



For the Fiscal Years Ended
June 30, 2023
and June 30, 2022



ANNUAL COMPREHENSIVE FINANCIAL REPORT

of the Qualified Pension Plan
and the Tax Deferred Annuity Program

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, 2023 AND JUNE 30, 2022**

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

STATE OF NEW YORK

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

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AND THE
TAX DEFERRED ANNUITY PROGRAM**

**INTRODUCTORY SECTION
PART I**

**FOR THE YEARS ENDED
JUNE 30, 2023 AND JUNE 30, 2022**

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December 21, 2023

Dear Members:

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, 2023, and June 30, 2022. 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, 2023

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 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 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 364 of the Laws of 2022

Provides that as of August 15, 2022, the Board of Education shall consist of 23 voting members: 5 members elected by the Community Education Councils (one from each borough), 1 appointed by each Borough President, and 13 appointed by the Mayor. This chapter law further provides that the Chancellor of Schools and the Comptroller of the City of New York as ex officio non-voting members. As a result, the BERS Board of Trustees now consists of 27 members. See also Chapter 71 of the Laws of 2023, below.

Chapter 482 of the Laws of 2022

Amends the Freedom of Information Law (FOIL) to provide that the home address of a retiree or beneficiary of a public New York City or State retirement system shall be exempt from disclosure under the FOIL.

Chapter 561 of the Laws of 2022

Extends the deadline for members who participated in the World Trade Center rescue, recovery and cleanup operations to file a Notice of Participation until September 11, 2026.

Chapter 775 of the Laws of 2022

Increases the portion of the assets of a public New York City or State retirement system that may be invested in miscellaneous investments ("the basket clause") from 25% to 35%.

Chapter 783 of the Laws of 2022

Extends the COVID-19 Accidental Death Benefit established by Chapter 89 of 2020 to cover members who die on or before December 31, 2024.

Chapter 58 of the Laws of 2023

Amends the Open Meetings Law to provide that a public body may adopt a written procedure to allow for a member to attend a meeting through videoconferencing, if that member has a disability that prevents the member from attending this meeting in person. Such attendance counts towards quorum for a meeting of the public body.

Chapter 71 of the Laws of 2023

Postpones the effective date of Chapter 364 of the Laws of 2022 from August 15, 2022 to January 15, 2023.

Chapter 184 of the Laws of 2023

Extends for two fiscal years, until June 30, 2025, 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.

FUNDING

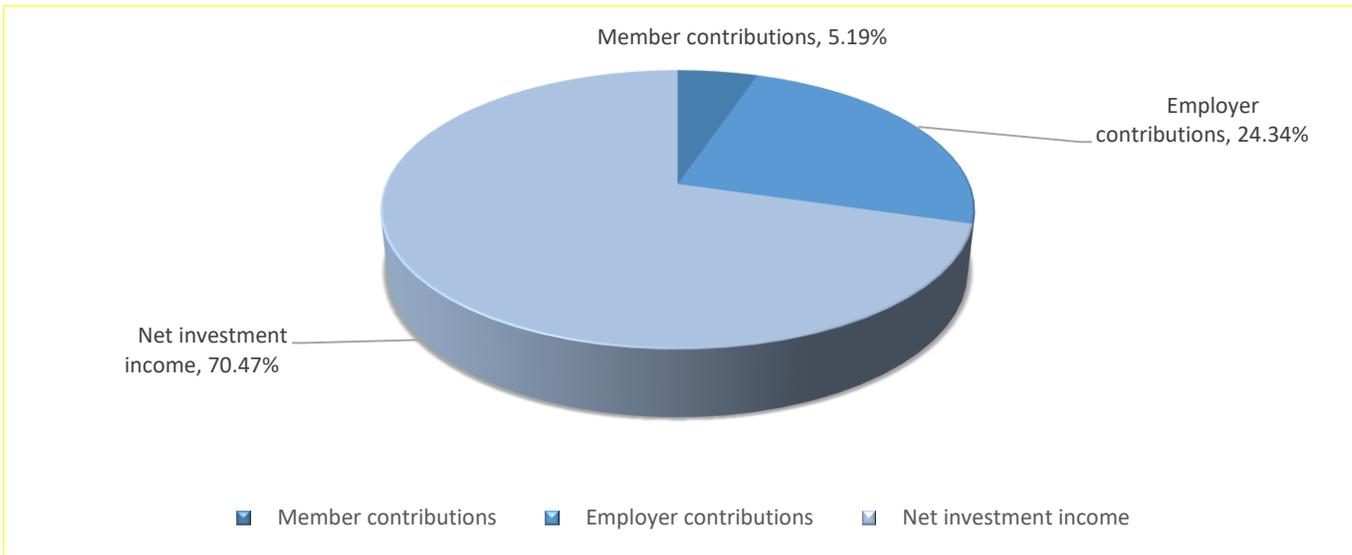
The financial objective of the QPP is to fund members' retirement benefits during their active service. The employer contributes amounts that, together with member contributions and investment income, would ultimately be sufficient to accumulate assets to pay benefits when due.

The 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 2023, 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 30th, 2023, the QPP's fiduciary net position represents 98.83% 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 93.0% as of June 30th, 2021. Funding status has been discussed in detail in the actuarial section of this report.

Funding Sources

The chart below summarizes the contribution funding sources for fiscal year 2023 for the QPP.

Funds	Percentage	Contribution (in thousands)
Member Contributions	5.19%	\$ 49,810
Employer Contributions	24.34%	\$ 233,546
Net Investment Income	70.47%	\$ 676,092
Total	100.00%	\$ 959,448



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.

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 +8.55%, net of management fees, for the fiscal year ending June 2023 surpassing the BERS Policy Benchmark by +0.62%. The gross performance for the fiscal year ranked in the 22nd percentile among the Wilshire public plans with assets greater than \$1 billion peer group. The Fund increased in value and ended the fiscal year at \$8.49 billion (compared to \$7.93 billion last year). Over the 5-year period ending June 2023, the Fund averaged a +7.41 annual net return versus +7.14% for the benchmark. The 5-year performance positioned the Fund in the top quartile of peers group.

As of June 2023, the variable investments held at TRS, increased to \$768.2 million from \$660.2 million in FY2022. During FY2023, the variable return fund performance was at +15.58% versus -20.65% during FY2022.

Investment Description¹

The Trustees establish an Investment Policy and asset allocation target 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 (also referred to alternatives and real assets investments). In order to participate in the performance of the broad markets while keeping expenses contained, the Fund invests in passive or indexed strategies for much of its U.S. public

¹ Segal Marco Advisors, Report on Investment Activity

equity allocation. For BERS, diversification and the focus on low investment expenses and fees are critical for long-term planning.

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. During the latter half of the fiscal year, the Trustees have been engaged in reviewing the BERS asset allocation target mix.

The Fund's target asset mix, approved in FY2023, 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 through diversification.

Investment Policy

BERS' investment policy statement, ratified by the Board of Trustees in January 2009 and amended in October 2011, in 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.

ECONOMIC AND MARKET COMMENT²

The Fund is diversified across U.S. and non-U.S. markets. Global economies and labor markets remained resilient despite the headwinds from elevated inflation, tightening credit conditions, and the rapid rise in interest rates. Declining energy prices helped reduce headline inflation in most countries, easing the strains on households and business. However, persistently high core consumer prices maintained the pressure on central banks to keep interest rates higher for longer.

U.S. equities continue to rise as waning inflation, surprisingly strong macroeconomic data, and improving earnings prospects provided hope that the U.S. economy could experience a moderate slowdown rather than a recession. Towards the end of the FY, developed markets led the return improvement as Europe avoided the economic woes predicted earlier with the Russia and Ukraine conflict. Emerging market stocks lagged behind developing market stocks as tensions between U.S. and China continued. Fixed income sectors were positive as the interest rate outlook became

² Segal Marco Advisors, Report on Investment Activity

more moderate after March 2023 banking crisis. While the Federal Reserve paused its interest rate hikes in June 2023, it signaled that further hikes could still happen. High yield and credit recovered after the banking stresses and performed well by the end of the fiscal year.

In the U.S., President Biden signed into law a bill to suspend the nation's debt limit alleviates financial stress. Non-U.S. developed market equities also experienced positive performance during the fiscal year as investor sentiment rose. Japan produced the highest returns as expectations of governance reforms and structural shifts in the economy boosted investor sentiment. European markets were able to contribute positive returns despite worries about the European Union economy and the continuing pace of the European Central Bank's interest rate hikes. Emerging markets were also positive for the fiscal year, though lagging behind developing markets. Tension between the U.S. and China was a contributing factor behind emerging markets performance, as were concerns about China's anemic economic recovery. The U.S. fixed income market experiences fluctuations but ends positively. While the Federal Reserve pauses rate hikes in June 2023, it signaled that further hikes could still happen.

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, 2023. 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 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 12. Schedule of the investment management fees and the schedule of payments of commissions to brokers are found in the investment section, page 92-99.

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, 2022. 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-seven 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, 2023

BOARD OF TRUSTEES

Hon. Aaron Bogad	Hon. John Maderich, employee trustee
Hon. Alan Ong	Hon. Kaliris Salas-Ramirez
Hon. Angela Green	Hon. Khari Edwards
Hon. Anita Garcia	Hon. Lilly Chan
Hon. Anthony Giordano	Hon. Maisha Sapp
Hon. Brad Lander, Comptroller	Hon. Marjorie Dienstag
Hon. Chantel Cabrera	Hon. Michelle Joseph
Hon. David Banks, Chancellor	Hon. Naveed Hasan
Hon. Donald Nesbit, employee trustee	Hon. Phoebe-Sade Arnold
Hon. Ephraim Zakry	Hon. Ruth Maria Kenley
Hon. Geneal Chacon	Hon. Sheree Gibson
Hon. Gladys Ward	Hon. Tazin Azad
Hon. Gregory Faulkner	Hon. Thomas Sheppard
Hon. Jessamyn Lee	

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 Hon. Russell Bateman-Buckley
 Hon. Seritta Scott

COMPTROLLER’S DESIGNEES

Hon. Alison Hirsh
 Hon. John Dorsa

ALTERNATE EMPLOYEE-MEMBERS

Hon. Frank Sirabella
 Hon. Shaun Francois

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

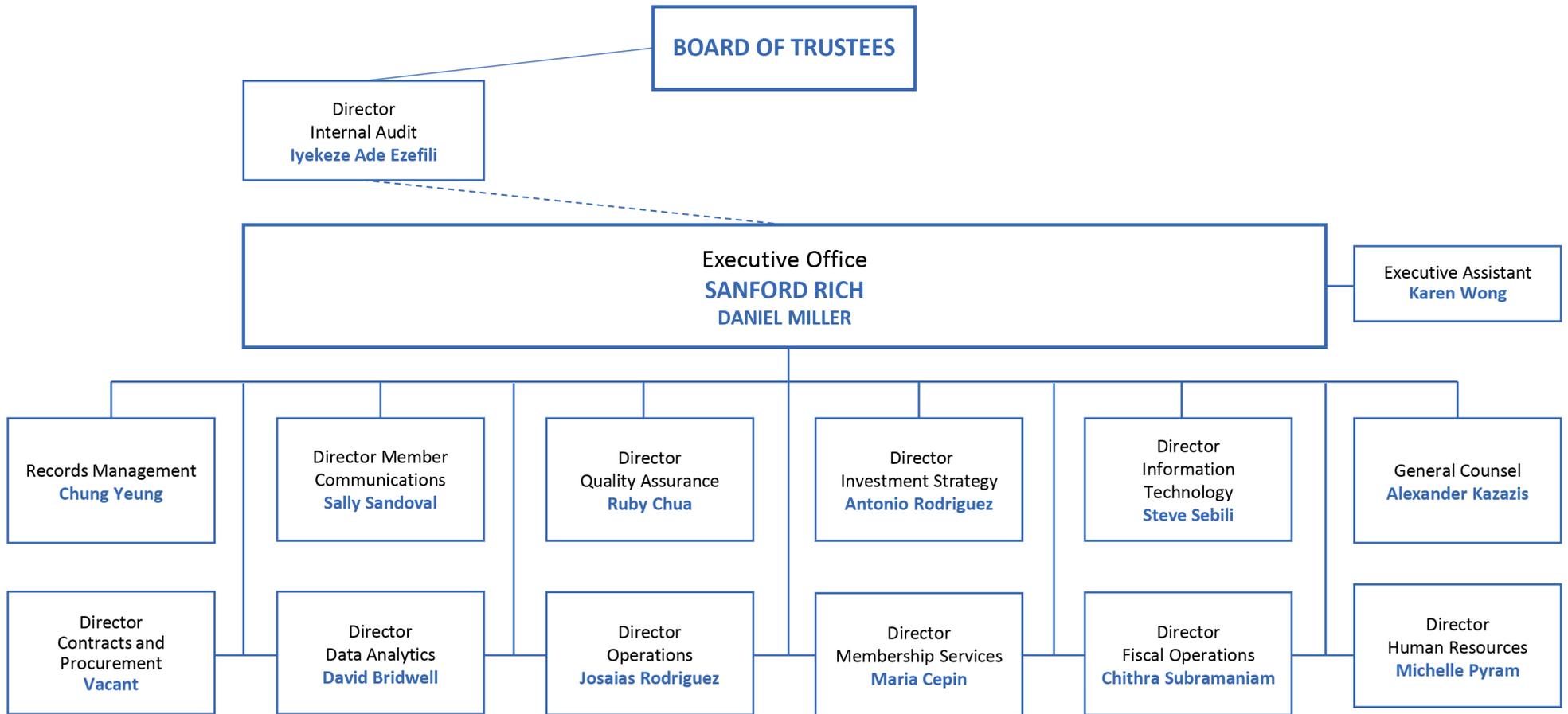
Headquarters Address:

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, 2023

BERS Organization Structure





NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM

CONSULTING AND PROFESSIONAL SERVICES FOR THE FISCAL YEAR ENDED JUNE 30, 2023

ACTUARY

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

AUDITORS

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

CUSTODIAN OF FUNDS

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

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

HR RESEARCH AND ADVISORY SERVICES

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

INTERNAL AUDIT CONSULTANT

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

INVESTMENT CONSULTANT

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

KPX LLC

1401 Lane Park Court
Birmingham, AL 35223

Segal Marco Advisors

333 West 34th Street
New York, NY 10001

LEGAL CONSULTANT

Groom Law Group, Chartered
Department 0589
Washington, DC 20073

OPERATIONS CONSULTANT

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



Government Finance Officers Association

Certificate of
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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, 2022

Christopher P. Morill

Executive Director/CEO

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**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, 2023 AND JUNE 30, 2022**

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GRANT THORNTON LLP

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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, 2023 and 2022 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, 2023 and 2022, 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 System’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 ten years in the period ended June 30, 2023, schedule 2 - schedules of employer contributions for each of the ten years in the period ended June 30, 2023, and schedule 3 - schedule of investment returns for each of the ten years in the period ended June 30, 2023, 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, 2023, 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, 2023

(except for the Additional Supplementary Information and the Other information section of our report, as to which the date is December 21, 2023)

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

June 30, 2023 and 2022

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, 2023 and 2022. 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 \$6.15 billion during Fiscal Year 2023, marking a growth of 4.65% compared to Fiscal Year 2022. The increase was primarily attributable to the rise in the fair value of investments. The fair value of investments, which includes the collateral from security lending, increased from \$8.53 billion in Fiscal Year 2022 to \$9.08 billion in Fiscal Year 2023, an increase of 6.46%. Return on investments stood at 7.44%.

New York City Board of Education Retirement System

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2023 and 2022

During Fiscal Year 2022, QPP's net position restricted for pension benefits stood at \$5.88 billion, indicating a notable decrease of 16.58% from Fiscal Year 2021. The decrease in the net position during Fiscal Year 2022 was due to a decrease in the fair value of investments. The fair value of investments, including the collateral from security lending, stood at \$8.53 billion, a decrease of 12.51% from the Fiscal Year 2021. Return on investments stood at -9.41%.

**QPP Fiduciary Net Position
June 30, 2023, 2022, and 2021
(In thousands)**

	<u>2023</u>	<u>2022</u>	<u>2021</u>
Assets:			
Cash	\$ 2,864	\$ 7,556	\$ 12,920
Receivables	169,655	212,230	304,182
Investments, at fair value	8,564,948	7,991,279	8,958,857
Collateral from securities lending	519,742	541,760	794,242
Other	199,888	319,776	464,473
Total assets	<u>9,457,097</u>	<u>9,072,601</u>	<u>10,534,674</u>
Liabilities:			
Accounts payable	65,414	63,581	78,462
Payable for investment securities purchased	156,536	204,459	436,597
Accrued benefits payable	13,604	12,621	13,150
Due to the TDA Program's fixed return fund from the System	2,552,317	2,374,096	2,167,983
Payables for securities lending	519,742	541,760	794,242
Total liabilities	<u>3,307,613</u>	<u>3,196,517</u>	<u>3,490,434</u>
Net position restricted for pension benefits	<u>\$ 6,149,484</u>	<u>\$ 5,876,084</u>	<u>\$ 7,044,240</u>

Total receivables decreased from \$212.23 million in Fiscal Year 2022 to \$169.66 million in Fiscal Year 2023, a decrease of 20.06%. The decrease in the receivables was mainly caused by the decrease in the receivables for investment securities sold. Receivables for investment securities sold totaled \$91.79 million in Fiscal Year 2023, a decrease of 33.63% from Fiscal Year 2022. Payables for investment securities purchased also decreased from \$204.46 million in Fiscal Year 2022 to \$156.54 million in Fiscal Year 2023, a decrease of 23.44% from Fiscal Year 2022.

At the close of Fiscal Year 2022, total receivables decreased from \$304.18 million in Fiscal Year 2021 to \$212.23 million, a decrease of 30.23%. Included in the total receivables are the receivables for investment securities sold, which decreased from \$232.84 million in Fiscal Year 2021 to \$138.29 million in Fiscal Year 2022, a decrease of 40.61% from Fiscal Year 2021.

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.

As of June 30, 2023, member loans totaled \$50.85 million, representing a 4.92% increase compared to Fiscal Year 2022.

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 2023 stood at \$2.55 billion, an increase of 7.51% from Fiscal Year 2022. This liability includes the TDA members' account balances for deposits in the fixed investment program.

New York City Board of Education Retirement System

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2023 and 2022

Changes in QPP Fiduciary Net Position

During Fiscal Year 2023, the QPP member contributions increased to \$49.81 million, an increase of 0.44% from Fiscal Year 2022. In Fiscal Year 2022, the QPP member contributions increased to \$49.59 million, an increase of 3.04% from Fiscal Year 2021 contributions of \$48.12 million.

**Changes in QPP Program Fiduciary Net Position
Years ended June 30, 2023, 2022, and 2021
(In thousands)**

	<u>2023</u>	<u>2022</u>	<u>2021</u>
Additions:			
Member contributions	\$ 49,810	\$ 49,591	\$ 48,125
Employer contributions	233,546	262,404	182,983
Net investment income (loss) before securities lending transaction	674,345	(805,356)	1,888,731
Net securities lending income	1,747	1,692	1,020
TDA Program's interest income in the fixed return fund	(201,361)	(191,054)	(171,806)
Other - receipts from (payments to) other retirement systems and other revenues/expenses	<u>(88,699)</u>	<u>(124,188)</u>	<u>239,808</u>
Total additions	<u>669,388</u>	<u>(806,911)</u>	<u>2,188,861</u>
Deductions:			
Benefit payments and withdrawals	359,271	325,679	302,336
Administrative expenses	<u>36,717</u>	<u>35,566</u>	<u>25,175</u>
Total deductions	<u>395,988</u>	<u>361,245</u>	<u>327,511</u>
 Net increase (decrease) in net position	 273,400	 (1,168,156)	 1,861,350
Net position restricted for pension benefits:			
Beginning of year	<u>5,876,084</u>	<u>7,044,240</u>	<u>5,182,890</u>
 End of year	 <u>\$ 6,149,484</u>	 <u>\$ 5,876,084</u>	 <u>\$ 7,044,240</u>

Employer contributions received through the QPP Program decreased from \$262.40 million in the Fiscal Year 2022 to \$233.55 million in the Fiscal Year 2023, a decrease of 11.00%. The employer contributions are made on a statutory basis based on the one-year lag methodology.

Fiscal Year 2023 reported a net investment income before securities lending transactions of \$674.35 million. Return on investments increased from -9.41% in Fiscal Year 2022 to 7.44% in Fiscal Year 2023.

The benefit payments and withdrawals increased from \$325.68 million during the Fiscal Year 2022 to \$359.27 million during the Fiscal Year 2023, an increase of 10.31%. Fiscal Year 2023 benefit payments to the retirees increased by 10.13%. During Fiscal Year 2022, the benefits payments and withdrawals increased by 7.72%, from \$302.34 million to \$325.68 million.

Administrative expenses increased from \$35.57 million in the Fiscal Year 2022 to \$36.72 million in the Fiscal Year 2023, an increase of 3.24%. During Fiscal Year 2022, administrative expenses stood at \$35.57 million, a net increase of \$10.39 million from Fiscal Year 2021.

New York City Board of Education Retirement System

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2023 and 2022

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 2023, the interest to the TDA Program's fixed return fund stood at \$185.30 million, an increase of \$12.93 million from Fiscal Year 2022. 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, 2023, 2022, 2021, 2020, and 2019**

(In thousands)

	<u>2023</u>	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>
Net investment income (loss)	\$ 665,751	\$ (791,687)	\$ 1,867,031	\$ 364,638	\$ 403,041
TDA percent of fixed assets (average)	28.17%	25.21%	24.60%	26.22%	25.26%
Investment income (loss) on account of TDA investment	\$ 187,528	\$ (199,622)	\$ 459,255	\$ 95,601	\$ 101,812
Less: statutory interest to TDA	<u>(185,298)</u>	<u>(172,365)</u>	<u>(155,904)</u>	<u>(142,223)</u>	<u>(128,413)</u>
Revenue (expense) to the System	<u>\$ 2,230</u>	<u>\$ (371,987)</u>	<u>\$ 303,351</u>	<u>\$ (46,622)</u>	<u>\$ (26,601)</u>

*Includes security-lending income

TDA Program Fiduciary Net Position

The TDA program's net position restricted for TDA benefits stood at \$3.14 billion as on June 30, 2023, a net increase of 14.25% from Fiscal Year 2022. The increase in Fiscal Year 2023 was primarily due to an increase in the fair value of investments. Amount due to the TDA Program's fixed return fund from the System increased from \$2.37 billion in Fiscal Year 2022 to \$2.55 billion in Fiscal Year 2023, an increase of 7.51%. Fair value of variable investments including collateral security lending stood at \$743.09 million, an increase of 16.63%, from Fiscal Year 2022.

During Fiscal Year 2022, the TDA Program's net position restricted for TDA benefits increased to \$2.74 billion, a net increase of 8.00% from Fiscal Year 2021. The increase in Fiscal Year 2022 was primarily due to an increase in the amounts due to the TDA Program's fixed return fund from the System, which increased by 9.50%. The TDA Program's total investments including collateral security lending stood at \$637.15 million, a decrease of 19.31% from Fiscal Year 2021. Amounts due to the TDA Program's fixed return fund from the System from \$2.16 billion for the Fiscal Year 2021 to \$2.37 billion in the Fiscal Year 2022.

New York City Board of Education Retirement System

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2023 and 2022

TDA Program Fiduciary Net Position

June 30, 2023, 2022, and 2021

(In thousands)

	2023	2022	2021
Assets:			
Cash	\$ 487	\$ 556	\$ 407
Receivables	45,159	48,802	46,345
Due to the TDA Program's fixed return fund from the System	2,552,317	2,374,096	2,167,983
Investments, at fair value	702,227	602,475	754,622
Collateral from securities lending	40,867	34,684	35,039
Total assets	3,341,057	3,060,613	3,004,396
Liabilities:			
Other liability	155,247	269,491	414,297
Payable for investment securities purchased	362	529	168
Accrued benefits payable	5,915	8,681	11,174
Payables for securities lending transactions	40,867	34,684	35,039
Total liabilities	202,391	313,385	460,678
 Net position restricted for TDA benefits	 \$ 3,138,666	 \$ 2,747,228	 \$ 2,543,718

Receivables and payables for investment stood at \$1.08 million and \$0.36 million, respectively, as of June 30, 2023. Payables for collateral security lending stood at \$40.87 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 decreased by \$3.64 million during Fiscal Year 2023, a decrease of 7.46% from Fiscal Year 2022. Included in these receivables, the TDA Program's member loans outstanding decreased from \$47.15 million in the Fiscal Year 2022 to \$43.35 million in the Fiscal Year 2023, a decrease of 8.06% from the Fiscal Year 2022.

At the end of Fiscal Year 2022, total receivables increased by \$48.80 million, 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.

Changes in TDA Program Fiduciary Net Position

During Fiscal Year 2023, member contributions to the TDA Program was at \$116.57 million, contributions marginally increased by 4.37% from fiscal year 2022. The number of contributing members declined by 2.84%. Net investment income increased from a net loss of \$119.08 million in the Fiscal Year 2022 to \$112.73 million in the Fiscal Year 2023, an increase of \$231.82 million.

During Fiscal Year 2022, member contributions to the TDA Program was at \$111.68 million, contributions marginally 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, 2023 and 2022

Changes in TDA Program Fiduciary Net Position

Years ended June 30, 2023, 2022, and 2021

(In thousands)

	<u>2023</u>	<u>2022</u>	<u>2021</u>
Additions:			
Member contributions	\$ 116,569	\$ 111,685	\$ 111,580
Net investment income (loss) before securities lending transaction	112,569	(119,188)	233,245
Net securities lending income	161	102	112
TDA Program's interest income in the fixed return fund	201,361	191,054	171,806
Other - receipts from (payments to) other retirement systems and other revenues/expenses	71,665	115,459	(239,773)
Total additions	<u>502,325</u>	<u>299,112</u>	<u>276,970</u>
Deductions:			
Benefit payments and withdrawals	110,577	95,317	69,743
Administrative expenses	310	285	259
Total deductions	<u>110,887</u>	<u>95,602</u>	<u>70,002</u>
 Net increase (decrease) in net position	 391,438	 203,510	 206,968
Net position restricted for TDA benefits:			
Beginning of year	<u>2,747,228</u>	<u>2,543,718</u>	<u>2,336,750</u>
End of year	<u>\$ 3,138,666</u>	<u>\$ 2,747,228</u>	<u>\$ 2,543,718</u>

Benefit payments and withdrawals increased from \$95.31 million in Fiscal Year 2022 to \$110.58 million in Fiscal Year 2023, an increase of \$15.26 million or 16.01%. The increase was primarily due to the net impact of the benefit payments towards death benefits and refund payments. The death benefit payments increased from \$22.60 million in Fiscal Year 2022 to \$28.51 million in Fiscal Year 2023, an increase of \$5.91 million from Fiscal Year 2022. The refund payments stood at \$81.66 million in Fiscal Year 2023, an increase of \$9.36 million from Fiscal Year 2022.

During Fiscal Year 2022, the benefit payments and withdrawals stood at \$95.31 million, an increase of \$25.57 million from Fiscal Year 2021. 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.

New York City Board of Education Retirement System

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2023 and 2022

Investment Summary

Investments held by BERS's 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, 2023	June 30, 2022	June 30, 2021
	<u> </u>	<u> </u>	<u> </u>
Short-term investments	\$ 126,663	\$ 270,497	\$ 350,053
Debt (fixed income) securities	2,146,559	2,103,604	2,585,380
Equity securities	4,555,898	4,147,837	5,238,122
Collective trust funds	87,999	92,540	116,667
Alternative investments	2,350,056	1,979,276	1,423,257
Collateral from securities lending	560,609	576,444	829,281
	<u> </u>	<u> </u>	<u> </u>
Total	<u>\$ 9,827,784</u>	<u>\$ 9,170,198</u>	<u>\$ 10,542,760</u>

Because the QPP's liabilities are of a long-term nature, the assets of the QPP and the TDA Programs are invested with a long-term investment horizon. Assets are invested in a diversified portfolio of capital market securities. Investments in these assets are expected to produce higher returns but are also subject to greater volatility and may produce negative returns. The System's investments increased by 7.17% in Fiscal Year 2023 and decreased by 13.02% in Fiscal Year 2022.

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, 2023
(In thousands)

	QPP	TDA Program	Eliminations	Total
ASSETS				
Cash	\$ 2,864	\$ 487	\$ -	\$ 3,351
Receivables:				
Investment securities sold	91,786	1,077	-	92,863
Accrued interest and dividends	26,603	733	-	27,336
Member loans	50,845	43,349	-	94,194
Other	421	-	-	421
Total receivables	<u>169,655</u>	<u>45,159</u>	<u>-</u>	<u>214,814</u>
Investments - at fair value: (Notes 2 and 3)				
Fixed return funds:				
Short-term investments:				
Commercial paper	-	-	-	-
Short-term investment fund	101,179	-	-	101,179
T-bills and discount notes	20,037	-	-	20,037
Debt (fixed income) securities	2,146,559	-	-	2,146,559
Equity securities	3,793,046	-	-	3,793,046
Collective trust funds:				
International equity	2,563	-	-	2,563
Domestic equity	65,141	-	-	65,141
Mortgage debt security	8,879	-	-	8,879
Fixed income	11,416	-	-	11,416
Alternative investments	2,350,056	-	-	2,350,056
Collateral from securities lending	515,897	-	-	515,897
Variable return funds:				
Short-term investments	469	4,978	-	5,447
Debt (fixed income) securities	-	-	-	-
Equities	65,603	697,249	-	762,852
Collateral from securities lending	3,845	40,867	-	44,712
Total investments	<u>9,084,690</u>	<u>743,094</u>	<u>-</u>	<u>9,827,784</u>
Due to the TDA Program's fixed return fund from System	-	2,552,317	(2,552,317)	-
Other assets	199,888	-	(155,247)	44,641
Total assets	<u>9,457,097</u>	<u>3,341,057</u>	<u>(2,707,564)</u>	<u>10,090,590</u>
LIABILITIES				
Accounts payable	65,414	-	-	65,414
Other liability	-	155,247	(155,247)	-
Payable for investment securities purchased	156,536	362	-	156,898
Accrued benefits payable	13,604	5,915	-	19,519
Due to the TDA Program's fixed return fund from System	2,552,317	-	(2,552,317)	-
Payables for securities lending	519,742	40,867	-	560,609
Total liabilities	<u>3,307,613</u>	<u>202,391</u>	<u>(2,707,564)</u>	<u>802,440</u>
Net position restricted for benefits:				
Net position restricted for QPP (Qualified Pension Plan) benefits	6,149,484	-	-	6,149,484
Net position restricted for TDA (Tax-Deferred Annuity) benefits	-	3,138,666	-	3,138,666
Total net position restricted for benefits	<u>\$ 6,149,484</u>	<u>\$ 3,138,666</u>	<u>\$ -</u>	<u>\$ 9,288,150</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, 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 CHANGES IN FIDUCIARY NET POSITION

Year ended June 30, 2023

(In thousands)

	<u>QPP</u>	<u>TDA Program</u>	<u>Total</u>
Additions			
Contributions:			
Member contributions	\$ 49,810	\$ 116,569	\$ 166,379
Employer contributions	233,546	-	233,546
Total contributions	<u>283,356</u>	<u>116,569</u>	<u>399,925</u>
Investment income (loss):			
Interest income	124,400	3,793	128,193
Dividend income	100,229	12,044	112,273
Net appreciation (depreciation) in fair value of investments	<u>516,847</u>	<u>98,874</u>	<u>615,721</u>
Total investment income (loss)	741,476	114,711	856,187
Less - investment expenses	<u>(67,131)</u>	<u>(2,142)</u>	<u>(69,273)</u>
Net investment income (loss), before securities lending transactions	<u>674,345</u>	<u>112,569</u>	<u>786,914</u>
Securities lending transactions:			
Securities lending income	1,939	178	2,117
Securities lending fees	<u>(192)</u>	<u>(17)</u>	<u>(209)</u>
Net securities lending income	<u>1,747</u>	<u>161</u>	<u>1,908</u>
Net investment income (loss)	<u>676,092</u>	<u>112,730</u>	<u>788,822</u>
Other - (payments to) receipts from other retirement systems and other revenues/expenses	(88,699)	71,665	(17,034)
TDA Program's interest income in the fixed return fund	<u>(201,361)</u>	<u>201,361</u>	<u>-</u>
Total additions	<u>669,388</u>	<u>502,325</u>	<u>1,171,713</u>
Deductions			
Benefit payments and withdrawals	359,271	110,577	469,848
Administrative expenses	<u>36,717</u>	<u>310</u>	<u>37,027</u>
Total deductions	<u>395,988</u>	<u>110,887</u>	<u>506,875</u>
Net increase (decrease) in net position	273,400	391,438	664,838
Net position restricted for benefits:			
Beginning of year	<u>5,876,084</u>	<u>2,747,228</u>	<u>8,623,312</u>
End of year	<u>\$ 6,149,484</u>	<u>\$ 3,138,666</u>	<u>\$ 9,288,150</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

NOTES TO COMBINING FINANCIAL STATEMENTS

June 30, 2023 and 2022

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 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, 2023 and 2022

At June 30, 2023, June 30, 2022, June 30, 2021, June 30, 2020, June 30, 2019, June 30, 2018, and June 30, 2017, the QPP's membership consisted of:

	<u>2023*</u>	<u>2022*</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>
Retirees and beneficiaries receiving benefits	20,791	20,481	19,448	19,120	18,502	18,041	17,425
Terminated vested members not receiving benefits	2,933	2,410	1,972	1,972	2,019	1,934	1,528
Terminated non-vested members **	12,576	9,245	8,922	8,826	11,422	10,525	2,618
Active members receiving salary	<u>25,180</u>	<u>25,639</u>	<u>27,556</u>	<u>28,183</u>	<u>25,825</u>	<u>25,864</u>	<u>25,794</u>
Total	<u>61,480</u>	<u>57,775</u>	<u>57,898</u>	<u>58,101</u>	<u>57,768</u>	<u>56,364</u>	<u>47,365</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>2023</u>	<u>2022</u>	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>
Contributing members	17,688	18,205	18,551	19,148	18,881	17,899	16,917
Retired members with TDA balances	8,789	8,124	7,628	7,102	6,798	6,484	6,673

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

June 30, 2023 and 2022

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, 2023 and 2022

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 \$2.07 million and \$2.50 million, for the years ended June 30, 2023 and 2022, 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, 2023 and 2022

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, 2023 and 2022

- 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 for the calendar year 2023 is \$22,500. Participants, who have attained age 50, are permitted to make additional contributions. The additional contribution limit for calendar year 2023 is \$7,500. 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, 2023 and 2022

- 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, 2023 and 2022

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.

Qualified Excess Benefit Arrangement - In April 2023, the BERS Board of Trustees resolved to establish a Qualified Excess Benefit Arrangement ("QEBA") Plan and Trust to pay the excess benefit to any retiree whose retirement benefit, as calculated under the applicable state statutes, would otherwise exceed the limits of Section 415 of the IRC of 1986. The BERS Board appointed the Executive Director of BERS as Administrator of the BERS QEBA Plan and Trust. The Actuary will notify BERS each year which BERS retirees, if any, qualify to receive a benefit in excess of Section 415. As of now, no BERS retirees fall into this category. All benefits paid by the QEBA Plan and Trust will be funded through dedicated employer contributions, which will be held in a separate account from the assets of the QPP.

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 System's 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, 2023 and 2022, 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 96.39 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

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2023 and 2022

liability for securities lending. Securities on loan are carried at market value, the values reported by the QPP as of June 30, 2023 and 2022 are \$504.43 million and \$526.46 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 89.87 days.

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

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.

New Accounting Standards Adopted - GASB Statement No. 96, *Subscription-Based Information Technology Arrangements* (SBITAs), established uniform accounting and financial reporting requirements for SBITAs for government end users. The statement defines a SBITA as a contract that conveys control to the right to use another party's information technology software, alone or in combination with tangible capital assets (the underlying IT assets), as specified in the contract for a period of time in an exchange or exchange-like transaction. It establishes how a SBITA results in a right-to-use subscription asset and a corresponding subscription liability. The adoption of GASB Statement No. 96 did not have a significant impact on these financial statements.

Reclassifications - Certain prior year investment amounts have been reclassified to conform to the current year presentation. Alternative investments totaling approximately \$1,979,000 previously reported as level 3 in the Fair Value hierarchy as of June 30, 2022 have been reclassified as Net Asset Value Practical Expedient to conform with the June 30, 2023 presentation. Certain investments previously reported as U.S. government & agency type investments in the credit risk and interest rate risk disclosures as of June 30, 2022 have been reclassified to mortgage debt securities type investments to conform with the June 30, 2023 presentation.

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2023 and 2022

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. Investments up to 35% 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.

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, 2023 and 2022

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, 2023 and 2022 are as follows:

Investment Type Fixed Funds June 30, 2023	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 & agency	32.61%	-%	0.02%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	0.61%	33.24%
Mortgage debt securities	12.93%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	12.93%
Corporate bonds	0.93%	0.02%	0.24%	0.16%	2.14%	1.07%	1.82%	2.31%	2.82%	3.36%	3.32%	3.21%	6.34%	6.23%	4.29%	4.22%	3.27%	2.77%	48.52%
Short term:																			
Commercial paper	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%
Discount notes & T-Bills	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	0.88%	0.88%
Pooled fund	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	4.43%	4.43%
Portfolio	46.47%	0.02%	0.26%	0.16%	2.14%	1.07%	1.82%	2.31%	2.82%	3.36%	3.32%	3.21%	6.34%	6.23%	4.29%	4.22%	3.27%	8.69%	100.00%

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 & agency	27.84%	-%	0.01%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	0.49%	28.34%
Mortgage debt securities	13.75%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	13.75%
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%
Pooled fund	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	-%	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%

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

June 30, 2023 and 2022

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, 2023 and 2022, are as follows:

Investment Type Variable Funds June 30, 2023	Moody's Quality Ratings																		Not Rated	Total	
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2			
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, 2022	Moody's Quality Ratings																		Not Rated	Total	
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2			
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>

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2023 and 2022

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, 2023 and 2022 are as follows:

Years to Maturity Investment Type June 30, 2023	Investment Maturities				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. government & agency	33.24%	-%	20.65%	6.43%	6.16%
Mortgage debt securities	12.93	-	0.10	0.21	12.62
Corporate bonds	48.52	0.55	28.30	11.90	7.77
Short term:					
Discount notes & T-Bills	0.88	0.88	-	-	-
Pooled fund	4.43	4.43	-	-	-
Portfolio	100.00%	5.86%	49.05%	18.54%	26.55%

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 & agency	28.34%	0.13%	14.47%	8.84%	4.90%
Mortgage debt securities	13.75	-	0.01	0.36	13.38
Corporate bonds	46.89	0.47	15.38	22.15	8.89
Short term:					
Commercial paper	8.50	8.50	-	-	-
Pooled fund	2.52	2.52	-	-	-
Portfolio	100.00%	11.62%	29.86%	31.35%	27.17%

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2023 and 2022

The lengths of investment maturities (in years) of the variable return fund, as shown by the percent of the rated portfolio, at June 30, 2023 and 2022 are as follows:

Years to Maturity Investment Type June 30, 2023	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>-%</u>	<u>-%</u>	<u>-%</u>

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>-%</u>	<u>-%</u>	<u>-%</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, 2023 and 2022

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, 2023 and 2022 in the fixed return fund are as follows (amounts in thousands of U.S. dollars):

Trade Currency	June 30, 2023	June 30, 2022
Euro Currency	\$ 431,571	\$ 399,346
Hong Kong Dollar	135,934	165,590
Japanese Yen	96,954	99,424
New Taiwan Dollar	84,838	73,494
British Pound Sterling	84,515	82,246
Indian Rupee	82,112	59,754
Swiss Franc	48,345	45,286
South Korean Won	46,626	54,312
Canadian Dollar	31,810	30,829
Australian Dollar	30,899	26,100
Danish Krone	28,684	21,422
Brazilian Real	21,586	24,164
Swedish Krona	20,680	16,675
Singapore Dollar	19,767	23,084
Chinese Yuan (Offshore)	17,764	19,625
Chinese Renminbi	17,479	14,007
Indonesian Rupiah	15,537	6,114
South African Rand	14,256	16,333
Thailand Baht	10,512	12,896
Mexican Peso	9,869	6,084
Norwegian Krone	7,810	7,302
UAE Dirham	6,468	1,913
Polish Zloty	3,562	8,067
Malaysian Ringgit	3,190	4,461
Hungarian Forint	2,646	1,977
Kuwaiti Dinar	2,017	1,487
Qatari Rial	1,787	2,481
Turkish Lira	1,636	1,623
New Israeli Shekel	651	2,630
Philippine Peso	204	56
Chilean Peso	203	569
Egyptian Pound	77	20
New Zealand Dollar	41	415
Czech Koruna	5	1,941
Colombian Peso	4	13
Russian Ruble	-	1
	<u>\$ 1,280,039</u>	<u>\$ 1,231,741</u>

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

June 30, 2023 and 2022

The foreign currency exposures of the variable return funds as of June 30, 2023 and 2022 are as follows (amounts in thousands of U.S. dollars):

Trade Currency	June 30, 2023	June 30, 2022
Euro Currency	\$ 43,661	\$ 32,901
Japanese Yen	25,703	20,752
British Pound Sterling	20,196	16,776
Swiss Franc	11,761	9,490
Hong Kong Dollar	11,242	12,286
South Korean Won	8,701	7,064
Indian Rupee	7,081	5,602
Australian Dollar	6,311	5,221
Taiwan Dollar	5,992	4,507
Swedish Krona	3,753	2,865
Canadian Dollar	3,380	2,917
Danish Krone	3,230	2,407
South African Rand	2,636	2,525
Singapore Dollar	1,911	1,760
Mexican Nuevo Peso	1,724	1,550
Indonesian Rupiah	1,616	1,025
Brazilian Real	1,510	2,110
Chinese Renminbi (Yuan)	1,380	1,475
Thailand Baht	1,288	932
UAE Dirham	1,025	528
Saudi Arabian Ryal	909	479
Norwegian Krone	816	781
Russian Ruble	482	376
Egyptian Pound	465	302
Polish Zloty	398	602
Israeli Shekel	334	298
Malaysian Ringgit	224	424
New Zealand Dollar	188	268
Turkish Lira	88	399
Philippine Peso	53	24
Chilean Peso	11	31
Hungarian Forint	2	57
Peruvian Nuevo Sol	2	3
Chinese Yuan (Offshore)	1	-
Czech Koruna	1	161
Total	<u>\$ 168,075</u>	<u>\$ 138,898</u>

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2023 and 2022

Securities Lending Transactions: Credit Risk - The quality ratings of investments held as collateral for Securities Lending at June 30, 2023 and 2022 are as follows:

Investment Type and Fair Value - Fixed Return Fund
 Securities Lending Transactions
 June 30, 2023
 (In thousands)

	Moody's Quality Ratings											Total
	Aaa	Aa	A1	A2	A3	Baa	Ba	B	Caa	Ca	Not Rated	
U.S. government												
Short term:												
Reverse repurchase agreements	\$ -	\$ 231,022	\$ 69,038	\$ 21,890	\$ -	\$ 3,368	\$ -	\$ -	\$ -	\$ -	\$ 109,450	\$ 434,768
Money market	18,510	-	-	-	-	-	-	-	-	-	254	18,764
US agency	-	-	-	-	-	-	-	-	-	-	10,799	10,799
Cash or cash equivalent	-	51,590	-	-	-	-	-	-	-	-	-	51,590
Under/over invested cash collateral	-	-	-	-	-	-	-	-	-	-	(24)	(24)
Total	\$ 18,510	\$ 282,612	\$ 69,038	\$ 21,890	\$ -	\$ 3,368	\$ -	\$ -	\$ -	\$ -	\$ 120,479	\$ 515,897
Percent of securities lending portfolio	3.59%	54.78%	13.38%	4.24%	-%	0.65%	-%	-%	-%	-%	23.35%	100.00%

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:												
Reverse repurchase agreements	\$ -	\$ -	\$ -	\$ 76,563	\$ 147,300	\$ 6,315	\$ -	\$ -	\$ -	\$ -	\$ 207,773	\$ 437,951
Money market	32,692	-	-	-	-	-	-	-	-	-	18,506	51,198
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%

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

June 30, 2023 and 2022

Interest Rate Risk - The lengths of investment maturities of the collateral for Securities Lending at June 30, 2023 and 2022 are as follows:

Fixed Return Fund June 30, 2023 (In thousands)	Investment Maturities (in Years)				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
Short term:					
Tri Party Repo	\$ 434,768	\$ 434,768	\$ -	\$ -	\$ -
Money market	18,764	18,764	-	-	-
Cash or cash equivalent	51,590	51,590	-	-	-
US agency	10,799	-	10,799	-	-
Under/over invested cash Collateral	(24)	(24)	-	-	-
Total	<u>\$ 515,897</u>	<u>\$ 505,098</u>	<u>\$ 10,799</u>	<u>\$ -</u>	<u>\$ -</u>
By percent	<u>100.00%</u>	<u>97.91%</u>	<u>2.09%</u>	<u>-%</u>	<u>-%</u>
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
Short term:					
Reverse repurchase agreements	\$ 437,951	\$ 437,951	\$ -	\$ -	\$ -
Money market	51,198	51,198	-	-	-
Cash or cash equivalent	54,350	54,350	-	-	-
Under/over invested cash Collateral	(5,066)	(5,066)	-	-	-
Total	<u>\$ 538,433</u>	<u>\$ 538,433</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
By percent	<u>100.00%</u>	<u>100.00%</u>	<u>-%</u>	<u>-%</u>	<u>-%</u>

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2023 and 2022

Years to Maturity Variable Return Fund June 30, 2023 (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	\$ 41,448	\$ 3,942	\$ 19,608	\$ 9,083	\$ 8,815
Short term:					
Repurchase agreements	3,211	3,211	-	-	-
U.S. Treasury	53	53	-	-	-
Total	\$ 44,712	\$ 7,206	\$ 19,608	\$ 9,083	\$ 8,815
By percent	<u>100.00%</u>	<u>16.12%</u>	<u>43.85%</u>	<u>20.31%</u>	<u>19.72%</u>

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	-	-	-
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>

Rate of Return - For the years ended June 30, 2023 and 2022, 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 8.53% and -9.01%, 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, 2023 and 2022

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, 2023 and 2022:

GASB 72 - Disclosure

Fixed Return Funds

Investments - at fair value

(In thousands)

	2023			Total
	Level 1	Level 2	Level 3	
Short-term investments:				
Commercial paper	\$ -	\$ -	\$ -	\$ -
Short-term investment fund	-	101,179	-	101,179
U.S. Treasury bills and agencies	-	20,037	-	20,037
Debt (fixed income) securities:				
Bank loans	-	21,614	-	21,614
Corporate and other	-	1,071,446	5,809	1,077,255
Mortgage debt securities	-	287,099	-	287,099
Treasury inflation-protected securities	-	254,966	-	254,966
U.S. government and agency	-	505,625	-	505,625
Equity securities	3,790,273	-	2,773	3,793,046
Collective trust funds:				
Bank loans	-	-	197	197
Corporate and other	-	475	10,744	11,219
Domestic equity	64,967	-	174	65,141
International equity	2,563	-	-	2,563
Mortgage debt securities	-	8,879	-	8,879
Total investments in the fair value hierarchy	<u>\$ 3,857,803</u>	<u>\$ 2,271,320</u>	<u>\$ 19,697</u>	6,148,820
Investments measured at NAV				<u>2,350,056</u>
Total investments				<u>\$ 8,498,876</u>

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2023 and 2022

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

	2022			
	Level 1	Level 2	Level 3	Total
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
Total investments in the fair value hierarchy	<u>\$ 3,565,117</u>	<u>\$ 2,360,828</u>	<u>\$ 28,266</u>	5,954,211
Investments measured at NAV				<u>1,979,276</u>
Total investments				<u>\$ 7,933,487</u>

The below table summarizes the assets that measure fair market value using NAV as a practical expedient (In thousands):

Asset	As of June 30, 2023		As of June 30, 2022		Redemption Frequency (Ranges if Eligible)	Redemption Notice Period (Ranges if Eligible)
	Fair Value	Unfunded Commitments	Fair Value	Unfunded Commitments		
Infrastructure	\$ 305,826	\$ 264,443	\$ 222,558	\$ 232,631	N/A	N/A
Private equity	1,007,398	530,139	908,973	583,599	N/A	N/A
Private real estate	746,517	270,786	645,745	429,460	Quarterly	30 - 90 days
Opportunistic fixed income	274,206	193,197	202,000	98,116	N/A	N/A
Fixed income investment company	16,109	-	-	-	Monthly	15 days
	<u>\$ 2,350,056</u>	<u>\$ 1,258,565</u>	<u>\$ 1,979,276</u>	<u>\$ 1,343,806</u>		

Equity, Debt Securities and Short-Term Investments - Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets issued by pricing vendors for these securities. Debt, equity securities, and short-term investments classified in Level 2 of the fair value hierarchy are valued using prices determined by the use of matrix pricing techniques maintained by the various pricing

New York City Board of Education Retirement System

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2023 and 2022

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.

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.

Alternative Investments - Alternative investments include Private Equity, Real Estate, Opportunistic Fixed Income and Infrastructure Investments. These are investments for which exchange quotations are not readily available and are valued at estimated fair value, as determined in good faith by the GP.

Investments in non-public equity securities should be 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. 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 that are measured at fair value using the net asset value ("NAV") per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy. The fair value quantities presented in the table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the entity's financial statements.

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, 2023 and 2022 amounted to \$1.26 billion and \$1.34 billion, respectively.

GASB 72 - Disclosure
Variable Return Funds
(In thousands)

	2023			Total
	Level 1	Level 2	Level 3	
Variable return funds:				
Short-term investments	\$ -	\$ 5,447	\$ -	\$ 5,447
Equities	750,326	12,465	61	762,852
Total	\$ 750,326	\$ 17,912	\$ 61	\$ 768,299

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2023 and 2022

GASB 72 - Disclosure
Variable Return Funds
(In thousands)

	2022			Total
	Level 1	Level 2	Level 3	
Variable return funds:				
Short-term investments	\$ -	\$ 5,674	\$ -	\$ 5,674
Equities	644,803	9,679	111	654,593
Total	<u>\$ 644,803</u>	<u>\$ 15,353</u>	<u>\$ 111</u>	<u>\$ 660,267</u>

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.

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.

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

June 30, 2023 and 2022

- For members of Tier 6 who earned certain forms of overtime and extracurricular compensation during 2020 through 2023, these earnings are excluded from the salary used to determine their Tier 6 BMC Contribution Rates for the period from 2023 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.

NOTE 5 - QPP NET PENSION LIABILITY

The components of the net pension liability of the Employers at June 30, 2023 and 2022 were as follows:

(In thousands)	2023	2022
Total pension liability	\$ 6,222,502	\$ 6,000,500
Fiduciary net position *	6,149,484	5,876,084
Employers’ net pension liability	\$ 73,018	\$ 124,416
Fiduciary net position as a percentage of the total pension liability	98.83%	97.93%

* 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, 2023 and 2022 was calculated from the actuarial valuations as of June 30, 2022 (Preliminary) and June 30, 2021 (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 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.

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2023 and 2022

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."

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, 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 June 30, 2023 total pension liability was calculated from the Preliminary June 30, 2022 actuarial valuation, 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, 2023 and 2022

Expected Rate of Return on Investments

The long-term expected rate of return on QPP investments was determined using a building-block method in which best-estimate ranges of expected real rates of return (i.e., expected returns, net of QPP investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocations and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table as of June 30, 2023 and 2022:

<u>Asset Class</u>	<u>As of June 30, 2023</u>		<u>As of June 30, 2022</u>	
	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>	<u>Target Asset Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
Public markets				
U.S. public market equities	31.0%	6.6%	31.0%	6.6%
Developed public market equities	10.0	6.9%	10.0	7.0%
Emerging public market equities	6.0	8.4%	6.0	8.6%
Fixed income	27.0	2.0%	27.0	1.4%
Private markets (alternative investments)				
Private equity	9.0	9.6%	9.0	10.5%
Private real estate	8.0	4.7%	8.0	6.8%
Infrastructure	4.0	5.4%	4.0	5.6%
Opportunistic-fixed income	5.0	6.0%	5.0	5.5%
Total	100.0%		100.0%	

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 one-percentage point lower (6.0%) or one-percentage point higher (8.0%) than the current rate as of June 30, 2023 and 2022:

<u>(In thousands)</u>	<u>1% Decrease (6.0%)</u>	<u>Discount Rate (7.0%)</u>	<u>1% Increase (8.0%)</u>
Employers' net pension liability - June 30, 2023	\$ 802,436	\$ 73,018	\$ (541,890)
Employers' net pension liability - June 30, 2022	\$ 837,357	\$ 124,416	\$ (476,646)

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

June 30, 2023 and 2022

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, 2023 and 2022 is \$50.85 million and \$48.46 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, 2023 and 2022 is \$43.35 million and \$47.15 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 \$3.22 million and \$2.75 million were incurred on behalf of the System by other City agencies, primarily the Comptroller's Office for 2023 and 2022, 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 2023 and 2022, 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 \$37.03 million and \$35.85 million, respectively.

In August 2019, the System entered into a sub-sublease agreement for office space with a duration of six years and seven months, entailing a total commitment of approximately \$11.18 million over the lease term. Rent expense for the year ending June 30, 2023, amounted to \$1.91 million under this lease agreement.

Capital assets are recorded at their original cost and are systematically depreciated using a straight-line method over their estimated useful lives. As of June 30, 2022, the completed ERP system was capitalized at \$51.65 million and commenced amortization. As of June 30, 2023, the accumulated amortization stands at \$14.76 million.

In accordance with GASB 96, government entities engaged in SBITA (Software Business-Related Intangible Asset) agreements with software vendors are required to report both a subscription asset and a corresponding liability on their financial statements. As of June 30, 2023, the SBITA Assets are valued at \$5.13 million, with accumulated amortization amounting to \$1.89 million. Consequently, the Net Asset Balance is recorded at \$3.24 million.

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

June 30, 2023 and 2022

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 NYCERS are conducted every two years.

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 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.

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

June 30, 2023 and 2022

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.

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.

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2023 and 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 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.

Chapter 364 of the Laws of 2022 – Provides that as of August 15, 2022, the Board of Education shall consist of 23 voting members: 5 members elected by the Community Education Councils (one from each borough), 1 appointed by each Borough President, and 13 appointed by the Mayor. This chapter law further provides that the Chancellor of Schools and the Comptroller of the City of New York as ex officio non-voting members. As a result, the BERS Board of Trustees now consists of 27 members. See also Chapter 71 of the Laws of 2023, below.

Chapter 482 of the Laws of 2022 – Amends the Freedom of Information Law (FOIL) to provide that the home address of a retiree or beneficiary of a public New York City or State retirement system shall be exempt from disclosure under the FOIL.

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2023 and 2022

Chapter 561 of the Laws of 2022 – Extends the deadline for members who participated in the World Trade Center rescue, recovery and cleanup operations to file a Notice of Participation until September 11, 2026.

Chapter 775 of the Laws of 2022 – Increases the portion of the assets of a public New York City or State retirement system that may be invested in miscellaneous investments (“the basket clause”) from 25% to 35%.

Chapter 783 of the Laws of 2022 – Extends the COVID-19 Accidental Death Benefit established by Chapter 89 of 2020 to cover members who die on or before December 31, 2024.

Chapter 58 of the Laws of 2023 – Amends the Open Meetings Law to provide that a public body may adopt a written procedure to allow for a member to attend a meeting through videoconferencing, if that member has a disability that prevents the member from attending this meeting in person. Such attendance counts towards quorum for a meeting of the public body.

Chapter 71 of the Laws of 2023 – Postpones the effective date of Chapter 364 of the Laws of 2022 from August 15, 2022 to January 15, 2023.

Chapter 184 of the Laws of 2023 – Extends for two fiscal years, until June 30, 2025, 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.

New York City Board of Education Retirement System
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2023 and 2022

COVID-19

The outbreak of the 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 ended on June 22, 2023. The ultimate impact of the COVID-19 pandemic on the Plan cannot be determined at this time.

The “SECURE 2.0” Act

The SECURE 2.0 Act of 2022 was signed into law by the President on December 29, 2022 as Division T of the Consolidated Appropriations Act of 2023. It contains several provisions that apply to BERS, the most important of which are the following:

- a) Effective January 1, 2023, the required beginning date for Required Minimum Distributions (RMDs) is increased from 72 to 73. Effective January 1, 2025, it will be further increased to 75.
- b) Effective January 1, 2025, higher age-based catch-up limits will apply to TDA participants at ages 60, 61, 62, and 63.
- c) Some leeway will be given to plans to choose not to recover pension overpayments resulting from plan administration errors.
- d) Effective January 1, 2023, the excise tax for failure to receive an RMD is reduced from 50% to 25% of the calculated RMD amount.
- e) Effective January 1, 2024, Roth contributions are no longer subject to RMD rules.
- f) Effective January 1, 2024, age-based catch-ups for employees who earned above \$145,000 in the previous year (to be indexed for inflation) can only be made on a Roth basis. The IRS has issued regulations suspending enforcement of this provision until January 1, 2026.
- g) Effective January 1, 2023, plans have the option to permit hardship distributions on self-certification (without requiring supporting documentation). The BERS Board has not yet decided whether to adopt this provision.
- h) Effective January 1, 2024, plans have the option to permit hardship distributions to include earnings (as well as contributions). The BERS Board has not yet decided whether to adopt this provision.

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)

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Total pension liability:										
Service cost	\$ 175,411	\$ 179,402	\$ 175,281	\$ 166,792	\$ 168,501	\$ 176,110	\$ 168,625	\$ 153,107	\$ 147,898	\$ 142,687
Interest	430,070	391,274	405,690	369,904	366,084	350,999	346,510	320,315	299,592	288,162
Changes of benefit terms	-	15,863	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(24,208)	(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	(359,271)	(325,679)	(302,336)	(296,047)	(280,463)	(261,574)	(262,432)	(240,727)	(223,244)	(214,315)
Net change in total pension liability	222,002	224,445	315,914	194,075	91,779	100,948	272,641	340,465	274,394	216,534
Total pension liability - beginning	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	3,969,305
Total pension liability - ending (a)	6,222,502	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	233,546	262,404	182,983	257,503	269,637	318,643	288,233	265,532	258,099	214,590
Member contributions	49,810	49,591	48,125	49,766	46,304	40,846	39,821	38,581	39,564	37,193
Net investment income	676,092	(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	(201,361)	(191,054)	(171,806)	(155,749)	(141,695)	(127,972)	(106,554)	(94,789)	(85,104)	(206,615)
Benefit payments and withdrawals	(359,271)	(325,679)	(302,336)	(296,047)	(280,463)	(261,574)	(262,432)	(240,727)	(223,244)	(214,315)
Administrative expenses	(36,717)	(35,566)	(25,175)	(22,207)	(17,357)	(13,212)	(15,486)	(12,818)	(10,956)	(9,776)
Other	(88,699)	(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	273,400	(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*	5,876,084	7,044,240	5,182,890	4,991,832	4,672,903	4,099,571	3,416,433	3,454,009	3,350,505	2,653,652
Plan fiduciary net position - ending (b)	6,149,484	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)	\$ 73,018	\$ 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	98.83%	97.93%	121.96%	94.92%	94.79%	90.31%	80.81%	71.17%	77.44%	78.34%
Covered payroll¹	\$ 1,427,145	\$ 1,484,264	\$ 1,476,598	\$ 1,353,266	\$ 1,264,079	\$ 1,102,184	\$ 1,052,171	\$ 1,008,056	\$ 1,016,822	\$ 989,160
BERS's net pension liability as percentage of covered payroll	5.12%	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.

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)

	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Actuarially determined contribution	\$ 233,546	\$ 262,404	\$ 182,983	\$ 257,503	\$ 269,637	\$ 318,643	\$ 288,233	\$ 265,532	\$ 258,099	\$ 214,590
Contributions in relation to the actuarially determined contribution	233,546	262,404	182,983	257,503	269,637	318,643	288,233	265,532	258,099	214,590
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll ¹	\$ 1,427,145	\$ 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
Contributions as a percentage of covered-employee payroll	16.36%	17.68%	12.39%	19.03%	21.33%	28.91%	27.39%	26.34%	25.38%	21.69%

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 2023 contributions were determined using an actuarial valuation as of June 30, 2021). The methods and assumptions used to determine the actuarially determined contributions are as follows:

Valuation Dates	June 30, 2021	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
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	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)
2010 ERI	0 year (closed)	0 year (closed)	0 year (closed)	0 year (closed)	0 year (closed)
2011 Actuarial gain/loss	5 years (closed)	6 years (closed)	7 years (closed)	8 years (closed)	9 years (closed)
2012 Actuarial gain/loss	6 years (closed)	7 years (closed)	8 years (closed)	9 years (closed)	10 years (closed)
2013 Actuarial gain/loss	7 years (closed)	8 years (closed)	9 years (closed)	10 years (closed)	11 years (closed)
2014 Actuarial gain/loss	8 years (closed)	9 years (closed)	10 years (closed)	11 years (closed)	12 years (closed)
2015 Actuarial gain/loss	9 years (closed)	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)
2016 Actuarial gain/loss	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)
2017 Actuarial gain/loss	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)
2017 Assumption change	16 years (closed)	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)
2017 Method change	16 years (closed)	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)
2018 Actuarial gain/loss	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA
2018 Method change	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)	NA
2019 Actuarial gain/loss	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA
2019 Method change	18 years (closed)	19 years (closed)	20 years (closed)	NA	NA
2019 Assumption change	18 years (closed)	19 years (closed)	20 years (closed)	NA	NA
2020 Actuarial gain/loss	14 years (closed)	15 years (closed)	NA	NA	NA
2020 Method change	19 years (closed)	20 years (closed)	NA	NA	NA
2020 Plan change	6 years (closed)	7 years (closed)	NA	NA	NA
2021 Actuarial gain/loss	15 years (closed)	NA	NA	NA	NA
2021 Plan change	13 years (closed)	NA	NA	NA	NA
Actuarial assets valuation method ¹	Five-year moving average of fair values with a "Market Value Restart" as of June 30, 2019.	Five-year moving average of fair values with a "Market Value Restart" as of June 30, 2019.	Five-year moving average of fair values with a "Market Value Restart" as of June 30, 2019.	Modified six-year moving average of fair 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 fair 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 June 30, 2014 valuation, the AVA is constrained to be within a corridor of 80% to 120% of the fair 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 2023 contributions were determined using an actuarial valuation as of June 30, 2021). The methods and assumptions used to determine the actuarially determined contributions are as follows:

Valuation Dates	June 30, 2016	June 30, 2015	June 30, 2014	June 30, 2013	June 30, 2012
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	16 years (closed)	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)
2010 ERI	0 year (closed)	1 year (closed)	2 years (closed)	3 years (closed)	4 years (closed)
2011 Actuarial gain/loss	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)
2012 Actuarial gain/loss	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)
2013 Actuarial gain/loss	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA
2014 Actuarial gain/loss	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA
2015 Actuarial gain/loss	14 years (closed)	15 years (closed)	NA	NA	NA
2016 Actuarial gain/loss	15 years (closed)	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
2021 Actuarial gain/loss	NA	NA	NA	NA	NA
2021 Plan change	NA	NA	NA	NA	NA
Actuarial assets valuation method ¹	Modified six-year moving average of fair 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 fair 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 fair 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 fair 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 fair 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 June 30, 2014 valuation, the AVA is constrained to be within a corridor of 80% to 120% of the fair 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, 2021	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017
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 2019
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 2019
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, 2016	June 30, 2015	June 30, 2014	June 30, 2013	June 30, 2012
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 2016	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 ten fiscal years:

<u>Fiscal Years Ended</u>	<u>Money-Weighted Rate of Return</u>
June 30, 2023	8.53%
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%

See Report of Independent Certified Public Accountants.

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, 2023

Fund Manager	Category	Amount (in \$)
1 Fixed Investment Expenses (net)		
Actis	Alternative Investment - Infrastructure	\$ 1,380,606
Ardian	Alternative Investment - Infrastructure	787,181
Axiom Infrastructure	Alternative Investment - Infrastructure	129,965
BlackRock	Alternative Investment - Infrastructure	906,319
Brookfield Asset Management	Alternative Investment - Infrastructure	1,113,555
DIF Infrastructure	Alternative Investment - Infrastructure	406,108
EIG Credit Management	Alternative Investment - Infrastructure	96,727
EQT Partners	Alternative Investment - Infrastructure	1,485,716
Global Infrastructure Management	Alternative Investment - Infrastructure	1,632,105
Industry Funds Management	Alternative Investment - Infrastructure	231,173
Infravia Capital Partners	Alternative Investment - Infrastructure	72,843
KKR	Alternative Investment - Infrastructure	606,369
Stonepeak Infrastructure Partners	Alternative Investment - Infrastructure	252,116
400 Capital Management	Alternative Investment - OFI	469,862
Apollo Global Management	Alternative Investment - OFI	136,748
Brightwood Capital	Alternative Investment - OFI	1,088,921
CarVal Centre Street	Alternative Investment - OFI	53,609
Crestline	Alternative Investment - OFI	172,041
ICG Strategic Equity	Alternative Investment - OFI	323,514
KKR	Alternative Investment - OFI	246,824
KLCP	Alternative Investment - OFI	765,755
Marathon Asset Management Limited	Alternative Investment - OFI	189,393
Oak Hill Advisors	Alternative Investment - OFI	325,161
Torchlight Investors	Alternative Investment - OFI	302,472
American Security Partners	Alternative Investment - Private Equity	(4,652)
Apax Partners	Alternative Investment - Private Equity	608,992
Apollo Global Management	Alternative Investment - Private Equity	473,463
Ardian	Alternative Investment - Private Equity	128,817
Ares Management	Alternative Investment - Private Equity	26,556
Base10 Advancement	Alternative Investment - Private Equity	364,967
BC Partners	Alternative Investment - Private Equity	59,830
Bridgepoint Capital	Alternative Investment - Private Equity	970,767
Carlyle Group	Alternative Investment - Private Equity	624,586
Centerbridge Partners	Alternative Investment - Private Equity	49,236
Clearlake Capital Group	Alternative Investment - Private Equity	336,132
Crestview Partners	Alternative Investment - Private Equity	434,143
CVC Capital Partners	Alternative Investment - Private Equity	2,067,754
EQT Partners	Alternative Investment - Private Equity	1,210,108
Fairview Capital Partners	Alternative Investment - Private Equity	(63,287)
FTV Capital	Alternative Investment - Private Equity	829,868
Grain Management	Alternative Investment - Private Equity	158,103
HarbourVest Partners	Alternative Investment - Private Equity	77,475
Heartwood Partners	Alternative Investment - Private Equity	22,735
Hg Capital	Alternative Investment - Private Equity	303,669
ICG Strategic Equity	Alternative Investment - Private Equity	811,625
ICV Partners	Alternative Investment - Private Equity	53,316
Insight Partners	Alternative Investment - Private Equity	670,117
Integrum Capital Partners	Alternative Investment - Private Equity	219,208
KKR	Alternative Investment - Private Equity	1,155,608
Landmark Partners	Alternative Investment - Private Equity	517,318
Leonard Green & Partners	Alternative Investment - Private Equity	374,948
Lexington Partners	Alternative Investment - Private Equity	893,922

(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, 2023

Fund Manager	Category	Amount (in \$)
Lightbay Investment Partners	Alternative Investment - Private Equity	127,656
Lindsay Goldberg	Alternative Investment - Private Equity	284,706
Mesirow Financial	Alternative Investment - Private Equity	278,236
Mill City Capital	Alternative Investment - Private Equity	8,431
Neuberger Berman Group	Alternative Investment - Private Equity	99,577
New 2ND Capital	Alternative Investment - Private Equity	466,571
New Mainstream Capital	Alternative Investment - Private Equity	49,577
One Rock Capital Partners	Alternative Investment - Private Equity	890,323
Palladium Equity Partners	Alternative Investment - Private Equity	192,699
Patriot Financial Partners	Alternative Investment - Private Equity	49,948
Permira	Alternative Investment - Private Equity	384,715
Platinum Equity	Alternative Investment - Private Equity	208,658
Providence Strategic Growth	Alternative Investment - Private Equity	967,682
Reverence Capital Partners	Alternative Investment - Private Equity	474,493
Siris Capital Group	Alternative Investment - Private Equity	159,427
Stellex Capital Management	Alternative Investment - Private Equity	700,490
The Raine Group	Alternative Investment - Private Equity	470,861
The Vistria Group	Alternative Investment - Private Equity	489,472
Thoma Bravo	Alternative Investment - Private Equity	328,060
TPG Capital	Alternative Investment - Private Equity	262,596
Valor Equity Partners	Alternative Investment - Private Equity	399,189
Vista Equity Partners	Alternative Investment - Private Equity	1,529,206
Warburg Pincus	Alternative Investment - Private Equity	2,290,121
Webster Capital	Alternative Investment - Private Equity	8,272
Welsh Carson Anderson & Stowe	Alternative Investment - Private Equity	1,861,058
Aermont Capital	Alternative Investment - Real Estate	3,272,643
Almanac Realty Investors	Alternative Investment - Real Estate	242,876
Artemis Real Estate Partners	Alternative Investment - Real Estate	922,821
Basis Management Group	Alternative Investment - Real Estate	308,248
Bentall GreenOak	Alternative Investment - Real Estate	159,959
Brookfield Asset Management	Alternative Investment - Real Estate	2,458,642
Carlyle Group	Alternative Investment - Real Estate	79,731
Clarion Partners	Alternative Investment - Real Estate	400,177
Cortland Partners	Alternative Investment - Real Estate	61,354
DivcoWest Real Estate Investments	Alternative Investment - Real Estate	583,247
DRA Advisors	Alternative Investment - Real Estate	135,226
EQT Partners	Alternative Investment - Real Estate	31,869
Exeter Property Group	Alternative Investment - Real Estate	358,798
Franklin Templeton Institutional	Alternative Investment - Real Estate	56,704
H/2 Capital Partners	Alternative Investment - Real Estate	138,004
Harrison Street Real Estate Capital	Alternative Investment - Real Estate	1,712,159
Heitman Capital Management	Alternative Investment - Real Estate	177,244
Jamestown	Alternative Investment - Real Estate	32,592
KKR	Alternative Investment - Real Estate	450,795
Lasalle Investment Management	Alternative Investment - Real Estate	375,527
Lone Star	Alternative Investment - Real Estate	30,269
Mesirow Financial	Alternative Investment - Real Estate	(8,008)
Metlife	Alternative Investment - Real Estate	124,637
Prudential Financial	Alternative Investment - Real Estate	53,215
Related Fund Management	Alternative Investment - Real Estate	98,348
Rialto Capital Management	Alternative Investment - Real Estate	423,682
RREEF America	Alternative Investment - Real Estate	505,351
The Blackstone Group	Alternative Investment - Real Estate	654,970
The Hudson Companies	Alternative Investment - Real Estate	79,353

(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, 2023

Fund Manager	Category	Amount (in \$)
Tristan Capital Partners	Alternative Investment - Real Estate	184,423
UBS Asset Management	Alternative Investment - Real Estate	188,650
USAA Real Estate	Alternative Investment - Real Estate	136,076
Vanbarton Group	Alternative Investment - Real Estate	170,700
Westbrook Partners	Alternative Investment - Real Estate	288,368
RBC Global Asset Management	CTF - Fixed Income - Mortgage	17,547
Barings	CTF - Fixed Income - Other	127
BlackRock	CTF-Domestic Equity	6,934
Acadian Asset Management	CTF-International Equity	2,264
Baillie Gifford	CTF-International Equity	329
BlackRock	CTF-International Equity	6,958
Sprucegrove Investment Management	CTF-International Equity	455
Altravue Capital	Domestic Equity	16,624
BlackRock	Domestic Equity	33,435
Bridge City Capital	Domestic Equity	11,506
Dean Capital Management	Domestic Equity	17,593
Essex Investment Management Company	Domestic Equity	11,803
Lisanti Capital Growth	Domestic Equity	12,137
Nicholas Investment Partners	Domestic Equity	7,650
QSV	Domestic Equity	13,809
State Street Global Advisors	Domestic Equity	31,851
Wasatch Advisors	Domestic Equity	176,529
Wellington Management Company	Domestic Equity	655,521
NYC Comptroller - Investment Operations	Fixed Income - Cash	14,272
New Century	Fixed Income - Government	54,810
State Street Global Advisors	Fixed Income - Government	65,475
AFL-CIO Housing Investment Trust	Fixed Income - Mortgage	53,496
BlackRock	Fixed Income - Mortgage	121,760
Semper	Fixed Income - Mortgage	54,712
Integrity-Credit	Fixed Income - Other	56,712
Mackay Shields	Fixed Income - Other	992,283
Nomura Corporate Research and Asset Management	Fixed Income - Other	1,138,209
Pugh Capital Management	Fixed Income - Other	235,622
T. Rowe Price Associates	Fixed Income - Other	298,898
State Street Global Advisors	Fixed Income - TIPS	14,059
Acadian Asset Management	International Equity	3,597,976
Algert Global	International Equity	133,980
ARGA Investment Management	International Equity	73,357
Aubrey Capital Management	International Equity	62,042
Baillie Gifford	International Equity	860,233
Change Global Investments	International Equity	(1,721)
Dundas Global Investors	International Equity	46,274
Fiera Capital Corporation	International Equity	473,012
Foresight Global Investors	International Equity	57,433
Haven	International Equity	784
JP Morgan Asset Management	International Equity	1,227,992
Martin Investment Management	International Equity	51,633
Morgan Stanley Investment Management	International Equity	316,430
North of South Capital	International Equity	83,702
NYC Comptroller - Investment Operations	International Equity	1,089
Osmosis Investment Management	International Equity	63,844

(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, 2023

Fund Manager	Category	Amount (in \$)
Redwood Investments	International Equity	41,042
Sprucegrove Investment Management	International Equity	994,588
Xponance	International Equity	6,878
	<i>Sub total</i>	66,635,029
<u>Legal Fees</u>		
Cox Castle Nicholson LLP		1,657
Day Pitney LLP		10,103
Foley & Lardner LLC		22,660
Foster Pepper PLLC		18,745
Hitchcock Law Firm		2,125
Morgan Lewis Bockius LLP		118,824
Pillsbury Winthrop Shaw Pittman LLP		41,554
Reinhart Boerner Van Dueren		26,437
Seward Kissel LLP		2,360
	<i>Sub total</i>	244,465
<u>Consultant Fees</u>		
Msci Barra LLC		31,502
Msci Esg Research LLC		2,835
Msci IPD		5,783
The Burgiss Group		3,215
SP Global Market Intelligence LLC		4,952
	<i>Sub total</i>	48,287
<u>2 Variable Investment Expenses</u>		
Qualified Pension Plan		202,700
Tax-Deferred Annuity		2,142,451
Investment Expenses FY 2023		\$ 69,272,932

**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, 2023**

EXPENSE TYPE	AMOUNT (in \$)
1 ADMINISTRATIVE EXPENSES (QPP):	
Consumable Supplies and Materials	\$ 149,618
Contractual Services	4,962,884
Furniture and Equipment	201,177
General Services	12,734,895
Salaries paid to Plan Personnel	18,668,568
Sub-Total	<u>36,717,142</u>
2 ADMINISTRATIVE EXPENSES (TDA):	
Sub-Total	<u>309,642</u>
 Total Administrative Expenses for FY 2023:	 <u>\$ 37,026,784</u>

The schedule shows total expenses paid by BERS. Other administrative expenses of \$ 3,220,391 were paid on BERS' behalf by other City agencies under Regulation 85 of the New York State Superintendent of Insurance Regulations.

**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, 2023**

INDIVIDUAL OR FIRM NAME	NATURE OF SERVICES	AMOUNT (in \$)
McLean & Company 3960 Howard Hughes Parkway, Suite 500 Las Vegas, NV, 89169	HR Research and Advisory Services	23,919
Baker Tilly Virchow Krause, LLP 2801 Via Fortuna, Suite 300 Austin, TX 78746	Internal Audit Service Consultant	399,601
Aksia TorreyCove Capital Partners LLC 10180 Barnes Canyon Road, Suite 200 San Diego, CA 92121	Investment Consultant	251,717
KPX LLC 1401 Lane Park Court Birmingham, AL 35223	Investment Consultant	125,000
Segal Marco Advisors 333 West 34th Street New York, NY 10001	Investment Consultant	230,461
Groom Law Group, Chartered Department 0589 Washington, DC 20073	Legal Consultant	93,593
Segal Company, Inc 333 West 34th Street New York, NY 10001	Operations Consultant	36,700
Total Consulting Fees for FY 2023		\$ 1,160,991

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**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, 2023 AND JUNE 30, 2022**

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 2023, 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.

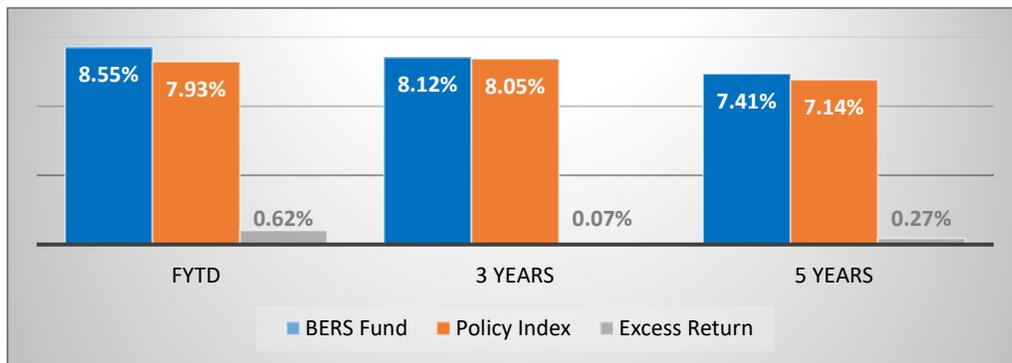
To: Board of Education Retirement System (BERS) of the City of New York
From: Segal Marco Advisors (Vanessa Vargas Guijarro and Christian Sevier)
Date: September 21, 2023
Re: Report of Fiscal Year 2023 Investment Activity

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

Fund Summary of Investment Performance

The Board of Education Retirement System (“BERS”) Total Fund returned +8.55%, net of fees, for the Fiscal Year (FY) ending June 2023, compared to +7.93% for the BERS Policy Benchmark¹ against which it is measured. Gross performance for the FY ranked in the 22nd percentile of the Wilshire public plans with assets greater than \$1 billion peer group. The Fund increased in value and ended the FY at \$8.49 billion (compared to \$7.93 billion at the end of the prior FY).

A pension fund/plan is a long-term investment established to pay 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, 2023, the Fund has averaged a +7.41% annual net return, versus +7.14% for the BERS Policy Benchmark. The 5-year performance ranks in the top quartile of the public funds’ peer group.

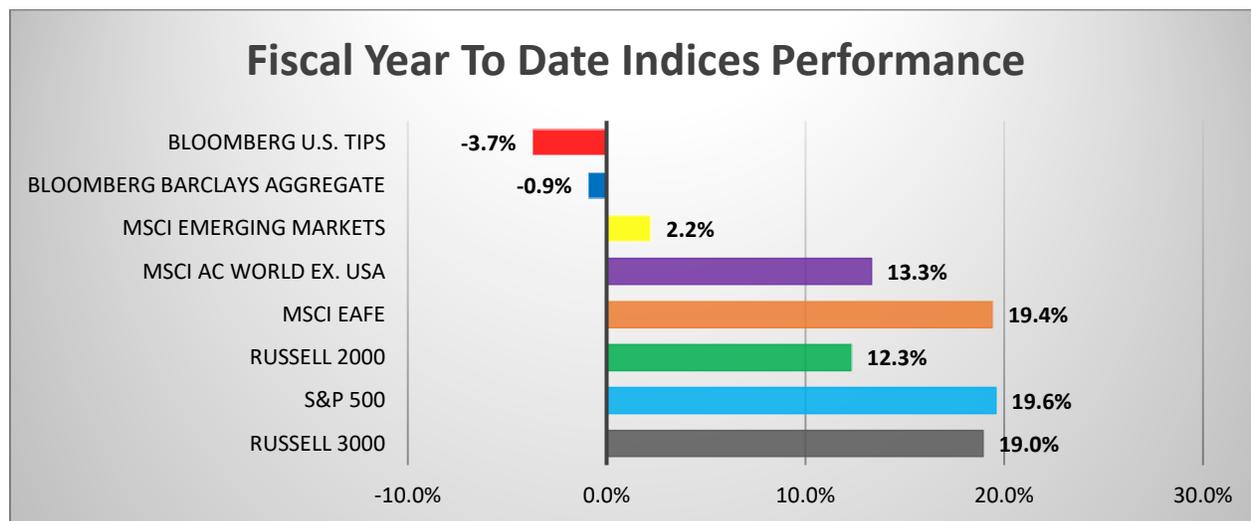


¹ The Board of Education Policy Benchmark is a custom index representing the weighted average return of the benchmarks for each major investment program in the Fund. The Policy Benchmark as of 6/30/23 consisted of: 30.65% Russell 3000, 8.94% MSCI World ex USA IMI Net, 1.80% MSCI ACWI, 5.56% MSCI Emerging Markets, 0.88% MSCI ACWI Ex US IMI Net, 9.00% Russell 3000 + 300 b.p. per annum, 4.00% NFI - ODCE Net, 3.01% NFI - ODCE Net + 200bps, 3.55% CPI + 4%, 2.13% FTSE US Government Bond 1-3 Years Index, 2.49% USBIG TSY AGN 1-10, 1.77% NYC Treasury Agency + 5, 0.71% FTSE US Government Bond 10+ Years Index, 0.00% Bloomberg U.S. Aggregate, 4.73% Bloomberg US Mortgage Backed Securities, 0.48% ETI Custom Benchmark, 5.10% NYC Custom IGC Benchmark, 8.89% Bloomberg U.S. HY - 2% Issuer Cap., 0.00% Credit Suisse Leveraged Loan, 3.11% Bloomberg Global Inflation Linked: U.S. TIPS, 3.23% OFI - JPMGHY / CSFB 50/50 Blend Plus 300 b.p. per annum

Public Capital Markets Commentary

The BERS Fund is diversified across U.S. and non-U.S. markets. Global economies and labor markets remained resilient despite the headwinds from elevated inflation, tightening credit conditions, and the rapid rise in interest rates. Declining energy prices helped reduce headline inflation in most countries, easing the strains on households and businesses. However, persistently high core consumer prices maintained the pressure on central banks to keep interest rates higher for longer.

U.S. equities continue to rise as waning inflation, surprisingly strong macroeconomic data, and improving earnings prospects provided hope that the U.S. economy could experience a moderate slowdown rather than a recession. Towards the end of the FY, developed markets led the return improvement as Europe avoided the economic woes predicted earlier with the Russia and Ukraine conflict. Emerging market stocks lagged behind developing market stocks as tensions between U.S. and China continued. Fixed income sectors were positive as the interest rate outlook became more moderate after March 2023 banking crisis. While the Federal Reserve paused its interest rate hikes in June 2023, it signaled that further hikes could still happen. High yield and credit recovered after the banking stresses and performed well by the end of the FY.



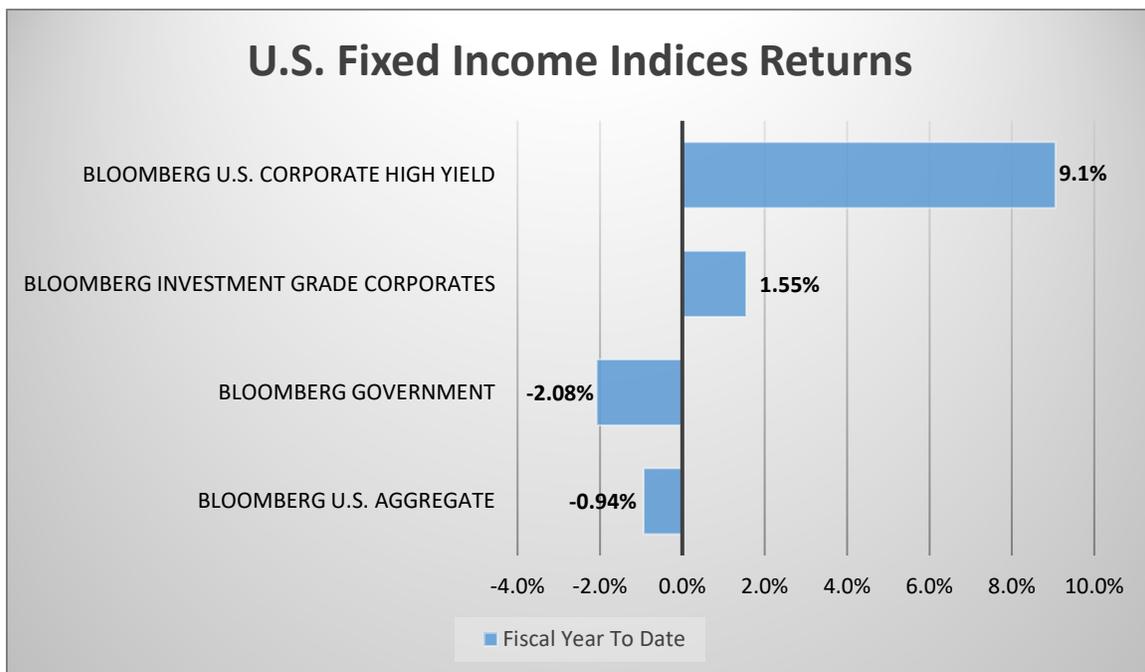
The U.S. stock market, as measured by the Russell 3000 Index, returned +18.95% for the FY. The advance came amid moderating inflation and signs that the U.S. economy remains resilient despite higher interest rates. In June 2023, President Joe Biden signed into law a bill to suspend the nation’s debt limit, removing a key financial stress on the economy. A revision to the Q1 GDP growth indicated expansion of 2% (annualized), substantially larger than the previous estimate of 1.3% growth.

Non-U.S. developed market equities also experienced positive performance during the FY as investor sentiment rose. The non-U.S. equity market, as measured by the benchmark MSCI EAFE Index, returned +19.41% for FY 2023. Japan produced the highest returns for the developed markets as expectations of governance reforms and structural shifts in the economy boosted investor sentiment. European markets were able to contribute positive returns despite worries about the European Union economy and the continuing pace of the European Central Bank’s interest rate hikes.

Emerging markets were also positive for the FY, though lagging behind developing markets. Tension between the U.S. and China was a contributing factor behind emerging markets performance, as were

concerns about China’s anemic economic recovery. Hungary, Poland and Greece were the top-performing markets despite rising recessionary fears in Europe. Central European markets began to anticipate rate cuts as inflation eased, and Hungary cut rates in June. Meanwhile, Greece’s outperformance came as the ruling New Democracy party won a second term in office in May, signaling a continuation of market friendly policies. The emerging market asset class, as measured by the MSCI Emerging Markets Index, returned +2.22% for the FY.

Within the U.S. fixed income market, there were mixed performance amongst fixed income sectors for the fiscal year to date period. For the start of the 2023 calendar year, the Federal Reserve continued its aggressive pace of rate hikes; instability flared in the banking sector, requiring government intervention; and a tense battle over raising the debt ceiling led to heightened fears that the U.S. government might default. However, in the second half of FY, fixed income sectors were largely positive as the interest rate outlook became more moderate after March’s banking crisis. While the Federal Reserve paused in June 2023, it signaled that further hikes could still happen.



BERS Fund Description

The Trustees establish an Investment Policy and asset allocation target 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 (also referred to alternatives and real assets investments). In order to participate in the performance of the broad markets while keeping expenses contained, the Fund invests in passive or 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.

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. During the latter half of the FY, the Trustees have been engaged in reviewing the BERS asset allocation target mix.

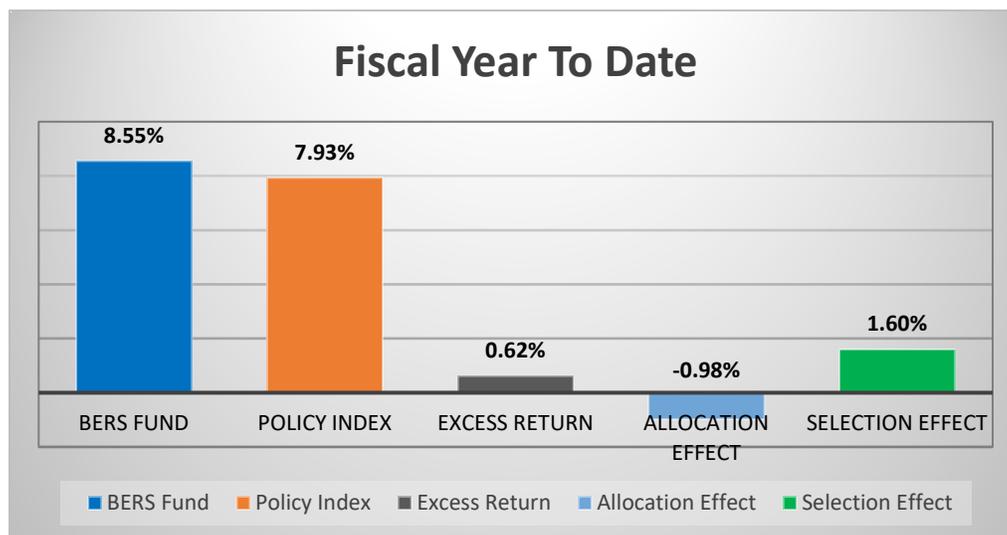


Through Board Policy or by statute, certain securities are prohibited from inclusion in the BERS public market investment portfolio. These include:

- Fossil fuel reserve owners: certain companies that own proven fossil fuel reserves (oil, gas and coal).
- Thermal coal: companies that earn more than 50% of their revenues from thermal coal.
- Civilian firearm manufacturers: companies that earn more than 5% of their revenues from the manufacture of civilian firearms.
- For-profit prisons: companies that derive at least 20% of their revenue from the operation of incarceration facilities.
- Iran/Sudan: companies that are not compliant with U.N. sanctions on Iran and Sudan.
- Russia: companies that are domiciled in Russia.

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, U.S., non-U.S. developed and emerging markets equities performed well on a relative and absolute basis, despite the ups and downs related to inflation, rate hike fears and events such as the regional banking crisis in the U.S. The attribution of returns is shown in the chart below. Overall, the BERS Fund outperformed the Policy Index by 0.62% for the FY. The manager selection effect was positive by +1.60%, while the allocation effect was negative by 0.98%. The comparison is based on the FY return of +8.55% for the BERS Fund versus the +7.93% 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, 2023, the Fund was close to its target allocation across equities and fixed income, with underweights of roughly 0.4% in fixed income and about 1.0% in equities. The Fund has investments across public and private equity, fixed income/credit, infrastructure, and real estate markets. Pension funds investors such as the BERS Fund have long-term investment 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 in U.S. stocks were slightly below benchmark returns (+18.47% vs. +18.95% for the index). World ex-U.S. equity active managers performed better than the benchmark with a +19.29% return versus a +16.35% return for the benchmark. Global equity strategies added value returning +27.34% versus +16.53% for the MSCI AC World Index. Emerging markets equity strategies outperformed the benchmark returning 4.76% versus 1.75% for the MSCI Emerging Markets Index. The underperformance within U.S. equity came from a growth-oriented manager. The total fixed income return was +2.59%, comparing favorably to the Bloomberg Aggregate Index return of -0.94%.

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 fees basis. The Fund’s current level of diversification into alternative assets had a positive impact in FY 2023, as the private equity, private real estate investments outperformed their respective benchmarks. Private infrastructure slightly detracted relative to its benchmark. 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,

Investment Solutions. Offices in the United States, Canada and Europe. Member of The Segal Group



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, 2023

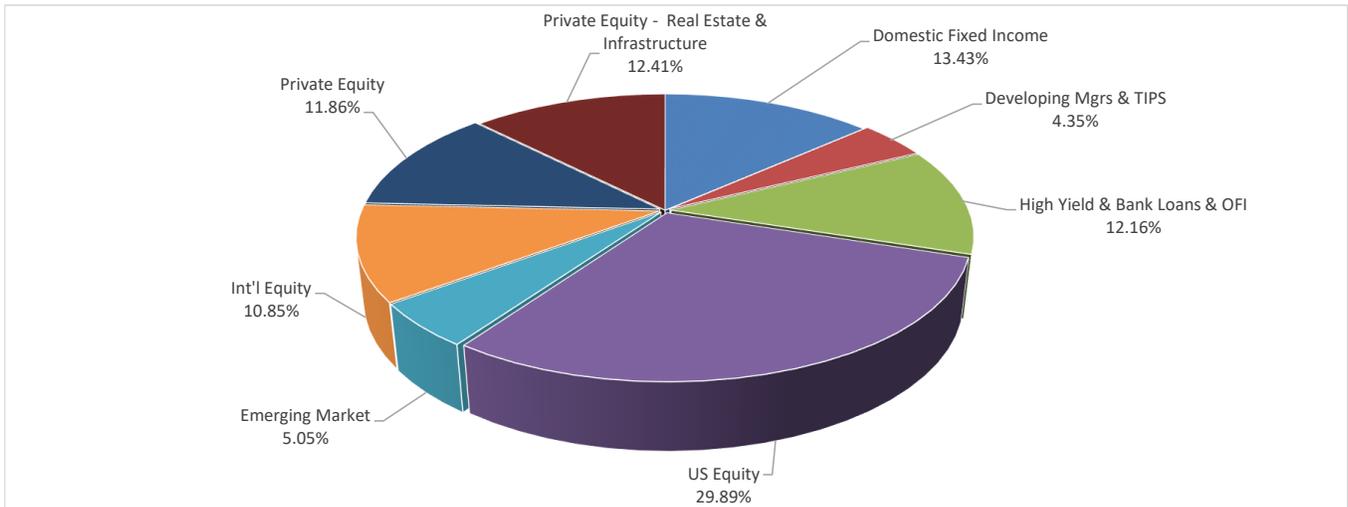
	3 Mos Apr-23 Jun-23 %	6 Mos Jan-23 Jun-23 %	1 Yr Jul-22 Jun-23 %	3 Yrs Jul-20 Jun-23 %	5 Yrs Jul-18 Jun-23 %	10 Yrs Jul-13 Jun-23 %
Total Equity	4.27	9.73	11.16	12.56	9.73	-
Domestic Equity	7.98	15.96	18.47	13.11	11.00	12.30
Russell 3000 Index	8.39	16.17	18.95	13.89	11.39	12.34
Total World ex-USA Equity	2.87	14.58	19.29	6.47	4.85	7.42
NYC Developed Equity Benchmark	2.67	10.46	16.35	8.87	4.17	5.37
Total Emerging Markets	1.55	7.38	4.76	2.35	0.01	3.50
MSCI Emerging Markets	0.90	4.89	1.75	2.32	0.93	2.95
International Fund of Funds	2.76	10.91	14.82	8.35	4.50	-
MSCI ACWI EX USA IMI NET	2.38	9.10	12.47	7.33	3.38	-
Total Global Equity	8.23	22.71	27.34	8.29	9.98	-
MSCI AC World (Daily Const)	6.18	13.93	16.53	10.99	8.10	-
Private Equity	2.47	3.41	(0.25)	24.96	18.39	18.81
Russell 3K + 300bps	7.96	16.55	(5.81)	21.99	13.74	14.97
Real Estate	(1.95)	(4.31)	(1.57)	11.85	9.09	11.44
NCREIF NFI-ODCE NET + 100 BP	(2.64)	(5.69)	(9.83)	8.11	6.61	8.84
Infrastructure	2.02	5.10	7.17	13.29	11.64	-
CPI + 4%	1.67	3.63	7.22	9.97	8.05	-
Total Fixed Income	0.09	3.47	2.71	(0.85)	2.45	-
Structured Fixed Income	(0.79)	2.35	(0.67)	(3.96)	1.33	2.14
NYC Custom Structured Index - BERS	(0.79)	2.29	(0.87)	(3.96)	1.84	2.31
Core FI - Developing Mgrs	(0.54)	2.68	(0.11)	-	-	-
Bloomberg US Aggregate	(0.84)	2.09	(0.94)	-	-	-
TIPS	(1.44)	1.98	(1.43)	(0.13)	2.50	2.14
BBG BARC GBL INF - LK: US TIPS (DLY)	(1.42)	1.87	(1.40)	(0.12)	2.49	2.08
Targeted Investments	(1.19)	2.13	(0.38)	(3.02)	1.49	2.26
BERS Custom Benchmark	(0.51)	2.07	(0.47)	(3.08)	0.94	1.65
High Yield	1.50	5.76	9.79	4.11	4.06	4.94
High Yield Custom Benchmark	1.75	5.38	9.07	3.12	3.34	4.20
Opportunistic Fixed Income	1.36	3.91	4.13	-	-	-
Opportunistic Fixed Income JPMGHY	3.22	7.42	13.02	-	-	-
Short-term Investments	1.25	2.37	3.80	1.30	1.47	1.12
Total Portfolio	2.99	7.79	8.55	8.12	7.41	8.75
BERS Policy Benchmark	3.65	8.85	7.93	8.05	7.14	7.93

Yield data were obtained from the NYCBERS Performance Overview as of June 30, 2023

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

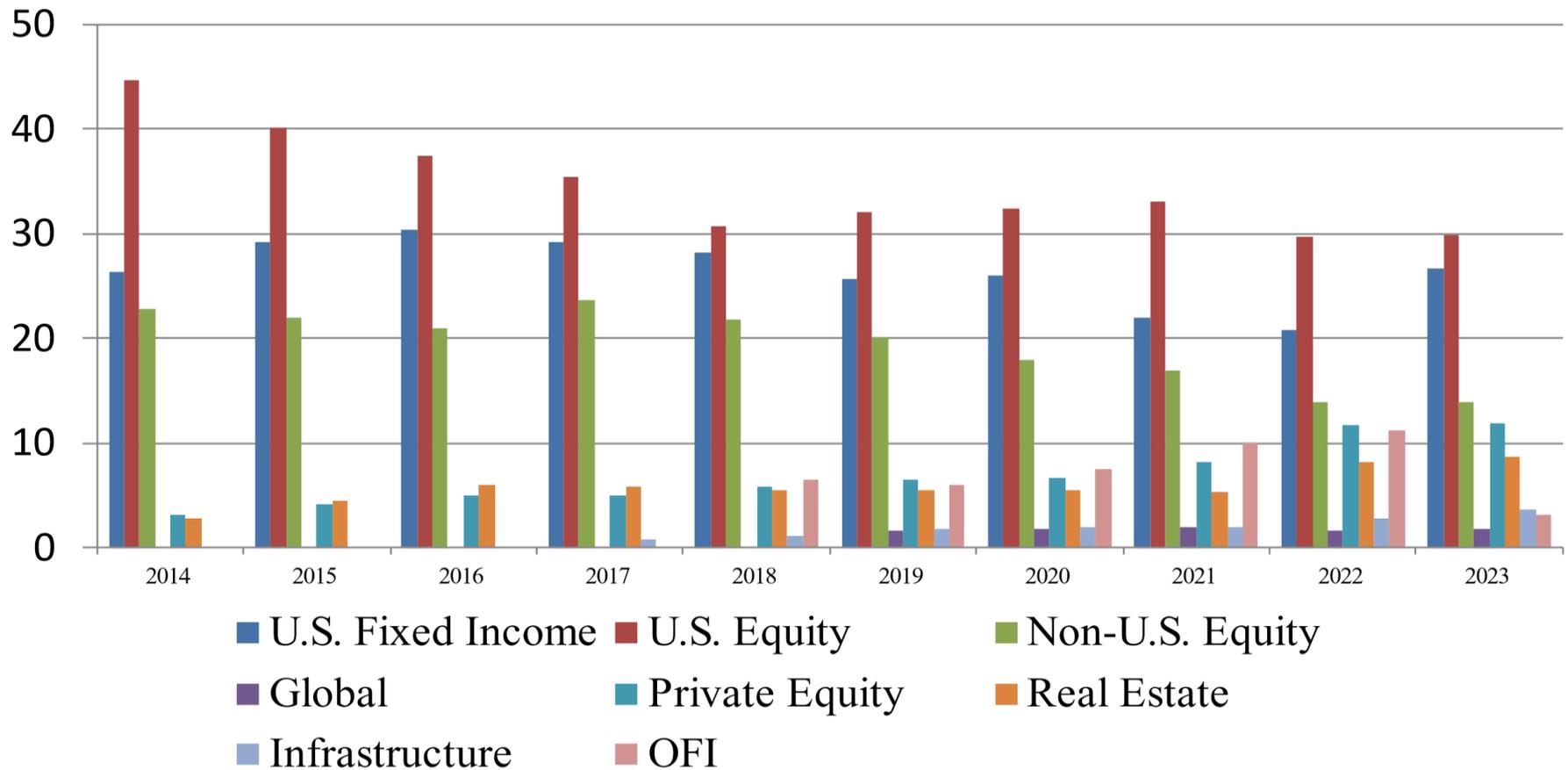
ASSET ALLOCATION (FIXED) FISCAL YEAR ENDED JUNE 30, 2023



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
6/30/2014	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
6/30/2023	13.43	4.35	12.16	29.89	5.05	10.85	11.86	12.41

NYC BOARD OF EDUCATION RETIREMENT SYSTEM ASSET ALLOCATION

June 30, 2014 – June 30, 2023



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, 2023

	NAME OF EQUITY SECURITIES	COST	FAIR VALUE
1	APPLE INC	\$ 42,836,456	\$ 168,953,883
2	MICROSOFT CORP	51,115,112	154,124,318
3	AMAZON.COM INC	44,276,479	70,938,262
4	NVIDIA CORP	9,271,643	57,953,317
5	ALPHABET INC CL A	23,701,912	46,347,960
6	TESLA INC	11,614,161	41,463,321
7	META PLATFORMS INC CLASS A	24,983,736	41,153,219
8	BERKSHIRE HATHAWAY INC CL B	23,708,441	38,072,650
9	ALPHABET INC CL C	17,787,227	37,182,791
10	UNITEDHEALTH GROUP INC	16,203,146	29,590,121
11	JOHNSON & JOHNSON	22,847,695	28,112,910
12	TAIWAN SEMICONDUCTOR MANUFAC	25,197,733	27,215,107
13	MASTERCARD INC A	13,004,757	25,647,486
14	VISA INC CLASS A SHARES	14,102,716	25,368,564
15	JPMORGAN CHASE & CO	19,084,032	24,787,194
16	ELI LILLY & CO	5,244,935	23,034,891
17	ASML HOLDING NV	7,208,070	22,449,370
18	TENCENT HOLDINGS LTD	25,150,904	22,180,274
19	PROCTER & GAMBLE CO/THE	12,807,621	20,789,290
20	ADYEN NV	15,475,719	20,207,665
21	BROADCOM INC	6,765,026	20,162,543
22	FERRARI NV	4,832,429	18,503,460
23	HOME DEPOT INC	10,798,447	18,212,513
24	PEPSICO INC	11,494,548	17,864,654
25	MERCADOLIBRE INC	12,536,499	17,840,076
26	MERCK & CO. INC.	8,895,334	17,604,360
27	SPOTIFY TECHNOLOGY SA	15,164,521	16,881,511
28	ADOBE INC	7,996,425	15,939,118
29	AIA GROUP LTD	12,436,273	15,750,162
30	COCA COLA CO/THE	11,125,025	14,282,317
31	SALESFORCE INC	9,248,331	14,020,481
32	COSTCO WHOLESALE CORP	6,207,354	13,902,048
33	ABBVIE INC	10,652,500	13,648,553
34	ORACLE CORP	5,842,116	13,577,808
35	MCDONALD S CORP	7,914,131	13,519,465
36	WALMART INC	8,041,021	13,255,618
37	LINDE PLC	9,914,358	12,455,600
38	KERING	7,436,232	12,283,798
39	CISCO SYSTEMS INC	10,430,620	12,199,723
40	THERMO FISHER SCIENTIFIC INC	5,849,988	12,142,688
41	BANK OF AMERICA CORP	12,970,831	12,030,750
42	PFIZER INC	11,768,533	12,020,476
43	UBER TECHNOLOGIES INC	8,815,395	12,019,348
44	SERVICENOW INC	5,280,200	11,962,655
45	WALT DISNEY CO/THE	13,898,401	11,765,676
46	ACCENTURE PLC CL A	6,268,410	11,484,730
47	SAMSUNG ELECTRONICS CO LTD	8,052,395	11,450,797
48	ABBOTT LABORATORIES	6,878,929	11,305,701
49	NETFLIX INC	7,771,103	11,270,818
50	L OREAL	4,870,199	10,857,945

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, 2023

	INTEREST RATE	MATURITY DATE	PAR VALUE	FAIR VALUE	
1	FED HM LN PC POOL SD8257	4.50%	10/01/2052	\$ 21,811,927	\$ 20,973,476
2	US TREASURY N/B	3.50%	02/15/2033	11,150,000	10,860,769
3	TSY INFL IX N/B	0.63%	07/15/2032	10,700,283	9,832,169
4	FED HM LN PC POOL SD7553	3.00%	03/01/2052	10,307,566	9,162,602
5	US TREASURY N/B	3.88%	11/30/2029	9,235,000	9,151,331
6	TSY INFL IX N/B	0.13%	07/15/2024	9,036,257	8,765,350
7	TSY INFL IX N/B	1.63%	10/15/2027	8,856,822	8,725,829
8	TSY INFL IX N/B	1.13%	01/15/2033	8,869,976	8,496,195
9	TSY INFL IX N/B	0.13%	01/15/2032	9,586,495	8,436,883
10	US TREASURY N/B	2.88%	08/15/2028	8,875,000	8,359,806
11	FED HM LN PC POOL SD7552	2.50%	01/01/2052	9,665,339	8,274,690
12	US TREASURY N/B	4.50%	11/15/2025	8,250,000	8,207,100
13	TSY INFL IX N/B	0.13%	10/15/2024	8,334,510	8,038,968
14	TSY INFL IX N/B	0.13%	01/15/2031	8,971,809	7,971,542
15	TSY INFL IX N/B	0.63%	01/15/2026	8,312,633	7,925,846
16	CARNIVAL CORP	5.75%	03/01/2027	8,575,000	7,894,059
17	TSY INFL IX N/B	0.50%	01/15/2028	8,421,873	7,876,557
18	FNMA TBA 30 YR 3.5	3.50%	07/13/2053	8,425,970	7,677,828
19	TSY INFL IX N/B	0.38%	07/15/2025	7,922,250	7,580,959
20	TSY INFL IX N/B	0.25%	01/15/2025	7,770,242	7,448,554
21	TSY INFL IX N/B	0.13%	07/15/2031	8,389,636	7,437,496
22	TSY INFL IX N/B	0.38%	01/15/2027	7,744,788	7,266,237
23	TSY INFL IX N/B	0.13%	04/15/2027	7,573,533	7,009,381
24	TSY INFL IX N/B	1.25%	04/15/2028	7,180,645	6,947,274
25	TSY INFL IX N/B	0.13%	10/15/2026	7,381,434	6,900,090
26	TSY INFL IX N/B	0.13%	07/15/2030	7,619,112	6,831,143
27	US TREASURY N/B	4.13%	11/15/2032	6,670,000	6,815,940
28	TSY INFL IX N/B	0.38%	07/15/2027	7,221,226	6,768,527
29	TSY INFL IX N/B	0.25%	07/15/2029	7,381,418	6,738,866
30	TSY INFL IX N/B	0.13%	10/15/2025	6,896,923	6,538,352
31	TSY INFL IX N/B	0.75%	07/15/2028	6,848,814	6,489,115
32	TSY INFL IX N/B	0.13%	01/15/2030	6,920,143	6,206,261
33	TSY INFL IX N/B	0.13%	07/15/2026	6,539,484	6,142,341
34	FNMA POOL FS0316	1.50%	11/01/2041	7,130,154	5,775,354
35	GNMA II TBA 30 YR 3	3.00%	07/20/2053	6,402,629	5,720,621
36	US TREASURY N/B	3.38%	05/15/2033	5,925,000	5,713,952
37	TSY INFL IX N/B	0.13%	04/15/2026	6,014,164	5,639,061
38	US TREASURY N/B	4.25%	09/30/2024	5,700,000	5,625,216
39	US TREASURY N/B	3.00%	02/15/2047	6,600,000	5,556,870
40	TSY INFL IX N/B	0.13%	04/15/2025	5,783,231	5,501,414
41	FNMA POOL FM7599	3.50%	01/01/2051	5,917,292	5,457,045
42	US TREASURY N/B	3.75%	04/15/2026	5,500,000	5,383,125
43	US TREASURY N/B	4.38%	10/31/2024	5,400,000	5,334,822
44	US TREASURY N/B	2.88%	05/15/2052	6,225,000	5,158,720
45	GNMA II TBA 30 YR 2	2.00%	07/20/2053	5,943,600	4,995,180
46	US TREASURY N/B	4.13%	01/31/2025	5,000,000	4,921,500
47	TSY INFL IX N/B	0.88%	01/15/2029	5,182,063	4,904,356
48	US TREASURY N/B	4.13%	10/31/2027	4,800,000	4,774,896
49	US TREASURY N/B	4.63%	03/15/2026	4,750,000	4,755,178
50	US TREASURY N/B	3.38%	08/15/2042	5,175,000	4,697,348

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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, 2023

FUND MANAGER	CATEGORY	ASSET UNDER MANAGEMENT AS OF 06/30/23 (in \$)	MANAGEMENT FEES (in \$)
Actis	Alternative Investment - Infrastructure	9,011,079.00	1,380,606
Ardian	Alternative Investment - Infrastructure	14,710,872.00	90,730
ASF	Alternative Investment - Infrastructure	14,377,373.00	695,543
Axium Infrastructure	Alternative Investment - Infrastructure	13,885,527.00	129,862
BIF IV	Alternative Investment - Infrastructure	2,883,394.00	661
Blackrock Global Infra Fund IV D	Alternative Investment - Infrastructure	4,143,702.00	450,176
Brookfield	Alternative Investment - Infrastructure	42,829,462.00	1,112,894
DIF Infrastructure VII	Alternative Investment - Infrastructure	7,911,247.00	406,107
EIG Energy	Alternative Investment - Infrastructure	4,198,303.00	96,727
EQT	Alternative Investment - Infrastructure	48,572,528.00	1,484,026
Global Energy & Power	Alternative Investment - Infrastructure	19,331,092.00	456,143
Global Infra Partners	Alternative Investment - Infrastructure	18,369,499.00	647,051
Global Infrastructure Partners III	Alternative Investment - Infrastructure	12,473,772.00	985,054
IFM Global Infrastructure	Alternative Investment - Infrastructure	29,837,466.00	231,173
InfraVia European Fund V	Alternative Investment - Infrastructure	9,331,496.00	71,401
KKR Global Infrastructure	Alternative Investment - Infrastructure	38,593,593.00	606,369
Stonepeak Infrastructure Fund IV	Alternative Investment - Infrastructure	16,998,465.00	252,116
400 Capital Centre Street	Alternative Investment - OFI	38,946,204.00	469,862
Apollo Centre Street Partnership	Alternative Investment - OFI	22,877,735.00	136,748
Brightwood Capital Fund V	Alternative Investment - OFI	18,153,023.00	1,088,921
CarVal Centre Street	Alternative Investment - OFI	10,611,220.00	53,609
Crestline Opportunity Fund V Onshore	Alternative Investment - OFI	11,682,646.00	172,041
ICG Centre Street Partnership	Alternative Investment - OFI	32,436,432.00	323,514
KKR NYC Credit C	Alternative Investment - OFI	21,138,882.00	246,824
KLCP Domestic Fund III	Alternative Investment - OFI	17,288,787.00	765,755
Marathon Centre Street Partnership	Alternative Investment - OFI	27,633,686.00	189,393
Oak Hill Centre Street Partnership	Alternative Investment - OFI	52,221,052.00	325,161
Torchlight Debt	Alternative Investment - OFI	21,216,317.00	302,472
American Securities Partners VII	Alternative Investment - Private Equity	10,825,918.00	(4,652)
Apax	Alternative Investment - Private Equity	24,302,893.00	608,992
Apollo Investment	Alternative Investment - Private Equity	37,434,647.00	473,463
Ares Corporate Opportunities Fund V	Alternative Investment - Private Equity	9,671,145.00	26,556
ASF	Alternative Investment - Private Equity	32,521,016.00	128,817
Base10 Advancement Initiative II	Alternative Investment - Private Equity	2,972,463.00	364,967
BC European Capital	Alternative Investment - Private Equity	20,481,642.00	59,234
Bridgepoint Europe	Alternative Investment - Private Equity	29,817,375.00	969,439
Carlyle Partners VI	Alternative Investment - Private Equity	9,999,949.00	624,586
Centerbridge Capital Partners III	Alternative Investment - Private Equity	2,434,057.00	49,236
Clearlake Capital Partners	Alternative Investment - Private Equity	31,008,088.00	336,132
Crestview Partners	Alternative Investment - Private Equity	27,174,970.00	434,143
CVC Capital Partners	Alternative Investment - Private Equity	55,963,860.00	2,064,776
EQT	Alternative Investment - Private Equity	57,676,010.00	1,209,013
FTV	Alternative Investment - Private Equity	24,094,028.00	829,868
Grain Comm Opp Fd II	Alternative Investment - Private Equity	13,849,205.00	81,679
Grain Communications Opportunity FD III	Alternative Investment - Private Equity	1,960,108.00	76,424
Green Equity Investors	Alternative Investment - Private Equity	12,408,651.00	374,948
HarbourVest Centre Street Co-Investment	Alternative Investment - Private Equity	15,003,926.00	77,475
Heartwood Partners III	Alternative Investment - Private Equity	2,453,623.00	22,735
Hg	Alternative Investment - Private Equity	3,902,091.00	303,656
ICG Strategic Equity	Alternative Investment - Private Equity	28,809,398.00	414,361
ICV Partners IV	Alternative Investment - Private Equity	3,010,562.00	53,316
Insight Partners XII	Alternative Investment - Private Equity	16,171,390.00	670,117
Integrum Capital Partners	Alternative Investment - Private Equity	283,781.00	219,208
KKR	Alternative Investment - Private Equity	52,793,723.00	1,155,608
Landmark	Alternative Investment - Private Equity	7,088,239.00	517,318
Lexington Capital	Alternative Investment - Private Equity	31,825,384.00	893,922
Lightbay Investment Partners II	Alternative Investment - Private Equity	337,570.00	127,656
Lindsay Goldberg V	Alternative Investment - Private Equity	6,143,842.00	284,706
Mesrow Financial Private Equity	Alternative Investment - Private Equity	31,316,794.00	278,236
Mill City Fund II	Alternative Investment - Private Equity	752,799.00	8,431
New 2ND Capital Fund	Alternative Investment - Private Equity	284,708.00	466,571
New Mainstream Capital II	Alternative Investment - Private Equity	608,849.00	(15,947)

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, 2023

FUND MANAGER	CATEGORY	ASSET UNDER MANAGEMENT AS OF 06/30/23 (in \$)	MANAGEMENT FEES (in \$)
New York Fairview Private Equity Fund	Alternative Investment - Private Equity	-	(63,287)
NMS Fund III	Alternative Investment - Private Equity	2,549,118.00	65,524
NYC-NorthBound Emerging Managers Program	Alternative Investment - Private Equity	14,487,112.00	99,577
One Rock Capital Partners III	Alternative Investment - Private Equity	21,296,956.00	890,323
Palladium Equity Partners V	Alternative Investment - Private Equity	8,073,750.00	192,699
Patriot Financial Partners	Alternative Investment - Private Equity	3,875,172.00	49,948
Permira VIII	Alternative Investment - Private Equity	2,934,770.00	384,071
Platinum Equity	Alternative Investment - Private Equity	30,598,252.00	208,624
PSG	Alternative Investment - Private Equity	12,313,574.00	967,682
Raine Partners	Alternative Investment - Private Equity	12,681,561.00	470,861
Reverence Capital Partners	Alternative Investment - Private Equity	14,925,791.00	474,493
Siris Partners	Alternative Investment - Private Equity	14,669,499.00	159,427
Stellax Capital Partners	Alternative Investment - Private Equity	21,095,968.00	700,490
Thoma Bravo	Alternative Investment - Private Equity	17,051,586.00	328,060
TPG Rise Climate	Alternative Investment - Private Equity	9,484,441.00	262,596
Valor Equity Partners	Alternative Investment - Private Equity	17,990,198.00	399,189
Vista Equity Partners	Alternative Investment - Private Equity	79,084,949.00	1,529,155
Vista VIII Co-Invest	Alternative Investment - Private Equity	1,395,686.00	51
Vistria Fund	Alternative Investment - Private Equity	14,341,222.00	489,472
Warburg Pincus	Alternative Investment - Private Equity	68,483,972.00	2,290,121
WCAS	Alternative Investment - Private Equity	20,497,180.00	1,861,058
Webster Capital III	Alternative Investment - Private Equity	166,799.00	8,272
ICG Strategic Equity	Alternative Investment - Private Equity	14,566,774.00	397,264
Aermont Capital Real Estate Fund IV	Alternative Investment - Real Estate	5,904,489.00	50,556
Almanac Realty	Alternative Investment - Real Estate	15,377,043.00	242,876
Artemis	Alternative Investment - Real Estate	12,022,693.00	922,821
Big Real Estate Fund II	Alternative Investment - Real Estate	12,980,702.00	308,248
Blackstone	Alternative Investment - Real Estate	37,005,311.00	654,970
Brookfield	Alternative Investment - Real Estate	72,430,009.00	2,458,642
Carlyle Realty Partners VII	Alternative Investment - Real Estate	6,120,977.00	79,731
Cortland Growth and Income	Alternative Investment - Real Estate	13,837,893.00	61,354
DivcoWest	Alternative Investment - Real Estate	11,880,314.00	583,247
DRA Growth and Income Fund IX	Alternative Investment - Real Estate	6,834,520.00	135,226
EPIISO IV	Alternative Investment - Real Estate	9,824,321.00	184,399
EQT Exeter Industrial	Alternative Investment - Real Estate	3,368,659.00	31,869
Exeter	Alternative Investment - Real Estate	41,032,676.00	358,798
Franklin Templeton Private RE FoF	Alternative Investment - Real Estate	318,871.00	56,704
GreenOak Asia USD III	Alternative Investment - Real Estate	6,932,847.00	159,959
H/2 Special Opportunities	Alternative Investment - Real Estate	13,881,374.00	138,004
Harrison	Alternative Investment - Real Estate	90,533,573.00	1,712,159
Heitman Capital Management LLC	Alternative Investment - Real Estate	27,494,785.00	177,244
Jamestown Premier Property Fund	Alternative Investment - Real Estate	3,235,336.00	32,592
KKR	Alternative Investment - Real Estate	39,329,109.00	450,795
LaSalle	Alternative Investment - Real Estate	71,537,321.00	375,527
Lion Industrial Trust	Alternative Investment - Real Estate	50,458,147.00	400,177
Lone Star Real Estate Fund V	Alternative Investment - Real Estate	2,649,524.00	30,269
Mesirow Financial Real Estate Value IV	Alternative Investment - Real Estate	17,788,127.00	(8,008)
MetLife Core Property Fund	Alternative Investment - Real Estate	23,436,270.00	124,637
NYC Asset #1 - Vanbarton (fka Emmes)	Alternative Investment - Real Estate	6,210,949.00	170,700
NYC Asset #2 - Related (fka Sandy)	Alternative Investment - Real Estate	6,805,085.00	98,348
NYC Asset #3 - Hudson	Alternative Investment - Real Estate	5,306,567.00	79,353
Pramerica Real Estate VI	Alternative Investment - Real Estate	3,909,536.00	53,050
PW Real Estate Fund III	Alternative Investment - Real Estate	4,167,912.00	3,218,514
Rialto Real Estate Fund	Alternative Investment - Real Estate	19,430,087.00	423,682
RREEF	Alternative Investment - Real Estate	49,107,149.00	505,351
UBS Trumbull Property Fund	Alternative Investment - Real Estate	22,493,996.00	188,650
USAA Eagle Real Estate Feeder 1	Alternative Investment - Real Estate	25,747,569.00	136,076
Westbrook	Alternative Investment - Real Estate	7,706,323.00	288,368
RBC Access MBS	CTF - Fixed Income - Mortgage	9,351,976.00	17,545
Barings	CTF - Fixed Income - Other	394,782.00	-
BlackRock	CTF-Domestic Equity	64,880,762.00	2,819
BlackRock	CTF-International Equity	1,613,094.00	428

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, 2023

FUND MANAGER	CATEGORY	ASSET UNDER MANAGEMENT AS OF 06/30/23 (in \$)	MANAGEMENT FEES (in \$)
Altravue-US SCV - Legato	Domestic Equity	2,999,093.00	16,624
BlackRock-US LMC R1000 Core	Domestic Equity	1,458,571,410.00	28,218
Bridge City-US SCG - Legato	Domestic Equity	2,224,245.00	11,506
Dean-US SCV - Legato	Domestic Equity	2,736,331.00	17,593
Essex-US SCG - Legato	Domestic Equity	3,149,013.00	11,723
Lisanti-US SCG - Legato	Domestic Equity	1,235,796.00	12,137
Nicholas Investment-US SCG - Legato	Domestic Equity	1,712,184.00	7,643
QSV-US SCV - Legato	Domestic Equity	2,740,142.00	13,536
SSGA-US LC Russell TOP 200 Core	Domestic Equity	694,241,098.00	31,851
Wasatch-US SCG	Domestic Equity	77,699,918.00	176,529
Wellington-US MCC	Domestic Equity	228,028,804.00	654,447
New Century-LI Treasury - Bivium	Fixed Income - Government	33,907,605.00	54,810
SSGA	Fixed Income - Government	436,233,928.00	62,632
AFL-CIO Housing Investment Trust	Fixed Income - Mortgage	16,109,443.00	53,496
BlackRock-Mortgages	Fixed Income - Mortgage	256,670,681.00	111,560
Semper-Mortgages - Bivium	Fixed Income - Mortgage	33,986,785.00	54,712
Integrity-Credit - Bivium	Fixed Income - Other	35,381,851.00	56,712
Mackay Shields-High Yield	Fixed Income - Other	381,469,941.00	991,472
Nomura-High Yield	Fixed Income - Other	377,558,365.00	1,129,574
Pugh-CorePlus	Fixed Income - Other	114,263,378.00	235,622
T Rowe Price-Credit	Fixed Income - Other	257,596,528.00	276,636
State Street Global Advisors	Fixed Income - TIPS	255,902,002.00	14,059
Acadian-EM	International Equity	295,108,946.00	892,233
Acadian-WorldxUS SCC	International Equity	85,750,150.00	278,300
Algert-EAFE SCC	International Equity	19,721,440.00	94,755
ARGA-WorldxUS LMCV - Xponance	International Equity	11,979,055.00	60,512
Aubrey-EM ACG - Xponance	International Equity	8,417,786.00	49,234
Baillie Gifford-WorldxUS LMCC	International Equity	291,237,545.00	713,856
Dundas-EAFE ACG - Xponance	International Equity	35,800.00	38,087
Fiera-Global	International Equity	87,296,164.00	448,915
Foresight-EAFE LMCV - Xponance	International Equity	10,733,303.00	51,452
Haven-EAFE-CAD ACV - Xponance	International Equity	8,078,404.00	784
JP Morgan AM-EM ACG	International Equity	132,111,317.00	920,746
Martin-EAFE ACG - Xponance	International Equity	8,095,859.00	44,719
Morgan Stanley-Global	International Equity	73,848,756.00	295,286
North of South-EM ACV - Xponance	International Equity	9,561,672.00	41,656
Osmosis-EAFE ACV - Xponance	International Equity	9,811,410.00	47,412
Redwood-EAFE ACG - Xponance	International Equity	9,485,751.00	32,268
Sprucegrove-WorldxUS LMCC	International Equity	286,087,655.00	616,261
Xponance Transition-WorldxUS	International Equity	110,387.00	1,608
	TOTAL		63,078,455

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, 2023

INDIVIDUAL OR BROKERAGE FIRM	# OF SHARES	COMMISSION PAID (in \$)	COMMISSION PER SHARE (in \$)
ABEL NOSER	36,235	1,790	0.0494
ABN AMRO CLEARING BANK N.V.	58,282	1,128	0.0193
ACADEMY SECURITIES INC	2,505	77	0.0308
ALLEN & COMPANY LLC	303	9	0.0300
ARQAM SECURITIES LLC	151,930	246	0.0016
BANCO ITAU SA	46,053	294	0.0064
BANCO S3 MEXICO SA	121,918	243	0.0020
BANCO SANTANDER (BRASIL) S.A.	115,000	282	0.0024
BANCO SANTANDER CENTRAL HISPANO	79,550	329	0.0041
BANK OF AMERICA CORPORATION	91,323	986	0.0108
BANK OF AMERICA INTL NY UNITED STATES	1,400	5	0.0035
BARCLAYS CAPITAL	16,786	54	0.0032
BARCLAYS CAPITAL INC	18,370	321	0.0175
BARCLAYS CAPITAL INC./LE	241,885	1,916	0.0079
BARCLAYS CAPITAL LE	440,999	2,038	0.0046
BERNSTEINAUTONOMOUS LLP	7,079,393	12,165	0.0017
BMO CAPITAL MARKETS	144,304	5,066	0.0351
BNP PARIBAS	1,829	115	0.0628
BNP PARIBAS PRIME BROKERAGE, INC.	1,010,056	1,275	0.0013
BNP PARIBAS SECURITIES (ASIA) LTD.	96,000	37	0.0004
BNP PARIBAS SECURITIES SERVICES	8,618,878	756	0.0001
BOFA SECURITIES, INC	77,419	1,366	0.0176
BOFA SECURITIES, INC.	1,764,489	14,714	0.0083
BRADESCO S.A. CTVM	1,508,447	3,138	0.0021
BTG PACTUAL CHILE S.A. CORREDORES DE BOL	1,962,755	177	0.0001
BTIG, LLC	140,124	3,409	0.0243
CABRERA CAPITAL MARKETS	106,900	267	0.0025
CACEIS BANK	407	54	0.1323
CANACCORD GENUITY INC.	50,746	1,388	0.0274
CANACCORDGENUITY LLC	8,586	190	0.0222
CANTOR FITZGERALD & CO.	47,021	665	0.0141
CANTOR FITZGERALD AND CO	66	1	0.0076
CANTOR FITZGERALD EUROPE	147,186	481	0.0033
CARNEGIE A S	45,069	2,273	0.0504
CARNEGIE INVESTMENT BANK AB	95,185	1,891	0.0199
CARNEGIE SECURITIES FINLAND	34,340	341	0.0099
CASTLEOAK SECURITIES LP	207,900	520	0.0025
CGS-CIMB SECURITIES (HONG KONG) LTD	176,700	86	0.0005
CHINA INTERNATIONAL CAPITAL CO	189,190	214	0.0011
CIMB SECURITIES LTD., KOREA BRANCH	4,192	133	0.0317
CIMB-GK SECURITIES PTE.LTD.	2,581,600	1,070	0.0004
CITIBANK CANADA	13,002	128	0.0098
CITIBANK INTERNATIONAL PLC	36,300	193	0.0053
CITIBANK MEXICO	149,946	766	0.0051
CITIBANK N.A.	29,909	257	0.0086
CITIGROUP GLOBAL MARKETS INC	160,166	1,585	0.0099
CITIGROUPGLBL MARKET KOERA SECS LTD	53,020	577	0.0109
CITIGROUPGLOBAL MARKETS BRASIL CCTVM SA	351,046	970	0.0028
CITIGROUPGLOBAL MARKETS EUROPE AG	557,708	4,249	0.0076

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, 2023

INDIVIDUAL OR BROKERAGE FIRM	# OF SHARES	COMMISSION PAID (in \$)	COMMISSION PER SHARE (in \$)
CITIGROUPGLOBAL MARKETS INC	20,652,689	7,136	0.0003
CITIGROUPGLOBAL MARKETS INC.	41,678	112	0.0027
CITIGROUPGLOBAL MARKETS INDIA	35,057	254	0.0072
CITIGROUPGLOBAL MARKETS LIMITED	3,839,839	14,827	0.0039
CITIGROUPGLOBAL MARKETS TAIWAN	263,923	405	0.0015
CL SECURITIES TAIWAN COMPANY LIMITED	525,870	862	0.0016
CLSA AMERICAS	128	1	0.0050
CLSA AUSTRALIA PTY LTD	1,054,259	274	0.0003
CLSA SECURITIES KOREA LTD.	121,905	1,340	0.0110
CLSA SECURITIES MALAYSIA SDN BHD	2,654,839	496	0.0002
CLSA SINGAPORE PTE LTD.	945,767	2,971	0.0031
COMPASS POINT	4,232	169	0.0400
COWEN AND COMPANY, LLC	412,075	4,085	0.0099
CRAIG-HALLUM	15,290	726	0.0475
CREDIT LYONNAIS SECURITIES INDIA	2,959,038	8,335	0.0028
CREDIT LYONNAIS SECURITIES(ASIA)	97,738,724	18,105	0.0002
CREDIT SUISSE FIRST BOSTON	90,000	571	0.0063
CREDIT SUISSE FIRST BOSTON (EUROPE)	641	53	0.0825
CREDIT SUISSE INTERNATIONAL	663,724	6,224	0.0094
CREDIT SUISSE SECS INDIA PRIVATE LTD	219,378	1,704	0.0078
CREDIT SUISSE SECURITIES (USA) LLC	382,838	2,027	0.0053
CREDIT SUISSE SECURITIES CANADA INC	536	16	0.0300
CS FIRST BOSTON (HONG KONG) LIMITED	996,280	2,487	0.0025
DAIWA CAPITAL MARKETS AMERICA INC.	162,550	3,926	0.0242
DAIWA SECURITIES (HK) LTD.	351,700	209	0.0006
DAIWA SECURITIES COMPANY LTD	1,544	128	0.0826
DAIWA SECURITIES SB CAPITAL MARKETS	221,153	942	0.0043
DAIWA SECURITIES SMBC CATHY CO	3,000	43	0.0145
DANSKE BANK A.S.	931	85	0.0908
DANSKE BANK A/S	298,776	353	0.0012
DAVIDSON D.A. & COMPANY INC.	2,960	102	0.0343
DBS VICKERS SECURITIES (SINGAPORE)	916,500	3,853	0.0042
DREXEL HAMILTON LLC	2,856	21	0.0075
DRIVEWEALTH INSTITUTIONAL LLC	1,255	13	0.0100
DSP MERRILL LYNCH LTD	7,258	45	0.0062
EVERCORE GROUP L.L.C.	6,325	47	0.0075
EVERCORE ISI	46,424	1,087	0.0234
EXANE S.A.	7,606	423	0.0556
FIDELITY CAPITAL MARKETS	48	1	0.0300
FIDELITY CLEARING CANADA ULC	379,739	1,606	0.0042
FINANCIALBROKERAGE GROUP (FBG)	3,740,470	5,306	0.0014
GOLDMAN SACHS (ASIA) L.L.C.	3,822,964	2,549	0.0007
GOLDMAN SACHS (ASIA) LLC	34,579	146	0.0042
GOLDMAN SACHS (INDIA)	362,792	1,009	0.0028
GOLDMAN SACHS & CO LLC	24,662,557	20,442	0.0008
GOLDMAN SACHS INTERNATIONAL	1,584,512	10,671	0.0067
GOLDMAN SACHS INTL FINANCE LONDON	996	45	0.0452
GUZMAN & CO	34,120	33	0.0010
HANWHA SECURITIES SEOUL	882	271	0.3072

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, 2023

INDIVIDUAL OR BROKERAGE FIRM	# OF SHARES	COMMISSION PAID (in \$)	COMMISSION PER SHARE (in \$)
HEIGHT SECURITIES, LLC	1,842	37	0.0200
HONG KONG AND SHANGHAI BANKING CORP	29	6	0.2197
HONGKONG AND SHANGHAI BANKING CORPORATIO	185,000	943	0.0051
HSBC BANKPLC	1,300,260	3,282	0.0025
HSBC BROKERAGE (USA) INC.	5,694	55	0.0097
HSBC SECURITIES (USA) INC.	40,520,351	12,963	0.0003
HSBC SECURITIES INDIA HOLDINGS	1,799,340	2,680	0.0015
ICBCFS LLC	1,847	73	0.0398
ICICI SECURITIES LIMITED	5,504,541	11,102	0.0020
INSTINET	578,601	2,768	0.0048
INSTINET AUSTRALIA CLEARING SRVC PTY LTD	3,923,524	2,970	0.0008
INSTINET EUROPE LIMITED	1,133	29	0.0259
INSTINET LLC	3,403,668	8,560	0.0025
INSTINET PACIFIC LIMITED	148,410,527	25,698	0.0002
INSTINET SINGAPORE SERVICES PT	1,589,127	2,759	0.0017
INSTINET U.K. LTD	10,270,379	44,705	0.0044
ITG AUSTRALIA LTD.	900	13	0.0139
ITG INC	269	2	0.0070
J P MORGAN INDIA PRIVATE LTD	1,018,997	1,102	0.0011
J P MORGAN SECURITIES INC	621,193	2,217	0.0036
J.P. MORGAN SECURITIES LIMITED	121,912	702	0.0058
J.P. MORGAN SECURITIES LLC	495,270	6,505	0.0131
J.P. MORGAN SECURITIES PLC	3,092,383	9,468	0.0031
J.P.MORGAN SECURITIES(FAR EAST)LTD SEOUL	23,864	213	0.0089
JANNEY MONTGOMERY SCOTT INC.	62,419	1,249	0.0200
JEFFERIESHONG KONG LIMITED	68,173	99	0.0014
JEFFERIESINDIA PRIVATE LIMITED	237,209	5,180	0.0218
JEFFERIESINTERNATIONAL LTD	1,207,611	6,599	0.0055
JEFFERIESLLC	1,721,948	10,949	0.0064
JMP SECURITIES	26,669	533	0.0200
JOH. BERENBERG, GOSSLER & CO. KG	94,777	3,822	0.0403
JONESTRADING INSTITUTIONAL SERVICES LLC	44,822	867	0.0194
JP MORGANBROKING HK LIMITED	27,800	168	0.0060
JP MORGANSECURITIES AUSTRALIA LTD	1,088,173	989	0.0009
JP MORGANSECURITIES SINGAPORE	3,705,900	1,019	0.0003
JPMORGAN SECURITIES(ASIA PACIFIC)LTD	18,082,955	2,974	0.0002
KEEFE BRUYETTE & WOODS INC	2,970	60	0.0203
KEPLER CHEUVREUX	1,221	46	0.0374
KEYBANC CAPITAL MARKETS INC	59,095	2,099	0.0355
KEYBANK NATIONAL ASSOCIATION	22,317	391	0.0175
KIM ENG SECURITIES (HK) LTD.	152,300	102	0.0007
KOREA INVESTMENT AND SECURITIES CO., LTD	3,526	270	0.0767
LEERINK PARTNERS LLC	6,815	189	0.0277
LIQUIDNET INC	114,816	2,304	0.0201
LIQUIDNETASIA LIMITED	150,700	131	0.0009
LIQUIDNETCANADA INC	1,300	17	0.0128
LIQUIDNETEUROPE LIMITED	25,235	656	0.0260
LOOP CAPITAL MARKETS	358,402	6,561	0.0183
LUMINEX TRADING AND ANALYTICS	6,248	31	0.0050

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, 2023

INDIVIDUAL OR BROKERAGE FIRM	# OF SHARES	COMMISSION PAID (in \$)	COMMISSION PER SHARE (in \$)
LUMINEX TRADING AND ANALYTICS LLC	263	3	0.0100
MACQUARIE SECURITIES (USA) INC	861	18	0.0207
MACQUARIEBANK LIMITED	788,330	1,090	0.0014
MACQUARIECAPITAL SECURITIES S	804,571	1,143	0.0014
MACQUARIESECURITIES KOREA LIMITED	819	19	0.0232
MERRILL LYNCH CANADA INC	4,251	128	0.0300
MERRILL LYNCH EQUITIES (AUSTRALIA)	225,488	2,217	0.0098
MERRILL LYNCH INTERNATIONAL	2,315,408	9,564	0.0041
MERRILL LYNCH, PIERCE FENNER SMITH	15,072	754	0.0500
MIRABAUD SECURITIES LLP	669	207	0.3097
MISCHLER FINANCIAL GROUP, INC-EQUITIES	1,760	16	0.0090
MIZUHO SECURITIES USA INC.	7,915	271	0.0343
MKM PARTNERS LLC	5,935	168	0.0283
MORGAN STANLEY AND CO INTERNATIONAL	115,553	1,134	0.0098
MORGAN STANLEY AND CO. INTERNATIONAL PLC	2,541,038	4,297	0.0017
MORGAN STANLEY CO INCORPORATED	18,775,527	22,975	0.0012
MORGAN STANLEY INDIA COMPANY PVT LTD	418,388	2,462	0.0059
MORGAN STANLEY TAIWAN LIMITED	3,219,000	2,359	0.0007
MOTILAL OSWAL SECURITIES LIMITED	51,961	929	0.0179
NATIONAL FINANCIAL SERVICES CORPORATION	13,518	270	0.0200
NATIONAL FINANCIAL SERVICES LLC	948	16	0.0164
NEEDHAM AND COMPANY LLC	24,382	1,004	0.0412
NESBITT BURNS	499	15	0.0300
NOMURA FINANCIAL ADVISORY & SEC INDIA	117,528	465	0.0040
NOMURA FINANCIAL INVESTMENT KOREA CO LTD	16,186	225	0.0139
NOMURA SECURITIES CO LTD	8,000	32	0.0041
NORTH SOUTH CAPITAL LLC	8,805	350	0.0397
NUMIS SECURITIES LIMITED	485,371	203	0.0004
OPPENHEIMER & CO. INC.	23,036	786	0.0341
PAREL	14,347	862	0.0601
PENSERRA SECURITIES	277,436	5,523	0.0199
PENSERRA SECURITIES LLC	268,476	492	0.0018
PERSHING LLC	2,318,613	19,538	0.0084
PERSHING SECURITIES LIMITED	847,577	8,087	0.0095
PGM GLOBAL INC.	77,140	1,478	0.0192
PIPER JAFFRAY & CO.	106,036	3,520	0.0332
PIPER, JAFFRAY AND HOPWOOD	353,717	1,069	0.0030
R.B.C. DOMINION SECURITIES CORPORATION	94	3	0.0300
RAYMOND JAMES AND ASSOCIATES	1,530	6	0.0037
RAYMOND JAMES AND ASSOCIATES INC	120,996	4,123	0.0341
RAYMOND JAMES LTD	3,821	115	0.0300
RBC CAPITAL MARKETS LLC	72,115	2,408	0.0334
RBC CAPITAL MARKETS, LLC	394,977	6,800	0.0172
REDBURN (EUROPE) LIMITED	54,772	706	0.0129
ROBERT W.BAIRD CO.INCORPORATED	316,762	7,445	0.0235
ROTH CAPITAL PARTNERS LLC	14,002	425	0.0303
ROYAL BANK OF CANADA EUROPE LTD	85,594	3,124	0.0365
SAMSUNG SECURITIES CO LTD	1,711	33	0.0192
SANFORD C BERNSTEIN CO LLC	87,586	1,045	0.0119

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, 2023

INDIVIDUAL OR BROKERAGE FIRM	# OF SHARES	COMMISSION PAID (in \$)	COMMISSION PER SHARE (in \$)
SANFORD C. BERNSTEIN AND CO. LLC	2,678,438	2,114	0.0008
SCOTIAMCLEOD (U.S.A.) INC.	88,430	621	0.0070
SG AMERICAS SECURITIES LLC	8,472	50	0.0060
SG SECURITIES (HK) LIMITED	268,507	279	0.0010
SIDCO/VIRTU AMERICAS	742	19	0.0251
SINOPAC SECURITIES CORPORATION	139,000	391	0.0028
SMBC SECURITIES INC	2,100	63	0.0299
SOCIETE GENERALE	654,135	940	0.0014
STATE STREET GLOBAL MARKETS, LLC	92,707	2,093	0.0226
STEPHENS INC	43,509	1,414	0.0325
STIFEL NICOLAUS & CO INC	99,432	2,795	0.0281
STRATEGAS SECURITIES LLC	2,173	72	0.0332
SUNTRUST CAPITAL MARKETS, INC.	14,195	675	0.0476
TELSEY ADVISORY GROUP	30,463	1,452	0.0477
THE BANK OF NEW YORK MELLON	156,332	374	0.0024
THE BENCHMARK COMPANY, LLC	5,117	256	0.0500
UBS AG	3,827,160	12,489	0.0033
UBS AG LONDON BRANCH	100,326	639	0.0064
UBS SECURITIES ASIA LTD	8,028,962	4,180	0.0005
UBS SECURITIES CANADA INC	375,697	269	0.0007
UBS SECURITIES HONG KONG LIMITED	159,000	56	0.0004
UBS SECURITIES INDIA PRIVATE LTD	66,447	331	0.0050
UBS SECURITIES LLC	1,018,345	6,143	0.0060
UBS SECURITIES PTE.LTD	128,559	432	0.0034
UBS SECURITIES PTE.LTD., SEOUL	22,255	370	0.0166
UOB KAY HIAN PTE LIMITED	181,700	307	0.0017
VIRTU AMERICAS	178,113	1,371	0.0077
VIRTU AMERICAS LLC	241,956	4,762	0.0197
VIRTU ITG HONG KONG LIMITED	1,228	92	0.0751
VIRTU ITGEUROPE LIMITED	35,132	894	0.0254
WELLS FARGO SECURITIES LLC	116,441	591	0.0051
WELLS FARGO SECURITIES, LLC	13,835	415	0.0300
WILLIAM BLAIR & COMPANY L.L.C	105,908	2,929	0.0277
WILLIAMS CAPITAL GROUP LP (THE)	2,400	19	0.0078
WOOD AND COMPANY	54,490	129	0.0024
WOOD GUNDY INC.	11,813	101	0.0086
XP INVESTIMENTOS CCTVM SA	247,200	239	0.0010
YUANTA SECURITIES CO., LTD.	1,000	13	0.0129

**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, 2023

(In thousands)

<u>Type of Investments</u>	<u>Fair Value</u>	<u>Percentages</u>
Short Term Investments	\$ 126,663	1.29 %
Debt Securities	2,146,559	21.84
Equity Securities	4,555,898	46.36
Alternative Investments	2,350,056	23.91
Collective Trust Funds		
Fixed Income	11,416	0.12
Domestic Equity	65,141	0.66
International Equity	2,563	0.03
Mortgage Debt Security	8,879	0.09
Total Collective Trust Funds	87,999	0.90
Collateral From Securities Lending:	560,609	5.70
Total Investments	\$ 9,827,784	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, 2023 AND JUNE 30, 2022**

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OFFICE OF THE ACTUARY

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NEW YORK, NY 10007
(212) 442-5775 • FAX: (212) 442-5777

MAREK TYSZKIEWICZ
CHIEF ACTUARY

December 1, 2023

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, 2023

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, 2021 actuarial valuation is used to determine Fiscal Year 2023 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 2023, 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 22, 2023, the Office of the Actuary (OA) published the "Fiscal Year 2023 GASB 67/68 Report for the City of New York and the New York City Retirement Systems" (the Fiscal Year 2023 GASB67/68 Report). Appendix C of the Fiscal Year 2023 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, 2021 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, 2021 and June 30, 2020 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, 2021 actuarial valuation is included in this ACFR. A summary of the census data used in the June 30, 2020 actuarial valuation of the Plan is available in the Fiscal Year 2022 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 Introductory Section of this ACFR. The benefits under the Plan have changed from the prior valuation and reflect the enactment of Chapter 56 of the Laws of 2022 which reduces the Tier 6 vesting requirement from ten years to five years. All other benefits under the Plan are unchanged from the prior valuation. Continued compliance has been presumed for the Older Workers Benefit Protection Act (OWBPA).

Note that this valuation does not reflect unknown potential future claims from *Gulino vs. Department of Education*, 96 Civ. 8414(KMW).

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, 2021 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.

Board of Trustees
New York City Board of Education Retirement System
December 1, 2023
Page 4

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 Crage Lu, Edward Hue, or me.

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
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NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2021 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.
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 the Market Value of Assets (MVA) as of June 30, 2019.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2021 ACTUARIAL VALUATION (Cont'd)

Beginning with the June 30, 2020 actuarial valuation, the asset smoothing method recognizes investment returns greater or less than expected over a period of five years, phasing these gains and losses in AVA at a rate of 20% per year.

The expected investment return is derived using the AIR of 7%, beginning-of-fiscal-year MVA, and net cash flows which are assumed to occur midyear.

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.

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 stable 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.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2021 ACTUARIAL VALUATION (Cont'd)

12. The One-Year Lag Methodology (OYLM) uses a June 30, XX valuation date to determine Fiscal Year XX+2 employer contributions as follows:

a. Normal Cost

The normal cost as of July 1, XX (calculated in the June 30, XX valuation) is rolled forward with the assumed AIR of 7.0% to the mid-point of Fiscal Year XX+2 (i.e., December 31, XX+1).

b. Administrative Expenses

A reimbursement for administrative expenses deducted from plan assets during the year ending June 30, XX is rolled forward with the assumed AIR of 7.0% to the mid-point of Fiscal Year XX+2.

c. UAL Payments

New amortization bases for gains and losses, method and assumption changes, and any benefit improvements are established each year XX such that the UAL as of June 30, XX is equal to the sum of the:

- 1) Outstanding prior amortization bases;
- 2) Unpaid prior year normal cost with interest;
- 3) Unreimbursed administrative expenses with interest, and
- 4) New Amortization Bases

The UAL payment is the sum of the payments on the amortization bases scheduled for Fiscal Year XX+2.

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

14. TDA Fixed Fund Normal Cost: A cost is added to each year's Normal Cost for providing a guaranteed 8.25% return on the TDA Fixed Fund.

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.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2021 ACTUARIAL VALUATION (Cont'd)

- 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, 2021 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, 2021 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, 2021 ACTUARIAL VALUATION (Cont'd)**

Table 3				
PROBABILITIES OF DISABILITY RETIREMENT				
	Ordinary Disability		Accidental Disability	
Age	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, 2021 ACTUARIAL VALUATION (Cont'd)**

Table 4			
PROBABILITIES OF MORTALITY FOR ACTIVE MEMBERS BASE RATES			
	Ordinary Death		Accidental Death
Age	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
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**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2021 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%

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**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2021 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, 2021 ACTUARIAL VALUATION (Cont'd)**

Table 5c					
PROBABILITIES OF MORTALITY FOR BENEFICIARIES					
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, 2021 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% 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
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%
2021	27,556	1,484,264,302	53,864	2.8%

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, 2021 and June 30, 2020 actuarial valuations, the Plan's Membership consisted of:

Table 8		
SUMMARY OF PLAN MEMBERSHIP		
Group	June 30, 2021	June 30, 2020
Active members	27,556	28,183
Terminated Nonvested Members	8,922	8,816
Deferred vested members not yet receiving benefits	1,972	1,972
Retirees and beneficiaries currently receiving benefits	<u>19,448</u>	<u>19,120</u>
Total	57,898	58,091

**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 Allowances ¹	Number	Annual Allowances	Number	Annual Allowances ²		
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	23,003,553	708	8,604,426	19,120	281,560,960	5.4%	14,726
2021	1,066	18,952,419	738	7,909,902	19,448	292,603,477	3.9%	15,045

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

² Allowances shown are those used in the actuarial valuation as of the Year End Date and are not adjusted for anticipated changes due to the finalization of benefit calculations or contract settlements.

**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
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%
2023	233,546,202	233,546,202	16.0%

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)	(2) Accrued Liability (AL)	(3) Unfunded AL (UAL) (2) - (1)	(4) Funded Ratio (1) / (2)	(5) Covered Payroll ¹	(6) UAL as a % of Covered Payroll (3) / (5)
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%
2021	5,471,200	5,880,071	408,871	93.0%	1,484,264	27.5%

¹ 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 (D)	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)
	(A)	(B)	(C)				
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
2021	728,036	2,953,125	2,198,910	5,471,200	100	100	81

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, 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%

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.

NEW YORK CITY BOARD OF EDUCATION RETIREMENT SYSTEM QUALIFIED PENSION PLAN

CONTRIBUTIONS (Cont'd)

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.

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**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, 2023 AND JUNE 30, 2022**

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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

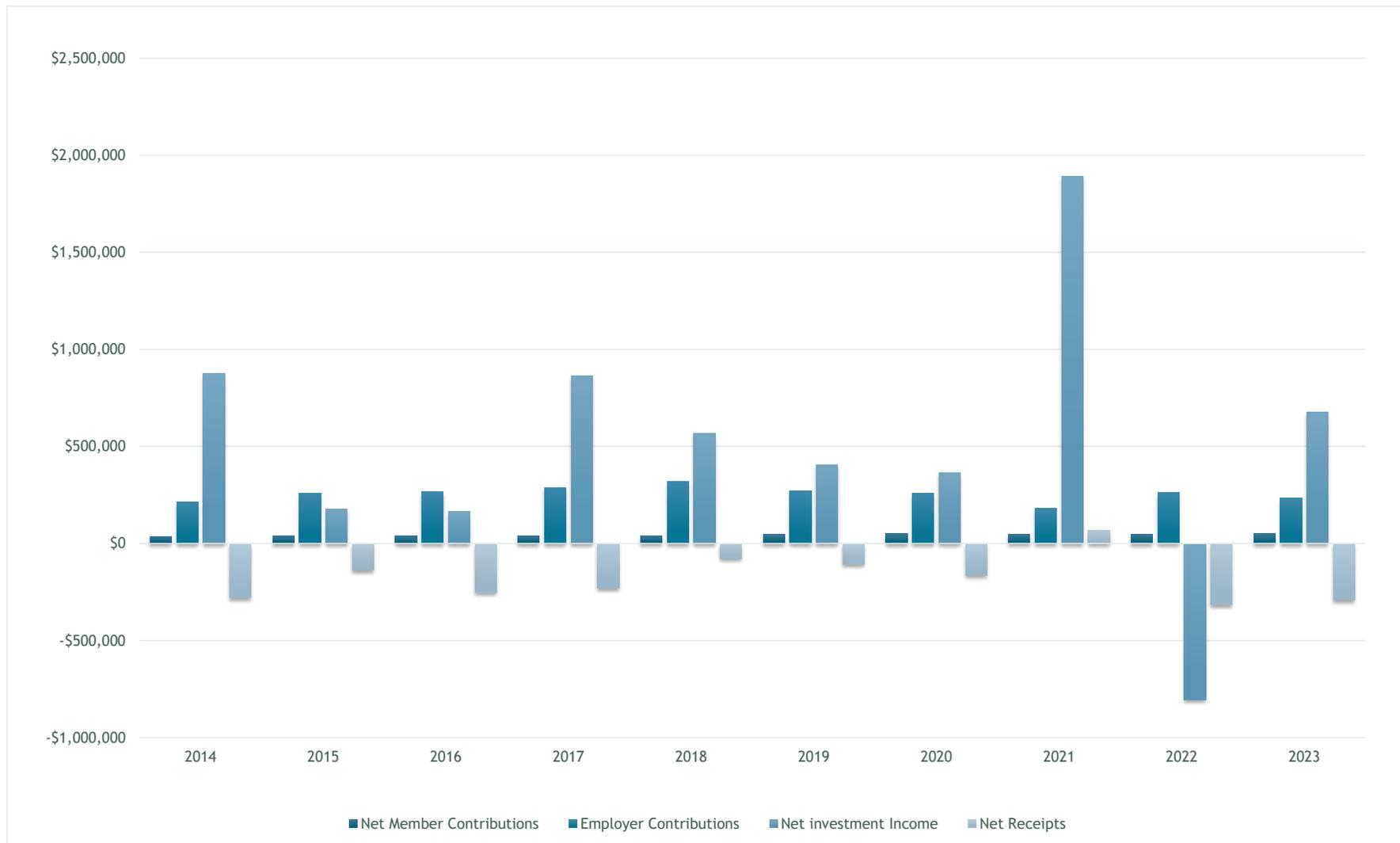
REVENUE BY SOURCE (In thousands)

Fiscal Year Ended June 30	Net Member Contributions	Employer Contributions	Net Investment Income	Net Receipts	Total	Employer Contributions as % of Payroll
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
2023	\$49,810	\$233,546	\$676,092	(\$290,060)	\$669,388	15.7

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**

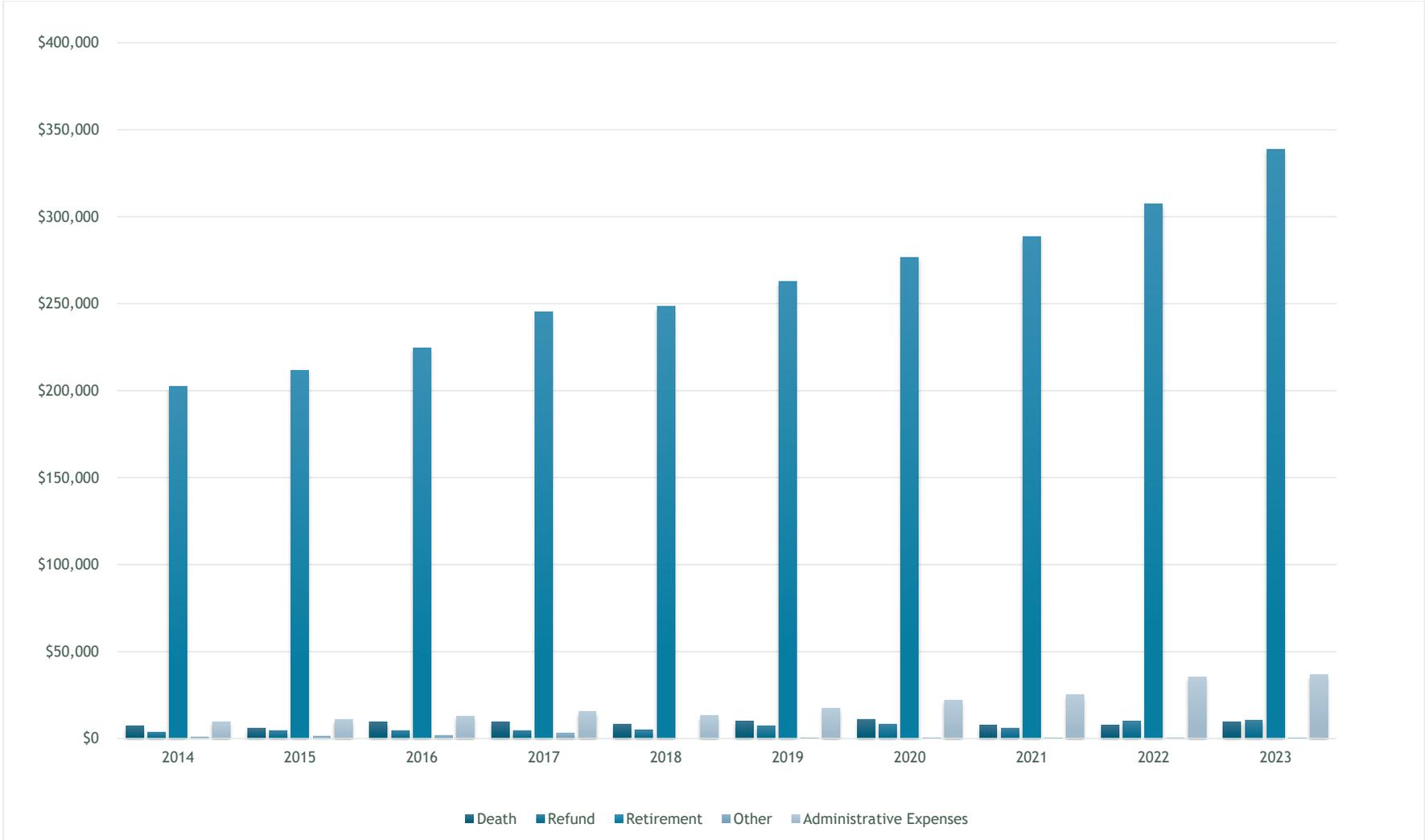
**EXPENSES BY TYPE
(In thousands)**

Fiscal Year Ended June 30	Benefit Payments				Administrative Expenses	Total
	Death	Refund	Retirement	Other		
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
2023	\$9,719	\$10,606	\$338,670	\$276	\$36,717	\$395,988

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

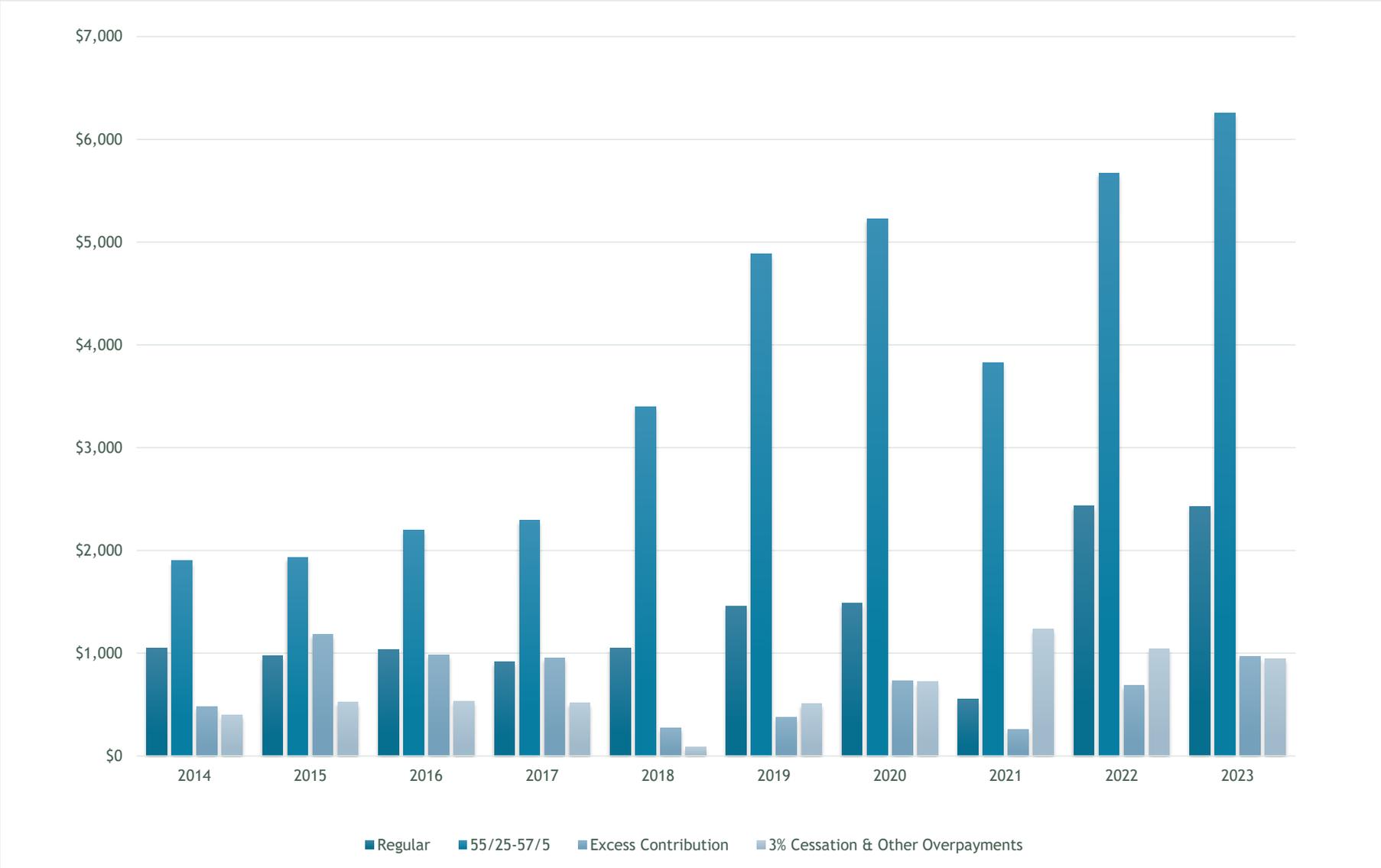
REFUNDS BY TYPE (In thousands)

Fiscal Year Ended June 30	Refunds				
	Regular Resignation	Add. Pension 55/25-57/5	Excess Contribution	3% Cessation & Other Overpayments	Total
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
2023	\$2,429	\$6,259	\$969	\$949	\$10,606

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**

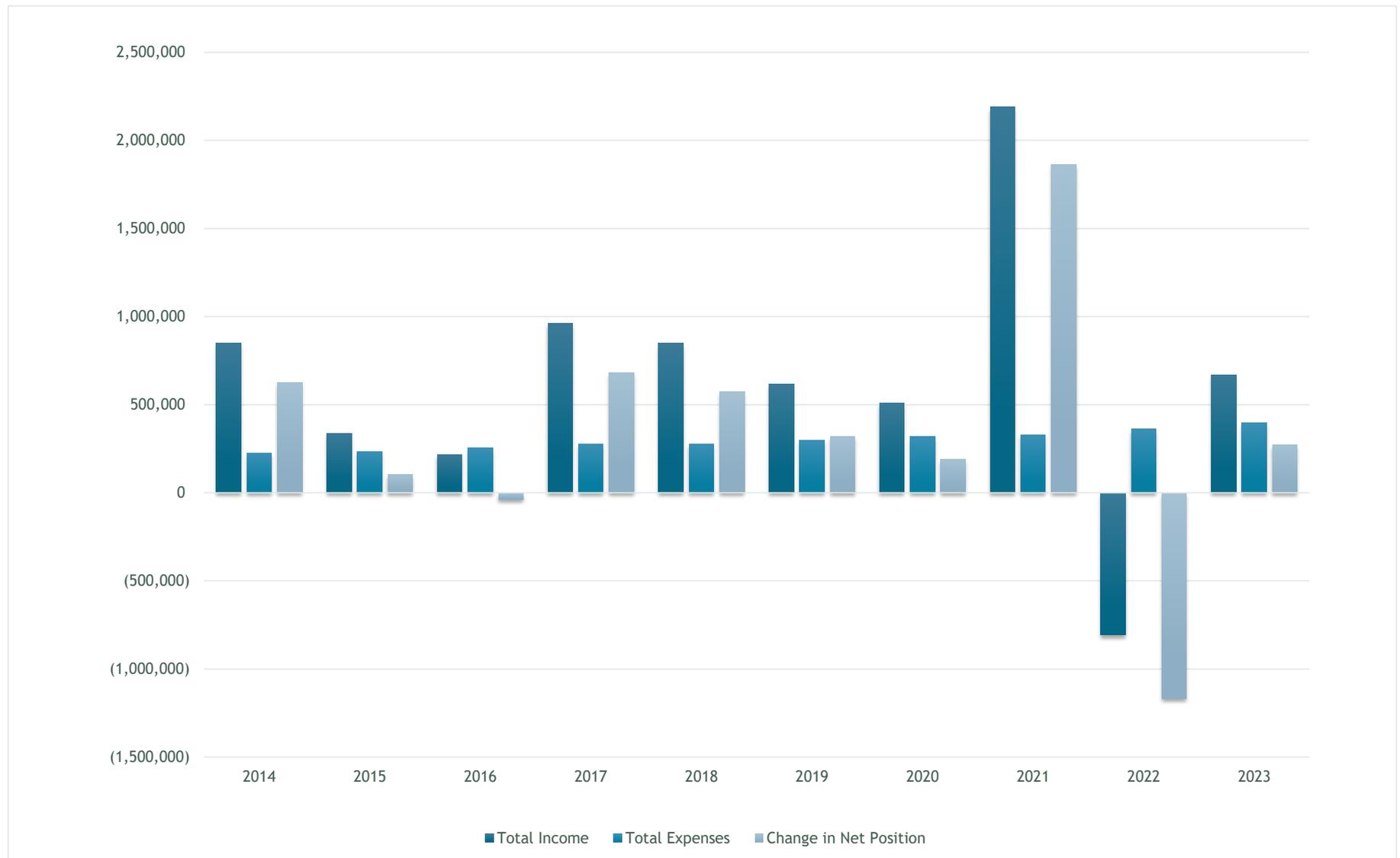
**SCHEDULE OF CHANGES IN NET POSITION
(In thousands)**

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			
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)
2023	\$49,810	\$233,546	\$676,092	(\$290,060)	\$669,388	\$9,719	\$10,606	\$338,670	\$276	\$36,717	\$395,988	\$273,400

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**

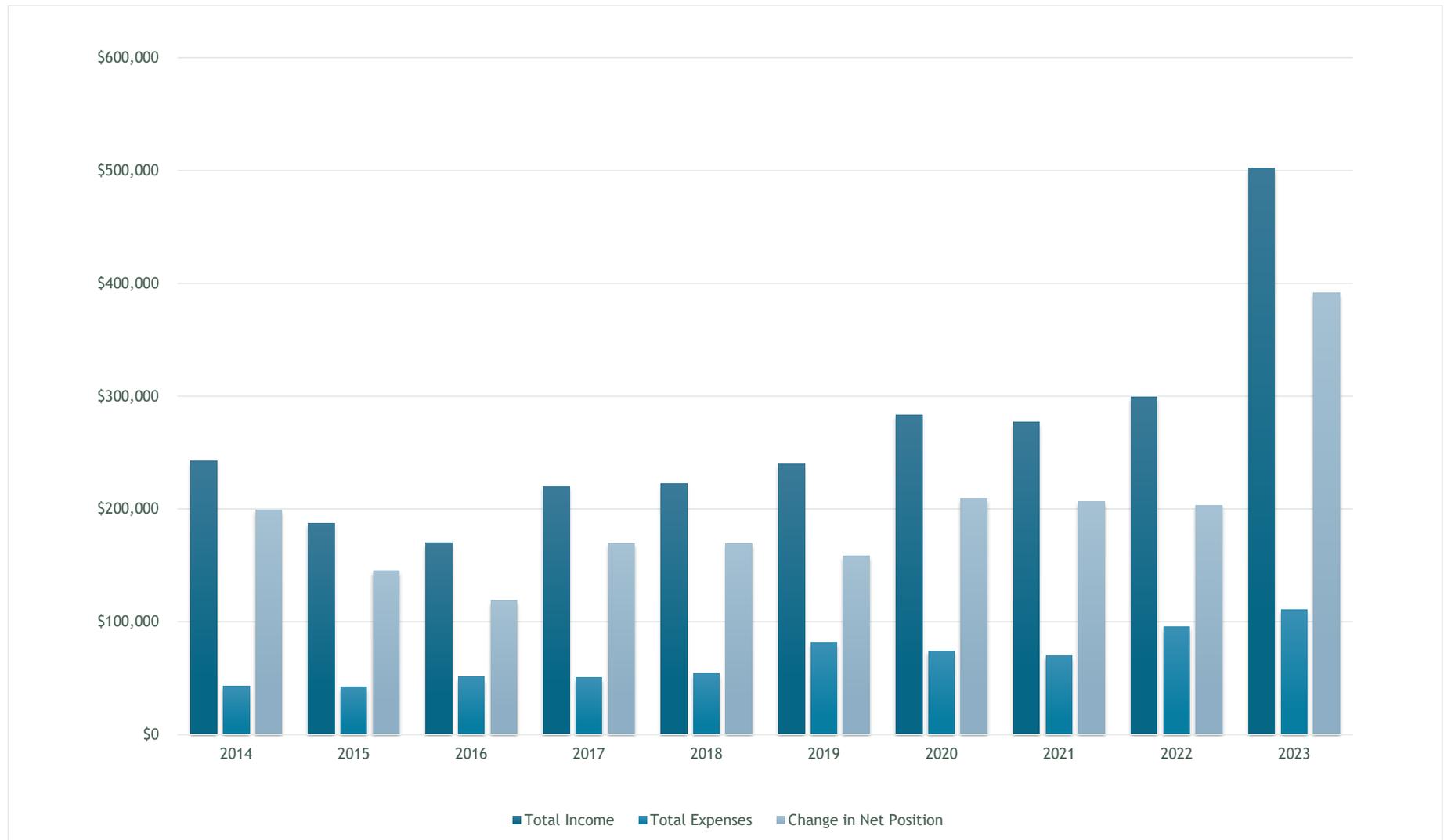
**SCHEDULE OF CHANGES IN NET POSITION
(In thousands)**

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			
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
2023	\$116,569	\$112,730	\$71,665	\$201,361	\$502,325	\$28,514	\$81,661	\$335	\$67	\$310	\$110,887	\$391,438

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	
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
2023	\$321,632	\$5,496	\$11,542	\$6,712	\$3,007	\$348,389

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	2	63,623	0	0
55 - 59	81	31,067	225	12,560
60 - 64	337	34,835	1,200	12,921
65 - 69	686	33,999	2,757	13,338
70 - 74	730	29,826	3,136	11,947
75 - 79	568	29,505	2,611	11,502
80 - 84	401	30,041	1,791	9,853
85 - 89	237	28,427	1,083	9,352
90 & OVER	169	27,001	979	8,951
TOTALS	3,211	\$31,014	13,782	\$11,547

ORDINARY DISABILITY (NON-DUTY) RETIREMENT

AGE	MEN		WOMEN	
	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE
49 & UNDER	7	\$15,189	9	\$14,329
50 - 54	9	16,756	26	16,699
55 - 59	30	18,349	104	12,967
60 - 64	49	19,017	186	11,671
65 - 69	52	17,521	203	11,191
70 - 74	44	18,011	176	10,662
75 - 79	27	16,379	121	10,213
80 - 84	14	13,570	63	9,484
85 - 89	2	21,580	9	8,775
90 & OVER	4	17,325	6	8,205
TOTALS	238	\$17,595	903	\$11,287

NOTE: This schedule is based on 2021 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	3	\$14,874
50 - 54	1	10,250	4	9,821
55 - 59	7	22,659	14	10,562
60 - 64	11	25,505	30	9,355
65 - 69	8	16,108	43	11,983
70 - 74	7	15,717	36	10,271
75 - 79	6	20,029	19	8,144
80 - 84	5	33,701	13	8,209
85 - 89	1	25,273	8	7,373
90 & OVER	2	38,005	4	9,147
TOTALS	49	\$22,249	174	\$10,083

ACCIDENTAL DEATH (DUTY) RETIREMENT

AGE	MEN		WOMEN	
	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE
49 & UNDER	4	\$4,801	2	\$6,858
50 - 54	0	0	0	0
55 - 59	0	0	0	0
60 - 64	2	4,260	1	51,707
65 - 69	1	17,226	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	8	\$5,669	3	\$21,808

NOTE: This schedule is based on 2021 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	30	\$12,413	44	\$10,127
50 - 54	11	10,328	45	6,310
55 - 59	20	9,105	43	6,348
60 - 64	30	10,413	55	10,325
65 - 69	33	15,113	62	12,999
70 - 74	52	18,212	71	16,551
75 - 79	72	19,714	74	15,293
80 - 84	58	18,112	101	21,453
85 - 89	43	15,538	102	19,828
90 & OVER	36	15,492	98	15,811
TOTALS	385	\$15,901	695	\$14,995

ALL PENSIONERS AND BENEFICIARIES

AGE OF RETIRANTS	MEN		WOMEN	
	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE	NUMBER OF RETIRANTS	AVERAGE ANNUAL ALLOWANCE
49 & UNDER	42	\$12,140	58	\$10,911
50 - 54	23	17,474	75	10,099
55 - 59	138	24,693	386	11,905
60 - 64	429	30,939	1,472	12,619
65 - 69	780	31,896	3,065	13,170
70 - 74	833	28,358	3,419	11,959
75 - 79	673	27,846	2,825	11,523
80 - 84	478	28,150	1,968	10,425
85 - 89	284	26,318	1,202	10,223
90 & OVER	211	24,958	1,087	9,566
TOTALS	3,891	\$28,535	15,557	\$11,671

NOTE: This schedule is based on 2021 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, 2021 (LAG) Actuarial Valuation
For Determining Fiscal Year 2023 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	0	0	0	0	0	0	0	0	0	0
20 TO 24	54	0	0	0	0	0	0	0	0	54
25 TO 29	254	7	0	0	0	0	0	0	0	261
30 TO 34	440	134	18	0	0	0	0	0	0	592
35 TO 39	429	242	69	11	0	0	0	0	0	751
40 TO 44	373	248	136	66	17	0	0	0	0	840
45 TO 49	294	222	204	148	56	6	0	0	0	930
50 TO 54	303	231	156	206	108	47	6	0	0	1,057
55 TO 59	306	237	170	179	126	79	43	9	0	1,149
60 TO 64	183	188	123	112	104	81	77	19	5	892
65 TO 69	70	93	75	57	36	31	24	9	9	404
70 & UP	31	48	34	28	28	12	6	5	8	200
TOTAL	2,737	1,650	985	807	475	256	156	42	22	7,130

SALARIES (IN THOUSANDS):

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	1,877	0	0	0	0	0	0	0	0	1,877
25 TO 29	11,694	390	0	0	0	0	0	0	0	12,084
30 TO 34	25,523	8,656	1,256	0	0	0	0	0	0	35,436
35 TO 39	27,665	16,972	4,853	993	0	0	0	0	0	50,484
40 TO 44	25,001	17,319	11,512	6,539	1,408	0	0	0	0	61,780
45 TO 49	20,304	14,928	17,638	15,371	5,177	722	0	0	0	74,141
50 TO 54	19,551	14,298	13,165	22,907	10,294	4,304	465	0	0	84,985
55 TO 59	18,625	14,403	13,269	18,306	12,380	7,954	4,409	763	0	90,110
60 TO 64	9,943	10,321	8,864	10,201	9,929	7,366	8,066	2,101	561	67,351
65 TO 69	4,102	5,678	5,062	5,226	3,461	3,008	2,241	874	1,045	30,696
70 & UP	1,111	2,076	2,047	1,695	2,424	1,174	588	571	901	12,586
TOTAL¹	165,396	105,042	77,668	81,238	45,073	24,528	15,770	4,309	2,507	521,529

AVERAGE SALARIES:²

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	34,755	0	0	0	0	0	0	0	0	34,755
25 TO 29	46,041	55,679	0	0	0	0	0	0	0	46,299
30 TO 34	58,007	64,601	69,799	0	0	0	0	0	0	59,858
35 TO 39	64,487	70,132	70,339	90,284	0	0	0	0	0	67,222
40 TO 44	67,026	69,834	84,648	99,083	82,840	0	0	0	0	73,547
45 TO 49	69,061	67,244	86,462	103,860	92,443	120,331	0	0	0	79,721
50 TO 54	64,526	61,898	84,393	111,200	95,317	91,578	77,455	0	0	80,402
55 TO 59	60,866	60,773	78,052	102,266	98,254	100,687	102,542	84,832	0	78,424
60 TO 64	54,332	54,899	72,067	91,078	95,471	90,942	104,752	110,559	112,193	75,506
65 TO 69	58,598	61,052	67,493	91,676	96,133	97,034	93,385	97,088	116,125	75,981
70 & UP	35,840	43,250	60,208	60,546	86,557	97,799	98,060	114,131	112,564	62,931
TOTAL	60,430	63,662	78,850	100,667	94,890	95,814	101,087	102,585	113,936	73,146

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, 2021 (LAG) Actuarial Valuation
For Determining Fiscal Year 2023 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	0	0	0	0	0	0	0	0	0	0
20 TO 24	56	0	0	0	0	0	0	0	0	56
25 TO 29	532	14	0	0	0	0	0	0	0	546
30 TO 34	956	253	5	0	0	0	0	0	0	1,214
35 TO 39	922	476	138	12	0	0	0	0	0	1,548
40 TO 44	1,079	559	362	135	15	1	0	0	0	2,151
45 TO 49	1,086	615	370	265	107	5	0	0	0	2,448
50 TO 54	1,128	890	514	356	163	54	17	0	0	3,122
55 TO 59	921	1,053	750	579	293	94	54	23	1	3,768
60 TO 64	616	795	667	596	367	129	53	44	9	3,276
65 TO 69	212	351	349	287	201	82	22	13	8	1,525
70 & UP	78	161	158	189	98	46	24	11	7	772
TOTAL	7,586	5,167	3,313	2,419	1,244	411	170	91	25	20,426

SALARIES (IN THOUSANDS):

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	1,711	0	0	0	0	0	0	0	0	1,711
25 TO 29	27,401	671	0	0	0	0	0	0	0	28,072
30 TO 34	56,404	18,440	420	0	0	0	0	0	0	75,265
35 TO 39	45,390	33,036	10,836	863	0	0	0	0	0	90,124
40 TO 44	43,434	35,345	28,530	11,888	1,218	104	0	0	0	120,519
45 TO 49	40,495	30,641	24,725	22,136	8,958	477	0	0	0	127,432
50 TO 54	36,358	36,410	27,335	21,905	11,663	4,339	1,408	0	0	139,417
55 TO 59	29,516	38,350	29,897	28,491	16,298	7,015	4,527	2,141	58	156,292
60 TO 64	20,002	27,545	27,395	26,357	19,790	7,300	4,336	3,485	689	136,901
65 TO 69	6,626	11,272	13,093	12,341	9,615	4,460	1,534	1,026	763	60,731
70 & UP	1,906	4,262	4,628	7,110	3,805	2,157	1,426	491	486	26,270
TOTAL¹	309,243	235,974	166,859	131,091	71,348	25,852	13,231	7,143	1,996	962,735

AVERAGE SALARIES: ²

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	30,546	0	0	0	0	0	0	0	0	30,546
25 TO 29	51,506	47,914	0	0	0	0	0	0	0	51,414
30 TO 34	59,000	72,887	83,980	0	0	0	0	0	0	61,997
35 TO 39	49,230	69,403	78,520	71,899	0	0	0	0	0	58,220
40 TO 44	40,254	63,230	78,813	88,058	81,211	103,948	0	0	0	56,029
45 TO 49	37,288	49,823	66,825	83,531	83,720	95,441	0	0	0	52,055
50 TO 54	32,233	40,910	53,181	61,531	71,550	80,346	82,830	0	0	44,656
55 TO 59	32,047	36,420	39,863	49,207	55,625	74,632	83,826	93,072	57,696	41,479
60 TO 64	32,471	34,648	41,073	44,224	53,924	56,591	81,814	79,206	76,550	41,789
65 TO 69	31,253	32,115	37,517	43,001	47,837	54,388	69,717	78,952	95,426	39,824
70 & UP	24,437	26,474	29,291	37,617	38,826	46,881	59,432	44,632	69,365	34,029
TOTAL	40,765	45,669	50,365	54,192	57,353	62,900	77,829	78,495	79,824	47,133

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, 2021 (LAG) Actuarial Valuation
For Determining Fiscal Year 2023 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	0	0	0	0	0	0	0	0	0	0
20 TO 24	110	0	0	0	0	0	0	0	0	110
25 TO 29	786	21	0	0	0	0	0	0	0	807
30 TO 34	1,396	387	23	0	0	0	0	0	0	1,806
35 TO 39	1,351	718	207	23	0	0	0	0	0	2,299
40 TO 44	1,452	807	498	201	32	1	0	0	0	2,991
45 TO 49	1,380	837	574	413	163	11	0	0	0	3,378
50 TO 54	1,431	1,121	670	562	271	101	23	0	0	4,179
55 TO 59	1,227	1,290	920	758	419	173	97	32	1	4,917
60 TO 64	799	983	790	708	471	210	130	63	14	4,168
65 TO 69	282	444	424	344	237	113	46	22	17	1,929
70 & UP	109	209	192	217	126	58	30	16	15	972
TOTAL	10,323	6,817	4,298	3,226	1,719	667	326	133	47	27,556

SALARIES (IN THOUSANDS):

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	3,587	0	0	0	0	0	0	0	0	3,587
25 TO 29	39,096	1,061	0	0	0	0	0	0	0	40,156
30 TO 34	81,927	27,097	1,676	0	0	0	0	0	0	110,701
35 TO 39	73,055	50,008	15,689	1,856	0	0	0	0	0	140,608
40 TO 44	68,435	52,664	40,042	18,427	2,626	104	0	0	0	182,299
45 TO 49	60,799	45,569	42,363	37,507	14,135	1,199	0	0	0	201,572
50 TO 54	55,910	50,708	40,500	44,812	21,957	8,643	1,873	0	0	224,403
55 TO 59	48,141	52,754	43,166	46,796	28,678	14,970	8,936	2,904	58	246,402
60 TO 64	29,945	37,866	36,260	36,558	29,719	14,666	12,402	5,586	1,250	204,252
65 TO 69	10,728	16,950	18,155	17,567	13,076	7,468	3,775	1,900	1,809	91,427
70 & UP	3,017	6,338	6,675	8,805	6,229	3,330	2,015	1,062	1,386	38,856
TOTAL¹	474,638	341,015	244,527	212,329	116,420	50,380	29,001	11,452	4,502	1,484,264

AVERAGE SALARIES: ²

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	32,612	0	0	0	0	0	0	0	0	32,612
25 TO 29	49,740	50,502	0	0	0	0	0	0	0	49,760
30 TO 34	58,687	70,018	72,882	0	0	0	0	0	0	61,296
35 TO 39	54,075	69,649	75,793	80,692	0	0	0	0	0	61,161
40 TO 44	47,131	65,259	80,406	91,678	82,077	103,948	0	0	0	60,949
45 TO 49	44,057	54,444	73,804	90,816	86,717	109,017	0	0	0	59,672
50 TO 54	39,070	45,235	60,448	79,737	81,022	85,573	81,428	0	0	53,698
55 TO 59	39,234	40,894	46,919	61,737	68,444	86,530	92,123	90,754	57,696	50,112
60 TO 64	37,478	38,521	45,898	51,636	63,098	69,840	95,400	88,662	89,280	49,005
65 TO 69	38,041	38,176	42,819	51,066	55,173	66,088	82,066	86,371	106,384	47,396
70 & UP	27,680	30,327	34,766	40,576	49,433	57,416	67,157	66,351	92,404	39,976
TOTAL	45,979	50,024	56,893	65,818	67,726	75,532	88,959	86,102	95,792	53,864

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
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
2021(Lag)	16,993	\$15,225	\$1,269	1141	\$12,603	\$1,050	223	\$12,757	\$1,063	1091	\$15,265	\$1,272

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

**PARTICIPATING EMPLOYERS
AS OF JUNE 30, 2021 (LAG)**

Employer	As of June 30, 2021 (Lag)		As of June 30, 2012 (Lag)	
	Number of Employees	Annual Payroll	Number of Employees	Annual Payroll
NYC Department of Education¹	26,809	\$ 1,401,571,582	27,260	\$ 965,217,331
NYC Schools Construction Authority	735	82,178,049	567	53,226,642
Charter Schools				
Beginning with Children²	0	-	3	97,667
KIPP Academy	0	-	0	-
Renaissance	12	514,671	10	353,725
TOTAL	27,556	\$ 1,484,264,302	27,840	\$ 1,018,895,365

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.

BERS
of the City of New York

Board of
Education
Retirement
System

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