

BERS

Board of
Education
Retirement
System

of the City of New York

ANNUAL COMPREHENSIVE FINANCIAL REPORT

of the Qualified Pension Plan
and the Tax Deferred Annuity Program

For the Fiscal Years Ended

**June 30
2022**

— and —

**June 30
2021**

A Fiduciary Fund of the City of New York
State of New York

**NEW YORK CITY BOARD OF EDUCATION
RETIREMENT SYSTEM**

A FIDUCIARY FUND
OF THE CITY OF NEW YORK

**ANNUAL COMPREHENSIVE FINANCIAL REPORT
OF THE
QUALIFIED PENSION PLAN
AND THE
TAX DEFERRED ANNUITY PROGRAM**

**FOR THE FISCAL YEARS ENDED
JUNE 30, 2022 AND JUNE 30, 2021**

Prepared by
Sanford R. Rich, Executive Director
Chithra Subramaniam, Director of Fiscal Operations

STATE OF NEW YORK

This page is intentionally left blank

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY

TABLE OF CONTENTS

	PAGE #
INTRODUCTORY Part I	1
• Letter of Transmittal	3
• Board of Trustees	9
• Organization Chart	10
• Consulting and Professional Services	11
• Certificate of Achievement for Excellence in Financial Reporting	12
FINANCIAL Part II	13
• Report of Independent Certified Public Accountants	15
• Management’s Discussion and Analysis (Unaudited)	19
• Combining Financial Statements	
• Combining Statements of Fiduciary Net Position	26
• Combining Statements of Changes in Fiduciary Net Position	28
• Notes to Combining Financial Statements	30
• Required Supplementary Information (Unaudited)	
• Schedule 1- Schedule of Changes in the Employer’s Net Pension Liability and Related Ratios	62
• Schedule 2- Schedules of Employer Contributions	63
• Schedule 3- Schedule of Investment Returns	68
• Additional Supplementary Information	
• Schedule 4- Schedule of Investment Expenses	69
• Schedule 5- Schedule of Administrative Expenses	73
• Schedule 6- Schedule of Direct Payments to Consultants	74
INVESTMENT Part III	75
• Introduction	76
• Report of Investment Activity	77
• Schedule of Investment Returns (Fixed)	82
• Asset Allocation (Fixed)	83
• Largest Equity Holdings (Fixed)	85
• Largest Debt Securities Holdings (Fixed)	86
• Schedule of Investment Management Fees (Fixed)	87
• Schedule of Payments of Commissions to Brokers (Fixed)	90
• Investment Summary (Fixed and Variable)	96

ACTUARIAL Part IV	97
• Actuary’s Certification Letter	99
• Summary of Actuarial Assumptions and Methods	103
• Summary of Active Member Valuation Data	115
• Summary of Plan Membership Data	116
• Schedule of Retirees and Beneficiaries	117
• Actuarial and Statutory Contribution History	118
• Funded Status Based on Entry Age Normal Cost Method	119
• Comparative Summary of Accrued Liabilities Funded by Actuarial Value of Assets (Solvency Test)	120
• Summary of Plan Provisions- Contributions	123
STATISTICAL Part V	125
• Introduction	127
• Schedule of Revenue by Source	128
• Schedule of Expenses by Type	130
• Schedule of Refunds by Type	132
• Schedule of Changes in Net Position	134
• Schedule of Benefit Expenses by Type	138
• Schedule of Retired Members by Type of Benefit	139
• Schedule of Summary of Active Members by Age and Service	142
• Schedule of Annual Average Benefit Payment Amounts	145
• Schedule of Participating Employers	146

**NEW YORK CITY BOARD OF EDUCATION
RETIREMENT SYSTEM**

A FIDUCIARY FUND
OF THE CITY OF NEW YORK

**ANNUAL COMPREHENSIVE FINANCIAL REPORT OF
THE QUALIFIED PENSION PLAN
AND THE
TAX DEFERRED ANNUITY PROGRAM**

**INTRODUCTORY SECTION
PART I**

**FOR THE YEARS ENDED
JUNE 30, 2022 AND JUNE 30, 2021**

This page is intentionally left blank

December 21, 2022

Board of Trustees
Board of Education Retirement System
City of New York
55 Water Street, 50th Floor
New York, NY 10041

Ladies and Gentlemen:

I am pleased to present the Annual Comprehensive Financial Report (“ACFR”) of the New York City Board of Education Retirement System (“BERS”, “Funds”, the “Plan” or the “System”) for the fiscal years ended June 30, 2022, and June 30, 2021. BERS administers the BERS Qualified Pension Plan (the “QPP”) and the BERS Tax Deferred Annuity Program (the “TDA Program”).

The QPP is a cost sharing, multiple employer Public Employee Retirement System (“PERS”) that was created on August 31, 1921. The QPP provides pension benefits to non-pedagogical employees of the Department of Education, certain other specific schools, school crossing guards employed by the New York City Police Department, and certain employees of the New York City School Construction Authority. The QPP combines features of a defined benefit pension plan with those of a defined contribution plan and functions in accordance with existing State statutes and City laws.

The TDA Program became operational on February 1, 1970 and is administered pursuant to the Internal Revenue Code Section 403(b) and existing State statutes and City laws. Certain members of the QPP have the option to participate in the TDA Program, which provides a means of deferring income tax payments on their voluntary tax-deferred contributions until the period after retirement or upon withdrawal of contributions. Contributions to the TDA Program are made by the members only. The TDA Program is maintained as a separate plan.

The responsibility for the accuracy of the data, and the completeness and fairness of the presentation, including all disclosures, rests with BERS. All disclosures necessary to enable the reader to gain an understanding of the system's financial activities have been included. Analysis of the changes that affected BERS fiduciary net position is presented in the Management’s Discussion and Analysis section of this report.

MAJOR LEGAL INITIATIVES - July 1, 2019 through June 30, 2022

Chapter 59 of 2019

Revises the composition of the Board of Education of the City of New York, and hence the BERS Board of Trustees, to include one additional mayoral appointee and one member to be elected by community district education council presidents. This provision takes effect on July 1, 2020.

Chapter 589 of the Laws of 2019

Increases the amount of money a retiree may earn in a position of public service in the year 2020 and thereafter to, \$35,000 from \$30,000.

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 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. Amounts payable are reduced by payments of any ordinary death benefits or option benefit paid to another statutory beneficiary.

Chapter 78 of the Laws of 2021

Establishes a COVID-19 public employee death benefit for individuals who reported to their usual place of employment or an alternate worksite at the direction of their employer on or after March 1, 2020 and such individual contracted COVID-19 within 45 days of reporting to such workplace as confirmed by a laboratory test or by a licensed physician and such individual died on or before December 31, 2022.

Chapter 391 of the Laws of 2021

Extends for two fiscal years until June 30, 2023, the 7% rate of interest used by the Chief Actuary for BERS in valuing the retirement system liabilities for the purpose of computing the amount of Employer contributions. The bill also extends for two fiscal years the rate of interest to be paid into certain constituent funds of The City retirement systems and the 8.25% per annum rate to be credited on AMCs and ITHP reserves for Tier 1 and Tier 2 members.

Chapter 417 of the Laws of 2021

Authorizes political subdivisions to permit any public body to hold meetings remotely and without in-person access during the COVID-19 state disaster emergency until the expiration or termination of the disaster emergency.

Chapter 424 of the Laws of 2021

Expands the definition of a member for World Trade Center purposes to include certain professionals who were in qualifying employment in a qualifying period for a qualifying employer, irrespective of whether such person was a participant in such system at that time, provided they purchased service credit for a period of time that includes some or all of the qualifying period in accordance with applicable law.

Chapter 525 of the Laws of 2021

Places family workers, family assistants, family associates, and parent program assistants under the jurisdiction of BERS instead of TRS, and provides that the membership of paraprofessionals in TRS is mandatory.

Chapter 561 of the Laws of 2021

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, 2026.

Chapter 56 of the Laws of 2022

Enacted into law major components of legislation necessary to implement the state education, labor, housing and family assistance budget for the 2022-2023 state fiscal year and including some reform of the retirement law. This law provides that all BERS members, including Tier 6 members, now become vested with 5 years of credited service; suspends earnings limitations for retirees from April 9, 2022 through June 30, 2023; and revises the Tier 6 contribution rate determination process to disregard overtime between April 1, 2022 and April 1, 2024.

FUNDING

The financial objective of the QPP is to fund members’ retirement benefits during their active service. The employer contributes amounts that, together with member contributions and investment income, would ultimately be sufficient to accumulate assets to pay benefits when due.

The table below summarizes the contribution funding sources for fiscal year 2022 for the QPP.

Funds	Percentage	Contribution (in thousands)
Member Contributions	15.89%	\$ 49,591
Employer Contributions	84.11%	\$ 262,404
Total	100.00%	\$ 311,995

Contributions to the TDA program are made on a voluntarily basis by certain eligible members of the QPP. TDA members who elect to participate in a fixed return fund investment program accounts are credited with the statutory annual rate of interest, currently 7% for members represented by the United Federation of Teachers and 8.25% for all other members. Members can also elect to participate in a variable return fund program.

The Office of the Actuary establishes employer contribution rates which, expressed as a percentage of annualized covered payroll, remain approximately level from year to year. An adequate funding level provides assurance and security for payment of future benefits. In fiscal year 2022, BERS sought to maintain a level of funding within the established guidelines of the Government Accounting Standards Board (“GASB”). As per GASB 67, a defined benefit pension plan is required to report fiduciary net position as a percentage of plan’s total pension liability. As of June 30, 2022, the QPP’s fiduciary net position represents 97.93% of the total pension liability. The funded status of the QPP is expressed by the relationship of assets to liabilities. The ratio of actuarial value of assets to the Entry Age Actuarial Accrued liability, stands at 94.1% as of June 30th, 2020. Funding status has been discussed in detail in the actuarial section of this report.

INVESTMENTS

Investment Summary

The System’s assets are invested in two investment programs. These are the fixed return fund, which is managed by BERS, and the variable return fund, consisting primarily of equity securities, which is managed by the Teachers’ Retirement System (“TRS”).

The Board of Education Retirement System Total Fund from the fixed return program returned -9.01%, net of management fees, for the fiscal year ending June 2022, compared to -8.30% for the Board of Education Policy Benchmark, against which it is measured. Performance for the fiscal year ranked in the 66th percentile of the Wilshire public plans with assets greater than \$1 billion peer group. The Fund decreased in value and ended the fiscal year at \$7.93 billion (compared to \$8.71 billion last year).

As of June 2022, the variable investments held at TRS, decreased to \$660.2 million from \$828.5 million in FY2021. During FY2022, the variable return fund performance was at -20.65% versus +30.62% during FY2021.

Investment Description¹

The Trustees establish a target asset mix after considering the long-term growth prospects of a diversified portfolio of investments and the expected costs of the Plan participants' benefits. Asset allocation is the percentage of fund assets that are in stocks, bonds and private market investments. In order to participate in the broad market performance while keeping Fund expenses low, the Fund invests in passive, index strategies for most of its U.S. public equity allocation.

There were two investment initiatives accomplished in FY 2022. A listed infrastructure Request for Proposal was completed, and the Trustees voted to divest from investments domiciled in Russia. The approved asset allocation implementation plan continues to commit assets to Private Equity, Real Estate, and private Infrastructure investments, while reducing U.S. equities and developed market non-U.S. equities. The Fund's active and passive/indexed managers continue to divest from 29 fossil fuel reserve owners, which responsibly reduces the exposure of the portfolio to carbon risk and mitigates the financial risks resulting from climate change.

The Fund's target asset mix, approved in FY2021, is 47% Equity (including US and Non-US), 14% Alternative Private Markets (including Private equities, Real Estate and Infrastructure), 27% Fixed Income, and 12% Real Assets. Over the long-term, which is the framework for considering the term structure of the Plan's liabilities, we expect our asset allocation will provide asset base growth to meet the benefit payments while protecting principal through diversification.

Investment Policy

BERS' investment policy statement, ratified by the Board of Trustees in January 2009 and amended in October 2011, January 2013, February 2015, June 2016, April 2020, and December 2021. It addresses investment objectives, investment philosophy and strategy, monitoring and evaluating performance, risk management, security lending protocol and rebalancing investment mix. The investment policy is available upon request.

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 Hedge Funds, Private Equity, Real Estate, Opportunistic-Fixed Income, and Infrastructure.

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.

¹ Michael Wright, Segal Marco Advisors, Report on Investment Activity

ECONOMIC AND MARKET COMMENT²

The Fund is diversified across U.S. and non-U.S. markets. In the first half of 2022, the primary factors that drove the decline in the stock market were accelerating inflation, the Federal Reserve tightening monetary policy, the Russia/Ukrainian war and COVID induced shutdowns in China. The sectors that have decreased the most have been technology, consumer discretionary, and industrials.

OTHER INFORMATION

Internal Control

The Executive Director is responsible for establishing and maintaining an internal control structure designed to provide reasonable assurance that the assets of the system are safeguarded and to ensure that adequate accounting data are compiled to allow for the preparation of financial statements in conformity with generally accepted accounting principles. The System's internal control practices are designed to provide reasonable assurance that these objectives are met.

The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived and that the valuation of costs and benefits requires estimates and judgments by management.

Accounting and Reporting

This ACFR has been prepared in conformity with principles of governmental accounting and reporting, promulgated by the Governmental Accounting Standards Board ("GASB"), and according to guidelines adopted and published by the Government Finance Officers Association of the United States and Canada ("GFOA").

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

Independent Audit

The five major retirement systems of the City of New York are required to undergo an annual audit by a firm of certified public accountants, in accordance with generally accepted auditing standards. Grant Thornton LLP, whose opinion is presented in the Financial Section of this report, conducted the audit of the financial statements of BERS for the fiscal year ended June 30, 2022. The five New York City retirement systems also undergo a five-year audit conducted by the New York State Department of Financial Services. During the fiscal year 2020, BERS went through an audit covering fiscal year 2014 thru fiscal year 2018.

Professional Services

The Chief Actuary provides actuarial services for the five major pension systems maintained by the City. The Chief Actuary's actuarial report and certification are included in this ACFR. The New York City Comptroller and the

² Michael Wright, Segal Marco Advisors, Report on Investment Activity

Teachers' Retirement System retain investment managers to assist in the execution of investment policy in accordance with statutory authority, Retirement Board decisions and standard governing fiduciary practices.

Details about the consulting and professional services are mentioned in the introductory section, page 11. Schedule of the investment management fees and the schedule of payments of commissions to brokers are found in the investment section, page 87-95.

Awards

The GFOA awarded a Certificate of Achievement for Excellence in Financial Reporting to BERS for its ACFR for the fiscal year ended June 30, 2021. The Certificate of Achievement is a prestigious national award, recognizing conformance with the highest standards for preparation of a state and local government finance reports. To be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized annual comprehensive financial report, whose contents conform to program standards. The ACFR must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. BERS has received a Certificate of Achievement over the last thirty-six consecutive years. We believe our current report continues to conform to the Certificate of Achievement program requirements and it will be submitted to the GFOA.

Acknowledgments

The dedicated service of the managers and staff of BERS made the preparation of this ACFR, on a timely basis, possible. In addition, our appreciation is extended to those members of the staffs of the Bureaus of Accountancy and Asset Management of the New York City Comptroller's Office and the Office of the Actuary who worked closely with the BERS personnel in the compilation of this report. We hope that the members of the Retirement Board, officials of the Department of Education of the City of New York, our members and the citizens of the City will find this report informative and helpful.

Respectfully submitted,



Sanford R. Rich
Executive Director



NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

FOR THE FISCAL YEAR ENDED JUNE 30, 2022

BOARD OF TRUSTEES

Hon. Vasthi Acosta
Hon. Tom Allon
Hon. Tazin Azad
Hon. David Banks, Chancellor
Hon. Geneal Chacon
Hon. Deborah Dillingham
Hon. Gregory Faulkner
Hon. Angela Green
Hon. Kyle Kimball
Hon. Brad Lander, Comptroller
Hon. Anthony Lopez
Hon. John Maderich
Hon. Donald Nesbit
Hon. Alan Ong
Hon. Kaliris Salas-Ramirez
Hon. Thomas Sheppard
Hon. Karina Taveras
Hon. Gladys Ward

CHANCELLOR'S DESIGNEES

Hon. Russell Buckley

ALTERNATE EMPLOYEE-MEMBERS

Hon. Nicholas Souto
Hon. Shaun Francois

CO-CHAIRS

Hon. John Maderich

Prepared By:

Sanford R. Rich, Executive Director
Chithra Subramaniam, Director of Fiscal Operations

Actuary:

Marek Tyszkiewicz, Chief Actuary

Custodian of the Funds:

Brad Lander, Comptroller of the City of New York
Teachers' Retirement System of the City of New York

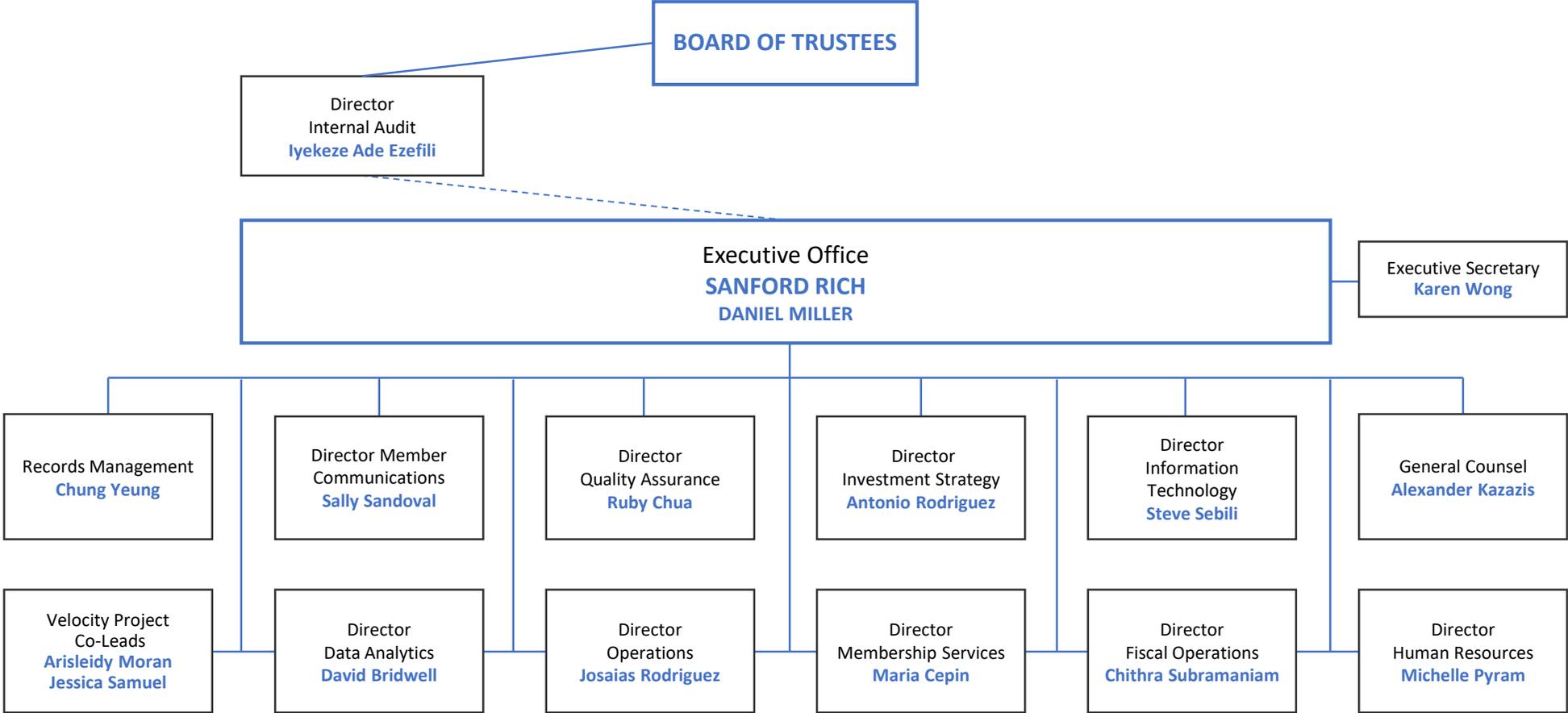
Headquarters Address:

Board of Education Retirement System of the City of New York
55 Water Street, 50th Floor, New York, New York 10041

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

FOR THE FISCAL YEAR ENDED JUNE 30, 2022

BERS Organization Structure



NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

**CONSULTING AND PROFESSIONAL SERVICES
FOR THE FISCAL YEAR ENDED JUNE 30, 2022**

**ACCOUNTING SOFTWARE
CONSULTANT**

RSM US LLP
151 West 42nd Street, Floors 18-20
New York, NY 10036

INTERNAL AUDIT CONSULTANT

Baker Tilly Virchow Krause, LLP
2801 Via Fortuna, Suite 300
Austin, TX 78746

FINANCIAL CONSULTANT

Rutter Associates LLC
60 East 42nd Street, Suite 2816
New York, NY 10165

INVESTMENT CONSULTANT

Aksia TorreyCove Partners LLC
10180 Barnes Canyon Road, Suite 200
San Diego, CA 92121

ACTUARY

Office of the Actuary
255 Greenwich Street, 9th Floor
New York, NY 10007

Segal Marco Advisors

333 West 34th Street
New York, NY 10001

AUDITORS

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

LEGAL CONSULTANT

Groom Law Group, Chartered
Department 0589
Washington, DC 20073

CUSTODIAN OF FUNDS

Office of the Comptroller
1 Centre Street
New York, NY 10007

OPERATIONS CONSULTANT

Segal Company, Inc.
333 West 34th Street
New York, NY 10001

Teachers' Retirement System
of the City of New York
55 Water Street
New York, NY 10041

**VELOCITY PROJECT
CONSULTANT**

Vitech Systems Group, Inc.
401 Park Avenue South, 12th Floor
New York, NY 10016

**HR RESEARCH AND
ADVISORY SERVICES**

McLean & Company
3960 Howard Hughes Parkway, Suite 500
Las Vegas, NV, 89169



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**New York City Board of Education
Retirement System Qualified Pension Plan**

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2021

Christopher P. Morill

Executive Director/CEO

**NEW YORK CITY BOARD OF EDUCATION
RETIREMENT SYSTEM**

A FIDUCIARY FUND
OF THE CITY OF NEW YORK

**ANNUAL COMPREHENSIVE FINANCIAL REPORT OF
THE QUALIFIED PENSION PLAN
AND THE
TAX DEFERRED ANNUITY PROGRAM**

**FINANCIAL SECTION
PART II**

**FOR THE YEARS ENDED
JUNE 30, 2022 AND JUNE 30, 2021**

This page is intentionally left blank

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
New York City Board of Education Retirement System

Opinion

We have audited the combining financial statements of New York City Board of Education Retirement System Qualified Pension Plan and the New York City Board of Education Retirement System Tax-Deferred Annuity Program, which collectively comprise the New York City Board of Education Retirement System (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 - schedules 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.

Supplementary information

Our audit was conducted for the purpose of forming an opinion on the basic combining financial statements as a whole. The schedule of investment expenses, schedule of administrative expenses and schedule of direct payments to consultants (“Additional Supplementary Information”) for the year ended June 30, 2022, are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic combining financial statements. The information has been subjected to the auditing procedures, applied in the audit of the basic combining financial statements and certain additional procedures. These additional procedures included comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic combining financial statements or to the basic combining financial statements themselves, and other additional procedures in accordance with US GAAS. In our opinion, the Additional Supplementary Information is fairly stated, in all material respects, in relation to the basic combining financial statements taken as a whole.

Other information

Management is responsible for the other information. The other information comprises the accompanying Introductory Section, Investment Section, Actuarial Section, and Statistical Section, but does not include the basic combining financial statements and our auditor’s report thereon. Our opinion on the basic combining financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic combining financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic combining financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Grant Thornton LLP

New York, New York

October 26, 2022

(except for the Additional Supplementary Information and the Other information section of our report, as to which the date is December 21, 2022)

This page is intentionally left blank

New York City Board of Education Retirement System
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)

June 30, 2022 and 2021

This narrative discussion and analysis of the New York City Board of Education Retirement System's ("BERS", "Funds", the "Plan" 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 the System's combining financial statements by providing an overall review of the combining financial activities during the years, the effects of significant changes, and a comparison of the prior years' activities and results. This discussion and analysis is intended to be read in conjunction with the System's combining financial statements. The System administers the BERS Qualified Pension Plan (the "QPP") and the BERS Tax-Deferred Annuity Program (the "TDA Program").

OVERVIEW OF 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 accordance with Governmental Accounting Standards Board ("GASB") pronouncements and include the financial statements of the QPP and the TDA Program, are as follows:

- **The Combining Statements of Fiduciary Net Position** - presents the financial position of the System at fiscal year-end. It provides information about: the nature and amounts of resources with present service capacity that the System presently controls (assets); consumption of net assets by the System that is applicable to a future reporting period (deferred outflow of resources); present obligations to sacrifice resources that the System has little or no discretion to avoid (liabilities); and acquisition of net assets by the System that is applicable to a future reporting period (deferred inflow of resources) with the difference between assets/deferred outflow of resources and liabilities/deferred inflow of resources being reported as net position. Investments are shown at fair value. All other assets and liabilities are determined on an accrual basis.
- **The Combining Statements of Changes in Fiduciary Net Position** - presents the results of activities during the fiscal year. All changes affecting the assets/deferred outflow and liabilities/deferred inflow of the System are reflected on an accrual basis when the activity occurred, regardless of the timing of the related cash flows. In that regard, changes in the fair values of investments are included in the year's activity as net appreciation (depreciation) in fair value of investments.
- **The Notes to Combining Financial Statements** - provide additional information that is essential to a full understanding of the data provided in the combining financial statements. The notes present information about the System's accounting policies, significant account balances and activities, material risks, obligations, contingencies and subsequent events, if any.
- **Required Supplementary Information (Unaudited)** - as required by GASB includes the management discussion and analysis (this section) and information presented following the notes to combining financial statements.

FINANCIAL HIGHLIGHTS

QPP Fiduciary Net Position

QPP's net position restricted for pension benefits totaled \$5.88 billion during Fiscal Year 2022, a decrease of 16.58% from Fiscal Year 2021. The decrease was the result of a bear stock market as indicated by the decline in the fair value of investments. The fair value of investments, which includes the collateral from security lending, decreased from \$9.75 billion in Fiscal Year 2021 to \$8.53 billion in Fiscal Year 2022, a decrease of 12.51%. Return on investments stood at -9.41%.

New York City Board of Education Retirement System

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2022 and 2021

During Fiscal Year 2021, QPP's net position restricted for pension benefits stood at \$7.04 billion, an increase of 35.91% from Fiscal Year 2020. The increase in the net position during Fiscal Year 2021 was due to an increase in the fair value of investments. The fair value of investments, including the collateral from security lending, stood at \$9.75 billion, an increase of 32.37% from the Fiscal Year 2020. Return on investments stood at 19.37%.

**QPP Fiduciary Net Position
June 30, 2022, 2021, and 2020
(In thousands)**

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Assets:			
Cash	\$ 7,556	\$ 12,920	\$ 977
Receivables	212,230	304,182	195,190
Investments, at fair value	7,991,279	8,958,857	6,915,714
Collateral from securities lending	541,760	794,242	452,087
Other	319,776	464,473	242,160
Total assets	<u>9,072,601</u>	<u>10,534,674</u>	<u>7,806,128</u>
Liabilities:			
Accounts payable	63,581	78,462	32,441
Payable for investment securities purchased	204,459	436,597	166,434
Accrued benefits payable	12,621	13,150	12,884
Due to the TDA Program's fixed return fund from the System	2,374,096	2,167,983	1,959,392
Payables for securities lending	541,760	794,242	452,087
Total liabilities	<u>3,196,517</u>	<u>3,490,434</u>	<u>2,623,238</u>
Net position restricted for pension benefits	<u>\$ 5,876,084</u>	<u>\$ 7,044,240</u>	<u>\$ 5,182,890</u>

Total receivables decreased from \$304.18 million in Fiscal Year 2021 to \$212.23 million in Fiscal Year 2022, a decrease of 30.23%. The decrease in the receivables was mainly caused by the decrease in the receivables for investment securities sold. Receivables for investment securities sold totaled \$138.29 million in Fiscal Year 2022, a decrease of 40.61% from Fiscal Year 2021. Payables for investment securities purchased also decreased from \$436.60 million in Fiscal Year 2021 to \$204.46 million in Fiscal Year 2022, a decrease of 53.17% from Fiscal Year 2021.

At the close of Fiscal Year 2021, total receivables increased from \$195.19 million in Fiscal Year 2020 to \$304.18 million, an increase of 55.83%. Included in the total receivables are the receivables for investment securities sold, which increased from \$116.43 million in Fiscal Year 2020 to \$232.84 million in Fiscal Year 2021, an increase of 99.97% from Fiscal Year 2020.

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

Member loans stood at \$48.46 million as of June 30th, 2022, an increase of 2.56% from Fiscal Year 2021.

New York City Board of Education Retirement System

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2022 and 2021

The account "Due to the TDA Program's fixed return fund from the System" represents a liability to the TDA program since the TDA Program assets are pooled with QPP assets for investment purposes. The liability for Fiscal Year 2022 stood at \$2.37 billion, an increase of 9.50% from Fiscal Year 2021. This liability includes the TDA member's account balances for deposits in the fixed investment program.

Changes in QPP Fiduciary Net Position

During Fiscal Year 2022, the QPP member contributions increased to \$49.59 million, an increase of 3.04% from Fiscal Year 2021. In Fiscal Year 2021, the QPP member contributions decreased to \$48.12 million, a decrease of 3.29% from Fiscal Year 2020 contributions of \$49.76 million.

**Changes in QPP Program 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	\$ 49,591	\$ 48,125	\$ 49,766
Employer contributions	262,404	182,983	257,503
Net investment income (loss) before securities lending transaction	(805,356)	1,888,731	364,295
Net securities lending income	1,692	1,020	1,472
TDA Program's interest income in the fixed return fund	(191,054)	(171,806)	(155,749)
Other - receipts from (payments to) other retirement systems and other revenues/expenses	<u>(124,188)</u>	<u>239,808</u>	<u>(7,975)</u>
Total additions	<u>(806,911)</u>	<u>2,188,861</u>	<u>509,312</u>
Deductions:			
Benefit payments and withdrawals	325,679	302,336	296,047
Administrative expenses	<u>35,566</u>	<u>25,175</u>	<u>22,207</u>
Total deductions	<u>361,245</u>	<u>327,511</u>	<u>318,254</u>
Net increase (decrease) in net position	(1,168,156)	1,861,350	191,058
Net position restricted for pension benefits:			
Beginning of year	<u>7,044,240</u>	<u>5,182,890</u>	<u>4,991,832</u>
End of year	<u>\$ 5,876,084</u>	<u>\$ 7,044,240</u>	<u>\$ 5,182,890</u>

Employer contributions received through the QPP Program increased from \$182.98 million in the Fiscal Year 2021 to \$262.40 million in the Fiscal Year 2022, an increase of 43.40%. The employer contributions are made on a statutory basis based on the one-year lag methodology.

Fiscal Year 2022 reported a net investment loss of \$805.36 million. Return on investments decreased from 19.37% in the Fiscal Year 2021 to -9.41% in Fiscal Year 2022.

The benefit payments and withdrawals increased from \$302.34 million in the Fiscal Year 2021 to \$325.68 million during the Fiscal Year 2022, an increase of 7.72%. Benefit payments to the retirees increased by 6.64%. During Fiscal Year 2021, the benefits payments and withdrawals increased by 2.12%, from \$296.05 million to \$302.34 million.

New York City Board of Education Retirement System

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2022 and 2021

Administrative expenses increased from \$25.18 million in the Fiscal Year 2021 to \$35.57 million in the Fiscal Year 2022, an increase of \$10.39 million. The increase was primarily due to the amortization of the rental lease payments and the depreciation of the ERP system. During Fiscal Year 2021, administrative expenses stood at \$25.17 million, a net increase of 13.36% from Fiscal Year 2020.

Interest to the TDA Program's fixed return fund represents the statutory interest credited on the TDA Program member account balances. The statutory rate of interest is currently 7.00% for United Federation of Teachers ("UFT") members and 8.25% for all other members. During Fiscal Year 2022, the interest to the TDA Program's fixed return fund stood at \$172.36 million, an increase of \$16.46 million from Fiscal Year 2021. The table below displays revenue (expenses) to the System due to any surplus or deficiency between the actual rate of return on the fixed investments and the statutory rate.

Net Investment Income (Loss) to the System from TDA Member Holdings in Fixed Return Fund*:

Years ended June 30, 2022, 2021, 2020, 2019, and 2018

(In thousands)

	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>
Net investment income (loss)	\$ (791,687)	\$ 1,867,031	\$ 364,638	\$ 403,041	\$ 559,753
TDA percent of fixed assets (average)	25.21%	24.60%	26.22%	25.26%	25.13%
Investment income (loss) on account of TDA investment	\$ (199,622)	\$ 459,255	\$ 95,601	\$ 101,812	\$ 140,661
Less: Statutory interest to TDA**	<u>(172,365)</u>	<u>(155,904)</u>	<u>(142,223)</u>	<u>(128,413)</u>	<u>(115,187)</u>
Revenue (expense) to the System	<u>\$ (371,987)</u>	<u>\$ 303,351</u>	<u>\$ (46,622)</u>	<u>\$ (26,601)</u>	<u>\$ 25,474</u>

*Includes security-lending income

** Prior amounts have been updated to conform to current year presentation and excludes amounts related to the variable return fund

TDA Program Fiduciary Net Position

The TDA program's net position restricted for TDA benefits stood at \$2.74 billion as on June 30th, 2022, a net increase of 8.00% from Fiscal Year 2021. TDA Program's fixed return fund from the System, increased by 9.50% from Fiscal Year 2021. Amount due to the TDA Program's fixed return fund from the System increased from \$2.16 billion in Fiscal Year 2021 to \$2.37 billion in Fiscal Year 2022. Fair value of variable investments including collateral security lending stood at \$637.15 million, a decrease of 19.31%, from Fiscal Year 2021.

During Fiscal Year 2021, the TDA Program's net position restricted for TDA benefits increased to \$2.54 billion, a net increase of \$206.96 million or 8.85% from Fiscal Year 2020. The increase in Fiscal Year 2021 was primarily due to an increase in the fair value of investments and the amounts due to the TDA Program's fixed return fund from the System, which increased by 45.22% and 10.64%, respectively. The TDA Program's total investments including collateral security lending stood at \$789.66 million, an increase of \$245.91 million from Fiscal Year 2020. Amounts due to the TDA Program's fixed return fund from the

New York City Board of Education Retirement System

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2022 and 2021

System increased by 10.64% in the Fiscal Year 2021, from \$1.95 billion for the Fiscal Year 2020 to \$2.16 billion in the Fiscal Year 2021.

TDA Program Fiduciary Net Position

June 30, 2022, 2021, and 2020

(In thousands)

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Assets:			
Cash	\$ 556	\$ 407	\$ 398
Receivables	48,802	46,345	44,400
Due to the TDA Program's fixed return fund from the System	2,374,096	2,167,983	1,959,392
Investments, at fair value	602,475	754,622	540,275
Collateral from securities lending	34,684	35,039	3,480
Total assets	<u>3,060,613</u>	<u>3,004,396</u>	<u>2,547,945</u>
Liabilities:			
Other liability	269,491	414,297	195,228
Payable for investment securities purchased	529	168	711
Accrued benefits payable	8,681	11,174	11,776
Payables for securities lending transactions	34,684	35,039	3,480
Total liabilities	<u>313,385</u>	<u>460,678</u>	<u>211,195</u>
 Net position restricted for TDA benefits	 <u>\$ 2,747,228</u>	 <u>\$ 2,543,718</u>	 <u>\$ 2,336,750</u>

Receivables and payables for investment stood at \$0.27 million and \$0.52 million, respectively, as on June 30th, 2022. Payables for collateral security lending stood at \$34.68 million. The TDA Program's receivables and payables are primarily generated through the timing differences between the trade and settlement dates for investment securities purchased or sold within the variable return fund. Total receivables increased by \$2.45 million during Fiscal Year 2022, an increase of 5.35% from Fiscal Year 2021. Included in these receivables, the TDA Program's member loans outstanding increased from \$44.75 million in the Fiscal Year 2021 to \$47.14 million in the Fiscal Year 2022, an increase of 5.35% from the Fiscal Year 2021.

At the end of Fiscal Year 2021, total receivables increased by \$1.94 million, an increase of 4.38% from Fiscal Year 2020. Included in these receivables, the TDA Program's member loans outstanding increased from \$42.81 million in the Fiscal Year 2020 to \$44.75 million in the Fiscal Year 2021, an increase of 4.51% from the Fiscal Year 2020.

Changes in TDA Program Fiduciary Net Position

During Fiscal Year 2022, member contributions to the TDA Program was at \$111.68 million, contributions marginal increased by 0.09% from fiscal year 2021. The number of contributing members declined by 1.86%. Net investment income decreased from \$233.35 million in the Fiscal Year 2021 to a net loss of \$119.08 million in the Fiscal Year 2022, a decrease of \$352.44 million.

New York City Board of Education Retirement System

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2022 and 2021

During Fiscal Year 2021, member contributions to the TDA Program increased to \$111.58 million, a 1.48% increase from the \$109.94 million contributed in Fiscal Year 2020. Net investment income increased from \$14.91 million in the Fiscal Year 2020 to \$233.35 million in the Fiscal Year 2021, a net increase of \$218.44 million.

Changes in TDA Program 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	\$ 111,685	\$ 111,580	\$ 109,944
Net investment income (loss) before securities lending transaction	(119,188)	233,245	14,838
Net securities lending income	102	112	74
TDA Program's interest income in the fixed return fund	191,054	171,806	155,749
Other - receipts from (payments to) other retirement systems and other revenues/expenses	115,459	(239,773)	2,945
Total additions	<u>299,112</u>	<u>276,970</u>	<u>283,550</u>
Deductions:			
Benefit payments and withdrawals	95,317	69,743	74,051
Administrative expenses	285	259	167
Total deductions	<u>95,602</u>	<u>70,002</u>	<u>74,218</u>
Net increase (decrease) in net position	203,510	206,968	209,332
Net position restricted for TDA benefits:			
Beginning of year	<u>2,543,718</u>	<u>2,336,750</u>	<u>2,127,418</u>
End of year	<u>\$ 2,747,228</u>	<u>\$ 2,543,718</u>	<u>\$ 2,336,750</u>

Benefit payments and withdrawals increased from \$69.74 million in Fiscal Year 2021 to \$95.31 million in Fiscal Year 2022, an increase of \$25.57 million or 36.66%. The increase was primarily due to the increase in the benefit payments for required minimum distributions ("RMD") withdrawals. The waiver for required minimum distributions per the Coronavirus Aid, Relief, and Economic Security Act ("CARES") Act, was not extended to calendar year 2021. The RMD payments increased from \$9.06 million in Fiscal Year 2021 to \$29.84 million in Fiscal Year 2022.

During Fiscal Year 2021, the benefit payments and withdrawals stood at \$69.74 million, a decrease of \$4.30 million from Fiscal Year 2020. The decrease was primarily due to the net impact of the benefit payments towards death benefits and refund payments. The death benefit payments increased from \$20.69 million in Fiscal Year 2020 to \$26.87 million in Fiscal Year 2021, an increase of \$6.17 million from Fiscal Year 2020. The refund payments stood at \$42.40 million in Fiscal Year 2021, a decrease of \$10.47 million from Fiscal Year 2020.

New York City Board of Education Retirement System

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2022 and 2021

Investment Summary

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

Investment Summary

Fair Value

(In thousands)

	June 30, 2022	June 30, 2021	June 30, 2020
Short-term investments	\$ 270,497	\$ 350,053	\$ 256,725
Debt (fixed income) securities	2,103,604	2,585,380	1,954,884
Equity securities	4,147,837	5,238,122	3,298,510
Collective trust funds	92,540	116,667	969,794
Alternative investments	1,979,276	1,423,257	976,076
Collateral from securities lending	576,444	829,281	455,567
	<u>\$ 9,170,198</u>	<u>\$ 10,542,760</u>	<u>\$ 7,911,556</u>
Total			

Because the QPP's liabilities are of a long-term nature, the assets of the QPP and the TDA Programs are invested with a long-term investment horizon. Assets are invested in a diversified portfolio of capital market securities. Investments in these assets are expected to produce higher returns but are also subject to greater volatility and may produce negative returns. The System's investments decreased by 13.02% in Fiscal Year 2022 and increased by 33.26% in the Fiscal Year 2021 and 6.17% in Fiscal Year 2020.

CONTACT INFORMATION

This financial report is designed to provide a general overview of the New York City Board of Education Retirement System's finances. Questions concerning any data provided in this report or requests for additional information should be directed to the Director of Fiscal Operations, New York City Board of Education Retirement System, 55 Water Street, 50th Floor, New York, New York 10041.

New York City Board of Education Retirement System
COMBINING STATEMENT OF FIDUCIARY NET POSITION

June 30, 2022
(In thousands)

	QPP	TDA Program	Eliminations	Total
ASSETS				
Cash	\$ 7,556	\$ 556	\$ -	\$ 8,112
Receivables:				
Investment securities sold	138,290	271	-	138,561
Accrued interest and dividends	25,062	1,382	-	26,444
Member loans	48,461	47,149	-	95,610
Other	417	-	-	417
Total receivables	<u>212,230</u>	<u>48,802</u>	<u>-</u>	<u>261,032</u>
Investments - at fair value: (Notes 2 and 3)				
Fixed return funds:				
Short-term investments:				
Commercial paper	201,539	-	-	201,539
Short-term investment fund	60,875	-	-	60,875
T-bills and discount notes	2,409	-	-	2,409
Debt (fixed income) securities	2,103,604	-	-	2,103,604
Equity securities	3,493,244	-	-	3,493,244
Collective trust funds:				
International equity	1,524	-	-	1,524
Domestic equity	70,349	-	-	70,349
Mortgage debt security	20,493	-	-	20,493
Fixed income	174	-	-	174
Alternative investments	1,979,276	-	-	1,979,276
Collateral from securities lending	538,433	-	-	538,433
Variable return funds:				
Short-term investments	497	5,177	-	5,674
Debt (fixed income) securities	-	-	-	-
Equities	57,295	597,298	-	654,593
Collateral from securities lending	3,327	34,684	-	38,011
Total investments	<u>8,533,039</u>	<u>637,159</u>	<u>-</u>	<u>9,170,198</u>
Due to the TDA Program's fixed return fund from System	-	2,374,096	(2,374,096)	-
Other assets	319,776	-	(269,491)	50,285
Total assets	<u>9,072,601</u>	<u>3,060,613</u>	<u>(2,643,587)</u>	<u>9,489,627</u>
LIABILITIES				
Accounts payable	63,581	-	-	63,581
Other liability	-	269,491	(269,491)	-
Payable for investment securities purchased	204,459	529	-	204,988
Accrued benefits payable	12,621	8,681	-	21,302
Due to the TDA Program's fixed return fund from System	2,374,096	-	(2,374,096)	-
Payables for securities lending	541,760	34,684	-	576,444
Total liabilities	<u>3,196,517</u>	<u>313,385</u>	<u>(2,643,587)</u>	<u>866,315</u>
Net position restricted for benefits:				
Net position restricted for QPP (Qualified Pension Plan) benefits	5,876,084	-	-	5,876,084
Net position restricted for TDA (Tax-Deferred Annuity) benefits	-	2,747,228	-	2,747,228
Total net position restricted for benefits	<u>\$ 5,876,084</u>	<u>\$ 2,747,228</u>	<u>\$ -</u>	<u>\$ 8,623,312</u>

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

New York City Board of Education Retirement System
COMBINING STATEMENT OF FIDUCIARY NET POSITION

June 30, 2021
(In thousands)

	QPP	TDA Program	Eliminations	Total
ASSETS				
Cash	\$ 12,920	\$ 407	\$ -	\$ 13,327
Receivables:				
Investment securities sold	232,846	341	-	233,187
Accrued interest and dividends	23,673	1,252	-	24,925
Member loans	47,251	44,752	-	92,003
Other	412	-	-	412
Total receivables	<u>304,182</u>	<u>46,345</u>	<u>-</u>	<u>350,527</u>
Investments - at fair value: (Notes 2 and 3)				
Fixed return funds:				
Short-term investments:				
Commercial paper	135,880	-	-	135,880
Short-term investment fund	86,487	-	-	86,487
T-bills and discount notes	121,533	-	-	121,533
Debt (fixed income) securities	2,565,100	-	-	2,565,100
Equity securities	4,436,044	-	-	4,436,044
Collective trust funds:				
International equity	1,964	-	-	1,964
Domestic equity	90,709	-	-	90,709
Mortgage debt security	23,482	-	-	23,482
Fixed income	512	-	-	512
Alternative investments	1,423,257	-	-	1,423,257
Collateral from securities lending	790,811	-	-	790,811
Variable return funds:				
Short-term investments	549	5,604	-	6,153
Debt (fixed income) securities	1,809	18,471	-	20,280
Equities	71,531	730,547	-	802,078
Collateral from securities lending	3,431	35,039	-	38,470
Total investments	<u>9,753,099</u>	<u>789,661</u>	<u>-</u>	<u>10,542,760</u>
Due to the TDA Program's fixed return fund from System	-	2,167,983	(2,167,983)	-
Other assets	464,473	-	(414,297)	50,176
Total assets	<u>10,534,674</u>	<u>3,004,396</u>	<u>(2,582,280)</u>	<u>10,956,790</u>
LIABILITIES				
Accounts payable	78,462	-	-	78,462
Other liability	-	414,297	(414,297)	-
Payable for investment securities purchased	436,597	168	-	436,765
Accrued benefits payable	13,150	11,174	-	24,324
Due to the TDA Program's fixed return fund from System	2,167,983	-	(2,167,983)	-
Payables for securities lending	794,242	35,039	-	829,281
Total liabilities	<u>3,490,434</u>	<u>460,678</u>	<u>(2,582,280)</u>	<u>1,368,832</u>
Net position restricted for benefits:				
Net position restricted for QPP (Qualified Pension Plan) benefits	7,044,240	-	-	7,044,240
Net position restricted for TDA (Tax-Deferred Annuity) benefits	-	2,543,718	-	2,543,718
Total net position restricted for benefits	<u>\$ 7,044,240</u>	<u>\$ 2,543,718</u>	<u>\$ -</u>	<u>\$ 9,587,958</u>

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

New York City Board of Education Retirement System

COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

Year ended June 30, 2022

(In thousands)

	<u>QPP</u>	<u>TDA Program</u>	<u>Total</u>
Additions			
Contributions:			
Member contributions	\$ 49,591	\$ 111,685	\$ 161,276
Employer contributions	262,404	-	262,404
Total contributions	<u>311,995</u>	<u>111,685</u>	<u>423,680</u>
Investment income (loss):			
Interest income	130,765	5,165	135,930
Dividend income	101,584	11,873	113,457
Net appreciation (depreciation) in fair value of investments	<u>(976,018)</u>	<u>(134,362)</u>	<u>(1,110,380)</u>
Total investment income (loss)	<u>(743,669)</u>	<u>(117,324)</u>	<u>(860,993)</u>
Less - investment expenses	<u>(61,687)</u>	<u>(1,864)</u>	<u>(63,551)</u>
Net investment income (loss), before securities lending transactions	<u>(805,356)</u>	<u>(119,188)</u>	<u>(924,544)</u>
Securities lending transactions:			
Securities lending income	1,874	114	1,988
Securities lending fees	<u>(182)</u>	<u>(12)</u>	<u>(194)</u>
Net securities lending income	<u>1,692</u>	<u>102</u>	<u>1,794</u>
Net investment income (loss)	<u>(803,664)</u>	<u>(119,086)</u>	<u>(922,750)</u>
Other - receipts from (payments to) other retirement systems and other revenues/expenses	(124,188)	115,459	(8,729)
TDA Program's interest income in the fixed return fund	<u>(191,054)</u>	<u>191,054</u>	<u>-</u>
Total additions	<u>(806,911)</u>	<u>299,112</u>	<u>(507,799)</u>
Deductions			
Benefit payments and withdrawals	325,679	95,317	420,996
Administrative expenses	<u>35,566</u>	<u>285</u>	<u>35,851</u>
Total deductions	<u>361,245</u>	<u>95,602</u>	<u>456,847</u>
Net increase (decrease) in net position	(1,168,156)	203,510	(964,646)
Net position restricted for benefits:			
Beginning of year	<u>7,044,240</u>	<u>2,543,718</u>	<u>9,587,958</u>
End of year	<u>\$ 5,876,084</u>	<u>\$ 2,747,228</u>	<u>\$ 8,623,312</u>

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

New York City Board of Education Retirement System

COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

Year ended June 30, 2021

(In thousands)

	<u>QPP</u>	<u>TDA Program</u>	<u>Total</u>
Additions			
Contributions:			
Member contributions	\$ 48,125	\$ 111,580	\$ 159,705
Employer contributions	182,983	-	182,983
Total contributions	<u>231,108</u>	<u>111,580</u>	<u>342,688</u>
Investment income:			
Interest income	95,613	2,884	98,497
Dividend income	82,601	8,632	91,233
Net appreciation in fair value of investments	1,753,472	222,870	1,976,342
Total investment income	<u>1,931,686</u>	<u>234,386</u>	<u>2,166,072</u>
Less - investment expenses	<u>(42,955)</u>	<u>(1,141)</u>	<u>(44,096)</u>
Net investment income, before securities lending transactions	<u>1,888,731</u>	<u>233,245</u>	<u>2,121,976</u>
Securities lending transactions:			
Securities lending income	1,140	124	1,264
Securities lending fees	(120)	(12)	(132)
Net securities lending income	<u>1,020</u>	<u>112</u>	<u>1,132</u>
Net investment income	<u>1,889,751</u>	<u>233,357</u>	<u>2,123,108</u>
Other - receipts from (payments to) other retirement systems and other revenues/expenses	239,808	(239,773)	35
TDA Program's interest income in the fixed return fund	(171,806)	171,806	-
Total additions	<u>2,188,861</u>	<u>276,970</u>	<u>2,465,831</u>
Deductions			
Benefit payments and withdrawals	302,336	69,743	372,079
Administrative expenses	25,175	259	25,434
Total deductions	<u>327,511</u>	<u>70,002</u>	<u>397,513</u>
Net increase in net position	1,861,350	206,968	2,068,318
Net position restricted for benefits:			
Beginning of year	<u>5,182,890</u>	<u>2,336,750</u>	<u>7,519,640</u>
End of year	<u>\$ 7,044,240</u>	<u>\$ 2,543,718</u>	<u>\$ 9,587,958</u>

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

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS

June 30, 2022 and 2021

NOTE 1 - SYSTEM DESCRIPTION

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”) statutes and City laws). The City’s five major actuarially funded pension systems are the New York City Board of Education Retirement System (“BERS”, “Funds”, the “Plan” or the “System”), the New York City Employees’ Retirement System (“NYCERS”), the Teachers’ Retirement System of the City of New York (“TRS”), the New York City Police Pension 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 other.

BERS administers the BERS Qualified Pension Plan (the “QPP”) and the BERS Tax-Deferred Annuity Program (the “TDA Program”). BERS is the fiduciary for the QPP and the TDA Program, which are included under BERS in the Pension and Other Employee Benefit Trust Funds section of The City’s Annual Comprehensive Financial Report (“ACFR”). 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 QPP is a cost-sharing, multiple-employer pension plan. The QPP provides pension benefits for non-pedagogical employees of the New York City Department of Education, certain other specific schools, and certain employees of the New York City School Construction Authority (collectively, the “Employer”). Substantially, all Department of Education non-pedagogical permanent employees, other than members of TRS, become members of the QPP on the first day of permanent employment. Employees classified as noncompetitive, exempt or provisional by Civil Service are eligible to enroll in the QPP voluntarily. For voluntary enrollment, membership date is governed by the date of filing.

The QPP functions in accordance with existing State statutes and City laws, which establish and amend the benefit terms and the Employer and member contribution requirements. It combines features of a defined benefit pension plan with those of a defined contribution pension plan but is considered a defined benefit pension plan for financial reporting purposes. Contributions are made by the Employer and the members.

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

At June 30, 2022, June 30, 2021, June 30, 2020, June 30, 2019, June 30, 2018, June 30, 2017, and June 30, 2016, the QPP's membership consisted of:

	<u>2022*</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Retirees and beneficiaries receiving benefits	19,979	19,448	19,120	18,502	18,041	17,425	16,937
Terminated vested members not receiving benefits	2,169	1,972	1,972	2,019	1,934	1,528	851
Terminated non-vested members **	12,374	8,922	8,826	11,422	10,525	2,618	2,629
Active members receiving salary	<u>25,629</u>	<u>27,556</u>	<u>28,183</u>	<u>25,825</u>	<u>25,864</u>	<u>25,794</u>	<u>25,864</u>
Total	<u>60,151</u>	<u>57,898</u>	<u>58,101</u>	<u>57,768</u>	<u>56,364</u>	<u>47,365</u>	<u>46,281</u>

* Preliminary figures.

** As of June 30, 2020, represents terminated members (and members deemed to be terminated) who are not vested in a pension benefit but who are eligible to withdraw their employee contribution account balance only. As of June 30, 2018, represents terminated members who are not vested in a pension benefit but who are eligible to withdraw their employee contribution account balance, and members who are no longer on payroll but who are not otherwise classified. Prior to June 30, 2018, represents members who are no longer on payroll but not otherwise classified.

BERS is a fiduciary component unit of The City and is included in The City's Annual Report as a Pension and Other Employee Benefit Trust Fund.

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

The TDA Program participants consisted of the following as of June 30:

	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Contributing members	18,205	18,551	19,148	18,881	17,899	16,917	16,113
Retired members with TDA balances	8,124	7,628	7,102	6,798	6,484	6,673	5,844

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

Summary of Benefits

QPP Benefits

The New York State Constitution provides that pension rights of public employees are contractual and shall not be diminished or impaired. In 1973, 1976, 1983, 2012, and 2022, 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 based on the year when an employee joined the QPP. A brief overview follows:

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

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

- For all members who enrolled in the QPP prior to July 27, 1976 (“Tier 1” and “Tier 2”), ITHP contributions made on their behalf as well as their own contributions are invested, at their election, in either the fixed return fund or the variable return fund, or 50% of such contributions in each. These investment elections can be changed every two years. The QPP guaranteed a 7.5% return on member contributions or ITHP contributions to the fixed return fund until June 30, 1982, increased the guaranteed return to 8% as of July 1, 1982, and to 8.25% as of July 1, 1988, for members who enrolled in the QPP prior to July 27, 1976 (5% on member contributions for members enrolled on or after July 27, 1976). The variable return fund includes only member contributions and ITHP contributions made on their behalf as described above and is expressed in terms of units, which are valued monthly, based on investment experience.
- Certain members of Tier 1 and Tier 2 have the right to make voluntary member contributions (“Voluntary Contributions”) in excess of their required member contributions (“Required Contributions”). The investment of the Voluntary Contributions and the Required Contributions is directed by each member. A member may invest: (1) in the QPP’s fixed return fund, which is credited with interest at the Statutory Interest Rate (currently 8.25% (7.0% for United Federation of Teachers (“UFT”) members)); and/or (2) in the QPP’s variable return fund. At the time of retirement or refund of contributions, a member’s aggregate balance of actual Required Contributions and Voluntary Contributions, including the actual accumulated earnings thereon, less the outstanding balance of any member loans (“Net Actual Contributions”), may exceed (“Excess

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

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 \$2.50 million and \$2.62 million, for the years ended June 30, 2022 and 2021, respectively. Actuarial estimates of the impacts of Excesses and Deficiencies are incorporated into the calculation of the QPP’s net pension liability (see Note 5).

- Members who joined after July 1, 1973 and before July 27, 1976 (“Tier 2”) have provisions similar to Tier 1, except that the eligibility requirements for retirement and the salary base for benefits are different and there was a limitation on their maximum benefit. Also, certain members retiring prior to age 62 may have their benefit reduced by an age-based factor. This maximum benefit limitation was subsequently eliminated under Chapter 574 of the Laws of 2000 for all Tier 2 members who retired after December 8, 2000. Tier 2 members contribute on the basis of a normal rate of contribution which is assigned by the QPP at membership, and which is dependent upon age and actuarial tables in effect at the time of membership.
- Members who joined the QPP on or after July 27, 1976 and prior to September 1, 1983 (“Tier 3”) were originally entitled to a retirement benefit upon the completion of 10 years of service at age 62. The formula for this benefit was 1.67% of “Final Average Salary” (“FAS”) per year of credited service for members with less than 20 years of service, or 2% of FAS per year of service for members with 20 to 30 years of service. Tier 3 benefits were reduced by one half of the primary Social Security benefit attributable to service with the Employer and provided an annual cost-of-living escalator in pension benefits of not more than 3%. Tier 3 required member contributions of 3% of salary for a period not to exceed 30 years. After September 1, 1983, all Tier 3 members were mandated into the Tier 4 plan. However, these members retain their Tier 3 rights. Effective October 1, 2000, Tier 4 members with Tier 3 rights, like other Tier 4 members, are not required to make contributions once the 10th anniversary of their membership date has passed, or upon completion of 10 years of credited service, whichever is earlier, and are eligible for a pension upon the completion of five years of credited service at age 62.
- Members who joined the QPP on or after September 1, 1983 and prior to April 1, 2012 (“Tier 4”) are eligible for a pension upon the completion of five years of credited service at age 62. The annual benefit is 1.67% of FAS per year of service for members with less than 20 years of service, or 2% of FAS per year of service for members with 20 to 30 years of service, plus an addition of 1.5% of FAS per year of service for service in excess of 30 years of service. Tier 4 members were originally required to make contributions of 3% of salary until termination of service. As of October 1, 2000, these members are not required to make contributions after the 10th anniversary of their membership date or upon completion of 10 years of credited service, whichever is earlier (Chapter 126 of Laws of 2000). Certain members retiring prior to age 62 have their benefit reduced by an age-based factor.
- Effective June 28, 1995, active Tier 2 and Tier 4 members, excluding those who hold a position represented by the recognized teacher organization for collective bargaining purposes (currently, the UFT), were eligible to enroll in an early retirement program permitting them to retire at age 55 with 25 years of credited service (“55/25”), with no age reduction factor to their retirement allowance, or at age 50 with 25 years of credited service in a physically taxing position (Chapter 96 of the Laws of 1995). Additionally, Tier 4 members in non-UFT positions who joined BERS on or after June 28, 1995 and before April 1, 2012 were mandated into an early retirement program permitting them to retire at age 57 with 5 years of credited service (“57/5”), with no age reduction

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

factor to their retirement allowance, or at age 50 with 25 years of credited service in a physically taxing position. Participants in the 55/25 and 57/5 early retirement programs are required to remit additional contributions of 1.85%, or 3.83% for physically taxing positions.

- Effective February 27, 2008, active Tier 4 members who hold a position represented by the recognized teacher organization for collective bargaining purposes (currently, UFT) were eligible to enroll in an early retirement program permitting them to retire at age 55 with 25 years of credited service ("55/25 UFT"), with no age reduction factor to their retirement allowance (Chapter 19 of the Laws of 2008). Those choosing the age 55 retirement option are required to make additional contributions of 1.85% of salary from February 28, 2008 until June 29, 2008, or until they have accumulated 25 years of credited service, whichever is later. UFT members in eligible titles who joined after February 27, 2008, but before December 10, 2009 were automatically enrolled in the 55/27 retirement program. Participants in the 55/27 retirement may retire if they are at least age 55 as of their retirement date and have attained at least 27 years of credited service. These members are required to make additional plan contributions of 1.85% of salary until they have accumulated 27 years of credited service.
- UFT members in covered titles who joined the QPP after December 10, 2009 and prior to April 1, 2012 are covered by 55/27 UFT but are required to make contributions of 4.85% of salary until they have 27 years of credited service and contributions of 1.85% of salary thereafter (Chapter 504 of the Laws of 2009).
- Members who join the QPP on or after April 1, 2012 are subject to the provisions of Chapter 18 of the Laws of 2012 ("Chapter 18/12"), also known as "Tier 6". BERS members in Tier 6 are eligible for a pension upon the completion of 10 years of credited service at age 63. The annual benefit is 1.67% of FAS for the first 20 years of credited service, or 35% upon the attainment of 20 years of service plus an addition of 2% of FAS per year of service for service in excess of 20 years of service. Additionally, the FAS period is five years, rather than three, and a cap is imposed on the maximum permissible FAS. Tier 6 members are required to make Basic Member Contributions ("BMC") until they separate from service or until they retire. The BMC rate is dependent on annual wages earned during a plan year and ranges from 3% for salaries less than \$45,000 to 6% for salaries greater than \$100,000. Tier 6 members become vested after 10 years of service.
- Under all service retirement categories, annuities attributable to member contributions are reduced on an actuarial basis for any loans with unpaid balances outstanding at the date of retirement.
- The QPP provides death benefits and retirement benefits on the occurrence of accidental or ordinary disability.
- During the Spring 2000 session, the State Legislature approved and the State Governor ("Governor") signed laws that provide automatic Cost-of-Living Adjustments ("COLA") for certain retirees and beneficiaries (Chapter 125 of the Laws of 2000). It also provides additional service credits for certain Tier 1 and Tier 2 members and reduced member contributions for certain Tier 3 and Tier 4 members (Chapter 126 of the Laws of 2000). 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 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.

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

- 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 Tier 6 vesting requirement from 10 years to 5 years and allows for retirement with 5 years of service.

TDA Program Benefits

Contributions to the TDA Program are made by the members only and are voluntary. In order to contribute to the TDA Program, certain active members of the QPP are required to submit a salary reduction agreement and TDA enrollment request. A participant may elect to exclude an amount of his or her compensation from current taxable income (within the maximum allowed by the Internal Revenue Service ("IRS")) by contributing it to the TDA Program. The basic contribution limit, as of 2022 is \$20,500. Participants, who have attained age 50, are permitted to make additional contributions. The additional contribution limit for 2022 is \$6,500. Additionally, participants can elect to invest their contributions in either the fixed return fund or the variable return fund.

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

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

Contributions made after December 31, 1988, and investment earnings credited after that date, may only be withdrawn by active participants upon attainment of age 59½ or for reasons of hardship (as defined by IRS regulations).

Contributions made on or before December 31, 1989, and earnings credited on or before that date, may be withdrawn by active participants even before age 59½. A member who has received a hardship withdrawal may continue to contribute to the TDA Program for the remainder of the current year.

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

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

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

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

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2022 and 2021

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

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 a flow of economic resources. Revenues are recognized in the accounting period in which they are earned, and expenses are recognized in the period incurred. Contributions from members are recognized when respective employers make payroll deductions from the QPP's members and the TDA Program participants. Employer contributions to the QPP are recognized when due and the Employer has made a formal commitment to provide the contributions. Benefit payments and withdrawals are recognized when due and payable in accordance with the terms of governing 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.

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

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 Hedge Funds, Private Equity, Real Estate, Opportunistic-Fixed Income, and Infrastructure.

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

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

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

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

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

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

Accounts Payable - Accounts payable is principally comprised of amounts owed by BERS for overdrawn bank balances, accrued administrative and investment expenses. BERS's practice is to fully invest cash balances in most bank accounts on a daily basis. Overdrawn balances result primarily from outstanding benefit checks that are presented to the banks for payment on a daily basis and these balances are routinely settled each day.

Accrued Benefits Payable - Accrued benefits payable represent benefits due and unpaid by the QPP and the TDA Program for the Fiscal Year ended on June 30.

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

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.

Securities Lending Transactions - State statutes and Board policies permit the System to lend its investments to broker-dealers and other entities for collateral, for the same securities in the future with a simultaneous agreement to return the collateral in the form of cash, U.S. Treasury and U.S. Government securities. The Systems' agent lends the following types of securities: short-term securities, common stocks, long-term corporate bonds, U.S. Government and U.S. Government agency bonds, asset-backed securities, and international equities and bonds held in collective investment funds. In return, the System receives collateral in the form of cash, U.S. Treasury and U.S. Government agency securities at 100% to 105% of the principal plus accrued interest for reinvestment. At June 30, 2022 and 2021, management believes that the System has 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. The contracts with the System's Securities Lending Agent (the "Agent") require the Agent to indemnify the System 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 System or the borrowers. Cash collateral is invested by the securities lending agent using approved Lender's Investment guidelines. The weighted-average maturity is 53.12 days for collateral investments.

The securities lending program in which the System participates only allows pledging or selling securities in the case of borrower default.

GASB Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions*, requires that securities loaned as assets and related liabilities be reported in the statements of fiduciary net position. Cash received as collateral on securities lending transactions and investments made with that cash are reported as assets. Securities received as collateral are also reported as assets if the government entity has the ability to pledge or sell them without a borrower default. Accordingly, the System recorded the investments purchased with the cash collateral as collateral from securities lending with a corresponding liability for securities lending. Securities on loan are carried at market value, the values reported by the QPP as of June 30, 2022 and 2021 are \$526.46 million and \$774.48 million, respectively. As of net position date, the maturities of the investments made with cash collateral on average exceed the maturities of the securities loans by approximately 44.52 days.

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.

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

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.

New Accounting Standards Adopted

GASB Statement No. 87, *Leases*, improves the usefulness of governmental financial statements to users by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. Management has evaluated all leases and determined there was no material impact as a result of adoption of GASB Statement No. 87.

GASB Statement No. 97, *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans*, 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 of the City of New York (the "Comptroller") acts as an investment advisor to BERS. In addition, BERS employs staff and independent investment consultants as an investment advisor. BERS utilizes several investment managers to manage the long-term debt and equity portfolios. The managers are regularly reviewed, with regard to both their investment performance and their adherence to investment guidelines.

The BERS investment policy statement was ratified by the Board of Trustees in January 2009 and amended in October 2011, January 2013, February 2015, June 2016, April 2020, and December 2021. It addresses investment objectives, investment philosophy and strategy, monitoring and evaluating performance, risk management, security lending protocol and rebalancing investment mix. Assets may be invested in fixed income, equity and other vehicles as permitted by RSSL § 176-178(a) and Banking Law § 235, the New York City Administrative Code and the Legal Investments for New York Savings Banks list as published by the New York State Banking Department. However, investments up to 25% of total System assets may be made in instruments not expressly permitted by the RSSL.

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

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

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2022 and 2021

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

- a. Fixed income, equity and other investments may be made as permitted by RSSL § 176-178(a) and Banking Law § 235, the New York City Administrative Code, and the Legal Investments for New York Savings Banks list as published by The New York State Banking Department, subject to Note 3(b).
- b. Investments up to 25% of total pension fund assets may be made in instruments not expressly permitted by the RSSL.

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

Concentrations - In accordance with RSSL § 177, no investment in any individual company may represent more than 2% of the Plan's total net assets or 5% of the company's total outstanding shares. Exclusions apply for 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.

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

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 fund's investments, 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 Fixed Funds June 30, 2022	Moody's Quality Ratings																			
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa & Below	Not Rated	Total	
U.S. government	41.59%	-%	0.01%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	0.49%	42.09%	
Corporate bonds	1.32%	0.04%	0.14%	0.05%	1.27%	2.08%	1.53%	2.88%	2.90%	4.01%	3.06%	4.14%	4.84%	4.71%	4.24%	3.08%	2.88%	3.72%	46.89%	
Short term:																				
Commercial paper	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	8.50%	8.50%
STIF	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	2.52%	2.52%
Portfolio	42.91%	0.04%	0.15%	0.05%	1.27%	2.08%	1.53%	2.88%	2.90%	4.01%	3.06%	4.14%	4.84%	4.71%	4.24%	3.08%	2.88%	15.23%	100.00%	

Investment Type Fixed Funds June 30, 2021	Moody's Quality Ratings																			
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa & Below	Not Rated	Total	
U.S. government	43.72%	0.02%	0.01%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	4.69%	48.44%	
Corporate bonds	1.00%	0.12%	0.22%	0.15%	0.60%	2.69%	2.01%	2.57%	3.09%	3.64%	2.78%	3.49%	4.35%	4.89%	3.29%	3.06%	3.55%	2.60%	44.10%	
Short term:																				
Commercial paper	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	4.49%	4.49%
STIF	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	2.97%	2.97%
Portfolio	44.72%	0.14%	0.23%	0.15%	0.60%	2.69%	2.01%	2.57%	3.09%	3.64%	2.78%	3.49%	4.35%	4.89%	3.29%	3.06%	3.55%	14.75%	100.00%	

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2022 and 2021

The quality ratings of investments of the variable return fund, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2022 and 2021, are as follows:

Investment Type Variable Funds June 30, 2022	Moody's Quality Ratings																				
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Not Rated	Total	
Corporate bond	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	
Short term:																					
U.S. Treasury bills	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	
Money market	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	100.00%	100.00%	
Cash equivalent	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	
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>-%</u>	<u>100.00%</u>	<u>100.00%</u>

Investment Type Variable Funds June 30, 2021	Moody's Quality Ratings																			
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Not Rated	Total
Corporate bond	-%	-%	-%	-%	-%	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	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	34.48%	34.48%
Cash equivalent	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%
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>-%</u>	<u>94.93%</u>	<u>100.00%</u>

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

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 Funds will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are not registered in the name of the Funds and are held by either the counterparty or the counterparty's trust department or agent but not in the name of the Funds. Consistent with the Funds' investment policy, the investments are held by the Funds' custodian and registered in the name of the Funds. All of the Funds' deposits are insured by the Federal Deposit Insurance Corporation ("FDIC") are collateralized by securities held by a financial institution separate from the Funds' depository financial institution. However, the System's cash balances can exceed FDIC insured limits. Non-invested cash is swept into a State Street Short-Term Investment Intraday account, which is not FDIC insured.

Interest Rate Risk - The risk that the value of debt securities will be affected by fluctuations in market interest rates. Although there is no formal interest rate risk management policy, the duration of the portfolio, relative to the duration of the portfolio's benchmark, is monitored by the Comptroller's Bureau of Asset Management. The lengths of investment maturities for fixed return fund (in years), as shown by the percent of the rated portfolio, at June 30, 2022 and 2021 are as follows:

Years to Maturity Investment Type 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	42.09%	0.13%	14.48%	9.20%	18.28%
Corporate bonds	46.89	0.47	15.38	22.15	8.89
Short term:					
Commercial paper	8.50	8.50	-	-	-
STIF	2.52	2.52	-	-	-
Portfolio	100.00%	11.62%	29.86%	31.35%	27.17%

Years to Maturity Investment Type 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	48.44%	4.18%	16.03%	9.28%	18.95%
Corporate bonds	44.10	0.32	12.07	22.32	9.39
Short term:					
Commercial paper	4.49	4.49	-	-	-
STIF	2.97	2.97	-	-	-
Portfolio	100.00%	11.96%	28.10%	31.60%	28.34%

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

The lengths of investment maturities (in years) of the variable return fund, as shown by the percent of the rated portfolio, at June 30, 2022 and 2021 are as follows:

Years to Maturity Investment Type 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	100.00	100.00	-	-	-
Cash equivalent	-	-	-	-	-
Portfolio	<u>100.00%</u>	<u>100.00%</u>	<u>00.00%</u>	<u>00.00%</u>	<u>00.00%</u>

Years to Maturity Investment Type 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	34.48	34.48	-	-	-
Cash equivalent	-	-	-	-	-
Portfolio	<u>100.00%</u>	<u>36.34%</u>	<u>47.68%</u>	<u>14.20%</u>	<u>1.78%</u>

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

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2022 and 2021

In addition, the System has investments in foreign stocks and/or bonds denominated in foreign currencies. The System's foreign currency exposures as of June 30, 2022 and 2021 in the fixed return fund are as follows (amounts in thousands of U.S. dollars):

Trade Currency	June 30, 2022	June 30, 2021
Euro Currency	\$ 399,346	\$ 450,512
Hong Kong Dollar	165,590	184,131
Japanese Yen	99,424	123,174
British Pound Sterling	82,246	138,600
New Taiwan Dollar	73,494	98,913
Indian Rupee	59,754	74,723
South Korean Won	54,312	83,860
Swiss Franc	45,286	64,073
Canadian Dollar	30,829	28,712
Australian Dollar	26,100	36,109
Brazilian Real	24,164	39,439
Singapore Dollar	23,084	17,983
Danish Krone	21,422	29,362
Chinese Yuan (Offshore)	19,625	20,736
Swedish Krona	16,675	24,197
South African Rand	16,333	24,268
Chinese Renminbi	14,007	35,365
Thailand Baht	12,896	4,269
Polish Zloty	8,067	12,817
Norwegian Krone	7,302	15,499
Indonesian Rupiah	6,114	3,853
Mexican Peso	6,084	3,506
Malaysian Ringgit	4,461	3,376
New Israeli Shekel	2,630	749
Qatari Rial	2,481	335
Hungarian Forint	1,977	2,780
Czech Koruna	1,941	594
UAE Dirham	1,913	230
Turkish Lira	1,623	2,499
Kuwaiti Dinar	1,487	13
Chilean Peso	569	999
New Zealand Dollar	415	237
Philippine Peso	56	85
Egyptian Pound	20	62
Colombian Peso	13	16
Russian Ruble	1	103
Pakistan Rupee	-	1
	<u>\$ 1,231,741</u>	<u>\$ 1,526,180</u>

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

The foreign currency exposures of the variable return funds as of June 30, 2022 and 2021 are as follows (amounts in thousands of U.S. dollars):

Trade Currency	June 30, 2022	June 30, 2021
Euro Currency	\$ 32,901	\$ 39,174
Japanese Yen	20,752	23,994
British Pound Sterling	16,776	18,221
Hong Kong Dollar	12,286	12,128
Swiss Franc	9,490	9,744
South Korean Won	7,064	8,703
Indian Rupee	5,602	5,613
Australian Dollar	5,221	5,614
Taiwan Dollar	4,507	5,806
Canadian Dollar	2,917	3,948
Swedish Krona	2,865	3,578
South African Rand	2,525	1,810
Danish Krone	2,407	3,119
Brazilian Real	2,110	2,382
Singapore Dollar	1,760	1,331
Mexican Nuevo Peso	1,550	950
Chinese Renminbi (Yuan)	1,475	1,635
Indonesian Rupiah	1,025	649
Thailand Baht	932	692
Norwegian Krone	781	961
Polish Zloty	602	525
UAE Dirham	528	317
Saudi Arabian Ryal	479	790
Malaysian Ringgit	424	161
Turkish Lira	399	252
Russian Ruble	376	144
Egyptian Pound	302	268
Israeli Shekel	298	249
New Zealand Dollar	268	399
Czech Koruna	161	2
Hungarian Forint	57	10
Chilean Peso	31	42
Philippine Peso	24	1
Peruvian Nuevo Sol	3	-
Total	<u>\$ 138,898</u>	<u>\$ 153,212</u>

New York City Board of Education Retirement System
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 at June 30, 2022 and 2021 are as follows:

Investment Type and Fair Value - Fixed Return Fund
 Securities Lending Transactions
 June 30, 2022
 (In thousands)

	Moody's Quality Ratings											Total
	Aaa	Aa	A1	A2	A3	Baa	Ba	B	Caa	Ca	Not Rated	
U.S. government												
Short term:												
Tri Party Repo	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Reverse repurchase agreements	-	-	-	76,563	147,300	6,315	-	-	-	-	207,773	437,951
Money market	32,692	-	-	-	-	-	-	-	-	-	18,506	51,198
Overnight Citibank account	-	-	-	-	-	-	-	-	-	-	-	-
Cash or cash equivalent	-	-	54,350	-	-	-	-	-	-	-	-	54,350
Under/over invested cash collateral	-	-	-	-	-	-	-	-	-	-	(5,066)	(5,066)
Total	\$ 32,692	\$ -	\$ 54,350	\$ 76,563	\$ 147,300	\$ 6,315	\$ -	\$ -	\$ -	\$ -	\$ 221,213	\$ 538,433
Percent of securities lending portfolio	6.07%	-%	10.09%	14.22%	27.36%	1.17%	-%	-%	-%	-%	41.09%	100.00%

Investment Type and Fair Value - Fixed Return Fund
 Securities Lending Transactions
 June 30, 2021
 (In thousands)

	Moody's Quality Ratings											Total
	Aaa	Aa	A1	A2	A3	Baa	Ba	B	Caa	Ca	Not Rated	
U.S. government												
Short term:												
Tri Party Repo	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 389,546	\$ 389,546
Money market	321,584	-	-	-	-	-	-	-	-	-	-	321,584
Overnight Citibank account	-	-	79,014	-	-	-	-	-	-	-	-	79,014
Uninvested	-	-	-	-	-	-	-	-	-	-	667	667
Total	\$ 321,584	\$ -	\$ 79,014	\$ -	\$ 390,213	\$ 790,811						
Percent of securities lending portfolio	40.66%	-%	10.00%	-%	-%	-%	-%	-%	-%	-%	49.34%	100.00%

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

Investment Type and Fair Value - Variable Return Fund
 Securities Lending Transactions
 June 30, 2022
 (In thousands)

	Moody's Quality Ratings																	Not Rated	Total		
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba	B1	B2	B3	Caa				
U.S. government	\$ 32,524	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 32,524	
Short term:																					
U.S. Treasury bills	281	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	281	
Repurchase agreements	3,711	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,495	5,206
Uninvested	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	\$ 36,516	\$ -	\$ 1,495	\$ 38,011																	
By percent	96.07%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	3.93%	100.00%

Investment Type and Fair Value - Variable Return Fund
 Securities Lending Transactions
 June 30, 2021
 (In thousands)

	Moody's Quality Ratings																	Not Rated	Total			
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba	B1	B2	B3	Caa					
U.S. government	\$ 31,286	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 31,286	
Short term:																						
U.S. Treasury bills	1,409	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,409	
Repurchase agreements	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,774	5,774
Uninvested	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Total	\$ 32,695	\$ -	\$ 5,775	\$ 38,470																		
By percent	84.99%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	15.01%	100.00%	

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

Interest Rate Risk - The lengths of investment maturities of the collateral for Securities Lending at June 30, 2022 and 2021 are as follows:

Years to Maturity Fixed Return Fund June 30, 2022 (In thousands)	Investment Maturities (in Years)				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. government	\$ -	\$ -	\$ -	\$ -	\$ -
Short term:					
Tri Party Repo	-	-	-	-	-
Reverse repurchase agreements	437,951	437,951	-	-	-
Money market	51,198	51,198	-	-	-
Overnight Citibank account	-	-	-	-	-
Cash or cash equivalent	54,350	54,350	-	-	-
Uninvested	-	-	-	-	-
Under/over invested cash Collateral	(5,066)	(5,066)	-	-	-
Total	\$ 538,433	\$ 538,433	\$ -	\$ -	\$ -
By percent	100.00%	100.00%	-%	-%	-%

Years to Maturity Fixed Return Fund June 30, 2021 (In thousands)	Investment Maturities (in Years)				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. government	\$ -	\$ -	\$ -	\$ -	\$ -
Short term:					
Tri Party Repo	389,546	389,546	-	-	-
Money market	321,584	321,584	-	-	-
Overnight Citibank account	79,014	79,014	-	-	-
Uninvested	667	667	-	-	-
Total	\$ 790,811	\$ 790,811	\$ -	\$ -	\$ -
By percent	100.00%	100.00%	-%	-%	-%

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

Years to Maturity Variable Return Fund June 30, 2022 (In thousands)	Investment Maturities (in Years)				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. government	\$ 32,524	\$ 3,474	\$ 14,811	\$ 7,145	\$ 7,094
Short term:					
Repurchase agreements	5,206	5,206	-	-	-
U.S. treasury	281	281	-	-	-
Uninvested	-	-	-	-	-
Total	\$ 38,011	\$ 8,961	\$ 14,811	\$ 7,145	\$ 7,094
By percent	<u>100.00%</u>	<u>23.58%</u>	<u>38.96%</u>	<u>18.80%</u>	<u>18.66%</u>

Years to Maturity Variable Return Fund June 30, 2021 (In thousands)	Investment Maturities (in Years)				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. government	\$ 31,286	\$ 3,355	\$ 15,749	\$ 6,838	\$ 5,344
Short term:					
Repurchase agreements	5,774	5,774	-	-	-
U.S. treasury	1,409	1,409	-	-	-
Uninvested	1	1	-	-	-
Total	\$ 38,470	\$ 10,539	\$ 15,749	\$ 6,838	\$ 5,344
By percent	<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 System's fixed return fund investments, net of investment expense on the System's fixed return fund, was -9.01% and 27.97%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense adjusted for the changing amounts invested.

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

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2022 and 2021

The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles ("GAAP"). The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. The System has the following recurring fair value measurements as of June 30, 2022 and 2021:

GASB 72 - Disclosure
Fixed Return Funds
Investments - at fair value
(In thousands)

	2022			Total
	Level 1	Level 2	Level 3	
Short-term investments:				
Commercial paper	\$ -	\$ 201,539	\$ -	\$ 201,539
Short-term investment fund	-	60,875	-	60,875
U.S. Treasury bills and agencies	-	2,409	-	2,409
Debt (fixed income) securities:				
Bank loans	-	16,383	-	16,383
Corporate and other	-	1,047,621	912	1,048,533
Mortgage debt securities	-	353,897	16,477	370,374
Treasury inflation-protected securities	-	288,815	-	288,815
U.S. government and agency	-	379,499	-	379,499
Equity securities	3,493,244	-	-	3,493,244
Collective trust funds:				
Bank loans	-	174	-	174
Domestic equity	70,349	-	-	70,349
International equity	1,524	-	-	1,524
Mortgage debt securities	-	9,616	10,877	20,493
Alternative investments	-	-	1,979,276	1,979,276
	<u>\$ 3,565,117</u>	<u>\$ 2,360,828</u>	<u>\$ 2,007,542</u>	<u>\$ 7,933,487</u>

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

GASB 72 - Disclosure
Fixed Return Funds
Investments - at fair value
(In thousands)

	2021			
	Level 1	Level 2	Level 3	Total
Short-term investments:				
Commercial paper	\$ -	\$ 135,880	\$ -	\$ 135,880
Short-term investment fund	-	86,487	-	86,487
U.S. Treasury bills and agencies	-	121,533	-	121,533
Debt (fixed income) securities:				
Bank loans	-	18,692	274	18,966
Corporate and other	-	1,206,668	2,229	1,208,897
Mortgage debt securities	-	419,922	-	419,922
Treasury inflation-protected securities	-	306,727	-	306,727
U.S. government and agency	-	610,588	-	610,588
Equity securities	4,414,294	-	21,750	4,436,044
Collective trust funds:				
Bank loans	-	512	-	512
Domestic equity	90,501	-	208	90,709
International equity	1,964	-	-	1,964
Mortgage debt securities	-	10,655	12,827	23,482
Alternative investments	-	-	1,423,257	1,423,257
	<u>\$ 4,506,759</u>	<u>\$ 2,917,664</u>	<u>\$ 1,460,545</u>	<u>\$ 8,884,968</u>

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

Collective Trust Funds - Collective trust funds are separately managed accounts which are owned 100% by The City's pension systems. The investments underlying the collective trust funds are presented as Level 1, Level 2 or Level 3 based on their respective fair value hierarchy classifications.

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

Alternative Investments - include Private Equity, Real Estate, Opportunistic-Fixed Income and Infrastructure Investments. These are investments for which exchange quotations are not readily available and are valued at net asset value calculated by the GP's valuation policy. Alternative investments are mainly illiquid and typically not sold or redeemed.

Investments in non-public equity securities are valued by the GP or 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. These financial instruments have been classified as Level 3 in the fair value hierarchy. 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.

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 \$1.3 billion and \$1.0 billion, respectively.

GASB 72 - Disclosure
Variable Return Funds
(In thousands)

	2022			
	Level 1	Level 2	Level 3	Total
Variable return funds:				
Short-term investments	\$ -	\$ 5,674	\$ -	\$ 5,674
Debt (fixed income) securities	-	-	-	-
Equities	644,803	9,679	111	654,593
Total	\$ 644,803	\$ 15,353	\$ 111	\$ 660,267

GASB 72 - Disclosure
Variable Return Funds
(In thousands)

	2021			
	Level 1	Level 2	Level 3	Total
Variable return funds:				
Short-term investments	\$ -	\$ 6,153	\$ -	\$ 6,153
Debt (fixed income) securities	-	20,280	-	20,280
Equities	765,050	22,889	14,139	802,078
Total	\$ 765,050	\$ 49,322	\$ 14,139	\$ 828,511

Level 1 - Valued using prices quoted in active markets.

Level 2 - Valued using a matrix pricing technique: based on relationship to benchmark quoted prices.

Level 3 - Valued using discounted cash flow techniques.

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

NOTE 4 - CONTRIBUTIONS AND ACTUARIAL ASSUMPTIONS

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

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

Member Contributions

- Members who joined the QPP prior to July 1, 1973 ("Tier 1") contribute on the basis of a normal rate of contribution which is assigned by the QPP at membership, and which is dependent upon age and actuarial tables in effect at the time of membership. Tier 1 members can also make Increased Take Home Pay ("ITHP") contributions, for which they can receive an additional annuity after retirement.
- Members who joined after July 1, 1973 and before July 27, 1976 ("Tier 2") also contribute on the basis of a normal rate of contribution which is assigned by the QPP at membership, and which is dependent upon age and actuarial tables in effect at the time of membership. Note that the actuarial tables are different in Tier 2. Tier 2 members can also make ITHP contributions, for which they can receive an additional annuity after retirement.
- Members who joined after July 27, 1976 and before April 1, 2012 ("Tier 4") contribute 3% of salary until the earlier of the 10th anniversary of their membership date, or upon the completion of 10 years of credited service. Certain Tier 4 members are enrolled in special early retirement plans and must, therefore, also make Additional Member Contributions ("AMC"), depending on the specific plan.
- Members who joined on or after April 1, 2012 ("Tier 6") are required to make Basic Member Contributions ("BMC") until they separate from service or until they retire. The BMC rate is dependent on annual wages earned during a plan year and ranges from 3% for salaries less than \$45,000 to 6% for salaries greater than \$100,000. Certain Tier 6 members are enrolled in special early retirement plans and must, therefore, also make Additional Member Contributions ("AMC"), depending on the specific plan.
- For members of Tier 6 who earned certain forms of overtime and extracurricular compensation during 2020 through 2022, these earnings are excluded from the salary used to determine their Tier 6 BMC Contribution Rates for the period from 2022 through 2024.

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

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2022 and 2021

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:

(In thousands)	2022	2021
Total pension liability	\$ 6,000,500	\$ 5,776,055
Fiduciary net position *	5,876,084	7,044,240
Employers' net pension liability	\$ 124,416	\$ (1,268,185)
Fiduciary net position as a percentage of the total pension liability	97.93%	121.96%

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

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 judgment of the Chief Actuary.

The fiscal year 2022 results reflect 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 New York City Retirement System ("NYCRS") 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 24, 2019, the Actuary issued a Report titled "Proposed Changes in Actuarial Assumptions and Methods used in Determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2018 for the New York City Board of Education Retirement System." The actuarial assumptions and methods described in that report are referred to as the "2019 A&M."

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2022 and 2021

On July 16, 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").

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.

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

Expected Rate of Return on Investments

The long-term expected rate of return on QPP investments was determined using a building-block method in which best-estimate ranges of expected real rates of return (i.e., expected returns, net of QPP investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	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	31.0%	6.6%	31.0%	7.1%
Developed public market equities	10.0	7.0%	10.0	7.8%
Emerging public market equities	6.0	8.6%	6.0	9.7%
Fixed income	27.0	1.4%	27.0	1.9%
Private markets (alternative investments)				
Private equity	9.0	10.5%	9.0	11.0%
Private real estate	8.0	6.8%	8.0	6.9%
Infrastructure	4.0	5.6%	4.0	6.3%
Opportunistic-fixed income	5.0	5.5%	5.0	6.3%
Total	<u>100.0%</u>		<u>100.0%</u>	

Discount Rate

The discount rate used to measure the total pension liability was 7%. The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the rates applicable to the current Tier for each member and that Employer contributions will be made at rates as determined by the Actuary. Based on those assumptions, the QPP's fiduciary net position was projected to be available to make all projected future benefit payments of current active and non-active QPP members. Therefore, the long-term expected rate of return on QPP investments was applied to all periods of projected benefit payments to determine the total pension liability.

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

(In thousands)	1% Decrease (6.0%)	Discount Rate (7.0%)	1% Increase (8.0%)
Employers' net pension liability - June 30, 2022	<u>\$ 837,357</u>	<u>\$ 124,416</u>	<u>\$ (476,646)</u>
Employers' net pension liability - June 30, 2021	<u>\$ (580,898)</u>	<u>\$ (1,268,185)</u>	<u>\$ (1,848,509)</u>

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

NOTE 6 - MEMBER LOANS

Members of the QPP are permitted to borrow up to 75% of their employee contribution account balances, including accumulated interest, subject to the limitations of Section 72 of the IRC. The balance of QPP member loans receivable at June 30, 2022 and 2021 is \$48.46 million and \$47.25 million, respectively. When a member withdraws from the QPP with an outstanding QPP loan balance, this outstanding QPP loan balance will be deducted from the refund of the member's contribution balance. When a member retires with an outstanding QPP loan balance, the member's retirement benefit will be reduced by the actuarial value of the amount of the outstanding QPP loan balance, unless this balance is paid off.

Members of the TDA Program are permitted to borrow up to 75% of their TDA Program account balances, including accumulated interest, subject to the limitations of Section 72 of the IRC. The balance of TDA Program member loans receivable at June 30, 2022 and 2021 is \$47.15 million and \$44.75 million, respectively.

NOTE 7 - RELATED PARTIES

The Comptroller has been appointed by law as custodian for the assets of the QPP and the TDA Program. QPP fixed return fund securities are held by certain banks under custodial agreements with the Comptroller. The Comptroller, the Financial Information Services Agency ("FISA"), and the Office of Payroll Administration ("OPA") also provides cash receipt and cash disbursement services to the System. Actuarial services are provided to the System by the New York City Office of the Actuary. The City's Corporation Counsel provides legal services to the System. Other administrative services are also provided by The City. Costs of \$2.75 million and \$2.82 million were incurred on behalf of the System by other City agencies, primarily the Comptroller's Office for 2022 and 2021, respectively. The fixed return fund assets of the QPP are co-invested with those of the TDA Program. The variable return fund assets of the QPP are co-invested with those of the TDA Program and TRS (see Note 2). TRS holds the assets of the variable return fund.

NOTE 8 - ADMINISTRATIVE EXPENSES

In Fiscal Years 2022 and 2021, as per Chapter 307 of the New York State Laws of 2002, the System provided BERS with corpus funding for administrative expenses in the amount of \$35.85 million and \$25.43 million, respectively.

In August 2019, the System entered into a Sub-sublease agreement for office space. The agreement is for a term of six years and seven months and requires a total commitment of approximately \$11.18 million over the term of the lease. Rent expense under the lease agreement for the year ended June 30, 2022 was \$1.83 million.

NOTE 9 - CONTINGENT LIABILITIES AND OTHER MATTERS

Contingent Liabilities - The System has claims pending against it and has been named as a defendant in lawsuits and also has certain other contingent liabilities. Management of the System, on the advice of legal counsel, believes that such proceedings and contingencies will not have a material effect on the net position of the System or changes in the net position of the System. Under the existing State statutes and City laws that govern the functioning of the System, increases in the obligations of the System to members and beneficiaries ordinarily result in increases in the obligations of the New York City Board of Education to the System.

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

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2022 and 2021

Revisions to Actuarial Assumptions and Methods - In accordance with the Administrative Code of the City of New York ("ACNY") and with appropriate practice, the Boards of Trustees of the five actuarially-funded NYCERS are to periodically review and adopt actuarial assumptions as proposed by the Actuary for use in the determination of Employer Contributions.

The most recently completed study was published by Bolton, Inc., dated June 2019. Bolton analyzed experience for the four and 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 have been adopted by the Board of Trustees during Fiscal Year 2019.

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

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

Chapter 18 of the Laws of 2012 ("Chapter 18/12") placed certain limitations on the Tier 3 and Tier 4 benefits available to participants hired on and after April 1, 2012 in most New York State PERS, including BERS. These changes are sometimes referred to as Tier 6.

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

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

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

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

Chapter 41 of the Laws of 2016 was enacted on May 31, 2016. This amendment removes the specified periods of time, medal requirements, and theaters of operation in which military service would have had to be 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.

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

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

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

Chapter 71 of the Laws of 2017, enacted on June 29, 2017, continues for Fiscal Year 2019, the Actuarial Interest Rate assumption of 7.0% per annum used to determine employer contributions to the New York City Pension Funds and Retirement Systems. This act also extends through Fiscal Year 2019, the interest rate of 8.25% per annum to credit interest on Tier 1 and Tier 2 member contributions and Increased-Take-Home-Pay ("ITHP") Reserves.

Chapter 266 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.

Chapter 59 of the Laws of 2019 revises the composition of the Board of Education of The City of New York, and, therefore, the BERS Board of Trustees, to include one additional mayoral appointee and one member to be elected by community district education council presidents. This provision took effect on July 1, 2020.

Chapter 589 of the Laws of 2019 increases the amount of money a retiree may earn in a position of public service in the year 2020 and thereafter to \$35,000 from \$30,000.

Chapter 76 of the Laws of 2019 extends for two fiscal years, until June 30, 2021, the 7% rate of interest used by the Chief Actuary for BERS in valuing the retirement system liabilities for the purpose of computing the amount of Employer contributions. The bill also extends for two fiscal years the rate of interest to be paid into certain constituent funds of The City retirement systems and the 8.25% per annum rate to be credited on AMCs and ITHP reserves for Tier 1 and Tier 2 members.

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 the 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. Amounts payable are reduced by payments of any ordinary death benefits or option benefit paid to another statutory beneficiary.

Chapter 78 of the Laws of 2021 establishes a COVID-19 public employee death benefit for individuals who reported to their usual place of employment or an alternate worksite at the direction of their employer on or after March 1, 2020 and such individual contracted COVID-19 within 45 days of reporting to such workplace as confirmed by a laboratory test or by a licensed physician and such individual died on or before December 31, 2022.

Chapter 391 of the Laws of 2021 extends for two fiscal years until June 30, 2023, the 7% rate of interest used by the Chief Actuary for BERS in valuing the retirement system liabilities for the purpose of computing the amount of Employer contributions. The bill also extends for two fiscal years the rate of interest to be paid into certain constituent funds of The City retirement systems and the 8.25% per annum rate to be credited on AMCs and ITHP reserves for Tier 1 and Tier 2 members.

Chapter 417 of the Laws of 2021 authorizes political subdivisions to permit any public body to hold meetings remotely and without in-person access during the COVID-19 state disaster emergency until the expiration or termination of the disaster emergency.

Chapter 424 of the Laws of 2021 expands the definition of a member for World Trade Center purposes to include certain professionals who were in qualifying employment in a qualifying period for a qualifying employer, irrespective of whether such person was a participant in such system at that time, provided they purchased service credit for a period of time that includes some or all of the qualifying period in accordance with applicable law.

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2022 and 2021

Chapter 425 of the Laws of 2021 provides for the electronic submission of a notice that a member of a retirement system participated in World Trade Center rescue, recovery or cleanup operations for a qualifying period.

Chapter 481 of the Laws of 2021 requires certain records to be discussed at an open meeting to be made available to the public at least twenty-four hours prior to the meeting upon request.

Chapter 525 of the Laws of 2021 places family workers, family assistants, family associates, and parent program assistants under the jurisdiction of BERS instead of TRS, and provides that the membership of paraprofessionals in TRS is mandatory.

Chapter 561 of the Laws of 2021 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, 2026.

Chapter 587 of the Laws of 2021 requires a public body that maintains a regularly and routinely updated website and utilizes a high speed internet connection to post the minutes of meetings within two weeks.

Chapter 56 of the Laws of 2022 enacted into law major components of legislation necessary to implement the state education, labor, housing and family assistance budget for the 2022-2023 state fiscal year and including some reform of the retirement law. This law provides that all BERS members, including Tier 6 members, now become vested with 5 years of credited service; suspends earnings limitations for retirees from April 9, 2022 through June 30, 2023; and revises the Tier 6 contribution rate determination process to disregard overtime between April 1, 2022 and April 1, 2024.

Chapter 173 of the Laws of 2022 extended the filing time for the Oath of Office for Public Officers who failed to file their oath of office within the statutory 30-day period from January 1, 2022 through March 31, 2022.

The Coronavirus Aid, Relief, and Economic Security (“CARES”) Act

The CARES Act, signed into law on March 27, 2020, is a major piece of federal legislation providing relief to individuals, as well as state and local governments, in connection with the impact of the COVID-19 outbreak. The CARES Act impacted the operations of BERS in six principal ways during Fiscal Year 2022 and 2021:

- a) all required minimum distributions (“RMDs”) were suspended between March 27, 2020 and December 31, 2020;
- b) qualified individuals who were entitled to receive a QPP refund (other than a refund of a deduction in error) were permitted to classify such a refund as a coronavirus-related distribution, not subject to the 10% penalty for individuals younger than 59½ years of age (subject to the limitation that the sum of all coronavirus-related distributions cannot exceed \$100,000), until December 30, 2020;
- c) qualified individuals were permitted to request a TDA refund, even if they would not otherwise have been eligible to do so, as a coronavirus-related distribution, not subject to the 10% penalty for individuals younger than 59½ years of age (subject to the limitation that the sum of all coronavirus-related distributions cannot exceed \$100,000), until December 30, 2020;
- d) qualified individuals were permitted to apply for coronavirus-related loans, with a higher aggregate maximum amount than ordinary loans (for QPP/AMC loans, the expanded limit was the lesser of \$100,000 or 75% of the account balance; for TDA loans, the expanded limit was the lesser of \$100,000 or 100% of the account balance), until September 23, 2020;
- e) qualified individuals with outstanding loans of any type were permitted to apply for extension of any loan payments due between March 27, 2020 and December 31, 2020 by up to one year; and

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2022 and 2021

- f) For the purposes of the above provisions, the CARES Act defined a “qualified individual” as an individual who:
1. is diagnosed with COVID-19 by a test approved by the Centers for Disease Control and Prevention; or
 2. has a spouse or dependent diagnosed with COVID-19 by a test approved by the Centers for Disease Control and Prevention; or
 3. experiences adverse financial consequences as a result of (i) being quarantined, furloughed or laid off or having work hours reduced due to COVID-19, (ii) being unable to work due to lack of child care due to COVID-19, (iii) being unable to work due to closing or reducing hours of a business owned or operated by the individual due to COVID-19, or (iv) other factors as determined by the Secretary of the Treasury.

The Setting Every Community Up for Retirement Enhancement (“SECURE”) Act

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

COVID-19

The outbreak of COVID-19 was declared a pandemic by the World Health Organization. Then-Governor Andrew Cuomo declared a state of emergency in the State on March 7, 2020 and the Mayor declared a state of emergency in New York City on March 12, 2020. Governor Cuomo 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. Due to increased COVID-19 transmission rates, current Governor Kathy Hochul declared a state of emergency in the State on November 26, 2021 and extended this state of emergency a number of times through September 12, 2022. The state of emergency in New York City due to the COVID-19 pandemic remains in effect. The ultimate impact of the COVID-19 pandemic on the Plan cannot be determined at this time.

New York City Board of Education Retirement System

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	\$ 179,402	\$ 175,281	\$ 166,792	\$ 168,501	\$ 176,110	\$ 168,625	\$ 153,107	\$ 147,898	\$ 142,687
Interest	391,274	405,690	369,904	366,084	350,999	346,510	320,315	299,592	288,162
Changes of benefit terms	15,883	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(36,415)	38,132	(46,574)	152,160	(164,587)	19,938	(75,907)	50,148	-
Changes of assumptions	-	(853)	-	(314,503)	-	-	183,677	-	-
Benefit payments/withdrawals	(325,679)	(302,336)	(296,047)	(280,463)	(261,574)	(262,432)	(240,727)	(223,244)	(214,315)
Net change in total pension liability	224,445	315,914	194,075	91,779	100,948	272,641	340,465	274,394	216,534
Total pension liability - beginning	5,776,055	5,460,141	5,266,066	5,174,287	5,073,339	4,800,698	4,460,233	4,185,839	3,969,305
Total pension liability - ending (a)	6,000,500	5,776,055	5,460,141	5,266,066	5,174,287	5,073,339	4,800,698	4,460,233	4,185,839
Plan fiduciary net position:									
Employer contributions	262,404	182,983	257,503	269,637	318,643	288,233	265,532	258,099	214,590
Member contributions	49,591	48,125	49,766	46,304	40,846	39,821	38,581	39,564	37,193
Net investment income	(803,664)	1,889,751	365,767	406,879	565,577	862,510	164,144	177,166	875,453
Payment of interest on TDA program fixed return funds	(191,054)	(171,806)	(155,749)	(141,695)	(127,972)	(106,554)	(94,789)	(85,104)	(206,615)
Benefit payments and withdrawals	(325,679)	(302,336)	(296,047)	(280,463)	(261,574)	(262,432)	(240,727)	(223,244)	(214,315)
Administrative expenses	(35,566)	(25,175)	(22,207)	(17,357)	(13,212)	(15,486)	(12,818)	(10,956)	(9,776)
Other	(124,188)	239,808	(7,975)	35,624	51,024	(122,954)	(157,499)	(52,021)	(70,916)
Net change in plan fiduciary net position	(1,168,156)	1,861,350	191,058	318,929	573,332	683,138	(37,576)	103,504	625,614
Plan fiduciary net position - beginning*	7,044,240	5,182,890	4,991,832	4,672,903	4,099,571	3,416,433	3,454,009	3,350,505	2,653,652
Plan fiduciary net position - ending (b)	5,876,084	7,044,240	5,182,890	4,991,832	4,672,903	4,099,571	3,416,433	3,454,009	3,279,266
BERS's net pension liability - ending (a)-(b)	\$ 124,416	\$ (1,268,185)	\$ 277,251	\$ 274,234	\$ 501,384	\$ 973,768	\$ 1,384,265	\$ 1,006,224	\$ 906,573
Plan fiduciary net position as a percentage of the total pension liability	97.93%	121.96%	94.92%	94.79%	90.31%	80.81%	71.17%	77.44%	78.34%
Covered payroll ¹	\$ 1,484,264	\$ 1,476,598	\$ 1,353,266	\$ 1,264,079	\$ 1,102,184	\$ 1,052,171	\$ 1,008,056	\$ 1,016,822	\$ 989,168
BERS's net pension liability as percentage of covered payroll	8.38%	-85.89%	20.49%	21.69%	45.49%	92.55%	137.32%	98.96%	91.65%

*FY 2015 Plan fiduciary net position - beginning was revised from the prior year.

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.

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 System's adoption year of GASB No. 67. Additional years will be added until the 10-year requirement is met.

See Report of Independent Certified Public Accountants.

New York City Board of Education Retirement System

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

Fiscal years ended June 30,
 (In thousands)

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Actuarially determined contribution	\$ 262,404	\$ 182,983	\$ 257,503	\$ 269,637	\$ 318,643	\$ 288,233	\$ 265,532	\$ 258,099	\$ 214,590	\$ 196,246
Contributions in relation to the actuarially determined contribution	262,404	182,983	257,503	269,637	318,643	288,233	265,532	258,099	214,590	196,246
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll ¹	\$ 1,484,264	\$ 1,476,598	\$ 1,353,266	\$ 1,264,079	\$ 1,102,184	\$ 1,052,171	\$ 1,008,056	\$ 1,016,822	\$ 989,168	\$ 886,186
Contributions as a percentage of covered-employee payroll	17.68%	12.39%	19.03%	21.33%	28.91%	27.39%	26.34%	25.38%	21.69%	22.15%

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.

New York City Board of Education Retirement System

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	0 year (closed)	0 year (closed)	0 year (closed)	0 year (closed)	0 year (closed)
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)
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 Assumption 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
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 Method change	19 years (closed)	20 years (closed)	NA	NA	NA
2019 Assumption 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 Plan change	7 years (closed)	NA	NA	NA	NA
Actuarial assets valuation 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 2010 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AVA is defined to recognize Fiscal Year 2010 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AVA is defined to recognize Fiscal Year 2010 investment performance.

¹ As of the June 30, 2014 (Lag) valuation, the AVA is constrained to be no more than 20% from Market Value.

See Report of Independent Certified Public Accountants.

New York City Board of Education Retirement System

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				
Amortization method for unfunded actuarial accrued liabilities:					
Initial unfunded	Increasing dollar				
Post-2010 unfunded	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 year (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
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 Assumption change	NA	NA	NA	NA	NA
2017 Method 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 Method change	NA	NA	NA	NA	NA
2019 Assumption change	NA	NA	NA	NA	NA
2020 Actuarial gain/loss	NA	NA	NA	NA	NA
2020 Method change	NA	NA	NA	NA	NA
2020 Plan change	NA	NA	NA	NA	NA
Actuarial assets valuation 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 2010 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AVA is defined to recognize Fiscal Year 2010 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AVA is defined to recognize Fiscal Year 2010 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AVA is defined to recognize Fiscal Year 2010 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AVA is defined to recognize Fiscal Year 2010 investment performance.

¹ As of the June 30, 2014 (Lag) valuation, the AVA is constrained to be no more than 20% from Market Value.

See Report of Independent Certified Public Accountants.

New York City Board of Education Retirement System

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.				
Post-retirement mortality ³	Tables adopted by Board of Trustees during Fiscal Year 2019	Tables adopted by Board of Trustees during Fiscal Year 2019	Tables adopted by Board of Trustees during Fiscal Year 2019	Tables adopted by Board of Trustees during Fiscal Year 2019	Tables adopted by Board of Trustees during Fiscal Year 2016
Active service: withdrawal, death, disability, service retirement ³	Tables adopted by Board of Trustees during Fiscal Year 2019	Tables adopted by Board of Trustees during Fiscal Year 2019	Tables adopted by Board of Trustees during Fiscal Year 2019	Tables adopted by Board of Trustees during Fiscal Year 2019	Tables adopted by Board of Trustees during Fiscal Year 2012
Salary increases ²	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general 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.

See Report of Independent Certified Public Accountants.

New York City Board of Education Retirement System

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.				
Post-retirement mortality ³	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012
Active service: withdrawal, death, disability, service retirement ³	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012
Salary increases ²	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general increases of 3.0% per year.	In general, merit and promotion increases plus assumed general 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.

See Report of Independent Certified Public Accountants.

New York City Board of Education Retirement System
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF INVESTMENT RETURNS

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

<u>Fiscal years ended</u>	<u>Money-Weighted Rate of Return</u>
June 30, 2022	-9.01%
June 30, 2021	27.97%
June 30, 2020	5.75%
June 30, 2019	7.00%
June 30, 2018	10.31%
June 30, 2017	15.33%
June 30, 2016	0.20%
June 30, 2015	3.15%
June 30, 2014	19.51%

Note: In accordance with 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 Plan’s adoption year of GASB 67. Additional years will be added until the 10-year requirement is met.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

ADDITIONAL SUPPLEMENTARY INFORMATION

SCHEDULE 4 - SCHEDULE OF INVESTMENT EXPENSES
FISCAL YEAR ENDED JUNE 30, 2022

Fund Manager	Category	Amount (in \$)
1 Fixed Investment Expenses (net)		
Actis	Alternative Investment - Infrastructure	\$ 904,367
Ardian	Alternative Investment - Infrastructure	577,676
Axiom Infrastructure	Alternative Investment - Infrastructure	114,431
BlackRock	Alternative Investment - Infrastructure	430,216
Brookfield Asset Management	Alternative Investment - Infrastructure	211,019
EIG Credit Management	Alternative Investment - Infrastructure	77,477
EQT Partners	Alternative Investment - Infrastructure	1,998,455
Global Infrastructure Management	Alternative Investment - Infrastructure	447,990
Industry Funds Management	Alternative Investment - Infrastructure	413,445
Infravia Capital Partners	Alternative Investment - Infrastructure	59,457
KKR	Alternative Investment - Infrastructure	296,653
Stonepeak Infrastructure Partners	Alternative Investment - Infrastructure	468,440
400 Capital Management	Alternative Investment - OFI	44,068
Apollo Global Management	Alternative Investment - OFI	142,261
KKR	Alternative Investment - OFI	267,145
Marathon Asset Management Limited	Alternative Investment - OFI	250,365
Oak Hill Advisors	Alternative Investment - OFI	727,660
Torchlight Investors	Alternative Investment - OFI	355,254
American Security Partners	Alternative Investment - Private Equity	(236,190)
Apax Partners	Alternative Investment - Private Equity	466,574
Apollo Global Management	Alternative Investment - Private Equity	1,929,686
Ardian	Alternative Investment - Private Equity	908,615
Ares Management	Alternative Investment - Private Equity	66,599
BC Partners	Alternative Investment - Private Equity	133,958
Bridgepoint Capital	Alternative Investment - Private Equity	344,234
Carlyle Group	Alternative Investment - Private Equity	2,498,993
Centerbridge Partners	Alternative Investment - Private Equity	195,641
Clearlake Capital Group	Alternative Investment - Private Equity	695,687
Crestview Partners	Alternative Investment - Private Equity	488,607
CVC Capital Partners	Alternative Investment - Private Equity	2,655,436
EQT Partners	Alternative Investment - Private Equity	163,095
Fairview Capital Partners	Alternative Investment - Private Equity	102,449
FTV Capital	Alternative Investment - Private Equity	202,469
Grain Management	Alternative Investment - Private Equity	188,389
HarbourVest Partners	Alternative Investment - Private Equity	39,661
Heartwood Partners	Alternative Investment - Private Equity	52,925
Hg Capital	Alternative Investment - Private Equity	9,565
ICG Strategic Equity	Alternative Investment - Private Equity	309,006
ICV Partners	Alternative Investment - Private Equity	274,017
Insight Partners	Alternative Investment - Private Equity	260,397
KKR	Alternative Investment - Private Equity	619,868
Landmark Partners	Alternative Investment - Private Equity	187,946
Leonard Green & Partners	Alternative Investment - Private Equity	923,185
Lexington Partners	Alternative Investment - Private Equity	375,637
Lindsay Goldberg	Alternative Investment - Private Equity	237,974
Mesirow Financial	Alternative Investment - Private Equity	470,145
Mill City Capital	Alternative Investment - Private Equity	12,484
Neuberger Berman Group	Alternative Investment - Private Equity	65,484
New Mainstream Capital	Alternative Investment - Private Equity	81,321
One Rock Capital Partners	Alternative Investment - Private Equity	399,052
Palladium Equity Partners	Alternative Investment - Private Equity	222,008
Patriot Financial Partners	Alternative Investment - Private Equity	89,292

(Continued)

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

ADDITIONAL SUPPLEMENTARY INFORMATION

SCHEDULE 4 - SCHEDULE OF INVESTMENT EXPENSES
 FISCAL YEAR ENDED JUNE 30, 2022

Fund Manager	Category	Amount (in \$)
Platinum Equity	Alternative Investment - Private Equity	1,268,127
Providence Strategic Growth	Alternative Investment - Private Equity	781,728
Reverence Capital Partners	Alternative Investment - Private Equity	308,231
Siris Capital Group	Alternative Investment - Private Equity	239,728
Stellex Capital Management	Alternative Investment - Private Equity	933,767
The Raine Group	Alternative Investment - Private Equity	896,266
The Vistria Group	Alternative Investment - Private Equity	119,806
Thoma Bravo	Alternative Investment - Private Equity	84,735
TPG Capital	Alternative Investment - Private Equity	116,732
Valor Equity Partners	Alternative Investment - Private Equity	545,079
Vista Equity Partners	Alternative Investment - Private Equity	2,097,891
Warburg Pincus	Alternative Investment - Private Equity	2,004,500
Webster Capital	Alternative Investment - Private Equity	16,802
Welsh Carson Anderson & Stowe	Alternative Investment - Private Equity	840,918
Aermont Capital	Alternative Investment - Real Estate	204,061
Almanac Realty Investors	Alternative Investment - Real Estate	157,231
Artemis Real Estate Partners	Alternative Investment - Real Estate	217,914
Basis Management Group	Alternative Investment - Real Estate	226,525
Bentall GreenOak	Alternative Investment - Real Estate	50,248
Brookfield Asset Management	Alternative Investment - Real Estate	1,019,952
Carlyle Group	Alternative Investment - Real Estate	429,434
Clarion Partners	Alternative Investment - Real Estate	1,803,524
Cortland Partners	Alternative Investment - Real Estate	97,655
DivcoWest Real Estate Investments	Alternative Investment - Real Estate	49,652
DRA Advisors	Alternative Investment - Real Estate	132,083
Exeter Property Group	Alternative Investment - Real Estate	2,628,333
Franklin Templeton Institutional	Alternative Investment - Real Estate	91,445
H/2 Capital Partners	Alternative Investment - Real Estate	204,418
Harrison Street Real Estate Capital	Alternative Investment - Real Estate	98,898
Heitman Capital Management	Alternative Investment - Real Estate	155,180
Jamestown	Alternative Investment - Real Estate	37,861
KKR	Alternative Investment - Real Estate	882,018
Lasalle Investment Management	Alternative Investment - Real Estate	420,275
Lone Star	Alternative Investment - Real Estate	8,185
Mesirow Financial	Alternative Investment - Real Estate	314,258
Metlife	Alternative Investment - Real Estate	131,924
Prudential Financial	Alternative Investment - Real Estate	70,282
Related Fund Management	Alternative Investment - Real Estate	51,359
Rialto Capital Management	Alternative Investment - Real Estate	564,767
RREEF America	Alternative Investment - Real Estate	56,355
The Blackstone Group	Alternative Investment - Real Estate	1,938,839
The Hudson Companies	Alternative Investment - Real Estate	69,429
Tristan Capital Partners	Alternative Investment - Real Estate	169,577
UBS Asset Management	Alternative Investment - Real Estate	218,155
USAA Real Estate	Alternative Investment - Real Estate	211,557
Vanbarton Group	Alternative Investment - Real Estate	448,175
Westbrook Partners	Alternative Investment - Real Estate	442,885
RBC Global Asset Management	CTF - Fixed Income - Mortgage	18,562
Barings	CTF - Fixed Income - Other	1,301
BlackRock	CTF-Domestic Equity	7,161
Acadian Asset Management	CTF-International Equity	(11,513)
Baillie Gifford	CTF-International Equity	(19)
BlackRock	CTF-International Equity	6,720
Sprucegrove Investment Management	CTF-International Equity	35,698

(Continued)

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

ADDITIONAL SUPPLEMENTARY INFORMATION

SCHEDULE 4 - SCHEDULE OF INVESTMENT EXPENSES
 FISCAL YEAR ENDED JUNE 30, 2022

Fund Manager	Category	Amount (in \$)
Altravue Capital	Domestic Equity	18,394
Ballast Equity Management	Domestic Equity	9,965
BlackRock	Domestic Equity	39,486
Bridge City Capital	Domestic Equity	11,324
Dean Capital Management	Domestic Equity	22,593
Essex Investment Management Company	Domestic Equity	13,965
Legato Capital Management	Domestic Equity	1
Lisanti Capital Growth	Domestic Equity	15,758
Nicholas Investment Partners	Domestic Equity	5,309
State Street Global Advisors	Domestic Equity	37,242
Wasatch Advisors	Domestic Equity	1,450,901
Wellington Management Company	Domestic Equity	765,761
NYC Comptroller - Investment Operations	Fixed Income - Cash	9,054
State Street Global Advisors	Fixed Income - Government	107,449
AFL-CIO Housing Investment Trust	Fixed Income - Mortgage	56,420
BlackRock	Fixed Income - Mortgage	169,195
Mackay Shields	Fixed Income - Other	1,034,023
Nomura Corporate Research and Asset Management	Fixed Income - Other	1,214,923
Prudential Financial	Fixed Income - Other	99
Pugh Capital Management	Fixed Income - Other	250,089
T. Rowe Price Associates	Fixed Income - Other	417,879
State Street Global Advisors	Fixed Income - TIPS	15,452
Acadian Asset Management	International Equity	3,864,818
Algert Global	International Equity	143,484
ARGA Investment Management	International Equity	62,334
Ativo Capital Management	International Equity	20,108
Aubrey Capital Management	International Equity	48,261
Baillie Gifford	International Equity	874,855
Change Global Investments	International Equity	733
Denali Advisors	International Equity	22,786
Dundas Global Investors	International Equity	38,217
Fiera Capital Corporation	International Equity	506,749
Foresight Global Investors	International Equity	74,170
JP Morgan Asset Management	International Equity	1,170,663
Martin Investment Management	International Equity	36,041
Metis Global Partners	International Equity	9,390
Morgan Stanley Investment Management	International Equity	417,405
North of South Capital	International Equity	66,405
NYC Comptroller - Investment Operations	International Equity	4
Osmosis Investment Management	International Equity	44,837
Redwood Investments	International Equity	29,579
Sprucegrove Investment Management	International Equity	1,090,237
Xponance	International Equity	993
	Sub total	61,322,613
Legal Fees		
Cox Castle Nicholson LLP		13,475
Day Pitney LLP		23,433
Foley & Lardner LLC		16,843
Foster Pepper PLLC		17,881
Morgan Lewis Bockius LLP		17,130
Pillsbury Winthrop Shaw Pittman LLP		16,328

(Continued)

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

ADDITIONAL SUPPLEMENTARY INFORMATION

SCHEDULE 4 - SCHEDULE OF INVESTMENT EXPENSES

FISCAL YEAR ENDED JUNE 30, 2022

Fund Manager	Category	Amount (in \$)
Reinhart Boerner Van Dueren		22,781
Seward Kissel LLP		8,203
	Sub total	136,074
<u>Consultant Fees</u>		
MSCI - BarraOne		22,329
MSCI - ESG Research LLC		9,389
MSCI - IPD		5,451
MSCI Inc		33
Stepstone Group Real Estate LP		5,687
The Burgiss Group		5,590
	Sub total	48,479
2 <u>Variable Investment Expenses</u>		
Qualified Pension Plan		179,545
Tax-Deferred Annuity		1,864,574
		\$ 63,551,285

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
 QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM**

ADDITIONAL SUPPLEMENTARY INFORMATION

**SCHEDULE 5 - SCHEDULE OF ADMINISTRATIVE EXPENSES
 FISCAL YEAR ENDED JUNE 30, 2022**

EXPENSE TYPE	AMOUNT (in \$)
1 ADMINISTRATIVE EXPENSES (QPP):	
Consumable Supplies and Materials	\$ 198,771
Contractual Services	7,923,892
Furniture and Equipment	631,438
General Services	10,614,356
Salaries paid to Plan Personnel	16,197,901
Sub-Total	<u>35,566,358</u>
2 ADMINISTRATIVE EXPENSES (TDA):	
Contractual Services	285,043
Sub-Total	<u>285,043</u>
3 MISCELLANEOUS EXPENSES:	
Related Parties Administrative Expenses (Adm expenses made by the Comptroller on our behalf. Charged on investment)	Sub-Total <u>2,755,131</u>
Total Administrative Expenses for FY 2022:	<u>\$ 38,606,532</u>

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM**

ADDITIONAL SUPPLEMENTARY INFORMATION

**SCHEDULE 6 - SCHEDULE OF DIRECT PAYMENTS TO CONSULTANTS
FISCAL YEAR ENDED JUNE 30, 2022**

INDIVIDUAL OR FIRM NAME	NATURE OF SERVICES	AMOUNT (in \$)
RSM US LLP 151 West 42nd Street, Floors 18-20 New York, NY 10036	Accounting Software Consultant	9,900
Rutter Associates LLC 60 East 42nd Street, Suite 2816 New York, NY 10165	Financial Consultant	10,847
Baker Tilly Virchow Krause, LLP 2801 Via Fortuna, Suite 300 Austin, TX 78746	Internal Audit Service Consultant	260,415
McLean & Company 3960 Howard Hughes Parkway, Suite 500 Las Vegas, NV, 89169	HR Research and Advisory Services	23,906
Segal Marco Advisors 333 West 34th Street New York, NY 10001	Investment Consultant	211,667
Aksia TorreyCove Capital Partners LLC 10180 Barnes Canyon Road, Suite 200 San Diego, CA 92121	Investment Consultant	220,336
Groom Law Group, Chartered Department 0589 Washington, DC 20073	Legal Consultant	25,262
Segal Company, Inc 333 West 34th Street New York, NY 10001	Operations Consultant	227,907
Vitech Systems Group, Inc. 401 Park Avenue South, 12th Floor New York, NY 10016	Velocity Project Consultant	3,310,000
Total Consulting Fees for FY 2022		\$ 4,300,240

**NEW YORK CITY BOARD OF EDUCATION
RETIREMENT SYSTEM**

A FIDUCIARY FUND
OF THE CITY OF NEW YORK

**ANNUAL COMPREHENSIVE FINANCIAL REPORT OF
THE QUALIFIED PENSION PLAN
AND THE
TAX DEFERRED ANNUITY PROGRAM**

**INVESTMENT SECTION
PART III**

**FOR THE YEARS ENDED
JUNE 30, 2022 AND JUNE 30, 2021**

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

INTRODUCTION

The investment section presents the following:

- Investment report for FY 2022, prepared by Segal Marco Advisors, investment consultant for BERS.
- The investment schedules following the investment report supplement the investment information presented in the financial section and the investment report as presented by the investment consultant.

Schedules are presented for the following categories

- a. Consolidated investment performance
- b. Asset Pie: focusing on the current fiscal year asset composition
- c. Asset Allocation: presents 10-year comparison of the invested assets
- d. Investment Holdings
- e. Management fees and brokers commission
- f. Investment Summary

The investment section has been prepared based on data provided by:

- The Comptroller of the City of New York through BAM;
- Teachers' Retirement System of The City of New York;
- Segal Marco, independent investment advisor for BERS;
- Custodians of investments; and the
- Investment managers.

To: New York City Board of Education Retirement System (BERS)

From: Segal Marco Advisors (Vanessa Vargas Guijarro and Christian Sevier)

Date: October 13, 2022

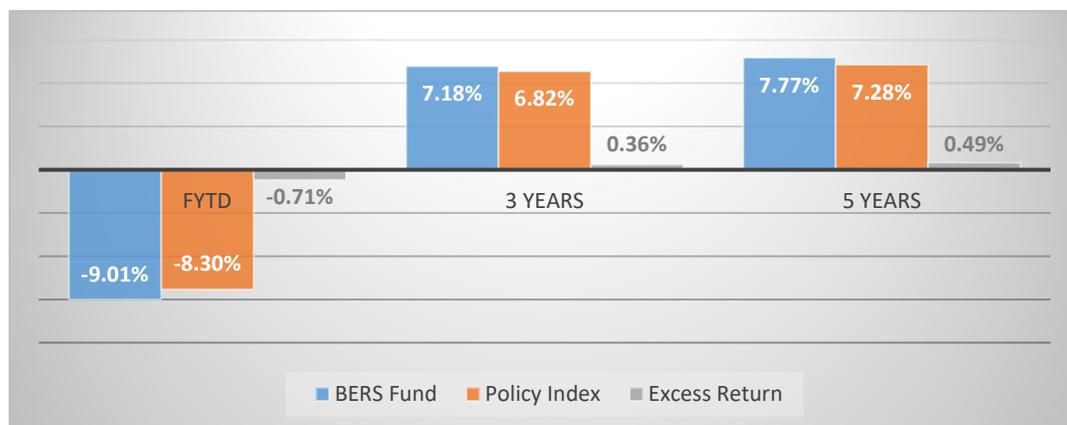
Re: Report of Investment Activity for Fiscal Year 2022

Dear Members of the New York City Board of Education Retirement System:

Fund Summary of Investment Performance

The Board of Education Retirement System (“BERS”) Total Fund returned -9.01%, net of fees, for the Fiscal Year (FY) ending June 2022, compared to -8.30% for the BERS Policy Benchmark¹ against which it is measured. Gross performance for the FY ranked in the 66th percentile of the Wilshire public plans with assets greater than \$1 billion peer group. The Fund decreased in value and ended the fiscal year at \$7.93 billion (compared to \$8.71 billion at the end of the prior fiscal year).

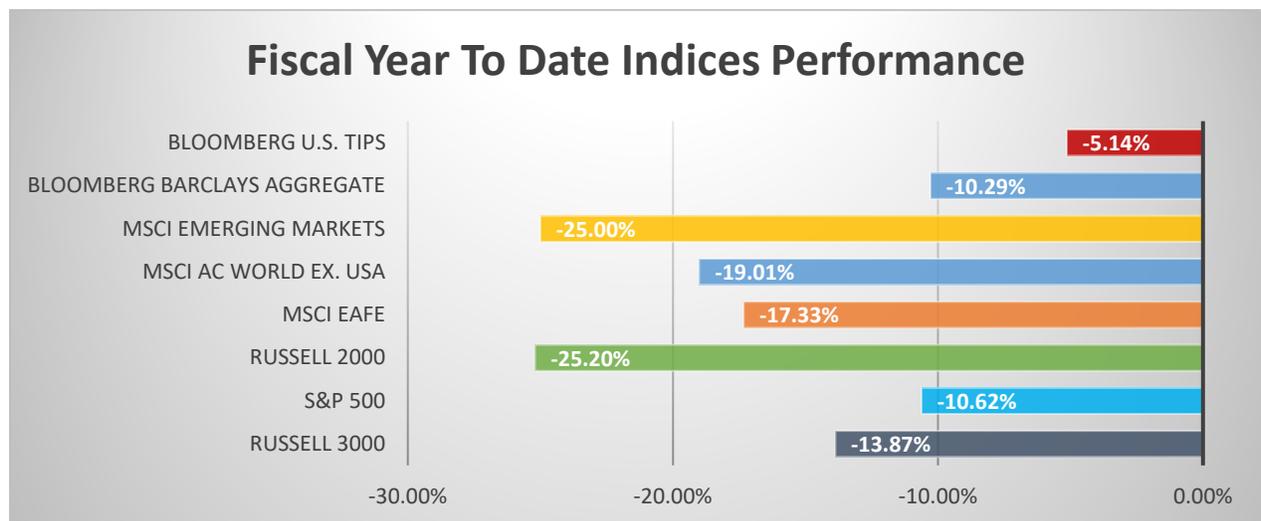
A pension fund/plan is a long-term investment established to pay for participants’ benefits. Over the long term, the expected return used for the actuarial valuation of benefits is 7%. However, the Fund is not expected to outperform this benchmark every year. Over the 5-year time period ending June 30, 2022, the Fund has averaged a +7.77% annual net return, versus +7.28% for the BERS Policy Benchmark. The 5-year performance ranks in the top quartile of the public funds’ peer group.



¹ The Board of Education Policy Benchmark is a custom index representing the weighted average return of the benchmarks for each major investment program in the Fund. The Policy Benchmark as of 6/30/22 consisted of: 31.18% Russell 3000, 9.11% MSCI World ex USA IMI Net, 1.80% MSCI ACWI, 5.61% MSCI Emerging Markets, 0.86% MSCI ACWI Ex US IMI Net, 9.00% Russell 3000 + 300 b.p. per annum, 4.00% NFI - ODCE Net, 2.53% NFI - ODCE Net + 200bps, 2.64% CPI + 4%, 2.26% FTSE US Government Bond 1-3 Years Index, 2.64% USBIG TSY AGN 1-10, 1.88% NYC Treasury Agency + 5, 0.75% FTSE US Government Bond 10+ Years Index, 0.00% Bloomberg U.S. Aggregate, 5.04% Bloomberg US Mortgage Backed Securities, 0.49% ETI Custom Benchmark, 5.42% NYC Custom IGC Benchmark, 9.54% Bloomberg U.S. HY - 2% Issuer Cap

Public Capital Markets Commentary

The BERS Fund is diversified across U.S. and non-U.S. markets. In the first half of 2022, equities declined with small capitalization stocks suffering the most and growth stocks underperforming value stocks. The ongoing war in Ukraine, supply chain issues, uncomfortably high inflation and sharp interest rate increases continued to weigh on the global economy. U.S. equities continued to struggle with high inflation, interest rate hikes by the Federal Reserve and investors’ fears of an impending recession. Developed and emerging market stocks were hurt by a stronger dollar and sold off alongside U.S. equities through most of the first half of 2022. U.S. Treasuries, credit, and high yield bonds fell substantially by the end of the fiscal year, as markets repriced in the face of an increasingly hawkish Federal Reserve.



The U.S. stock market, as measured by the Russell 3000 Index, returned -13.87% for the Fiscal year-to-date period. In the first half of 2022, the primary factors that drove the decline in the stock market were accelerating inflation, the Federal Reserve tightening monetary policy, the Russia/Ukrainian war and COVID induced shutdowns in China. The sectors that have decreased the most have been technology, consumer discretionary, and industrials.

Non-U.S. developed market equities also experienced negative performance during the fiscal period amidst the ongoing war in Ukraine, supply chain issues, and high energy prices. The non-U.S. equity market, as measured by the benchmark MSCI EAFE Index, returned -17.33% for Fiscal Year 2022. European natural gas prices continued to skyrocket as supplies fell 60% from normal levels amid gas flow disruptions in the Nord Stream 1 pipeline, forcing European governments to scramble to build-up natural gas inventories ahead of the winter. Germany triggered the second phase of its national gas emergency plan, bringing it one step closer to energy rationing, while the Netherlands and Austria indicated that coal-fired power plants could be used to compensate for reduced Russian gas supplies. The Bank of Japan maintained its stimulus program with hope that it can achieve a sustainable 2% inflation rate. The G-7 summit in Berlin concluded with the group reaffirming its support for Ukraine, but economic pressures have dampened the West’s appetite for tougher sanctions against Russia.

Emerging markets were also negative for the fiscal year, as investor sentiment weakened further amid concerns that rising global inflation and ongoing supply chain problems, accentuated by the war in Ukraine,

would push the world into recession. Colombia declined at the end of the fiscal year following a significant political shift as Gustavo Petro was named president-elect. Petro will become Colombia’s first leftist leader and intends to bring new regulations to big business, raise taxes, curtail the country’s oil and mining industries, and re-establish lost ties with neighboring nations. Towards the end of the fiscal year, Chinese economic activity began to rebound after most high-profile lockdowns were eased in May 2022. Additionally, China benefited from favorable trade dynamics as Russia’s isolated economy overtook Saudi Arabia to become China’s largest supplier of crude oil. The emerging market asset class, as measured by the MSCI Emerging Markets Index, returned -25.00% for the fiscal year.

Within the fixed income market, all fixed income sectors were negative for the fiscal year to date period amid surging interest rates and unrelenting inflationary pressures. The first half of 2022 was the worst start to a calendar year on record for the high-yield bond market and the Bloomberg Aggregate had its worst first six months since the inception of the index in 1976. U.S. Treasuries, credit, and high yield fell substantially as markets repriced for an increasingly hawkish Federal Reserve.

U.S. Fixed Income Indices	Fiscal Year To Date
Bloomberg U.S. Aggregate	-10.29%
Bloomberg Government	-8.82%
Bloomberg Investment Grade Corporates	-14.19%
Bloomberg U.S. Corporate High Yield	-12.81%

BERS Fund Description

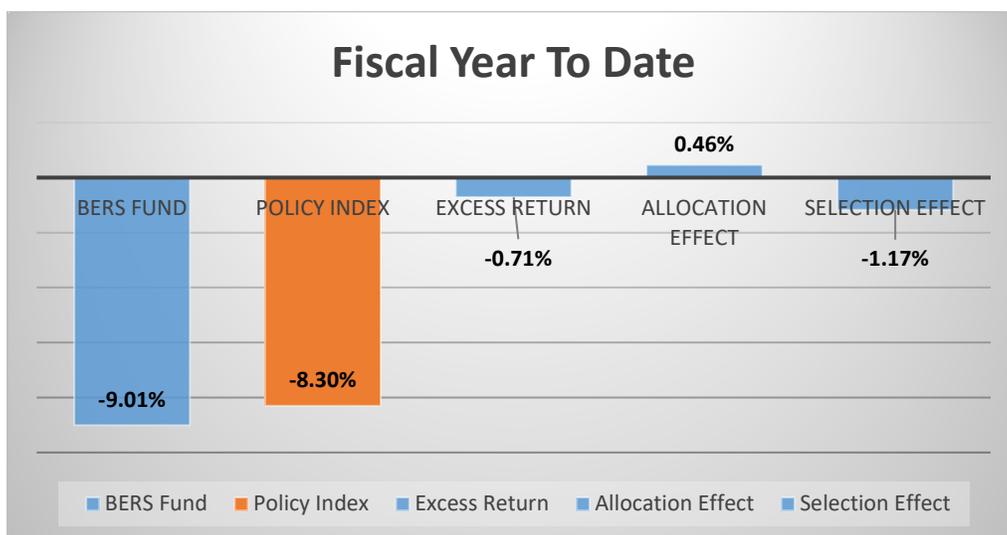
The Trustees establish an Investment Policy asset allocation targets after considering the long-term growth prospects of a diversified portfolio of investments and the expected costs of administering participants’ benefits. Asset allocation refers to the percentages of the BERS Fund assets that are in stocks, bonds, and private markets investments. In order to participate in the performance of the broad markets while keeping expenses contained, the Fund invests in passive, indexed strategies for much of its U.S. public equity allocation.

For BERS, diversification and the focus on low investment expenses and fees are critical for long-term planning. There were two investment initiatives accomplished in FY 2022. A listed infrastructure Request for Proposal was completed, and the Trustees voted to divest from investments domiciled in Russia. The approved asset allocation implementation plan continues to commit assets to Private Equity, Real Estate, and private Infrastructure investments, while reducing U.S. equities and developed market non-U.S. equities. The Fund’s active and passive/indexed managers continue to divest from 29 fossil fuel reserve owners, which responsibly reduces the exposure of the portfolio to carbon risk and mitigates the financial risks resulting from climate change.



The Fund’s target asset mix is shown in the graph depicted above. Over the long-term, which is the framework for considering the term structure of the Plans’ liabilities, we expect the asset allocation will provide asset base growth to meet benefit payments, while protecting principal through diversification.

During this most recent FY, the Fund’s asset allocation, primarily the allocations to inflation linked and high yield bonds, performed well on a relative basis, while all U.S., non-U.S. developed and emerging markets equities detracted on a relative and absolute basis. It has been a challenging environment for equities given the looming recession in the U.S., and probably already underway in Europe. The breakout of the attribution of returns is shown in the chart below. Overall, the BERS Fund underperformed the Policy Index by 0.71% for the FY. Allocation effect was positive 0.46%, while manager selection effect was -1.17%. The comparison is based on the FY return of -9.01% for the BERS Fund versus the -8.30% FY return for the Policy Index.



The diversified holdings of the BERS Fund have been a contributor to its long-term success. As of June 30, 2022, the Fund was close to its target allocation across equities and fixed income, with underweights of

roughly 2% in U.S. Treasuries and 1% in U.S. equities. The Fund has investments across public and private equity, fixed income, infrastructure, and real estate markets. Pension investors such as the BERS Fund have long-term horizons over which benefits will be paid. Therefore, BERS and many of its peers diversify a portion of assets to less liquid, private investments with higher expected returns where the invested capital is not needed for benefit payments over at least a 5 to 7-year period. These private market investments respond differently to short-term moves in stocks, interest rates, and inflation.

The U.S. passive managers essentially matched their benchmarks, while active manager selection in U.S. stocks was unfavorable compared to the benchmark (-15.05% vs. -13.87% for the index). World ex-U.S. equity active managers performed worse than the benchmark with a -31.51% return versus a -17.73% return for the benchmark. Global equity strategies detracted value returning -29.91% versus -15.75% for the MSCI AC World Index. The underperformance within non-U.S. equity came from growth-oriented managers and the emerging markets holdings. The Total Fixed Income return was -8.97%. As part of our ongoing monitoring, we review the manager contributions and the structure of the Fund to achieve the expected levels of returns on a net of fee basis. The Fund's current level of diversification into alternative assets had a positive impact in FY 2022, as the Private Equity, Private Real Estate, and Private Infrastructure investments outperformed their respective benchmarks. These investments have added value to the Fund over longer periods and continue to be important strategic allocations.

Market conditions and Fund performance will continue to be monitored closely to accomplish the goal of providing promised benefits to participants.

Sincerely,



Vanessa Vargas Guijarro
Vice President & Senior Consultant



Christian Sevier
Vice President & Senior Consultant

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

SCHEDULE OF INVESTMENT RETURNS (FIXED) ANNUALIZED INVESTMENTS RESULTS (UNAUDITED) FISCAL YEAR ENDED JUNE 30, 2022

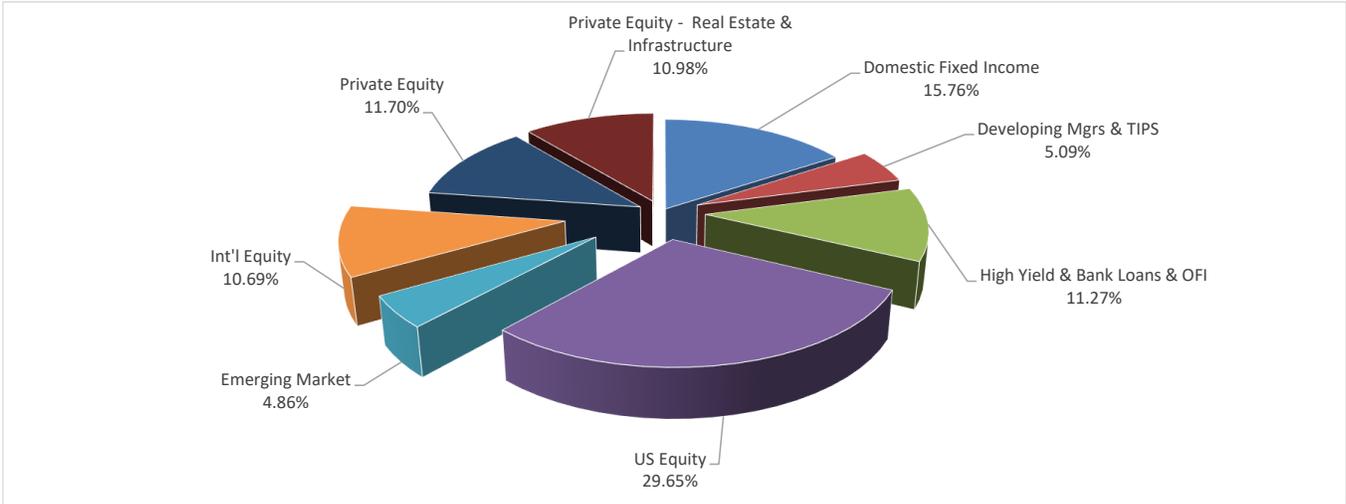
	3 Mos Apr-22 Jun-22 %	6 Mos Jan-22 Jun-22 %	1 Yr Jul-21 Jun-22 %	3 Yrs Jul-19 Jun-22 %	5 Yrs Jul-17 Jun-22 %	10 Yrs Jul-12 Jun-22 %
Total Equity	(10.75)	(14.71)	(9.08)	10.28	10.40	-
Domestic Equity	(16.82)	(22.12)	(15.05)	9.30	10.50	12.72
Russell 3000 Index	16.70	(21.10)	(13.87)	9.77	10.60	14.70
Total World ex-USA Equity	(17.27)	(27.78)	(31.51)	2.41	4.36	7.14
NYC Developed Equity Benchmark	(15.15)	(19.54)	(17.73)	1.72	2.55	5.57
Total Emerging Markets	(15.56)	(20.81)	(26.60)	(1.34)	0.38	3.16
MSCI Emerging Markets	(11.45)	(17.63)	(25.28)	0.57	2.18	3.06
International Fund of Funds	(13.76)	(20.24)	(20.90)	2.66	3.40	-
MSCI ACWI EX USA IMI NET	(14.28)	(19.08)	(19.86)	1.55	2.50	-
Total Global Equity	(19.93)	(31.75)	(29.91)	4.96	-	-
MSCI AC World (Daily Const)	(15.66)	(20.18)	(15.75)	6.21	-	-
Private Equity	1.96	7.32	28.30	26.52	22.41	19.41
Russell 3K + 300bps	(4.56)	5.04	15.25	21.74	18.82	17.62
Real Estate	6.36	14.13	29.88	12.82	12.07	12.49
NCREIF NFI-ODCE NET + 100 BP	4.80	12.55	29.57	12.77	10.64	11.25
Infrastructure	6.94	8.16	13.59	13.24	13.80	-
CPI + 4%	3.66	7.51	13.36	9.16	8.03	-
Total Fixed Income	(5.83)	(10.02)	(8.97)	0.87	2.07	-
Structured Fixed Income	(4.82)	(10.37)	(10.28)	(0.19)	1.37	2.20
NYC Custom Structured Index - BERS	(4.80)	(10.38)	(10.27)	0.32	1.89	2.30
Core FI - Developing Mgrs	(5.23)	(10.89)	(10.95)	-	-	-
Bloomberg US Aggregate	(4.69)	(10.35)	(10.29)	-	-	-
TIPS	(6.23)	(8.87)	(5.11)	3.07	3.24	1.84
BBG BARC GBL INF - LK: US TIPS (DLY)	(6.08)	(8.92)	(5.14)	3.04	3.21	1.73
Targeted Investments	(3.74)	(8.91)	(8.81)	(0.34)	1.46	2.22
BERS Custom Benchmark	(3.72)	(8.48)	(8.48)	(0.60)	1.06	1.64
High Yield	(9.32)	(12.91)	(11.42)	1.23	2.58	4.90
High Yield Custom Benchmark	(9.84)	(14.19)	(12.82)	0.18	2.05	4.11
Opportunistic Fixed Income	0.85	1.76	8.18	-	-	-
Opportunistic Fixed Income JPMGHY	(6.13)	(7.61)	(4.95)	-	-	-
Short-term Investments	0.12	0.01	0.01	0.50	1.00	0.73
Total Portfolio	(9.16)	(13.19)	(9.01)	7.18	7.77	9.11
BERS Policy Benchmark	(9.90)	(12.57)	(8.30)	6.82	7.28	8.49

Yield data were obtained from the NYCBERS Performance Overview as of June 30, 2022

These returns are calculated using a time weighted rate of return based on the market value of the portfolio, for time periods greater than one year the returns are annualized.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

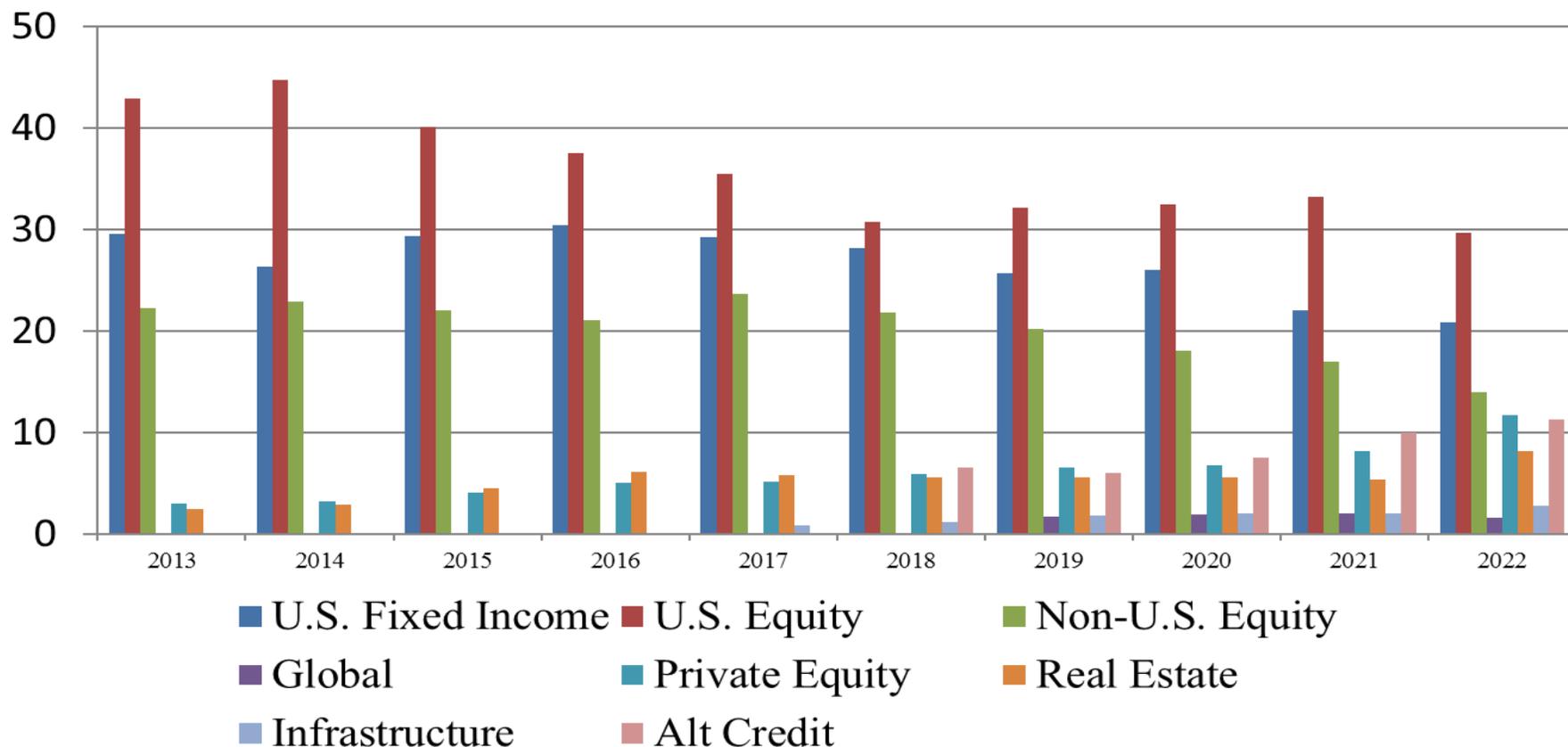
ASSET ALLOCATION (FIXED) FISCAL YEAR ENDED JUNE 30, 2022



Years	Domestic Fixed Income	Developing Mgrs & TIPS	High Yield & Bank Loans & OFI	US Equity	Emerging Market	Int'l Equity	Private Equity	Private Equity - Real Estate & Infrastructure
6/30/2013	20.01	3.91	5.60	42.90	4.56	17.59	3.04	2.39
6/30/2014	16.69	3.38	6.19	44.72	4.67	18.27	3.25	2.83
6/30/2015	20.67	3.16	5.48	40.15	4.94	17.06	4.07	4.47
6/30/2016	19.50	5.00	5.50	37.00	5.00	17.00	4.97	6.03
6/30/2017	20.37	4.81	6.00	36.49	7.98	12.76	5.01	6.58
6/30/2018	22.87	4.73	7.11	30.74	7.54	14.24	5.91	6.86
6/30/2019	20.99	4.69	6.42	32.12	6.97	14.92	6.55	7.34
6/30/2020	21.78	4.20	7.49	32.42	6.17	13.59	6.70	7.65
6/30/2021	17.17	4.97	10.03	33.15	6.02	13.23	8.19	7.24
6/30/2022	15.76	5.09	11.27	29.65	4.86	10.69	11.70	10.98

NYC BOARD OF EDUCATION RETIREMENT SYSTEM ASSET ALLOCATION

June 30, 2013 – June 30, 2022



NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

LIST OF 50 LARGEST EQUITY HOLDINGS (FIXED) FISCAL YEAR ENDED JUNE 30, 2022

	NAME OF EQUITY SECURITIES	COST	FAIR VALUE
1	APPLE INC	\$ 40,151,009	\$ 125,060,929
2	MICROSOFT CORP	49,231,583	120,654,625
3	AMAZON.COM INC	44,402,462	58,308,015
4	ALPHABET INC CL A	22,602,631	41,676,168
5	ALPHABET INC CL C	20,462,336	38,840,362
6	TESLA INC	9,385,915	35,675,771
7	BERKSHIRE HATHAWAY INC CL B	24,937,115	32,453,614
8	JOHNSON & JOHNSON	22,844,845	30,128,595
9	UNITEDHEALTH GROUP INC	14,142,762	29,722,227
10	META PLATFORMS INC CLASS A	24,826,413	23,351,580
11	NVIDIA CORP	10,219,407	23,032,736
12	PROCTER & GAMBLE CO/THE	12,979,975	21,265,103
13	VISA INC CLASS A SHARES	13,449,573	20,453,130
14	JPMORGAN CHASE & CO	20,307,058	20,435,787
15	PFIZER INC	12,882,504	18,814,977
16	HOME DEPOT INC	12,145,939	18,077,684
17	ABBVIE INC	12,300,449	17,886,178
18	ELI LILLY & CO	5,463,097	17,567,106
19	MASTERCARD INC A	10,633,808	17,336,572
20	COCA COLA CO/THE	11,690,284	15,841,367
21	PEPSICO INC	10,960,454	15,488,047
22	MERCK & CO. INC.	9,280,417	14,883,776
23	BANK OF AMERICA CORP	14,139,615	14,230,208
24	THERMO FISHER SCIENTIFIC INC	6,369,230	13,832,995
25	VERIZON COMMUNICATIONS INC	13,022,767	13,455,652
26	COSTCO WHOLESALE CORP	6,229,943	13,323,984
27	BROADCOM INC	7,389,661	12,576,163
28	ABBOTT LABORATORIES	7,192,951	11,872,403
29	MCDONALD S CORP	8,100,408	11,653,230
30	ACCENTURE PLC CL A	6,869,708	11,362,549
31	MARATHON PETROLEUM CORP	11,112,382	11,229,886
32	BRISTOL MYERS SQUIBB CO	9,047,519	11,175,472
33	WALMART INC	8,520,379	11,047,245
34	ADOBE INC	7,052,481	10,948,489
35	RAYTHEON TECHNOLOGIES CORP	9,219,609	10,730,105
36	COMCAST CORP CLASS A	9,671,505	10,644,988
37	DANAHER CORP	5,099,520	10,543,390
38	LINDE PLC	10,643,259	10,092,015
39	PHILIP MORRIS INTERNATIONAL	10,066,965	10,059,138
40	AT&T INC	12,353,035	9,960,653
41	SALESFORCE INC	8,349,824	9,942,505
42	WALT DISNEY CO/THE	10,501,295	9,911,245
43	CISCO SYSTEMS INC	10,163,627	9,870,904
44	INTEL CORP	12,786,693	9,647,328
45	NEXTERA ENERGY INC	5,333,348	9,283,349
46	TEXAS INSTRUMENTS INC	6,746,808	9,251,881
47	WELLS FARGO & CO	12,374,307	9,154,460
48	QUALCOMM INC	4,587,658	9,138,520
49	UNION PACIFIC CORP	5,677,641	8,533,120
50	INTL BUSINESS MACHINES CORP	8,500,594	8,440,479

NOTE: Full listing of holdings can be obtained at
NYC Board of Education Retirement System
55 Water Street, 50th Floor, New York, NY 10041

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

LIST OF 50 LARGEST DEBT SECURITIES HOLDING (FIXED) FISCAL YEAR ENDED JUNE 30, 2022

	INTEREST RATE	MATURITY DATE	PAR VALUE	FAIR VALUE	
1	TSY INFL IX N/B 07/23 0.375	0.38%	07/15/2023	\$ 11,912,885	\$ 12,122,314
2	FNMA POOL FS2040 FN 02/52 FIXED VAR	2.00%	02/01/2052	13,778,833	11,972,566
3	TSY INFL IX N/B 01/24 0.625	0.63%	01/15/2024	11,570,579	11,768,551
4	US TREASURY N/B 08/48 3	3.00%	08/15/2048	11,525,000	10,889,742
5	US TREASURY N/B 02/32 1.875	1.88%	02/15/2032	11,796,000	10,686,468
6	FED HM LN PC POOL SD7553 FR 03/52 FIXED 3	3.00%	03/01/2052	11,158,116	10,492,646
7	TSY INFL IX N/B 01/32 0.125	0.13%	01/15/2032	10,856,800	10,305,275
8	TSY INFL IX N/B 07/24 0.125	0.13%	07/15/2024	9,828,884	9,922,946
9	TSY INFL IX N/B 07/31 0.125	0.13%	07/15/2031	10,152,231	9,652,640
10	FED HM LN PC POOL SD7552 FR 01/52 FIXED 2.5	2.50%	01/01/2052	10,568,896	9,579,964
11	TSY INFL IX N/B 01/28 0.5	0.50%	01/15/2028	9,490,813	9,425,896
12	TSY INFL IX N/B 07/25 0.375	0.38%	07/15/2025	9,134,437	9,225,872
13	US TREASURY N/B 08/28 2.875	2.88%	08/15/2028	9,150,000	9,038,462
14	GNMA II TBA 30 YR 2.5 JUMBOS	2.50%	07/21/2052	9,862,500	9,024,188
15	TSY INFL IX N/B 01/30 0.125	0.13%	01/15/2030	9,403,611	8,975,653
16	TSY INFL IX N/B 07/30 0.125	0.13%	07/15/2030	9,346,710	8,913,490
17	TSY INFL IX N/B 01/31 0.125	0.13%	01/15/2031	9,327,360	8,871,718
18	TSY INFL IX N/B 04/27 0.125	0.13%	04/15/2027	8,907,377	8,769,936
19	TSY INFL IX N/B 10/26 0.125	0.13%	10/15/2026	8,779,823	8,699,839
20	TSY INFL IX N/B 01/25 0.25	0.25%	01/15/2025	8,503,747	8,555,280
21	FNMA POOL FM7599 FN 01/51 FIXED VAR	3.50%	01/01/2051	8,530,178	8,305,834
22	TSY INFL IX N/B 10/25 0.125	0.13%	10/15/2025	8,243,748	8,237,318
23	TSY INFL IX N/B 01/26 0.625	0.63%	01/15/2026	7,921,913	8,010,639
24	TSY INFL IX N/B 07/28 0.75	0.75%	07/15/2028	7,678,469	7,733,370
25	TSY INFL IX N/B 07/27 0.375	0.38%	07/15/2027	7,650,067	7,622,297
26	TSY INFL IX N/B 10/24 0.125	0.13%	10/15/2024	7,492,156	7,538,008
27	US TREASURY N/B 05/29 2.375	2.38%	05/15/2029	7,850,000	7,520,379
28	US TREASURY N/B 11/31 1.375	1.38%	11/15/2031	8,569,000	7,432,236
29	FED HM LN PC POOL SD8212 FR 05/52 FIXED 2.5	2.50%	05/01/2052	8,239,427	7,419,769
30	US TREASURY N/B 05/52 2.875	2.88%	05/15/2052	7,850,000	7,414,561
31	US TREASURY N/B 08/31 1.25	1.25%	08/15/2031	8,600,000	7,403,396
32	TSY INFL IX N/B 07/26 0.125	0.13%	07/15/2026	7,437,991	7,377,743
33	TSY INFL IX N/B 01/27 0.375	0.38%	01/15/2027	7,380,752	7,353,296
34	TSY INFL IX N/B 01/29 0.875	0.88%	01/15/2029	7,228,015	7,295,380
35	TSY INFL IX N/B 04/26 0.125	0.13%	04/15/2026	7,274,586	7,206,496
36	TSY INFL IX N/B 01/25 2.375	2.38%	01/15/2025	6,603,165	6,996,912
37	TSY INFL IX N/B 07/29 0.25	0.25%	07/15/2029	7,034,437	6,820,801
38	TSY INFL IX N/B 04/25 0.125	0.13%	04/15/2025	6,658,407	6,661,670
39	FNMA POOL FS0316 FN 11/41 FIXED VAR	1.50%	11/01/2041	7,687,096	6,586,765
40	CARNIVAL CORP COMPANY GUAR 144A 03/27 5.75	5.75%	03/01/2027	8,550,000	6,175,494
41	US TREASURY N/B 05/25 2.125	2.13%	05/15/2025	6,255,000	6,101,815
42	TSY INFL IX N/B 04/24 0.5	0.50%	04/15/2024	6,017,025	6,100,240
43	GNMA II POOL MA7767 G2 12/51 FIXED 2.5	2.50%	12/20/2051	6,628,992	6,087,602
44	GNMA II POOL MA7135 G2 01/51 FIXED 2	2.00%	01/20/2051	6,682,272	5,963,393
45	US TREASURY N/B 07/24 1.75	1.75%	07/31/2024	6,030,000	5,878,768
46	TSY INFL IX N/B 04/29 3.875	3.88%	04/15/2029	4,807,247	5,803,933
47	JPMORGAN CHASE & CO SR UNSECURED 02/32 VAR	1.95%	02/04/2032	7,170,000	5,730,766
48	GNMA II TBA 30 YR 2 JUMBOS	2.00%	07/21/2052	6,450,400	5,727,246
49	US TREASURY N/B 01/28 0.75	0.75%	01/31/2028	6,500,000	5,724,550
50	TSY INFL IX N/B 02/45 0.75	0.75%	02/15/2045	6,077,402	5,440,916

NOTE: Full listing of holdings can be obtained at
NYC Board of Education Retirement System
55 Water Street, 50th Floor, New York, NY 10041

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

SCHEDULE OF INVESTMENT MANAGEMENT FEES (FIXED) FISCAL YEAR ENDED JUNE 30, 2022

FUND MANAGER	CATEGORY	ASSET UNDER MANAGEMENT AS OF 06/30/22 (in \$)	MANAGEMENT FEES (in \$)
Actis	Alternative Investment - Infrastructure	6,363,198	904,367
Ardian	Alternative Investment - Infrastructure	17,461,003	576,796
Axiom Infrastructure	Alternative Investment - Infrastructure	13,371,548	114,356
BlackRock	Alternative Investment - Infrastructure	14,495,803	430,216
Brookfield Asset Management	Alternative Investment - Infrastructure	35,983,012	211,019
EIG Credit Management	Alternative Investment - Infrastructure	4,428,848	77,477
EQT Partners	Alternative Investment - Infrastructure	37,670,868	1,997,532
Global Infrastructure Management	Alternative Investment - Infrastructure	25,806,100	447,990
Industry Funds Management	Alternative Investment - Infrastructure	26,887,702	413,445
Infravia Capital Partners	Alternative Investment - Infrastructure	2,770,757	58,722
KKR	Alternative Investment - Infrastructure	18,862,476	296,653
Stonepeak Infrastructure Partners	Alternative Investment - Infrastructure	12,160,997	468,440
400 Capital Management	Alternative Investment - OFI	28,936,807	44,068
Apollo Global Management	Alternative Investment - OFI	14,311,942	142,261
KKR	Alternative Investment - OFI	18,818,567	267,145
Marathon Asset Management Limited	Alternative Investment - OFI	30,660,534	250,365
Oak Hill Advisors	Alternative Investment - OFI	49,212,340	727,660
Torchlight Investors	Alternative Investment - OFI	9,389,851	355,254
American Security Partners	Alternative Investment - Private Equity	10,846,450	(236,190)
Apax Partners	Alternative Investment - Private Equity	24,962,066	466,574
Apollo Global Management	Alternative Investment - Private Equity	36,129,028	1,929,686
Ardian	Alternative Investment - Private Equity	33,731,619	908,615
Ares Management	Alternative Investment - Private Equity	9,805,315	66,599
BC Partners	Alternative Investment - Private Equity	21,478,948	133,668
Bridgepoint Capital	Alternative Investment - Private Equity	26,749,244	342,745
Carlyle Group	Alternative Investment - Private Equity	16,713,094	2,498,993
Centerbridge Partners	Alternative Investment - Private Equity	2,427,077	195,641
Clearlake Capital Group	Alternative Investment - Private Equity	22,730,083	695,687
Crestview Partners	Alternative Investment - Private Equity	26,158,299	488,607
CVC Capital Partners	Alternative Investment - Private Equity	50,204,414	2,651,543
EQT Partners	Alternative Investment - Private Equity	61,828,506	159,708
Fairview Capital Partners	Alternative Investment - Private Equity	-	102,449
FTV Capital	Alternative Investment - Private Equity	20,154,655	202,469
Grain Management	Alternative Investment - Private Equity	10,217,978	188,389
HarbourVest Partners	Alternative Investment - Private Equity	9,285,036	39,661
Heartwood Partners	Alternative Investment - Private Equity	1,950,894	52,925
Hg Capital	Alternative Investment - Private Equity	546,568	9,565
ICG Strategic Equity	Alternative Investment - Private Equity	37,502,634	308,604
ICV Partners	Alternative Investment - Private Equity	1,680,792	274,017
Insight Partners	Alternative Investment - Private Equity	13,169,162	260,397
KKR	Alternative Investment - Private Equity	43,832,602	619,868
Landmark Partners	Alternative Investment - Private Equity	10,647,746	187,946
Leonard Green & Partners	Alternative Investment - Private Equity	14,825,847	923,185
Lexington Partners	Alternative Investment - Private Equity	29,187,612	375,637
Lindsay Goldberg	Alternative Investment - Private Equity	4,889,007	237,974
Mesirov Financial	Alternative Investment - Private Equity	44,921,569	470,145
Mill City Capital	Alternative Investment - Private Equity	1,410,545	12,484
Neuberger Berman Group	Alternative Investment - Private Equity	6,300,415	65,484
New Mainstream Capital	Alternative Investment - Private Equity	3,132,732	81,321
One Rock Capital Partners	Alternative Investment - Private Equity	11,456,782	399,052
Palladium Equity Partners	Alternative Investment - Private Equity	7,197,390	222,008
Patriot Financial Partners	Alternative Investment - Private Equity	4,644,480	89,292
Platinum Equity	Alternative Investment - Private Equity	29,385,503	1,268,127
Providence Strategic Growth	Alternative Investment - Private Equity	4,338,472	781,728
Reverence Capital Partners	Alternative Investment - Private Equity	10,183,867	308,231
Siris Capital Group	Alternative Investment - Private Equity	13,856,690	239,728
Stellex Capital Management	Alternative Investment - Private Equity	11,708,033	933,767
The Raine Group	Alternative Investment - Private Equity	15,648,281	896,266
The Vistria Group	Alternative Investment - Private Equity	9,467,159	119,806
Thoma Bravo	Alternative Investment - Private Equity	4,655,206	84,735

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

SCHEDULE OF INVESTMENT MANAGEMENT FEES (FIXED) FISCAL YEAR ENDED JUNE 30, 2022

FUND MANAGER	CATEGORY	ASSET UNDER MANAGEMENT AS OF 06/30/22 (in \$)	MANAGEMENT FEES (in \$)
TPG Capital	Alternative Investment - Private Equity	3,285,656	116,732
Valor Equity Partners	Alternative Investment - Private Equity	16,673,251	545,079
Vista Equity Partners	Alternative Investment - Private Equity	84,014,881	2,097,891
Warburg Pincus	Alternative Investment - Private Equity	77,666,690	2,004,500
Webster Capital	Alternative Investment - Private Equity	1,324,106	16,802
Welsh Carson Anderson & Stowe	Alternative Investment - Private Equity	22,108,614	840,918
Aermont Capital	Alternative Investment - Real Estate	23,997,098	203,339
Almanac Realty Investors	Alternative Investment - Real Estate	10,076,493	157,231
Artemis Real Estate Partners	Alternative Investment - Real Estate	13,408,798	217,914
Basis Management Group	Alternative Investment - Real Estate	4,973,707	226,525
Bentall GreenOak	Alternative Investment - Real Estate	3,308,529	50,248
Brookfield Asset Management	Alternative Investment - Real Estate	52,698,097	1,019,952
Carlyle Group	Alternative Investment - Real Estate	6,914,589	429,434
Clarion Partners	Alternative Investment - Real Estate	45,787,104	1,803,524
Cortland Partners	Alternative Investment - Real Estate	15,476,598	97,654
DivcoWest Real Estate Investments	Alternative Investment - Real Estate	10,714,605	49,652
DRA Advisors	Alternative Investment - Real Estate	7,638,787	132,083
Exeter Property Group	Alternative Investment - Real Estate	45,029,790	2,628,333
Franklin Templeton Institutional	Alternative Investment - Real Estate	914,859	91,445
H/2 Capital Partners	Alternative Investment - Real Estate	15,003,961	204,418
Harrison Street Real Estate Capital	Alternative Investment - Real Estate	17,757,854	98,898
Heitman Capital Management	Alternative Investment - Real Estate	27,525,713	155,180
Jamestown	Alternative Investment - Real Estate	5,260,893	37,861
KKR	Alternative Investment - Real Estate	42,203,774	881,547
Lasalle Investment Management	Alternative Investment - Real Estate	74,351,045	420,275
Lone Star	Alternative Investment - Real Estate	2,764,610	8,185
Mesirow Financial	Alternative Investment - Real Estate	6,456,470	314,258
Metlife	Alternative Investment - Real Estate	24,664,080	131,924
Prudential Financial	Alternative Investment - Real Estate	3,939,479	69,982
Related Fund Management	Alternative Investment - Real Estate	8,455,383	51,359
Rialto Capital Management	Alternative Investment - Real Estate	13,237,909	564,767
RREEF America	Alternative Investment - Real Estate	48,650,125	56,355
The Blackstone Group	Alternative Investment - Real Estate	35,128,505	1,938,839
The Hudson Companies	Alternative Investment - Real Estate	6,375,099	69,429
Tristan Capital Partners	Alternative Investment - Real Estate	9,651,987	169,345
UBS Asset Management	Alternative Investment - Real Estate	26,696,745	218,155
USAA Real Estate	Alternative Investment - Real Estate	25,280,673	211,557
Vanbarton Group	Alternative Investment - Real Estate	6,222,692	448,175
Westbrook Partners	Alternative Investment - Real Estate	7,047,715	442,885
RBC Global Asset Management	CTF - Fixed Income - Mortgage	9,571,610	18,562
Barings	CTF - Fixed Income - Other	373,982	1,299
BlackRock	CTF-Domestic Equity	70,248,073	2,927
BlackRock	CTF-International Equity	1,579,365	509
Altravue Capital	Domestic Equity	3,096,768	18,394
Ballast Equity Management	Domestic Equity	1,580,687	9,772
BlackRock	Domestic Equity	1,397,161,478	32,165
Bridge City Capital	Domestic Equity	1,696,020	11,324
Dean Capital Management	Domestic Equity	3,944,325	22,593
Essex Investment Management Company	Domestic Equity	1,831,462	13,929
Legato Capital Management	Domestic Equity	-	1
Lisanti Capital Growth	Domestic Equity	1,979,987	15,750
Nicholas Investment Partners	Domestic Equity	694,292	5,308
State Street Global Advisors	Domestic Equity	597,380,842	37,242
Wasatch Advisors	Domestic Equity	66,103,371	1,450,869
Wellington Management Company	Domestic Equity	203,944,542	764,713
State Street Global Advisors	Fixed Income - Government	320,554,341	106,735
AFL-CIO Housing Investment Trust	Fixed Income - Mortgage	16,476,852	56,420
BlackRock	Fixed Income - Mortgage	339,000,944	156,185
Mackay Shields	Fixed Income - Other	349,649,986	1,033,206
Nomura Corporate Research and Asset Management	Fixed Income - Other	341,729,014	1,199,345

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

SCHEDULE OF INVESTMENT MANAGEMENT FEES (FIXED) FISCAL YEAR ENDED JUNE 30, 2022

FUND MANAGER	CATEGORY	ASSET UNDER MANAGEMENT AS OF 06/30/22 (in \$)	MANAGEMENT FEES (in \$)
Pugh Capital Management	Fixed Income - Other	114,384,712	250,089
T. Rowe Price Associates	Fixed Income - Other	373,565,672	412,501
State Street Global Advisors	Fixed Income - TIPS	289,612,884	15,452
Acadian Asset Management	International Equity	369,276,931	1,410,932
Algert Global	International Equity	26,387,836	117,694
ARGA Investment Management	International Equity	10,809,811	40,391
Aubrey Capital Management	International Equity	9,469,285	37,917
Baillie Gifford	International Equity	245,843,060	772,770
Dundas Global Investors	International Equity	7,078,917	29,540
Fiera Capital Corporation	International Equity	72,720,498	484,716
Foresight Global Investors	International Equity	9,120,142	33,895
JP Morgan Asset Management	International Equity	102,713,827	982,871
Martin Investment Management	International Equity	8,208,149	31,394
Morgan Stanley Investment Management	International Equity	53,823,697	400,417
North of South Capital	International Equity	7,564,165	29,440
Osmosis Investment Management	International Equity	8,533,401	32,402
Redwood Investments	International Equity	5,772,975	24,955
Sprucegrove Investment Management	International Equity	291,707,939	724,594
Xponance	International Equity	266	164

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

SCHEDULE OF PAYMENTS OF COMMISSIONS TO BROKERS (FIXED) FISCAL YEAR ENDED JUNE 30, 2022

INDIVIDUAL OR BROKERAGE FIRM	# OF SHARES	COMMISSION PAID (in \$)	COMMISSION PER SHARE (in \$)
ABEL NOSER	11,130	557	0.0500
ABN AMRO CLEARING BANK N.V.	38,527	859	0.0223
ACADEMY SECURITIES INC	867	17	0.0200
ALLEN & COMPANY LLC	25,016	750	0.0300
AMBIT CAPITAL PRIVATE LIMITED	5,396	88	0.0163
AUTREPAT-DIV RE	7,063	135	0.0191
B.RILEY & CO., LLC	43,291	866	0.0200
BANCO ITAU SA	337,900	2,140	0.0063
BANCO PACTUAL S.A.	284,656	527	0.0019
BANCO SANTANDER (BRASIL) S.A.	211,000	368	0.0017
BANCO SANTANDER MEXICANO, S.A.	64,251	274	0.0043
BANCROFT CAPITAL LLC	6,480	52	0.0080
BANK OF AMERICA CORPORATION	25,803	331	0.0128
BANK OF NOVA SCOTIA - SCUSA	7,222	84	0.0117
BARCLAYS CAPITAL	33,625	136	0.0040
BARCLAYS CAPITAL INC./LE	157,556	1,227	0.0078
BARCLAYS CAPITAL LE	268,048	6,144	0.0229
BARRINGTON RESEARCH ASSOCIATES	563	17	0.0300
BERNSTEIN AUTONOMOUS LLP	562,034	8,622	0.0153
BMO CAPITAL MARKETS	185,458	6,186	0.0334
BNP PARIBAS PRIME BROKERAGE, INC.	670,695	5,202	0.0078
BNP PARIBAS SECURITIES SERVICES	306,153	3,753	0.0123
BNP PARIBAS SECURITIES SERVICES SA	23,006	264	0.0115
BOFA SECURITIES, INC	209,291	1,351	0.0065
BOFA SECURITIES, INC.	2,553,793	17,136	0.0067
BRADESCO S.A. CTVM	1,315,945	5,625	0.0043
BTG PACTUAL CHILE S.A. CORREDORES DE BOL	298,889	540	0.0018
BTIG, LLC	101,910	3,083	0.0303
CABRERA CAPITAL MARKETS	130,322	326	0.0025
CANACCORD GENUITY INC.	73,624	2,303	0.0313
CANTOR FITZGERALD + CO.	29,780	555	0.0186
CANTOR FITZGERALD AND CO	762	8	0.0100
CANTOR FITZGERALD EUROPE	62,812	791	0.0126
CARNEGIE A S	334,104	10,184	0.0305
CARNEGIE INVESTMENT BANK AB	11,320	662	0.0585
CARNEGIE SECURITIES FINLAND	47,640	1,003	0.0210
CASTLEOAK SECURITIES LP	8,739	31	0.0035
CGS-CIMB SECURITIES (HONG KONG) LTD	978,340	524	0.0005
CHINA INTERNATIONAL CAPITAL CO	477,948	203	0.0004
CIBC WORLD MARKETS CORP	653	26	0.0400
CIBC WORLD MKTS INC	110	2	0.0157
CIMB SECURITIES LTD., KOREA BRANCH	955	46	0.0480
CIMB-GK SECURITIES PTE.LTD.	25,600	155	0.0060
CITATION GROUP	7,118	214	0.0300
CITIBANK CANADA	93,570	842	0.0090
CITIBANK N.A.	88,606	779	0.0088

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

SCHEDULE OF PAYMENTS OF COMMISSIONS TO BROKERS (FIXED) FISCAL YEAR ENDED JUNE 30, 2022

INDIVIDUAL OR BROKERAGE FIRM	# OF SHARES	COMMISSION PAID (in \$)	COMMISSION PER SHARE (in \$)
CITIGROUP GLBL MARKET KOERA SECS LTD	13,353	67	0.0050
CITIGROUP GLOBAL MARKETS BRASIL CCTVM SA	69,972	22	0.0003
CITIGROUP GLOBAL MARKETS EUROPE AG	118,168	1,360	0.0115
CITIGROUP GLOBAL MARKETS INC	13,610,188	9,383	0.0007
CITIGROUP GLOBAL MARKETS INC.	1,206,353	1,433	0.0012
CITIGROUP GLOBAL MARKETS INDIA	7,643	46	0.0060
CITIGROUP GLOBAL MARKETS LIMITED	807,695	6,965	0.0086
CITIGROUP GLOBAL MARKETS TAIWAN	453,128	124	0.0003
CL SECURITIES TAIWAN COMPANY LIMITED	319,000	813	0.0025
CLSA AMERICAS	18,026	130	0.0072
CLSA AUSTRALIA PTY LTD	1,041,312	534	0.0005
CLSA SECURITIES KOREA LTD.	483,865	4,611	0.0095
CLSA SECURITIES MALAYSIA SDN BHD	514,400	181	0.0004
CLSA SINGAPORE PTE LTD.	3,933,968	7,124	0.0018
COMPASS POINT	2,081	83	0.0400
CORNERSTONE MACRO LLC	6,639	181	0.0273
COWEN AND COMPANY, LLC	311,895	4,477	0.0144
CRAIG-HALLUM	15,668	624	0.0398
CREDIT AGRICOLE CIB	18,820	118	0.0062
CREDIT LYONNAIS SECURITIES INDIA	3,295,028	6,577	0.0020
CREDIT LYONNAIS SECURITIES(ASIA)	48,487,547	24,988	0.0005
CREDIT SUISSE FIRST BOSTON	151,000	2,993	0.0198
CREDIT SUISSE FIRST BOSTON (EUROPE)	5,246	128	0.0243
CREDIT SUISSE FIRST BOSTON SA CTVM	5,500	34	0.0063
CREDIT SUISSE INTERNATIONAL	222,434	2,038	0.0092
CREDIT SUISSE SECURITIES (USA) LLC	2,127,806	6,762	0.0032
CREDIT SUISSE SECURITIES CANADA INC	1,618	24	0.0146
CS FIRST BOSTON (HONG KONG) LIMITED	20,628	235	0.0114
CUTTONE & CO. INC.	744	30	0.0400
DAIWA CAPITAL MARKETS AMERICA INC.	316,200	15,484	0.0490
DAIWA SBCM EUROPE	27,700	293	0.0106
DAIWA SECURITIES (HK) LTD.	598,900	387	0.0006
DAIWA SECURITIES COMPANY LTD	6,034	235	0.0389
DAIWA SECURITIES SB CAPITAL MARKETS	110,635	490	0.0044
DANSKE BANK A.S.	334	30	0.0904
DAVIDSON D.A. + COMPANY INC.	3,518	102	0.0289
DBS VICKERS SECURITIES (SINGAPORE)	167,300	3,452	0.0206
DSP MERRILL LYNCH LTD	4,724	174	0.0369
EVERCORE ISI	43,382	1,052	0.0242
EXANE S.A.	31,498	917	0.0291
FIDELITY CAPITAL MARKETS	10,129	83	0.0082
FIDELITY CLEARING CANADA ULC	173,300	1,295	0.0075
FINANCIAL BROKERAGE GROUP (FBG)	433,411	976	0.0023
FLOW CORRETORA DE MERCADORIAS LTDA.	13,700	72	0.0053
FUBON SECURITIES CO. LTD	5,000	45	0.0091

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

SCHEDULE OF PAYMENTS OF COMMISSIONS TO BROKERS (FIXED) FISCAL YEAR ENDED JUNE 30, 2022

INDIVIDUAL OR BROKERAGE FIRM	# OF SHARES	COMMISSION PAID (in \$)	COMMISSION PER SHARE (in \$)
GOLDMAN SACHS (ASIA) L.L.C.	6,453,344	4,024	0.0006
GOLDMAN SACHS (ASIA) LLC	58,647	1,032	0.0176
GOLDMAN SACHS (INDIA)	1,024,779	2,327	0.0023
GOLDMAN SACHS + CO LLC	17,022,568	23,368	0.0014
GOLDMAN SACHS INTERNATIONAL	396,455	5,923	0.0149
HAITONG INTERNATIONAL SECURITIES COMPANY	6,000	3	0.0005
HILLTOP SECURITIES INC	158,698	3,837	0.0242
HONGKONG AND SHANGHAI BANKING CORPORATIO	59,280	187	0.0031
HSBC BANK PLC	1,988,092	6,077	0.0031
HSBC BROKERAGE (USA) INC.	2,344	12	0.0050
HSBC SECURITIES (USA) INC.	31,440,350	13,790	0.0004
HSBC SECURITIES INDIA HOLDINGS	1,068,049	2,821	0.0026
ICBCFS LLC	3,257	35	0.0108
ICICI BROKERAGE SERVICES	6,409,779	23,600	0.0037
INSTINET	132,218	1,353	0.0102
INSTINET AUSTRALIA CLEARING SRVC PTY LTD	2,488,540	2,423	0.0010
INSTINET EUROPE LIMITED	2,440	87	0.0358
INSTINET LLC	4,192,259	7,855	0.0019
INSTINET PACIFIC LIMITED	66,122,938	28,578	0.0004
INSTINET SINGAPORE SERVICES PT	1,350,019	2,159	0.0016
INSTINET U.K. LTD	15,192,766	48,687	0.0032
INVESTEC BANK PLC	535	5	0.0100
INVESTMENT TECHNOLOGY GROUP INC.	7,932	146	0.0184
ITG AUSTRALIA LTD.	173,453	634	0.0037
ITG INC	520,659	174	0.0003
J P MORGAN INDIA PRIVATE LTD	880,582	2,671	0.0030
J P MORGAN SECURITIES INC	529,595	1,226	0.0023
J.P. MORGAN SECURITIES LIMITED	64,843	741	0.0114
J.P. MORGAN SECURITIES LLC	383,969	9,745	0.0254
J.P. MORGAN SECURITIES PLC	4,169,069	16,172	0.0039
J.P.MORGAN SECURITIES(FAR EAST)LTD SEOUL	23,745	476	0.0200
JANNEY MONTGOMERY SCOTT INC.	4,875	147	0.0302
JEFFERIES HONG KONG LIMITED	181,331	1,956	0.0108
JEFFERIES INDIA PRIVATE LIMITED	137,158	5,050	0.0368
JEFFERIES INTERNATIONAL LTD	1,354,294	9,950	0.0073
JEFFERIES LLC	958,125	10,399	0.0109
JMP SECURITIES	18,075	379	0.0209
JOH. BERENBERG, GOSSLER & CO. KG	323,213	5,153	0.0159
JONESTRADING INSTITUTIONAL SERVICES LLC	86,430	1,896	0.0219
JP MORGAN SECURITIES AUSTRALIA LTD	1,290,716	990	0.0008
JP MORGAN SECURITIES SINGAPORE	579,300	113	0.0002
JPMORGAN SECURITIES(ASIA PACIFIC)LTD	8,528,882	2,267	0.0003
KEEFE BRUYETTE + WOODS INC	8,051	204	0.0254
KEPLER CHEUVREUX	3,793	157	0.0414
KEYBANC CAPITAL MARKETS INC	34,567	1,039	0.0301
KIM ENG SECURITIES (HK) LTD.	5,000	20	0.0040

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

SCHEDULE OF PAYMENTS OF COMMISSIONS TO BROKERS (FIXED) FISCAL YEAR ENDED JUNE 30, 2022

INDIVIDUAL OR BROKERAGE FIRM	# OF SHARES	COMMISSION PAID (in \$)	COMMISSION PER SHARE (in \$)
KOREA INVESTMENT AND SECURITIES CO., LTD	6,956	195	0.0280
LEERINK PARTNERS LLC	13,971	339	0.0242
LIQUIDNET ASIA LIMITED	4,160	95	0.0228
LIQUIDNET CANADA INC	1,700	21	0.0125
LIQUIDNET EUROPE LIMITED	14,782	207	0.0140
LIQUIDNET INC	214,360	3,436	0.0160
LOOP CAPITAL MARKETS	1,059,841	12,333	0.0116
LUMINEX TRADING AND ANALYTICS	21,385	107	0.0050
LUMINEX TRADING AND ANALYTICS LLC	8,283	77	0.0093
MACQUARIE BANK LIMITED	1,465,835	1,789	0.0012
MACQUARIE CAPITAL (EUROPE) LTD	32,795	136	0.0042
MACQUARIE CAPITAL (USA) INC	37,190	144	0.0039
MACQUARIE CAPITAL SECURITIES S	1,784,418	1,367	0.0008
MACQUARIE SECURITIES (INDIA) PVT LTD	9,912	164	0.0166
MACQUARIE SECURITIES KOREA LIMITED	5,795	152	0.0261
MACQUARIE SECURITIES LIMITED	4,000	19	0.0047
MAXIM GROUP	1,885	38	0.0200
MERRIL LYNCH CORREDORES DE BOL	21,661	1,083	0.0500
MERRILL LYNCH CANADA INC	178	5	0.0300
MERRILL LYNCH EQUITIES (AUSTRALIA)	110,360	187	0.0017
MERRILL LYNCH INTERNATIONAL	2,074,568	9,165	0.0044
MERRILL LYNCH PROFESSIONAL CLEARING CORP	1,872	37	0.0200
MIRABAUD SECURITIES LLP	460	127	0.2770
MIRAE ASSET SEC USA	846	25	0.0300
MISCHLER FINANCIAL GROUP	23,260	78	0.0034
MISCHLER FINANCIAL GROUP, INC-EQUITIES	5,348	112	0.0210
MIZUHO SECURITIES USA INC	19,389	506	0.0261
MIZUHO SECURITIES USA INC.	22,902	414	0.0181
MKM PARTNERS LLC	5,227	186	0.0356
MORGAN STAN INTERNATIONAL LTD	497	4	0.0079
MORGAN STANLEY AND CO INTERNATIONAL	170,153	5,900	0.0347
MORGAN STANLEY AND CO. INTERNATIONAL PLC	1,303,290	1,717	0.0013
MORGAN STANLEY CO INCORPORATED	17,375,752	19,761	0.0011
MORGAN STANLEY INDIA COMPANY PVT LTD	474,475	641	0.0014
MORGAN STANLEY TAIWAN LIMITED	5,420,394	7,775	0.0014
MOTILAL OSWAL SECURITIES LIMITED	3,850	284	0.0739
NATIONAL FINANCIAL SERVICES CORPORATION	20,113	402	0.0200
NBC CLEARING SERVICES INCORPORATED	13,145	32	0.0025
NEEDHAM AND COMPANY LLC	35,431	1,279	0.0361
NESBITT BURNS	1,725	52	0.0300
NOMURA FINANCIAL ADVISORY + SEC INDIA	303,957	478	0.0016
NOMURA SECURITIES CO LTD	80,000	317	0.0040
NORTH SOUTH CAPITAL LLC	47	2	0.0400
NORTHLAND SECURITIES INC.	5,834	117	0.0200
OPPENHEIMER + CO. INC.	24,627	673	0.0273
PAREL	9,705	288	0.0297

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

SCHEDULE OF PAYMENTS OF COMMISSIONS TO BROKERS (FIXED) FISCAL YEAR ENDED JUNE 30, 2022

INDIVIDUAL OR BROKERAGE FIRM	# OF SHARES	COMMISSION PAID (in \$)	COMMISSION PER SHARE (in \$)
PAVILION GLOBAL MARKETS LTD	121,500	3,317	0.0273
PENSERRA SECURITIES	940,678	18,542	0.0197
PENSERRA SECURITIES LLC	437,218	800	0.0018
PERSHING LLC	2,377,494	22,727	0.0096
PERSHING SECURITIES CANADA LIMITED	820	24	0.0290
PERSHING SECURITIES LIMITED	738,647	11,473	0.0155
PIPER JAFFRAY & CO.	49,248	1,938	0.0393
PIPER, JAFFRAY AND HOPWOOD	138,989	269	0.0019
R.B.C. DOMINION SECURITIES CORPORATION	2,225	30	0.0133
RAYMOND JAMES AND ASSOCIATES INC	77,548	2,980	0.0384
RAYMOND JAMES LTD	2,096	63	0.0300
RBC CAPITAL MARKETS LLC	463,567	5,338	0.0115
RBC CAPITAL MARKETS, LLC	204,855	2,950	0.0144
REDBURN (EUROPE) LIMITED	70,928	2,707	0.0382
ROBERT W. BAIRD CO. INCORPORATED	225,957	6,213	0.0275
ROTH CAPITAL PARTNERS LLC	4,141	198	0.0477
ROYAL BANK OF CANADA EUROPE LTD	246,697	7,053	0.0286
SAMSUNG SECURITIES CO LTD	753	117	0.1552
SANFORD C BERNSTEIN CO LLC	138,217	1,627	0.0118
SANFORD C. BERNSTEIN AND CO. LLC	945,246	6,894	0.0073
SCOTIA CAPITAL (USA) INC	35,009	258	0.0074
SG SECURITIES (HK) LIMITED	320,683	797	0.0025
SIDCO/VIRTU AMERICAS	203	8	0.0400
SINOPAC SECURITIES CORPORATION	135,000	601	0.0045
SKANDINAVISKA ENSKILDA BANKEN AB GLOBAL	13,490	747	0.0554
SMBC NIKKO CAPITAL MARKETS LIMITED	25,798	431	0.0167
SMBC SECURITIES INC	11,500	188	0.0164
SOCIETE GENERALE	1,225,622	2,286	0.0019
STATE STREET GLOBAL MARKETS, LLC	29,771	780	0.0262
STEPHENS INC	54,476	1,733	0.0318
STIFEL NICOLAUS + CO INC	110,202	2,787	0.0253
STONEX FINANCIAL INC.	129	5	0.0400
STRATEGAS SECURITIES LLC	3,420	86	0.0250
STUART FRANKEL + CO INC	755	8	0.0100
SUNTRUST CAPITAL MARKETS, INC.	9,559	344	0.0360
TELSEY ADVISORY GROUP	38,698	1,902	0.0492
THE BANK OF NEW YORK MELLON	53,012	296	0.0056
TULLETT PREBON FINANCIAL SERVICES LLC	576	12	0.0200
UBS AG	5,626,322	22,178	0.0039
UBS AG LONDON BRANCH	62,704	267	0.0043
UBS SECURITIES ASIA LTD	7,266,309	3,137	0.0004
UBS SECURITIES CANADA INC	9,416	29	0.0031
UBS SECURITIES HONG KONG LIMITED	122,000	99	0.0008
UBS SECURITIES INDIA PRIVATE LTD	753,022	2,153	0.0029
UBS SECURITIES LLC	2,611,660	11,367	0.0044
UBS SECURITIES PTE.LTD	891,304	1,198	0.0013

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
 QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM**

**SCHEDULE OF PAYMENTS OF COMMISSIONS TO BROKERS (FIXED)
 FISCAL YEAR ENDED JUNE 30, 2022**

INDIVIDUAL OR BROKERAGE FIRM	# OF SHARES	COMMISSION PAID (in \$)	COMMISSION PER SHARE (in \$)
UBS SECURITIES PTE.LTD., SEOUL	82,980	774	0.0093
UBS SWITZERLAND AG	93,279	115	0.0012
UOB KAY HIAN PTE LIMITED	156,500	810	0.0052
VIRTU AMERICAS	15,366	124	0.0081
VIRTU AMERICAS LLC	292,091	5,684	0.0195
VIRTU ITG EUROPE LIMITED	29,692	1,562	0.0526
VTB BANK EUROPE PLC	239,035,059	684	0.0000
WELLS FARGO SECURITIES LLC	594,069	4,753	0.0080
WELLS FARGO SECURITIES, LLC	29,998	1,073	0.0358
WILLIAM BLAIR & COMPANY L.L.C	72,283	2,941	0.0407
WILLIAMS CAPITAL GROUP LP (THE)	91,936	645	0.0070
WOOD GUNDY INC.	5,946	49	0.0083
XP INVESTIMENTOS CCTVM SA	297,286	191	0.0006
YUANTA SECURITIES CO., LTD.	71,000	170	0.0024

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
 QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM**

INVESTMENT SUMMARY (FIXED AND VARIABLE)

FISCAL YEAR ENDED JUNE 30, 2022

(In thousands)

<u>Type of Investments</u>	<u>Fair Value</u>	<u>Percentages</u>
Short Term Investments	\$ 270,497	2.95 %
Debt Securities	2,103,604	22.94
Equity Securities	4,147,837	45.23
Alternative Investments	1,979,276	21.58
Collective Trust Funds		
Fixed Income	174	0.00
Domestic Equity	70,349	0.77
International Equity	1,524	0.02
Mortgage Debt Security	20,493	0.22
Total Collective Trust Funds	92,540	1.01
Collateral From Securities Lending:	576,444	6.29
Total Investments	\$ 9,170,198	100.00 %

**NEW YORK CITY BOARD OF EDUCATION
RETIREMENT SYSTEM**

A FIDUCIARY FUND
OF THE CITY OF NEW YORK

**ANNUAL COMPREHENSIVE FINANCIAL REPORT OF
THE QUALIFIED PENSION PLAN
AND THE
TAX DEFERRED ANNUITY PROGRAM**

**ACTUARIAL SECTION
PART IV**

**FOR THE YEARS ENDED
JUNE 30, 2022 AND JUNE 30, 2021**

This page is intentionally left blank



OFFICE OF THE ACTUARY

255 GREENWICH STREET • 9TH FLOOR
NEW YORK, NY 10007
(212) 442-5775 • FAX: (212) 442-5777

MAREK TYSZKIEWICZ
CHIEF ACTUARY

December 1, 2022

Board of Trustees
New York City Board of Education Retirement System
55 Water Street, 50th Floor
New York, NY 10041

Re: Actuarial Information for the Annual Comprehensive Financial Report (ACFR) for the
Fiscal Year Ended June 30, 2022

Dear Members of the Board of Trustees:

The financial objective of the New York City Board of Education Retirement System - Qualified Pension Plan (BERS-QPP or the Plan) is to fund members' retirement benefits during their active service by establishing employer normal contribution rates that, expressed as a percentage of active member annualized covered payroll, would remain approximately level over the future working lifetimes of those active members and, together with member contributions and investment income, are intended to ultimately be sufficient to accumulate assets to pay benefits when due.

An actuarial valuation of the Plan is performed annually as of the second June 30 preceding each fiscal year to determine the Employer Contributions to be paid for that fiscal year (i.e., the June 30, 2020 actuarial valuation is used to determine Fiscal Year 2022 Employer Contributions (Actuarial Contributions)).

The funding policy of the City of New York (the City) is to contribute statutorily-required contributions (Statutory Contributions) and these contributions are generally funded by the City within the appropriate fiscal year.

For Fiscal Year 2022, the Actuarial Contributions to BERS, are equal to those recommended by the Actuary of the New York City Retirement Systems and Pension Funds (the Actuary) and represent the Statutory Contributions.

Pursuant to the Governmental Accounting Standards Board (GASB) Statement No. 67 (GASB67) and Statement No. 68 (GASB68), on September 23, 2022, the Office of the Actuary published the "Fiscal Year 2022 GASB 67/68 Report for the City of New York and the New York City Retirement Systems" (the Fiscal Year 2022 GASB67/68 Report). Appendix C of the Fiscal Year 2022 GASB67/68 Report contains information developed in accordance with GASB67 for BERS.

Actuarial Assumptions and Methods

The assumptions and methods used for the June 30, 2020 valuation were presented in the memorandum titled “Proposed Changes to Actuarial Assumptions and Methods (Revised 2021 A&M)” dated July 16, 2021 and were adopted by the Board of Trustees at the September 23, 2021 Board meeting. These actuarial assumptions and methods used for funding purposes meet the parameters set forth by the Actuarial Standards of Practice (ASOPs).

Benefits, Financial Information, and Census Data

The June 30, 2020 and June 30, 2019 actuarial valuations are based upon the census data as of those dates submitted by the Plan’s administrative staff and the employer’s payroll facilities. A summary of the census data used in the June 30, 2020 actuarial valuation is included in this ACFR. A summary of the census data used in the June 30, 2019 actuarial valuation of the Plan is available in the Fiscal Year 2021 Annual Comprehensive Financial Report.

Consistent with the Actuarial Standards of Practice, the Office of the Actuary has reviewed the census data and financial information for consistency and reasonability but has not audited it. The accuracy of the results and calculations presented are dependent on the accuracy of this census data and financial information. To the extent any such data or information provided is materially inaccurate or incomplete, the results contained herein will require revision.

A summary of the benefits available under the terms of the Plan is shown in the Financial Section of this ACFR. The benefits under the Plan are unchanged from the prior valuation.

Funded Status

The funded status of the Plan is usually expressed by the relationship of assets to liabilities.

With respect to the funded status of the Plan, included in the Actuarial Section of the ACFR is a schedule of funded status based on the Entry Age Normal cost method (Table 11).

Also included in the Actuarial Section of the ACFR is a Solvency Test (i.e., Comparative Summary of Accrued Liabilities Funded by Actuarial Value of Assets) (Table 12), as prescribed by the Government Finance Officers Association (GFOA). This Solvency Test represents an alternative approach to describing progress toward funding objectives.

Presentation Style and Sources of Information

The actuarial information herein is believed to be presented in a manner consistent with the requirements of the GFOA and, where applicable, with GASB67.

The following items in the Actuarial Section of the ACFR were prepared by the OA:

- Summary of Actuarial Assumptions and Methods in Effect for the June 30, 2020 Actuarial Valuation.
- Summary of Active Member Valuation Data.
- Summary of Plan Membership Data.
- Schedule of Retirees and Beneficiaries Added to and Removed from Rolls.
- Actuarial and Statutory Contribution History.
- Funded Status Based on Entry Age Normal Cost Method.
- Comparative Summary of Accrued Liabilities Funded by Actuarial Value of Assets - Solvency Test.
- Contributions.

The following items in the Financial Section of the ACFR were also prepared by the OA:

- Membership Data.
- Net Pension Liability.
- Actuarial Assumptions and Methods.
- Schedule of Changes in Employers' Net Pension Liability and Related Ratios.
- Schedule of Employer Contributions.

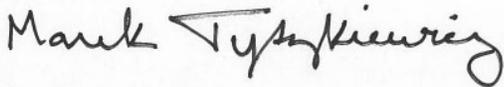
If you have any questions about the information in this Actuarial Section or the actuarial information presented elsewhere in this ACFR, please do not hesitate to contact Dolores Capone, Edward Hue, or me.

Board of Trustees
New York City Board of Education Retirement System
December 1, 2022
Page 4

Acknowledgement of Qualification

I, Marek Tyszkiewicz, am the Chief Actuary for, and independent of, the New York City Retirement Systems and Pension Funds. I am an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of my knowledge, the results contained herein have been prepared in accordance with generally accepted actuarial principles and procedures and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Respectfully submitted,



Marek Tyszkiewicz, ASA, MAAA
Chief Actuary

MT/eh

Att.

cc: Dolores Capone, ASA, EA – New York City Office of the Actuary
Edward Hue, EA – New York City Office of the Actuary
Michael Hunter, ASA, EA – New York City Office of the Actuary
Sanford Rich – New York City Board of Education Retirement System
Keith Snow, Esq. – New York City Office of the Actuary
Chithra Subramaniam – New York City Board of Education Retirement System

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION

1. 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.

Also, in accordance with the Administrative Code of the City of New York (ACCNY), 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 Actuary issued a memorandum titled, "Proposed Changes to Actuarial Assumptions and Methods (Revised 2021 A&M)" dated July 16, 2021. The actuarial assumptions and methods described in that memorandum were adopted by the Board of Trustees at the September 23, 2021 Board meeting and are referred to as the "Revised 2021 A&M." These actuarial assumptions and methods are effective beginning with Fiscal Year 2021.

2. The Actuarial Interest Rate (AIR) assumption is 7.0% per annum, net of investment expenses (4.0% per annum for benefits payable under the Variable Annuity Program).
3. Active service tables are used to estimate various withdrawals from active service. Probabilities are shown in Table 1 for members withdrawing from active service for service retirement, Table 2 for members terminating from active service, and Tables 3 and 4 for members withdrawing from active service due to disability or death, respectively. Mortality improvement scale MP-2020, published by the Society of Actuaries, is applied to probabilities of ordinary death for actives and pre-commencement mortality for deferred vesteds.
4. The service retiree mortality, disabled retiree mortality, and beneficiary mortality base tables are projected from 2012 using mortality improvement scale MP-2020. The base tables are also multiplied by adjustment factors to convert from lives-weighted to amounts-weighted tables to reflect socioeconomic effects on mortality. Base table probabilities for service and disability pensioners are shown in Tables 5a and 5b respectively, and for beneficiaries in Table 5c.
5. A salary scale is used to estimate salaries at termination, retirement, or death. Percentage increases are shown in Table 6. The salary scale includes a General Wage Increase (GWI) assumption of 3.0% per annum.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION (Cont'd)

6. The economic assumptions (i.e., the assumed investment return rate, GWI rate, and Cost-of-Living Adjustments (COLA)) were developed assuming a long-term Consumer Price Inflation (CPI) assumption of 2.5% per annum. The assumption is 1.5% per annum for AutoCOLA and 2.5% per annum for escalation.
7. The valuation assumes a closed group of members.
8. The Actuary reset the Actuarial Value of Assets (AVA) to market value as of June 30, 2019.

Beginning with the June 30, 2020 actuarial valuation, the Actuarial Asset Valuation Method (AAVM) recognizes investment returns greater or less than expected over a period of five years. In accordance with this AAVM, the Unexpected Investment Returns are phased into the AVA over a five-year period at 20% per year.

The AVA is further constrained to be within a corridor of 80% to 120% of the Market Value of Assets.

Beginning with the June 30, 2018 actuarial valuation, the Actuarial Value of Assets is determined by re-characterizing the interest credited on TDA Fixed Fund account balances as investment income instead of as a cash disbursement.

9. The Entry Age Normal (EAN) cost method of funding is used by the Actuary to calculate Employer Contributions.

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 expected earnings (or service) of the individual between entry age and the 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).

The excess, if any, of the AL over the AVA is the Unfunded Accrued Liability (UAL).

Under this method, actuarial gains and losses, as they occur, reduce and increase the UAL, respectively, 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.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION (Cont'd)

The explicit UALs that are developed under EAN each year are financed over fixed periods.

Under EAN, the Normal Cost as a percentage of pay remains constant by individual and changes gradually over time for the entire plan as the characteristics of the group changes (e.g., more Tier 6 active members decrease the average Normal Cost as a percentage of pay).

10. The Employer Contribution for a fiscal year is increased by the interest-adjusted amount of administrative expenses paid from BERS during the second prior fiscal year.
11. Obligations attributable to the World Trade Center (WTC) Disability Benefits Law and to the WTC Death Benefits Law are determined through estimation techniques for post-retirement reclassifications.
12. One-Year Lag Methodology (OYLM) uses a June 30, XX-2 valuation date to determine Fiscal Year XX employer contributions.

This methodology requires adjustments to certain components used to determine the Fiscal Year XX employer contributions as follows:

- a. Normal Cost

The normal cost as of June 30, XX-2 is rolled forward with the assumed AIR of 7.0% to derive the normal cost as of December 31, XX-1.

- b. UAL Payments

For determining the UAL payments for Fiscal Year XX, and to be consistent with the OYLM, the UAL as of June 30, XX-2 is adjusted by the discounted value of the employer normal cost and UAL payments paid during Fiscal Year XX-1 and the discounted value of Administrative Expenses reimbursed during Fiscal Years XX-1 and XX.

13. Excess Benefit Plan: The valuation includes liabilities and costs, if any, associated with benefits in excess of the Internal Revenue Code Section 415 limitation.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION (Cont'd)

14. TDA Fixed Fund Normal Cost: A cost is added to each year's Normal Cost for providing a guaranteed return on the TDA Fixed Fund. See item 15 below for more information.
15. Additional Assumptions used for the TDA fixed fund:
- a. Active TDA members would contribute the currently elected percentage of compensation to the TDA fixed fund.
 - b. TDA members would transfer 25% of their TDA variable fund to the TDA fixed fund.
 - c. Active members in the QPP who have not joined the TDA would join and contribute 1% of pay to the TDA fixed fund.
 - d. The probability that a member elects 4% per year withdrawals from the TDA fixed fund starting from the later of age 60 and the age at termination is 25%.
 - e. The probability that a member elects required minimum distributions from the TDA fixed fund starting from the later of age 72 and the age at termination is 75%.
 - f. The probability that a member elects a lump sum of the TDA fixed fund and the probability that a member elects to annuitize the TDA fixed fund is 0%.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION (Cont'd)

Table 1					
PROBABILITIES OF SERVICE RETIREMENT					
Age	Reduced Service Retirement	Unreduced Service Retirement Probabilities For Members Who Did Not Elect an Improved Retirement Program		Unreduced Service Retirement Probabilities For Members Who Elected an Improved Retirement Program	
		Year 1	Ultimate	Year 1	Ultimate
55	2.50%	15.00%	0.00%	35.00%	0.00%
56	2.50%	15.00%	6.50%	35.00%	12.00%
57	2.50%	15.00%	6.50%	35.00%	12.00%
58	2.50%	15.00%	6.50%	35.00%	12.00%
59	3.75%	15.00%	6.50%	35.00%	12.00%
60	5.00%	15.00%	6.50%	35.00%	12.00%
61	6.25%	15.00%	10.00%	35.00%	12.00%
62	7.50% ¹	20.00%/15.00% ²	10.00%	50.00%	20.00%
63	0.00%	15.00%/20.00% ³	10.00%	35.00%	15.00%
64	0.00%	15.00%	10.00%	35.00%	15.00%
65	0.00%	20.00%	15.00%	50.00%	20.00%
66	0.00%	15.00%	10.00%	35.00%	15.00%
67	0.00%	15.00%	10.00%	35.00%	15.00%
68	0.00%	15.00%	10.00%	35.00%	15.00%
69	0.00%	15.00%	10.00%	35.00%	15.00%
70	0.00%	20.00%	20.00%	35.00%	15.00%
71	0.00%	20.00%	20.00%	35.00%	15.00%
72	0.00%	20.00%	20.00%	35.00%	15.00%
73	0.00%	20.00%	20.00%	35.00%	15.00%
74	0.00%	20.00%	20.00%	35.00%	15.00%
75	0.00%	20.00%	20.00%	35.00%	15.00%
76	0.00%	20.00%	20.00%	35.00%	15.00%
77	0.00%	20.00%	20.00%	35.00%	15.00%
78	0.00%	20.00%	20.00%	35.00%	15.00%
79	0.00%	20.00%	20.00%	35.00%	15.00%
80+	NA	100.00%	100.00%	100.00%	100.00%

¹ 7.50% only applies to Tier 6 members; 0.00% otherwise.

² 20.00% for Tier 1, 2, & 4 members and 15.00% for Tier 6 members.

³ 15.00% for Tier 1, 2, & 4 members and 20.00% for Tier 6 members.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION (Cont'd)**

Table 2		
PROBABILITIES OF TERMINATION		
Years of Service	Males	Females
0	8.40%	5.60%
1	7.70%	5.30%
2	7.20%	5.00%
3	6.70%	4.70%
4	6.20%	4.50%
5	5.70%	4.20%
6	5.20%	3.90%
7	4.70%	3.60%
8	4.30%	3.30%
9	3.90%	3.00%
10	3.50%	2.80%
11	3.20%	2.60%
12	2.90%	2.50%
13	2.60%	2.40%
14	2.30%	2.20%
15	2.10%	2.10%
16	1.90%	1.90%
17	1.80%	1.80%
18	1.70%	1.70%
19	1.50%	1.50%
20+	1.40%	1.40%

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION (Cont'd)

Table 3				
PROBABILITIES OF DISABILITY RETIREMENT				
Age	Ordinary Disability		Accidental Disability	
	Males	Females	Males	Females
15	0.20%	0.20%	0.030%	0.025%
16	0.20%	0.20%	0.030%	0.025%
17	0.20%	0.20%	0.030%	0.025%
18	0.20%	0.20%	0.030%	0.025%
19	0.20%	0.20%	0.030%	0.025%
20	0.20%	0.20%	0.030%	0.025%
21	0.20%	0.20%	0.030%	0.025%
22	0.20%	0.20%	0.030%	0.025%
23	0.20%	0.20%	0.030%	0.025%
24	0.20%	0.20%	0.030%	0.025%
25	0.20%	0.20%	0.030%	0.025%
26	0.20%	0.20%	0.030%	0.025%
27	0.20%	0.20%	0.030%	0.025%
28	0.20%	0.20%	0.030%	0.025%
29	0.20%	0.20%	0.030%	0.025%
30	0.20%	0.20%	0.030%	0.025%
31	0.22%	0.20%	0.030%	0.025%
32	0.24%	0.20%	0.030%	0.025%
33	0.26%	0.20%	0.030%	0.025%
34	0.28%	0.20%	0.030%	0.025%
35	0.30%	0.20%	0.030%	0.025%
36	0.32%	0.21%	0.030%	0.025%
37	0.34%	0.22%	0.030%	0.025%
38	0.36%	0.23%	0.030%	0.025%
39	0.38%	0.24%	0.030%	0.025%
40	0.40%	0.25%	0.030%	0.025%
41	0.42%	0.26%	0.030%	0.025%
42	0.44%	0.27%	0.030%	0.025%
43	0.46%	0.28%	0.030%	0.025%
44	0.48%	0.29%	0.030%	0.025%
45	0.50%	0.30%	0.030%	0.025%
46	0.52%	0.34%	0.030%	0.025%
47	0.54%	0.38%	0.030%	0.025%
48	0.56%	0.42%	0.030%	0.025%
49	0.58%	0.46%	0.030%	0.025%
50	0.60%	0.50%	0.030%	0.025%
51	0.62%	0.54%	0.030%	0.025%
52	0.64%	0.58%	0.030%	0.025%
53	0.66%	0.62%	0.030%	0.025%
54	0.68%	0.66%	0.030%	0.025%
55	0.70%	0.70%	0.030%	0.025%
56	0.70%	0.70%	0.030%	0.025%
57	0.70%	0.70%	0.030%	0.025%
58	0.70%	0.70%	0.030%	0.025%
59	0.70%	0.70%	0.030%	0.025%
60	0.70%	0.70%	0.030%	0.025%
61	0.70%	0.70%	0.030%	0.025%
62	0.70%	0.70%	0.030%	0.025%
63	0.70%	0.70%	0.030%	0.025%
64	0.70%	0.70%	0.030%	0.025%
65	0.70%	0.70%	0.030%	0.025%
66	0.70%	0.70%	0.030%	0.025%
67	0.70%	0.70%	0.030%	0.025%
68	0.70%	0.70%	0.030%	0.025%
69	0.70%	0.70%	0.030%	0.025%
70	0.70%	0.70%	0.030%	0.025%
71	0.70%	0.70%	0.030%	0.025%
72	0.70%	0.70%	0.030%	0.025%
73	0.70%	0.70%	0.030%	0.025%
74	0.70%	0.70%	0.030%	0.025%
75	0.70%	0.70%	0.030%	0.025%
76	0.70%	0.70%	0.030%	0.025%
77	0.70%	0.70%	0.030%	0.025%
78	0.70%	0.70%	0.030%	0.025%
79	0.70%	0.70%	0.030%	0.025%
80+	NA	NA	NA	NA

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION (Cont'd)

Table 4			
PROBABILITIES OF ACTIVE MEMBER MORTALITY			
Age	Ordinary Death		Accidental Death
	Males	Females	
15	0.027%	0.020%	0.000%
16	0.027%	0.020%	0.000%
17	0.027%	0.020%	0.000%
18	0.027%	0.020%	0.000%
19	0.027%	0.020%	0.000%
20	0.027%	0.020%	0.000%
21	0.027%	0.020%	0.000%
22	0.027%	0.020%	0.000%
23	0.027%	0.020%	0.000%
24	0.027%	0.020%	0.000%
25	0.027%	0.020%	0.000%
26	0.029%	0.021%	0.000%
27	0.032%	0.023%	0.000%
28	0.035%	0.024%	0.000%
29	0.037%	0.025%	0.000%
30	0.040%	0.027%	0.000%
31	0.043%	0.028%	0.000%
32	0.045%	0.029%	0.000%
33	0.048%	0.031%	0.000%
34	0.051%	0.032%	0.000%
35	0.053%	0.033%	0.000%
36	0.056%	0.035%	0.000%
37	0.059%	0.036%	0.000%
38	0.061%	0.037%	0.000%
39	0.064%	0.039%	0.000%
40	0.067%	0.040%	0.000%
41	0.073%	0.045%	0.000%
42	0.080%	0.051%	0.000%
43	0.087%	0.056%	0.000%
44	0.093%	0.061%	0.000%
45	0.100%	0.067%	0.000%
46	0.107%	0.073%	0.000%
47	0.113%	0.080%	0.000%
48	0.120%	0.087%	0.000%
49	0.127%	0.093%	0.000%
50	0.133%	0.100%	0.000%
51	0.147%	0.107%	0.000%
52	0.160%	0.113%	0.000%
53	0.173%	0.120%	0.000%
54	0.187%	0.127%	0.000%
55	0.200%	0.133%	0.000%
56	0.213%	0.140%	0.000%
57	0.227%	0.147%	0.000%
58	0.240%	0.153%	0.000%
59	0.253%	0.160%	0.000%
60	0.267%	0.167%	0.000%
61	0.280%	0.173%	0.000%
62	0.293%	0.180%	0.000%
63	0.307%	0.187%	0.000%
64	0.320%	0.193%	0.000%
65	0.333%	0.200%	0.000%
66	0.360%	0.213%	0.000%
67	0.387%	0.227%	0.000%
68	0.413%	0.240%	0.000%
69	0.440%	0.253%	0.000%
70	0.500%	0.300%	0.000%
71	0.580%	0.350%	0.000%
72	0.660%	0.400%	0.000%
73	0.740%	0.450%	0.000%
74	0.820%	0.500%	0.000%
75	0.900%	0.550%	0.000%
76	1.020%	0.640%	0.000%
77	1.140%	0.730%	0.000%
78	1.260%	0.820%	0.000%
79	1.380%	1.000%	0.000%
80+	NA	NA	NA

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION (Cont'd)

Table 5a					
PROBABILITIES OF MORTALITY FOR SERVICE RETIREES BASE RATES					
Age	Males	Females	Age	Males	Females
15	0.0105%	0.0090%	68	1.6659%	0.9362%
16	0.0142%	0.0110%	69	1.7932%	1.0193%
17	0.0191%	0.0120%	70	1.9258%	1.1035%
18	0.0222%	0.0130%	71	2.0702%	1.2437%
19	0.0240%	0.0140%	72	2.2162%	1.3853%
20	0.0251%	0.0142%	73	2.3643%	1.5280%
21	0.0268%	0.0150%	74	2.5141%	1.6727%
22	0.0284%	0.0158%	75	2.6665%	1.8182%
23	0.0301%	0.0168%	76	3.0461%	2.0628%
24	0.0315%	0.0179%	77	3.4300%	2.3088%
25	0.0327%	0.0191%	78	3.8175%	2.5551%
26	0.0342%	0.0204%	79	4.2104%	2.8024%
27	0.0354%	0.0217%	80	4.6069%	3.0489%
28	0.0371%	0.0231%	81	5.1554%	3.4450%
29	0.0394%	0.0247%	82	5.7232%	3.8502%
30	0.0427%	0.0265%	83	6.3098%	4.2655%
31	0.0495%	0.0316%	84	6.9124%	4.6895%
32	0.0562%	0.0360%	85	7.5337%	5.1258%
33	0.0625%	0.0398%	86	8.3597%	5.8556%
34	0.0682%	0.0427%	87	9.1919%	6.5878%
35	0.0743%	0.0455%	88	10.0369%	7.3277%
36	0.0780%	0.0474%	89	10.8896%	8.0720%
37	0.0818%	0.0497%	90	11.7567%	8.8218%
38	0.0861%	0.0521%	91	13.4856%	10.1869%
39	0.0917%	0.0551%	92	15.2819%	11.5772%
40	0.0997%	0.0588%	93	17.1377%	13.0290%
41	0.1422%	0.0633%	94	19.0983%	14.4884%
42	0.1848%	0.0702%	95	21.2134%	16.0080%
43	0.2279%	0.0792%	96	23.2990%	17.8232%
44	0.2725%	0.0907%	97	25.4356%	19.4807%
45	0.3194%	0.1052%	98	27.7079%	20.8097%
46	0.3686%	0.1228%	99	29.9402%	21.7553%
47	0.4207%	0.1427%	100	32.1584%	22.1859%
48	0.4752%	0.1652%	101	33.7521%	23.0680%
49	0.5320%	0.1896%	102	35.1259%	24.0803%
50	0.5908%	0.2151%	103	36.3671%	25.2770%
51	0.6563%	0.2401%	104	37.3834%	26.6309%
52	0.7203%	0.2647%	105	38.1051%	28.0912%
53	0.7821%	0.2889%	106	38.4698%	29.6244%
54	0.8405%	0.3120%	107	38.6325%	31.1943%
55	0.8938%	0.3338%	108	38.8076%	32.7579%
56	0.9368%	0.3689%	109	38.9794%	34.2712%
57	0.9718%	0.4030%	110	50.0000%	50.0000%
58	0.9982%	0.4360%	111	50.0000%	50.0000%
59	1.0164%	0.4677%	112	50.0000%	50.0000%
60	1.0277%	0.4987%	113	50.0000%	50.0000%
61	1.0989%	0.5398%	114	50.0000%	50.0000%
62	1.1606%	0.5722%	115	50.0000%	50.0000%
63	1.2158%	0.6041%	116	50.0000%	50.0000%
64	1.2656%	0.6395%	117	50.0000%	50.0000%
65	1.3111%	0.6785%	118	50.0000%	50.0000%
66	1.4252%	0.7529%	119	50.0000%	50.0000%
67	1.5432%	0.8397%	120	100.0000%	100.0000%

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION (Cont'd)

Table 5b					
PROBABILITIES OF MORTALITY FOR DISABLED RETIREES					
BASE RATES					
Age	Males	Females	Age	Males	Females
15	0.3309%	0.3302%	68	2.8866%	2.3870%
16	0.4477%	0.4467%	69	2.9926%	2.4723%
17	0.6034%	0.6020%	70	3.1133%	2.5721%
18	0.7007%	0.6521%	71	3.2494%	2.6887%
19	0.7591%	0.7023%	72	3.4007%	2.8231%
20	0.7745%	0.7242%	73	3.5688%	2.9757%
21	0.8177%	0.7766%	74	3.7535%	3.1493%
22	0.8636%	0.8321%	75	3.9565%	3.3428%
23	0.9115%	0.8806%	76	4.1960%	3.5573%
24	0.9623%	0.9414%	77	4.4576%	3.7722%
25	1.0128%	0.9950%	78	4.7400%	4.0056%
26	1.0629%	1.0450%	79	5.0460%	4.2512%
27	1.1121%	1.1039%	80	5.3741%	4.5399%
28	1.1590%	1.1437%	81	5.7241%	4.8505%
29	1.2025%	1.1849%	82	6.0991%	5.1822%
30	1.2403%	1.2276%	83	6.5012%	5.5379%
31	1.2721%	1.2719%	84	6.9293%	5.9081%
32	1.2964%	1.2906%	85	7.5490%	6.6447%
33	1.3125%	1.3095%	86	8.3752%	7.3415%
34	1.3230%	1.3220%	87	9.2076%	8.0805%
35	1.3497%	1.3314%	88	10.0528%	8.8285%
36	1.3769%	1.3388%	89	10.9057%	10.1243%
37	1.4047%	1.3459%	90	11.7730%	11.4944%
38	1.4330%	1.3555%	91	13.5023%	12.9995%
39	1.4619%	1.3700%	92	15.2987%	14.4425%
40	1.4914%	1.3831%	93	17.1548%	15.8488%
41	1.5215%	1.3968%	94	19.1157%	17.6512%
42	1.5522%	1.4199%	95	21.2311%	19.4304%
43	1.5835%	1.4535%	96	23.3168%	20.7560%
44	1.6154%	1.4910%	97	25.4537%	21.5692%
45	1.6480%	1.5473%	98	27.7263%	22.0007%
46	1.6812%	1.6100%	99	29.9589%	23.0087%
47	1.7151%	1.6774%	100	32.1584%	23.1230%
48	1.7497%	1.7359%	101	33.7521%	23.6022%
49	1.7850%	1.7789%	102	35.1259%	24.0803%
50	1.8210%	1.8069%	103	36.3671%	25.2770%
51	1.8577%	1.8265%	104	37.3834%	26.6309%
52	1.8952%	1.8400%	105	38.1051%	28.0912%
53	1.9838%	1.8414%	106	38.4698%	29.6244%
54	2.0700%	1.8419%	107	38.6325%	31.1943%
55	2.1499%	1.8425%	108	38.8076%	32.7579%
56	2.2301%	1.8428%	109	38.9794%	34.2712%
57	2.2996%	1.8478%	110	50.0000%	50.0000%
58	2.3571%	1.8725%	111	50.0000%	50.0000%
59	2.4033%	1.9054%	112	50.0000%	50.0000%
60	2.4415%	1.9416%	113	50.0000%	50.0000%
61	2.4758%	1.9833%	114	50.0000%	50.0000%
62	2.5090%	2.0209%	115	50.0000%	50.0000%
63	2.5475%	2.0671%	116	50.0000%	50.0000%
64	2.5926%	2.1353%	117	50.0000%	50.0000%
65	2.6476%	2.2013%	118	50.0000%	50.0000%
66	2.7148%	2.2603%	119	50.0000%	50.0000%
67	2.7940%	2.3165%	120	100.0000%	100.0000%

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION (Cont'd)**

Table 5c					
PROBABILITIES OF BENEFICIARY MORTALITY					
BASE RATES					
Age	Males	Females	Age	Males	Females
15	0.0105%	0.0092%	68	1.8256%	1.3605%
16	0.0142%	0.0112%	69	1.9386%	1.4332%
17	0.0191%	0.0122%	70	2.0542%	1.5007%
18	0.0222%	0.0133%	71	2.2359%	1.6745%
19	0.0240%	0.0143%	72	2.4230%	1.8463%
20	0.0251%	0.0145%	73	2.6165%	2.0157%
21	0.0268%	0.0153%	74	2.8157%	2.1838%
22	0.0284%	0.0161%	75	3.0220%	2.3492%
23	0.0301%	0.0171%	76	3.4928%	2.6652%
24	0.0315%	0.0183%	77	3.9787%	2.9831%
25	0.0327%	0.0195%	78	4.4792%	3.3011%
26	0.0342%	0.0208%	79	4.9963%	3.6207%
27	0.0354%	0.0221%	80	5.5282%	3.9391%
28	0.0371%	0.0236%	81	6.1051%	4.4386%
29	0.0394%	0.0252%	82	6.6894%	4.9473%
30	0.0427%	0.0270%	83	7.2805%	5.4665%
31	0.0495%	0.0330%	84	7.8749%	5.9942%
32	0.0562%	0.0384%	85	8.4753%	6.5354%
33	0.0625%	0.0431%	86	9.6136%	7.4659%
34	0.0682%	0.0471%	87	10.8005%	8.3995%
35	0.0743%	0.0511%	88	12.0443%	9.3428%
36	0.0780%	0.0542%	89	13.3397%	10.2918%
37	0.0818%	0.0579%	90	14.6958%	11.2477%
38	0.0861%	0.0618%	91	16.4185%	12.8868%
39	0.0917%	0.0666%	92	18.1416%	14.4887%
40	0.0997%	0.0719%	93	19.8574%	16.0801%
41	0.1394%	0.0775%	94	21.6187%	17.5854%
42	0.1774%	0.0859%	95	23.5884%	19.0626%
43	0.2143%	0.0968%	96	25.4266%	20.2474%
44	0.2507%	0.1111%	97	27.2119%	21.2937%
45	0.2875%	0.1287%	98	29.0202%	22.0663%
46	0.3207%	0.1501%	99	30.6654%	22.5443%
47	0.3534%	0.1748%	100	32.1584%	22.6473%
48	0.3849%	0.2022%	101	33.7521%	23.5294%
49	0.4150%	0.2319%	102	35.1259%	24.5619%
50	0.4431%	0.2633%	103	36.3671%	25.7825%
51	0.5156%	0.2999%	104	37.3834%	27.1635%
52	0.5928%	0.3376%	105	38.1051%	28.6530%
53	0.6740%	0.3762%	106	38.4698%	30.2169%
54	0.7583%	0.4151%	107	38.6325%	31.8182%
55	0.8440%	0.4540%	108	38.8076%	33.4131%
56	0.9048%	0.5132%	109	38.9794%	34.9566%
57	0.9604%	0.5735%	110	50.0000%	50.0000%
58	1.0101%	0.6353%	111	50.0000%	50.0000%
59	1.0536%	0.6981%	112	50.0000%	50.0000%
60	1.0919%	0.7631%	113	50.0000%	50.0000%
61	1.1835%	0.8329%	114	50.0000%	50.0000%
62	1.2676%	0.8908%	115	50.0000%	50.0000%
63	1.3473%	0.9493%	116	50.0000%	50.0000%
64	1.4238%	1.0146%	117	50.0000%	50.0000%
65	1.4985%	1.0876%	118	50.0000%	50.0000%
66	1.6059%	1.1681%	119	50.0000%	50.0000%
67	1.7146%	1.2609%	120	100.0000%	100.0000%

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2020 ACTUARIAL VALUATION (Cont'd)**

Table 6		
ANNUAL RATES OF MERIT AND SALARY INCREASE		
Years of Service	Merit Increase	Salary Increase¹
0	6.00%	9.00%
1	5.00%	8.00%
2	4.00%	7.00%
3	3.00%	6.00%
4	2.50%	5.50%
5	2.00%	5.00%
6	1.90%	4.90%
7	1.80%	4.80%
8	1.70%	4.70%
9	1.60%	4.60%
10	1.50%	4.50%
11	1.50%	4.50%
12	1.50%	4.50%
13	1.50%	4.50%
14	1.50%	4.50%
15	1.50%	4.50%
16	1.45%	4.45%
17	1.40%	4.40%
18	1.35%	4.35%
19	1.30%	4.30%
20	1.25%	4.25%
21	1.20%	4.20%
22	1.15%	4.15%
23	1.10%	4.10%
24	1.05%	4.05%
25+	1.00%	4.00%

¹ Salary Increase is the General Wage Increase of 3.00% plus the Merit Increase.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

SUMMARY OF ACTIVE MEMBER VALUATION DATA

Table 7				
ACTIVE MEMBER VALUATION DATA				
June 30 Actuarial Valuation	Number	Annual Salary	Average Annual Salary	Percentage Increase/ (Decrease) In Avg. Salary
2011	23,131	920,369,154	39,789	1.7%
2012	27,840	1,018,895,365	36,598	(8.0%)
2013	25,848	1,051,571,168	40,683	11.2%
2014	25,182	1,045,187,738	41,505	2.0%
2015	24,903	1,093,962,316	43,929	5.8%
2016	25,864	1,149,019,892	44,425	1.1%
2017	25,794	1,201,925,550	46,597	4.9%
2018	25,864	1,280,302,470	49,501	6.2%
2019	25,825	1,353,266,355	52,401	5.9%
2020	28,183	1,476,597,629	52,393	0.0%

Salaries reflect the impact of recent labor contract settlements and certain non-union salary increases with retroactive effective dates, if any.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

SUMMARY OF PLAN MEMBERSHIP DATA

As of the June 30, 2020 and June 30, 2019 actuarial valuations, the Plan's Membership consisted of:

Table 8		
SUMMARY OF PLAN MEMBERSHIP		
Group	June 30, 2020	June 30, 2019
Active members	28,183	25,825
Terminated Nonvested Members / Actives Off Payroll ¹	8,816	11,422
Deferred vested members not yet receiving benefits	1,972	2,019
Retirees and beneficiaries currently receiving benefits	<u>19,120</u>	<u>18,502</u>
Total	58,091	57,768

¹ Actives Off Payroll as of June 30, 2019 represents members no longer on payroll, but not otherwise classified.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM THE ROLLS

Table 9								
SCHEDULE OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM THE ROLLS								
June 30 Actuarial Valuation	Added to Rolls		Removed from Rolls		End of Year Rolls		% Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances¹	Number	Annual Allowances	Number	Annual Allowances		
2011	901	14,977,636	471	4,325,573	14,399	176,523,316	6.4%	12,259
2012	1,053	16,201,746	578	6,211,198	14,874	186,513,864	5.7%	12,540
2013	1,110	16,977,455	529	4,957,022	15,455	198,534,297	6.4%	12,846
2014	1,094	13,701,890	554	5,306,812	15,995	206,929,375	4.2%	12,937
2015	1,002	16,482,509	559	4,979,621	16,438	218,432,263	5.6%	13,288
2016	1,075	14,412,852	576	5,776,541	16,937	227,068,574	4.0%	13,407
2017	1,061	17,321,922	573	6,234,174	17,425	238,156,322	4.9%	13,668
2018	1,179	20,878,837	563	5,613,557	18,041	253,421,602	6.4%	14,047
2019	1,216	22,617,426	755	8,877,195	18,502	267,161,833	5.4%	14,440
2020	1,326	22,984,672	708	7,588,070	19,120	282,558,435	5.8%	14,778

¹ Amounts shown include changes due to benefit finalization, changes in benefit type (e.g. Service to Accidental Disability), COLA increases, and other changes.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

ACTUARIAL AND STATUTORY CONTRIBUTION HISTORY

Table 10			
ACTUARIAL AND STATUTORY CONTRIBUTION HISTORY			
Fiscal Year Ended June 30	Actuarial Contribution Certified	Statutory Contribution Contributed¹	Employer Rate of Contribution²
2013	\$196,245,777	\$196,245,777	22.1%
2014	214,589,565	214,589,565	21.7%
2015	258,099,327	258,099,327	25.4%
2016	265,532,032	265,532,032	26.3%
2017	288,233,217	288,233,217	27.4%
2018	318,643,334	318,643,334	28.9%
2019	269,636,601	269,636,601	22.8%
2020	257,503,447	257,503,447	20.5%
2021	182,983,084	182,983,084	13.7%
2022	262,404,099	262,404,099	18.1%

¹ Represents total employer contributions accrued for fiscal year.

² The Employer Rate of Contribution equals the Statutory Contribution as a percentage of the salaries of members who were on payroll or projected to be on payroll (under One-Year Lag Methodology) as of the preceding June 30 adjusted, where applicable, to be consistent with collective bargaining agreements estimated to be achieved.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

FUNDED STATUS BASED ON ENTRY AGE NORMAL COST METHOD

Table 11 FUNDED STATUS BASED ON ENTRY AGE NORMAL COST METHOD (\$ Thousands)						
June 30 Valuation Date	(1) Actuarial Value of Assets (AVA) ¹	(2) Accrued Liability (AL)	(3) Unfunded AL (UAL) ¹ (2) - (1)	(4) Funded Ratio (1) / (2)	(5) Covered Payroll ²	(6) UAL as a % of Covered Payroll (3) / (5)
2011	2,323,629	3,681,694	1,358,065	63.1%	920,369	147.6%
2012	2,371,613	3,763,130	1,391,517	63.0%	1,018,895	136.6%
2013	2,277,791	4,015,080	1,737,289	56.7%	1,051,571	165.2%
2014	2,632,922	4,335,746	1,702,824	60.7%	1,045,188	162.9%
2015	2,772,466	4,585,781	1,813,315	60.5%	1,093,962	165.8%
2016	2,858,737	4,767,760	1,909,023	60.0%	1,149,020	166.1%
2017	3,289,191	4,743,881	1,454,690	69.3%	1,201,926	121.0%
2018	3,908,833	5,103,583	1,194,750	76.6%	1,280,302	93.3%
2019	4,991,832	5,306,986	315,154	94.1%	1,353,266	23.3%
2020	5,291,811	5,620,897	329,086	94.1%	1,476,598	22.3%

¹ Unfunded Accrued Liability excludes receivables and estimated payables in the Actuarial Value of Assets.

² Salaries reflect the impact of recent labor contract settlements and certain non-union salary increases with retroactive effective dates, if any.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

COMPARATIVE SUMMARY OF ACCRUED LIABILITIES FUNDED BY ACTUARIAL VALUE OF ASSETS

Table 12							
COMPARATIVE SUMMARY OF ACCRUED LIABILITIES FUNDED BY ACTUARIAL VALUE OF ASSETS							
SOLVENCY TEST							
(\$ Thousands)							
June 30 Valuation Date	Accrued Liabilities for			Actuarial Value of Assets ¹	Percentage of Accrued Liabilities Funded by Actuarial Value of Assets		
	Accumulated Member Contributions	Current Retirees and Beneficiaries	Active Members' Employer-Financed Portion				
	(A)	(B)	(C)	(D)	(A)	(B)	(C)
2011	409,625	1,714,099	1,319,938	2,323,629	100	100	15
2012	434,215	1,804,626	1,283,582	2,371,613	100	100	10
2013	469,312	1,918,824	1,372,542	2,277,791	100	94	0
2014	504,619	2,080,400	1,475,008	2,632,922	100	100	3
2015	527,781	2,200,281	1,569,097	2,772,466	100	100	3
2016	557,473	2,273,411	1,638,262	2,858,737	100	100	2
2017	593,952	2,364,059	1,433,790	3,289,191	100	100	23
2018	619,602	2,541,989	1,591,961	3,908,833	100	100	47
2019	647,081	2,680,150	1,979,755	4,991,832	100	100	84
2020	678,178	2,836,001	2,106,718	5,291,811	100	100	84

¹ The Actuarial Value of Assets excludes receivables and estimated payables.

See following "SOLVENCY TEST - NOTES."

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

COMPARATIVE SUMMARY OF ACCRUED LIABILITIES FUNDED BY ACTUARIAL VALUE OF ASSETS (Cont'd)

SOLVENCY TEST - NOTES

The ultimate test of financial soundness in a retirement system is its ability to pay all of its promised benefits when due. The retirement system's progress in accumulating assets to pay all promised benefits can be measured by comparing the Actuarial Value of Assets of the retirement system with the Accrued Liabilities for:

- a. Accumulated Member Contributions;
- b. Current Retirees and Beneficiaries; and
- c. Active Members' Employer-Financed Portion.

Prior to the June 30, 2019 valuation, the Accrued Liabilities were calculated under the Projected Unit Credit actuarial cost method. Beginning with the June 30, 2019 actuarial valuation, the Accrued Liabilities are calculated based on the Entry Age Normal (EAN) actuarial cost method.

The values in the table are dependent upon census data, benefit levels (which have changed over the past years), and the actuarial assumptions and methods employed at each valuation date.

To fully evaluate trends in financial soundness, changes in assumptions need to be evaluated. The Actuarial Interest Rate assumption has been 7.0% per annum, net of investment expenses, throughout the period shown. However, other actuarial assumptions and methods have been revised. The two most recent changes in assumptions and methods occurred in the June 30, 2020 valuation used to compute the Employer Contributions for Fiscal Year 2022 and in the June 30, 2019 valuation used to compute the Employer Contributions for Fiscal Year 2021.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

CONTRIBUTIONS

The benefits of the System are financed by member and employer contributions and from investment earnings of the System.

A. MEMBER CONTRIBUTIONS

Tier 1 and Tier 2

A member who joined prior to July 27, 1976 contributes by salary deductions on the basis of a normal rate of contribution which is assigned by the System at the time he or she elects his or her plan. The normal contribution rate, which is dependent upon the member's age and plan, as well as the tables in effect for such purpose at the time he or she became a member, is determined to provide approximately one-third of the benefit on account of the first 25 years of service.

For Tier 1 and Tier 2 plans which permit retirement for service at age 55, the normal contribution rate is calculated to provide an annuity equal to 1.0% of final salary for each year of service at the earliest age for service retirement. For such plans, the normal contribution rate for members who enter at age 55 or over is the rate applicable to a member entering at age 54.

Member contributions are accumulated with interest on individually maintained ledger accounts. Upon retirement, the amount to his or her credit (i.e. accumulated deductions) is used to purchase an annuity on the basis of the tables adopted by the Board of Trustees. Upon death in service, the accumulated deductions are paid to the beneficiary.

Beginning July 1, 1960, on a year-to-year basis, the normal contribution rates of Tier 1 and Tier 2 members who joined before July 27, 1976 were reduced by an increased-take-home-pay rate of 2.5%, and of 5.0% beginning July 1, 1961. Between July 1, 1968 and December 31, 1975, an increased-take-home-pay rate of 4.0% was effective for all members. On January 1, 1976, an increased-take-home-pay rate of 2.0% became effective for all members. The following table shows the effective periods and increased-take-home-pay rate.

PERIOD	INCREASED-TAKE-HOME-PAY RATE
07/01/60 - 06/30/61	2.5%
07/01/61 - 06/30/68	5.0%
07/01/68 - 12/31/75	4.0%
01/01/76 and after	2.0%

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

CONTRIBUTIONS (Cont'd)

In general, the retirement and death benefits payable to or on account of members are supplemented by the reserve for increased-take-home-pay, accumulated from City contributions equal to the increased-take-home-pay rate times salary so that in general, the total benefit is equal to the benefit which would have been paid if the members' rates of contribution had not been reduced. However, the reserve for increased-take-home-pay is not payable upon death of a member who joins after June 30, 1973.

Tier 4

A Tier 4 member of Article 15 (Coordinated Retirement Plan) who joined BERS on or before March 31, 2012 is mandated to contribute 3% of salary during all years of coverage. Effective October 1, 2000, most Tier 4 members are not required to make contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. Tier 4 members of the Chapter 504 55/27 plan contribute Basic Member Contributions for 27 years of service. For those who elected or were mandated into an Optional Retirement Plan or Special Officers Plan, Additional Member Contributions are required.

Tier 6

A member who joins BERS on or after April 1, 2012 (Tier 6) is required to contribute between 3.0% and 6.0% of salary, depending on salary level, for all years of service. Tier 6 members in the Automotive or Special Officers Programs also contribute AMC.

B. EMPLOYER CONTRIBUTIONS

The Entry Age Normal cost method of funding is utilized by the Plan's Actuary to calculate the contributions required of the employers.

Employer contributions are accrued by the Plan and are funded by the employers on a current basis.

This page is intentionally left blank

**NEW YORK CITY BOARD OF EDUCATION
RETIREMENT SYSTEM**

A FIDUCIARY FUND
OF THE CITY OF NEW YORK

**ANNUAL COMPREHENSIVE FINANCIAL REPORT OF
THE QUALIFIED PENSION PLAN
AND THE
TAX DEFERRED ANNUITY PROGRAM**

**STATISTICAL SECTION
PART V**

**FOR THE YEARS ENDED
JUNE 30, 2022 AND JUNE 30, 2021**

This page is intentionally left blank

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN AND TAX DEFERRED ANNUITY PROGRAM

STATISTICAL SECTION

INTRODUCTION:

The Statistical section presents three sets of data. The first group of data is comprised of six (6) schedules and accompanying graphs that provide a comparative horizontal base of the financials over a ten-year spread for the QPP and ten-year spread for the TDA. The second group of data offers an analysis of the BERS benefit payments based on demographic information. The third and final group gives a comparative analysis of the contributors based on their salary and their provenance.

The schedules and graphs of the first group are:

- (A) Revenue by source for the QPP
- (B) Expenses by type for the QPP
- (C) Refunds by type for the QPP
- (D) Schedule of changes in QPP net position
- (E) Schedule of changes in TDA net position
- (F) Benefit expenses by type for the QPP

The second group of data is comprised of the following: QPP

- (A) Age and service retirement
- (B) Ordinary disability retirement
- (C) Accidental disability retirement
- (D) Accidental death retirement
- (E) Other beneficiaries
- (F) All pensioners and beneficiaries

The third group of data is comprised of the following: QPP

- (A) Summary of activities by Age and Service
- (B) Average annual benefit payments
- (C) Participating Employers

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

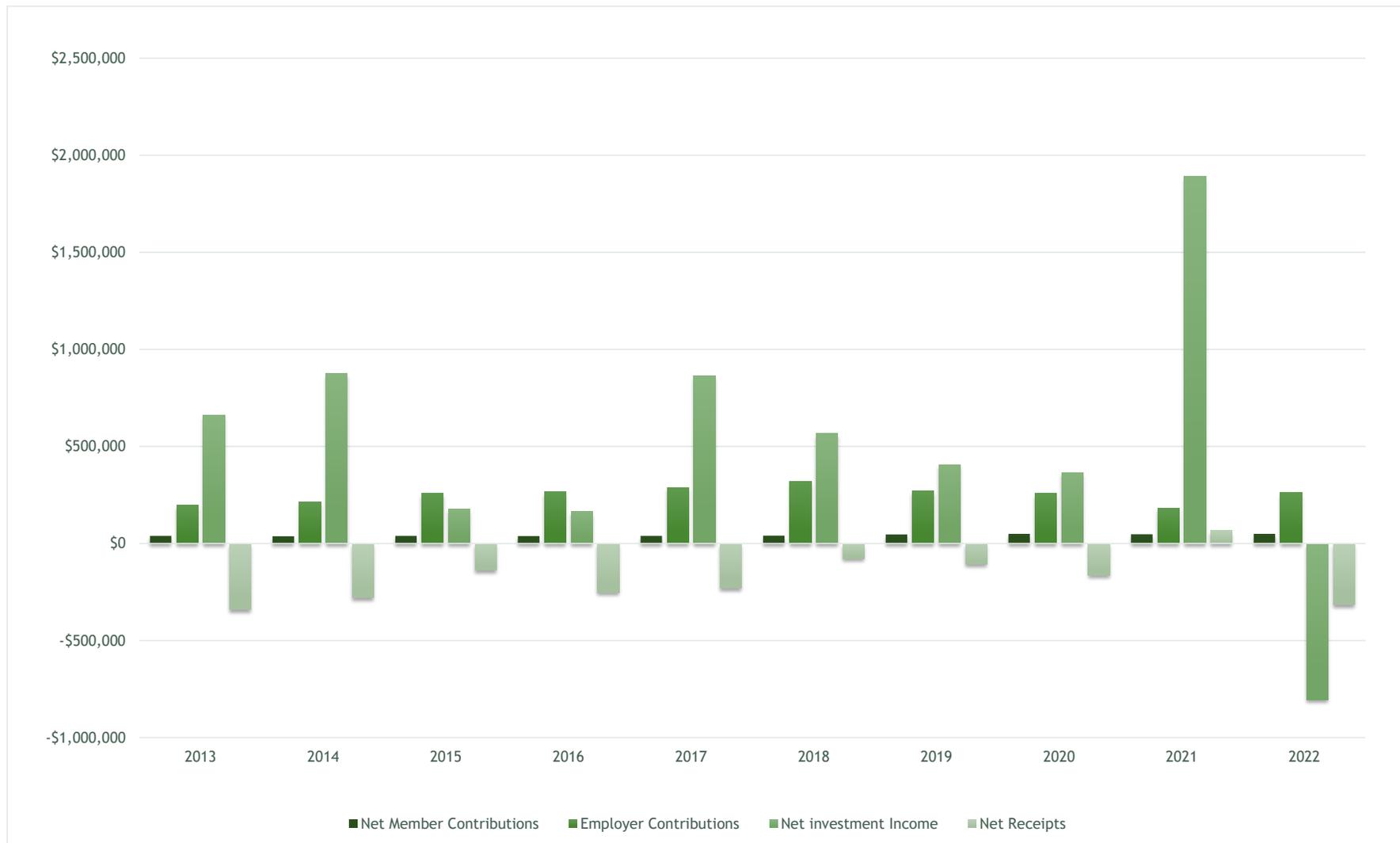
**REVENUE BY SOURCE
(In thousands)**

Fiscal Year Ended June 30	Net Member Contributions	Employer Contributions	Net Investment Income	Net Receipts	Total	Employer Contributions as % of Payroll
2013	\$39,056	\$196,246	\$660,827	(\$340,057)	\$556,072	21.3
2014	\$37,193	\$214,590	\$875,453	(\$277,531)	\$849,705	21.1
2015	\$39,564	\$258,099	\$177,166	(\$137,125)	\$337,704	24.5
2016	\$38,581	\$265,532	\$164,144	(\$252,288)	\$215,969	25.4
2017	\$39,821	\$288,233	\$862,510	(\$229,508)	\$961,056	26.3
2018	\$40,846	\$318,643	\$565,577	(\$76,948)	\$848,118	27.7
2019	\$46,304	\$269,637	\$406,879	(\$106,071)	\$616,749	22.4
2020	\$49,766	\$257,503	\$365,767	(\$163,724)	\$509,312	20.1
2021	\$48,125	\$182,983	\$1,889,751	\$68,002	\$2,188,861	13.5
2022	\$49,591	\$262,404	(\$803,664)	(\$315,242)	(\$806,911)	17.8

The table offers a horizontal comparison base for the revenue sources of the Plan for the past 10 years.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

REVENUE BY SOURCE (In thousands)



**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

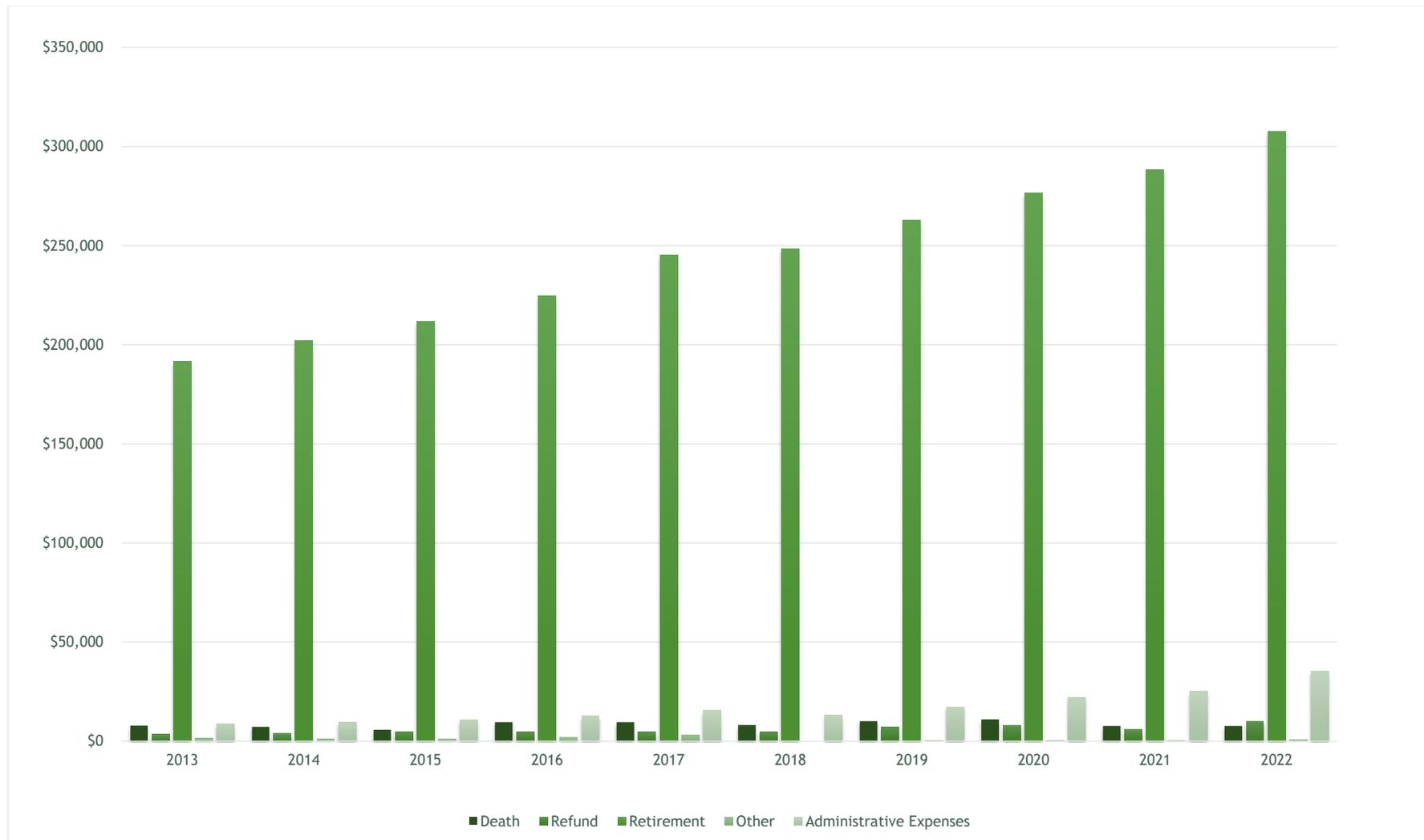
**EXPENSES BY TYPE
(In thousands)**

Fiscal Year Ended June 30	Benefit Payments				Administrative Expenses	Total
	Death	Refund	Retirement	Other		
2013	\$7,858	\$3,360	\$191,463	\$1,412	\$8,927	\$213,020
2014	\$7,274	\$3,827	\$202,233	\$981	\$9,776	\$224,091
2015	\$5,765	\$4,614	\$211,693	\$1,172	\$10,956	\$234,200
2016	\$9,580	\$4,750	\$224,639	\$1,758	\$12,818	\$253,545
2017	\$9,570	\$4,687	\$245,066	\$3,109	\$15,486	\$277,918
2018	\$8,208	\$4,808	\$248,429	\$129	\$13,212	\$274,786
2019	\$10,161	\$7,231	\$262,804	\$267	\$17,357	\$297,820
2020	\$11,016	\$8,174	\$276,614	\$243	\$22,207	\$318,254
2021	\$7,638	\$5,871	\$288,419	\$408	\$25,175	\$327,511
2022	\$7,732	\$9,836	\$307,520	\$591	\$35,566	\$361,245

The table offers a horizontal comparison base for the expense groups of the Plan for the past 10 years.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

EXPENSES BY TYPE (In thousands)



NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

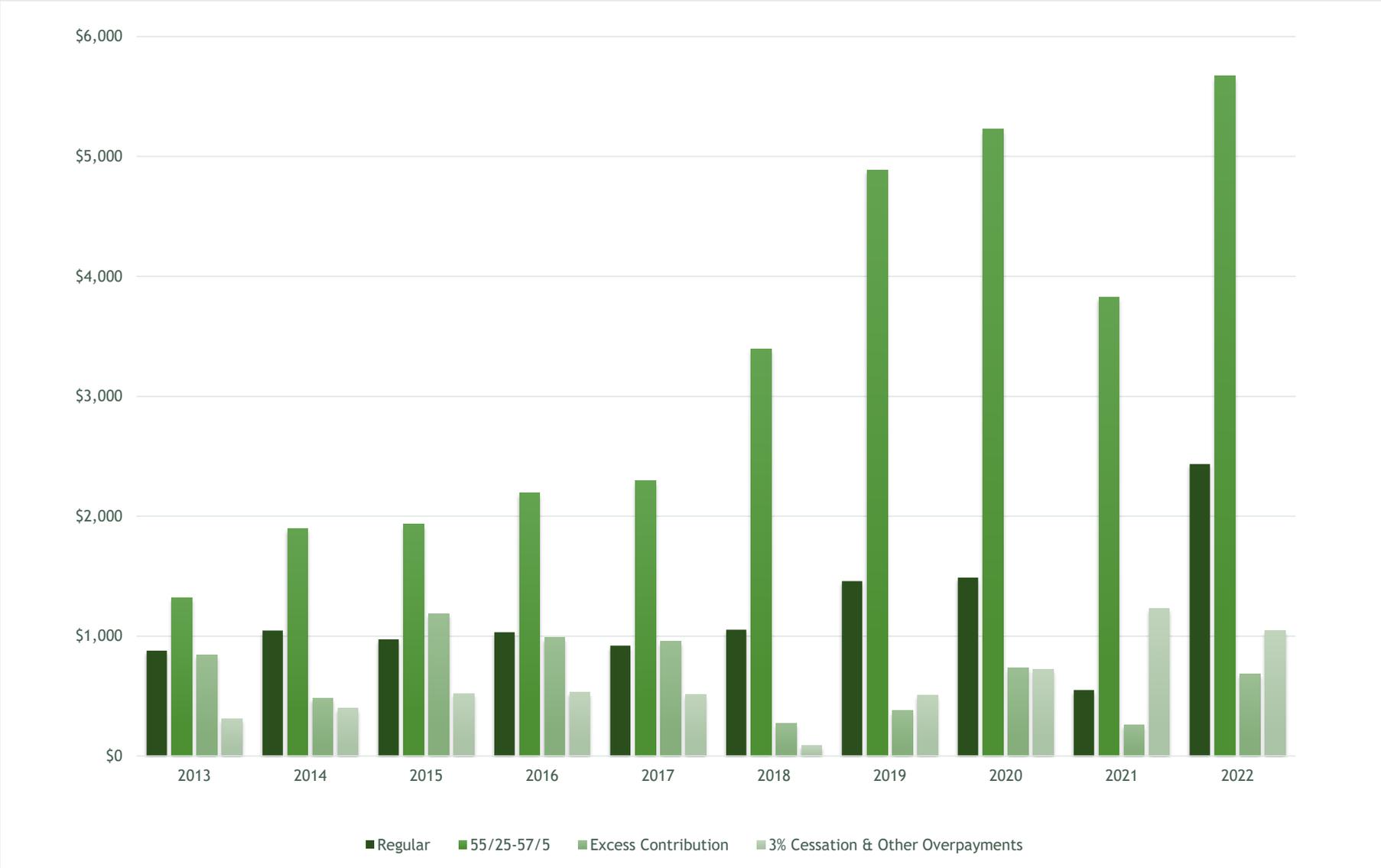
REFUNDS BY TYPE (In thousands)

Fiscal Year Ended June 30	Refunds				Total
	Regular Resignation	Add. Pension 55/25-57/5	Excess Contribution	3% Cessation & Other Overpayments	
2013	\$880	\$1,322	\$846	\$312	\$3,360
2014	\$1,047	\$1,899	\$484	\$397	\$3,827
2015	\$973	\$1,933	\$1,186	\$522	\$4,614
2016	\$1,033	\$2,198	\$986	\$533	\$4,750
2017	\$920	\$2,295	\$957	\$515	\$4,687
2018	\$1,053	\$3,397	\$271	\$87	\$4,808
2019	\$1,459	\$4,887	\$378	\$507	\$7,231
2020	\$1,489	\$5,227	\$735	\$723	\$8,174
2021	\$551	\$3,826	\$261	\$1,233	\$5,871
2022	\$2,435	\$5,670	\$685	\$1,046	\$9,836

The table offers a horizontal comparison base for the refund segment of the expense groups of the Plan for the past 10 years. The refund segment is broken down by type.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

**REFUNDS BY TYPE
(In thousands)**



**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

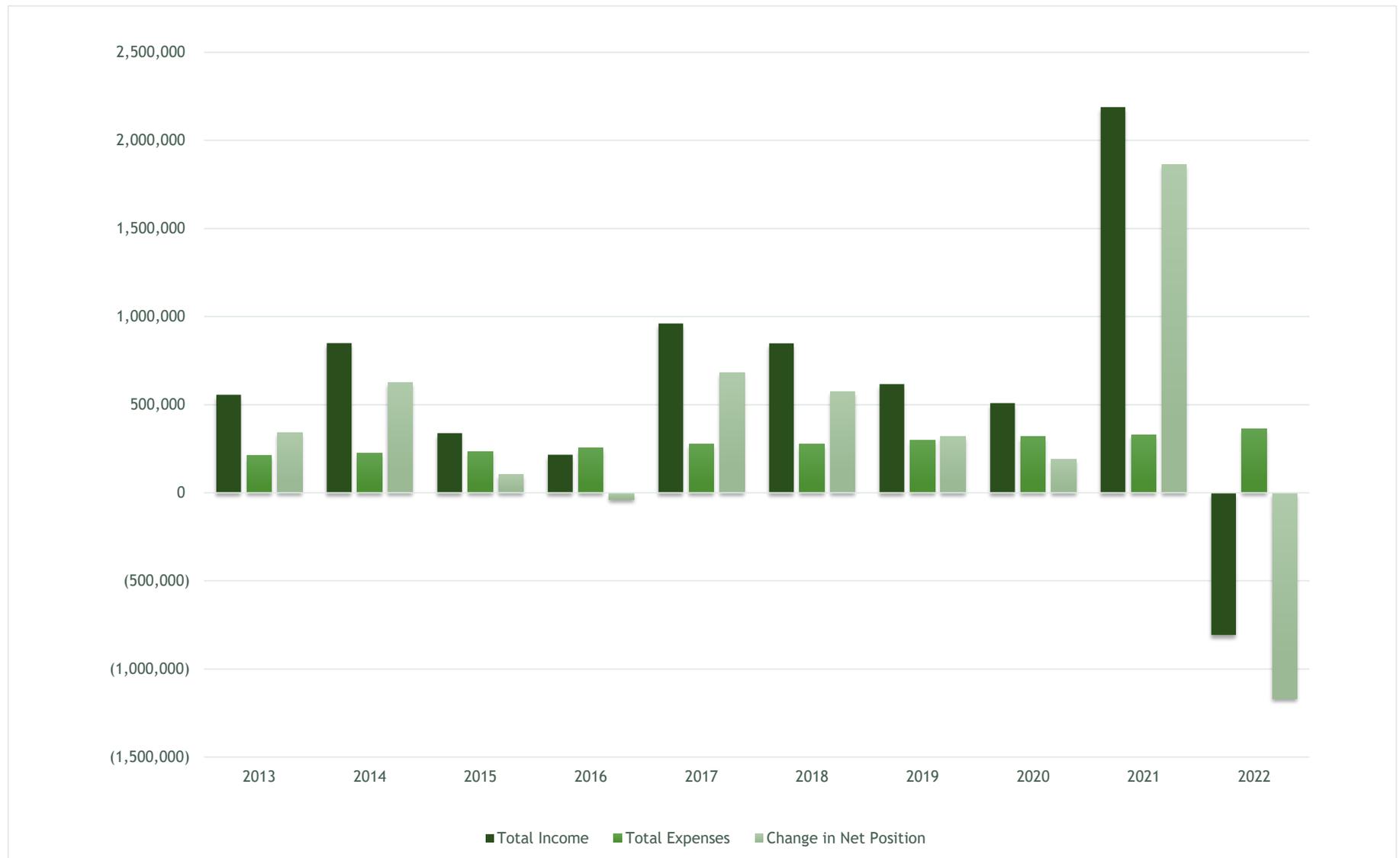
**SCHEDULE OF CHANGES IN NET POSITION
(In thousands)**

Year Ended	Member Contributions	Employer Contributions	Net Investment Income	Net Receipts	Total Income	Benefit Payments				Administrative Expenses	Total Expenses	Change in Net Position
						Death	Refund	Retirement	Other			
2013	\$39,056	\$196,246	\$660,827	(\$340,057)	\$556,072	\$7,858	\$3,360	\$191,463	\$1,412	\$8,927	\$213,020	\$343,052
2014	\$37,193	\$214,590	\$875,453	(\$277,531)	\$849,705	\$7,274	\$3,827	\$202,233	\$981	\$9,776	\$224,091	\$625,614
2015	\$39,564	\$258,099	\$177,166	(\$137,125)	\$337,704	\$5,765	\$4,614	\$211,693	\$1,172	\$10,956	\$234,200	\$103,504
2016	\$38,581	\$265,532	\$164,144	(\$252,288)	\$215,969	\$9,580	\$4,750	\$224,639	\$1,758	\$12,818	\$253,545	(\$37,576)
2017	\$39,821	\$288,233	\$862,510	(\$229,508)	\$961,056	\$9,570	\$4,687	\$245,066	\$3,109	\$15,486	\$277,918	\$683,138
2018	\$40,846	\$318,643	\$565,577	(\$76,948)	\$848,118	\$8,208	\$4,808	\$248,429	\$129	\$13,212	\$274,786	\$573,332
2019	\$46,304	\$269,637	\$406,879	(\$106,071)	\$616,749	\$10,161	\$7,231	\$262,804	\$267	\$17,357	\$297,820	\$318,929
2020	\$49,766	\$257,503	\$365,767	(\$163,724)	\$509,312	\$11,016	\$8,174	\$276,614	\$243	\$22,207	\$318,254	\$191,058
2021	\$48,125	\$182,983	\$1,889,751	\$68,002	\$2,188,861	\$7,638	\$5,871	\$288,419	\$408	\$25,175	\$327,511	\$1,861,350
2022	\$49,591	\$262,404	(\$803,664)	(\$315,242)	(\$806,911)	\$7,732	\$9,836	\$307,520	\$591	\$35,566	\$361,245	(\$1,168,156)

The table offers a 10 year horizontal comparison base for the operations of the BERS.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

**SCHEDULE OF CHANGES IN NET POSITION
(In thousands)**



**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
TAX DEFERRED ANNUITY PROGRAM**

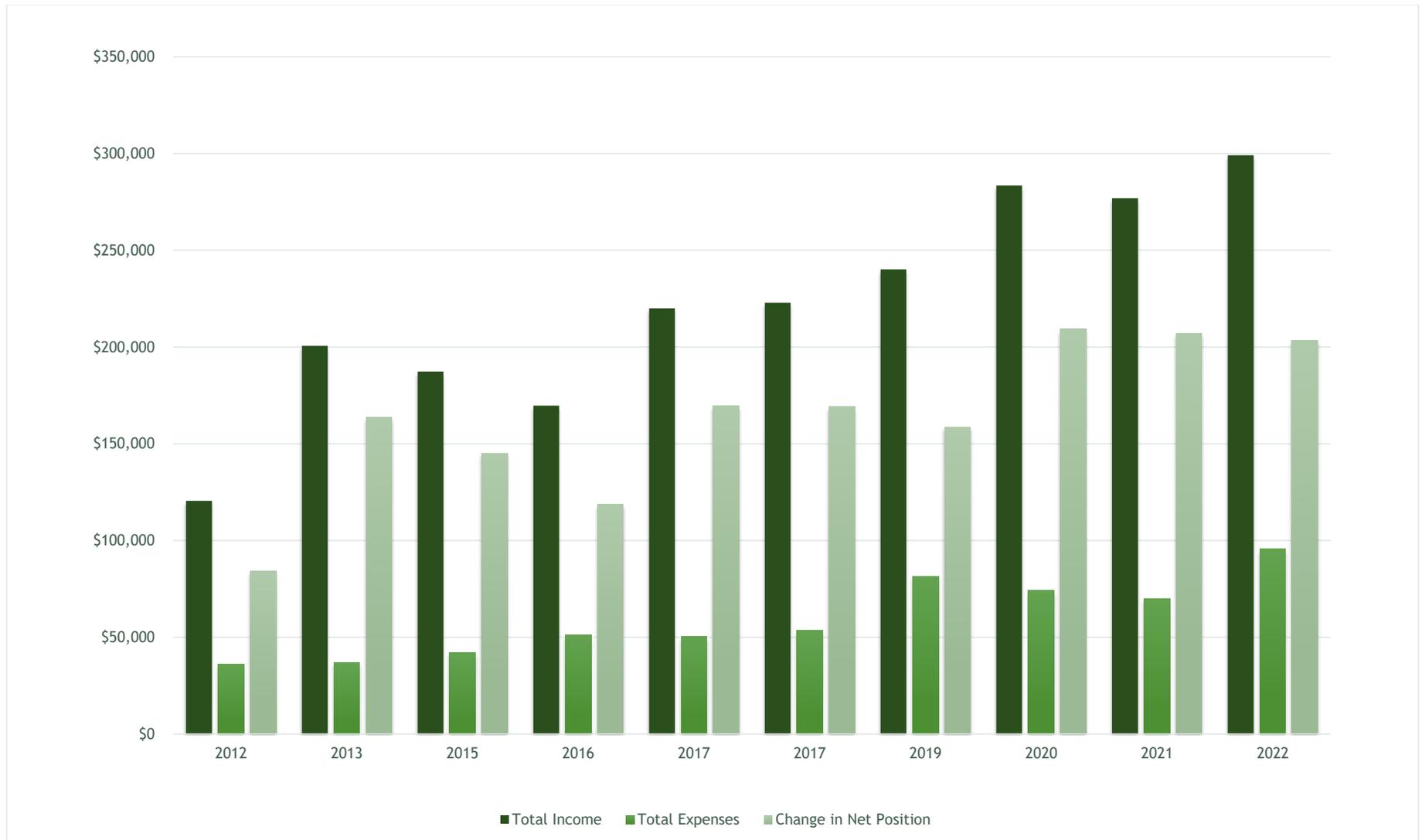
**SCHEDULE OF CHANGES IN NET POSITION
(In thousands)**

Year Ended	Participant Contributions	Net Investment Income	Other Receipts	Transfer of Investment Income	Total Income	Benefit Payments				Administrative Expenses	Total Expenses	Change in Net Position
						Death	Refund	Retirement	Other			
2013	\$61,550	\$62,134	(\$86,810)	\$163,756	\$200,630	\$6,523	\$27,802	\$301	\$31	\$2,455	\$37,112	\$163,518
2014	\$63,767	\$82,223	(\$110,273)	\$206,615	\$242,332	\$9,242	\$30,755	\$354	\$59	\$2,531	\$42,941	\$199,391
2015	\$74,890	\$22,950	\$4,448	\$85,104	\$187,392	\$4,133	\$34,707	\$370	\$12	\$3,033	\$42,255	\$145,137
2016	\$77,459	\$1,049	(\$3,541)	\$94,789	\$169,756	\$13,292	\$36,467	\$351	\$79	\$850	\$51,039	\$118,717
2017	\$85,765	\$75,739	(\$48,113)	\$106,554	\$219,945	\$9,415	\$40,371	\$323	\$99	\$125	\$50,333	\$169,612
2018	\$89,972	\$59,168	(\$54,240)	\$127,972	\$222,872	\$10,851	\$42,427	\$338	\$52	\$84	\$53,752	\$169,120
2019	\$102,203	\$40,087	(\$43,842)	\$141,695	\$240,143	\$25,490	\$55,492	\$336	\$96	\$119	\$81,533	\$158,610
2020	\$109,944	\$14,912	\$2,945	\$155,749	\$283,550	\$20,695	\$52,877	\$352	\$127	\$167	\$74,218	\$209,332
2021	\$111,580	\$233,357	(\$239,773)	\$171,806	\$276,970	\$26,874	\$42,404	\$359	\$106	\$259	\$70,002	\$206,968
2022	\$111,685	(\$119,086)	\$115,459	\$191,054	\$299,112	\$22,601	\$72,306	\$387	\$23	\$285	\$95,602	\$203,510

The table offers a 10 year horizontal comparison base for the operations of the BERS TDA Program.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
TAX DEFERRED ANNUITY PROGRAM**

**SCHEDULE OF CHANGES IN NET POSITION
(In thousands)**



**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

**BENEFIT EXPENSES BY TYPE
(In thousands)**

FISCAL YEAR ENDED JUNE 30	AGE AND SERVICE RETIREMENT BENEFITS	DISABILITY RETIREMENT BENEFITS		LUMP SUM PAYMENTS		TOTAL
		DUTY	NON-DUTY	DEATH IN SERVICE	SURVIVORS	
2013	\$183,250	\$2,649	\$5,564	\$5,890	\$1,968	\$199,321
2014	\$193,400	\$2,849	\$5,984	\$4,768	\$2,506	\$209,507
2015	\$202,193	\$3,065	\$6,435	\$3,642	\$2,124	\$217,459
2016	\$214,422	\$3,296	\$6,921	\$7,094	\$2,486	\$234,219
2017	\$234,057	\$3,551	\$7,458	\$6,571	\$2,999	\$254,636
2018	\$236,588	\$3,820	\$8,021	\$5,165	\$3,043	\$256,637
2019	\$250,070	\$4,108	\$8,626	\$9,720	\$441	\$272,965
2020	\$262,918	\$4,418	\$9,278	\$10,927	\$89	\$287,630
2021	\$273,689	\$4,752	\$9,978	\$4,909	\$2,729	\$296,057
2022	\$291,678	\$5,110	\$10,732	\$6,899	\$833	\$315,252

The table offers a horizontal comparison base for the benefit segment of the expense groups of the Plan across the past 10 years. The benefit segment is broken down by type.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

RETIRED MEMBERS BY TYPE OF BENEFIT

AGE AND SERVICE RETIREMENT

AGE	MEN		WOMEN	
	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE
49 & UNDER	0	\$0	0	\$0
50 - 54	4	57,738	0	0
55 - 59	93	33,301	221	11,365
60 - 64	332	34,367	1,188	12,088
65 - 69	691	32,889	2,705	13,287
70 - 74	704	29,899	3,074	11,909
75 - 79	563	28,209	2,532	11,009
80 - 84	393	29,209	1,719	9,375
85 - 89	238	27,124	1,091	9,400
90 & OVER	173	24,874	970	8,607
TOTALS	3,191	\$30,283	13,500	\$11,261

ORDINARY DISABILITY (NON-DUTY) RETIREMENT

AGE	MEN		WOMEN	
	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE
49 & UNDER	9	\$16,615	10	\$13,954
50 - 54	10	16,122	30	15,068
55 - 59	35	18,804	114	13,173
60 - 64	51	18,726	193	11,412
65 - 69	52	18,029	205	11,120
70 - 74	42	17,422	181	10,666
75 - 79	25	16,790	114	9,891
80 - 84	12	13,355	52	9,549
85 - 89	4	20,820	7	7,393
90 & OVER	6	17,153	5	8,903
TOTALS	246	\$17,721	911	\$11,226

NOTE: This schedule is based on 2020 data (LAG)

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

**RETIRED MEMBERS BY TYPE OF BENEFIT
(CONT'D)**

ACCIDENTAL DISABILITY (DUTY) RETIREMENT

AGE	MEN		WOMEN	
	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE
49 & UNDER	1	\$11,956	4	\$13,589
50 - 54	1	10,250	3	9,834
55 - 59	10	25,062	20	10,207
60 - 64	8	22,633	32	9,928
65 - 69	11	15,669	44	11,311
70 - 74	7	17,482	29	10,305
75 - 79	4	18,998	19	8,269
80 - 84	5	33,656	13	7,579
85 - 89	1	25,228	7	7,168
90 & OVER	3	35,787	4	9,122
TOTALS	51	\$22,068	175	\$9,969

ACCIDENTAL DEATH (DUTY) RETIREMENT

AGE	MEN		WOMEN	
	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE
49 & UNDER	0	\$0	0	\$0
50 - 54	0	0	0	0
55 - 59	0	0	0	0
60 - 64	1	5,299	1	51,707
65 - 69	0	0	0	0
70 - 74	0	0	0	0
75 - 79	0	0	0	0
80 - 84	0	0	0	0
85 - 89	1	397	0	0
90 & OVER	0	0	0	0
TOTALS	2	\$2,848	1	\$51,707

NOTE: This schedule is based on 2020 data (LAG)

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

RETIRED MEMBERS BY TYPE OF BENEFIT

(CONT'D)

OTHER BENEFICIARIES

AGE OF RETIRANTS	MEN		WOMEN	
	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE
49 & UNDER	28	\$9,474	40	\$9,237
50 - 54	9	6,917	44	6,323
55 - 59	20	12,747	44	6,977
60 - 64	32	9,859	46	9,722
65 - 69	29	16,585	61	13,658
70 - 74	55	19,411	73	14,982
75 - 79	65	18,875	79	18,139
80 - 84	51	18,953	102	20,275
85 - 89	35	23,055	94	19,997
90 & OVER	35	17,937	101	15,941
TOTALS	359	\$16,921	684	\$15,087

ALL PENSIONERS AND BENEFICIARIES

AGE OF RETIRANTS	MEN		WOMEN	
	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE
49 & UNDER	38	\$11,231	54	\$10,433
50 - 54	24	19,362	77	9,867
55 - 59	158	26,967	399	11,340
60 - 64	424	30,346	1,460	11,904
65 - 69	783	31,056	3,015	13,118
70 - 74	808	28,429	3,357	11,895
75 - 79	657	26,795	2,744	11,149
80 - 84	461	27,710	1,886	9,957
85 - 89	279	26,421	1,199	10,206
90 & OVER	217	23,692	1,080	9,296
TOTALS	3,849	\$28,111	15,271	\$11,418

NOTE: This schedule is based on 2020 data (LAG)

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

SUMMARY OF ACTIVES - BY AGE AND SERVICE: MALE

Data Used In The June 30, 2020 (LAG) Actuarial Valuation
For Determining Fiscal Year 2022 Employer Contributions

AGE \ SVC	UNDER 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & UP	ALL YEARS
NUMBER:										
UNDER 20	2	0	0	0	0	0	0	0	0	2
20 TO 24	67	0	0	0	0	0	0	0	0	67
25 TO 29	300	9	0	0	0	0	0	0	0	309
30 TO 34	471	121	12	0	0	0	0	0	0	604
35 TO 39	462	238	87	10	0	0	0	0	0	797
40 TO 44	378	223	152	58	15	0	0	0	0	826
45 TO 49	325	217	234	139	43	5	0	0	0	963
50 TO 54	320	208	211	171	104	51	7	0	0	1,072
55 TO 59	307	223	191	156	125	80	46	5	0	1,133
60 TO 64	194	186	130	121	108	103	59	17	2	920
65 TO 69	66	75	69	58	29	22	20	10	6	355
70 & UP	36	40	40	23	20	12	6	2	8	187
TOTAL	2,928	1,540	1,126	736	444	273	138	34	16	7,235

SALARIES (IN THOUSANDS):

UNDER 20	63	0	0	0	0	0	0	0	0	63
20 TO 24	2,386	0	0	0	0	0	0	0	0	2,386
25 TO 29	14,405	459	0	0	0	0	0	0	0	14,864
30 TO 34	27,195	7,491	919	0	0	0	0	0	0	35,606
35 TO 39	29,196	15,360	6,877	1,030	0	0	0	0	0	52,464
40 TO 44	24,525	15,047	12,698	4,649	1,216	0	0	0	0	58,135
45 TO 49	20,978	14,212	21,264	13,503	4,150	652	0	0	0	74,759
50 TO 54	21,559	12,465	18,834	17,117	9,391	4,448	675	0	0	84,489
55 TO 59	18,464	12,284	15,751	14,228	12,369	7,454	4,444	474	0	85,470
60 TO 64	10,988	9,494	10,234	10,272	9,928	10,100	5,981	1,888	212	69,097
65 TO 69	3,900	3,920	4,600	5,285	2,426	1,978	1,832	1,165	543	25,649
70 & UP	1,366	1,393	2,307	1,175	1,827	996	638	279	856	10,837
TOTAL¹	175,025	92,125	93,484	67,259	41,307	25,628	13,570	3,806	1,611	513,819

AVERAGE SALARIES: ²

UNDER 20	31,427	0	0	0	0	0	0	0	0	31,427
20 TO 24	35,611	0	0	0	0	0	0	0	0	35,611
25 TO 29	48,016	50,995	0	0	0	0	0	0	0	48,103
30 TO 34	57,740	61,908	76,604	0	0	0	0	0	0	58,950
35 TO 39	63,195	64,540	79,048	103,012	0	0	0	0	0	65,826
40 TO 44	64,881	67,474	83,537	80,163	81,062	0	0	0	0	70,381
45 TO 49	64,548	65,493	90,870	97,142	96,504	130,463	0	0	0	77,631
50 TO 54	67,371	59,930	89,259	100,097	90,302	87,216	96,467	0	0	78,815
55 TO 59	60,145	55,087	82,466	91,208	98,952	93,181	96,609	94,825	0	75,437
60 TO 64	56,641	51,045	78,720	84,893	91,924	98,054	101,375	111,035	106,099	75,105
65 TO 69	59,088	52,269	66,665	91,126	83,655	89,904	91,615	116,456	90,452	72,250
70 & UP	37,952	34,832	57,671	51,075	91,341	83,016	106,269	139,523	107,015	57,951
TOTAL	59,776	59,821	83,023	91,385	93,034	93,875	98,333	111,941	100,688	71,019

Note: Age is nearest birthday. Service is nearest year.

¹ Total may not add up due to rounding.

² Average based on unrounded salary.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

SUMMARY OF ACTIVES- BY AGE AND SERVICE : FEMALE

Data Used In The June 30, 2020 (LAG) Actuarial Valuation
For Determining Fiscal Year 2022 Employer Contributions

AGE \ SVC	UNDER 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & UP	ALL YEARS
NUMBER:										
UNDER 20	1	0	0	0	0	0	0	0	0	1
20 TO 24	60	0	0	0	0	0	0	0	0	60
25 TO 29	620	15	0	0	0	0	0	0	0	635
30 TO 34	1,013	247	12	0	0	0	0	0	0	1,272
35 TO 39	1,014	418	144	17	0	0	0	0	0	1,593
40 TO 44	1,143	527	362	133	15	0	0	0	0	2,180
45 TO 49	1,119	653	394	249	91	8	1	0	0	2,515
50 TO 54	1,199	915	538	355	162	53	16	0	0	3,238
55 TO 59	1,009	1,052	823	608	251	105	49	19	0	3,916
60 TO 64	616	736	726	645	322	147	53	44	4	3,293
65 TO 69	226	342	334	313	171	69	20	13	10	1,498
70 & UP	76	149	181	169	103	36	19	10	4	747
TOTAL	8,096	5,054	3,514	2,489	1,115	418	158	86	18	20,948

SALARIES (IN THOUSANDS):

UNDER 20	56	0	0	0	0	0	0	0	0	56
20 TO 24	2,006	0	0	0	0	0	0	0	0	2,006
25 TO 29	34,093	924	0	0	0	0	0	0	0	35,017
30 TO 34	57,322	17,807	1,008	0	0	0	0	0	0	76,138
35 TO 39	51,352	28,626	11,180	1,235	0	0	0	0	0	92,394
40 TO 44	46,979	31,118	27,396	10,970	1,152	0	0	0	0	117,616
45 TO 49	41,222	30,314	26,012	18,920	7,395	720	69	0	0	124,652
50 TO 54	40,265	36,434	26,416	19,946	10,577	4,146	1,289	0	0	139,072
55 TO 59	32,981	36,431	33,238	29,464	14,393	7,417	3,871	1,612	0	159,406
60 TO 64	20,153	24,509	28,770	28,515	16,408	8,148	4,595	3,504	332	134,933
65 TO 69	6,287	10,799	11,633	13,174	7,527	3,951	1,250	970	847	56,438
70 & UP	1,694	4,089	5,127	6,663	3,841	1,719	1,103	573	245	25,053
TOTAL¹	334,410	221,051	170,780	128,887	61,293	26,101	12,177	6,659	1,424	962,781

AVERAGE SALARIES: ²

UNDER 20	56,144	0	0	0	0	0	0	0	0	56,144
20 TO 24	33,432	0	0	0	0	0	0	0	0	33,432
25 TO 29	54,989	61,575	0	0	0	0	0	0	0	55,144
30 TO 34	56,587	72,093	84,029	0	0	0	0	0	0	59,857
35 TO 39	50,643	68,484	77,641	72,673	0	0	0	0	0	58,000
40 TO 44	41,102	59,048	75,680	82,483	76,809	0	0	0	0	53,952
45 TO 49	36,839	46,422	66,020	75,983	81,263	90,040	68,759	0	0	49,563
50 TO 54	33,582	39,818	49,100	56,187	65,288	78,220	80,591	0	0	42,950
55 TO 59	32,686	34,631	40,387	48,460	57,341	70,635	79,009	84,821	0	40,706
60 TO 64	32,715	33,300	39,628	44,209	50,956	55,432	86,694	79,630	83,039	40,976
65 TO 69	27,819	31,577	34,829	42,088	44,016	57,265	62,493	74,621	84,731	37,676
70 & UP	22,292	27,443	28,326	39,424	37,292	47,743	58,044	57,297	61,145	33,538
TOTAL	41,306	43,738	48,600	51,783	54,971	62,443	77,070	77,430	79,111	45,961

Note: Age is nearest birthday. Service is nearest year.

¹ Total may not add up due to rounding.

² Average based on unrounded salary.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

SUMMARY OF ACTIVES - BY AGE AND SERVICE: MALE AND FEMALE

Data Used In The June 30, 2020 (LAG) Actuarial Valuation
For Determining Fiscal Year 2022 Employer Contributions

AGE \ SVC	UNDER 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & UP	ALL YEARS
NUMBER:										
UNDER 20	3	0	0	0	0	0	0	0	0	3
20 TO 24	127	0	0	0	0	0	0	0	0	127
25 TO 29	920	24	0	0	0	0	0	0	0	944
30 TO 34	1,484	368	24	0	0	0	0	0	0	1,876
35 TO 39	1,476	656	231	27	0	0	0	0	0	2,390
40 TO 44	1,521	750	514	191	30	0	0	0	0	3,006
45 TO 49	1,444	870	628	388	134	13	1	0	0	3,478
50 TO 54	1,519	1,123	749	526	266	104	23	0	0	4,310
55 TO 59	1,316	1,275	1,014	764	376	185	95	24	0	5,049
60 TO 64	810	922	856	766	430	250	112	61	6	4,213
65 TO 69	292	417	403	371	200	91	40	23	16	1,853
70 & UP	112	189	221	192	123	48	25	12	12	934
TOTAL	11,024	6,594	4,640	3,225	1,559	691	296	120	34	28,183

SALARIES (IN THOUSANDS):

UNDER 20	119	0	0	0	0	0	0	0	0	119
20 TO 24	4,392	0	0	0	0	0	0	0	0	4,392
25 TO 29	48,498	1,383	0	0	0	0	0	0	0	49,881
30 TO 34	84,518	25,298	1,928	0	0	0	0	0	0	111,743
35 TO 39	80,548	43,987	18,058	2,266	0	0	0	0	0	144,857
40 TO 44	71,504	46,165	40,094	15,620	2,368	0	0	0	0	175,751
45 TO 49	62,200	44,526	47,276	32,422	11,545	1,373	69	0	0	199,410
50 TO 54	61,823	48,899	45,249	37,063	19,968	8,594	1,965	0	0	223,561
55 TO 59	51,445	48,716	48,989	43,692	26,762	14,871	8,315	2,086	0	244,876
60 TO 64	31,141	34,003	39,004	38,787	26,336	18,248	10,576	5,391	544	204,030
65 TO 69	10,187	14,720	16,233	18,459	9,953	5,929	3,082	2,135	1,390	82,087
70 & UP	3,060	5,482	7,434	7,837	5,668	2,715	1,740	852	1,101	35,890
TOTAL¹	509,435	313,179	264,265	196,146	102,600	51,730	25,747	10,464	3,035	1,476,597

AVERAGE SALARIES: ²

UNDER 20	39,666	0	0	0	0	0	0	0	0	39,666
20 TO 24	34,581	0	0	0	0	0	0	0	0	34,581
25 TO 29	52,715	57,608	0	0	0	0	0	0	0	52,840
30 TO 34	56,953	68,744	80,316	0	0	0	0	0	0	59,565
35 TO 39	54,572	67,053	78,171	83,910	0	0	0	0	0	60,610
40 TO 44	47,011	61,553	78,004	81,779	78,935	0	0	0	0	58,467
45 TO 49	43,075	51,179	75,280	83,563	86,153	105,587	68,759	0	0	57,335
50 TO 54	40,700	43,543	60,413	70,462	75,068	82,632	85,423	0	0	51,870
55 TO 59	39,092	38,208	48,313	57,189	71,174	80,384	87,531	86,905	0	48,500
60 TO 64	38,446	36,880	45,565	50,635	61,246	72,992	94,428	88,382	90,726	48,429
65 TO 69	34,886	35,299	40,280	49,755	49,764	65,156	77,054	92,810	86,876	44,300
70 & UP	27,326	29,007	33,637	40,820	46,081	56,561	69,618	71,001	91,725	38,426
TOTAL	46,211	47,495	56,954	60,820	65,811	74,863	86,983	87,200	89,265	52,393

Note: Age is nearest birthday. Service is nearest year.

¹ Total may not add up due to rounding.

² Average based on unrounded salary.

**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

ANNUAL AVERAGE BENEFIT PAYMENT AMOUNTS

FISCAL YEAR ENDED JUNE 30	SERVICE RETIREMENT BENEFITS			ORDINARY (NON-DUTY) DISABILITY BENEFITS			ACCIDENTAL (DUTY) DISABILITY BENEFITS			SURVIVOR BENEFITS		
	NUMBER	AVERAGE ANNUAL ALLOWANCE	AVERAGE MONTHLY ALLOWANCE	NUMBER	AVERAGE ANNUAL ALLOWANCE	AVERAGE MONTHLY ALLOWANCE	NUMBER	AVERAGE ANNUAL ALLOWANCE	AVERAGE MONTHLY ALLOWANCE	NUMBER	AVERAGE ANNUAL ALLOWANCE	AVERAGE MONTHLY ALLOWANCE
2011 (Lag)	12,841	\$12,244	\$1,020	698	\$10,975	\$915	138	\$12,559	\$1,047	722	\$13,724	\$1,144
2012 (Lag)	13,218	\$12,520	\$1,043	731	\$11,393	\$949	148	\$12,490	\$1,041	777	\$13,969	\$1,164
2013 (Lag)	13,662	\$12,811	\$1,068	795	\$11,620	\$968	153	\$12,809	\$1,067	845	\$14,579	\$1,215
2014(Lag)	14,150	\$12,932	\$1,078	853	\$11,680	\$973	156	\$12,268	\$1,022	836	\$14,435	\$1,203
2015(Lag)	14,572	\$13,303	\$1,109	890	\$12,208	\$1,017	159	\$12,341	\$1,028	817	\$14,391	\$1,199
2016(Lag)	15,034	\$13,420	\$1,118	937	\$11,957	\$996	168	\$13,377	\$1,115	798	\$14,869	\$1,239
2017(Lag)	15,454	\$13,722	\$1,144	999	\$11,960	\$997	182	\$12,585	\$1,049	790	\$15,010	\$1,251
2018(Lag)	15,979	\$14,138	\$1,178	1085	\$12,250	\$1,021	209	\$12,642	\$1,054	768	\$15,076	\$1,256
2019(Lag)	16,156	\$14,594	\$1,216	1136	\$12,328	\$1,027	223	\$12,334	\$1,028	987	\$14,819	\$1,235
2020(Lag)	16,691	\$14,897	\$1,241	1157	\$12,607	\$1,051	226	\$12,699	\$1,058	1046	\$15,728	\$1,311

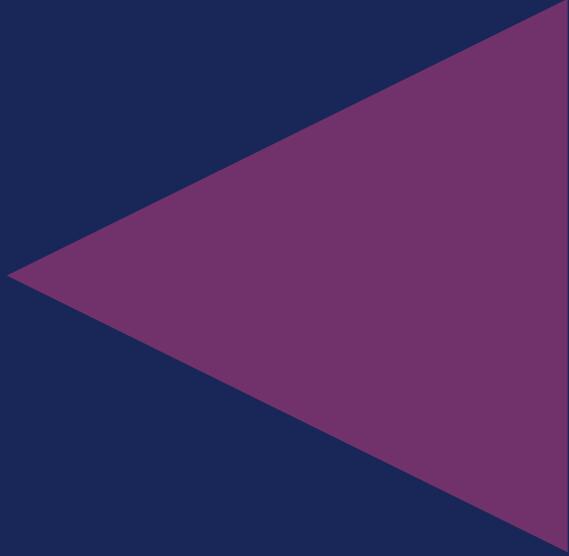
**NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM
QUALIFIED PENSION PLAN**

**PARTICIPATING EMPLOYERS
AS OF JUNE 30, 2020 (LAG)**

Employer	As of June 30, 2020 (Lag)		As of June 30, 2011 (Lag)	
	Number of Employees	Annual Payroll	Number of Employees	Annual Payroll
NYC Department of Education¹	27,440	\$ 1,395,857,119	22,571	\$ 868,363,084
NYC Schools Construction Authority	730	80,172,758	544	51,262,621
Charter Schools				
Beginning with Children²	0	-	4	118,555
KIPP Academy	0	-	0	-
Renaissance	13	567,752	12	624,894
TOTAL	28,183	\$ 1,476,597,629	23,131	\$ 920,369,154

¹ A limited (de minimis) number of these employees have been reported as employed by employers other than those listed in the table. For actuarial valuation purposes these employees are included with the NYC Department of Education pending confirmation of status.

² The Beginning with Children Charter School closed in 2016.



Board of Education Retirement System

EXECUTIVE OFFICE	WALK IN CENTER
55 Water Street, 50 th Floor	65 Court Street
New York, NY 10041	Brooklyn, NY 11201
929.305.3800	800.843.5575