2023.

Chapter 357 of the Laws of 2021 eliminated TDA beneficiary accounts for beneficiaries of members who die on or after July 1, 2021.

Chapter 391 of the Laws of 2021 extended for a 2-year period the 7% Actuarial Interest Rate assumption.

Chapter 56 of the Laws of 2022, signed on April 9, 2022, was passed as part of the budget and provided for the following three relevant parts:

- **Part HH** waives RSSL 211 and 212 approval and income limitations on retirees as a result of earnings from employment in public schools in the state. It is deemed repealed June 30, 2023.
- **Part SS** excludes certain forms of overtime and extracurricular compensation from the salary used to determine Tier 6 BMC Contribution Rates during the specified period of 2022 through 2024.
- **Part TT** reduces the vesting requirement from 10 years to 5 years for Tier 6 and certain Tier 4 members and allows for retirement with 5 years of service.

Other Legislation

The SECURE Act of December 2019 increased the age at which Required Minimum Distributions must commence from 70.5 to 72. It also required that certain inherited retirement plan accounts be more rapidly distributed to their owners.

The CARES Act of March 2020 suspended Required Minimum Distributions due in 2020. It also authorized more advantageous loans and distributions to members who certify that COVID-19 adversely affected themselves or their households. These special rules sunset on or before December 31, 2020.

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS – CONTINUED
June 30, 2022 and 2021

COVID-19

The outbreak of the COVID-19 has been declared a pandemic by the World Health Organization. The Governor declared a state of emergency in the state on March 7, 2020 and the Mayor declared a state of emergency in The City on March 12, 2020. The Governor declared an end to the state of emergency due to the COVID-19 pandemic in the State on June 24, 2021, effective June 25, 2021. The state of emergency in The City remains in effect. The ultimate impact of the COVID-19 pandemic on the plans cannot be determined at this time.

Teachers' Retirement System of the City of New York

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN

SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS

June 30,
(In thousands)

	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability:									
Service cost	\$ 1,626,586	\$ 1,588,162	\$ 1,555,755	\$ 1,691,144	\$ 1,436,617	\$ 1,386,674	\$ 1,274,308	\$ 1,223,158	\$ 1,205,662
Interest	3,868,974	7,145,949	4,838,801	4,914,552	5,071,481	5,147,042	4,131,177	4,027,139	4,407,702
Changes of benefit terms	14,121	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(297,901)	(393,805)	(34,324)	(1,188,247)	(2,235,673)	1,008,249	1,229,501	1,507,964	-
Changes of assumptions	-	(338,383)	-	(826,850)	-	-	2,432,878	-	-
Benefit payments/withdrawals	(4,909,488)	(4,699,448)	(4,591,086)	(4,487,680)	(4,351,924)	(4,219,312)	(4,107,455)	(4,024,272)	(3,818,248)
Net change in total pension liability	302,292	3,302,475	1,769,146	102,919	(79,499)	3,322,653	4,960,409	2,733,989	1,795,116
Total pension liability - beginning	78,418,471	75,115,996	73,346,850	73,243,931	73,323,430	70,000,777	65,040,368	62,306,379	60,511,262
Total pension liability - ending (a)	78,720,763	78,418,471	75,115,996	73,346,850	73,243,931	73,323,430	70,000,777	65,040,368	62,306,378
Plan fiduciary net position:									
Contributions - employer	3,303,798	3,131,607	3,590,822	3,696,686	3,889,710	3,888,399	3,760,714	3,325,528	3,054,424
Contributions - other employer*	60,581	61,663	61,748	62,513	59,979	57,369	n/a	n/a	n/a
Contributions - employee	273,686	247,751	226,920	217,205	195,241	180,076	173,696	158,590	154,962
Net investment income	(10,853,862)	22,362,988	3,911,187	5,721,310	6,275,115	8,133,280	960,267	1,611,929	9,435,906
Benefit payments/withdrawals	(4,909,488)	(4,699,448)	(4,591,086)	(4,487,680)	(4,351,924)	(4,219,312)	(4,107,455)	(4,024,272)	(3,818,248)
Payment of interest on TDA fixed funds	(2,140,639)	(1,998,388)	(1,846,173)	(1,716,679)	(1,595,462)	(1,466,615)	(1,354,207)	(1,248,988)	(1,147,923)
Administrative expenses	(71,490)	(68,100)	(64,532)	(64,291)	(65,076)	(60,790)	(59,367)	(58,391)	(46,042)
Other changes	(456)	(9,725)	39,853	28,671	29,170	(46,229)	1,233	329	404
Net change in plan fiduciary net position	(14,337,870)	19,028,348	1,328,739	3,457,735	4,436,753	6,466,178	(625,119)	(235,275)	7,633,483
Plan fiduciary net position - beginning	78,347,298	59,318,950	57,990,211	54,532,476	50,095,723	43,629,545	44,254,664	44,489,939	36,856,456
Plan fiduciary net position - ending (b) **	64,009,428	78,347,298	59,318,950	57,990,211	54,532,476	50,095,723	43,629,545	44,254,664	44,489,939
Employer's net pension liability - ending (a)-(b)	\$ 14,711,335	\$ 71,173	\$ 15,797,046	\$ 15,356,639	\$ 18,711,455	\$ 23,227,707	\$ 26,371,232	\$ 20,785,704	\$ 17,816,440
Plan fiduciary net position as a percentage of the total pension liability	81.30%	99.91%	78.97%	79.06%	74.45%	68.32%	62.33%	68.04%	71.41%
Covered payroll	\$ 11,469,453	\$ 11,203,878	\$ 10,903,755	\$ 10,404,404	\$ 9,200,180	\$ 8,818,537	\$ 8,256,100	\$ 8,074,522	\$ 7,964,149
TRS net pension liability as a percentage of covered payroll	128.27%	0.64%	144.88%	147.60%	203.38%	263.40%	319.42%	257.42%	223.71%

Additionally, in accordance with paragraph 50 of GASB No. 67, this schedule should present information for 10 years, if available. The information presented here pertains to periods beginning with the June 30, 2014 fiscal year, the plan's adoption year of GASB No. 67. Additional years will be added until the 10-year requirement is met.

*Includes amounts for Employer'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.

See Report of Independent Certified Public Accountants.

Teachers' Retirement System of the City of New York
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULES OF EMPLOYER CONTRIBUTIONS

Fiscal years ended June 30,
(In thousands)

	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Actuarially determined contribution	\$ 3,303,798	\$ 3,131,607	\$ 3,590,822	\$ 3,696,686	\$ 3,889,710	\$ 3,888,399	\$ 3,702,569	\$ 3,270,007	\$ 2,998,694	\$ 2,855,640
Contributions in relation to the actuarially determined contribution	<u>3,303,798</u>	<u>3,131,607</u>	<u>3,590,822</u>	<u>3,696,686</u>	<u>3,889,710</u>	<u>3,888,399</u>	<u>3,702,569</u>	<u>3,270,007</u>	<u>2,998,694</u>	<u>2,855,640</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered payroll ¹	\$ 11,469,453	\$ 11,203,878	\$ 10,903,755	\$ 10,404,404	\$ 9,200,180	\$ 8,818,537	\$ 8,256,100	\$ 8,074,522	\$ 7,964,149	\$ 7,833,329
Contributions as a percentage of covered payroll	28.805%	27.951%	32.932%	35.530%	42.279%	44.093%	44.846%	40.498%	37.652%	36.455%

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

See Report of Independent Certified Public Accountants.

Teachers' Retirement System of the City of New York

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
 QUALIFIED PENSION PLAN
 SCHEDULES OF EMPLOYER CONTRIBUTIONS

Note to Schedule:

The above actuarially determined contributions were developed using a One-Year Lag Methodology, under which the actuarial valuation determines the Employer contribution for the second following fiscal year (e.g., fiscal year 2022 contributions were determined using an actuarial valuation as of June 30, 2020). The methods and assumptions used to determine the actuarially determined contributions are as follows:

Valuation Dates	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016
Actuarial cost method	Entry age	Entry age	Entry age	Entry age	Entry age
Amortization method for unfunded actuarial accrued liabilities:					
Initial unfunded	Increasing dollar	Increasing dollar	Increasing dollar	Increasing dollar	Increasing dollar
Post-2010 unfunded	Level dollar	Level dollar	Level dollar	Level dollar	Level dollar
Remaining amortization period:					
Initial unfunded	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	16 years (closed)
2010 ERI	-	-	-	-	-
2011 Actuarial gain/loss	6 years (closed)	7 years (closed)	8 years (closed)	9 years (closed)	10 years (closed)
2012 Actuarial gain/loss	7 years (closed)	8 years (closed)	9 years (closed)	10 years (closed)	11 years (closed)
2013 Actuarial gain/loss	8 years (closed)	9 years (closed)	10 years (closed)	11 years (closed)	12 years (closed)
2014 Actuarial gain/loss	9 years (closed)	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)
2014 Assumption change	14 years (closed)	15 years (closed)	16 years (closed)	17 years (closed)	18 years (closed)
2015 Actuarial gain/loss	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)
2016 Actuarial gain/loss	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)
2017 Actuarial gain/loss	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA
2017 ASAF method change	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)	NA
2017 Method change	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)	NA
2017 Assumption change	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)	NA
2018 Actuarial gain/loss	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA
2018 Method change	18 years (closed)	19 years (closed)	20 years (closed)	NA	NA
2019 Actuarial gain/loss	14 years (closed)	15 years (closed)	NA	NA	NA
2019 Assumption change	19 years (closed)	20 years (closed)	NA	NA	NA
2019 Method change	19 years (closed)	20 years (closed)	NA	NA	NA
2020 Actuarial gain/loss	15 years (closed)	NA	NA	NA	NA
2020 Method Change	20 years (closed)	NA	NA	NA	NA
2020 OWBPA	8 years (closed)	NA	NA	NA	NA
Actuarial value of assets method ¹	Five-year moving average of market values with a "Market Value Restart" as of June 30, 2020.	Five-year moving average of market values with a "Market Value Restart" as of June 30, 2019.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AVA 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 AVA 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 AVA is defined to recognize Fiscal Year 2011 investment performance.

¹ As of the June 30, 2014 (Lag) valuation, the AVA is constrained to be no more than 20% from Fair Value. As of the June 30, 2018 (Lag) valuation, the AVA is determined by re-characterizing the interest credited on TDA Fixed Fund account balances as investment income instead of as a cash disbursement.

See Report of Independent Certified Public Accountants.

Teachers' Retirement System of the City of New York

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
 QUALIFIED PENSION PLAN
 SCHEDULES OF EMPLOYER CONTRIBUTIONS

Note to Schedule:

The above actuarially determined contributions were developed using a One-Year Lag Methodology, under which the actuarial valuation determines the Employer contribution for the second following fiscal year (e.g., fiscal year 2022 contributions were determined using an actuarial valuation as of June 30, 2020). The methods and assumptions used to determine the actuarially determined contributions are as follows:

Valuation Dates	June 30, 2015	June 30, 2014	June 30, 2013	June 30, 2012	June 30, 2011
Actuarial cost method	Entry age	Entry age	Entry age	Entry age	Entry age
Amortization method for unfunded actuarial accrued liabilities:					
Initial unfunded	Increasing dollar	Increasing dollar	Increasing dollar	Increasing dollar	Increasing dollar
Post-2010 unfunded	Level dollar	Level dollar	Level dollar	Level dollar	Level dollar
Remaining amortization period:					
Initial unfunded	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)	21 years (closed)
2010 ERI	1 years (closed)	2 years (closed)	3 years (closed)	4 years (closed)	5 years (closed)
2011 Actuarial gain/loss	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)
2012 Actuarial gain/loss	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA
2013 Actuarial gain/loss	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA
2014 Actuarial gain/loss	14 years (closed)	15 years (closed)	NA	NA	NA
2014 Assumption change	19 years (closed)	20 years (closed)	NA	NA	NA
2015 Actuarial gain/loss	15 years (closed)	NA	NA	NA	NA
2016 Actuarial gain/loss	NA	NA	NA	NA	NA
2017 Actuarial gain/loss	NA	NA	NA	NA	NA
2017 ASAF method change	NA	NA	NA	NA	NA
2017 Method change	NA	NA	NA	NA	NA
2017 Assumption change	NA	NA	NA	NA	NA
2018 Actuarial gain/loss	NA	NA	NA	NA	NA
2018 Method change	NA	NA	NA	NA	NA
2019 Actuarial gain/loss	NA	NA	NA	NA	NA
2019 Assumption change	NA	NA	NA	NA	NA
2019 Method change	NA	NA	NA	NA	NA
2020 Actuarial gain/loss	NA	NA	NA	NA	NA
2020 Method Change	NA	NA	NA	NA	NA
2020 OWBPA	NA	NA	NA	NA	NA
Actuarial value of assets method ¹	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AVA 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 AVA 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 AVA 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 AVA 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 AVA is defined to recognize Fiscal Year 2011 investment performance.

¹ As of the June 30, 2014 (Lag) valuation, the AVA is constrained to be no more than 20% from Fair Value. As of the June 30, 2018 (Lag) valuation, the AVA is determined by re-characterizing the interest credited on TDA Fixed Fund account balances as investment income instead of as a cash disbursement.

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Teachers' Retirement System of the City of New York

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
 QUALIFIED PENSION PLAN
 SCHEDULES OF EMPLOYER CONTRIBUTIONS

Valuation Dates	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016
Actuarial assumptions:					
Assumed rate of return ²	7.0% per annum, net of investment expenses.	7.0% per annum, net of investment expenses.	7.0% per annum, net of investment expenses.	7.0% per annum, net of investment expenses.	7.0% per annum, net of investment expenses.
Post-retirement mortality ³	Tables adopted by Retirement Board during Fiscal Year 2019	Tables adopted by Retirement Board during Fiscal Year 2019	Tables adopted by Retirement Board during Fiscal Year 2019	Tables adopted by Retirement Board during Fiscal Year 2019	Tables adopted by Retirement Board during Fiscal Year 2016
Active service: withdrawal, death, disability, service retirement ³	Tables adopted by Retirement Board during Fiscal Year 2019	Tables adopted by Retirement Board during Fiscal Year 2019	Tables adopted by Retirement Board during Fiscal Year 2019	Tables adopted by Retirement Board during Fiscal Year 2019	Tables adopted by Retirement Board during Fiscal Year 2012
Salary increases ²	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.
Cost-of-living adjustments ²	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.

² Developed using a long-term Consumer Price Inflation assumption of 2.5% per year.

³ As of June 30, 2019, applies mortality improvement scale MP-2020 published by the Society of Actuaries to post-retirement mortality, active ordinary death mortality rates, and pre-commencement mortality rates for terminated vesteds. Prior to June 30, 2019, MP-2018 was applied to post-retirement mortality. Prior to June 30, 2017, MP-2015 was applied to post-retirement mortality. Prior to June 30, 2014, Scale AA was applied to post-retirement mortality.

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Teachers' Retirement System of the City of New York

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
 QUALIFIED PENSION PLAN
 SCHEDULES OF EMPLOYER CONTRIBUTIONS

Valuation Dates	June 30, 2015	June 30, 2014	June 30, 2013	June 30, 2012	June 30, 2011
Actuarial assumptions:					
Assumed rate of return ²	7.0% per annum, net of investment expenses.	7.0% per annum, net of investment expenses.	7.0% per annum, net of investment expenses.	7.0% per annum, net of investment expenses.	7.0% per annum, net of investment expenses.
Post-retirement mortality ³	Tables adopted by Retirement Board during Fiscal Year 2016	Tables adopted by Retirement Board during Fiscal Year 2016	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
Active service: withdrawal, death, disability, service retirement ³	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
Salary increases ²	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.
Cost-of-living adjustments ²	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.

² Developed using a long-term Consumer Price Inflation assumption of 2.5% per year.

³ As of June 30, 2019, applies mortality improvement scale MP-2020 published by the Society of Actuaries to post-retirement mortality, active ordinary death mortality rates, and pre-commencement mortality rates for terminated vesteds. Prior to June 30, 2019, MP-2018 was applied to post-retirement mortality. Prior to June 30, 2017, MP-2015 was applied to post-retirement mortality. Prior to June 30, 2014, Scale AA was applied to post-retirement mortality.

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Teachers' Retirement System of the City of New York
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF INVESTMENT RETURNS

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 nine fiscal years:

<u>Fiscal Year Ended</u>	<u>Money- Weighted Rate of Return</u>
June 30, 2022	(-9.72)%
June 30, 2021	24.80%
June 30, 2020	4.92%
June 30, 2019	7.50%
June 30, 2018	8.14%
June 30, 2017	12.50%
June 30, 2016	1.66%
June 30, 2015	2.81%
June 30, 2014	17.60%

Note: In accordance with paragraph 50 of GASB Statement No. 67, *Financial Reporting for Pension Plans* ("GASB 67"), this schedule should present information for 10 years, if available. The information presented here pertains to periods beginning with the June 30, 2014 fiscal year, the System's adoption year of GASB 67. Additional years will be added until the 10-year requirement is met.

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