

Annual Comprehensive Financial Report

Fiscal Years Ending June 30, 2024 and June 30, 2023



Teachers' Retirement System of the City of New York
A Fiduciary Fund of the City of New York

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A Fiduciary Fund of the City of New York

Annual Comprehensive Financial Report
for Fiscal Years Ended
June 30, 2024 and June 30, 2023

Prepared by the Accounting Department for the
Qualified Pension Plan
and
Tax-Deferred Annuity Program

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

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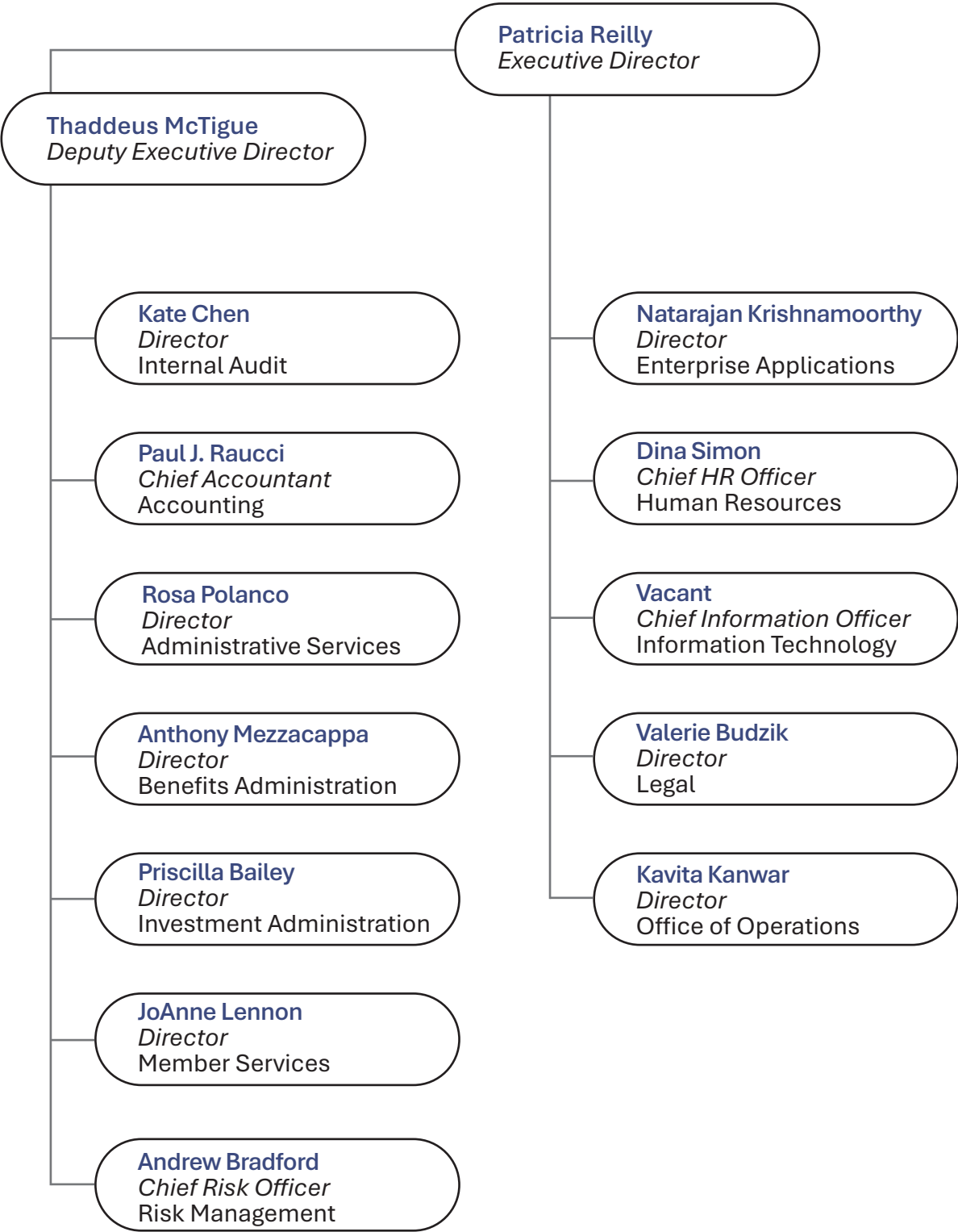
Introductory Section



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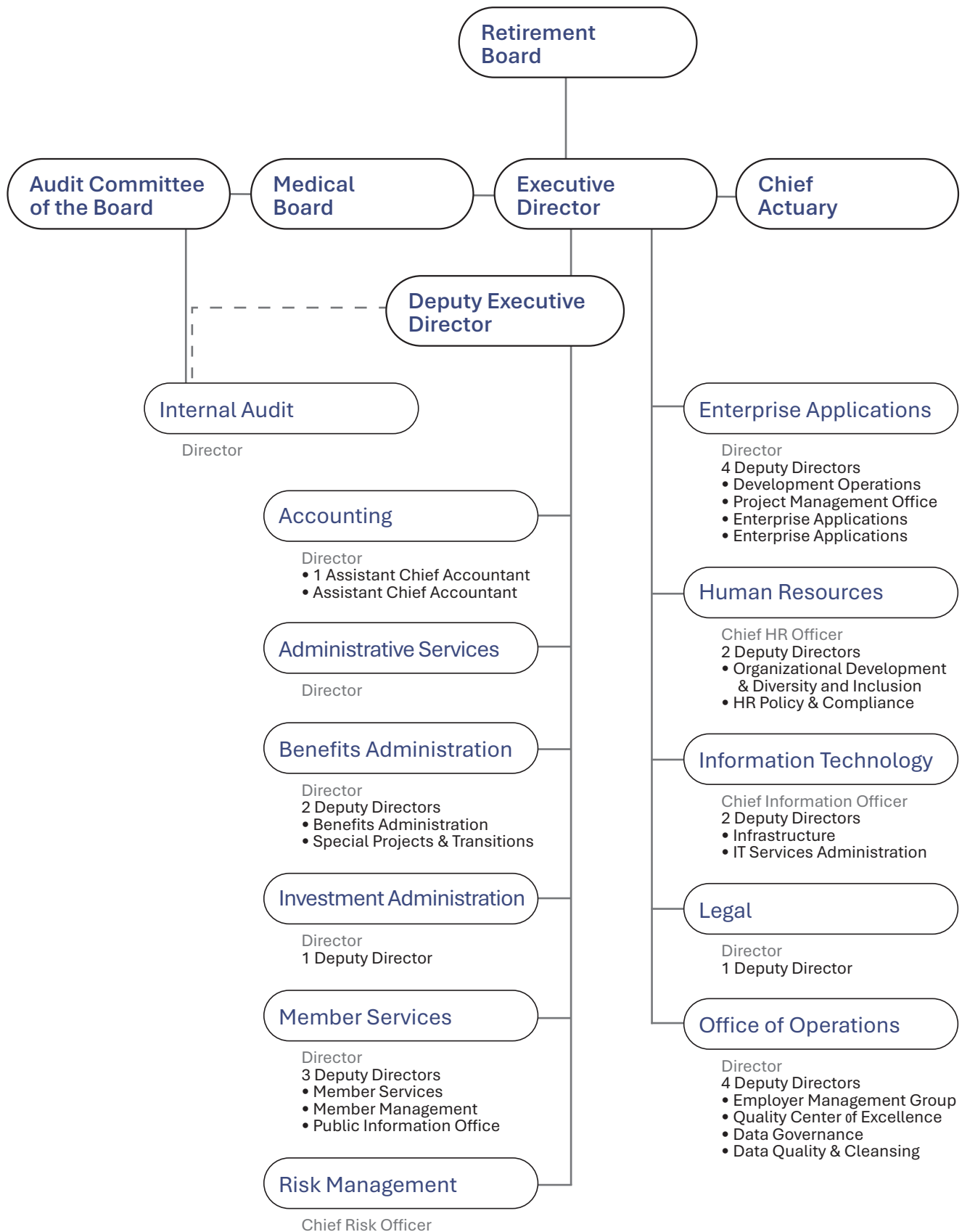
Principal Officials

As of June 30, 2024



Organization Chart

As of June 30, 2024





Government Finance Officers Association

**Certificate of
Achievement
for Excellence
in Financial
Reporting**

Presented to

**Teachers' Retirement System of the City of New York
New York**

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2023

Christopher P. Morill

Executive Director/CEO



December 20, 2024

Dear Members of the Board of Trustees:

We are pleased to present the Annual Comprehensive Financial Report of the Teachers' Retirement System of the City of New York (TRS) for the fiscal year ended June 30, 2024.

TRS was established on August 1, 1917 under Chapter 303 of the Laws of 1917 and is governed by the Administrative Code of the City of New York and the New York State Retirement and Social Security Law.

TRS' pension plan became a tax-qualified retirement plan under Section 401(a) of the Internal Revenue Code (IRC) and is known as our Qualified Pension Plan (QPP). The QPP is a cost-sharing, multiple employer defined-benefit pension plan. The QPP provides pension benefits to teachers and educational or administrative personnel employed by the Department of Education, participating New York City Charter Schools, and the City University of New York.

TRS' Tax-Deferred Annuity (TDA) Program was established and is administered pursuant to IRC Section 403(b) and NYC Administrative Code section 13-582, and became effective February 1, 1970. The TDA Program is a voluntary defined-contribution savings option available to TRS members.

Member Profile

Our programs impact over 220,000 in-service members, retirees, and beneficiaries. Our membership includes individuals of varying ages, membership tiers, and employment status. And although many TRS members are currently in active service, more than 40% of them have retired. As of June 30, 2024, there were approximately 127,000 in-service members and approximately 96,000 retired members and beneficiaries receiving monthly benefits.

Participating Employers

The participating employers that share the cost of the defined-benefit QPP plan are the New York City Department of Education (DOE), City University of New York (CUNY), and certain New York City Charter Schools that offer TRS benefits to their employees. Employees who become TRS members may participate in the TDA Program in addition to the QPP plan.

Initiatives

During the past fiscal year, TRS implemented several initiatives, both internal and public-facing: Among key legislative projects, we implemented Chapter 716 of the Laws of 2022, which changed the calculation of death benefits resulting from the death of a retiree. Chapter 711 of the Laws of 2023 requires the transfer of reserves between pension funds when members with at least 10 years of credit transfer their membership. We completed system changes needed for incoming transfers and began work to support outgoing transfers. We also implemented pension revisions related to recent collective bargaining agreements, and we completed the second phase of a telecom upgrade, including post-call surveys and a live chat option for members on our portal.

Under our modernization initiative, we enhanced retirees' ability to manage their electronic payments and access payment details online. Additional milestones included generating pension valuation data from the new system for the first time, and enhancing our partner portal to allow CUNY staff to directly enroll new employees in TRS for the first time. Production stabilization also continued through regular maintenance releases, and planning for future phases continued.

Financial Statements

The financial statements and notes along with Management's Discussion and Analysis in this report present and analyze the changes in the TRS fiduciary net position for the fiscal year ended June 30, 2024. Since markets are dynamic and fluid, any judgment of the financial statements should also consider current market conditions.

Funding

The Qualified Pension Plan's funding objective is to meet long-term benefit promises through employer and member contributions, together with investment earnings. Annual funding by employer contributions is determined through an actuarial valuation of all liabilities to the QPP with adjustments to allow for an incremental phase-in of newly assumed actuarial liabilities. As such, employer contributions have been increasing steadily in line with current membership liabilities.

The QPP's funding ratios are also developed as part of the QPP's actuarial valuation. The funding ratios are determined at specific points in time, are usually expressed in various relationships of assets to obligations, and, over time, can provide insight into the long-term financial trend of the QPP.

One measure of the QPP's funded status, the ratio of Actuarial Asset Value to the Entry Age Normal Actuarial Accrued Liability, determined as of June 30, 2022, is 85.5%. Please refer to the report's Actuarial Section for a detailed discussion of the Plan's measures of funded status.

Under Governmental Accounting Standards Board (GASB) Statement No. 67, Financial Reporting for Pension Plans, a defined-benefit pension plan is also required to report fiduciary net position as a percentage of the plan's total pension liability. This method reports assets at current fair value and, as such, is more sensitive to market volatility. As of June 30, 2024, the Qualified Pension Plan's fiduciary net position represents 85.7% of the QPP's total pension liability.

Funds needed to finance the QPP's long-term benefit are accumulated through the collection of employer and member contributions and through income from investments. Primary expenses include benefit and survivor payments as well as investment and administrative expenses, and refunds of contributions to terminated employees. An overview of revenue and expenses, as well as asset and liability information, is provided in the Management's Discussion and Analysis portion of the Financial Section.

Management Responsibility for Financial Reporting and Internal Controls

The financial statements were prepared in accordance with accounting principles generally accepted in the United States of America and GASB pronouncements. Management is responsible for the integrity and fairness of the information presented in the financial statements, including data that, out of necessity, is based on estimates and judgments. Management is also responsible for establishing and maintaining an effective internal control structure. A system of internal controls provides reasonable, but not absolute, assurance that assets are properly safeguarded and that financial statements are reliable. The concept of reasonable assurance recognizes that first, the cost of a control should not exceed the benefits likely to be derived, and second, the valuation of the cost and benefits requires estimates and judgments by management. We believe that the internal controls currently in place support this purpose, and that the financial statements, accompanying schedules, and statistical tables are fairly presented in all material respects.

Investments

Assets of the QPP and the TDA Program are invested together in the following investment funds: the Pension Fund, the Diversified Equity Fund, the Balanced Fund, the International Equity Fund, the Sustainable Equity Fund, the U.S. Equity Index Fund, and the International Equity Index Fund. The performance summary for Fiscal Year 2024 follows:

| Rate of Return By Fund—Fiscal Year 2024 | | |
|---|--------|--------------------------|
| Fund | ROR | Gross vs. Net Returns |
| Pension | 9.96% | Net of Advisory Expenses |
| | | |
| Variable-Return Funds | ROR | Gross vs. Net Returns* |
| Diversified Equity Fund | 20.26% | Net of Fees |
| Balanced Fund | 8.85% | Net of Fees |
| International Equity Fund | 10.98% | Net of Fees |
| Sustainable Equity Fund | 27.38% | Net of Fees |
| U.S. Equity Index Fund | 22.34% | Net of Fees |
| International Equity Index Fund | 10.68% | Net of Fees |
| * net of operational (advisory and custody) and administrative expenses | | |

For Funds other than the Pension Fund, members’ accounts are valued on a monthly basis based on unit values. The unit values are based on each Fund’s closing fair value as of the end of the preceding month and are comparable to shares in mutual funds. TRS members who invest in these variable-return funds purchase units with their contributions.

The following table showing July unit values for 2024 and 2023 was based on the performance of the variable-return funds as of June 30. In addition to the changes in unit values, members' accounts are credited with a 4% increment factor increasing the number of units they hold, and their accounts are similarly discounted to offset this increase.

| Unit Values for Fiscal Years 2024 and 2023 | | |
|---|-----------------------------|-----------------------------|
| Variable Fund | Unit Value July 2024 | Unit Value July 2023 |
| Diversified Equity Fund | \$139.612 | \$120.740 |
| Balanced Fund | 16.251 | 15.528 |
| International Equity Fund | 12.088 | 11.328 |
| Sustainable Equity Fund | 31.308 | 25.561 |
| U.S. Equity Index Fund | 17.201 | 14.624 |
| International Equity Index Fund | 12.010 | 11.284 |

The Administrative Code of the City of New York and Retirement and Social Security Law authorize the investments of plan assets subject to the terms, conditions, limitations, and restrictions imposed by law. The New York State Retirement and Social Security Law, Banking Law, and the Administrative Code establish the criteria for permissible equity investments. Plan assets are diversified over a range of investments, and multiple investment strategies are used to limit risk. Details concerning the criteria for TRS' investments may be found in the Notes to the Financial Statements. A detailed discussion of TRS' investment strategies, asset classes, and yield information is provided in the report's Investment Section.

Actuarial Reports

The Actuarial Section contains the Actuary's certification letter, the actuary's statements, a summary of actuarial assumptions, and the actuarial tables. The actuarial valuation provides a picture of the overall funding health of the QPP.

Statistical Reports

Past and current data are contained in this section. The section includes tables that reflect the net position and demographic characteristics of the QPP and the TDA Program. Also captured in the tables, when applicable, is information comparing ten years of data. This look back shows overall trends in our programs and membership demographics that help to accurately forecast our future ability to meet our members' retirement needs.

Independent Audit & Professional Services

State statutes require an annual audit by independent certified public accountants. TRS' auditor, Grant Thornton LLP, provides a Report of Independent Certified Public Accountants on the financial statements and schedules in the Financial Section of this Report.

Investment professionals are appointed under the direction of the Teachers' Retirement Board. Investment administration services for the TRS NYC Pension Fund are provided by the New York City Office of the Comptroller. Investment administration services for TRS's Variable-Return Funds are performed by TRS. The Office of the Comptroller and TRS hire consultants and other investment professionals to perform additional investment services. The listing of Investment Managers and Fees can be found on pages 111-123. A listing of brokerage firms and the amounts paid to such firms can be found in the Schedule of Payments of Commissions to Brokers on pages 124-142.

Legal services to TRS are provided by the City's Corporation Counsel and Groom Law Group.

Actuarial services are provided by the Office of the Actuary of the City of New York, which is employed by the City's five major pension systems.

Awards

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to TRS for its Annual Comprehensive Financial Report for the Fiscal Year ended June 30, 2023. This was the 36th consecutive year that TRS was accorded this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized Annual Comprehensive Financial Report. This report must satisfy both the generally accepted accounting principles and the applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current annual comprehensive financial report continues to meet the Certificate of Achievement Program's requirements, and we are submitting it to the GFOA for its consideration.

Acknowledgements

The compilation of the Report reflects the efforts of the TRS staff under the leadership of the Board of Trustees. It is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions, and as a means for determining responsible stewardship for the assets contributed by the members and their employers.

Finally, we would like to take this opportunity to express our gratitude to the staff, the advisors, and the many people who have worked diligently to ensure the successful operation of TRS.

Sincerely,



Patricia M. Reilly
Executive Director



Paul J. Raucci
Chief Accountant

Summary of Plan Provisions

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Summary of Plan Provisions

TRS' principal benefit provisions correspond to the tier structure established by applicable New York State Law¹.

Tiers III, IV, VI

Members with a date of membership of July 27, 1976 or later are covered by the following provisions:

Service Retirement

Normal Service Retirement

Eligibility:

A member is eligible to retire at age 62 (age 63 for Tier VI) with immediate payability after 5 or more years of service².

Current members as of February 27, 2008 (excluding CUNY employees) were provided a 180-day period during which they were allowed to join a plan that permitted them to retire at age 55 and later with immediate payability and without reduction after 25 years of service, provided they pay an additional 1.85% of future pay, subject to contribution obligations.

After February 27, 2008, new members (excluding CUNY employees) are eligible to retire at age 55 and later with immediate payability and without reduction after 27 years of service and are required to pay an additional 1.85% of future pay, subject to contribution obligations.

After December 10, 2009, new members in a position represented by the UFT under the 55/27 retirement program 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.

After March 31, 2012, new Tier VI members are required to make contributions in amounts ranging from 3% to 6% per annum, based on annual wages earned during a "plan year," originally defined as April 1 to March 31, but amended to January 1 to December 31 as of January 1, 2016.³

Benefits:

- (1) For a member with fewer than 20 years of service, the benefit is 1.67% times FAS⁴ multiplied by years of service.
- (2) For a member with at least 20 (Tier VI) but fewer than 30 years of service (Tier III/IV), the benefit is 2% times FAS multiplied by years of service (Tier III/IV) or 35% plus 2% times FAS multiplied by each additional year exceeding 20 years of service (Tier VI).

¹ Chapter 274 of the Laws of 1970 (Tiers I/II), as restricted by RSSL Article 11; RSSL Articles 14 and 15 (Tiers III/IV); Chapter 18 of the Laws of 2012 (Tier VI).

² Prior to the enactment of Chapter 56 of the Laws of 2022 on April 9, the vesting requirement was 10 years of service for all Tier VI members, as well as UFT- affiliated Tier IV members who joined TRS after December 10, 2009.

³ For the first three plan years of membership, TRS uses projected annual earnings provided by the employer(s) to determine the contribution rates. For the fourth plan year of membership and each plan year thereafter, TRS uses the actual wages earned two plan years prior to the current plan year. As of April 1, 2022, overtime pay is excluded from the "actual wages" figure.

⁴ Final Average Salary (FAS) is the average earned during any three consecutive years (any five consecutive years for Tier VI) providing the highest average salary. However, if salary earned during any year included in the three-year period (five-year period for Tier VI) exceeds the average of salaries of the previous two years by more than 10%, the amount in excess of 10% will be excluded.

- (3) For a member with 30 or more years of service, the benefit is 2% times FAS for each of the first 30 years of service plus 1.5% times FAS for each additional year (Tier III/IV).

Early Service Retirement

Eligibility:

A member is eligible to retire at age 55 or later with immediate payability, after 5 or more years of service.²

Benefits:

The pension is calculated similarly to the pension of a Normal Service Retirement, but it is reduced as follows:

- (1) For a Tier III/IV member who retires prior to age 62 with less than 30 years of service and is not a member of an Age 55 Plan, the member's pension for service is reduced by 0.5% for each of the first 24 months that the payability date precedes age 62, and by 0.25% for each additional month.
- (2) A Tier III/IV member with 30 or more years of service receives no reduction in benefits because of early retirement.
- (3) For a Tier VI member who retires prior to age 63, the retirement allowance is reduced by 6.5% per year.

Deferred Vested Benefit

Eligibility:

A member who has 5 or more years of credited service upon termination of employment is entitled to a deferred vested benefit payable at age 55 or later.²

A member who elects payability before age 62 (age 63 for Tier VI) will receive a reduced benefit unless they have 30 years of service under Tier III/IV or meet the eligibility requirements of their retirement plan.

Benefits:

The benefit formulas are the same as those set forth under a Normal Service Retirement and an Early Service Retirement.

DISABILITY RETIREMENTS

Ordinary Disability Retirement

Eligibility:

A member is eligible for Ordinary Disability Retirement benefits if the member has completed 10 or more years of service and is incapacitated for performance of gainful employment. If the disability is judged to be the result of an accident in the performance of duty, the 10-year requirement is waived.

Benefits:

The benefit is the greater of: (a) 33.33% of FAS (66.67% of FAS for a member if the disability is judged to be the result of an accident in the performance of duty); or (b) 1.67% times FAS multiplied by the credited service.

A lump-sum disability benefit equals the in-service death benefit amount for members with: a terminal illness with a life expectancy of one year or less; or a medical condition of a long, continued, and indefinite duration requiring extraordinary care and treatment, regardless of life expectancy.

Accident Disability Retirement**Eligibility:**

A member is entitled to an accident disability retirement allowance upon the occurrence of a disability caused by an accident in the actual performance of duty.

Benefits:

The retirement allowance will consist of a pension equal to 66.67% (60% under Tier III) of FAS.

DEATH BENEFITS**Ordinary Death Benefits****Benefits:**

For members joining TRS after January 1, 2001, Death Benefit #2 below would be payable if a member dies before retirement. For members joining prior to that date, the greater of the two death benefits described below would be payable.

Death Benefit 1: This benefit provides one month's salary for each year of service up to a maximum of three years' salary. If the member would have been eligible to receive an unreduced retirement allowance at the time of the member's death, the benefit is a lump sum that is actuarially equivalent to the retirement allowance which would have been payable had the member retired on the day before dying, if greater.

Death Benefit 2: This benefit provides one year's salary for each year of service up to a maximum of three years' salary after three years of service. The benefits reduce after age 60 at the rate of 3% per year, to a maximum reduction of 30% of the benefit in effect at age 60 .

A benefit is also payable upon death after retirement and is expressed as follows:

- If death occurs in the first year after retirement, 50% of the benefit in force immediately before retirement.
- If death occurs in the second year following retirement, 25% of the benefit in force immediately before retirement.
- If death occurs subsequently, 10% of the benefit in force at age 60 or immediately before retirement if retirement was earlier than age 60.

The minimum death benefit payable after retirement is 10% of the death benefit in force at age 60 or at the time of retirement if retirement occurred prior to age 60.

The death benefit for a vested member with at least 10 years of credited service, who died while inactive before retirement, is equal to 50% of the death benefit that would have been payable had the member died on their last day of active service, in addition to a refund of the member contributions.

The Rules and Regulations adopted by the Teachers' Retirement Board in accordance with Chapter 581 of the Laws of 1970 provide that the first \$50,000 of each benefit on account of death in active service is payable from the Group Term Life Insurance Plan. Only the amount in excess of \$50,000, if any, is payable by TRS.

Beneficiaries:

The latest named beneficiary, duly designated with TRS, will receive the death benefits. If there is no eligible beneficiary on file, the benefits will be paid to the member's estate.

Accidental Death Benefits

Eligibility:

A beneficiary is entitled to the benefit if the member died before the effective date of retirement as a natural and proximate result of an accident sustained in the performance of duty, and if the accident was not caused by the member's willful negligence.

Benefits:

Benefits are payable to "eligible beneficiaries," as defined by law. The beneficiary receives a benefit equal to 50% of the wages the member earned during the last year of actual service. If there is no eligible beneficiary on file, the benefits will be paid to the member's estate.

Special Provisions:

An Accidental Death Benefit (resulting from a qualifying World Trade Center-related condition or COVID-19, as defined in law) is payable to the eligible beneficiary(ies).

Tiers I, II

Members with a date of membership before July 27, 1976 are covered by the following provisions:

Service Retirement

Twenty-Year Pension Plan

Eligibility:

- (1) A Tier I member who elects the Twenty-Year Pension Plan is eligible to retire after having completed 20 years of service, with benefits to begin on the latter of: a) the day they cease active employment, b) age 55, or c) the date they could have completed 25 years of service had they remained active. Regardless of the number of years of service, such a member who has elected the Twenty-Year Pension Plan and who is at least 55 years of age may retire with benefits payable immediately by canceling the election of the Twenty-Year Pension Plan, thereby becoming eligible for the benefits under the Age-55- Increased-Benefits Pension Plan.
- (2) A member who joined TRS under Tier II must also have rendered five years of continuous service immediately prior to retiring and must have attained age 55.

Benefits:

The service retirement allowance for a Tier I member is the sum of the following:

- (1) 50% of the average salary⁵, reduced by an annuity which is the actuarial equivalent of the minimum accumulation⁶;
- (2) an annuity which is the actuarial equivalent of the accumulated contributions; and
- (3) for service in excess of 20 years, a pension for Increased-Take-Home-Pay⁷, which is the actuarial equivalent of the Reserve for Increased-Take-Home-Pay credited in such years, 1.2% of the average salary for each such year prior to July 1, 1970, and 1.7% of the average salary for each such year beginning on that date.

If a Tier II member retires prior to age 62 with less than 30 years of service, the member's pension for service is reduced by 0.5% for each of the first 24 months that the payability date precedes age 62, and by 0.25% for each additional month.

Current Tier II members as of February 27, 2008 (excluding CUNY employees) were provided a 180-day period during which they were allowed to join a plan that permitted them to retire at age 55 and later with immediate payability and without reduction after 25 years of service, provided they pay an additional 1.85% of future pay.

Age-55-Increased-Benefits Pension Plan

Eligibility:

- (1) A Tier I member who either elects the Age-55-Increased-Benefits Pension Plan or cancels the election of the Twenty-Year Pension Plan may retire after having attained age 55 with benefits payable immediately upon retirement.
- (2) A Tier II member must have rendered five years of continuous service immediately prior to retiring and must have attained age 55.

Benefits:

The service retirement allowance consists of a pension for service, a pension for Increased-Take-Home- Pay, and an annuity.

The pension for service is equal to 1.2% of the average salary multiplied by years of service prior to July 1, 1970, plus 1.53% of the average salary multiplied by years of service after June 30, 1970. The pension for Increased-Take-Home-Pay is the actuarial equivalent of the Reserve for Increased-Take-Home- Pay, and the annuity is the actuarial equivalent of the member's accumulated deductions.

⁵ For a Tier I member, salary earnable in the last year of the most recent three-year period during which the member held no more than one position, or the average annual salary earnable in any five consecutive years designated by the member. For a Tier II member, the average salary earned during any three consecutive years which provides the highest salary. However, if salary earned during any year included in the three-year period exceeds the average of the previous two years by more than 20%, the amount in excess of 20% will be excluded.

⁶ The difference between (1) the amount of required contributions during the member's first 20 years of city service, accumulated with interest to the member's payability date, and (2) the amount of the reserve for Increased-Take-Home-Pay on the date such period of 20 years is completed.

⁷ Increased-Take-Home-Pay consists of special contributions made by the employer at 2.5%, 5%, or 8% of salary, with applicable interest.

If a Tier II member retires prior to age 62 with less than 30 years of service, his/her pension for service is reduced by 0.5% for each of the first 24 months that the payability date precedes age 62, and by 0.25% for each additional month.

Current Tier II members as of February 27, 2008 (excluding CUNY employees) were provided a 180-day period during which they were allowed to join a plan that permitted them to retire at age 55 and later with immediate payability and without reduction after 25 years of service, provided they pay an additional 1.85% of future pay.

Vested Deferred Retirement Allowance

Eligibility:

A member who either resigns or is dismissed from service would receive a benefit equal to the member's accumulated deductions. However, a member who is eligible for benefits under the Age-55-Increased- Benefits Pension Plan and who has at least 5 years of service immediately preceding resignation may instead elect to receive a deferred vested allowance.

Benefits:

This allowance is computed in the same manner as the retirement allowance for service retirement under the Age-55-Increased-Benefits Pension Plan, except that the allowance is deferred to age 55. Should a member who elected to receive a vested deferred retirement allowance and who had 10 years of service die before the attainment of age 55, the death benefit is 50% of the Ordinary Death Benefit in force on the last day of service.

Disability Retirements

DISABILITY RETIREMENTS

Ordinary Disability Retirement

Eligibility:

Regardless of the Plan elected, a member who has completed 10 or more years of City service preceding the occurrence of disability, for causes other than an accident in the actual performance of duty, is entitled to an ordinary disability retirement allowance.

Benefits:

If, at the time of becoming disabled, the member could have retired for service with benefits payable immediately, the ordinary disability allowance will be the same as the service retirement allowance without reduction on account of age. For all other members, the ordinary disability allowance is computed in the same manner as though the member had been eligible for service retirement under the Age-55-Increased- Benefits Pension Plan with benefits payable immediately, but never less than the allowance that would have been payable under the provisions in effect prior to July 1, 1970.

Accident Disability Retirement

Eligibility:

A member is entitled to an accident disability retirement allowance upon the occurrence of a disability caused by an accident in the actual performance of duty.

Benefits:

The retirement allowance will consist of a pension equal to 75% of the average salary in the last 5 years, plus a pension which is the actuarial equivalent of the Reserve for Increased-Take-Home-Pay, and an annuity purchased with the member's accumulated deductions.

DEATH BENEFITS

Ordinary Death Benefits

Benefits:

Upon the death of a member in active service, a benefit is paid to the deceased's estate or to such person(s) as the member shall have nominated.

Tier I Members

- If a member completed less than 10 years of City Service, the benefit is equal to the compensation earnable by the member in the 6 months immediately preceding death.
- If the total number of years of City Service is greater than 10, but less than 20, the benefit is equal to the compensation earnable by the member during the 12 months immediately preceding death.
- If the total number of years of City Service exceeds 20, the benefit is equal to twice the compensation earnable by the member during the 12 months immediately preceding death.
- In addition, the member's accumulated deductions and the Reserve for Increased-Take-Home-Pay are paid to the member's estate or to the designated beneficiary.

The benefits payable on account of such a member who, at the time of death, would have been eligible for service retirement is either the benefit described above or a lump sum that is actuarially equivalent to the retirement allowance which would have been payable had the member retired on the day before dying, whichever is larger.

Tier II Members must choose between the two following death benefits so that, upon the member's death, benefits are paid pursuant to the member's election:

Death Benefit 1: This benefit provides one month's salary for each year of service, up to a maximum of three years' salary. In addition, the member's accumulated deductions are payable.

If the member would have been eligible to receive an unreduced retirement allowance at the time of death, the benefit is a lump sum that is actuarially equivalent to the retirement allowance which would have been payable had the member retired on the day before dying, if greater.

Death Benefit 2: In addition to a refund of the member's accumulated deductions, this benefit provides one year's salary for each year of service up to a maximum of three years' salary after three years of service. The benefit reduces after age 60 at the rate of 5% per year, to a maximum reduction of 50% of the benefits in effect at age 60. A benefit is also payable upon death after retirement and is expressed as follows:

- If death occurs in the first year after retirement, 50% of the benefit in force immediately before retirement.
- If death occurs in the second year following retirement, 25% of the benefit in force immediately before retirement.
- If death occurs subsequently, 10% of the benefit in force at age 60 or immediately before retirement if retirement was earlier than age 60.

If retirement occurs after age 60, the minimum death benefit payable after retirement is 10% of the death benefit in force at age 60.

The death benefit for a vested member with at least 10 years of credited service, who died while inactive before becoming eligible for unreduced retirement benefits, is equal to 50% of the

death benefit that would have been payable had the member died on their last day of active service, in addition to a refund of the member contributions.

The Rules and Regulations adopted by the Teachers' Retirement Board in accordance with Chapter 581 of the Laws of 1970 provide that the first \$50,000 of each benefit on account of death in active service is payable from the Group Term Life Insurance Plan. Only the amount in excess of \$50,000, if any, is payable by TRS.

Beneficiaries:

The latest named beneficiary, duly designated with TRS, will receive the death benefits. If there is no eligible beneficiary on file, the benefits will be paid to the member's estate.

Accidental Death Benefits

Eligibility:

A member is entitled to accidental death benefits upon the occurrence of death caused by an accident in the actual performance of duty and not the result of willful negligence.

Benefits:

The accidental death benefits are (a) a lump-sum equal to the Reserve for Increased-Take-Home-Pay and (b) a pension equal to 50% of the average salary in the last five years payable annually to the widow until remarriage or death, or if there is no widow, to a child or children until the attainment of age 18 of the youngest child, or if there is no widow, or child, to the dependent parents, and (c) a lump-sum equal to the member's accumulated deductions and Reserve for Increased-Take-Home-Pay payable to the member's estate or to the designated beneficiary. Alternatively, the beneficiary of a Tier I member may elect to receive a lump sum that is actuarially equivalent to the retirement allowance which would have been payable if the member had retired on the day before the member's death, provided that the death occurred after the member became eligible to retire for service.

Cost-of-Living Adjustments

Eligibility:

Automatic annual Cost-of-Living Adjustments (COLA) are applicable to retired members in all tiers. COLA are payable to members who are either (1) at least age 62 and have been retired for at least 5 years or (2) at least age 55 and have been retired for at least 10 years. Additionally, COLA are payable to members who retired for disability after being retired for 5 or more years and beneficiaries receiving accidental death benefits who have been receiving them for at least 5 years.

Benefits:

Starting with benefits for September 2001, the annual increase for COLA is equal to 50% of the increase in the Consumer Price Index for all Urban Consumers (CPI-U) based on the year ending March 31, rounded to the next higher 0.1%, not less than 1% nor greater than 3% of the first \$18,000 of the sum of maximum retirement allowance and prior COLA.

COLA are payable during the life of the retired member. Fifty percent of the amount is also payable after the member's death and during the life of the spouse beneficiary if such retired member had elected one of the options under the Administrative Code which provides that benefits are to be continued for the life of such spouse after the death of the retired member, and where the death of such retired member occurred or occurs more than 30 days after the effective date of the retirement of such member.

Options on Retirement

A member, upon retirement, may receive the basic retirement allowance in monthly installments throughout life with all payments ending at death, or may elect to receive the actuarial equivalent in the following optional forms.

- (1) A joint-and-survivor allowance under which reduced payment will be made during life, with a provision that upon the member's death, the same payments or 50% of such payments shall be continued throughout the life of other such person(s) as the member shall have designated. (Applicable to members under Tiers I and II.)
- (2) A joint-and-survivor allowance under which reduced payments will be made during life, with a provision that upon the member's death, 100% or less (i.e., in 10% increments) of such payments shall be continued throughout the life of such other person(s) as the member shall have designated. (Applicable to members under Tier III.)
- (3) A joint-and-survivor allowance under which reduced payments will be made during life, with a provision that upon a member's death, 100% or less (i.e., in 25% increments) of such payments shall be continued throughout the life of such other person(s) as the member shall have designated. (Applicable to members under Tiers IV and VI.)
- (4) A joint-and-survivor allowance under which reduced payments will be made during life, with a provision that in the event of a member's death prior to the death of the designated beneficiary, the person designated would receive a percentage of the payments under the applicable plan, which had been received by the member under that plan. Should the designated beneficiary predecease the member, the member's retirement allowance "pops up" to the amount which would have been payable, had no optional modification of the retirement allowance been in effect. (All Tiers)
- (5) A ten-year or five-year certain and life allowance under which reduced payments will be made during life, with a provision that in case of death within ten or five years of retirement, the balance that would have been payable had the member survived for ten or five years, shall continue to be paid to the designated beneficiary or estate. (All Tiers)
- (6) A cash refund allowance under which reduced payment will be made during life, with a provision that, in case of death before such payments have equaled the present value of the retirement allowance at the time of retirement, the balance shall be paid to the designated beneficiary or estate in a lump-sum. (Applicable to members under Tier I.)
- (7) A cash refund allowance under which reduced payments will be made during life, with a provision that, in case of death before such payments have equaled the present value of the retirement allowance at the time of retirement, the balance from the annuity portion of the retirement allowance shall be paid to the designated beneficiary or estate in a lump-sum. (Applicable to members under Tier II.)
- (8) A cash refund allowance under which reduced payment will be made during life, with a provision that, upon the member's death, a sum specified by the retiree at the time of retirement, would be paid to the designated beneficiary or estate. (Applicable to members under Tiers I and II, by resolution of the Teachers' Retirement Board.)
- (9) Such other actuarial equivalent optional forms as may be certified by the Actuary and approved by the Teachers' Retirement Board. (All Tiers)

Annuitization Options for Beneficiaries of a Death Benefit

Upon a member's death, the beneficiary may elect to receive the actuarial equivalent of a lump-sum death benefit, otherwise payable, in one of the following forms: 1) An annual amount payable for life in monthly installments, all payments ending at death (only available to the beneficiary of a member who joined under Tiers I and II); or 2) A cash refund allowance under which reduced payments will be made during life, with a provision that, in case of death before such payments have equaled the lump-sum payable upon the member's death, the balance shall be paid to the designated beneficiary or estate (only available to the beneficiary of a member joined under Tier I).

Financial Section



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REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

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

Opinion

We have audited the combining financial statements of Teachers' Retirement System of the City of New York Qualified Pension Plan and the Teachers' Retirement System of the City of New York Tax-Deferred Annuity Program, which collectively comprise the Teachers' Retirement System of the City of New York (the "System"), which comprise the combining statements of fiduciary net position as of June 30, 2024 and 2023 and the related combining statements of changes in fiduciary net position for the years then ended, and the related notes to the combining financial statements, which collectively comprise the 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, 2024 and 2023, 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 twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

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, 2024, schedule 2 - schedules of employer contributions for each of the ten years in the period ended June 30, 2024, and schedule 3 - schedule of investment returns for each of the ten years in the period ended June 30, 2024, be presented to supplement the basic combining financial statements. Such information is the responsibility of management and, although not a part of the basic combining financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of 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 audits were conducted for the purpose of forming an opinion on the basic combining financial statements as a whole. The schedule of administrative expenses, and schedule of investment expenses and services ("Additional Supplementary Information") for the year ended June 30, 2024, 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 audits 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 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.



New York, New York

October 29, 2024 (except for the Additional Supplementary Information and the Other information section of our report, as to which the date is December 20, 2024)

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

June 30, 2024 and 2023

This narrative discussion and analysis of the Teachers' Retirement System of the City of New York's ("TRS" or the "System") financial performance provides an overview of the System's combining financial activities for the Fiscal Years ended June 30, 2024 and 2023. It is meant to assist the reader in understanding TRS' combining financial statements by providing an overall review of the combining financial activities during the years and the effects of significant changes, as well as a comparison with prior years' activity and results. This discussion and analysis is intended to be read in conjunction with the System's combining financial statements. TRS administers the TRS Qualified Pension Plan ("QPP") and the TRS Tax-Deferred Annuity ("TDA") Program. The QPP is a cost-sharing, multiple-employer, defined-benefit pension plan. The QPP provides pension benefits to New York City ("The City" or "City") public school teachers and certain other personnel, participating Charter Schools, and participating City University of New York ("CUNY") teachers and other personnel. The TDA Program is a tax-deferred annuity program described in Internal Revenue Code section 403(b) and is available as a supplemental savings option to QPP members.

OVERVIEW OF COMBINING FINANCIAL STATEMENTS

The following discussion and analysis is intended to serve as an introduction to the System's combining financial statements. The combining financial statements, which are prepared in conformity with Generally Accepted Accounting Principles ("GAAP"), as prescribed by Government Accounting Standards Board ("GASB"), include the financial statements of the QPP and the TDA Programs and are as follows:

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

Teachers' Retirement System of the City of New York
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED
June 30, 2024 and 2023

HIGHLIGHTS AND RECENT DEVELOPMENTS

Employer Information

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

The following schedule provides the 2024 QPP summary information of the employer groups.

Contributions from Employers and Members

| | Members Active | Contribution Employer | Contribution Member | Members Retired | Pension Payments |
|-----------------|-------------------|--------------------------|------------------------|--------------------|---------------------|
| DOE | 118,000 | \$ 3.0 billion | \$ 311 million | 93,000 | \$ 4.8 billion |
| CUNY | 8,000 | \$ 144 million | \$ 18 million | 3,400 | \$ 175 million |
| Charter Schools | 500 | \$ 6.2 million | \$ 2 million | Less than 70 | \$ 2.6 million |

United Federation of Teachers ("UFT") Contract

On July 10, 2023, the United Federation of Teachers ("UFT"), the primary union for the DOE's employees, ratified its new collective bargaining agreement. The contract is retroactive to September 14, 2022 and runs through November 28, 2027. The contract provides for retroactive and future wage increases as well as annual bonuses. The wage increases and certain other payments are pensionable. They impact member and employer contributions, as well as annual retirement payments.

FINANCIAL HIGHLIGHTS

QPP Fiduciary Net Position

The QPP's net position restricted for benefits is held in trust for the payment of future benefits to members and pensioners. The QPP's net position restricted for benefits was \$74.5 billion, \$67.9 billion, and \$64.0 billion as of June 30, 2024, 2023, and 2022, respectively. The System's employer contributions amounted to \$3.2 billion, \$3.1 billion, and \$3.4 billion for Fiscal Years 2024, 2023 and 2022, respectively. The QPP's benefit payments totaled \$5.1 billion, \$4.9 billion, and \$4.9 billion for Fiscal Years 2024, 2023, and 2022, respectively. Below is a summary of the QPP's net position and changes in net position.

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2024 and 2023

QPP Fiduciary Net Position

June 30, 2024, 2023 and 2022

(In thousands)

| | 2024 | 2023 | 2022 |
|--|----------------------|----------------------|----------------------|
| Cash | \$ 61,173 | \$ 70,795 | \$ 86,489 |
| Receivables for investments sold | 2,425,261 | 1,826,650 | 1,544,209 |
| Receivables for accrued interest and dividends | 493,713 | 378,152 | 339,801 |
| Member loan receivables | 363,254 | 333,351 | 301,958 |
| Investments, at fair value | 110,516,768 | 101,588,747 | 96,153,573 |
| Collateral from securities lending | 3,612,893 | 4,378,298 | 828,300 |
| Other assets | 160,414 | 169,089 | 166,039 |
| Total assets | <u>117,633,476</u> | <u>108,745,082</u> | <u>99,420,369</u> |
| Accounts payable | 734,190 | 339,755 | 308,685 |
| Payable for investments purchased | 3,087,495 | 2,295,806 | 2,230,369 |
| Accrued benefits payable | 129,809 | 7,398 | 44,285 |
| Investments due to TDA Program | 35,459,207 | 33,663,158 | 31,868,042 |
| Payable for securities lending | 3,612,893 | 4,378,298 | 828,300 |
| Other liabilities | 121,493 | 126,411 | 131,260 |
| Total liabilities | <u>43,145,087</u> | <u>40,810,826</u> | <u>35,410,941</u> |
| Net position restricted for benefits | <u>\$ 74,488,389</u> | <u>\$ 67,934,256</u> | <u>\$ 64,009,428</u> |

Cash balances amounted to \$61.2 million at June 30, 2024, a decrease of \$9.6 million (-13.6%) from June 30, 2023. Cash balances amounted to \$70.8 million at June 30, 2023, a decrease of \$15.7 million (-18.1%) from June 30, 2022. Cash balances consist of advances to investment managers' accounts, accounts used to process reimbursement transfers between the System's investment programs, and bank accounts associated with the collections of loan insurance premiums and loan service charges. As of June 30, 2024, the largest cash balances, with a composite balance of \$38.2 million, were with the International Equity investment managers. Large cash balances held by an investment manager are due to recent sales, foreign currency balances, or the general investment cycle.

Receivables for investment securities sold amounted to \$2.4 billion at June 30, 2024, an increase of \$598.6 million (32.8%) from June 30, 2023. Receivables for investment securities sold amounted to \$1.8 billion at June 30, 2023, an increase of \$282.4 million (18.3%) from June 30, 2022. These balances are principally composed of receivables for securities that have been sold but have not yet settled (*i.e.*, the cash has not been collected). The changes resulted primarily from timing differences between trade and settlement dates occurring around fiscal year-end. Trades typically do not settle until a few days after the trade date.

Receivables for accrued interest and dividends amounted to \$493.7 million at June 30, 2024, an increase of \$115.6 million (30.6%) from June 30, 2023. Receivables for accrued interest and dividends amounted to \$378.2 million as of June 30, 2023, an increase of \$38.4 million (11.3%) from June 30, 2022. Changes in accrued earnings are impacted primarily by the cumulative value of the interest or dividend-bearing securities, as well as by changes in discount rates and interest payable dates.

At June 30, 2024, member loan receivables amounted to \$363.3 million, an increase of \$29.9 million (9.0%) from the previous year. At June 30, 2023, member loan receivables amounted to \$333.4 million, an increase of \$31.4 million (10.4%) from the previous year.

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2024 and 2023

Investments at June 30, 2024 were \$110.5 billion, an increase of \$8.9 billion (8.8%) from June 30, 2023. Investments at June 30, 2023 were \$101.6 billion, an increase of \$5.4 billion (5.7%) from June 30, 2022. As of June 30, 2024, the QPP's total investment portfolio, including both the TRSNYC Pension and Variable-Return Funds, consisted of 47% equity investments, 33% fixed income securities and 20% alternative investments. The alternative investments consisted of private equity (8%), private real estate investments (5%), opportunistic-fixed income (4%), and infrastructure securities (3%). The \$8.9 billion annual increase in investments is primarily the result of \$10.5 billion in net investment income, less \$1.6 billion of QPP payments in excess of QPP contributions. Also, investments as of June 30, 2024, and June 30, 2023, reflect the equity and fixed-income markets' annual returns. For the year ended June 30, 2024, the Russell 3000 Index, a broad measure of U.S. equity markets, returned (23.1%). The Morgan Stanley Capital International ("MSCI") World Index Custom Benchmark excluding the United States returned (10.8%). The NYC Custom-Structured Index returned (2.49%). The Bloomberg U.S. Mortgage Backed Securities Index returned (2.12%). For the year ended June 30, 2023, the Russell 3000 Index, a broad measure of U.S. equity markets, returned (19.0%). The Morgan Stanley Capital International ("MSCI") World Index Custom Benchmark excluding the United States returned (16.4%). The NYC Custom-Structured Index returned (-1.18%). The Bloomberg U.S. Mortgage Backed Securities Index returned (-1.52%).

Other assets at June 30, 2024 totaled \$160.4 million, an \$8.7 million (-5.1%) decrease from June 30, 2023. The year-over-year decrease in other assets, as of June 30, 2024, was primarily due to annual amortization of lease assets, decreases in Corpus expenses, less an increase in receivables due from the TDA Program. Other assets at June 30, 2023 totaled \$169.1 million, a \$3.1 million (1.8%) increase from June 30, 2022. The year-over-year increase in other assets, as of June 30, 2023, was primarily due to increases of receivables from the DOE Gulino employer portion, increases due from the TDA Program, less decreases due from Corpus expenses.

Accounts payable at June 30, 2024 amounted to \$734.2 million, a \$394.4 million (116.1%) increase from June 30, 2023. Accounts payable as of June 30, 2024 consisted of balances due to depositories (79.5%), reserve for expenses (4.5%), accrued investment expenses (8.9%), unclaimed funds (3.2%), and other payables (3.9%). Accounts payable at June 30, 2023 amounted to \$339.8 million, a \$31.1 million (10.1%) increase from June 30, 2022. Accounts payable as of June 30, 2023 consisted of balances due to depositories (55.2%), reserve for expenses (12.4%), accrued investment expenses (15.7%), unclaimed funds (7.3%), and other payables (9.4%).

Payables for investment securities purchased at June 30, 2024 amounted to \$3.1 billion, a \$791.7 million (34.5%) increase from June 30, 2023. Payables for investment securities purchased at June 30, 2023 amounted to \$2.3 billion, a \$65.4 million (2.9%) increase from June 30, 2022. Investments purchased are accounted for on a trade-date basis. The increase resulted from timing differences between settlement dates and trade dates, similar to receivables for investment securities sold (discussed earlier).

Accrued benefits payable at June 30, 2024 amounted to \$129.8 million, a \$122.4 million (1,654.6%) increase from June 30, 2023. The \$122.4 million increase is primarily attributed to a recognition of additional \$120.5 million in death benefit expenses as of year-end. Accrued benefits payable at June 30, 2023 amounted to \$7.4 million, a \$36.9 million (-83.3%) decrease from June 30, 2022. The \$36.9 million decrease is primarily attributed to a decrease of pending death benefits due to beneficiaries at year-end.

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

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2024 and 2023

Other liabilities represent amounts due to vendors for the underlying leased assets measured at the present value of the future payments. At June 30, 2024, other liabilities amounted to \$121.5 million, a decrease of \$4.9 million (-3.9%) from June 30, 2023. At June 30, 2023, other liabilities amounted to \$126.4 million, a decrease of \$4.8 million (-3.7%) from June 30, 2022.

QPP Changes in Fiduciary Net Position

Years ended June 30, 2024, 2023 and 2022

(In thousands)

| | 2024 | 2023 | 2022 |
|---|----------------------|----------------------|----------------------|
| Additions: | | | |
| Member contributions | \$ 331,674 | \$ 292,473 | \$ 273,686 |
| Employer contributions | 3,218,638 | 3,143,803 | 3,364,379 |
| Net receipts (payments to) other retirement systems | (9,244) | (6,564) | (2,993) |
| Net securities lending income | 6,815 | 9,235 | 4,932 |
| Net investment income (loss) | 10,521,195 | 7,835,149 | (10,858,794) |
| Total additions | <u>14,069,078</u> | <u>11,274,096</u> | <u>(7,218,790)</u> |
| Deductions: | | | |
| Administrative expenses | 75,590 | 73,784 | 71,490 |
| TDA Rebalance | (94,273) | 66,064 | (2,537) |
| Benefits payments and withdrawals | 5,139,963 | 4,947,702 | 4,909,488 |
| Payment of statutory interest to TDA Program | 2,393,665 | 2,261,718 | 2,140,639 |
| Total deductions | <u>7,514,945</u> | <u>7,349,268</u> | <u>7,119,080</u> |
| Net increase (decrease) in net position | 6,554,133 | 3,924,828 | (14,337,870) |
| Net position restricted for benefits | | | |
| Beginning of year | <u>67,934,256</u> | <u>64,009,428</u> | <u>78,347,298</u> |
| End of year | <u>\$ 74,488,389</u> | <u>\$ 67,934,256</u> | <u>\$ 64,009,428</u> |

TRS received \$331.7 million in member contributions in Fiscal Year 2024, an \$39.2 million (13.4 %) increase from Fiscal Year 2023. TRS received \$292.5 million in member contributions in Fiscal Year 2023, an \$18.8 million (6.9%) increase from Fiscal Year 2022. The \$39.2 million increase in Fiscal Year 2024 and the \$18.8 million increase in Fiscal Year 2023 were both primarily due to UFT salary increases and a larger active Tier VI membership.

Employer contributions during Fiscal Year 2024, including other employer contributions, were \$3.2 billion, a \$74.8 million (2.4%) increase from Fiscal Year 2023. Employer contributions during Fiscal Year 2023, including other employer contributions, were \$3.1 billion, a \$220.6 million (-6.6%) decrease from Fiscal Year 2022. The Fiscal Year 2024 increase in employer contributions was primarily due to the increase in the initial unfunded actuarial liability payment. The Fiscal Year 2023 decrease in employer contributions was primarily due to investment experience gains. (See Note 5 - QPP Net Pension Liability.)

The QPP's net investment income for Fiscal Year 2024 was \$10.5 billion, a \$2.7 billion increase from Fiscal Year 2023. The QPP's net investment income of \$10.5 billion consisted of \$2.6 billion in dividend and interest income plus a net gain of \$8.6 billion on the appreciation in fair value of the QPP's investments less \$641.4 million in investment expenses. Net investment income for the QPP portion of the TRSNYC Pension Fund, QPP portion of the Diversified Equity Fund, QPP portion of the Balanced Fund, QPP portion of the

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2024 and 2023

International Equity Fund, QPP portion of the Sustainable Equity Fund, QPP portion of the U.S. Equity Index Fund, and QPP portion of the International Equity Index Fund totaled \$9.4 billion, \$1.1 billion, \$3.2 million, \$769.8 thousand, \$4.1 million, \$1.5 million, and \$22.8 thousand, respectively. The QPP's net investment income for Fiscal Year 2023 was \$7.8 billion, an \$18.7 billion increase from Fiscal Year 2022. The QPP's net investment income of \$7.8 billion consisted of \$2.6 billion in dividend and interest income plus a net gain of \$5.8 billion on the appreciation in fair value of the QPP's investments and \$518.9 million in investment expenses. Net investment income for the QPP portion of the TRSNYC Pension Fund, QPP portion of the Diversified Equity Fund, QPP portion of the Balanced Fund, QPP portion of the International Equity Fund, QPP portion of the Sustainable Equity Fund, QPP portion of the U.S. Equity Index Fund, and QPP portion of the International Equity Index Fund totaled \$6.9 billion, \$906.1 million, \$2.1 million, \$1.3 million, \$2.8 million, \$1.0 million, and \$44.0 thousand, respectively.

For Fiscal Year 2024, the QPP's effective net investment income for the QPP portion of the TRSNYC Pension Fund increased due to investment returns attributable to the TDA Program's TRSNYC Pension Fund assets. The TDA Fixed-Return Fund program resulted in approximately \$868.8 million more assets accruing to the QPP's Contingent Reserve Fund of Employer's Contributions, as a result of the TDA Program's investment returns being above the statutory rates. For Fiscal Year 2023, the QPP's effective net investment income for the QPP portion of the TRSNYC Pension Fund increased due to investment returns attributable to the TDA Program's TRSNYC Pension Fund assets. The TDA Fixed-Return Fund program resulted in approximately \$170.8 million more assets accruing to the QPP's Contingent Reserve Fund of Employer's Contributions, as a result of the TDA Program's investment returns being above the statutory rates. The table below displays the TDA Program's impact on the QPP's Contingent Reserve Fund of Employer's Contributions for Fiscal Years 2024, 2023, and 2022.

Revenue (Expense) to Contingent Reserve Fund

TRSNYC Pension Fund Assets (QPP)*

Years ended June 30, 2024, 2023, and 2022

(In thousands)

| | <u>2024</u> | <u>2023</u> | <u>2022</u> |
|--|--------------------|--------------------|-----------------------|
| Net investment income (loss) | \$ 9,452,571 | \$ 6,929,785 | \$ (9,762,620) |
| TDA percent of fixed assets as of June 30 | 33.93% | 35.10% | 35.11% |
| TDA percent of fixed assets as of 6/30/21: | | | 29.18% |
| TDA percent of fixed assets (average) | 34.51% | 35.10% | 32.14% |
| Investment income on account of TDA investment | \$ 3,262,494 | \$ 2,432,482 | \$ (3,138,080) |
| Less: statutory interest to TDA | <u>(2,393,665)</u> | <u>(2,261,718)</u> | <u>(2,140,639)</u> |
| Revenue (expense) to QPP contingent reserve | <u>\$ 868,829</u> | <u>\$ 170,764</u> | <u>\$ (5,278,719)</u> |

* Includes security-lending income

Administrative expenses during Fiscal Year 2024 were \$75.6 million, an increase of \$1.8 million (2.5%) from Fiscal Year 2023. The System continues its phased implementation to replace its legacy IBM A/S 400 computer system to a distributed Windows Server based system and Net programming framework. Sagitec, an outside vendor and a provider of Pension Database Systems, and Cognizant, a software testing company, have been assisting with this multi-year project. In Fiscal Year 2024, the System continued with the implementation of additional new pension payroll modules and development of active account modules. The change in administrative expenses also reflects the annual update in the System's administrative

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MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2024 and 2023

expenses attributed to the QPP. (See Note 8.) In addition, Fiscal Year 2024 QPP and TDA administrative expenses increased by \$2.7 million and \$696.8 thousand, respectively, due to recognition of interest and amortization expenses as required by GASB No. 87. The QPP's total administrative expenses for Fiscal Year 2024 accounted for 79.3% of the System's administrative expenditures. The balance of \$19.7 million (20.7%) was expensed to the TDA Program. Administrative expenses during Fiscal Year 2023 were \$73.8 million, an increase of \$2.3 million (3.2%) from Fiscal Year 2022. In addition, Fiscal Year 2023 QPP and TDA administrative expenses increased by \$2.9 million and \$701.7 thousand, respectively, due to recognition of interest and amortization expenses as required by GASB No. 87. The QPP's total administrative expenses for Fiscal Year 2023 accounted for 80.4% of the System's administrative expenditures. The balance of \$18.0 million (19.6%) was expensed to the TDA Program. Less GASB No. 87 recognition, the System's administrative expenditures amounted to \$91.9 million, \$88.2 million, and \$86.0 million for Fiscal Years 2024, 2023, and 2022, respectively.

The TDA rebalance during Fiscal Year 2024 resulted in \$94.3 million in transfers to the QPP TRSNYC Pension Fund from the TDA Program. The Administrative Code of The City of New York under sections 13-582 and 13-577 provides for certain internal transfer of funds. These transfers are intended to rebalance estimated actuarial liabilities with reported assets and follow liability reviews conducted by the Actuary of The City of New York. Also, \$80.2 million was transferred from the QPP Program's Variable-Return Funds to the QPP TRSNYC Pension Fund. The \$80.2 million transfer increased the investments held by the QPP TRSNYC Pension Fund and decreased the investments held by the QPP Program's Variable-Return Funds but did not impact net investments held by the QPP (see Note 2, Intra-Fund Payable/Receivable). The TDA rebalance during Fiscal Year 2023 resulted in \$66.1 million in transfers from the QPP TRSNYC Pension Fund to the TDA Program.

Benefit payments and withdrawals during Fiscal Year 2024 were \$5.1 billion, a \$192.3 million (3.9%) increase from Fiscal Year 2023. The \$192.3 million increase in benefit payments and withdrawals was primarily due to a \$182.3 million (3.8%) increase in payments to retirees. In total, benefit payments and withdrawals distributed during Fiscal Year 2024 were composed of 97.6% in retirement benefits and 2.4% in refund/withdrawals and survivor benefits.

Payments of statutory interest due to the TDA from its investment in the TRSNYC Pension Fund Assets (Fixed-Return Fund) during Fiscal Year 2024 were \$2.4 billion, an increase of \$131.9 million (5.8%) from Fiscal Year 2023. Payments of statutory interest due to the TDA from its investment in the TRSNYC Pension Fund Assets (Fixed-Return Fund) during Fiscal Year 2023 were \$2.3 billion, an increase of \$121.1 million (5.7%) from Fiscal Year 2022.

TDA Program Financial Highlights - The TDA Program's net position restricted for benefits was \$49.1 billion, \$45.4 billion, and \$42.2 billion, as of June 30, 2024, 2023, and 2022, respectively. Member contributions amounted to \$1.2 billion, \$1.1 billion, and \$1.1 billion for Fiscal Years 2024, 2023, and 2022, respectively. Benefit payments and withdrawals totaled \$2.1 billion, \$2.0 billion, and \$1.9 billion for Fiscal Years 2024, 2023, and 2022, respectively. Below is a summary of the TDA program's net position and changes in net position.

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2024 and 2023

TDA Program's Fiduciary Net Position

June 30, 2024, 2023 and 2022

(In thousands)

| | 2024 | 2023 | 2022 |
|--|----------------------|----------------------|----------------------|
| Cash | \$ 13,233 | \$ 9,037 | \$ 9,983 |
| Receivables for investments sold | 78,846 | 3,979 | 2,473 |
| Receivables for accrued interest and dividends | 22,358 | 23,957 | 21,565 |
| Member loan receivables | 519,614 | 469,682 | 418,199 |
| Investments, at fair value | 13,645,502 | 11,844,357 | 10,451,408 |
| Investment in TRSNYC Pension Fund | 35,459,207 | 33,663,158 | 31,868,042 |
| Collateral from securities lending | 887,211 | 673,841 | 529,602 |
| Other assets | 38,567 | 42,717 | 43,495 |
| Total assets | <u>50,664,538</u> | <u>46,730,728</u> | <u>43,344,767</u> |
| Accounts payable | 50,003 | 44,008 | 43,330 |
| Payable for investment securities purchased | 85,050 | 5,664 | 6,306 |
| Accrued benefits payable | 499,066 | 570,164 | 526,673 |
| Payable for securities lending transactions | 887,211 | 673,841 | 529,602 |
| Other liabilities | 32,322 | 33,605 | 34,787 |
| Total liabilities | <u>1,553,652</u> | <u>1,327,282</u> | <u>1,140,698</u> |
| Net position held in trust for benefits | <u>\$ 49,110,886</u> | <u>\$ 45,403,446</u> | <u>\$ 42,204,069</u> |

Cash balances amounted to \$13.2 million at June 30, 2024, an increase of \$4.2 million (46.4%) from June 30, 2023. Cash balances amounted to \$9.0 million at June 30, 2023, a decrease of \$946 thousand (-9.5%) from June 30, 2022. Cash balances consist of accounts used to reimburse the funds of the Variable-Annuity Program and accounts used for advance funding of the Variable-Return Funds' investment managers.

Receivables for investment securities sold at June 30, 2024 amounted to \$78.8 million, an increase of \$74.9 million (1,881.6%) from June 30, 2023. Receivables for investment securities sold at June 30, 2023 amounted to \$4.0 million, an increase of \$1.5 million (60.9%) from June 30, 2022. These balances are principally composed of receivables for securities that have been sold but have not yet settled (*i.e.*, the cash has not been collected). The year-over-year changes resulted from timing differences in trading and settlement dates. Trades typically do not settle until a few days after the trade date.

Receivables for accrued earnings at June 30, 2024 were \$22.4 million, a decrease of \$1.6 million (-6.7%) from June 30, 2023. Receivables for accrued earnings at June 30, 2023 were \$24.0 million, an increase of \$2.4 million (11.1%) from June 30, 2022. Changes in accrued earnings are impacted by the cumulative value of the interest- or dividend-bearing securities, discount rates, and interest payable dates at fiscal year-end.

Member loan receivables at June 30, 2024 amounted to \$519.6 million, an increase of \$49.9 million (10.6%) from June 30, 2023. There were 34,951 new TDA loan issues in Fiscal Year 2024 compared to 32,098 in Fiscal Year 2023, an increase of 2,853 (8.9%) from Fiscal Year 2023. For Fiscal Year 2024, loan disbursements amounted to \$300.2 million, and principal and interest payments amounted to \$271.0 million. Member loan receivables at June 30, 2023 amounted to \$469.7 million, an increase of \$51.5 million (12.3%) from June 30, 2022. There were 32,098 new TDA loan issues in Fiscal Year 2023 compared to 24,294 in Fiscal Year 2022, an increase of 7,804 (32.1%) from Fiscal Year 2022. For Fiscal

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2024 and 2023

Year 2023, loan disbursements amounted to \$281.5 million, and principal and interest payments amounted to \$246.5 million.

The Variable-Return Funds' investments at June 30, 2024, including collateral received for securities lending, were \$14.5 billion, an increase of \$2.0 billion (16.1%) from June 30, 2023. The Variable-Return Funds' investments at June 30, 2023, including collateral received for securities lending, were \$12.5 billion, an increase of \$1.5 billion (14.0%) from June 30, 2022.

Assets of the TDA Program's Fixed-Return Fund invested in the TRSNYC Pension Fund at June 30, 2024 were \$35.5 billion, an increase of \$1.8 billion (5.3%) from June 30, 2023. In addition to the 7% statutory return for UFT members [and 8.25% for non-UFT members] for Fiscal Year 2024, contributions, withdrawals, and investment transfers to (from) the Fixed-Return Fund totaled \$816.6 million, -\$1.8 billion, and \$493.5 million, respectively. Assets of the TDA Program's Fixed-Return Fund invested in the TRSNYC Pension Fund at June 30, 2023 were \$33.7 billion, an increase of \$1.8 billion (5.6%) from June 30, 2022. In addition to the 7% statutory return for UFT members [and 8.25% for non-UFT members] for Fiscal Year 2023, contributions, withdrawals, and investment transfers to (from) the Fixed-Return Fund totaled \$716.0 million, -\$1.7 billion, and \$459.6 million, respectively.

Other assets at June 30, 2024 were \$38.6 million, a decrease of \$4.2 million (-9.7%) from June 30, 2023. Other assets at June 30, 2023 were \$42.7 million, a decrease of \$778 thousand (-1.8%) from June 30, 2022. Besides leased assets, other assets primarily represent assets already allocated for future administrative expenses.

Accounts payable at June 30, 2024 amounted to \$50.0 million, an increase of \$6.0 million (13.6%) from June 30, 2023. Accounts payable at June 30, 2023 amounted to \$44.0 million, an increase of \$678 thousand (1.6%) from June 30, 2022. The TDA Program's accounts payable balance primarily represents a reserve fund to pay the TDA Program's investment and administrative expenses.

Payables for investment securities purchased at June 30, 2024 amounted to \$85.1 million, an increase of \$79.4 million (1,401.6%) from June 30, 2023. Payables for investment securities purchased at June 30, 2023 amounted to \$5.7 million, a decrease of \$642 thousand (-10.2%) from June 30, 2022. Investments purchased are accounted for on a trade-date basis. The changes resulted from timing differences in settlement and trade dates, similar to receivables for investments sold (discussed earlier).

Accrued benefits payable at June 30, 2024 amounted to \$499.1 million, a decrease of \$71.1 million (-12.5%) from June 30, 2023. Accrued benefits payable at June 30, 2023 amounted to \$570.2 million, an increase of \$43.5 million (8.3%) from June 30, 2022. The year-over-year changes are primarily attributed to decreases and increases of benefits due to beneficiaries at year-end 2024 and 2023, respectively.

Other liabilities represent amounts due to vendors for the underlying leased assets measured at the present value of the future payments. At June 30, 2024, other liabilities amounted to \$32.3 million.

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2024 and 2023

Changes in TDA Program's Fiduciary Net Position

Years ended June 30, 2024, 2023 and 2022

(In Thousands)

| | <u>2024</u> | <u>2023</u> | <u>2022</u> |
|--|----------------------|----------------------|----------------------|
| Additions: | | | |
| Member contributions | \$ 1,207,169 | \$ 1,061,225 | \$ 1,088,219 |
| Net investment income (loss) | 2,357,185 | 1,850,042 | (2,088,612) |
| Net securities lending income | 1,935 | 2,509 | 1,568 |
| Total additions | <u>3,566,289</u> | <u>2,913,776</u> | <u>(998,825)</u> |
| Deductions: | | | |
| Administrative expenses | 19,716 | 17,998 | 19,872 |
| TDA rebalance | 94,273 | (66,064) | 2,537 |
| Benefits payments and withdrawals | 2,138,525 | 2,024,183 | 1,874,811 |
| Receipt of statutory interest for portion of investment in TRSNYC Pension Fund | <u>(2,393,665)</u> | <u>(2,261,718)</u> | <u>(2,140,639)</u> |
| Total deductions | <u>(141,151)</u> | <u>(285,601)</u> | <u>(243,419)</u> |
| Net increase (decrease) in net position | 3,707,440 | 3,199,377 | (755,406) |
| Net position restricted for benefits | | | |
| Beginning of year | <u>45,403,446</u> | <u>42,204,069</u> | <u>42,959,475</u> |
| End of year | <u>\$ 49,110,886</u> | <u>\$ 45,403,446</u> | <u>\$ 42,204,069</u> |

TRS's TDA Program received \$1.2 billion in member contributions during Fiscal Year 2024, an increase of \$145.9 million (13.8%) from Fiscal Year 2023. TRS's TDA Program received \$1.1 billion in member contributions during Fiscal Year 2023, a decrease of \$27.0 million (-2.5%) from Fiscal Year 2022.

Net investment income for the TDA Program's Variable-Return Funds for Fiscal Year 2024 increased by \$507.1 million from Fiscal Year 2023. Net investment income for the TDA Program's Variable-Return Funds for Fiscal Year 2023 increased by \$3.9 billion from Fiscal Year 2022. Net investment gains/losses primarily reflect the appreciation/depreciation in fair value of the TDA Program's Variable-Return Fund investments, including both realized and unrealized gains and losses.

Administrative expenses for the Fiscal Year ended June 30, 2024 totaled \$19.7 million, an increase of \$1.7 million (9.5%) from Fiscal Year 2023. Administrative expenses for the Fiscal Year ended June 30, 2023 totaled \$18.0 million, a decrease of \$1.9 million (-9.4%) from Fiscal Year 2022. Fiscal Year 2024 TDA administrative expenses included a \$696.8 thousand expense due to recognition of future lease expenses as required by GASB No. 87. The TDA Program accounted for a portion of the System's total administrative expenses; see QPP administrative expenses above and Note 8.

The TDA rebalance during Fiscal Year 2024 resulted in a \$94.3 million transfer to the TRSNYC Pension Fund from the TDA Program. The TDA rebalance during Fiscal Year 2023 resulted in a \$66.1 million transfer from the TRSNYC Pension Fund to the TDA Program. The Administrative Code of the City of New York under sections 13-582 and 13-577 provides for certain internal transfers of funds. These transfers are intended to rebalance estimated actuarial liabilities with reported assets; see Note 2, Intra-Fund Payable/Receivable.

Benefit payments and withdrawals for the Fiscal Year ended June 30, 2024 totaled \$2.1 billion, an increase of \$114.3 million (5.6%) from Fiscal Year 2023. The Fiscal Year 2024 increase was primarily due to

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2024 and 2023

increases in required minimum withdrawals and death benefit payments. Benefit payments and withdrawals for the Fiscal Year ended June 30, 2023 totaled \$2.0 billion, an increase of \$149.4 million (8.0%) from Fiscal Year 2022. The Fiscal Year 2023 increase was due to increases in partial withdrawals.

Receipts of statutory interest for the TDA Program's Fixed-Return Fund portion in investments in the TRSNYC Pension Fund assets for Fiscal Year 2024 were \$2.4 billion, an increase of \$132.0 million (5.8%) from Fiscal Year 2023. Receipts of statutory interest for the TDA Program's Fixed-Return Fund portion in investments in the TRSNYC Pension Fund assets for Fiscal Year 2023 were \$2.3 billion, an increase of \$121.1 million (5.7%) from Fiscal Year 2022.

Cash Flow

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

| (In thousands) | June 30, 2024 QPP | June 30, 2024 TDA | June 30, 2023 QPP | June 30, 2023 TDA | June 30, 2022 QPP | June 30, 2022 TDA |
|-----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Contributions | \$ 3,550,312 | \$ 1,207,169 | \$ 3,436,276 | \$ 1,061,225 | \$ 3,638,065 | \$ 1,088,219 |
| Contributions - Loan adj. | - | (209) | - | (350) | - | (21) |
| Loan repayments (cash) | 156,145 | 271,006 | 144,506 | 246,513 | 142,132 | 231,268 |
| 401(a) receipts (payments) | (9,244) | - | (6,564) | - | (2,993) | - |
| Interest income | 1,479,521 | 41,866 | 1,476,900 | 36,009 | 1,412,618 | 22,992 |
| Interest income - Loan adj. | (21,170) | (34,678) | (19,330) | (31,233) | (18,433) | (29,633) |
| Dividend income | 1,113,055 | 192,982 | 1,115,816 | 188,809 | 1,238,843 | 198,217 |
| Investment expenses (net) | (641,437) | (22,047) | (518,867) | (11,230) | (535,284) | (24,194) |
| Benefits/withdrawals | (5,139,963) | (2,138,525) | (4,947,702) | (2,024,183) | (4,909,488) | (1,874,811) |
| Withdrawals - Loan adj. | 20,026 | 15,191 | 18,440 | 16,056 | 22,905 | 11,145 |
| New loans | (184,617) | (300,193) | (174,607) | (281,521) | (137,894) | (220,082) |
| Administrative expenses | (75,590) | (19,716) | (73,784) | (17,998) | (71,490) | (19,872) |
| Admin exp- GASB87 adj. | 2,671 | 697 | 2,877 | 702 | 3,491 | 1,851 |
| | <u>\$ 249,709</u> | <u>\$ (786,457)</u> | <u>\$ 453,961</u> | <u>\$ (817,201)</u> | <u>\$ 782,472</u> | <u>\$ (614,921)</u> |

Investments

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

| by Plan Percentage | June 30, 2024 QPP | June 30, 2024 TDA | June 30, 2023 QPP | June 30, 2023 TDA | June 30, 2022 QPP | June 30, 2022 TDA |
|-------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| TRSNYC Pension Fund | 66.1% | 33.9% | 64.9% | 35.1% | 64.9% | 35.1% |
| Variable-Return Funds: | | | | | | |
| Diversified Equity Fund* | 31.8% | 63.3% | 33.4% | 62.0% | 34.8% | 60.8% |
| Balance Fund** | 5.6% | 94.4% | 6.7% | 93.3% | 7.9% | 92.1% |
| International Equity Fund | 2.8% | 97.2% | 3.2% | 96.8% | 4.3% | 95.7% |
| Sustainable Equity Fund*** | 2.4% | 97.6% | 2.8% | 97.2% | 3.1% | 96.9% |
| U.S. Equity Index Fund**** | 4.3% | 95.7% | 4.9% | 95.1% | 4.6% | 95.4% |
| International Equity Index Fund**** | 1.4% | 98.6% | 1.1% | 98.9% | 3.0% | 97.0% |

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

** Bond Fund prior to January 1, 2018.

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

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

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2024 and 2023

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

In addition to other indices, the "policy index" is a custom benchmark for the complete TRSNYC Pension Fund. As of June 30, 2024, the policy index includes the following percentage weights:

TRSNYC Pension Fund Policy Index as of June 30, 2024*

| Investment Type | Benchmark | Percent |
|--------------------------------------|---|---------------|
| U.S. Equity | Russell 3000 | 27.2% |
| International Developed EAFE Markets | MSCI World ex USA IMI Net | 12.5% |
| Emerging Markets | MSCI Custom TRS Emerging Markets (Net) | 5.0% |
| Private Equity | Russell 3000 + 300 b.p. per annum | 8.7% |
| Private Real Estate | NCREIF NFI - ODCE Net + 100BP | 5.4% |
| Infrastructure | CPI + 4% | 2.8% |
| U.S. Treasury Short-Term | FTSE US Government Bond 1-3 Years Index | 2.7% |
| U.S. Treasury Intermediate | USBIG TSY AGN 1-10Y | 6.1% |
| U.S. Treasury Long Duration | FTSE US Government Bond 10+ Years Index | 2.7% |
| Mortgage | Bloomberg U.S. Mortgage Backed Securities | 3.7% |
| ETI | ETI Custom Benchmark | 2.0% |
| Investment Grade Corporate | NYC Custom IGC Benchmark | 10.7% |
| High-Yield | Bloomberg U.S. HY 2% Issuer Cap | 6.0% |
| Opportunistic Fixed | OFI - JPMGHY/CSFB 50/50 Blend Plus 300 b.p. per annum | 4.0% |
| Cash | ICE BofA US 3-Month Treasury Bill | 0.5% |
| | | <u>100.0%</u> |

* Source: Teachers' Retirement System of New York City Performance Overview as of June 30, 2024, prepared by State Street Bank and Trust Company ("State Street").

Variable-Return Funds are benchmarked using the Russell 3000 Index, Dow Jones U.S. Total Stock Market Index, MSCI ACWI ex USA IMI Net Index, FTSE Global All Cap Index, Bloomberg U.S. 1-5 Year Government/Credit Float Adjusted Index, as well as numerous other indices.

TRS earns additional investment income by lending its investment securities. The borrowers provide collateral to TRS that is valued in excess of the securities loaned, and the collateral is invested in short-term interest-bearing funds. For the Fiscal Year ended June 30, 2024, net securities lending income amounted to \$8.8 million, a decrease of \$3.0 million from Fiscal Year 2023. For the Fiscal Year ended June 30, 2023, net securities lending income amounted to \$11.7 million, an increase of \$5.2 million from Fiscal Year 2022.

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

| Investment Summary (by Asset Class) (In thousands) | 2024 | 2023 | 2022 |
|---|-----------------------|-----------------------|-----------------------|
| Short-term investments | \$ 2,248,905 | \$ 1,434,590 | \$ 3,083,489 |
| Debt securities | 34,589,712 | 31,158,869 | 31,150,798 |
| Equity securities | 65,763,472 | 61,248,269 | 54,492,993 |
| Alternative investments | 21,560,181 | 19,591,376 | 17,877,701 |
| Collateral from securities lending | 4,500,104 | 5,052,139 | 1,357,902 |
| Total | <u>\$ 128,662,374</u> | <u>\$ 118,485,243</u> | <u>\$ 107,962,883</u> |

Teachers' Retirement System of the City of New York

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) - CONTINUED

June 30, 2024 and 2023

| Investment Summary (by Plan) (In thousands) | 2024 | 2023 | 2022 |
|--|-----------------------|-----------------------|-----------------------|
| TRSNYC Pension Fund: | | | |
| QPP | \$ 69,037,542 | \$ 62,255,871 | \$ 58,902,644 |
| TDA | 35,459,207 | 33,663,158 | 31,868,042 |
| Total | <u>104,496,749</u> | <u>95,919,029</u> | <u>90,770,686</u> |
| Variable-Return Funds: | | | |
| QPP | 6,020,019 | 5,669,718 | 5,382,887 |
| TDA | 13,645,502 | 11,844,357 | 10,451,408 |
| Total | <u>19,665,521</u> | <u>17,514,075</u> | <u>15,834,295</u> |
| Collateral from securities lending: | | | |
| QPP Pension Fund | 3,194,880 | 4,052,373 | 525,316 |
| QPP Variable-Return Funds | 418,013 | 325,925 | 302,984 |
| TDA Variable-Return Funds | 887,211 | 673,841 | 529,602 |
| Total | <u>4,500,104</u> | <u>5,052,139</u> | <u>1,357,902</u> |
| Total investments | <u>\$ 128,662,374</u> | <u>\$ 118,485,243</u> | <u>\$ 107,962,883</u> |

CONTACT INFORMATION

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

* * * * *

Teachers' Retirement System of the City of New York

COMBINING STATEMENT OF FIDUCIARY NET POSITION

June 30, 2024
(In thousands)

| | QPP | TDA | Eliminations | Total |
|--|---------------|---------------|--------------|----------------|
| ASSETS | | | | |
| Cash | \$ 61,173 | \$ 13,233 | \$ - | \$ 74,406 |
| Receivables: | | | | |
| Investments securities sold | 2,425,261 | 78,846 | - | 2,504,107 |
| Accrued interest and dividends | 493,713 | 22,358 | - | 516,071 |
| Member loans (Note 6) | 363,254 | 519,614 | - | 882,868 |
| Total receivables | 3,282,228 | 620,818 | - | 3,903,046 |
| Investments - at fair value (Notes 2 and 3): | | | | |
| TRSNYC Pension Fund Assets (Fixed-Return Fund): | | | | |
| Short-term investment: | | | | |
| Commercial paper | 221,320 | - | - | 221,320 |
| Short-term investment fund | 1,004,087 | - | - | 1,004,087 |
| Discount notes | 449,761 | - | - | 449,761 |
| U.S. treasury bills and agencies | 366,424 | - | - | 366,424 |
| Debt securities: | | | | |
| U.S. government | 11,747,756 | - | - | 11,747,756 |
| Corporate and other | 22,227,025 | - | - | 22,227,025 |
| Treasury inflation-protected securities | 614,931 | - | - | 614,931 |
| Equity securities: | | | | |
| Domestic equity | 29,840,623 | - | - | 29,840,623 |
| International equity | 16,464,641 | - | - | 16,464,641 |
| Alternative investments | 21,560,181 | - | - | 21,560,181 |
| Collateral from securities lending (Fixed-Return Fund) | 3,194,880 | - | - | 3,194,880 |
| Variable-Return Funds: | | | | |
| Diversified Equity Fund: | | | | |
| Short-term investments | 73,363 | 113,355 | - | 186,718 |
| Equity securities | 5,875,940 | 11,691,715 | - | 17,567,655 |
| Debt securities | | | | |
| Balanced Fund: | | | | |
| Short-term investments | 57 | 965 | - | 1,022 |
| Equity securities | 34,426 | 575,754 | - | 610,180 |
| International Equity Fund: | | | | |
| Short-term investments | 108 | 3,748 | - | 3,856 |
| International equity | 7,641 | 264,164 | - | 271,805 |
| Sustainable Equity Fund: | | | | |
| Short-term investments | 378 | 15,280 | - | 15,658 |
| Equity securities | 18,117 | 732,035 | - | 750,152 |
| U.S. Equity Index Fund: | | | | |
| Short-term investments | 1 | 15 | - | 16 |
| Equity securities | 9,476 | 213,123 | - | 222,599 |
| International Equity Index Fund: | | | | |
| Short-term investments | 1 | 42 | - | 43 |
| Equity securities | 511 | 35,306 | - | 35,817 |
| Collateral from securities lending (Variable-Return Funds) | 418,013 | 887,211 | - | 1,305,224 |
| Total investments | 114,129,661 | 14,532,713 | - | 128,662,374 |
| TDA investment in TRSNYC Pension Fund | - | 35,459,207 | (35,459,207) | - |
| Other assets | 160,414 | 38,567 | (23,392) | 175,589 |
| Total assets | 117,633,476 | 50,664,538 | (35,482,599) | 132,815,415 |
| LIABILITIES | | | | |
| Accounts payable | 734,190 | 50,003 | (23,392) | 760,801 |
| Payable for investment securities purchased | 3,087,495 | 85,050 | - | 3,172,545 |
| Accrued benefits payable | 129,809 | 499,066 | - | 628,875 |
| Due to TDA program's Fixed-Return Fund | 35,459,207 | - | (35,459,207) | - |
| Securities lending (Note 2) | 3,612,893 | 887,211 | - | 4,500,104 |
| Other liabilities | 121,493 | 32,322 | - | 153,815 |
| Total liabilities | 43,145,087 | 1,553,652 | (35,482,599) | 9,216,140 |
| Net position restricted for benefits: | | | | |
| Benefits to be provided by QPP | 74,488,389 | - | - | 74,488,389 |
| Benefits to be provided by TDA Program | - | 49,110,886 | - | 49,110,886 |
| Total net position restricted for benefits | \$ 74,488,389 | \$ 49,110,886 | \$ - | \$ 123,599,275 |

Teachers' Retirement System of the City of New York

COMBINING STATEMENT OF FIDUCIARY NET POSITION

June 30, 2023
(In thousands)

| | QPP | TDA | Eliminations | Total |
|--|---------------|---------------|--------------|----------------|
| ASSETS | | | | |
| Cash | \$ 70,795 | \$ 9,037 | \$ - | \$ 79,832 |
| Receivables: | | | | |
| Investments securities sold | 1,826,650 | 3,979 | - | 1,830,629 |
| Accrued interest and dividends | 378,152 | 23,957 | - | 402,109 |
| Member loans (Note 6) | 333,351 | 469,682 | - | 803,033 |
| Total receivables | 2,538,153 | 497,618 | - | 3,035,771 |
| Investments - at fair value (Notes 2 and 3): | | | | |
| TRSNYC Pension Fund Assets (Fixed-Return Fund): | | | | |
| Short-term investment: | | | | |
| Commercial paper | 7,048 | - | - | 7,048 |
| Short-term investment fund | 1,094,454 | - | - | 1,094,454 |
| U.S. treasury bills and agencies | 151,349 | - | - | 151,349 |
| Debt securities: | | | | |
| U.S. government | 13,194,373 | - | - | 13,194,373 |
| Corporate and other | 14,822,382 | - | - | 14,822,382 |
| Treasury inflation-protected securities | 3,142,114 | - | - | 3,142,114 |
| Equity securities: | | | | |
| Domestic equity | 26,917,090 | - | - | 26,917,090 |
| International equity | 16,998,843 | - | - | 16,998,843 |
| Alternative investments | 19,591,376 | - | - | 19,591,376 |
| Collateral from securities lending (Fixed-Return Fund) | 4,052,373 | - | - | 4,052,373 |
| Variable-Return Funds: | | | | |
| Diversified Equity Fund: | | | | |
| Short-term investments | 75,724 | 92,788 | - | 168,512 |
| Equity securities | 5,525,485 | 10,275,133 | - | 15,800,618 |
| Debt securities | | | | |
| Balanced Fund: | 87 | 1,221 | - | 1,308 |
| Short-term investments | 37,698 | 526,948 | - | 564,646 |
| International Equity Fund: | | | | |
| Short-term investments | 88 | 2,710 | - | 2,798 |
| International equity | 7,617 | 233,748 | - | 241,365 |
| Sustainable Equity Fund: | | | | |
| Short-term investments | 251 | 8,805 | - | 9,056 |
| Equity securities | 15,548 | 544,584 | - | 560,132 |
| U.S. Equity Index Fund: | | | | |
| Short-term investments | 1 | 13 | - | 14 |
| Equity securities | 6,959 | 135,041 | - | 142,000 |
| International Equity Index Fund: | | | | |
| Short-term investments | 1 | 50 | - | 51 |
| Equity securities | 259 | 23,316 | - | 23,575 |
| Collateral from securities lending (Variable-Return Funds) | 325,925 | 673,841 | - | 999,766 |
| Total investments | 105,967,045 | 12,518,198 | - | 118,485,243 |
| TDA investment in TRSNYC Pension Fund | - | 33,663,158 | (33,663,158) | - |
| Other assets | 169,089 | 42,717 | (23,514) | 188,292 |
| Total assets | 108,745,082 | 46,730,728 | (33,686,672) | 121,789,138 |
| LIABILITIES | | | | |
| Accounts payable | 339,755 | 44,008 | (23,514) | 360,249 |
| Payable for investment securities purchased | 2,295,806 | 5,664 | - | 2,301,470 |
| Accrued benefits payable | 7,398 | 570,164 | - | 577,562 |
| Due to TDA program's Fixed-Return Fund | 33,663,158 | - | (33,663,158) | - |
| Securities lending (Note 2) | 4,378,298 | 673,841 | - | 5,052,139 |
| Other liabilities | 126,411 | 33,605 | - | 160,016 |
| Total liabilities | 40,810,826 | 1,327,282 | (33,686,672) | 8,451,436 |
| Net position restricted for benefits: | | | | |
| Benefits to be provided by QPP | 67,934,256 | - | - | 67,934,256 |
| Benefits to be provided by TDA Program | - | 45,403,446 | - | 45,403,446 |
| Total net position restricted for benefits | \$ 67,934,256 | \$ 45,403,446 | \$ - | \$ 113,337,702 |

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

Teachers' Retirement System of the City of New York

COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

Year ended June 30, 2024
(In thousands)

| | <u>QPP</u> | <u>TDA</u> | <u>Total</u> |
|--|----------------------|----------------------|-----------------------|
| Additions | | | |
| Contributions: | | | |
| Member contributions (Note 4) | \$ 331,674 | \$ 1,207,169 | \$ 1,538,843 |
| Employer contributions | 3,161,752 | - | 3,161,752 |
| Other employer contributions | 56,886 | - | 56,886 |
| Total contributions | <u>3,550,312</u> | <u>1,207,169</u> | <u>4,757,481</u> |
| Investment income (loss) (Note 2): | | | |
| Interest income | 1,479,521 | 41,866 | 1,521,387 |
| Dividend income | 1,113,055 | 192,982 | 1,306,037 |
| Net appreciation in fair value of investments | <u>8,570,056</u> | <u>2,144,384</u> | <u>10,714,440</u> |
| Total investment income | <u>11,162,632</u> | <u>2,379,232</u> | <u>13,541,864</u> |
| Less: | | | |
| Investment expenses | 652,526 | 21,459 | 673,985 |
| Net decrease in variable expense provision | <u>(11,089)</u> | <u>588</u> | <u>(10,501)</u> |
| Net investment income | <u>10,521,195</u> | <u>2,357,185</u> | <u>12,878,380</u> |
| Securities lending transactions: | | | |
| Securities lending income | 7,281 | 2,147 | 9,428 |
| Less - securities lending fees | <u>(466)</u> | <u>(212)</u> | <u>(678)</u> |
| Net securities lending income | <u>6,815</u> | <u>1,935</u> | <u>8,750</u> |
| Other: | | | |
| Net receipts from other retirement systems | <u>(9,244)</u> | <u>-</u> | <u>(9,244)</u> |
| Total additions | <u>14,069,078</u> | <u>3,566,289</u> | <u>17,635,367</u> |
| Deductions | | | |
| Benefit payments and withdrawals | 5,139,963 | 2,138,525 | 7,278,488 |
| Administrative expenses (Note 8) | <u>75,590</u> | <u>19,716</u> | <u>95,306</u> |
| Other: | | | |
| Statutory interest for TDA Program's Fixed-Return Fund | 2,393,665 | (2,393,665) | - |
| TDA rebalance | <u>(94,273)</u> | <u>94,273</u> | <u>-</u> |
| Total deductions | <u>7,514,945</u> | <u>(141,151)</u> | <u>7,373,794</u> |
| Net increase in net position | 6,554,133 | 3,707,440 | 10,261,573 |
| Net position restricted for benefits | | | |
| Beginning of year | <u>67,934,256</u> | <u>45,403,446</u> | <u>113,337,702</u> |
| End of year | <u>\$ 74,488,389</u> | <u>\$ 49,110,886</u> | <u>\$ 123,599,275</u> |

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

Teachers' Retirement System of the City of New York

COMBINING STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

Year ended June 30, 2023
(In thousands)

| | QPP | TDA | Total |
|--|----------------------|----------------------|-----------------------|
| Additions | | | |
| Contributions: | | | |
| Member contributions (Note 4) | \$ 292,473 | \$ 1,061,225 | \$ 1,353,698 |
| Employer contributions | 3,086,082 | - | 3,086,082 |
| Other employer contributions | 57,721 | - | 57,721 |
| Total contributions | <u>3,436,276</u> | <u>1,061,225</u> | <u>4,497,501</u> |
| Investment income (loss) (Note 2): | | | |
| Interest income | 1,476,900 | 36,009 | 1,512,909 |
| Dividend income | 1,115,816 | 188,809 | 1,304,625 |
| Net appreciation in fair value of investments | <u>5,761,300</u> | <u>1,636,454</u> | <u>7,397,754</u> |
| Total investment income | <u>8,354,016</u> | <u>1,861,272</u> | <u>10,215,288</u> |
| Less: | | | |
| Investment expenses | 534,098 | 18,234 | 552,332 |
| Net decrease in variable expense provision | <u>(15,231)</u> | <u>(7,004)</u> | <u>(22,235)</u> |
| Net investment income | <u>7,835,149</u> | <u>1,850,042</u> | <u>9,685,191</u> |
| Securities lending transactions: | | | |
| Securities lending income | 9,542 | 2,784 | 12,326 |
| Less - securities lending fees | <u>(307)</u> | <u>(275)</u> | <u>(582)</u> |
| Net securities lending income | <u>9,235</u> | <u>2,509</u> | <u>11,744</u> |
| Other: | | | |
| Net receipts from other retirement systems | <u>(6,564)</u> | <u>-</u> | <u>(6,564)</u> |
| Total additions | <u>11,274,096</u> | <u>2,913,776</u> | <u>14,187,872</u> |
| Deductions | | | |
| Benefit payments and withdrawals | 4,947,702 | 2,024,183 | 6,971,885 |
| Administrative expenses (Note 8) | <u>73,784</u> | <u>17,998</u> | <u>91,782</u> |
| Other: | | | |
| Statutory interest for TDA Program's Fixed-Return Fund | 2,261,718 | (2,261,718) | - |
| TDA rebalance | <u>66,064</u> | <u>(66,064)</u> | <u>-</u> |
| Total deductions | <u>7,349,268</u> | <u>(285,601)</u> | <u>7,063,667</u> |
| Net increase in net position | 3,924,828 | 3,199,377 | 7,124,205 |
| Net position restricted for benefits | | | |
| Beginning of year | <u>64,009,428</u> | <u>42,204,069</u> | <u>106,213,497</u> |
| End of year | <u>\$ 67,934,256</u> | <u>\$ 45,403,446</u> | <u>\$ 113,337,702</u> |

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

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS

June 30, 2024 and 2023

NOTE 1 - SYSTEM AND PLAN DESCRIPTIONS

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

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

The QPP is a cost-sharing, multiple-employer pension plan. The QPP provides pension benefits for City public school teachers, certain other school employees, and college teachers. The Employers, in addition to The City, are the City University of New York ("CUNY"), several Charter Schools, and certain members of TRS who are on leave to conduct union business for the United Federation of Teachers ("UFT") (each, an "Employer" and collectively, the "Employers"). Substantially all teachers in the public schools of The City become members of the QPP, and certain other specified school and college personnel may become members on the first day of permanent employment.

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

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

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

Board of Trustees ("TRS Board")

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

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2024 and 2023

Membership Data

The QPP's and TDA Program's membership, at June 30, 2024 and 2023, consisted of:

| | QPP | |
|--|----------------|----------------|
| | 2024* | 2023 |
| Retirees and beneficiaries receiving benefits | 96,000 | 93,759 |
| Terminated vested members not yet receiving benefits | 20,000 | 21,830 |
| Terminated non-vested members** | 29,000 | 29,739 |
| Active members receiving salary | 127,000 | 124,368 |
| Total | 272,000 | 269,696 |
| | | |
| | TDA Program | |
| | 2024* | 2023 |
| Retirees receiving a TDA annuity | 2,800 | 2,770 |
| Retirees or Inactive members with TDA deferral | 66,000 | 64,830 |
| Active members with TDA | 99,000 | 94,231 |
| Total | 167,800 | 161,831 |

* Preliminary

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

The QPP's and TDA Program's membership, at June 30, 2022 and 2021, the dates of the membership data used in determining Fiscal Year 2024 and Fiscal Year 2023 employer contributions, consisted of:

| | QPP | |
|--|----------------|----------------|
| | 2022 | 2021 |
| Retirees and beneficiaries receiving benefits | 92,282 | 89,997 |
| Terminated vested members not yet receiving benefits | 19,630 | 15,128 |
| Terminated non-vested members** / Other inactives*** | 5,106 | 4,574 |
| Active members | 123,674 | 123,211 |
| Total | 240,692 | 232,910 |
| | | |
| | TDA Program | |
| | 2022 | 2021 |
| Retirees receiving a TDA annuity | 2,730 | 2,724 |
| Retirees or inactive members with TDA deferral | 63,086 | 60,594 |
| Active members with TDA | 93,997 | 96,790 |
| Total | 159,813 | 160,108 |

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

Teachers' Retirement System of the City of New York
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June 30, 2024 and 2023

Summary of Benefits

QPP Plan

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

- Members who joined prior to July 1, 1973 ("Tier I") are entitled to service retirement benefits of 50% of "final salary" (as defined within State and City laws) after 20 years of service; a portion is provided from member contributions, plus additional benefits equal to specified percentages (as defined within State and City laws) per year of service of "final salary" for years in excess of the 20-year minimum. These benefits are increased, where applicable, by an annuity attributable to accumulated member contributions in excess of the minimum required balance and by any benefits attributable to Increased-Take-Home-Pay ("ITHP") contributions [accumulated after the 20th year of member qualifying service]. ITHP represents amounts contributed by The City to members' QPP accounts in lieu of members' own contributions. These amounts reduce the contributions that members would have to make to the QPP during their service and thereby increase their take-home pay. Members have the choice of waiving their ITHP reduction, which would reduce their take-home pay, but provide them with increased benefits upon retirement.

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

- Members who joined the QPP after June 30, 1973 and before July 27, 1976 ("Tier II") have provisions similar to Tier I, except that the eligibility for retirement and the salary base for benefits are different and there is a limitation on the maximum benefit. This maximum limitation was subsequently eliminated under Chapter 574 of the Laws of 2000 for all Tier II members who retired after December 8, 2000. Members retiring prior to the age of 62 without 30 years of credited service are subject to an age-reduction factor in their retirement allowance. Effective February 27, 2008, active members were eligible to enroll in a 55-retirement-age minimum and 25 credited years of service retirement option ("55/25 retirement option") enabling them to eliminate any age-reduction factor in their retirement allowance (Chapter 19 of the Laws of 2008). Those choosing the 55/25 retirement option are required to make additional contributions of 1.85% of salary from February 28, 2008 until June 29, 2008, or until they have accumulated 25 years of credited service, whichever is later.

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

Certain members of Tier I and Tier II have the right to make voluntary member contributions ("Voluntary Contributions") in excess of their required member contributions ("Required Contributions"). Both the investment of the Voluntary Contributions and the Required Contributions

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

are directed by each member. A member may invest in: (1) the QPP's Fixed-Return Fund, in which it is credited with interest at the Statutory-Interest Rate (currently 8.25% for Tier I and Tier II contributions and 7.0% for United Federation of Teachers ("UFT") members and 8.25% for non-UFT members for TDA Contributions); and/or (2) in one or more of the QPP's Variable-Return Funds (see Note 2 - Investment Programs). At the time of retirement or refund of contributions, a member's aggregate balance of actual Required Contributions and Voluntary Contributions, including the actual accumulated earnings thereon, less the outstanding balance of any member loans ("Net Actual Contributions"), may exceed ("Excess of Contributions") or fall short of ("Deficiency of Contributions") the member's Expected Balance. The Expected Balance is the sum of the Required Contributions which a member should have made during his or her credited service, plus the earnings that would have accumulated thereon at the Statutory-Interest rate. The amount of the member's retirement annuity or the refund of contributions that he or she is entitled to is increased by any Excess of Contributions or reduced by any Deficiency of Contributions. The total values of active members' Excess of Contributions, net of all Deficiencies of Contributions, for the years ended June 30, 2024 and 2023, are \$21.9 million and \$27.6 million, respectively. Actuarial estimates of the impact of Excesses and Deficiencies are incorporated into the calculation of the QPP's net pension liability.

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

- Members who joined the QPP on or after July 27, 1976 and prior to September 1, 1983 ("Tier III") were later mandated into Tier IV. However, these members retain their Tier III rights. Tier III requires member contributions of 3.0% of salary for a 10-year period (Chapter 126 of the Laws of 2000), and generally provides for reducing benefits by one-half of the primary Social Security benefit attributable to service with the Employer and for an annual cost-of-living escalator in pension benefits of not more than 3.0%. Members retiring prior to the age of 62 without 30 years of credited service are subject to an age-reduction factor in their retirement allowance.
- Members who joined the QPP on or after September 1, 1983 ("Tier IV") were required to make contributions of 3.0% of salary until termination of service. As of October 1, 2000, these members are not required to make contributions after the 10th anniversary of their membership date or completion of 10 years of credited service, whichever is earlier (Chapter 126 of the Laws of 2000). The annual benefit is approximately 1.67% of "final average salary" per year of service for members with less than 20 years of service and 2.0% of "final average salary" per year of service for members with 20 to 30 years of service, plus a 1.5% addition of "final average salary" per year of service in excess of 30 years of service. Members retiring prior to the age of 62 without 30 years of credited service experience an age-reduction factor in their retirement allowance. Effective February 27, 2008, active members were eligible to enroll in a 55-retirement-age minimum and 25-credited years of service retirement option enabling them to eliminate any age-reduction factor in their retirement allowance. Those choosing the age 55 retirement option are required to make additional contributions of 1.85% of salary from February 28, 2008 until June 29, 2008, or until they have accumulated 25 years of credited service, whichever is later. Members joining after February 27, 2008 are automatically enrolled in a 55-retirement-age minimum and 27-credited years of service retirement program ("55/27 retirement program"). These members are required to make additional plan contributions of 1.85% of salary until they have accumulated 27 years of credited service.

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NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

Members under the 55/27 retirement program who joined after December 10, 2009, but before April 1, 2012, were required to make contributions of 4.85% of salary until they have 27 years of credited service and contributions of 1.85% of salary thereafter.

- Members who joined on and after April 1, 2012 ("Tier VI") are required to make contributions of 3.0% per year through March 31, 2013. Thereafter, contributions range from 3.0% to 6.0% in accordance with a schedule based on salary. Member contributions continue until retirement. Salary is limited to the New York State Governor's salary. Tier VI members are generally eligible to retire with unreduced benefits beginning at age 63 or with reduced benefits beginning at age 55, if vested. As of April 9, 2022, Tier VI members are vested after five years of service (Chapter 56 of the Laws of 2022).

Members enrolled in the QPP on or after July 27, 1976 ("Tier III, IV, and VI") who resign or otherwise terminate from service prior to eligibility for a benefit, are refunded all of their member contributions with 5.0% interest (RSSL, Article 15). Tier III, IV, and VI members who work for the Department of Education also receive a monthly supplemental contribution. Monthly supplemental contributions totaling \$550 per year for supervisors and administrators and \$400 per year for other eligible members is credited to the members' Annuity Savings Accumulation Fund ("ASAF").

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

Subject to certain conditions, members become fully vested and eligible for benefits upon the completion of five years of service.

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

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

TDA Program

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

A participant may withdraw all or part of the balance of their account prior to or at the time of retirement. As of January 1, 1989, the tax laws restricted withdrawals of tax-deferred annuity contributions and accumulated earnings thereon for reasons other than retirement or termination. Contributions made after

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2024 and 2023

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

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

When a member resigns before attaining vested rights under the QPP, they may withdraw the value of the account or may leave the account in the TDA Program for a period of up to seven school years after the date of resignation, provided the member does not withdraw their account from the QPP. If a member resigns after attaining vested rights under the QPP, they may leave the account in the TDA Program, provided the member does not withdraw their QPP funds. Once a withdrawal is made from the QPP, the member's participation in the TDA Program is automatically terminated, and the value of the account in the TDA Program will be paid out to the member. Upon death, TDA balances are paid to the assigned beneficiaries or may be invested on behalf of the beneficiaries in the TDA Program's Variable-Return Funds. The option for new beneficiaries to invest in the TDA Program's Variable-Return Funds was statutorily rescinded in August 2021.

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

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

Excess Benefit Plan

The System also administers an Excess Benefit Plan ("EBP") in accordance with Chapter 623 of the laws of 2004. The EBP pays an additional benefit for any member whose QPP benefit payable was reduced due to the limitations of IRC Section 415(b). In Fiscal Year 2024, the EBP paid three retirees a total of \$254.9 thousand and retained as of June 30, 2023 \$5.0 thousand EBP contributions for future EBP payments. In Fiscal Year 2023, the EBP paid four retirees a total of \$59.2 thousand and retained as of June 30, 2023 \$4.8 thousand EBP contributions for future EBP payments.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting - The QPP and the TDA Program use the accrual basis of accounting, where the measurement focus is on the flow of economic resources. Revenues are recognized in the accounting period in which they are earned, and expenses are recognized in the period incurred. Contributions from members are recognized when the Employers make payroll deductions from members' salary. Employer contributions to the QPP are recognized when due, and the Employer has a legal obligation to provide the contributions. Benefit payments and withdrawals are recognized when due and payable in accordance with the terms of the QPP and the TDA Program.

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

Investment Valuation - Investments are reported at fair value. Fair value is defined as the quoted market price at the end of the last trading day for the specified period, except for Alternative investments, which are considered long-term and illiquid in nature. Alternative investments consist of limited partnership structures invested in privately-held investments for which exchange quotations are not readily available, and are valued at estimated fair value. Fair value at fiscal year-end is based on the fair value of net assets reported in the most recently available partnership's capital account statements from the general partner,

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

adjusted for any subsequent contributions, distributions, management fees, and changes in values of foreign currency. They include investments held within Private Equity, Real Estate, Opportunistic Fixed Income, and Infrastructure.

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

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

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

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

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

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

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

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

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

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

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

Other Employer Contributions - Include amounts for Contingent Reserve Funds for half (or employer's portion) of Additional Member Contributions (Chapter 19; 1.85%), buyback payments for outside and military service, and The New York City Department of Education ("DOE") supplemental contributions for the ASAF and Annuity Savings Fund ("ASF"). The Employer portion of Additional Member Contributions is not part of the employer's appropriation amount and also not recoverable by the member upon the member's resignation.

Investment Expenses - The Variable-Return Funds maintain a reserve for administrative and investment expenses. As of June 30, 2024, the reserve was \$33.3 million for QPP and \$24.3 million for TDA. The expense reserve and net investment expenses for 2024 were reduced by \$11.1 million for QPP and \$588.5 thousand for TDA. As of June 30, 2023, the reserve was \$42.0 million for QPP and \$22.6 million for TDA. The expense reserve and net investment expenses for 2023 were reduced by \$15.2 million for QPP and \$7.0 million for TDA.

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

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NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

Accounts Payable - Accounts payable is principally comprised of amounts owed to the System's banks due to depositories, unclaimed payments, reserves for investment and administrative expenses for the Variable-Return Funds, and investment expenses accrued to the QPP and TDA Program. The System's practice is to fully invest its day-end cash balances in a pooled short-term fund. A typical benefit payment bank account would show no balance, since funding only occurs when benefit payment checks are presented to the bank for payment each day.

Intra-fund Payable/Receivable - At fiscal year-end, intra-fund payables/receivables between the TRSNYC Pension Fund and the Variable-Return Funds are excluded from QPP and TDA Program assets. The NYCAC Sections 13-577 and 13-582 provide for certain internal transfers of funds. These transfers are intended to rebalance estimated actuarial liabilities with reported assets. In Fiscal Year 2024, \$80.2 million was transferred from the QPP Variable-Return Funds to the QPP TRSNYC Pension Fund. In addition, in Fiscal Year 2024, \$94.3 million was transferred from the TDA Program to the QPP Plan.

In Fiscal Year 2023, \$66.1 million was transferred to the QPP Variable-Return Funds from the QPP TRSNYC Pension Fund. In addition, in Fiscal Year 2023, \$3.2 million was transferred to the TDA from the QPP Program.

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

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

Securities-Lending Transactions - State statutes and Board policies permit the Funds to lend their investments to broker-dealers and other entities for collateral, for the same securities in the future with a simultaneous agreement to return the collateral in the form of cash, U.S. Treasury, and U.S. Government securities. The Funds' agent lends the following types of securities: short-term securities, common stocks, long-term corporate bonds, U.S. Government and agency bonds, asset-backed securities, international equities, and bonds held in collective investment funds. In return, the Funds receive collateral in the form of cash, U.S. Treasury, and U.S. Government agency securities at 100% to 105% of the principal plus accrued interest for reinvestment. At June 30, 2024 and 2023, management believes that the Funds had no credit risk exposure to borrowers because the fair value of collateral held by the System equaled or exceeded the fair value of securities lent to the borrowers. Also, the contracts with the Funds' Securities Lending Agent (the "Agent") require the Agent to indemnify the Funds as follows: In the situation when a borrower goes into default, the Agent will liquidate the collateral to purchase replacement securities. Any shortfall before the replacement securities' cost and the collateral value is covered by the Agent. All securities loans can be terminated on demand within a period specified in each agreement by either the Funds or the borrowers. Cash collateral is invested by the securities-lending agent using approved Lender's Investment guidelines. The weighted-average maturity is 159.9 days for collateral investments under State Street's TRSNYC Pension Fund investments and 1.0 days for JPMorgan Chase's Variable-Return Fund investments. The securities-lending program in which the Funds participate only allows pledging or selling securities in the case of borrower default.

During Fiscal Year 2024, net earnings from the securities-lending program were \$8.8 million. Net earnings from QPP were \$6.8 million, including \$5.9 million from the TRSNYC Pension Fund and \$955.1 thousand

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June 30, 2024 and 2023

from the Variable-Return Funds. The TDA net earnings from the Variable-Return Funds securities-lending program amounted to \$1.9 million.

During Fiscal Year 2023, net earnings from the securities-lending program were \$11.7 million. Net earnings from QPP were \$9.2 million, including \$7.9 million from the TRSNYC Pension Fund and \$1.3 million from the Variable-Return Funds. The TDA net earnings from the Variable-Return Funds securities-lending program amounted to \$2.5 million.

GASB Statement No. 28, *Accounting and Financial Reporting for Securities-Lending Transactions*, requires that securities loaned as assets and related liabilities be reported in the Combining Statements of Fiduciary Net Position. Cash received as collateral on securities-lending transactions and investments made with that cash are reported as assets. As of the balance sheet date, the maturities of the investments made with cash collateral on average exceed the maturities of the securities loans by approximately 156.9 days for State Street's TRSNYC Pension Fund investments and 0.0 days for JPMorgan Chase's Variable-Return Fund investments. Securities received as collateral are also reported as assets if the government entity has the ability to pledge or sell them with a borrower default. Accordingly, the System records the investments purchased with the cash collateral from securities lending with a corresponding liability for securities lending. Securities on loan are carried at fair value; as of June 30, 2024 and 2023, the values on loan by the TRSNYC Pension Fund were \$3.1 billion and \$4.0 billion, respectively, and the values on loan by the Variable-Return Funds were \$1.3 billion and \$977.1 million, respectively. Collateral received related to securities lending as of June 30, 2024 and 2023 was \$3.2 billion and \$4.1 billion, respectively, for the TRSNYC Pension Fund, and \$1.3 billion and \$999.8 million, respectively, for the Variable-Return Funds.

Implementation of Governmental Accounting Standards Board (GASB) Statements

GASB Statement No. 98, *The Annual Comprehensive Financial Report*, establishes the term Annual Comprehensive Financial Report and its acronym ACFR. The term replaced Comprehensive Annual Financial Report and its acronym in generally accepted accounting principles for state and local governments. The System, in fiscal year 2021, implemented this pronouncement and has applied the change as of the issuance of this report.

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

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

GASB Statement No. 96, *Subscription-Based Information Technology Arrangements* ("SBITA"), establishes a uniform approach for the accounting and financial reporting requirements for eligible SBITAs, grounded on the principle that these arrangements are financings of the right to use specific technology resources. The Statement defines recognition of SBITA assets and corresponding liabilities for certain agreements, and the associated inflows or outflows of resources. The objective of this Statement is to standardize the comparability of financial statements and enhance the consistency of information regarding the technology

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June 30, 2024 and 2023

subscription agreements of governments. As of June 30, 2024, the adoption of GASB 96 did not have a significant impact on these financial statements.

GASB Statement No. 100, *Accounting Changes and Error Corrections*, statement prescribes the accounting and financial reporting for each type of accounting change and error correction. This Statement requires disclosure in notes to financial statements of descriptive information about accounting changes and error corrections. It also requires the information about the quantitative effects on beginning balances of each accounting change and error correction be disclosed in a tabular format to reconcile beginning balances as previously reported to beginning balances as restated. This statement also addresses how information that is affected by a change in accounting principle or error correction should be presented in required supplementary information and supplementary information. The adoption of GASB Statement No. 100 did not have a significant impact on these financial statements.

NOTE 3 - INVESTMENTS AND DEPOSITS

The Comptroller acts as an investment advisor to TRS and employs an independent consultant for the TRSNYC Pension Fund. In addition, TRS employs an independent investment consultant as an investment advisor for its Variable-Return Funds. TRS utilizes investment managers to manage the long-term debt and equity portfolios. The managers are regularly reviewed with regard to both their investment performance and their adherence to investment guidelines.

The State Retirement and Social Security Law (RSSL) and New York City Administrative Code (NYCAC) authorize the investment of assets subject to the terms, conditions, limitations, and restrictions imposed by law for investments by savings banks and domestic life insurance companies. The RSSL §§ 176-178(a), Banking Law § 235, and the ACNY establish the criteria for permissible equity investments. Investments up to 35% of total assets of the QPP and the TDA Program may be made in instruments not expressly permitted by the State RSSL.

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

TRS possesses investment policy statements for its QPP and TDA Program, and investment risk management is an inherent function of the asset allocation process. The System's assets are diversified over a broad range of asset classes and encompass multiple investment strategies aimed at limiting concentration risk. The asset allocation per investment program targeted for Fiscal Years 2024 and 2023 included securities in the categories listed below. TRSNYC Pension Fund primarily holds QPP assets, and the returns from this fund impact the funding of the QPP, a defined-benefit plan. The Variable-Return Funds primarily relate to the TDA Program, a defined-contribution plan.

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

| TRSNYC Pension Fund Target Asset Allocations Investment Type | Asset Allocation Percentages * | |
|--|-----------------------------------|--------|
| | 2024 | 2023 |
| Common stock | 27.3% | 24.7% |
| International investments - Non-U.S. | 12.5% | 10.3% |
| International investments - Emerging markets | 5.0% | 9.6% |
| Alternative investments - Real estate | 5.4% | 5.8% |
| Alternative investments - Private equity | 8.6% | 8.5% |
| Alternative investments - Infrastructure | 2.8% | 2.4% |
| Alternative investments - Opportunistic fixed income | 4.0% | 3.7% |
| Fixed income | 34.4% | 35.0% |
| Total | 100.0% | 100.0% |

* Represents adjusted target policy percentages.

| Variable-Return Funds Target Asset Allocations Investment Type | Asset Allocation Percentages | |
|--|---------------------------------|--------|
| | 2024 | 2023 |
| Diversified Equity (Variable A): | | |
| Common stock - Passive | 62.0% | 62.0% |
| Common stock - Active | 15.0% | 15.0% |
| International investments | 23.0% | 23.0% |
| Balanced Fund (formerly Bond Fund - Variable B): | | |
| Fixed Income | 70.0% | 70.0% |
| Equity | 30.0% | 30.0% |
| International Equity (Variable C): | | |
| International Investments | 100.0% | 100.0% |
| Sustainable Equity (former Socially Responsible - Variable E): | | |
| Sustainable Equity BA SEF | 100.0% | 100.0% |
| U.S. Equity Index (established January 1, 2020 - Variable F): | | |
| U.S. Equity Index Fund | 100.0% | 100.0% |
| International Equity Index (established January 1, 2020 - Variable G): | | |
| International Equity Index Fund | 100.0% | 100.0% |

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

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

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

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

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

The quality ratings of the TRSNYC Pension Fund investments, by percentage of the rated portfolio, as described by nationally recognized rating organizations, at June 30, 2024 and 2023, are as follows:

| Investment Type Pension Fund June 30, 2024 (in percent) | Moody's Quality Ratings | | | | | | | | | | | | | | | | | | |
|--|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|--------------|---------|
| | Aaa | Aaa1 | Aaa2 | Aaa3 | A1 | A2 | A3 | Baa1 | Baa2 | Baa3 | Ba1 | Ba2 | Ba3 | B1 | B2 | B3 | Caa1 & Below | Not Rated | Total |
| Government and Agency Debt | 32.72% | - | - | 0.06% | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.94% | 33.72% |
| | 12.56% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 12.56% |
| | 0.90% | 0.04% | 0.27% | 0.58% | 4.01% | 2.55% | 3.97% | 4.05% | 6.88% | 3.91% | 2.09% | 2.01% | 3.03% | 2.86% | 2.54% | 2.19% | 2.28% | 3.99% | 48.15% |
| | Short-term: | | | | | | | | | | | | | | | | | | |
| | Commercial paper | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.60% | 0.60% |
| Discount notes and T-bills Pooled fund | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2.23% | 2.23% |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2.74% | 2.74% |
| Percent of rated portfolio | 46.18% | 0.04% | 0.27% | 0.64% | 4.01% | 2.55% | 3.97% | 4.05% | 6.88% | 3.91% | 2.09% | 2.01% | 3.03% | 2.86% | 2.54% | 2.19% | 2.28% | 10.50% | 100.00% |
| Investment Type Pension Fund June 30, 2023 (in percent) | Moody's Quality Ratings | | | | | | | | | | | | | | | | | | |
| | Aaa | Aaa1 | Aaa2 | Aaa3 | A1 | A2 | A3 | Baa1 | Baa2 | Baa3 | Ba1 | Ba2 | Ba3 | B1 | B2 | B3 | Caa1 & Below | Not Rated | Total |
| Government and Agency Debt | 49.62% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.78% | 50.40% |
| | 12.85% | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 12.85% |
| | 0.95% | 0.01% | 0.10% | 0.29% | 2.48% | 1.27% | 2.43% | 2.49% | 3.35% | 2.17% | 1.59% | 1.52% | 2.48% | 2.63% | 2.20% | 2.21% | 1.91% | 2.80% | 32.88% |
| | Short-term: | | | | | | | | | | | | | | | | | | |
| | Commercial paper | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.02% | 0.02% |
| Discount notes and T-bills Pooled fund | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.47% | 0.47% |
| | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3.38% | 3.38% |
| Percent of rated portfolio | 63.42% | 0.01% | 0.10% | 0.29% | 2.48% | 1.27% | 2.43% | 2.49% | 3.35% | 2.17% | 1.59% | 1.52% | 2.48% | 2.63% | 2.20% | 2.21% | 1.91% | 7.45% | 100.00% |

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

The quality ratings of the Variable-Return Fund investments, both QPP and TDA, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2024 and 2023, are as follows:

| Investment Type Variable-Return Funds June 30, 2024 (In percent) | Moody's Quality Ratings | | | | | | | | | | | | |
|---|-------------------------|-----|-----|-----|----|----|----|------|------|------|-----|-----|-----|
| | Aaa* | Aa1 | Aa2 | Aa3 | A1 | A2 | A3 | Baa1 | Baa2 | Baa3 | Ba1 | Ba2 | Ba3 |
| Corporate | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Short-term: U.S. treasury bills | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Money market funds | 100.00% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Percent of rated portfolio | 100.00% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| | | | | | | | | | | | | | |
| Investment Type Variable-Return Funds June 30, 2023 (In percent) | Moody's Quality Ratings | | | | | | | | | | | | |
| | Aaa* | Aa1 | Aa2 | Aa3 | A1 | A2 | A3 | Baa1 | Baa2 | Baa3 | Ba1 | Ba2 | Ba3 |
| Corporate | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Short-term: U.S. treasury bills | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Money market funds | 100.00% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Percent of rated portfolio | 100.00% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| | | | | | | | | | | | | | |
| Investment Type Variable-Return Funds June 30, 2024 (In percent) | Moody's Quality Ratings | | | | | | | | | | | | |
| | Aaa* | Aa1 | Aa2 | Aa3 | A1 | A2 | A3 | Baa1 | Baa2 | Baa3 | Ba1 | Ba2 | Ba3 |
| Corporate | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Short-term: U.S. treasury bills | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Money market funds | 100.00% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Percent of rated portfolio | 100.00% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| | | | | | | | | | | | | | |
| Investment Type Variable-Return Funds June 30, 2023 (In percent) | Moody's Quality Ratings | | | | | | | | | | | | |
| | Aaa* | Aa1 | Aa2 | Aa3 | A1 | A2 | A3 | Baa1 | Baa2 | Baa3 | Ba1 | Ba2 | Ba3 |
| Corporate | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Short-term: U.S. treasury bills | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Money market funds | 100.00% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| Percent of rated portfolio | 100.00% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% | -% |
| | | | | | | | | | | | | | |

*Certain prior year investment ratings have been reclassified to conform to the current year presentation. Money market funds, previously reported as not rated as of June 30, 2023 have been reclassified as Aaa to conform with the June 30, 2024 presentation.

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

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

Generally, the System is the sole account owner of the custodial account. However, the Diversified Equity Fund is co-invested along with certain assets of BERS. Also, as of June 30, 2023, 0.6% of the TRSNYC Pension Fund assets were held in NYC commingled trust accounts owned 100% by The City's pension systems and related funds.

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

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

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

The lengths of investment maturities (in years) of TRSNYC Pension Fund investments, both QPP and TDA, as shown by the percent of the rated portfolio at June 30, 2024 and 2023, are as follows:

| Investment Type TRSNYC Pension Fund June 30, 2024 | Investment Maturities | | | | |
|---|-----------------------|-----------------------|----------------------|---------------------|------------------------|
| | Fair Value | Less Than One Year | One to Five Years | Six to Ten Years | More Than Ten Years |
| Government and Agency Debt | 33.72% | 0.02% | 20.80% | 4.73% | 8.17% |
| Mortgage debt securities | 12.56% | -% | 0.20% | 0.26% | 12.10% |
| Corporate bonds | 48.15% | 0.80% | 23.00% | 11.48% | 12.87% |
| Short-term: | | | | | |
| Commercial paper | 0.60% | 0.60% | -% | -% | -% |
| Discount notes and Treasury bills | 2.23% | 2.23% | -% | -% | -% |
| Pooled funds | 2.74% | 2.74% | -% | -% | -% |
| Percent of rated portfolio | 100.00% | 6.39% | 44.00% | 16.47% | 33.14% |

| Investment Type TRSNYC Pension Fund June 30, 2023 | Investment Maturities | | | | |
|---|-----------------------|-----------------------|----------------------|---------------------|------------------------|
| | Fair Value | Less Than One Year | One to Five Years | Six to Ten Years | More Than Ten Years |
| Government and Agency Debt | 50.40% | 0.04% | 32.28% | 7.96% | 10.12% |
| Mortgage debt securities | 12.85% | -% | 0.14% | 0.28% | 12.43% |
| Corporate bonds | 32.88% | 0.39% | 16.15% | 7.89% | 8.45% |
| Short-term: | | | | | |
| Commercial paper | 0.02% | 0.02% | -% | -% | -% |
| Discount notes and Treasury bills | 0.47% | 0.47% | -% | -% | -% |
| Pooled funds | 3.38% | 3.38% | -% | -% | -% |
| Percent of rated portfolio | 100.00% | 4.30% | 48.57% | 16.13% | 31.00% |

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

The lengths of investment maturities (in years) of the Variable-Return Funds for QPP and TDA, as shown by the percent of the rated portfolio at June 30, 2024 and 2023, are as follows:

| Investment Type Variable-Return Funds June 30, 2024 | Investment Maturities | | | | |
|---|-----------------------|-----------------------|----------------------|---------------------|------------------------|
| | Fair Value | Less Than One Year | One to Five Years | Six to Ten Years | More Than Ten Years |
| Corporate bonds | -% | -% | -% | -% | -% |
| Short-term: | | | | | |
| U.S. Treasury bills | -% | -% | -% | -% | -% |
| Money market funds | 100.00% | 100.00% | -% | -% | -% |
| Percent of rated portfolio | 100.00% | 100.00% | -% | -% | -% |

| Investment Type Variable-Return Funds June 30, 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 funds | 100.00% | 100.00% | -% | -% | -% |
| Percent of rated portfolio | 100.00% | 100.00% | -% | -% | -% |

Foreign Currency Risk - Foreign currency risk is the risk that changes in the exchange rates will adversely impact the fair value of an investment. Currency risk is present in underlying portfolios that invest in foreign stocks and/or bonds. The currency markets have proven to be effective diversifiers in a total portfolio context; therefore, the TRSNYC Pension Fund has numerous managers that invest globally. In general, currency exposure is viewed as a benefit for diversification reasons and not as an inherent risk within the portfolio. In addition, the TRSNYC Variable-Return Funds have investments in foreign stocks and/or bonds denominated in foreign currencies.

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

Foreign currency exposures as of June 30, 2024 and 2023, are as follows:

| Trade Currency (in thousands) | Pension Fund June 30, 2024 | Variable-Return Funds June 30, 2024 | Pension Fund June 30, 2023 | Variable-Return Funds June 30, 2023 |
|--|---------------------------------------|--|---------------------------------------|--|
| Euro Currency | \$ 5,649,167 | \$ 876,546 | \$ 4,804,784 | \$ 959,267 |
| Japanese Yen | 2,092,483 | 525,313 | 1,575,151 | 564,538 |
| British Pound Sterling | 1,726,416 | 450,691 | 1,378,907 | 444,595 |
| Hong Kong Dollar | 1,331,141 | 229,172 | 2,111,599 | 246,875 |
| New Taiwan Dollar | 1,134,175 | 209,391 | 1,375,382 | 131,348 |
| Indian Rupee | 1,053,698 | 212,623 | 1,411,194 | 155,005 |
| Swiss Franc | 962,330 | 257,445 | 796,306 | 258,517 |
| South Korean Won | 794,103 | 192,041 | 1,209,951 | 190,256 |
| Canadian Dollar | 737,614 | 87,432 | 609,642 | 74,920 |
| Australian Dollar | 462,407 | 119,028 | 358,709 | 138,437 |
| Danish Krone | 388,571 | 109,708 | 323,755 | 70,985 |
| Swedish Krona | 351,033 | 79,190 | 243,945 | 82,514 |
| Brazilian Real | 255,085 | 36,408 | 504,215 | 32,912 |
| Singapore Dollar | 201,791 | 36,694 | 184,974 | 42,154 |
| Chinese Yuan (Offshore) | 171,862 | 14 | 307,440 | 14 |
| South African Rand | 131,748 | 66,477 | 198,603 | 57,273 |
| Indonesian Rupiah | 126,676 | 25,047 | 263,366 | 35,248 |
| Mexican Nuevo Peso | 108,630 | 35,961 | 184,145 | 37,454 |
| Thai Baht | 86,185 | 29,768 | 158,253 | 28,232 |
| Norwegian Krone | 84,792 | 22,726 | 69,230 | 17,937 |
| UAE Dirham | 77,054 | 29,262 | 80,189 | 22,350 |
| Polish Zloty | 76,531 | 14,031 | 80,084 | 9,122 |
| Saudi Arabian Ryal | 74,942 | 12,536 | - | 19,849 |
| Chinese Yuan Renminbi | 61,381 | 35,182 | 124,776 | 30,322 |
| Malaysian Ringgit | 51,688 | 5,992 | 63,253 | 5,296 |
| Qatari Rial | 33,167 | - | 55,162 | - |
| Turkish Lira | 32,016 | 3,210 | 36,745 | 1,932 |
| Philippines Peso | 28,001 | 3,062 | 44,038 | 1,134 |
| Israeli Shekel | 26,561 | 5,394 | 15,863 | 7,314 |
| Chilean Peso | 14,706 | 99 | 33,844 | 271 |
| Kuwaiti Dinar | 14,330 | - | 24,213 | - |
| Hungarian Forint | 13,843 | 1,060 | 17,276 | 41 |
| New Zealand Dollar | 10,842 | 5,899 | 7,429 | 4,104 |
| Vietnamese Dong | 8,125 | - | 248 | - |
| Egyptian Pound | 1,665 | 9,606 | 2,693 | 10,173 |
| Colombian Peso | 1,345 | - | 2,869 | - |
| Czech Koruna | 1,261 | 6 | 2,514 | 23 |
| Russian Ruble | 286 | 15,623 | 276 | 10,472 |
| Pakistan Rupee | 5 | - | 5 | - |
| Peruvian Nuevo Sol | 3 | 65 | 14 | 51 |
| | <u>\$ 18,377,659</u> | <u>\$ 3,742,702</u> | <u>\$ 18,661,042</u> | <u>\$ 3,690,935</u> |

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

Securities Lending Transactions

Credit Risk - The quality ratings of investments held as collateral for Securities Lending by the TRSNYC Pension Fund at June 30, 2024 and 2023 are as follows:

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

| June 30, 2024 (In thousands) | Moody's Quality Ratings | | | | | | |
|-------------------------------------|-------------------------|------|------------|------------|------|------|--------------|
| | Aaa | Aa1 | Aa2 | Aa3 | A1 | A2 | Total |
| Short-term: | | | | | | | |
| Reverse repurchase agreements | \$ - | \$ - | \$ 19,844 | \$ 99,218 | \$ - | \$ - | \$ 383,074 |
| Money market mutual fund | 384,389 | - | - | - | - | - | 104,971 |
| U.S. agency notes | - | - | - | - | - | - | 1,881,193 |
| Cash or cash equivalent | - | - | - | 319,188 | - | - | - |
| Over/under invested cash collateral | - | - | - | - | - | - | 3,003 |
| Total | \$ 384,389 | \$ - | \$ 19,844 | \$ 418,406 | \$ - | \$ - | \$ 2,372,241 |
| Percent of Related Portfolio | 12.03% | -% | 0.62% | 13.10% | -% | -% | 74.25% |
| | | | | | | | |
| June 30, 2023 (In thousands) | Moody's Quality Ratings | | | | | | |
| | Aaa | Aa1 | Aa2 | Aa3 | A1 | A2 | Total |
| Short-term: | | | | | | | |
| Reverse repurchase agreements | \$ - | \$ - | \$ 185,591 | \$ 99,246 | \$ - | \$ - | \$ 683,370 |
| Money market mutual fund | 643,936 | - | - | - | - | - | 168,637 |
| U.S. agency notes | - | - | - | - | - | - | 1,869,833 |
| Cash or cash equivalent | - | - | - | 405,291 | - | - | - |
| Over/under invested cash collateral | - | - | - | - | - | - | (3,531) |
| Total | \$ 643,936 | \$ - | \$ 185,591 | \$ 504,537 | \$ - | \$ - | \$ 2,718,309 |
| Percent of Related Portfolio | 15.89% | -% | 4.58% | 12.45% | -% | -% | 67.08% |

Over invested cash collateral securities are due to late collateral settlements where the cash positions changed after cash-collateral investments were made. As of June 30, 2023, the System had a greater amount of cash-collateral investments than the amount in open loans, which resulted in an overinvestment of \$3.5 million.

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

The quality ratings of investments held as collateral for Securities Lending under the Variable-Return Funds at June 30, 2024 and 2023 are as follows:

| Investment Type and Fair Value of Securities Lending Transactions - Variable-Return Funds June 30, 2024 (In thousands) | | | | |
|---|-------------------------|-------------|------------------|---------------------|
| | Moody's Quality Ratings | | | |
| | Aaa | A3 | Not Rated | Total |
| Government | \$ 1,262,595 | \$ - | \$ - | \$ 1,262,595 |
| Short-term: | | | | |
| Repurchase agreements | - | - | 31,428 | 31,428 |
| Money market | 4,860 | - | - | 4,860 |
| U.S. Treasury bills | 6,322 | - | - | 6,322 |
| Uninvested | - | - | 19 | 19 |
| Total | \$ 1,273,777 | \$ - | \$ 31,447 | \$ 1,305,224 |
| Percent of securities lending portfolio | 97.59% | -% | 2.41% | 100.00% |

| Investment Type and Fair Value of Securities Lending Transactions - Variable-Return Funds June 30, 2023 (In thousands) | | | | |
|---|-------------------------|-------------|------------------|-------------------|
| | Moody's Quality Ratings | | | |
| | Aaa | A3 | Not Rated | Total |
| Government | \$ 926,787 | \$ - | \$ - | \$ 926,787 |
| Short-term: | | | | |
| Repurchase agreements | 38,287 | - | 33,513 | 71,800 |
| U.S. Treasury bills | 1,177 | - | - | 1,177 |
| Uninvested | - | - | 2 | 2 |
| Total | \$ 966,251 | \$ - | \$ 33,515 | \$ 999,766 |
| Percent of securities lending portfolio | 96.65% | -% | 3.35% | 100.00% |

Interest Rate Risk - The lengths of investment maturities (in years) of the collateral for Securities Lending held by the TRSNYC Pension Fund at June 30, 2024 and 2023 are as follows:

| Years to Maturity Investment Type TRSNYC Pension Fund | | | | | |
|--|-----------------------|-----------------------|----------------------|---------------------|------------------------|
| June 30, 2024 (In thousands) | Investment Maturities | | | | |
| | Fair Value | Less Than One Year | One to Five Years | Six to Ten Years | More Than Ten Years |
| Short-term: | | | | | |
| Reverse repurchase agreements | \$ 502,136 | \$ 502,136 | \$ - | \$ - | \$ - |
| Money market mutual fund | 489,360 | 489,360 | - | - | - |
| U.S. Agency notes | 1,881,193 | 1,454,554 | 426,639 | - | - |
| Cash or cash equivalent | 319,188 | 319,188 | - | - | - |
| Over/under invested cash collateral | 3,003 | 3,003 | - | - | - |
| Total | \$ 3,194,880 | \$ 2,768,241 | \$ 426,639 | \$ - | \$ - |
| Percent of securities lending portfolio | 100.00% | 86.65% | 13.35% | -% | -% |

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

Years to Maturity

Investment Type TRS NYC Pension Fund

| June 30, 2023 (In thousands) | Investment Maturities | | | | |
|---|-----------------------|-----------------------|----------------------|---------------------|------------------------|
| | Fair Value | Less Than One Year | One to Five Years | Six to Ten Years | More Than Ten Years |
| Short-term: | | | | | |
| Reverse repurchase agreement | \$ 968,207 | \$ 968,207 | \$ - | \$ - | \$ - |
| Money market | 812,573 | 812,573 | - | - | - |
| U.S. Agency | 1,869,833 | 919,735 | 950,098 | - | - |
| Cash or cash equivalents | 405,291 | 405,291 | - | - | - |
| Uninvested | (3,531) | (3,531) | - | - | - |
| Total | <u>\$ 4,052,373</u> | <u>\$ 3,102,275</u> | <u>\$ 950,098</u> | <u>\$ -</u> | <u>\$ -</u> |
| Percent of securities lending portfolio | <u>100.00%</u> | <u>76.55%</u> | <u>23.45%</u> | <u>-%</u> | <u>-%</u> |

The lengths of investment maturities (in years) of the collateral for Securities Lending held under the Variable-Return Funds at June 30, 2024 and 2023 are as follows:

Years to Maturity

Investment Type Variable-Return Funds

| June 30, 2024 (In thousands) | Investment Maturities | | | | |
|---|-----------------------|-----------------------|----------------------|---------------------|------------------------|
| | Fair Value | Less Than One Year | One to Five Years | Six to Ten Years | More Than Ten Years |
| Government | \$ 1,262,595 | \$ 91,469 | \$ 664,783 | \$ 250,190 | \$ 256,153 |
| Short-term: | | | | | |
| Repurchase agreements | 31,428 | 31,428 | - | - | - |
| Money market | 4,860 | 4,860 | - | - | - |
| U.S. Treasury bills | 6,322 | 6,322 | - | - | - |
| Uninvested | 19 | 19 | - | - | - |
| Total | <u>\$ 1,305,224</u> | <u>\$ 134,098</u> | <u>\$ 664,783</u> | <u>\$ 250,190</u> | <u>\$ 256,153</u> |
| Percent of securities lending portfolio | <u>100.00%</u> | <u>10.27%</u> | <u>50.93%</u> | <u>19.17%</u> | <u>19.63%</u> |

Years to Maturity

Investment Type Variable-Return Funds

| June 30, 2023 (In thousands) | Investment Maturities | | | | |
|---|-----------------------|-----------------------|----------------------|---------------------|------------------------|
| | Fair Value | Less Than One Year | One to Five Years | Six to Ten Years | More Than Ten Years |
| Government | \$ 926,787 | \$ 88,157 | \$ 438,445 | \$ 203,088 | \$ 197,097 |
| Short-term: | | | | | |
| Repurchase agreements | 71,800 | 71,800 | - | - | - |
| U.S. Treasury bills | 1,177 | 1,177 | - | - | - |
| Uninvested | 2 | 2 | - | - | - |
| Total | <u>\$ 999,766</u> | <u>\$ 161,136</u> | <u>\$ 438,445</u> | <u>\$ 203,088</u> | <u>\$ 197,097</u> |
| Percent of securities lending portfolio | <u>100.00%</u> | <u>16.12%</u> | <u>43.85%</u> | <u>20.31%</u> | <u>19.72%</u> |

Rate of Return - For the years ended June 30, 2024 and 2023, the annual money-weighted rate of return on the TRS NYC Pension Fund was 9.94% and 7.72%, respectively. The money-weighted rate of return

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

expresses investment performance, net of investment expenses adjusted for the changing amounts actually 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.

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

The System has the following recurring fair value measurements for the TRS NYC Pension Fund as of June 30, 2024 and 2023:

| GASB 72 - Disclosure (TRS NYC Pension Fund) (In thousands) | 2024 | | | |
|---|----------------------|----------------------|-------------------|-----------------------|
| | Level 1 | Level 2 | Level 3 | Total |
| Investments - at fair value (Notes 2 and 3): | | | | |
| Short-term investments: | | | | |
| Commercial paper | \$ - | \$ 221,320 | \$ - | \$ 221,320 |
| Short-term investment fund | - | 1,004,087 | - | 1,004,087 |
| Discount notes | - | 449,761 | - | 449,761 |
| U.S. Treasury bills and agencies | - | 366,424 | - | 366,424 |
| Debt securities: | | | | |
| Government and Agency | - | 11,747,756 | - | 11,747,756 |
| Corporate and other | - | 21,936,837 | 290,188 | 22,227,025 |
| Treasury inflation-protected securities | - | 614,931 | - | 614,931 |
| Equity securities: | | | | |
| Domestic equity | 29,812,177 | - | 28,446 | 29,840,623 |
| International equity | 16,453,121 | - | 11,520 | 16,464,641 |
| Total investments in the fair value hierarchy | <u>\$ 46,265,298</u> | <u>\$ 36,341,116</u> | <u>\$ 330,154</u> | 82,936,568 |
| Alternative investments measured at NAV | | | | <u>21,560,181</u> |
| Total pension fund investments | | | | <u>\$ 104,496,749</u> |
| | | | | |
| GASB 72 - Disclosure (TRS NYC Pension Fund) (In thousands) | 2023 | | | |
| | Level 1 | Level 2 | Level 3 | Total |
| Investments - at fair value (Notes 2 and 3): | | | | |
| Short-term investments: | | | | |
| Commercial paper | \$ - | \$ 7,048 | \$ - | \$ 7,048 |
| Short-term investment fund | - | 1,094,454 | - | 1,094,454 |
| U.S. Treasury bills and agencies | - | 151,349 | - | 151,349 |
| Debt securities: | | | | |
| Government and Agency | - | 13,194,373 | - | 13,194,373 |
| Corporate and other | - | 14,556,070 | 266,312 | 14,822,382 |
| Treasury inflation-protected securities | - | 3,142,114 | - | 3,142,114 |
| Equity securities: | | | | |
| Domestic equity | 26,906,170 | - | 10,920 | 26,917,090 |
| International equity | 16,994,199 | - | 4,644 | 16,998,843 |
| Total investments in the fair value hierarchy | <u>\$ 43,900,369</u> | <u>\$ 32,145,408</u> | <u>\$ 281,876</u> | 76,327,653 |
| Alternative investments measured at NAV | | | | <u>19,591,376</u> |
| Total pension fund investments | | | | <u>\$ 95,919,029</u> |

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

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

| Asset | As of June 30, 2024 | | As of June 30, 2023 | | Redemption Frequency (Ranges if Eligible) | Redemption Notice Period (Ranges if Eligible) |
|---------------------------------|----------------------|-----------------------|----------------------|-----------------------|--|--|
| | Fair Value | Unfunded Commitments* | Fair Value | Unfunded Commitments* | | |
| Infrastructure | \$ 2,887,024 | \$ 1,981,126 | \$ 2,289,380 | \$ 1,432,135 | N/A | N/A |
| Private equity | 8,909,223 | 4,175,923 | 8,146,204 | 3,501,898 | N/A | N/A |
| Private real estate | 5,652,831 | 3,239,358 | 5,534,456 | 2,495,765 | Quarterly | 30 - 90 days |
| Opportunistic fixed income | 3,816,688 | 1,239,871 | 3,336,820 | 1,122,698 | N/A | N/A |
| Fixed income investment company | 294,415 | - | 284,516 | - | Monthly | 15 days |
| | <u>\$ 21,560,181</u> | <u>\$ 10,636,278</u> | <u>\$ 19,591,376</u> | <u>\$ 8,552,496</u> | | |

* Unfunded commitments include capital commitment amounts that the System is obligated to fund upon the occurrence of certain triggering events as defined in the relevant investments' partnership agreement.

Equity and Debt Securities and Short-Term Investments

Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets issued by pricing vendors for these securities. Debt, equity securities, and short-term investments classified in Level 2 of the fair value hierarchy are valued using prices determined by the use of matrix pricing techniques maintained by the various pricing vendors for these securities. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Debt and equity securities classified in Level 3 of the fair value hierarchy are securities whose stated market price is unobservable by the marketplace; many of these securities are priced by the issuers or industry groups for these securities. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from various pricing sources by the System's custodian bank.

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, Infrastructure Investments, and Fixed Income Investment Company. These are investments for which exchange quotations are not readily available and are valued at estimated fair value by the General Partner ("GP").

Alternative investments are measured at fair value using the NAV as a practical expedient and are not classified in the fair value hierarchy. The fair value quantities presented in the table below align with the amounts shown in the entity's financial statements.

Fair value is determined 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

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

expected that the underlying assets of the funds will generally be liquidated within 10 years but in some cases can take longer.

Certain 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 System has the following recurring fair value measurements, for the Variable-Return Funds as of June 30, 2024 and 2023:

GASB 72 - Disclosure (Variable-Return Funds)
June 30, 2024
(In thousands)

| | 2024 | | | |
|---|---------------|------------|---------|---------------|
| | Level 1 | Level 2 | Level 3 | Total |
| Investments - at fair value | | | | |
| Diversified Equity Fund: | | | | |
| Short-term investments | \$ - | \$ 186,716 | \$ 2 | \$ 186,718 |
| Equity securities | 17,299,256 | 268,247 | 152 | 17,567,655 |
| Balanced Fund: | | | | |
| Short-term investments | - | 1,022 | - | 1,022 |
| Equity securities | 610,180 | - | - | 610,180 |
| International Equity Fund: | | | | |
| Short-term investments | - | 3,856 | - | 3,856 |
| International equity | 254,793 | 17,012 | - | 271,805 |
| Sustainable Equity Fund: | | | | |
| Short-term investments | - | 15,658 | - | 15,658 |
| Equity securities | 750,152 | - | - | 750,152 |
| U.S. Equity Index Fund: | | | | |
| Short-term investments | - | 16 | - | 16 |
| Equity securities | 222,599 | - | - | 222,599 |
| International Equity Index Fund: | | | | |
| Short-term investments | - | 43 | - | 43 |
| Equity securities | 35,817 | - | - | 35,817 |
| Total Variable-Return Funds investments | \$ 19,172,797 | \$ 492,570 | \$ 154 | \$ 19,665,521 |

GASB 72 - Disclosure (Variable-Return Funds)
June 30, 2023
(In thousands)

| | 2023 | | | |
|---|---------------|------------|----------|---------------|
| | Level 1 | Level 2 | Level 3 | Total |
| Investments - at fair value | | | | |
| Diversified Equity Fund: | | | | |
| Short-term investments | \$ - | \$ 168,512 | \$ - | \$ 168,512 |
| Equity securities | 15,541,181 | 258,185 | 1,252 | 15,800,618 |
| Balanced Fund: | | | | |
| Short-term investments | - | 1,308 | - | 1,308 |
| Equity securities | 564,646 | - | - | 564,646 |
| International Equity Fund: | | | | |
| Short-term investments | - | 2,798 | - | 2,798 |
| International equity | 224,884 | 16,477 | 4 | 241,365 |
| Sustainable Equity Fund: | | | | |
| Short-term investments | - | 9,056 | - | 9,056 |
| Equity securities | 560,132 | - | - | 560,132 |
| U.S. Equity Index Fund: | | | | |
| Short-term investments | - | 14 | - | 14 |
| Equity securities | 142,000 | - | - | 142,000 |
| International Equity Index Fund: | | | | |
| Short-term investments | - | 51 | - | 51 |
| Equity securities | 23,575 | - | - | 23,575 |
| Total Variable-Return Funds investments | \$ 17,056,418 | \$ 456,401 | \$ 1,256 | \$ 17,514,075 |

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NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2024 and 2023

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

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

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

NOTE 4 - QPP CONTRIBUTIONS

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

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

Members who joined on or after July 27, 1976 are mandated to contribute 3% of salary. Effective October 1, 2000, these members are not required to make contributions after the 10th anniversary of their membership date or completion of 10 years of credited service, whichever is earlier.

Effective February 27, 2008, active members were eligible to enroll in a 55 retirement-age minimum and 25 credited years of service retirement option ("55/25 retirement option"), enabling them to eliminate any age-reduction factor in their retirement allowance. Those choosing the age 55/25 retirement option are required to make additional contributions of 1.85% of salary from February 28, 2008 until June 29, 2008, or until they have accumulated 25 years of credited service, whichever is later. Members joining after February 27, 2008 are automatically enrolled in a 55-retirement-age minimum and 27 credited years of service retirement program ("55/27 retirement program"). These members are required to make additional pension contributions of 1.85% of salary until they have accumulated 27 years of credited service. Chapter 504 of the Laws of 2009 ("Chapter 504/09") provides that individuals joining after December 10, 2009, who participate in the 55/27 retirement program, are required to make pension contributions of 4.85% of salary until they have 27 years of credited service and contributions of 1.85% of salary thereafter.

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

Employer Contributions - Actuarially-required contributions ("Actuarial Contributions") to the QPP, determined by the Actuary in accordance with the State statutes and City laws, are generally funded by the Employers within the appropriate fiscal year. These contributions consider any expected deficiencies between the actuarial rates of interest on TDA Program deposits in the Fixed-Return Fund and on statutory

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2024 and 2023

rates of interest credited to QPP members and actual investment earnings on such funds. The Actuarial Contribution for the year ended June 30, 2024, based on an actuarial valuation as of June 30, 2022, was \$3.2 billion, and the Actuarial Contribution for the year ended June 30, 2023, based on an actuarial valuation as of June 30, 2021, was \$3.1 billion. Refer to the Schedule of Employers' Contributions in the accompanying required supplementary information for more information on the actuarial methods and assumptions applied by the Actuary to determine the Actuarial Contributions.

NOTE 5 - QPP NET PENSION LIABILITY

The components of the net pension liability of the Employers at June 30, 2024 and 2023 were as follows:

| | 2024 | 2023 |
|---|------------------|------------------|
| | (in millions) | |
| Total pension liability | \$ 86,910 | \$ 81,613 |
| Fiduciary net position* | 74,488 | 67,934 |
| Employers' net pension liability | <u>\$ 12,422</u> | <u>\$ 13,679</u> |
| Fiduciary net position as a percentage of the total pension liability | 85.7% | 83.2% |

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

Actuarial Methods and Assumptions

The total pension liability as of June 30, 2024 and 2023 was calculated from the actuarial valuations as of June 30, 2023 (Preliminary) and June 30, 2022 (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 increases plus assumed General Wage Increases of 3.0% per annum. |
| Investment Rate of Return | 7.0% per annum, net of Investment Expenses. |
| COLAs | 1.5% per annum for 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.

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. 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.

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NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2024 and 2023

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

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

The June 30, 2023 total pension liability was calculated from the Preliminary June 30, 2022 actuarial valuation, which was based on the Revised 2021 A&M.

The June 30, 2024 total pension liability was calculated from the Preliminary June 30, 2023 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.

Teachers' Retirement System of the City of New York

NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

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, 2024 and 2023:

| Asset Class | As of June 30, 2024 | | As of June 30, 2023 | |
|---|-------------------------|--|-------------------------|--|
| | Target Asset Allocation | Long-Term Expected Real Rate of Return | Target Asset Allocation | Long-Term Expected Real Rate of Return |
| Public Markets | | | | |
| U.S. public market equities | 24.0% | 5.4% | 25.0% | 5.3% |
| Developed public market equities | 12.1% | 5.7% | 10.0% | 6.1% |
| Emerging public market equities | 4.9% | 7.1% | 9.5% | 7.5% |
| Fixed income | 30.0% | 2.3% | 32.5% | 2.1% |
| Private Markets (Alternative Investments) | | | | |
| Private equity | 10.0% | 10.3% | 7.0% | 10.4% |
| Private real estate | 8.0% | 8.5% | 7.0% | 7.8% |
| Infrastructure | 5.0% | 7.9% | 4.0% | 7.9% |
| Opportunistic-fixed income | 6.0% | 5.8% | 5.0% | 5.2% |
| Total | 100.0% | | 100.0% | |

Discount Rate

The discount rate used to measure the total pension liability was 7.0%. The projections of cash flows used to determine the discount rate assumed that employee contributions will be made at the rates applicable to the current Tier for each member and that Employer contributions will be made at rates as determined by the Actuary. Based on those assumptions, the QPP's fiduciary net position was projected to be available to make all projected future benefit payments of current active and non-active QPP members. Therefore, the long-term expected rate of return on QPP investments was applied to all periods of projected benefit payments to determine the total pension liability. The following presents the net pension liability of the Employers, calculated using the discount rate of 7.0%, as well as what the Employers' net pension liability would be if it were calculated using a discount rate that is one-percentage point lower (6.0%) or one-percentage point higher (8.0%) than the current rate as of June 30, 2024 and 2023:

| | 1% Decrease (6.0%) | Discount Rate (7.0%) (In thousands) | 1% Increase (8.0%) |
|-----------------------------------|-----------------------|---|-----------------------|
| Employers' net pension liability: | | | |
| June 30, 2024 | \$ 29,156,587 | \$ 12,421,525 | \$ 3,158,221 |
| June 30, 2023 | \$ 22,931,877 | \$ 13,678,909 | \$ 5,912,852 |

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2024 and 2023

NOTE 6 - MEMBER LOANS

The balance of member loans receivable for the QPP at June 30, 2024 and 2023 was \$363.3 million and \$333.4 million, respectively. QPP members are permitted to borrow up to 75% of their own contributions, including accumulated interest. Outstanding loan balances are insured in order to protect members' balances in case of death. In return for insurance coverage, Tiers III, IV, and VI members supplement their loan interest payments of 6.0% APR with a 0.1% insurance fee. Tiers I and II members pay loan interest payments of 6.0% APR and are not subject to the insurance fee. Upon termination of employment before retirement, certain QPP members are entitled to refunds of their own contributions, including accumulated interest, less any loans outstanding.

The balance of member loans receivable for the TDA Program at June 30, 2024 and 2023 was \$519.6 million and \$469.7 million, respectively. Members of the TDA Program are permitted to borrow up to 75% of their own contributions, including accumulated interest. TDA Program members supplement their member loans' interest payments (7.0% for UFT, 8.25% for all other members) with a 0.3% ("APR") insurance fee. This fee funds a reserve, which is used to repay members' loan balances outstanding in case of death. Upon termination of employment before retirement, members are entitled to refunds of their own contributions, including accumulated interest, less any loans outstanding.

NOTE 7 - RELATED PARTIES

The Comptroller has been appointed by law as custodian for assets of the QPP and TDA Program with discretionary authority. Securities are held by certain banks under custodial agreements with the Comptroller. The Comptroller and the NYC Financial Information Services Agency and Office of Payroll Administration ("FISA-OPA") provide cash receipt and cash disbursement services and financial services; the Office of Actuary ("OA") provides actuarial services; the Office of Management and Budget ("OMB") provides budget review services; and The City's Corporation Counsel provides legal services to TRS. The cost of providing such services amounted to \$17.7 million and \$15.1 million in Fiscal Years 2024 and 2023, respectively. The City also provides other administrative services.

NOTE 8 - ADMINISTRATIVE EXPENSES

Chapter 593 of the Laws of 1996 ("Chapter 593/96"), effective July 1, 1996, authorized the Board of Trustees to draw upon its assets to pay the administrative expenses incurred by TRS. Prior to Fiscal Year 1997, The City and Variable Annuity Programs had paid all administrative expenses. After Chapter 593/96, administrative expenses incurred by the System are attributed to the QPP and the Variable-Return Funds of the TDA Program. The cost sharing is weighted and depends on an assessment of the prior year's administrative activities. Total TRS administrative expenses, attributable to the QPP and TDA Program, amounted to \$95.3 million and \$91.8 million for Fiscal Years 2024 and 2023, respectively. In addition to TRS' administrative expenses, other City agencies attribute the cost for services rendered by them during the fiscal year; see Note 7 above. Fiscal Year 2024 Administrative expenses included \$3.4 million due to recognition of interest and amortization expenses as required by GASB No. 87.

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

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

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NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED

June 30, 2024 and 2023

At June 30, 2024, the right to use the office space (asset) amounted to \$142.5 million, net of annual amortization in the amount of \$9.5 million. At June 30, 2023, the right to use the office space (asset) amounted to \$152.0 million, net of annual amortization in the amount of \$9.5 million.

At June 30, 2024, the future minimum principal and interest payments required under the lease contracts are as follows (in thousands):

| | Beginning Balance | Annual Year-end Interest Accrual | Total Annual Payment | Ending Balance |
|-----------|----------------------|---|-------------------------|-------------------|
| 2025 | \$ 153,815 | \$ 3,224 | \$ (11,156) | \$ 145,883 |
| 2026 | 145,883 | 3,051 | (11,156) | 137,778 |
| 2027 | 137,778 | 2,874 | (11,155) | 129,497 |
| 2028 | 129,497 | 2,694 | (11,156) | 121,035 |
| 2029 | 121,035 | 2,509 | (11,235) | 112,309 |
| 2030-2034 | 112,309 | 9,350 | (60,641) | 61,018 |
| 2035-2039 | 61,018 | 3,237 | (64,255) | - |

NOTE 9 - CONTINGENT LIABILITIES AND OTHER MATTERS

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

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

Actuarial Audit - Pursuant to Section 96 of the New York City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarially-funded NYCERS are conducted every two years. Refer to Note 5 (QPP Net Pension Liability) for the results of the most recent actuarial audits for the QPP.

Revised Actuarial Assumptions and Methods - In accordance with the ACNY and with appropriate practice, the Boards of Trustees of the five actuarially-funded NYCERS are to periodically review and adopt actuarial assumptions as proposed by the Actuary for use in the determination of Employer Contributions.

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2024 and 2023

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

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

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

Chapter 3 of the Laws of 2013 implemented changes in the actuarial procedures for determining Employer Contributions beginning Fiscal Year 2012. In particular, Chapter 3/13 continued the One-Year Lag Methodology ("OYLM"), employed the Entry Age Actuarial Cost Method ("EAACM"), established an Actuarial Interest Rate ("AIR") assumption of 7.0% per annum, net of expenses, continued it and other interest rates until June 30, 2016, and defined the amortization of Unfunded Actuarial Accrued Liabilities ("UAAL").

Chapter 489 of the Laws of 2013 ("Chapter 489/13") extended the Notice of Participation filing deadline to September 11, 2014 for vested members to file a sworn statement indicating participation in the World Trade Center Rescue, Recovery, and Clean-up Operations.

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

Chapter 510 of the Laws of 2015 clarifies for Tier VI the definition of multiple employers for the purpose of exclusion of wages, and changes the plan year for contributions from plan year April 1 to March 31 to plan year January 1 to December 31. Chapter 41 of the Laws of 2016 was enacted on May 31, 2016. This amendment removes the specified periods of time, medal requirements, and theaters of operation in which military service would have had to have been rendered for a service purchase pursuant to RSSL § 1000. Accordingly, for a member to be eligible to purchase service credit pursuant to RSSL § 1000 for pre-membership military service, the member need only have been honorably discharged from the military; all other requirements of RSSL § 1000 remain the same. This law is not retroactive and does not permit retired members to purchase service credit.

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

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

Chapter 89 of the Laws of 2020 provides death benefits to statutory beneficiaries of members whose death was a result of or was contributed to by Coronavirus Disease ("COVID-19"). This law provides an Accidental Death Benefit to the eligible beneficiaries of a member or a retiree who retired after March 1, 2020, where

Teachers' Retirement System of the City of New York
NOTES TO COMBINING FINANCIAL STATEMENTS - CONTINUED
June 30, 2024 and 2023

such member reported for work outside their home and contracted COVID-19 within 45 days after reporting for work, and whose death was caused by COVID-19 or where COVID-19 contributed to such member's death and where such death occurred before January 1, 2021. Amounts payable are reduced by payments of any ordinary death benefits or option benefit paid to another statutory beneficiary. Chapter 78 of 2021 extended the deadline for statutory beneficiaries of members who died prior to January 1, 2023.

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

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

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

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

Chapter 775 of the Laws of 2022 amends the section of law colloquially referred to as the "Basket Clause" and raises the permissible limit on the allocation of certain investments from 25% to 35%.

Chapter 55 of the Laws of 2024, Part KK, signed on April 20, 2024, extended Part SS of Chapter 56 of the Laws of 2022 by excluding overtime and compensation earned for supplemental work from wages used to calculate Tier VI Basic Member Contribution Rates for two additional years.

Chapter 56 of the Laws of 2024, Part QQ, signed on April 20, 2024, reduced the numbers of years used to calculate the Final Average Salary from five years to 3 years for certain Tier III and Tier VI members.

Other Legislation

The SECURE 2.0 Act of 2022 increases the age at which Required Minimum Distributions must commence to 75 in steps over a ten-year period. Effective 2026, the act will also require that certain age-based catch-up contributions to the TDA be made on a Roth basis.

Teachers' Retirement System of the City of New York

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

Fiscal years ended June 30,
(In thousands)

| | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 |
|--|---------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|
| Actuarially determined contribution | \$ 3,161,752 | \$ 3,086,082 | \$ 3,303,798 | \$ 3,131,607 | \$ 3,590,822 | \$ 3,696,686 | \$ 3,889,710 | \$ 3,888,399 | \$ 3,702,569 | \$ 3,270,007 |
| Contributions in relation to the actuarially determined contribution | 3,161,752 | 3,086,082 | 3,303,798 | 3,131,607 | 3,590,822 | 3,696,686 | 3,889,710 | 3,888,399 | 3,702,569 | 3,270,007 |
| Contribution deficiency (excess) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Covered payroll ¹ | \$ 12,247,353 | \$ 11,825,124 | \$ 11,469,453 | \$ 11,203,878 | \$ 10,903,755 | \$ 10,404,404 | \$ 9,200,180 | \$ 8,818,537 | \$ 8,256,100 | \$ 8,074,522 |
| Contributions as a percentage of covered payroll | 25.816% | 26.098% | 28.805% | 27.951% | 32.932% | 35.530% | 42.279% | 44.093% | 44.846% | 40.498% |

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

See Report of Independent Certified Public Accountants.

Teachers' Retirement System of the City of New York

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

Note to Schedule:

The above actuarially determined contributions were developed using a One-Year Lag Methodology, under which the actuarial valuation determines the Employer contribution for the second following fiscal year (e.g., fiscal year 2024 contributions were determined using an actuarial valuation as of June 30, 2022). The methods and assumptions used to determine the actuarially determined contributions are as follows:

| Valuation Dates | June 30, 2022 | June 30, 2021 | June 30, 2020 | June 30, 2019 | June 30, 2018 |
|---|---|---|---|---|---|
| Actuarial cost method | Entry age | Entry age | Entry age | Entry age | Entry age |
| Amortization method for unfunded actuarial accrued liabilities: | | | | | |
| Initial unfunded | Increasing dollar Level dollar | Increasing dollar Level dollar | Increasing dollar Level dollar | Increasing dollar Level dollar | Increasing dollar Level dollar |
| Post-2010 unfunded | | | | | |
| Remaining amortization period: | | | | | |
| Initial unfunded | 10 years (closed) | 11 years (closed) | 12 years (closed) | 13 years (closed) | 14 years (closed) |
| 2010 ERI | | | | | |
| 2011 Actuarial gain/loss | 4 years (closed) | 5 years (closed) | 6 years (closed) | 7 years (closed) | 8 years (closed) |
| 2012 Actuarial gain/loss | 5 years (closed) | 6 years (closed) | 7 years (closed) | 8 years (closed) | 9 years (closed) |
| 2013 Actuarial gain/loss | 6 years (closed) | 7 years (closed) | 8 years (closed) | 9 years (closed) | 10 years (closed) |
| 2014 Actuarial gain/loss | 7 years (closed) | 8 years (closed) | 9 years (closed) | 10 years (closed) | 11 years (closed) |
| 2015 Assumption change | 12 years (closed) | 13 years (closed) | 14 years (closed) | 15 years (closed) | 16 years (closed) |
| 2015 Actuarial gain/loss | 8 years (closed) | 9 years (closed) | 10 years (closed) | 11 years (closed) | 12 years (closed) |
| 2016 Actuarial gain/loss | 9 years (closed) | 10 years (closed) | 11 years (closed) | 12 years (closed) | 13 years (closed) |
| 2017 Actuarial gain/loss | 10 years (closed) | 11 years (closed) | 12 years (closed) | 13 years (closed) | 14 years (closed) |
| 2017 ASAF method change | 15 years (closed) | 16 years (closed) | 17 years (closed) | 18 years (closed) | 19 years (closed) |
| 2017 Method change | 15 years (closed) | 16 years (closed) | 17 years (closed) | 18 years (closed) | 19 years (closed) |
| 2017 Assumption change | 11 years (closed) | 12 years (closed) | 13 years (closed) | 14 years (closed) | 15 years (closed) |
| 2018 Actuarial gain/loss | 15 years (closed) | 16 years (closed) | 17 years (closed) | 18 years (closed) | 19 years (closed) |
| 2018 Method change | 16 years (closed) | 17 years (closed) | 18 years (closed) | 19 years (closed) | 20 years (closed) |
| 2019 Actuarial gain/loss | 12 years (closed) | 13 years (closed) | 14 years (closed) | 15 years (closed) | NA |
| 2019 Assumption change | 17 years (closed) | 18 years (closed) | 19 years (closed) | 20 years (closed) | NA |
| 2019 Method change | 13 years (closed) | 14 years (closed) | 15 years (closed) | 16 years (closed) | NA |
| 2020 Actuarial gain/loss | 6 years (closed) | 7 years (closed) | 8 years (closed) | 9 years (closed) | NA |
| 2020 OWBPA | 14 years (closed) | 15 years (closed) | 16 years (closed) | 17 years (closed) | NA |
| 2021 Actuarial gain/loss | 1 year (closed) | 2 years (closed) | 3 years (closed) | 4 years (closed) | NA |
| 2021 Method Change | 19 years (closed) | 20 years (closed) | 21 years (closed) | 22 years (closed) | NA |
| 2021 Plan Change | | | | | NA |
| 2022 Actuarial gain/loss | 15 years (closed) | 16 years (closed) | 17 years (closed) | 18 years (closed) | 19 years (closed) |
| 2022 Death Audit | 2 years (closed) | NA | NA | NA | NA |
| Actuarial value of assets 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 | 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 2011 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. As of the June 30, 2018 valuation, the AVA is determined by re-characterizing the interest credited on TDA Fixed Fund account balances as investment income instead of as a cash disbursement.

See Report of Independent Certified Public Accountants.

Teachers' Retirement System of the City of New York

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

QUALIFIED PENSION PLAN

SCHEDULES OF EMPLOYER CONTRIBUTIONS

Note to Schedule:

The above actuarially determined contributions were developed using a One-Year Lag Methodology, under which the actuarial valuation determines the Employer contribution for the second following fiscal year (e.g., fiscal year 2024 contributions were determined using an actuarial valuation as of June 30, 2022). The methods and assumptions used to determine the actuarially determined contributions are as follows:

| Valuation Dates | June 30, 2017 | June 30, 2016 | June 30, 2015 | June 30, 2014 | June 30, 2013 |
|---|---|---|---|---|---|
| Actuarial cost method | Entry age | Entry age | Entry age | Entry age | Entry age |
| Amortization method for unfunded actuarial accrued liabilities: | | | | | |
| Initial unfunded | Increasing dollar Level dollar | Increasing dollar Level dollar | Increasing dollar Level dollar | Increasing dollar Level dollar | Increasing dollar Level dollar |
| Post-2010 unfunded | | | | | |
| Remaining amortization period: | | | | | |
| Initial unfunded | 15 years (closed) | 16 years (closed) | 17 years (closed) | 18 years (closed) | 19 years (closed) |
| 2010 ERI | - | - | 1 years (closed) | 2 years (closed) | 3 years (closed) |
| 2011 Actuarial gain/loss | 9 years (closed) | 10 years (closed) | 11 years (closed) | 12 years (closed) | 13 years (closed) |
| 2012 Actuarial gain/loss | 10 years (closed) | 11 years (closed) | 12 years (closed) | 13 years (closed) | 14 years (closed) |
| 2013 Actuarial gain/loss | 11 years (closed) | 12 years (closed) | 13 years (closed) | 14 years (closed) | 15 years (closed) |
| 2014 Actuarial gain/loss | 12 years (closed) | 13 years (closed) | 14 years (closed) | 15 years (closed) | NA |
| 2014 Assumption change | 17 years (closed) | 18 years (closed) | 19 years (closed) | 20 years (closed) | NA |
| 2015 Actuarial gain/loss | 13 years (closed) | 14 years (closed) | 15 years (closed) | NA | NA |
| 2016 Actuarial gain/loss | 14 years (closed) | 15 years (closed) | NA | NA | NA |
| 2017 Actuarial gain/loss | 15 years (closed) | NA | NA | NA | NA |
| 2017 ASAF method change | 20 years (closed) | NA | NA | NA | NA |
| 2017 Method change | 20 years (closed) | NA | NA | NA | NA |
| 2017 Assumption change | NA | NA | NA | NA | NA |
| 2018 Actuarial gain/loss | NA | NA | NA | NA | NA |
| 2018 Method change | NA | NA | NA | NA | NA |
| 2019 Actuarial gain/loss | NA | NA | NA | NA | NA |
| 2019 Assumption change | NA | NA | NA | NA | NA |
| 2019 Method change | NA | NA | NA | NA | NA |
| 2020 Actuarial gain/loss | NA | NA | NA | NA | NA |
| 2020 Method Change | NA | NA | NA | NA | NA |
| 2020 OWBPA | NA | NA | NA | NA | NA |
| 2021 Actuarial gain/loss | NA | NA | NA | NA | NA |
| 2021 Method Change | NA | NA | NA | NA | NA |
| 2021 Plan Change | NA | NA | NA | NA | NA |
| 2022 Actuarial gain/loss | NA | NA | NA | NA | NA |
| 2022 Death Audit | NA | NA | NA | NA | NA |
| Actuarial value of assets 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 2011 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 2011 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 2011 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 2011 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 2011 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. As of the June 30, 2018 valuation, the AVA is determined by re-characterizing the interest credited on TDA Fixed Fund account balances as investment income instead of as a cash disbursement.

See Report of Independent Certified Public Accountants.

Teachers' Retirement System of the City of New York

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

| Valuation Dates | June 30, 2022 | 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. | 7.0% per annum, net of investment expenses. | 7.0% per annum, net of investment expenses. | 7.0% per annum, net of investment expenses. | 7.0% per annum, net of investment expenses. | 7.0% per annum, net of investment expenses. |
| Post-retirement mortality ³ | Tables adopted by Retirement Board during Fiscal Year 2019 | Tables adopted by Retirement Board during Fiscal Year 2019 | Tables adopted by Retirement Board during Fiscal Year 2019 | Tables adopted by Retirement Board during Fiscal Year 2019 | Tables adopted by Retirement Board during Fiscal Year 2019 | Tables adopted by Retirement Board during Fiscal Year 2019 |
| Active service: withdrawal, death, disability, service retirement ³ | Tables adopted by Retirement Board during Fiscal Year 2019 | Tables adopted by Retirement Board during Fiscal Year 2019 | Tables adopted by Retirement Board during Fiscal Year 2019 | Tables adopted by Retirement Board during Fiscal Year 2019 | Tables adopted by Retirement Board during Fiscal Year 2019 | Tables adopted by Retirement Board during Fiscal Year 2019 |
| Salary increases ² | In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year. | In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year. | In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year. | In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year. | In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year. | In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year. |
| Cost-of-living adjustments ² | 1.5% per annum for Auto COLA. 2.5% per annum for Escalation. | 1.5% per annum for Auto COLA. 2.5% per annum for Escalation. | 1.5% per annum for Auto COLA. 2.5% per annum for Escalation. | 1.5% per annum for Auto COLA. 2.5% per annum for Escalation. | 1.5% per annum for Auto COLA. 2.5% per annum for Escalation. | 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 vested. 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.

SCHEDULE 2 - CONTINUED

Teachers' Retirement System of the City of New York

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

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 vested. 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.

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

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

| <u>Fiscal Year Ended</u> | <u>Money- Weighted Rate of Return</u> |
|--------------------------|---|
| June 30, 2024 | 9.94% |
| June 30, 2023 | 7.72% |
| June 30, 2022 | (9.72)% |
| June 30, 2021 | 24.80% |
| June 30, 2020 | 4.92% |
| June 30, 2019 | 7.50% |
| June 30, 2018 | 8.14% |
| June 30, 2017 | 12.50% |
| June 30, 2016 | 1.66% |
| June 30, 2015 | 2.81% |

See Report of Independent Certified Public Accountants.

SCHEDULE 4

Additional Supplementary Information
Schedule of Administrative Expenses
Year Ended June 30, 2024

| | TOTAL | QPP | TDA |
|--|--------------|--------------|-------------|
| Personnel Services | | | |
| Staff Salaries | \$37,937,550 | \$31,550,005 | \$6,387,545 |
| Social Security | 2,328,467 | 1,936,423 | 392,044 |
| Insurance (Health) | 7,268,795 | 6,044,948 | 1,223,847 |
| Welfare Benefit Fund | 1,307,997 | 1,087,770 | 220,227 |
| TOTAL PERSONNEL SERVICES | 48,842,809 | 40,619,146 | 8,223,663 |
| Professional Services | | | |
| Data Processing Support and Licenses | 6,067,155 | 5,045,628 | 1,021,527 |
| Temporary and Consultant Staffing | 4,595,977 | 3,822,152 | 773,825 |
| Outside Professional Services | 1,034,030 | 859,930 | 174,100 |
| TOTAL PROFESSIONAL SERVICES | 11,697,162 | 9,727,710 | 1,969,452 |
| Modernization and DOE Class | | | |
| Consultants and Temporary Costs | 8,085,446 | 6,054,908 | 2,030,538 |
| IT Vendor Development Costs | 2,752,336 | 2,061,128 | 691,208 |
| QA Vendor Non-IT Costs | 3,534,615 | 2,646,950 | 887,665 |
| Equipment Costs | 1,034,587 | 774,766 | 259,821 |
| Other Expenses | 6,470 | 4,845 | 1,625 |
| TOTAL MODERNIZATION AND DOE CLASS | 15,413,454 | 11,542,597 | 3,870,857 |
| Secure Act (TDA) | | | |
| Consultants and Temporary Costs | 2,662,696 | — | 2,662,696 |
| Consultant- Groom Law | 59,149 | — | 59,149 |
| TOTAL SECURE ACT (TDA) | 2,721,845 | — | 2,721,845 |
| Rentals | | | |
| Office Space Lease | 9,516,167 | 7,913,930 | 1,602,237 |
| GASB 87 Lease adjustment | 3,368,286 | 2,671,498 | 696,788 |
| Real Estate Taxes & Operating Expenses | 781,830 | 650,193 | 131,637 |
| Equipment Leasing | 99,482 | 82,732 | 16,750 |
| TOTAL RENTALS | 13,765,765 | 11,318,353 | 2,447,412 |
| Communication | | | |
| Telephone | 221,028 | 183,814 | 37,214 |
| Postage | 705,943 | 587,083 | 118,860 |
| Local Travel Expense* | 29,032 | 24,144 | 4,888 |
| Non-Local Travel Expense** | 74,888 | 62,279 | 12,609 |
| TOTAL COMMUNICATION | 1,030,891 | 857,320 | 173,571 |

| | TOTAL | QPP | TDA |
|---|---------------------|---------------------|---------------------|
| Other Operating Expenses | | | |
| Utilities | 312,797 | 260,131 | 52,666 |
| Supplies and Materials | 85,711 | 71,280 | 14,431 |
| Maintenance, Repairs, and Services | 913,157 | 759,409 | 153,748 |
| Office Equipment and Furniture | 62,763 | 52,196 | 10,567 |
| Storage | 98,223 | 81,685 | 16,538 |
| Printing | 167,346 | 139,170 | 28,176 |
| Training Programs | 171,704 | 142,794 | 28,910 |
| Dues and Subscriptions | 22,006 | 18,301 | 3,705 |
| TOTAL OTHER OPERATING EXPENSES | 1,833,707 | 1,524,966 | 308,741 |
| TOTAL ADMINISTRATIVE EXPENSES*** | \$95,305,633 | \$75,590,092 | \$19,715,541 |

* Total TRS Local Travel Expense includes Courier \$21,162, Meals & Refreshments \$5,526, and Conferences \$2,344.

** Total TRS Non-Local Travel Expense includes Hotels & Meals \$28,175, Travel Fare \$23,819, and Conferences \$22,894.

*** The QPP Fixed Return Fund's administrative expense amounted to \$53,377,827 of which the modernization portion was \$2,494,876 and DOE class action expense was \$1,819,350. The Variable Return Fund's administrative expense amounted to \$37,340,679 of which the modernization portions attributable to the QPP and TDA were \$4,180,098 and \$2,238,480, respectively, the DOE class action expense portions attributable to the QPP and TDA were \$3,048,273 and \$1,632,377, respectively, and the TDA Roth expense portion attributable to TDA was 2,721,845. Administrative expenses offset by loan service charge revenues amounted to \$1,218,841; portion attributable to the QPP and TDA were \$389,011 and \$829,830, respectively. In addition, total administrative expenses include the \$3,368,286 GASB 87 lease adjustment.

The schedule shows total expenses paid by TRS. Other administrative expenses of \$ 17,694,840 were paid on TRS' behalf by other City agencies under Regulation 85 of the New York State Superintendent of Insurance Regulations.

See Note 8 of the Financial Statements for Administrative Expenses.

SCHEDULE 5

Additional Supplementary Information
Schedule of Investment Expenses and Services (QPP & TDA)
Year Ended June 30, 2024

| | Assets Under Management | Investment Expenses and Services |
|---|----------------------------|-------------------------------------|
| Investment Category | | |
| Pension Fund | \$104,496,748,532 | \$631,889,048 |
| Diversified Equity and Int'l Equity Funds | 17,754,373,084 | 25,621,888 |
| Balanced Fund | 611,201,535 | 890 |
| International Equity Fund | 275,661,334 | 1,246,574 |
| Sustainable Equity Fund | 765,810,526 | 2,282,692 |
| U.S. Equity Index Fund | 222,614,825 | 335 |
| International Equity Index Fund | 35,859,895 | 325 |
| Other Investment Services | | |
| NYC Office of Comptroller (Fixed-Return Fund) | | 6,734,627 |
| NYC TRS (Variable-Return Funds) | | 864,298 |
| Consultant | | 4,405,627 |
| Legal | | 855,418 |
| Other Services | | 82,564 |
| Provision for Expense Reduction | | (10,500,356) |
| | \$124,162,269,731 | \$663,483,930 |
| *Excludes \$4,500,103,911 in securities lending | | |

Investment Section



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Report on Investment Activity

Goldman Sachs Asset Management prepared this investment activity report. Fund summaries of the System's Investment Options follow along with disclosures of sector returns, asset class allocation, investment management and other service fees, and bond and equity holdings. The disclosures supplement the investment information of the Financial Section.

Prepared by Goldman Sachs Asset Management

Investment Consultant to the Teachers' Retirement System of the City of New York

As of June 30, 2024, TRS offered seven investment program options to its membership: the Fixed Return Fund, the Diversified Equity Fund, the Balanced Fund, the International Equity Fund, the Sustainable Equity Fund, the U.S. Equity Index Fund, and the International Equity Index Fund. State Street and JP Morgan Chase are the custodians of the assets of these investment programs. The custodian calculates the return information using time-weighted compound returns, which is the basis for this presentation. The structure of each program differs depending on its investment objective, as described below.

The pooled New York City Pension Fund includes a) all funds that Tier I/II members invested in the Fixed Return Fund; b) Employer Contribution assets for Tier I/II members; c) all Tier III/IV/VI QPP funds; d) all TDA funds invested in the Fixed Return Fund. The Fixed Return Fund currently provides Tier I/II participants with an 8.25% return. Tier III/IV/VI members are credited 5% in their QPP accounts. UFT members and non-UFT members with TDA funds invested in the Fixed Return Fund are provided with 7.0% and 8.25% returns, respectively. The combined QPP and TDA Fixed Return Funds assets totaled \$104.5 billion as of June 30, 2024. The overall Pension Fund had a net-of-fees return of 9.96% for the fiscal year ending June 30, 2024. As of June 30, 2024, the Fund had 28% U.S. equity investments, 16% non-U.S. equity investments, 21% in alternative investments, and 35% fixed income investments and short-term investments. The Fund's long-term asset allocation policy is based on the Fund's long-term investment horizon of more than 20 years. The investment structure has a significant emphasis on risk control. For example, as of June 30, 2024, approximately 92% of U.S. equity assets were invested in indexed or risk-controlled strategies. This emphasis on indexed and risk-controlled strategies enables the program to control costs more effectively. The Fund's fixed income holdings are primarily high-quality U.S. securities with smaller allocations to sectors such as enhanced yield.

The Diversified Equity Fund's objective is to achieve a rate of return comparable to the broad equity market. As of June 30, 2024, the Diversified Equity Fund, including both QPP and TDA assets, had \$17.8 billion in assets and a net-of-fees return of 20.26% for the fiscal year ending June 30, 2024. As of June 30, 2024, this portfolio's target structure is a mixture of U.S. equities (77%) and non-U.S. equities (23%). The diversification of this portfolio beyond U.S. equities is intended to broaden diversification. Risk control and cost-effectiveness are a very important focus of the investment structure. For example, as of June 30, 2024, approximately 63% of the assets within the Diversified Equity Fund were invested in indexed strategies.

The Balanced Fund's objective is to seek current income and some capital appreciation. The Balanced Fund invests in both stocks and bonds and targets a conservative mix of approximately 70% bonds and 30% stocks. The Fund's bond allocation is passively managed and includes allocations to short-term U.S. Treasuries, Agencies, short-term investment-grade Corporate Bonds, and some foreign securities. The Fund's stock allocation is passively managed and is composed of U.S. and non-U.S. companies located in developed and emerging markets, traded on a variety of stock exchanges, and denominated in a variety of currencies around the world. As of June 30, 2024, the combined QPP and TDA Balanced Funds' assets totaled \$611.2 million, and the Fund earned a net-of-fees return of 8.85% for the fiscal year ending June 30, 2024.

The International Equity Fund invests primarily in the stocks of non-U.S. companies located in both developed and emerging markets. The objective of this fund is to provide a return comparable to the return of the non-U.S. developed equity markets over a full market cycle. As of June 30, 2024, the combined QPP and TDA International Equity Funds' assets totaled \$275.7 million. For the fiscal year ending June 30, 2024, the International Equity Fund returned 10.98% net of fees.

The Sustainable Equity Fund invests primarily in stocks of large and mid-cap U.S. companies that, in the manager's view, effectively implement sustainable business strategies to drive their prospects for future earnings growth. The objective of this fund is to provide a rate of return comparable to the broad equity market while focusing on sustainability characteristics including environmental, social, and governance (ESG) factors. As of June 30, 2024, the combined QPP and TDA Sustainable Equity Funds' assets totaled \$765.8 million. For the fiscal year ending June 30, 2024, the Socially Responsive Equity Fund returned 27.38% net of fees.

The U.S. Equity Index Fund invests primarily in stocks of large-, mid-, and small-cap companies in the U.S. The objective of this fund is to track the total return of the broad U.S. equity market, including large-, mid-, and small-capitalization stocks. As of June 30, 2024, the combined QPP and TDA U.S. Equity Index Funds' assets totaled \$222.6 million. For the fiscal year ending June 30, 2024, the U.S. Equity Index returned 22.34% net of fees.

The International Equity Index Fund invests primarily in stocks of large-, mid-, and small-cap companies located in both non-U.S. developed and emerging markets. The objective of this fund is to closely track the total return of the broad non-U.S. equity markets, including developed and emerging markets. As of June 30, 2024, the combined QPP and TDA International Equity Index Funds' assets totaled \$35.9 million. For the fiscal year ending June 30, 2024, the International Equity Index returned 10.68% net of fees.

The investment strategies of these investment managers are monitored periodically for consistency with TRS' overall investment objectives.

ECONOMIC REVIEW

Over the course of the 12 months ending June 30, 2024, equity markets reached new all-time highs. Global equities, as represented by the MSCI World Index, returned 20.19% for the fiscal year. There have been continued signs of improvement in the labor market and expectations for monetary policy easing in the second half of 2024. Corporate earnings growth continued to lend broad support to equity markets in the second quarter of 2024. The 10-year Treasury yield was 4.4% as of June 30, 2024, up from 3.8% as of June 30, 2023.

The Federal Open Market Committee (FOMC) left rates unchanged at their June 2024 meeting, but signaled that we are at the end of the hiking cycle. Multiple rate cuts are anticipated later this year and into 2025.

Looking ahead, market participants will focus on the 2024 U.S. Presidential election, which could have a potential impact on taxes, fiscal policy, immigration, and trade. Market participants continue to focus on China as it faces a mix of structural and cyclical challenges.

U.S. MARKETS REVIEW

The S&P 500 posted another year of strongly positive results, returning 24.56% for the one-year period ending June 30, 2024. The broad U.S. equity market, as measured by the Russell 3000 Index, returned 23.13% over the same one-year period. Growth stocks generally outperformed value stocks and larger-cap stocks outperformed smaller-cap stocks during the year.

Interest rates remained elevated during the year, and the Bloomberg U.S. Aggregate Bond Index, a broad index of U.S. investment grade bonds, returned 2.63% for the year ending June 30, 2024.

During that same period, U.S. investment grade corporate bonds, as represented by the Bloomberg U.S. Corporate Investment Grade Index, returned 4.63%.

INTERNATIONAL MARKETS REVIEW

Outside of the U.S., developed international markets produced strong positive returns in U.S. dollar terms, with the MSCI EAFE Index returning 11.54%. While emerging markets lagged U.S. equities, the MSCI Emerging Markets Index outpaced non-U.S. developed markets equities with a return of 12.55% in U.S. dollar terms during the one-year period ending June 30, 2024.

Goldman Sachs Asset Management
20 Glover Avenue
Norwalk, CT 06850

Performance information for MSCI non-U.S. equity indices represents Total Return Net Dividends in U.S. Dollar Terms.

Investment Options

Below is a depiction of the investment programs in the QPP and the TDA Program available to members. The programs' portfolios are structured differently to allow members to diversify their investments. Please see pages 94-99 for detailed descriptions of the investment programs.

| Pension Fund | Diversified Equity Fund | Balanced Fund |
|---|--|---|
| (Member Contributions Pension Reserve Funds & ITHP Contributions) | Member Contributions & ITHP Contributions) | Member Contributions & ITHP Contributions) |
| Tiers I/II QPP funds in the Fixed Return Fund | Tiers I/II QPP funds in the Diversified Equity Fund | Tiers I/II QPP funds in the Balanced Fund |
| + | | |
| All Tiers III/IV/VI QPP Funds | + | + |
| + | | |
| All Tiers' TDA funds in the Fixed Return Fund | All Tiers' TDA funds in the Diversified Equity Fund | All Tiers' TDA funds in the Balanced Fund |

| International Equity Fund | Sustainable Equity Fund | U.S. Equity Index Fund | International Equity Index Fund |
|---|---|--|---|
| (Member Contributions & ITHP Contributions) | (Member Contributions & ITHP Contributions) | (Member Contributions & ITHP Contributions) | (Member Contributions & ITHP Contributions) |
| Tiers I/II QPP funds in the International Equity Fund | Tiers I/II QPP funds in the Sustainable Equity Fund | Tiers I/II QPP funds in the U.S. Equity Index Fund | Tiers I/II QPP funds in the International Equity Index Fund |
| + | + | + | + |
| All Tiers' TDA funds in the International Equity Fund | All Tiers' TDA funds in the Sustainable Equity Fund | All Tiers' TDA funds in the U.S. Equity Index Fund | All Tiers' TDA funds in the International Equity Index Fund |

Note: Members' QPP accounts receive additional contributions from their employer: "Pension Reserve" funds, which are invested in the Pension Fund, are provided to all members on a statutory basis consistent with generally accepted actuarial principles; actuarial variations are performed annually as of June 30. "Increased-Take-Home Pay" (ITHP) funds, provided by the City of New York to Tier I and Tier II members only, are invested according to member designation in any combination of the seven investment programs.

The table below compares accumulations as of June 30, 2024, based on assumed contributions of \$100.00 per month into each of the Fixed Return, Diversified Equity, Balanced, International Equity, Sustainable Equity, U.S. Equity Index, and International Equity Index Funds.

| 10-Year Comparison of Accumulations in TRS' Investment Programs As of June 30, 2024 | | | | | | | | | | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|
| Months of Participation | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 |
| Fixed Return Fund (TDA/ UFT) ¹ | \$1,239 | \$2,564 | \$3,982 | \$5,499 | \$7,122 | \$8,859 | \$10,718 | \$12,707 | \$14,835 | \$17,112 |
| Fixed Return Fund (All others) | \$1,245 | \$2,594 | \$4,053 | \$5,633 | \$7,343 | \$9,194 | \$11,198 | \$13,367 | \$15,715 | \$18,257 |
| Diversified Equity Fund ² | \$1,364 | \$1,343 | \$2,525 | \$4,810 | \$5,660 | \$7,488 | \$11,671 | \$14,180 | \$16,669 | \$19,490 |
| Balanced Fund ³ | \$1,268 | \$1,246 | \$2,409 | \$4,282 | \$4,947 | \$6,344 | N/A | N/A | N/A | N/A |
| International Equity Fund ⁴ | \$1,298 | \$1,338 | \$2,499 | \$4,571 | \$5,313 | \$6,868 | \$10,185 | \$12,129 | \$13,964 | \$15,871 |
| Sustainable Equity Fund ⁵ | \$1,404 | \$1,391 | \$2,550 | \$4,913 | \$5,912 | \$8,017 | \$12,841 | \$15,736 | \$18,649 | \$21,977 |
| U.S. Equity Index Fund ⁶ | \$1,381 | \$1,348 | \$2,456 | \$5,094 | N/A | N/A | N/A | N/A | N/A | N/A |
| International Equity Index Fund ⁷ | \$1,293 | \$1,307 | \$2,456 | \$4,552 | N/A | N/A | N/A | N/A | N/A | N/A |
| ¹ Fixed Return Fund QPP: Tiers I/II members are credited with 8.25% annually on QPP investments in the Fixed Return Fund; this rate has been in effect since July 1, 1988. TDA: Members who are represented by the United Federation of Teachers (UFT) are credited with 7% annually on TDA investments. This rate has been in effect since December 11, 2009; the previous rate was 8.25%. Members who are not represented by the UFT are credited with 8.25% annually on TDA investments in the Fund; this rate has been in effect since July 1, 1988. The numbers in the chart represent the accumulation for a UFT member. ² Based on July 2024 unit value of \$139.612 ³ Based on July 2024 unit value of \$16.251 ⁴ Based on July 2024 unit value of \$12.088 ⁵ Based on July 2024 unit value of \$31.308 ⁶ Based on July 2024 unit value of \$17.201 ⁷ Based on July 2024 unit value of \$12.010 | | | | | | | | | | |

Pension Fund

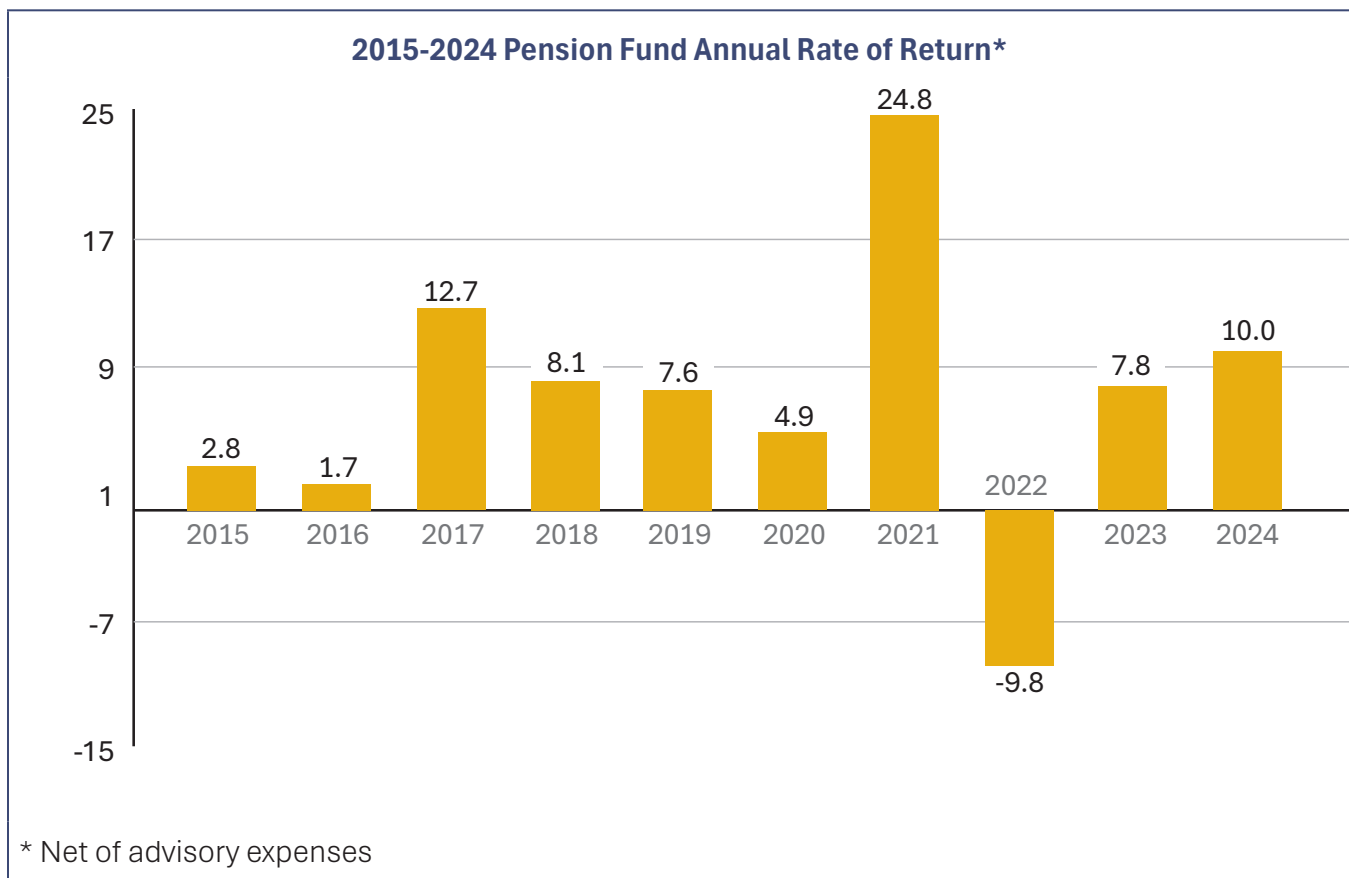
Fund Summary | Fiscal Year 2024

Return: 9.96% | Total Investments: \$104.5 Billion

During Fiscal Year 2024, the Pension Fund's portfolio, consisting primarily of equities and fixed-income investments, yielded a net return of 9.96% and a gross return of 10.44%. The 10.44% gross return was an increase from the 8.24% return for Fiscal Year 2024.

The Pension Fund includes a) all funds that Tier I/II members invested in the Fixed Return Fund; b) Employer Contribution assets for Tier I/II members; c) all Tier III/IV/VI Qualified Pension Plan (QPP) funds; and d) all Tax-Deferred Annuity (TDA) Program funds invested in the Fixed Return Fund. The Fixed Return Fund provides an annual rate of return that is set by the New York State Legislature in accordance with applicable laws. The combined QPP and TDA Fixed Return Fund assets totaled \$104.5 billion as of June 30, 2024.

The Comptroller of the City of New York invests the Pension Fund's holdings in a diversified portfolio, as authorized by the Teachers' Retirement Board. This portfolio consists of U.S. and international equities and fixed-income instruments, with smaller allocations to private equity and real estate investments.



Diversified Equity Fund

Fund Summary | Fiscal Year 2024

Return: 20.26% | Total Investments: \$17.8 Billion

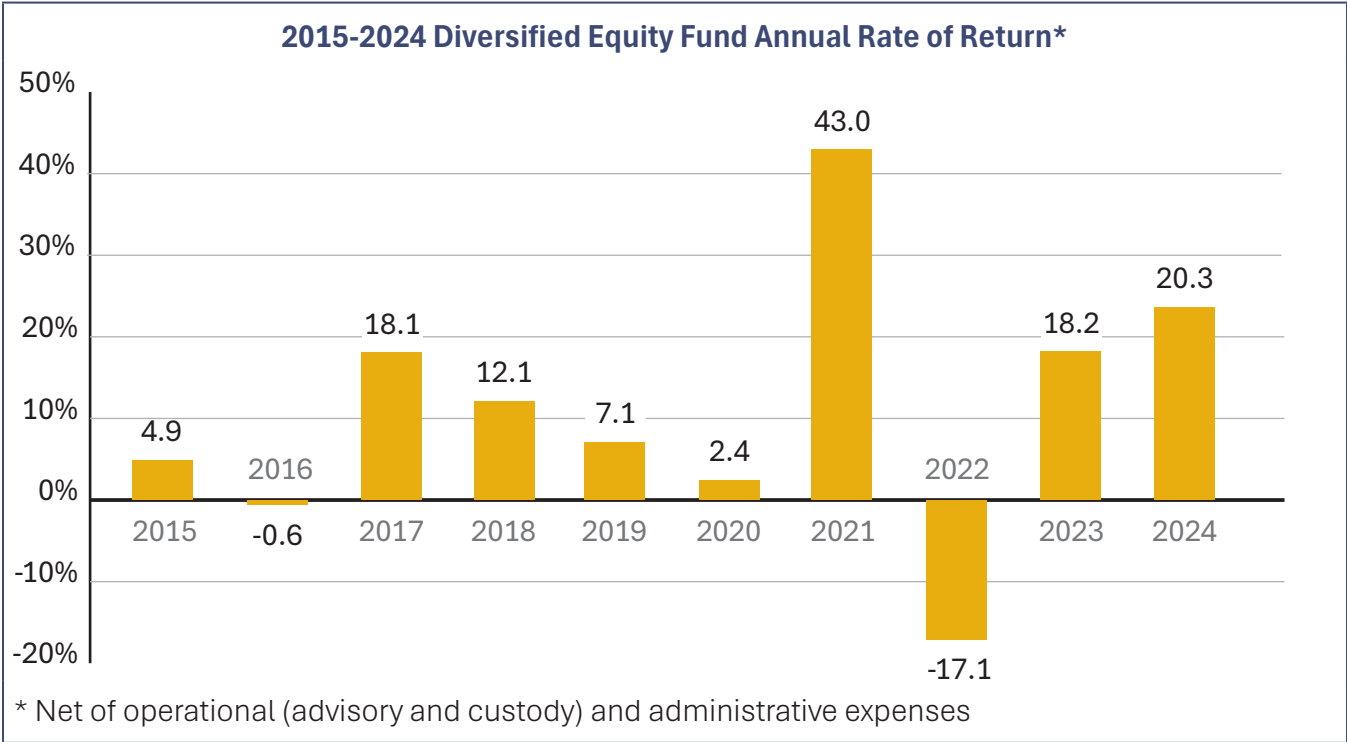
For the 12-month period ending June 30, 2024, the Global Market Composite Benchmark, which represents a passive implementation of the underlying U.S. and Non-U.S. equity market opportunity set of the Diversified Equity Fund, returned 20.42%. As of January 1, 2022, the Global Market Composite Benchmark is comprised of 77% Russell 3000 Index and 23% MSCI ACWI ex-US IMI Index and includes no fees. Between July 1, 2021 and January 1, 2022, the Global Market Composite Benchmark was comprised of 80% Russell 3000 Index and 20% MSCI ACWI ex-US IMI Index. Prior to July 2021, the Composite Benchmark was the Russell 3000 Index. For the 12-month period ending June 30, 2024, the Diversified Equity Fund returned 20.26%, after fees. The Fund invests in a diversified blend of investment strategies that historically have made the Diversified Equity Fund less volatile over long time periods than the overall U.S. equity market. The Hybrid Benchmark, which includes no fees, is constructed based on a passive reflection of the Diversified Equity Fund's target asset allocation among domestic stocks and international equities. As of June 30, 2024, the Hybrid Benchmark was 65% Russell 3000 Index, 23% International Composite Benchmark, and 12% Active US Equity Composite benchmark. Over the 12-month period ending June 30, 2024, the Diversified Equity Fund outperformed the Hybrid Benchmark's return of 20.19%.

For the three-year period ending June 30, 2024, the Diversified Equity Fund returned 5.60% on an annualized basis after fees, trailing the Global Market Composite Benchmark's annualized return of 6.37% and the Hybrid Benchmark's annualized returns of 5.96% over the same period. For the five-year period ending June 30, 2024, the Diversified Equity Fund returned 11.53%, annualized after fees, behind the Global Market Composite Benchmark's annualized return of 13.07% and the Hybrid Benchmark's annualized returns of 12%.

As of June 30, 2024, approximately 77% of the Diversified Equity Fund's portfolio was invested in the U.S. common stock market. The Diversified Equity Fund's portfolio also contained approximately 23% in international stocks as of the fiscal year-end. The international stock allocations contribute to portfolio diversification.

The Diversified Equity Fund utilizes several different investment strategies managed by professional money management firms. These strategies are classified into the component sectors described here:

- The Passive Core (or index) sector is comprised of one index mandate.
- The Active Domestic Equity sector is comprised of strategies focused on particular market capitalization ranges and investment styles.
- The International Equity sector is comprised of strategies focused on particular market capitalization ranges and investment styles across developed and emerging markets.



Balanced Fund

Fund Summary | Fiscal Year 2024

Return: 8.85% | Total Investments: \$611.2 Million

The Balanced Fund has targets of 70% U.S. short-term fixed income and 30% passive world equity. The fund aims to passively track its benchmark, which is 70% Bloomberg U.S. Govt/Credit 1-5 Year Float Adjusted Index and 30% FTSE Global All Cap Index. For the one-year period ending June 30, 2024, the Fund returned 8.85%, after fees, compared with the Balanced Fund Composite Benchmark return of 8.90%. For the three-year period ending June 30, 2024, the Balanced Fund returned 1.32%, annualized after fees, versus its benchmark return of 1.60%.

International Equity Fund

Fund Summary | Fiscal Year 2024

Return: 10.98% | Total Investments: \$275.7 Million

As of June 30, 2024, the International Equity Fund was primarily comprised of a mix of active and passive management, implemented by one passive and 10 active non-U.S. equity managers that invest primarily in the stocks of non-U.S. companies located in developed and emerging markets. For the one-year period ending June 30, 2024, the International Equity Fund returned 10.98%, after fees, underperforming the International Composite Benchmark, which returned 11.72%. For the three-year period ending June 30, 2024, the International Equity Fund returned 0.80%, after fees, outperforming the benchmark return of 0.34%. Over the longer five-year period ending June 30, 2024, the International Equity Fund has returned 6.46%, after fees, outperforming the benchmark return of 5.62%. The total return of this option reflects the performance of the underlying managers as well as the impact of cash flows into and out of the fund.

Sustainable Equity Fund

Fund Summary | Fiscal Year 2024

Return: 27.38% | Total Investments: \$765.8 Million

The Sustainable Equity Fund invests in the common stock of large- and mid-cap U.S. companies that, in the manager's view, effectively implement sustainable business strategies to drive their prospects for future earnings growth. For the one-year period ending June 30, 2024, the Sustainable Equity Fund returned 27.38%, after fees, versus the Sustainable Fund Composite Benchmark's return of 33.48%. The Sustainable Fund Composite Benchmark is comprised of the S&P 500 Index through September 30, 2019, and the Russell 1000 Growth Index thereafter. For the three-year period ending June 30, 2024, the Sustainable Equity Fund returned 7.91%, after fees, underperforming the Sustainable Fund Composite Benchmark return of 11.28% for the same period. Over the longer five-year period ending June 30, 2024, the Sustainable Equity Fund has also trailed the benchmark, returning 16.69%, after fees, against the benchmark return of 19.39%. The total return of this option reflects the performance of the underlying manager as well as the impact of cash flows into and out of the fund.

U.S. Equity Index Fund

Fund Summary | Fiscal Year 2024

Return: 22.34% | Total Investments: \$222.6 Million

The U.S. Equity Index Fund was added to the Passport Funds in January 2020. The fund tracks the Dow Jones U.S. Total Stock Market Index, which represents the broad U.S. equity market, excluding the smallest and least liquid stocks. For the one-year period ending June 30, 2024, the U.S. Equity Index Fund returned 22.34%, after fees, versus the benchmark return of 23.20% for the same period. The total return of this option reflects the performance of the underlying manager as well as the impact of cash flows into and out of the fund.

International Equity Index Fund

Fund Summary | Fiscal Year 2024

Return: 10.68% | Total Investments: \$35.9 Million

The International Equity Index Fund was added to the Passport Funds in January 2020. The objective of the fund is to track the MSCI ACWI ex-US IMI Net Index, which includes both non-U.S. developed and emerging markets. For the one-year period ending June 30, 2024, the International Equity Index Fund returned 10.68%, after fees, versus the index return of 11.57% for the same period. The total return of this option reflects the performance of the underlying manager as well as the impact of cash flows into and out of the fund.

| Annualized Investment Results¹ For Year Ended June 30, 2024 | | | | |
|--|--------------|-------------|--------------|--------------|
| | 1 year | 3 Year | 5 Year | 10 Year |
| Fixed Return Fund² | | | | |
| TRS Pension Fund | 9.96 | 2.25 | 6.95 | 6.71 |
| Benchmark: Policy Index ³ | 11.98 | 2.66 | 7.13 | 6.95 |
| Diversified Equity Fund (Variable A) | | | | |
| Diversified Equity Fund | 20.26 | 5.60 | 11.53 | 9.81 |
| Hybrid Benchmark ⁴ | 20.19 | 5.96 | 12.00 | 10.39 |
| Global Market Composite Benchmark ⁴ | 20.42 | 6.37 | 13.07 | 11.62 |
| Balanced Fund (Variable B) | | | | |
| Balanced Fund | 8.85 | 1.32 | 4.00 | N/A |
| Balanced Fund Composite Benchmark ⁵ | 8.90 | 1.60 | 4.17 | 3.77 |
| International Equity Fund (Variable C) | | | | |
| International Equity Fund | 10.98 | 0.80 | 6.46 | 4.98 |
| International Equity Composite Benchmark ⁶ | 11.72 | 0.34 | 5.62 | 4.42 |
| Sustainable Equity Fund (Variable E) | | | | |
| Sustainable Equity Fund | 27.38 | 7.91 | 16.69 | 12.35 |
| Sustainable Fund Composite Benchmark ⁷ | 33.48 | 11.28 | 19.39 | 14.97 |
| U.S. Equity Index Fund (Variable F) | | | | |
| U.S. Equity Index Fund | 22.34 | 8.13 | N/A | N/A |
| Dow Jones U.S. Total Stock Market Index | 23.20 | 7.90 | 14.04 | 12.07 |
| International Equity Index Fund (Variable G) | | | | |
| International Equity Index Fund | 10.68 | 0.44 | N/A | N/A |
| MSCI ACWI ex-US IMI Net Index | 11.57 | 0.19 | 5.62 | 3.92 |

¹ Performance calculations reflect time-weighted compound returns. Charts reflect investment results of the TRS Pension Fund net of advisory expenses and Variable-Return Funds net of operational (advisory and custody) and administrative expenses.

² The following are the crediting rates for the Fixed Annuity Program for the specified period. These rates are set by the New York State Legislature. QPP: Tier I/II members are credited with 8.25% annually on QPP investments.

TDA: Members who are represented by the United Federation of Teachers (UFT) are credited with 7% annually on TDA investments. Members who are not represented by the UFT are credited with 8.25% annually on TDA investments in the Fund.

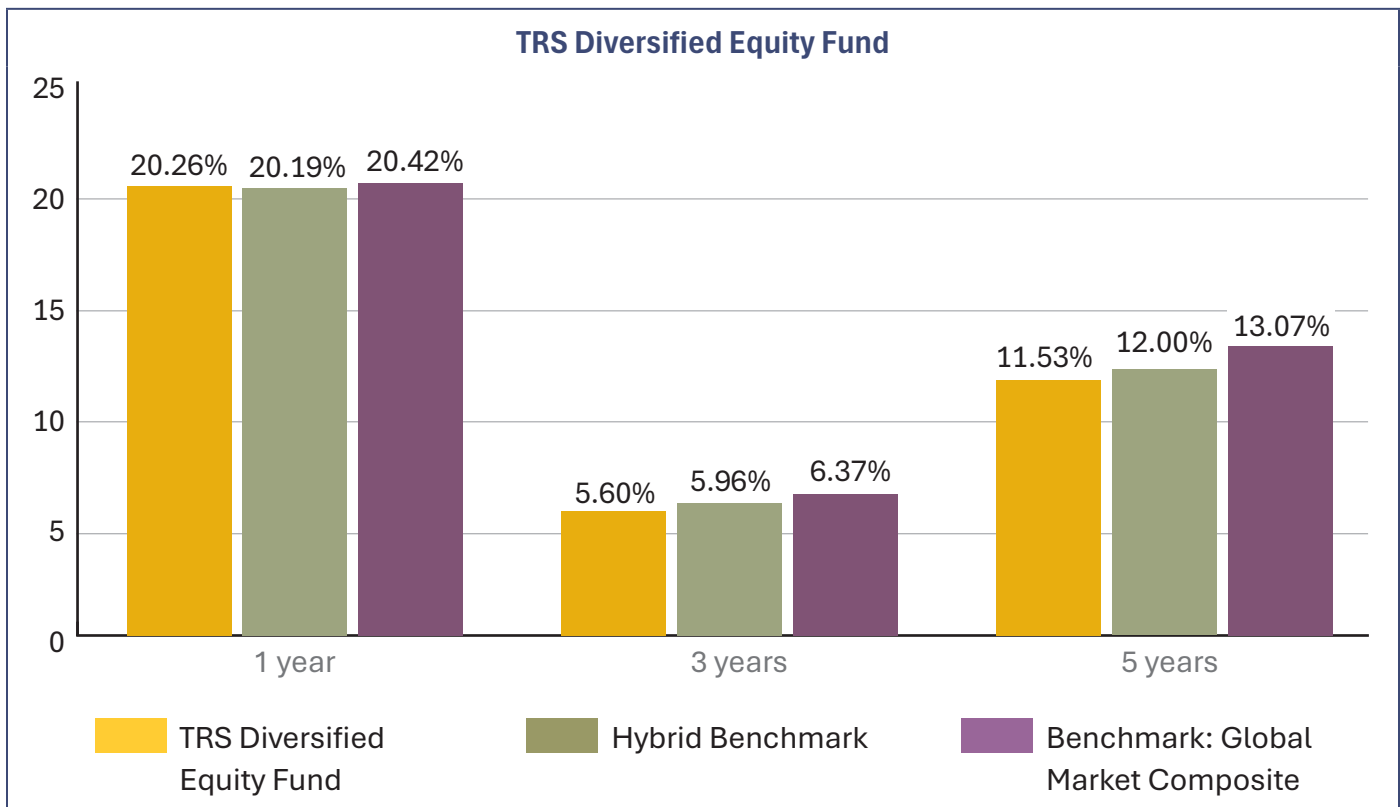
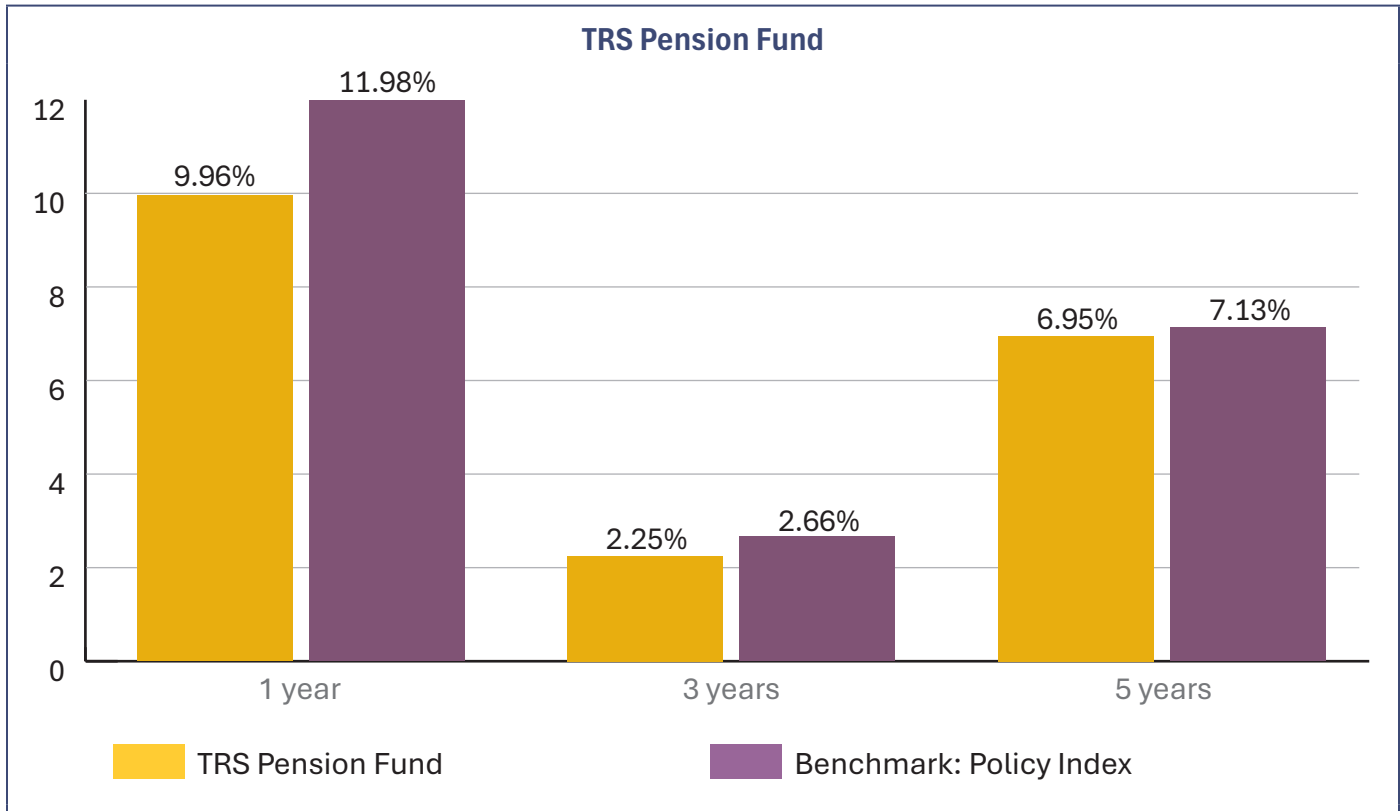
³ The “Policy Index” is a custom benchmark representing the weighted average return of the weighted benchmark indexes for each major investment program within the TRS Pension Fund. For the weights of the benchmark indexes, see the MD&A of the Financial Section.

- ⁴ The Hybrid Benchmark is rebalanced monthly to the Fund's target weights of its underlying composites, which are 65% Russell 3000 / 23% International Composite Benchmark / 12% Active US Equity Composite Benchmark.
- ⁵ The Global Market Composite Benchmark is 77% Russell 3000 Index and 23% MSCI ACWI ex-US IMI Index as of January 1, 2022. Prior to July 1, 2021, the performance history reflects the Russell 3000 Index.
- ⁶ The Balanced Fund Composite Benchmark return is composed of 70% Bloomberg Barclays U.S. Government / Credit 1–5 Year Float Adjusted Index and 30% FTSE Global All Cap Index.
- ⁷ The International Equity Composite Benchmark reflects the underlying strategy benchmarks at target and is currently comprised of 60% MSCI EAFE / 25% MSCI Emerging Markets Index / 11% MSCI ACWI ex USA Small Cap Index / 4% S&P Developed ex US Small Cap Index. These weights have changed periodically over time with the strategy targets. Prior to January 2022, the weights were 63% MSCI EAFE / 22% MSCI Emerging Markets Index / 11% MSCI ACWI ex USA Small Cap Index / 4% S&P Developed ex US Small Cap Index.
- ⁸ The Sustainable Fund Composite Benchmark was the S&P 500 Index through September 30, 2019, and the Russell 1000 Growth Index thereafter.
- ⁹ The U.S. Equity Index Fund has existed since January 1, 2020. Performance of the Fund's benchmark is representative of how the Fund would have performed prior to Fund inception; this is because the Fund is passively managed. Any difference between the returns of the Fund and that of its underlying mutual fund is due to the timing of cash flows.
- ¹⁰ The International Equity Index Fund has existed since January 1, 2020. Performance of the Fund's benchmark is representative of how the Fund would have performed prior to Fund inception; this is because the Fund is passively managed. Any difference between the returns of the Fund and that of its underlying mutual fund is due to the timing of cash flows.

The information from the previous page has been gathered from reliable sources, but TRS can only take responsibility for the accuracy of the information concerning its own investment programs.

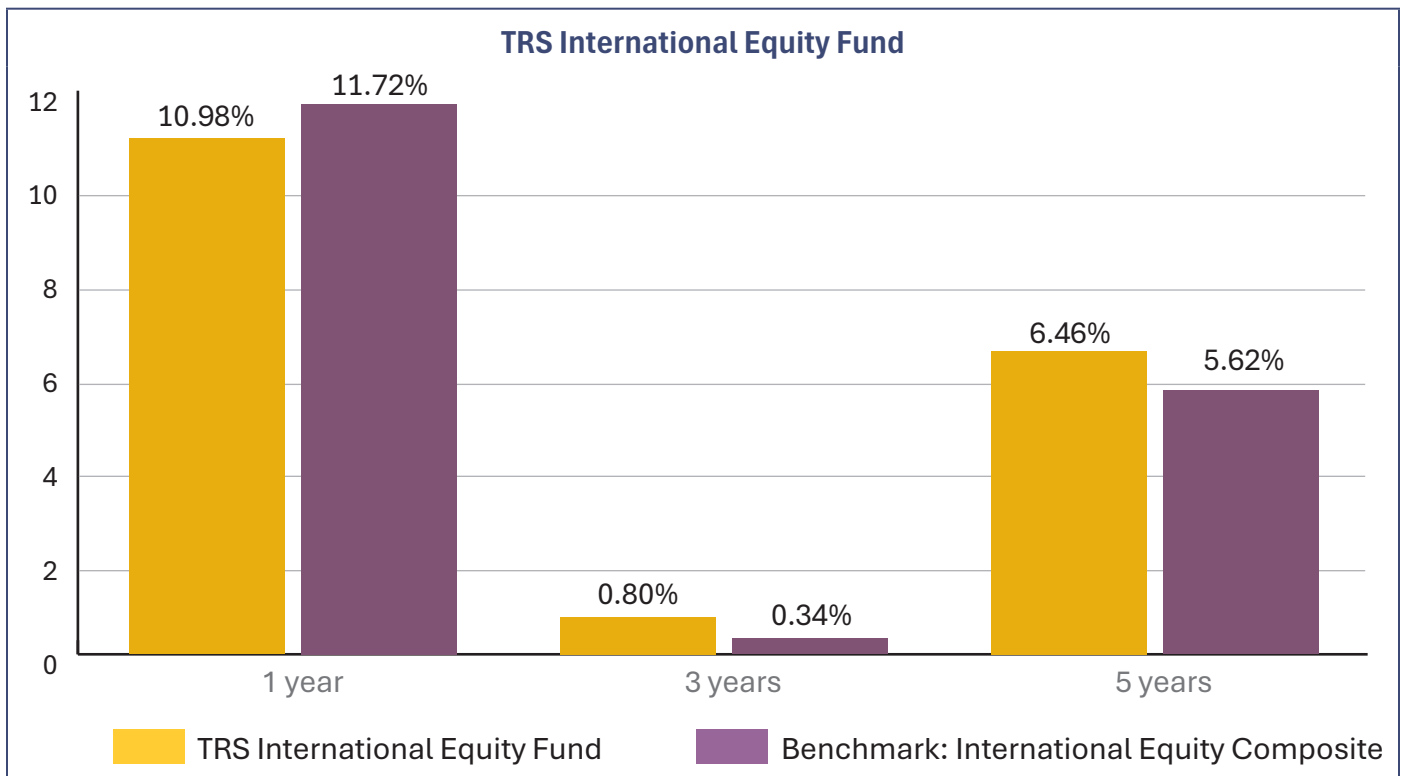
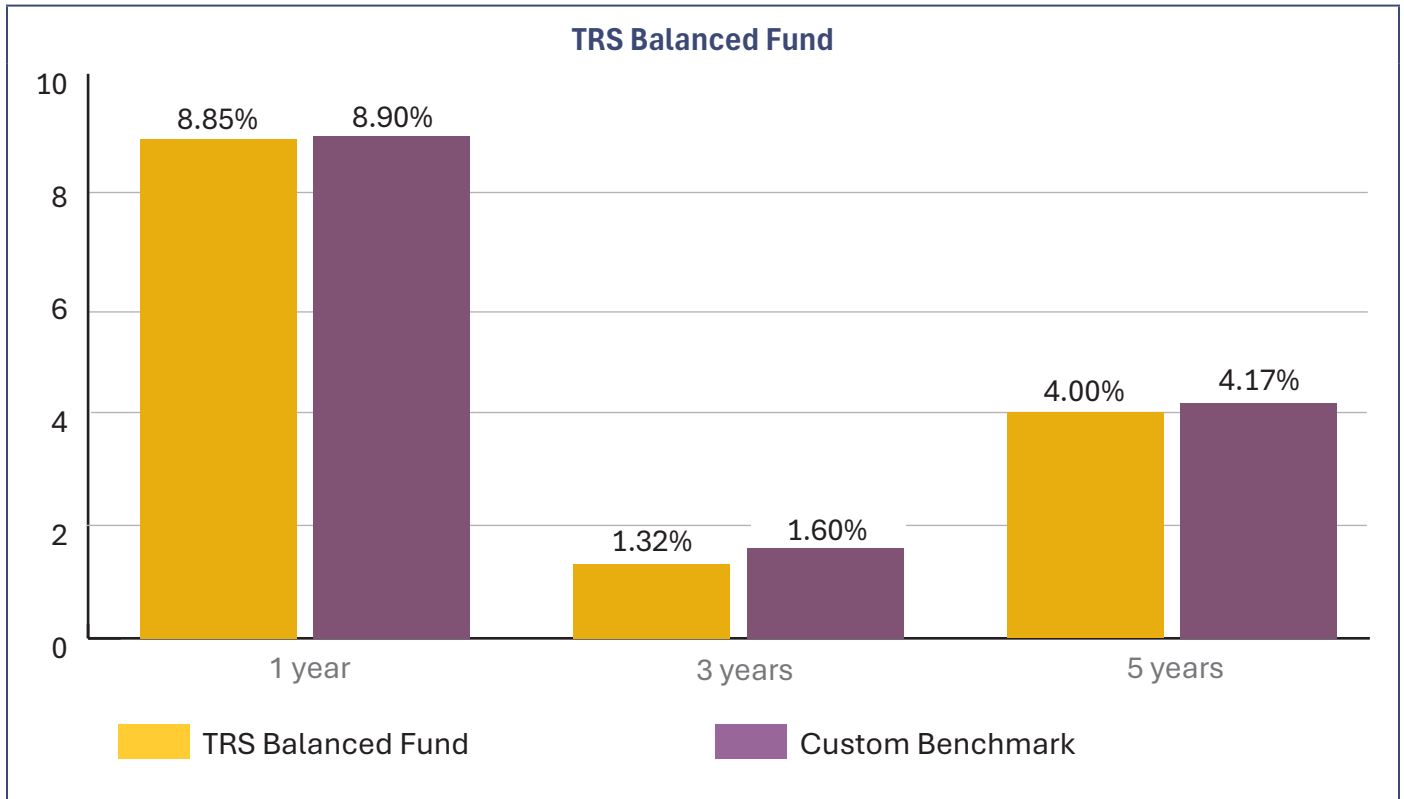
Annualized Investment Results

For Year Ended June 30, 2024



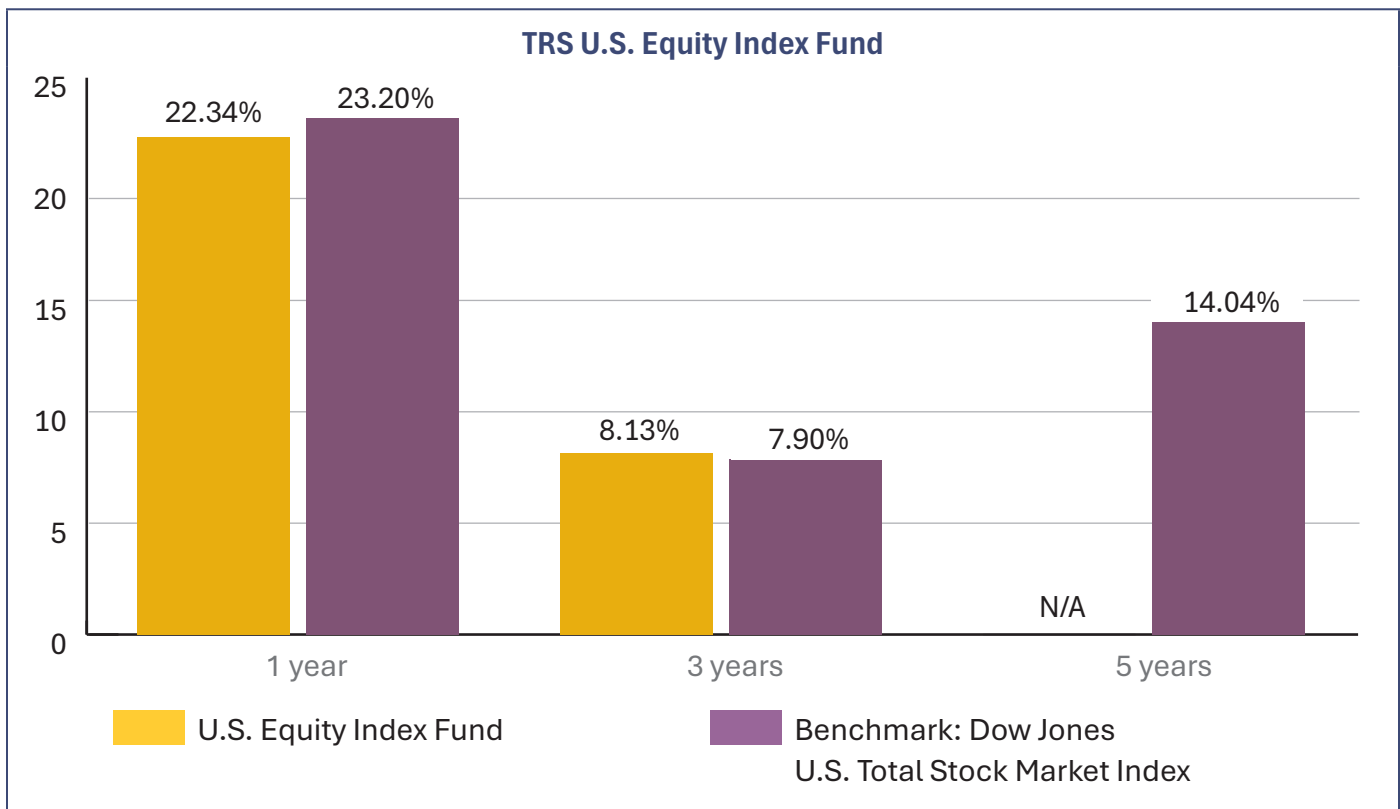
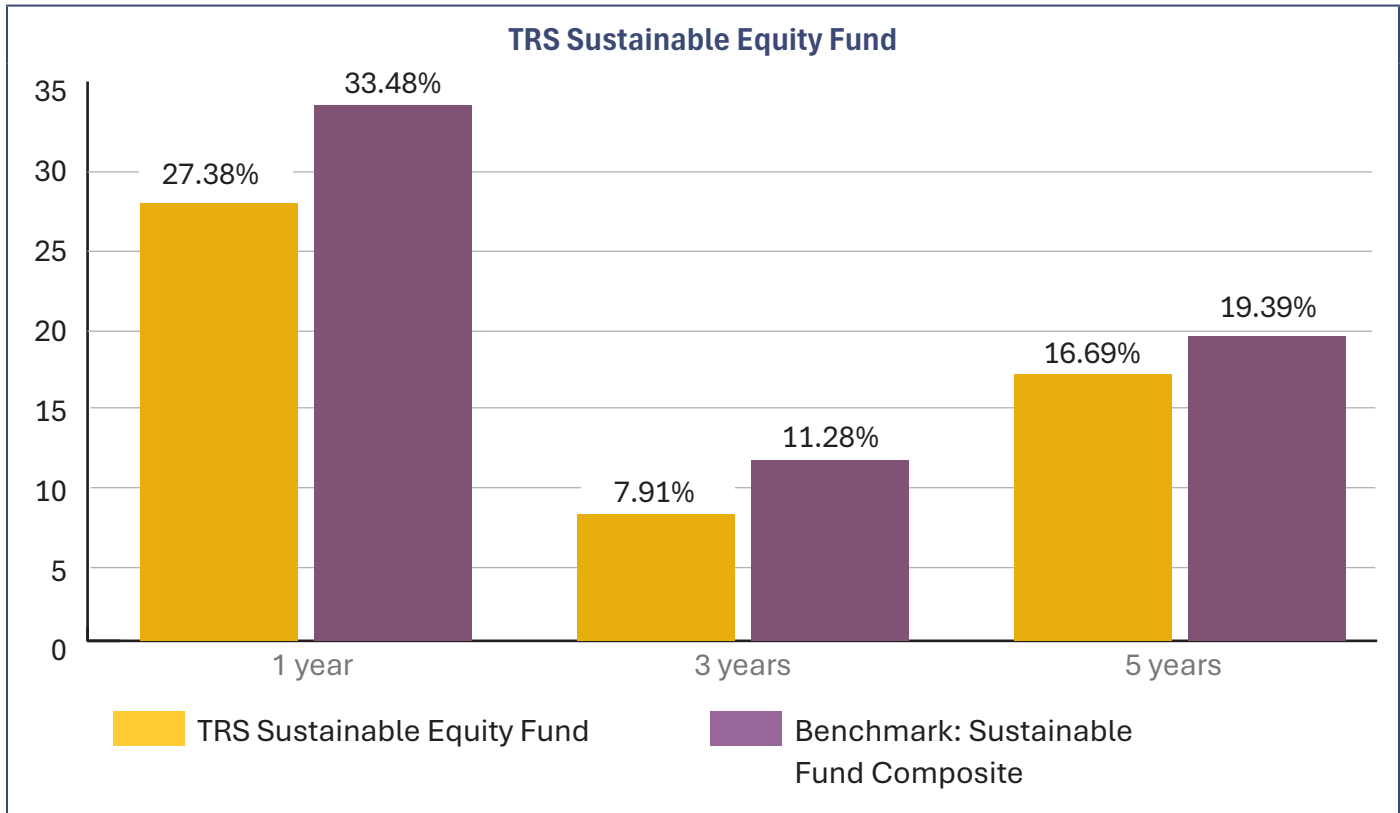
Annualized Investment Results (Continued)

For Year Ended June 30, 2024



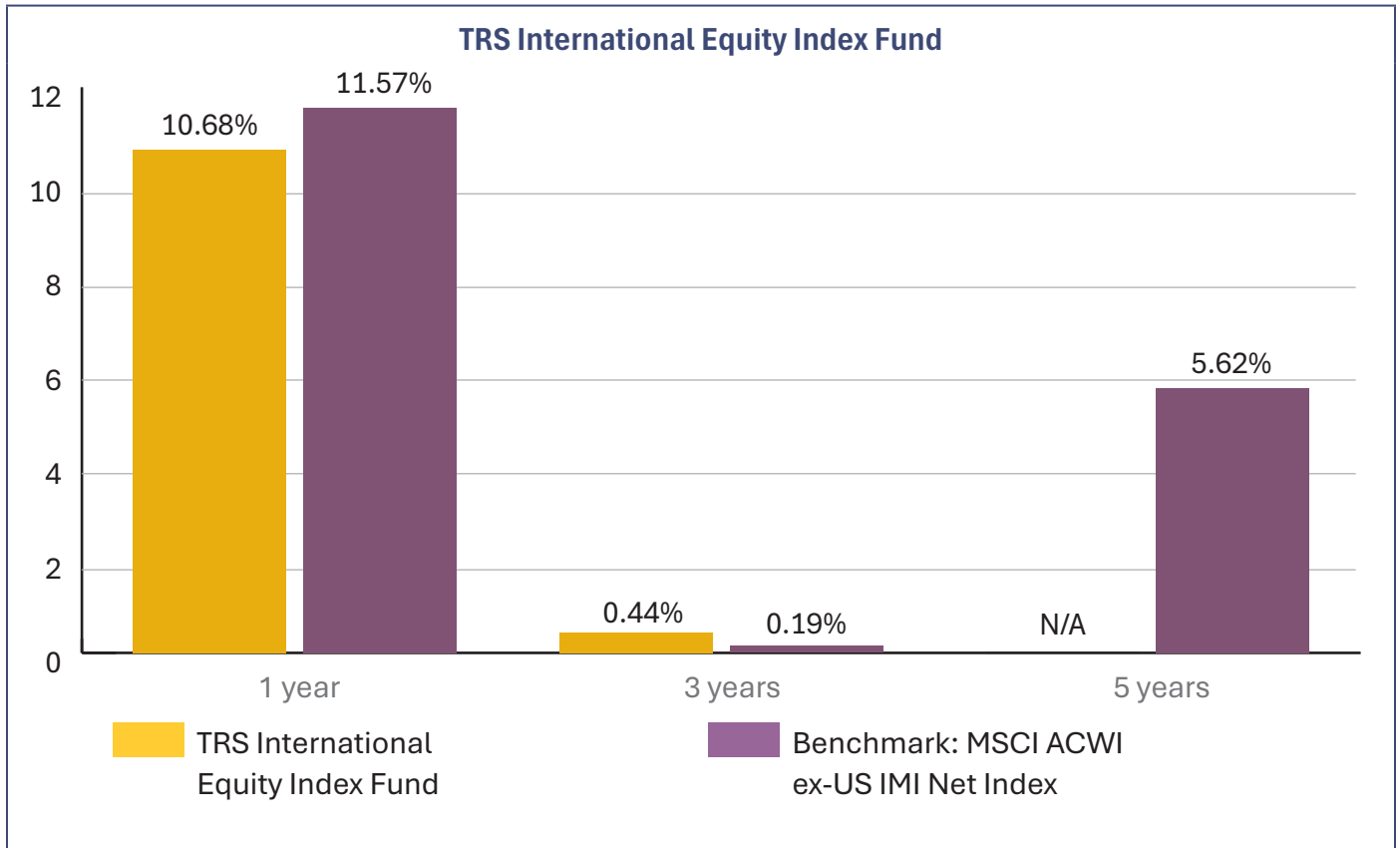
Annualized Investment Results

For Year Ended June 30, 2024



Annualized Investment Results (Continued)

For Year Ended June 30, 2024



Investment Summary (QPP & TDA)

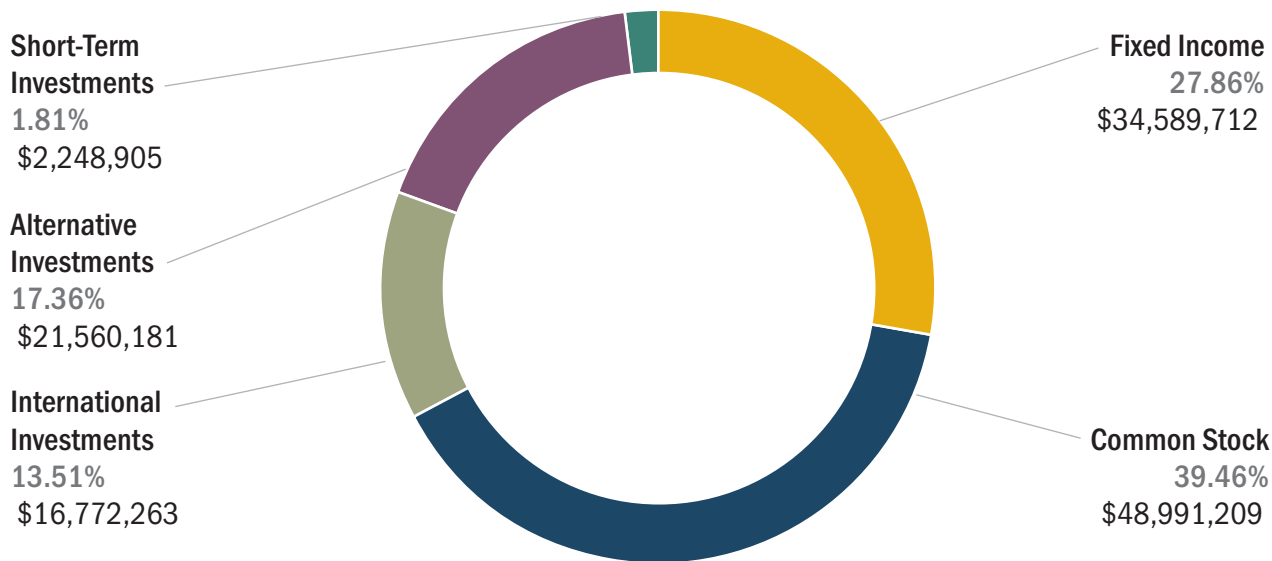
As of June 30, 2024

| Type of Investment | Fair Value in Thousands | Percent of Total Fair Value |
|---|----------------------------|--------------------------------|
| Fixed Income: | | |
| Government Bonds | \$11,747,756 | 9.46% |
| Corporate and Other | 22,227,025 | 17.90% |
| TIPS | 614,931 | 0.50% |
| Total Fixed Income | \$34,589,712 | 27.86% |
| Common Stock: | | |
| Financial & Utility | \$8,725,967 | 7.03% |
| Basic Industry | 10,532,733 | 8.48% |
| Consumer & Service | 15,656,435 | 12.61% |
| Technological | 9,081,556 | 7.32% |
| Miscellaneous | 4,994,518 | 4.02% |
| Total Common Stock | \$48,991,209 | 39.46% |
| International Investments | \$16,772,263 | 13.51% |
| Alternative/ Private-Equity Investments | \$21,560,181 | 17.36% |
| Short-Term Investments | \$2,248,905 | 1.81% |
| Total Investments | \$124,162,270* | 100.00% |

* Excludes \$4,500,104 in securities lending

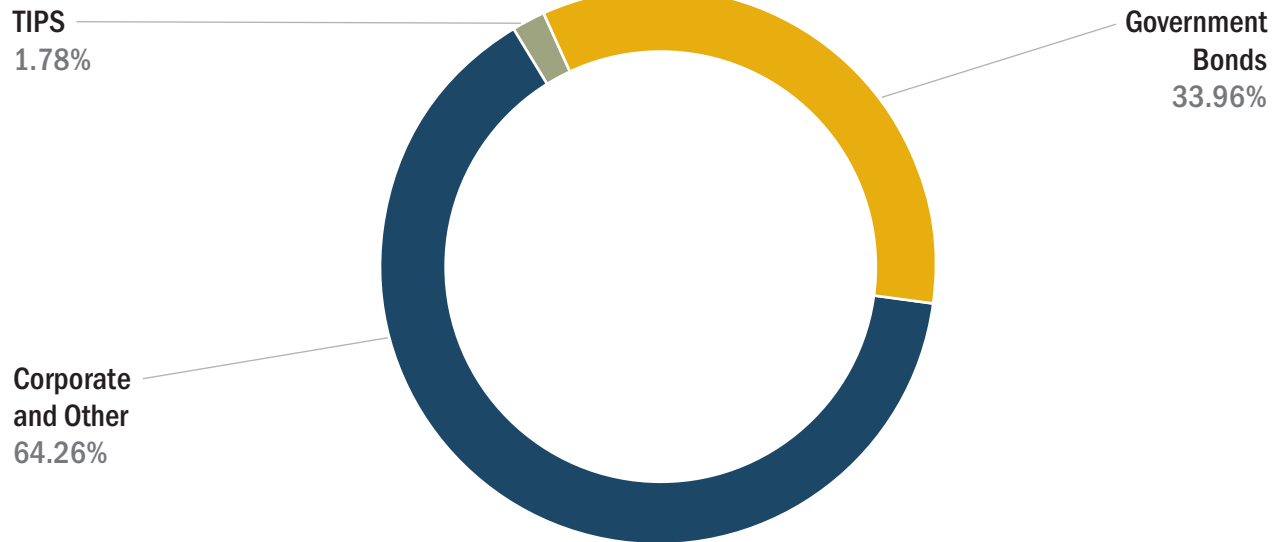
Total Investments Asset Allocation

As of June 30, 2024



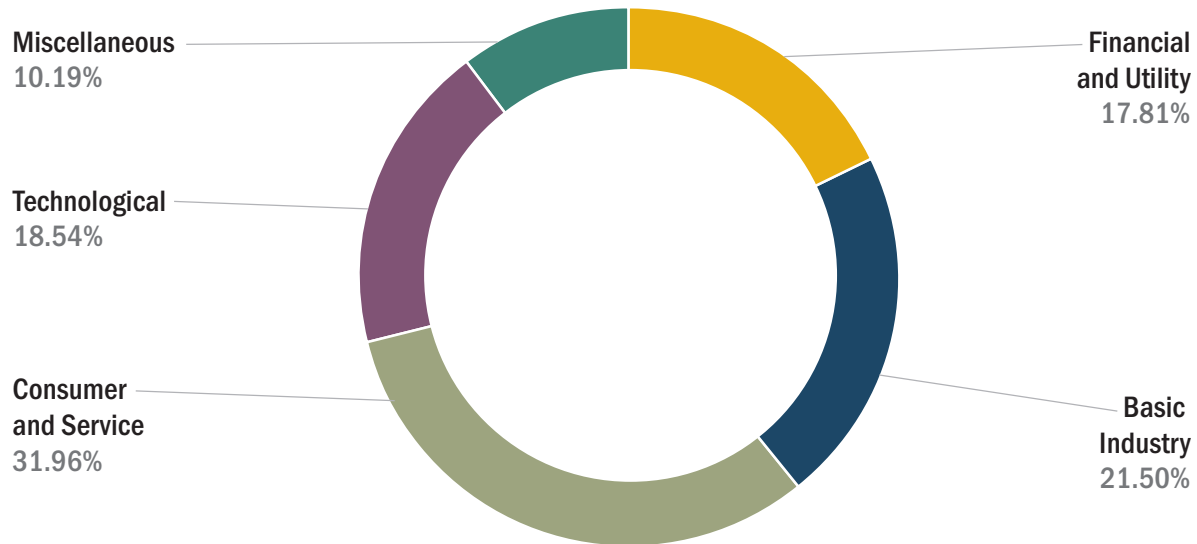
Fixed Income Investments Asset Allocation

As of June 30, 2024



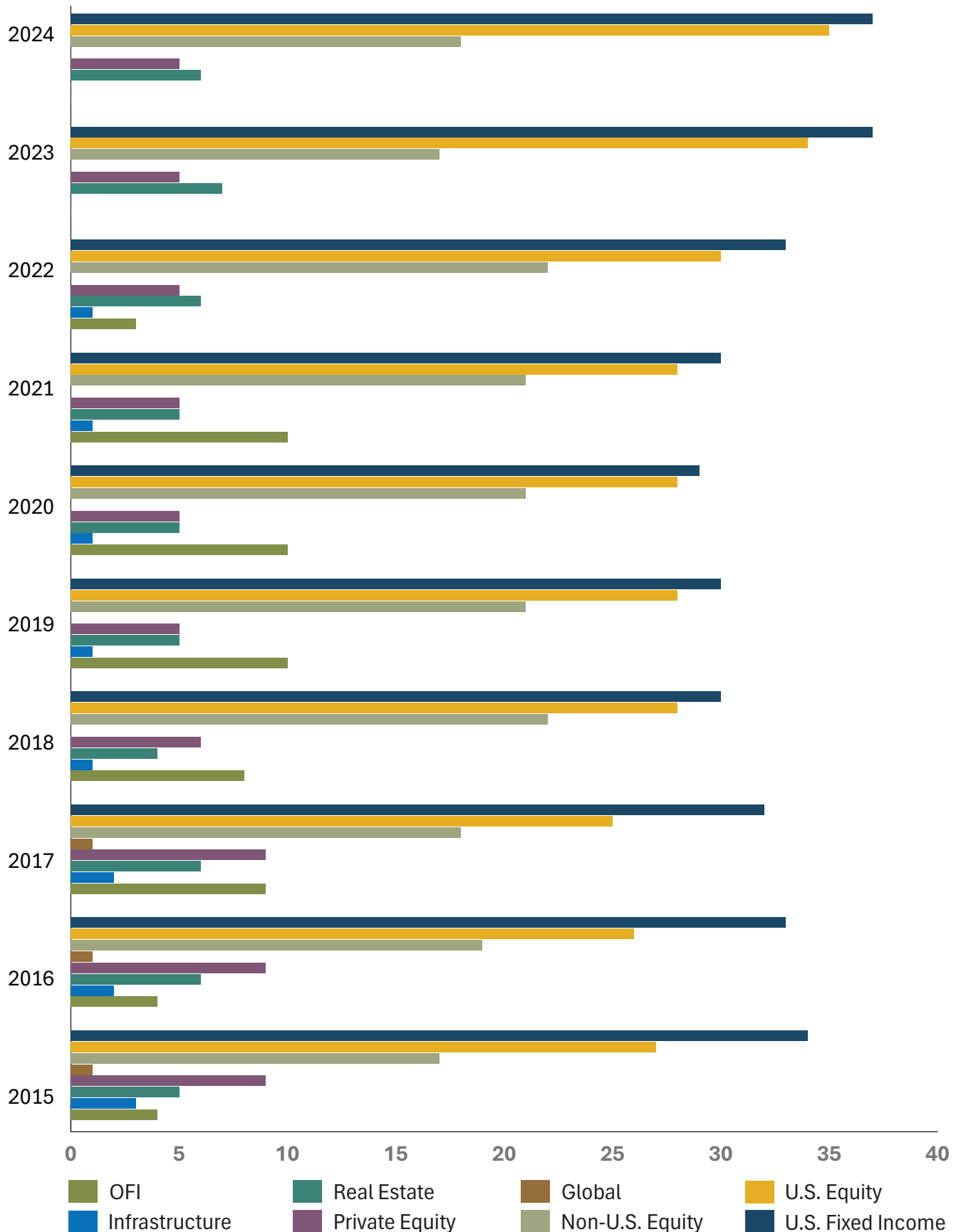
Equity Investments Asset Allocation

As of June 30, 2024



Changes in Asset Allocation By Percentage for TRS Pension Fund Over 10-Year Period

June 30, 2015 – June 30, 2024



**List of Largest Bond Assets Held
(By Fair Value)**

As of June 30, 2024

| Par Value | Security Name | Interest Rate | Maturity Date | Fair Value |
|---------------|---------------------------------------|---------------|---------------|---------------|
| \$207,942,500 | United States Treasury Notes | 4.250% | 02/15/54 | \$198,000,769 |
| 242,350,000 | Federal National Mortgage Association | 2.000 | 08/15/54 | 189,684,922 |
| 115,000,000 | United States Treasury Notes | 4.625 | 02/28/26 | 114,587,150 |
| 110,500,000 | United States Treasury Notes | 4.250 | 01/31/26 | 109,438,095 |
| 117,850,000 | United States Treasury Notes | 1.500 | 01/31/27 | 109,066,640 |
| 109,000,000 | United States Treasury Notes | 2.875 | 11/30/25 | 105,968,710 |
| 103,250,000 | United States Treasury Notes | 4.250 | 12/31/25 | 102,261,898 |
| 99,250,000 | United States Treasury Notes | 5.000 | 10/31/25 | 99,261,910 |
| 102,000,000 | United States Treasury Notes | 2.500 | 02/28/26 | 98,198,460 |
| 96,750,000 | United States Treasury Notes | 4.875 | 11/30/25 | 96,640,673 |
| 96,625,000 | United States Treasury Notes | 3.000 | 10/31/25 | 94,183,286 |
| 93,275,000 | United States Treasury Notes | 4.500 | 11/15/33 | 94,134,996 |
| 95,000,000 | United States Treasury Notes | 4.250 | 10/15/25 | 94,109,850 |
| 100,060,000 | United States Treasury Notes | 0.750 | 03/31/26 | 93,313,955 |
| 94,690,000 | United States Treasury Notes | 4.500 | 02/15/44 | 92,885,209 |

List of Largest Equity Assets Held (Pension Funds)
(By Fair Value)

As of June 30, 2024

| Company Name | Shares | Fair Value |
|---------------------------------------|------------|-----------------|
| Microsoft Corp | 4,036,924 | \$1,804,303,182 |
| Apple Inc | 7,704,882 | 1,622,802,247 |
| Nvidia Corp | 12,574,908 | 1,553,504,134 |
| Amazon | 5,016,206 | 969,381,810 |
| Meta Platforms Inc | 1,211,364 | 610,793,956 |
| Alphabet Inc - CL A | 3,232,470 | 588,794,411 |
| Alphabet Inc - CL C | 2,757,726 | 505,822,103 |
| Berkshire Hathaway Inc | 1,056,293 | 429,699,992 |
| Taiwan Semiconductor Manufacturing Co | 14,404,939 | 428,931,186 |
| Eli Lilly & Co | 440,252 | 398,595,356 |
| Broadcom Inc | 236,294 | 379,377,106 |
| JP Morgan Chase & Co | 1,503,242 | 304,045,727 |
| Tesla Inc | 1,472,733 | 291,424,406 |
| UnitedHealth Group Inc | 533,856 | 271,871,507 |
| Asml Holding Nv | 246,211 | 254,429,969 |

List of Largest Equity Assets Held (Variable-Return Funds)
(By Fair Value)

As of June 30, 2024

| Company Name | Shares | Fair Value |
|------------------------|-----------|---------------|
| Microsoft Corp | 1,929,651 | \$862,457,346 |
| NVIDIA Corp | 6,459,290 | 797,980,722 |
| Apple Inc | 3,295,022 | 693,997,441 |
| Amazon.com Inc | 2,733,882 | 528,322,605 |
| Alphabet Inc-CL A | 1,688,356 | 307,534,050 |
| Meta Platforms Inc | 551,295 | 277,973,916 |
| Alphabet Inc-CL C | 1,089,484 | 199,833,206 |
| Eli Lilly & Co | 204,033 | 184,727,555 |
| Berkshire Hathaway Inc | 444,553 | 180,844,130 |
| Broadcom Inc | 105,253 | 168,987,256 |
| Visa Inc | 590,087 | 154,880,126 |
| JP Morgan Chase & Co | 608,528 | 123,080,779 |
| Tesla Inc | 619,043 | 122,496,185 |
| Exxon Mobil | 955,756 | 110,026,627 |
| UnitedHealth Group Inc | 213,983 | 108,973,169 |

Note: The above tables reflect assets of both the Variable Qualified Pension Plan (QPP) and the Tax-Deferred Annuity (TDA) Program. The complete list of assets held by TRS' seven investment programs is included in the publication Investment Portfolios.

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | Total |
|------------------------------------|--------------------|-----------|-----------|
| Fixed Annuity Program | | | |
| Fixed Income | | | |
| AFL-CIO Housing Investment | Investment Manager | \$938,974 | \$938,974 |
| Barksdale Investment Management | Investment Manager | 53,761 | 53,761 |
| BlackRock | Investment Manager | 1,345,460 | 1,345,460 |
| Brigade Capital Management | Investment Manager | 2,389,596 | 2,389,596 |
| Ducenta Squared Asset Management | Investment Manager | 67,114 | 67,114 |
| Eaton Vance Management | Investment Manager | 2,401,408 | 2,401,408 |
| GIA Partners | Investment Manager | 199,139 | 199,139 |
| HGK Asset Management | Investment Manager | 78,813 | 78,813 |
| Integrity Fixed Income Management | Investment Manager | 67,507 | 67,507 |
| JP Morgan Asset Management | Investment Manager | 201,440 | 201,440 |
| LM Capital Group | Investment Manager | 172,378 | 172,378 |
| Mackay Shields | Investment Manager | 2,320,430 | 2,320,430 |
| Medalist Partners | Investment Manager | 92,327 | 92,327 |
| Neuberger Berman Group | Investment Manager | 4,494,792 | 4,494,792 |
| New Century Advisors | Investment Manager | 78,948 | 78,948 |
| Nomura Corp Research and Asset Mgt | Investment Manager | 2,272,819 | 2,272,819 |
| Oaktree Capital Management | Investment Manager | 1,755,873 | 1,755,873 |
| Pacific Investment Mgt Company | Investment Manager | 1,243,034 | 1,243,034 |
| Pinebridge Investments | Investment Manager | 185,367 | 185,367 |
| Pugh Capital Management | Investment Manager | 110,175 | 110,175 |
| Ramirez Asset Management | Investment Manager | 90,864 | 90,864 |
| RBC Global Asset Management | Investment Manager | 262,625 | 262,625 |
| State Street Global Advisors | Investment Manager | 1,397,015 | 1,397,015 |
| T Rowe Price Associates | Investment Manager | 4,375,150 | 4,375,150 |
| Voya Investment Management | Investment Manager | 990,628 | 990,628 |
| Wellington Management Company | Investment Manager | 395,269 | 395,269 |

Continued on page 112

Continued from page 111

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | Total |
|---|--------------------|------------|------------|
| Domestic Equity | | | |
| Altravue Capital | Investment Manager | \$157,474 | \$157,474 |
| BlackRock | Investment Manager | 421,451 | 421,451 |
| Bridge City Capital | Investment Manager | 108,850 | 108,850 |
| Brown Asset Management | Investment Manager | 4,237,843 | 4,237,843 |
| Cooke and Bieler | Investment Manager | 2,758,745 | 2,758,745 |
| Dean Capital Management | Investment Manager | 132,934 | 132,934 |
| Earnest Partners | Investment Manager | 795,747 | 795,747 |
| Essex Investment Mgt Company | Investment Manager | 149,068 | 149,068 |
| Lisanti Capital Growth | Investment Manager | 58,810 | 58,810 |
| MFS Institutional Advisors | Investment Manager | 453,470 | 453,470 |
| Nicholas Investment Partners | Investment Manager | 88,039 | 88,039 |
| PanAgora Asset Management | Investment Manager | 1,372,547 | 1,372,547 |
| QSV Equity Investors | Investment Manager | 133,627 | 133,627 |
| State Street Global Advisors | Investment Manager | 143,768 | 143,768 |
| T Rowe Price Associates | Investment Manager | 718,302 | 718,302 |
| Victory Capital Management | Investment Manager | 1,198,700 | 1,198,700 |
| Wellington Management Company | Investment Manager | 842,943 | 842,943 |
| Westfield Capital Management | Investment Manager | 967,574 | 967,574 |
| EAFE, Emerging markets, Global and World ex U.S. | | | |
| Acadian Asset Management | Investment Manager | 6,428,018 | 6,428,018 |
| Algert Global | Investment Manager | 467,396 | 467,396 |
| AQR Capital Management | Investment Manager | 2,818,632 | 2,818,632 |
| ARGA Investment Management | Investment Manager | 537,051 | 537,051 |
| Ativo Capital Management | Investment Manager | 324,085 | 324,085 |
| Aubrey Capital Management | Investment Manager | 137,820 | 137,820 |
| Baillie Gifford | Investment Manager | 12,227,273 | 12,227,273 |
| Bivium Capital Partners | Investment Manager | 13 | 13 |
| BlackRock | Investment Manager | 310,455 | 310,455 |
| Causeway Capital Management | Investment Manager | 5,578,121 | 5,578,121 |
| Cedar Street Asset Management | Investment Manager | 102,511 | 102,511 |
| Channing Capital Management | Investment Manager | 208,267 | 208,267 |
| Dimensional Fund Advisors | Investment Manager | 5,437,799 | 5,437,799 |

Continued on page 113

Continued from page 112

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | Total |
|-----------------------------------|--------------------|-----------|-----------|
| Dundas Global Investors | Investment Manager | \$362,168 | \$362,168 |
| Fidelity Institutional Asset Mgt | Investment Manager | 1,870,397 | 1,870,397 |
| Fiera Capital Corporation | Investment Manager | 1,921,820 | 1,921,820 |
| Foresight Global Investors | Investment Manager | 165,033 | 165,033 |
| Frontier Global Partners | Investment Manager | 126,358 | 126,358 |
| Global Alpha Capital Management | Investment Manager | 105,321 | 105,321 |
| Haven Global Partners | Investment Manager | 519,584 | 519,584 |
| Henry James International Mgt | Investment Manager | 313,732 | 313,732 |
| Hillsdale Investment Management | Investment Manager | 54,033 | 54,033 |
| Martin Investment Management | Investment Manager | 128,443 | 128,443 |
| Morgan Stanley Investment Mgt | Investment Manager | 997,632 | 997,632 |
| Nordea Investment Management | Investment Manager | 887,180 | 887,180 |
| North of South Capital | Investment Manager | 163,368 | 163,368 |
| Osmosis Investment Management | Investment Manager | 142,824 | 142,824 |
| Pictet Asset Management | Investment Manager | 1,160,442 | 1,160,442 |
| Promethos Capital | Investment Manager | 686,062 | 686,062 |
| RBC Global Asset Management | Investment Manager | 5,665,173 | 5,665,173 |
| Redwood Investments | Investment Manager | 572,037 | 572,037 |
| RVX Asset Management | Investment Manager | 148,754 | 148,754 |
| Sands Capital | Investment Manager | 2,642,147 | 2,642,147 |
| Smith Asset Management Group | Investment Manager | 321,250 | 321,250 |
| Solstein Capital | Investment Manager | 327,987 | 327,987 |
| Sprucegrove Investment Management | Investment Manager | 3,366,241 | 3,366,241 |
| State Street Global Advisors | Investment Manager | 284,182 | 284,182 |
| UBS Asset Management | Investment Manager | 2,515,505 | 2,515,505 |
| Walter Scott & Partners | Investment Manager | 5,005,741 | 5,005,741 |
| Xponance | Investment Manager | 260 | 260 |

Continued on page 114

Continued from page 113

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | Total |
|--------------------------------|--------------------|-------------|-------------|
| Alternative Investments | | | |
| 400 Capital Management | Investment Manager | \$1,001,550 | \$1,001,550 |
| ACON Investments | Investment Manager | 892 | 892 |
| Actis | Investment Manager | 6,347,686 | 6,347,686 |
| Aermont Capital | Investment Manager | 3,426,894 | 3,426,894 |
| Aisling Capital | Investment Manager | 7,203 | 7,203 |
| Almanac Realty Investors | Investment Manager | 2,906,405 | 2,906,405 |
| Altaris Capital Partners | Investment Manager | 104,912 | 104,912 |
| American Security Partners | Investment Manager | 7,200,025 | 7,200,025 |
| American Value Partners | Investment Manager | 7,521 | 7,521 |
| Ampersand Capital | Investment Manager | 6,775 | 6,775 |
| Amulet Capital Partners | Investment Manager | 694,650 | 694,650 |
| Angelo Gordon | Investment Manager | 5,412,027 | 5,412,027 |
| Apax Partners | Investment Manager | 9,132,798 | 9,132,798 |
| Apollo Global Management | Investment Manager | 16,096,055 | 16,096,055 |
| Ardian | Investment Manager | 12,151,043 | 12,151,043 |
| Ares Management | Investment Manager | 13,643,778 | 13,643,778 |
| Artemis Real Estate Partners | Investment Manager | 5,301,515 | 5,301,515 |
| Axiom Infrastructure | Investment Manager | 1,653,914 | 1,653,914 |
| Barings | Investment Manager | 1,034,231 | 1,034,231 |
| Basalt Infrastructure Partners | Investment Manager | 5,359,558 | 5,359,558 |
| Basis Management Group | Investment Manager | 2,094,393 | 2,094,393 |
| BC Partners | Investment Manager | 4,190,879 | 4,190,879 |
| Bentall GreenOak | Investment Manager | 898,174 | 898,174 |
| Black Diamond Capital Partners | Investment Manager | 19,804 | 19,804 |
| BlackRock | Investment Manager | 2,026,393 | 2,026,393 |
| Blue Wolf Capital | Investment Manager | 60,278 | 60,278 |
| Bridgepoint Capital | Investment Manager | 4,740,571 | 4,740,571 |
| Brightwood Capital Advisers | Investment Manager | 11,945,477 | 11,945,477 |
| Brookfield Asset Management | Investment Manager | 11,549,381 | 11,549,381 |
| Canyon Johnson | Investment Manager | 1 | 1 |
| Capri Capital Partners | Investment Manager | 44,565 | 44,565 |
| Carlyle Group | Investment Manager | 25,451,505 | 25,451,505 |

Continued on page 115

Continued from page 114

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | Total |
|-----------------------------------|--------------------|-------------|-------------|
| CarVal Partners | Investment Manager | \$2,130,598 | \$2,130,598 |
| Catterton Partners | Investment Manager | 18,383 | 18,383 |
| Centerbridge Partners | Investment Manager | 241,475 | 241,475 |
| Cerberus Capital Management | Investment Manager | 6,246,932 | 6,246,932 |
| Charlesbank Capital Partners | Investment Manager | 224,593 | 224,593 |
| Clarion Partners | Investment Manager | 5,922,136 | 5,922,136 |
| Clayton Dubilier & Rice | Investment Manager | 2,321,934 | 2,321,934 |
| Clearlake Capital Group | Investment Manager | 4,686,759 | 4,686,759 |
| Contrarian Capital Management | Investment Manager | 911,375 | 911,375 |
| Cortland Partners | Investment Manager | 3,006,878 | 3,006,878 |
| Crestline Investors | Investment Manager | 583,034 | 583,034 |
| Crestview Partners | Investment Manager | 4,377,202 | 4,377,202 |
| Crow Holdings Realty Partners | Investment Manager | 3,454,308 | 3,454,308 |
| CVC Capital Partners | Investment Manager | 15,853,504 | 15,853,504 |
| Deutsche Bank | Investment Manager | 1,728,855 | 1,728,855 |
| DIF Capital Partners | Investment Manager | 2,208,149 | 2,208,149 |
| DivcoWest Real Estate Investments | Investment Manager | 10,003,195 | 10,003,195 |
| DRA Advisors | Investment Manager | 2,663,124 | 2,663,124 |
| EIG Credit Management | Investment Manager | 941,777 | 941,777 |
| Elmtree Funds | Investment Manager | 2,147,463 | 2,147,463 |
| EQT Partners | Investment Manager | 24,489,588 | 24,489,588 |
| Exeter Property Group | Investment Manager | 10,664,191 | 10,664,191 |
| Fairview Capital Partners | Investment Manager | 113,316 | 113,316 |
| Fortress Investment Group | Investment Manager | 5,906,858 | 5,906,858 |
| Freeman Spogli | Investment Manager | 16,324 | 16,324 |
| FTV Capital | Investment Manager | 2,772,540 | 2,772,540 |
| GCM Grosvenor | Investment Manager | 3,689,729 | 3,689,729 |
| GF Capital Management | Investment Manager | 12,930 | 12,930 |
| Global Infrastructure Management | Investment Manager | 8,158,568 | 8,158,568 |
| Goldentree Asset Management | Investment Manager | 2,811,242 | 2,811,242 |
| Grain Management | Investment Manager | 964,307 | 964,307 |
| Grey Mountain Partners | Investment Manager | 6,306 | 6,306 |

Continued on page 116

Continued from page 115

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | Total |
|-------------------------------------|--------------------|------------|------------|
| GSO Capital Partners | Investment Manager | \$5,588 | \$5,588 |
| H/2 Capital Partners | Investment Manager | 4,182,593 | 4,182,593 |
| Halyard Capital | Investment Manager | 53,444 | 53,444 |
| HarbourVest Partners | Investment Manager | 564,012 | 564,012 |
| Harrison Street Real Estate Capital | Investment Manager | 1,770,065 | 1,770,065 |
| Heartwood Partners | Investment Manager | 1,499,838 | 1,499,838 |
| Heitman Capital Management | Investment Manager | 2,144,101 | 2,144,101 |
| Hg Capital | Investment Manager | 4,808,405 | 4,808,405 |
| ICG Strategic Equity | Investment Manager | 4,625,384 | 4,625,384 |
| ICV Partners | Investment Manager | 266,113 | 266,113 |
| Incline Equity Partners | Investment Manager | 33,343 | 33,343 |
| Industry Funds Management | Investment Manager | 4,234,282 | 4,234,282 |
| Infravia Capital Partners | Investment Manager | 2,929,956 | 2,929,956 |
| Insight Partners | Investment Manager | 1,552,762 | 1,552,762 |
| Integrum Holdings | Investment Manager | 275,896 | 275,896 |
| Intermediate Capital Group | Investment Manager | 768,939 | 768,939 |
| Jamestown | Investment Manager | 2,504,606 | 2,504,606 |
| JP Morgan Chase Bank | Investment Manager | 1,088,966 | 1,088,966 |
| Kennedy Lewis Investment Mgt | Investment Manager | 1,368,206 | 1,368,206 |
| KKR | Investment Manager | 25,848,796 | 25,848,796 |
| Landmark Partners | Investment Manager | 4,459,263 | 4,459,263 |
| Lasalle Investment Management | Investment Manager | 2,720,582 | 2,720,582 |
| LBA Realty | Investment Manager | 1,092,500 | 1,092,500 |
| Lee Equity | Investment Manager | 340,669 | 340,669 |
| Leeds Equity Partners | Investment Manager | 285,086 | 285,086 |
| Leonard Green & Partners | Investment Manager | 9,991,828 | 9,991,828 |
| Levine Leichtman Capital Partners | Investment Manager | 4,519 | 4,519 |
| Lexington Partners | Investment Manager | 4,421,020 | 4,421,020 |
| Lightbay Capital | Investment Manager | 783,205 | 783,205 |
| Lincolnshire Management | Investment Manager | 50,890 | 50,890 |
| Lindsay Goldberg | Investment Manager | 1,940,121 | 1,940,121 |
| Lone Star | Investment Manager | 49,846 | 49,846 |

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Continued from page 116

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | Total |
|----------------------------|--------------------|-------------|-------------|
| Maranon Capital | Investment Manager | \$9,404,914 | \$9,404,914 |
| Marathon Asset Management | Investment Manager | 3,664,390 | 3,664,390 |
| Mesirow Financial | Investment Manager | 283,500 | 283,500 |
| Metlife | Investment Manager | 2,250,168 | 2,250,168 |
| MidOcean Partners | Investment Manager | 25,910 | 25,910 |
| Mill City Capital | Investment Manager | 17,854 | 17,854 |
| Montreux Equity Partners | Investment Manager | 2,262,343 | 2,262,343 |
| Napier Park Global Capital | Investment Manager | 1,331,588 | 1,331,588 |
| Nautic Partners | Investment Manager | 40,628 | 40,628 |
| Neuberger Berman Group | Investment Manager | 1,195,267 | 1,195,267 |
| New Mainstream Capital | Investment Manager | 182,847 | 182,847 |
| New Mountain Capital | Investment Manager | 1,859 | 1,859 |
| NGN | Investment Manager | 73,049 | 73,049 |
| Nordic Capital Limited | Investment Manager | 3,740,393 | 3,740,393 |
| Oak Hill Advisors | Investment Manager | 9,546,225 | 9,546,225 |
| Oaktree Capital Management | Investment Manager | 801,331 | 801,331 |
| Olympus Growth | Investment Manager | 5,503,271 | 5,503,271 |
| One Rock Capital Partners | Investment Manager | 586,217 | 586,217 |
| Onex Credit Partners | Investment Manager | 15,124 | 15,124 |
| Paladin | Investment Manager | 119,434 | 119,434 |
| Palladium Equity Partners | Investment Manager | 1,317,415 | 1,317,415 |
| Patriot Financial Partners | Investment Manager | 453,362 | 453,362 |
| Pegasus Capital Advisors | Investment Manager | 201,647 | 201,647 |
| Percheron Capital | Investment Manager | 1,506,685 | 1,506,685 |
| Permira Advisors | Investment Manager | 3,436,886 | 3,436,886 |
| Phoenix Realty Group | Investment Manager | 1,711 | 1,711 |
| Prologis | Investment Manager | 2,225,304 | 2,225,304 |
| Prudential Financial | Investment Manager | 4,635,610 | 4,635,610 |
| Quaker Bioventures | Investment Manager | 4,280 | 4,280 |
| Related Fund Management | Investment Manager | 1,480,283 | 1,480,283 |
| Reverence Capital Partners | Investment Manager | 541,948 | 541,948 |
| Rialto Capital Management | Investment Manager | 3,405,118 | 3,405,118 |
| RLJ Equity Partners | Investment Manager | 31,854 | 31,854 |

Continued on page 118

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | Total |
|-----------------------------------|--------------------|------------|--------------|
| RRE Ventures | Investment Manager | \$52,041 | \$52,041 |
| SCP Partners | Investment Manager | 79,617 | 79,617 |
| Silverpeak Legacy Partners | Investment Manager | 34,275 | 34,275 |
| Siris Capital Group | Investment Manager | 1,451,712 | 1,451,712 |
| Snow Phipps | Investment Manager | 9,174 | 9,174 |
| Stellex Capital Management | Investment Manager | 4,108,079 | 4,108,079 |
| Stockbridge Capital Group | Investment Manager | 71,379 | 71,379 |
| Stonepeak Infrastructure Partners | Investment Manager | 1,950,383 | 1,950,383 |
| Taconic Investment Partners | Investment Manager | 60,513 | 60,513 |
| The Blackstone Group | Investment Manager | 13,863,179 | 13,863,179 |
| The Hudson Companies | Investment Manager | 770,576 | 770,576 |
| The Jordan Company | Investment Manager | 1,938,441 | 1,938,441 |
| The Raine Group | Investment Manager | 2,473,316 | 2,473,316 |
| The Vistria Group | Investment Manager | 638,791 | 638,791 |
| The Yucaipa Group | Investment Manager | 232,065 | 232,065 |
| Thoma Bravo | Investment Manager | 365,239 | 365,239 |
| Thomas McNerney & Partners | Investment Manager | 21,855 | 21,855 |
| Thor Equities Group | Investment Manager | 2,827 | 2,827 |
| Tikehau Investment Management | Investment Manager | 742,012 | 742,012 |
| Torchlight Investors | Investment Manager | 4,141,784 | 4,141,784 |
| TPG Capital | Investment Manager | 6,193,222 | 6,193,222 |
| Trilantic Capital Partners | Investment Manager | 2,292,161 | 2,292,161 |
| Tristan Capital Partners | Investment Manager | 4,730,725 | 4,730,725 |
| UBS Asset Management | Investment Manager | 385,375 | 385,375 |
| USAA Real Estate | Investment Manager | 763,749 | 763,749 |
| Valor Equity Partners | Investment Manager | 1,387,213 | 1,387,213 |
| Vanbarton Group | Investment Manager | 3,339,818 | 3,339,818 |
| Vista Equity Partners | Investment Manager | 21,800,834 | 21,800,834 |
| Warburg Pincus | Investment Manager | 9,928,096 | 9,928,096 |
| Waterton Associates | Investment Manager | 854,359 | 854,359 |
| Welsh Carson Anderson & Stowe | Investment Manager | 7,431,242 | 7,431,242 |
| Westbrook Partners | Investment Manager | 3,086,042 | 3,086,042 |

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Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | Total |
|---------------------------------|--------------------|---------------|---------------|
| Avista Capital Partners | Fee Refund | (\$1,136,263) | (\$1,136,263) |
| GI Partners | Fee Refund | (5,158) | (5,158) |
| New 2ND Capital Advisors | Fee Refund | (2,184,218) | (2,184,218) |
| Pine Brook Capital Partners | Fee Refund | (5,531) | (5,531) |
| Platinum Equity | Fee Refund | (381,493) | (381,493) |
| Riverstone Carlyle Global Ener | Fee Refund | (12,514) | (12,514) |
| Starvest Partners | Fee Refund | (23,473) | (23,473) |
| Stone Point Capital | Fee Refund | (125,195) | (125,195) |
| Webster Capital | Fee Refund | (23,051) | (23,051) |
| NYC Office of Comptroller - BAM | Investment Support | 6,734,627 | 6,734,627 |
| Cox Castle Nicholson | Legal Fees | 30,857 | 30,857 |
| Day Pitney | Legal Fees | 67,610 | 67,610 |
| Foley & Lardner | Legal Fees | 73,875 | 73,875 |
| Foster Garvey | Legal Fees | 180,636 | 180,636 |
| Lowenstein Sandler | Legal Fees | 29,870 | 29,870 |
| Morgan Lewis Bockius | Legal Fees | 124,104 | 124,104 |
| Pillsbury Winthrop Shaw Pittman | Legal Fees | 152,045 | 152,045 |
| Reinhart Boerner Van Dueren | Legal Fees | 160,377 | 160,377 |
| Seward Kissel | Legal Fees | 26,044 | 26,044 |
| BlackRock | Consultant Fees | 275,000 | 275,000 |
| Hamilton Lane Advisors | Consultant Fees | 877,500 | 877,500 |
| MSCI | Consultant Fees | 69,049 | 69,049 |
| MSCI Barra | Consultant Fees | 498,209 | 498,209 |
| MSCI ESG Research | Consultant Fees | 42,751 | 42,751 |
| Rocaton Investment | Consultant Fees | 967,917 | 967,917 |
| Shareholder Research Services | Consultant Fees | 193,637 | 193,637 |
| Stepstone Group | Consultant Fees | 817,539 | 817,539 |
| The Burgiss Group | Consultant Fees | 12,135 | 12,135 |
| State Street | Custodian Bank | 1,059,270 | 1,059,270 |
| State Street - FX Service Fees | Custodian Bank | 730,116 | 730,116 |
| State Street - Hard Dollar Comp | Custodian Bank | 144,298 | 144,298 |
| State Street - Miscellaneous | Custodian Bank | 158,588 | 158,588 |

Continued on page 120

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | TDA | Total |
|-------------------------------------|--------------------|------------|------------|--------------|
| Diversified Equity Fund | | | | |
| Acadian Asset Management | Investment Manager | \$369,298 | \$717,562 | \$1,086,860 |
| Baillie Gifford | Investment Manager | 480,869 | 934,348 | 1,415,217 |
| BlackRock | Investment Manager | 122,894 | 238,789 | 361,683 |
| Brown Advisory | Investment Manager | 305,992 | 594,555 | 900,547 |
| Brown Capital | Investment Manager | 529,987 | 1,029,787 | 1,559,774 |
| Diamond Hill Management | Investment Manager | 538,996 | 1,047,292 | 1,586,288 |
| Franklin Templeton | Investment Manager | 469,552 | 912,360 | 1,381,912 |
| Jennison | Investment Manager | 256,709 | 498,795 | 755,504 |
| Mellon Russell 3000 - Broad Market | Investment Manager | 116,004 | 225,401 | 341,405 |
| MFS Investment Advisors Intl Equity | Investment Manager | 548,966 | 1,066,664 | 1,615,630 |
| Pyramis Global | Investment Manager | 360,272 | 700,024 | 1,060,296 |
| Sands Capital | Investment Manager | 278,409 | 540,960 | 819,369 |
| Shapiro Capital Management | Investment Manager | 504,328 | 979,930 | 1,484,258 |
| Sound Shore Management | Investment Manager | 304,456 | 591,570 | 896,026 |
| Sprucegrove Investment Management | Investment Manager | 181,351 | 352,373 | 533,724 |
| T Rowe Price Associates | Investment Manager | 241,295 | 468,846 | 710,141 |
| Walter Scott & Partners | Investment Manager | 252,095 | 489,831 | 741,926 |
| Wasatch Advisors | Investment Manager | 376,660 | 731,868 | 1,108,528 |
| Wellington Management Company | Investment Manager | 302,008 | 586,815 | 888,823 |
| Westwood Global Investments | Investment Manager | 1,639,563 | 3,185,739 | 4,825,302 |
| NYC TRS | Investment Support | 268,753 | 515,102 | 783,855 |
| Groom Law Group | Legal Fees | 3,113 | 5,959 | 9,072 |
| Amaces | Consultant Fees | 10,263 | 19,299 | 29,562 |
| Ernst & Young US | Consultant Fees | 25,121 | 49,229 | 74,350 |
| Esquire | Consultant Fees | 2,385 | 4,468 | 6,853 |
| Convene | Consultant Fees | 3,056 | 5,763 | 8,819 |
| Rocaton Investment Advisors | Consultant Fees | 161,976 | 309,752 | 471,728 |
| Bloomberg | Data Services | 18,067 | 34,473 | 52,540 |
| eVestment Alliance | Data Services | 7,761 | 14,637 | 22,398 |
| JP Morgan Chase Bank | Custodian Bank | 526,216 | 1,022,459 | 1,548,675 |

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Continued from page 120

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | TDA | Total |
|-------------------------------------|--------------------|-------|---------|---------|
| Balanced Fund | | | | |
| Vanguard Mutual Fund | Mutual Fund | \$— | \$— | \$— |
| NYC TRS | Investment Support | 1,736 | 26,238 | 27,974 |
| Groom Law Group | Legal Fees | 20 | 302 | 322 |
| Amaces | Consultant Fees | 69 | 994 | 1,063 |
| Ernst & Young US | Consultant Fees | 154 | 2,457 | 2,611 |
| Esquire | Consultant Fees | 16 | 229 | 245 |
| Convene | Consultant Fees | 21 | 306 | 327 |
| Rocaton Investment Advisors | Consultant Fees | 1,053 | 15,827 | 16,880 |
| Bloomberg | Data Services | 117 | 1,749 | 1,866 |
| eVestment Alliance | Data Services | 54 | 777 | 831 |
| JP Morgan Chase Bank | Custodian Bank | 54 | 836 | 890 |
| International Equity Fund | | | | |
| Acadian Asset Management | Investment Manager | 1,699 | 61,899 | 63,598 |
| Baillie Gifford | Investment Manager | 2,517 | 91,683 | 94,200 |
| BlackRock | Investment Manager | 573 | 20,888 | 21,461 |
| Brown Capital | Investment Manager | 3,319 | 120,899 | 124,218 |
| Franklin Templeton | Investment Manager | 2,491 | 90,754 | 93,245 |
| MFS Investment Advisors Intl Equity | Investment Manager | 3,059 | 111,444 | 114,503 |
| Pyramis Global | Investment Manager | 1,824 | 66,439 | 68,263 |
| Sprucegrove Investment Management | Investment Manager | 1,241 | 45,226 | 46,467 |
| Walter Scott & Partners | Investment Manager | 1,255 | 45,719 | 46,974 |
| Wellington Management Company | Investment Manager | 1,604 | 58,449 | 60,053 |
| Westwood Global Investments | Investment Manager | 6,049 | 220,353 | 226,402 |
| NYC TRS | Investment Support | 349 | 11,923 | 12,272 |
| Groom Law Group | Legal Fees | 4 | 138 | 142 |
| Amaces | Consultant Fees | 14 | 445 | 459 |
| Ernst & Young US | Consultant Fees | 31 | 1,150 | 1,181 |
| Esquire | Consultant Fees | 3 | 102 | 105 |
| Convene | Consultant Fees | 4 | 133 | 137 |
| Rocaton Investment Advisors | Consultant Fees | 212 | 7,164 | 7,376 |
| Bloomberg | Data Services | 23 | 793 | 816 |
| eVestment Alliance | Data Services | 11 | 339 | 350 |
| JP Morgan Chase Bank | Custodian Bank | 7,673 | 279,517 | 287,190 |

Continued on page 122

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | TDA | Total |
|--------------------------------|--------------------|------------|-------------|--------------|
| Sustainable Equity Fund | | | | |
| Brown Advisory | Investment Manager | \$57,026 | \$2,223,526 | \$2,280,552 |
| NYC TRS | Investment Support | 787 | 29,939 | 30,726 |
| Groom Law Group | Legal Fees | 9 | 346 | 355 |
| Amaces | Consultant Fees | 30 | 1,065 | 1,095 |
| Ernst & Young US | Consultant Fees | 73 | 2,952 | 3,025 |
| Esquire | Consultant Fees | 7 | 244 | 251 |
| Convene | Consultant Fees | 9 | 318 | 327 |
| Rocaton Investment Advisors | Consultant Fees | 474 | 17,919 | 18,393 |
| Bloomberg | Data Services | 53 | 2,003 | 2,056 |
| eVestment Alliance | Data Services | 22 | 807 | 829 |
| JP Morgan Chase Bank | Custodian Bank | 53 | 2,087 | 2,140 |
| U.S. Equity Index Fund | | | | |
| Fidelity Mutual Fund | Mutual Fund | | | |
| NYC TRS | Investment Support | 328 | 7,775 | 8,103 |
| Groom Law Group | Legal Fees | 4 | 89 | 93 |
| Amaces | Consultant Fees | 13 | 262 | 275 |
| Ernst & Young US | Consultant Fees | 30 | 814 | 844 |
| Esquire | Consultant Fees | 3 | 60 | 63 |
| Convene | Consultant Fees | 4 | 80 | 84 |
| Rocaton Investment Advisors | Consultant Fees | 198 | 4,614 | 4,812 |
| Bloomberg | Data Services | 22 | 517 | 539 |
| eVestment Alliance | Data Services | 10 | 203 | 213 |
| JP Morgan Chase Bank | Custodian Bank | 13 | 322 | 335 |

Continued from page 122

Summary of Investment Managers and Fees (QPP & TDA)

Year Ended June 30, 2024

| Investment Managers | | QPP | TDA | Total |
|---|---------------------|-----------------------|---------------------|-----------------------|
| International Equity Index Fund | | | | |
| Fidelity Mutual Fund | Mutual Fund | \$— | \$— | \$— |
| NYC TRS | Investment Support | 13 | 1,355 | 1,368 |
| Groom Law Group | Legal Fees | — | 16 | 16 |
| Amaces | Consultant Fees | — | 46 | 46 |
| Ernst & Young US | Consultant Fees | 1 | 142 | 143 |
| Esquire | Consultant Fees | — | 10 | 10 |
| Convene | Consultant Fees | — | 14 | 14 |
| Rocaton Investment Advisors | Consultant Fees | 7 | 805 | 812 |
| Bloomberg | Data Services | 1 | 89 | 90 |
| eVestment Alliance | Data Services | — | 36 | 36 |
| JP Morgan Chase Bank | Custodian Bank | 2 | 323 | 325 |
| Investment Expenses | Subtotal: | \$652,525,686 | \$21,458,600 | \$673,984,286 |
| Provision for Administrative Expenses | Administrative Fees | 8,062,916 | 18,777,405 | 26,840,321 |
| Reserve Transfer to Administrative Expenses | Fund Transfer | (19,151,756) | (18,188,921) | (37,340,677) |
| Net (decrease) in variable expense provision | Subtotal: | (\$11,088,840) | \$588,484 | (\$10,500,356) |
| Total Investment Expenses | | \$641,436,846 | \$22,047,084 | \$663,483,930 |

Schedule of Payments of Commissions to Brokers (Pension Fund)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|--|-------------------------|-------------------------|--------------------|
| Abel Noser | 79,535 | \$0.04 | \$2,992.00 |
| ABG Securities As (Stockholm) | 230,991 | 0.00 | 223 |
| ABG Sundal Collier ASA | 115,724 | 0.00 | 494 |
| ABN Amro Clearing Bank NV | 922,580 | 0.01 | 10,610 |
| Academy Securities Inc | 815,720 | 0.03 | 23,748 |
| Acumen Capital Partners | 924 | 0.01 | 11 |
| Agora Corretora De Titulos E Valores Mob | 4,891,436 | 0.00 | 8,663 |
| Andisa Securities (PTY) Limited | 1,760,497 | 0.00 | 4,830 |
| Apex Clearing Corporation | 75,130 | 0.04 | 3,005 |
| Arqaam Capital Limited | 5,741,132 | 0.00 | 22,667 |
| Arqaam Securities LLC | 14,114,466 | 0.00 | 24,108 |
| Baader Bank Ag | 6,826 | 0.02 | 169 |
| Banco Chase Manhattan SA | 1,992,900 | 0.00 | 3,277 |
| Banco Itau SA | 3,951,945 | 0.00 | 15,817 |
| Banco Mexico SA | 1,385,695 | 0.00 | 3,633 |
| Banco Pactual SA | 3,876,096 | 0.00 | 11,404 |
| Banco Santander Central Hispano | 2,110,991 | 0.00 | 6,852 |
| Bancroft Capital LLC | 7,101 | 0.01 | 57 |
| Bank of America Corporation | 1,402,190 | 0.02 | 21,374 |
| Bank of America Intl NY United States | 158,654 | 0.00 | 556 |
| Bank of Nova Scotia - Scusa | 13,807,688 | 0.00 | 6,912 |
| Bank of Santander - Brazil | 1,385,821 | 0.00 | 6,572 |
| Barclays Capital Inc | 22,689,956 | 0.00 | 84,129 |
| Barclays Capital Inc/Le | 1,884,369 | 0.01 | 11,290 |
| Barclays Capital Le | 3,655,596 | 0.01 | 24,123 |
| Barrenjoey Markets PTY Limited | 63,503 | 0.00 | 69 |
| Berenberg Capital Markets LLC | 28,042 | 0.04 | 1,122 |
| Bernstein Institutional Services LLC | 831,979 | 0.04 | 32,834 |
| Bernsteinautonomous LLP | 13,069,502 | 0.01 | 111,158 |
| BMO Capital Markets | 989,138 | 0.01 | 12,047 |
| Bmo Capital Markets Limited | 429 | — | — |
| BMO Nesbitt Burns Inc | 293,223 | 0.01 | 1,780 |
| BNP Paribas Arbitrage | 3,282,821 | 0.01 | 35,770 |
| Bnp Paribas Prime Brokerage Acting Agent | 25,669 | 0.03 | 885 |

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Schedule of Payments of Commissions to Brokers (Pension Fund)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|--|---------------------------------|---------------------------------|----------------------------|
| BNP Paribas Prime Brokerage Inc | 6,665,232 | \$0.00 | \$15,285 |
| Bnp Paribas Prime Brokerage Inc | 62,655 | 0.01 | 626 |
| BNP Paribas Securities (Asia) LTD | 5,156,692 | 0.00 | 2,254 |
| BNP Paribas Securities Corporation | 100 | 0.01 | 1 |
| BNP Paribas Securities India Private Lim | 549,877 | 0.00 | 1,678 |
| BNP Paribas Securities Services | 43,906,291 | 0.00 | 60,330 |
| BOFA Securities Inc | 25,507,900 | 0.01 | 148,708 |
| Bradesco SA Ctvm | 8,893,164 | 0.00 | 12,715 |
| Briley & Co, LLC | 135,637 | 0.01 | 1,171 |
| BTG Pactual Casa De Bolsa | 277,415 | 0.01 | 1,503 |
| BTG Pactual Chile SA Corredores De Bol | 8,312,566 | 0.00 | 3,567 |
| Btig Hongkong Limited | 200 | 0.04 | 8 |
| BTIG, LLC | 365,048 | 0.03 | 9,562 |
| Cabrera Capital Markets LLC | 492,065 | 0.03 | 16,015 |
| Caceis Bank | 1,263,291 | 0.03 | 38,102 |
| Canaccord Genuity Inc | 208,691 | 0.03 | 7,023 |
| Canadian Imperial Bank of Commerce | 558,650 | 0.00 | 770 |
| Cantor Fitzgerald & Co | 434,351 | 0.01 | 5,926 |
| Capital Institutional Svcs Inc Equities | 12,732 | 0.04 | 446 |
| Carnegie AS | 162,014 | 0.07 | 10,565 |
| Carnegie Investment Bank Ab | 1,764,825 | 0.00 | 7,409 |
| CastleOak Securities | 197,359 | 0.01 | 1,726 |
| Cgs International Securities Hong Kong | 1,336,300 | 0.00 | 1,893 |
| Cgs International Securities Singapore P | 1,515,800 | 0.00 | 903 |
| Cgs-Cimb Sekuritas Indonesia, Pt | 1,483,600 | 0.00 | 1,927 |
| China International Capital Co | 4,029,090 | 0.01 | 34,838 |
| Cibc World Markets Inc | 877 | 0.00 | 4 |
| CIBC World Mkts Inc | 599,667 | 0.01 | 3,396 |
| CIMB Securities (Korea) LTD | 21,873 | 0.05 | 1,006 |
| Citadel Securities Institutional LLC | 432,610 | 0.01 | 2,323 |
| Citation Group | 460 | 0.03 | 14 |
| Citibank Ag | 79,397 | 0.03 | 2,419 |
| Citibank Canada | 501,654 | 0.00 | 2,423 |

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Schedule of Payments of Commissions to Brokers (Pension Fund)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|--|---------------------------------|---------------------------------|----------------------------|
| Citibank Europe Plc | 28,498 | \$0.06 | \$1,771 |
| Citibank Europe Plc Austria Branch | 5,734 | 0.03 | 150 |
| Citibank International | 94,076 | 0.03 | 2,693 |
| Citibank Mexico | 271,577 | 0.00 | 1,076 |
| Citibank NA | 13,293,020 | 0.00 | 35,251 |
| Citibank of Colombia | 297,010 | 0.01 | 2,678 |
| Citigroup Global Markets Australia PTY | 1,910,257 | 0.00 | 440 |
| Citigroup Global Markets Europe AG | 12,491,314 | 0.01 | 133,447 |
| Citigroup Global Markets Inc | 119,464,631 | 0.00 | 79,990 |
| Citigroup Markets India | 1,273,405 | 0.01 | 7,119 |
| Citigroup Markets Limited | 35,565,259 | 0.00 | 163,246 |
| Citigroup Markets Taiwan | 16,793,500 | 0.00 | 21,781 |
| Citigroup Market Koera Secs Ltd | 2,691,948 | 0.02 | 47,926 |
| CL King | 480,504 | 0.03 | 16,406 |
| CL King and Associates | 17,441 | 0.02 | 318 |
| CL Securities Taiwan Company Limited | 1,431,846 | 0.02 | 25,213 |
| Clearstream Banking SA, Luxembourg | 1,456 | 0.31 | 446 |
| CLSA Americas | 53,910 | 0.03 | 1,554 |
| CLSA Australia Pty LTD | 8,761,551 | 0.00 | 17,369 |
| Clsa Limited | 340,221,356 | 0.00 | 152,044 |
| CLSA Securities Korea LTD | 5,216,617 | 0.02 | 104,243 |
| CLSA Securities Malaysia Sdn Bhd | 8,312,500 | 0.00 | 1,544 |
| CLSA Singapore Pte LTD | 19,833,147 | 0.00 | 64,352 |
| CLSA UK | 1,442,109 | 0.01 | 8,924 |
| Compass Point | 48,062 | 0.03 | 1,558 |
| Conaccord Genuity (Australia) Limited | 3,020 | 0.01 | 26 |
| Conaccord Genuity Corp | 91,397 | 0.02 | 1,979 |
| Convencaos/A Corretora de Valores | 256,462 | 0.01 | 1,714 |
| Cor Clearing Llc | 8,580 | 0.01 | 64 |
| Cormark Securities Inc | 28,729 | 0.01 | 300 |
| Corpcapital Corredores De Bolsa Sa | 1,303,118 | 0.00 | 3,077 |
| Cowen And Company LLC | 21,444,419 | 0.00 | 54,317 |
| Cowen and Company, LLC | 1,314,628 | 0.02 | 28,424 |
| Craig - Hallum | 278,127 | 0.03 | 8,831 |

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Schedule of Payments of Commissions to Brokers (Pension Fund)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|--|---------------------------------|---------------------------------|----------------------------|
| Credit Industriel et Commercial | 263,350 | \$0.01 | \$1,444 |
| Credit Lyonnais Securities (India) | 14,272,563 | 0.01 | 78,530 |
| Credit Lyonnais Securities (Usa) Inc | 5,409 | 0.02 | 84 |
| Credit Mutuel-Cic Banques | 11,337 | 0.06 | 663 |
| Daiwa Capital Markets America Inc | 6,821,034 | 0.02 | 151,707 |
| Daiwa Capital Markets Investment | 84,100 | 0.02 | 1,755 |
| Daiwa Sbcm Europe | 1,531,100 | 0.03 | 41,326 |
| Daiwa Securities (HK) LTD | 1,728,079 | 0.00 | 2,604 |
| Daiwa Securities Company LTD | 16,732 | 0.06 | 934 |
| Daiwa Securities Sb Capital Markets | 4,887,873 | 0.00 | 18,018 |
| Daiwa Securities Smbc Cathy Co | 407,605 | 0.01 | 6,013 |
| Danske Bank AS | 50,122 | 0.03 | 1,263 |
| Davidson DA & Company Inc | 108,985 | 0.03 | 3,001 |
| Davy Stockbrokers | 15,300 | 0.00 | 41 |
| DBS Vickers (Hong Kong) Limited | 653,850 | 0.00 | 2,226 |
| DBS Vickers Securities (Singapore) | 17,154,000 | 0.00 | 40,097 |
| Deutsche Bank AG | 259,203 | 0.01 | 1,869 |
| Deutsche Bank Securities Inc | 56,304 | 0.05 | 2,615 |
| DNB Markets Custody | 3,047 | 0.02 | 59 |
| Drexel Hamilton LLC | 152,847 | 0.02 | 3,058 |
| DSP Merrill Lynch LTD | 51,524,630 | 0.00 | 174,918 |
| E Trade Securities Co Ltd | 400 | 0.02 | 8 |
| Edwards D Jones | 12,400 | 0.01 | 124 |
| Efg Hermes International Securities Brok | 16,053,433 | 0.00 | 33,566 |
| Euroclear Bank | 54,100 | 0.01 | 684 |
| Euromobiliare Sim SPA | 35,495 | 0.02 | 720 |
| Evercore Group LLC | 373,207 | 0.02 | 8,412 |
| Evercore Isi | 459,150 | 0.02 | 11,277 |
| Exane SA | 221 | 0.30 | 67 |
| Fidelity Capital Markets | 297,171 | 0.01 | 4,109 |
| Fidelity Clearing Canada | 146,700 | 0.01 | 1,956 |
| Fidelity Clearing Canada ULC | 860,555 | 0.09 | 75,672 |
| First Republic Securities Company Llc | 1,628 | 0.04 | 65 |

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Schedule of Payments of Commissions to Brokers (Pension Fund)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|---|---------------------------------|---------------------------------|----------------------------|
| First Union Intl Cap Mkt Ltd | 1,800 | \$0.05 | \$96 |
| Flow Corretora De Mercadorias LTDa | 18,101,395 | 0.00 | 30,262 |
| Fubon Securities Co LTD | 64,860 | 0.02 | 1,210 |
| Gbm Grupobursatil Mexicano | 430,700 | 0.00 | 1,172 |
| Goldman Sachs & Co LLC | 471,467,997 | 0.00 | 588,164 |
| Goldman Sachs (Asia) LLC | 16,913,234 | 0.00 | 47,184 |
| Goldman Sachs (Asia) Securities Limited | 6,099,950 | 0.00 | 1,182 |
| Goldman Sachs (India) | 58,491,908 | 0.00 | 257,352 |
| Goldman Sachs Australia Pty LTD | 561,749 | 0.00 | 171 |
| Goldman Sachs Do Brasil Corretora | 10,261,889 | 0.01 | 63,940 |
| Goldman Sachs International | 35,203,155 | 0.01 | 197,652 |
| Goodbody Stockbrokers | 144,400 | 0.00 | 147 |
| Gordon Haskett Capital Corp | 1,887 | 0.02 | 47 |
| Guggenheim Capital Markets LLC | 167,994 | 0.03 | 5,375 |
| Guzman And Company | 710,329 | 0.02 | 14,469 |
| Haitong Intl Secs Company LTD | 1,785,301 | 0.00 | 6,317 |
| Hanwha Securities Seoul | 22,362 | 0.07 | 1,523 |
| Hongkong And Shaghai Banking Corpo | 854,000 | 0.00 | 143 |
| Hongkong and Shanghai Banking Corporation | 51,923,381 | 0.00 | 27,776 |
| HSBC Bank PLC | 39,159,020 | 0.00 | 98,997 |
| HSBC Brokerage (USA) Inc | 168,188 | 0.01 | 1,680 |
| Hsbc Securities | 1,405,900 | 0.01 | 8,772 |
| HSBC Securities (USA) Inc | 312,902,606 | 0.00 | 123,788 |
| HSBC Securities India Holdings | 18,186,765 | 0.00 | 58,732 |
| Hsc | 3,238,400 | 0.00 | 9,179 |
| ICBCFS LLC | 9,002 | 0.03 | 303 |
| ICICI Securities Limited | 26,530,802 | 0.00 | 73,084 |
| IM Trust SA Corredores De Bolsa | 5,717,571 | 0.00 | 514 |
| India Infoline LTD | 868,749 | 0.00 | 3,623 |
| Instinet Australia Clearing Srvs Pty LTD | 15,393,817 | 0.00 | 19,971 |
| Instinet Canada | 231,168 | 0.00 | 960 |
| Instinet Europe LTD | 302,076 | 0.08 | 25,477 |
| Instinet LLC | 16,926,357 | 0.00 | 54,947 |

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Continued from page 128

Schedule of Payments of Commissions to Brokers (Pension Fund)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|---|---------------------------------|---------------------------------|----------------------------|
| Instinet Pacific Limited | 736,312,443 | \$0.00 | \$219,100 |
| Instinet Singapore Services Pt | 6,466,144 | 0.00 | 5,319 |
| Instinet UK LTD | 132,253,427 | 0.00 | 388,493 |
| Internal Swap | 54,427 | 0.00 | 185 |
| Intl Fcstone Dtvn Ltda | 500,900 | 0.00 | 405 |
| Investec Bank PLC | 1,035,664 | 0.00 | 1,914 |
| Investec Cap Services(India)Private Ltd | 198,647 | 0.01 | 1,710 |
| Investec Markets(Proprietary)Limited | 1,484,457 | 0.00 | 2,452 |
| ITG Australia LTD | 28,561,751 | 0.00 | 33,945 |
| ITG Canada | 78,720 | 0.01 | 411 |
| ITG Inc | 466 | 0.02 | 9 |
| Jane Street Execution Services LLC | 3,800 | 0.01 | 47 |
| Janney Montgomery, Scott Inc | 89,575 | 0.03 | 2,724 |
| Jarden Securities Limited | 373,342 | 0.00 | 121 |
| Jefferies Australia PTY Limited | 147,715 | 0.01 | 739 |
| Jefferies Hong Kong Limited | 3,009,664 | 0.00 | 7,279 |
| Jefferies India Private Limited | 31,357,919 | 0.01 | 249,946 |
| Jefferies International Ltd | 187,887,593 | 0.00 | 211,896 |
| Jefferies LLC | 36,758,824 | 0.01 | 287,262 |
| JMP Securities | 12,770 | 0.04 | 489 |
| Joh Berenberg, Gossler & Co KG | 2,643,112 | 0.01 | 35,353 |
| Jonestrading Institutional Services LLC | 1,300,242 | 0.02 | 24,829 |
| JP Morgan Broking HK Limited | 1,649,170 | 0.01 | 14,891 |
| JP Morgan India Private LTD | 8,473,957 | 0.00 | 31,778 |
| JP Morgan Securities (Asia Pacific) LTD | 111,881,631 | 0.00 | 132,152 |
| JP Morgan Securities (Far East) LTD Seoul | 514,689 | 0.02 | 10,661 |
| JP Morgan Securities (Taiwan) LTD | 5,224,511 | 0.00 | 2,454 |
| JP Morgan Securities Australia Ltd | 5,637,534 | 0.00 | 4,178 |
| JP Morgan Securities Inc | 24,354,649 | 0.00 | 87,644 |
| JP Morgan Securities Limited | 1,060,350 | 0.01 | 5,973 |
| JP Morgan Securities LLC | 4,919,793 | 0.01 | 59,298 |
| JP Morgan Securities PLC | 36,871,962 | 0.01 | 195,187 |
| JP Morgan Securities Singapore | 4,107,268 | 0.00 | 7,342 |

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Schedule of Payments of Commissions to Brokers (Pension Fund)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|---|---------------------------------|---------------------------------|----------------------------|
| Jupiter Securities Sdn Bhd | 53,754 | \$0.01 | \$551 |
| Kb Securities Co, LTD | 1,278,126 | 0.05 | 65,383 |
| KB Securities NV | 309 | 0.03 | 8 |
| Keefe Bruyette & Woods Inc | 241,323 | 0.03 | 8,105 |
| Kempen & Co NV | 475 | 0.01 | 4 |
| Kepler CA Pital Markets LLC | 11,642 | 0.03 | 407 |
| Keybanc Capital Markets Inc | 462,857 | 0.04 | 16,983 |
| Kim Eng Securities (Hk) LTD | 2,424,100 | 0.00 | 2,508 |
| Kim Eng Securities, PT | 377,600 | 0.00 | 3 |
| Korea Investment And Securities Co, LTD | 51,284 | 0.03 | 1,741 |
| Kotak Securities LTD | 2,342,875 | 0.01 | 31,512 |
| Larrain Vial | 15,590,636 | 0.00 | 977 |
| Leerink Partners LLC | 228,887 | 0.03 | 7,190 |
| Liberum Capital Inc | 487 | 0.01 | 5 |
| Liquidnet Canada Inc | 119,700 | 0.01 | 1,434 |
| Liquidnet Europe Limited | 774,422 | 0.01 | 7,505 |
| Liquidnet Inc | 1,526,467 | 0.02 | 35,331 |
| Loop Capital Markets LLC | 4,224,112 | 0.02 | 73,515 |
| Luminex Trading and Analytics LLC | 405,460 | 0.02 | 6,260 |
| Macquarie Bank Limited | 10,275,474 | 0.00 | 14,723 |
| Macquarie Capital (Europe) LTD | 24,536 | 0.04 | 886 |
| Macquarie Capital (USA) Inc | 867,802 | 0.00 | 2,334 |
| Macquarie Capital Securities | 74,616,438 | 0.00 | 52,066 |
| Macquarie Sec (NZ) LTD | 111,765 | 0.00 | 54 |
| Macquarie Securities (India) PVT LTD | 10,347,808 | 0.01 | 59,461 |
| Macquarie Securities (Korea) Limited | 565,519 | 0.02 | 10,080 |
| Macquarie Securities (Singapore) | 9,520,690 | 0.00 | 3,691 |
| Macquarie Securities Limited | 551,615 | 0.00 | 2,536 |
| Maybank Investment Bank Berhad | 213,000 | 0.00 | 69 |
| Maybank Kim Eng Securities PTE LTD | 375,290 | 0.00 | 278 |
| Mediobanca Spa | 485,514 | 0.02 | 12,104 |
| Merrill Lynch Canada Inc | 233,423 | 0.03 | 7,002 |
| Merrill Lynch Equities (Australia) | 394,269 | 0.01 | 3,655 |
| Merrill Lynch International | 404,390,271 | 0.00 | 436,703 |

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Schedule of Payments of Commissions to Brokers (Pension Fund)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|--|---------------------------------|---------------------------------|----------------------------|
| Merrill Lynch Pierce Fenner & Smith | 5,526 | \$0.02 | \$88 |
| Merrill Lynch Professional Clearing Corp | 31,200 | 0.03 | 1,062 |
| Merrill Lynch, Pierce Fenner Smith | 111,850 | 0.05 | 5,546 |
| Mirabaud Securities LLP | 6,789 | 0.09 | 617 |
| Mirae Asset Sec USA | 14,143 | 0.04 | 497 |
| Mirae Asset Securities Co Ltd | 425,215 | 0.02 | 8,145 |
| Mischler Financial Group, Inc-Equities | 489,707 | 0.03 | 12,717 |
| Mitsubishi UFJ Securities (USA) | 51,930 | 0.00 | 251 |
| Mizuho International Plc | 2,300 | 0.07 | 160 |
| Mizuho Securities Asia Limited | 18,300 | 0.01 | 254 |
| Mizuho Securities USA Inc | 1,159,214 | 0.02 | 28,082 |
| MKM Partners LLC | 9,371 | 0.04 | 367 |
| Morgan Stanley and Co International | 77,714,623 | 0.00 | 211,981 |
| Morgan Stanley Asia Ltd | 23,600 | 0.00 | 40 |
| Morgan Stanley Australia Securities Ltd | 1,228,076 | 0.00 | 1,855 |
| Morgan Stanley Co Incorporated | 246,506,927 | 0.00 | 347,594 |
| Morgan Stanley India Company Pvt LTD | 13,027,863 | 0.00 | 33,817 |
| Morgan Stanley International Ltd | 24,100 | 0.02 | 482 |
| Morgan Stanley Taiwan Limited | 43,775,264 | 0.00 | 56,859 |
| Motilal Oswal Securities Limited | 120,362 | 0.03 | 3,959 |
| National Bank Financial Inc | 36,987 | 0.01 | 433 |
| National Financial Services Corporation | 1,460,182 | 0.05 | 79,308 |
| National Financial Services LLC | 1,051,343 | 0.01 | 7,564 |
| NBCN Clearing Inc | 3,716 | 0.02 | 74 |
| Needham and Company LLC | 609,644 | 0.03 | 20,980 |
| Nesbitt Burns | 6,230 | 0.03 | 187 |
| NH Investment and Securities Co LTD | 23,970 | 0.12 | 2,810 |
| Nomura Financial Advisory & Sec India | 10,362,044 | 0.00 | 26,183 |
| Nomura Financial Investment Korea Co LTD | 16,750 | 0.02 | 271 |
| Nomura Securities Co LTD | 29,424,383 | 0.00 | 21,896 |
| Nordea Bank ABP | 31,322 | 0.01 | 280 |
| North South Capital LLC | 57,606 | 0.04 | 2,023 |
| Northern Trust Brokerage Institution | 332 | 0.02 | 6 |

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Schedule of Payments of Commissions to Brokers (Pension Fund)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|---|---------------------------------|---------------------------------|----------------------------|
| Northern Trust Securities LLP | 8,250 | \$0.03 | \$236 |
| Northland Securities Inc | 49,993 | 0.03 | 1,515 |
| Numis Securities Inc | 20,124 | 0.01 | 134 |
| Numis Securities Limited | 7,500 | 0.00 | 34 |
| O Neil, William And CO Inc / Bcc Clrg | 27,260 | 0.04 | 1,090 |
| ODDO Et Cie | 68,564 | 0.01 | 829 |
| Oppenheimer & Co Inc | 368,899 | 0.03 | 10,686 |
| Optiver VOF | 84,823 | 0.00 | 289 |
| Parel | 15,280 | 0.08 | 1,234 |
| Peel Hunt LLP | 38,118 | 0.01 | 191 |
| Penserra Securities LLC | 2,723,279 | 0.01 | 19,357 |
| Pershing LLC | 17,573,380 | 0.01 | 177,154 |
| Pershing Securities Limited | 7,224,179 | 0.02 | 108,889 |
| Peters And Co Limited | 2,869 | 0.01 | 33 |
| PGM Global Inc | 1,130,633 | 0.03 | 35,452 |
| Philippine National Bank | 5,198,200 | 0.00 | 1,589 |
| Piper Jaffray & Co | 2,597,701 | 0.01 | 32,402 |
| Raymond James and Associates Inc | 1,003,288 | 0.04 | 35,307 |
| Raymond James LTD | 284,930 | 0.03 | 7,633 |
| RBC Capital Markets, LLC | 4,662,461 | 0.02 | 82,094 |
| RBC Dominion Securities Corporation | 2,817,576 | 0.01 | 21,627 |
| Rbc Dominion Securities Inc Toronto | 700 | 0.01 | 5 |
| Redburn (Europe) Limited | 15,813 | 0.17 | 2,730 |
| Redburn (USA) LLC | 20,238 | 0.03 | 672 |
| Rf Securities Clearing Lp | 2,779 | 0.01 | 33 |
| Robert W Baird Co Incorporated | 2,747,623 | 0.02 | 67,534 |
| Roberts & Ryan | 3,700 | 0.03 | 93 |
| Rosenblatt Securities Inc | 7,428 | 0.04 | 298 |
| Roth Capital Partners LLC | 133,550 | 0.03 | 4,667 |
| Royal Bank Of Canada Europe LTD | 934,922 | 0.02 | 14,889 |
| Salisburybkt Securities Corporation | 639,080 | 0.00 | 564 |
| Samsung Securities Co LTD | 292,520 | 0.08 | 23,186 |
| Sanford C Bernstein (Hong Kong) Limited | 213,542 | 0.00 | 403 |
| Sanford C Bernstein (India) Private LIM | 940,901 | 0.01 | 13,191 |

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Schedule of Payments of Commissions to Brokers (Pension Fund)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|--|---------------------------------|---------------------------------|----------------------------|
| Sanford C Bernstein LTD | 5,644,850 | \$0.01 | \$37,815 |
| Santander Us Capital Markets Llc | 4,183,267 | 0.00 | 9,163 |
| Santandermerchant SA | 59,091,761 | 0.00 | 4,612 |
| Scotia Capital Inc | 182,059 | 0.01 | 1,046 |
| Scotia McLeod (USA) Inc | 110,377 | 0.00 | 392 |
| Seaport Group Securities, Llc | 20,600 | 0.03 | 720 |
| SG Americas Securities LLC | 35,350 | 0.01 | 487 |
| SG Asia Securities (Inoia) Pvt LTD | 5,757,920 | 0.00 | 8,457 |
| Shenwan Hongyuan Securities (HK) Limited | 146,525 | 0.01 | 1,647 |
| Shinhan Investment Corp | 11,639 | 0.02 | 179 |
| Sinopac Securities Corporation | 940,010 | 0.01 | 4,765 |
| Six Sis Ag | 223 | 0.06 | 14 |
| Skandinaviska Enskilda Banken | 4,892 | 0.02 | 96 |
| Skandinaviska Enskilda Banken London | 9,377 | 0.00 | 45 |
| Smbc Nikko Capital Markets Limited | 2,800 | 0.09 | 242 |
| Smbc Nikko Securities (Honk Kong) LTD | 48,900 | 0.01 | 334 |
| SMBC Securities Inc | 420,725 | 0.01 | 3,582 |
| Societe Generale | 50,926,827 | 0.00 | 113,004 |
| State Street Global Markets, LLC | 637,477 | 0.03 | 17,908 |
| Stephens, Inc | 321,869 | 0.03 | 11,252 |
| Stifel Nicolaus & Co Inc | 759,629 | 0.04 | 26,597 |
| Stifel Nicolaus Europe Limited | 1,506,544 | 0.01 | 8,284 |
| Stifel, Nicolaus And Company, Incorporated | 53,919 | 0.03 | 1,471 |
| Stonex Financial Ltd | 130,800 | 0.00 | 428 |
| Strategas Securities LLC | 150,450 | 0.03 | 5,253 |
| Sturdivant | 387,293 | 0.04 | 14,482 |
| Suntrust Capital Markets, Inc | 1,645,186 | 0.04 | 64,733 |
| Svenska Handelsbanken | 46,002 | 0.01 | 664 |
| Td Waterhouse Investor Services Inc | 97 | — | — |
| Telsey Advisory Group | 176,726 | 0.04 | 6,947 |
| The Bank of New York Mellon | 516,976 | 0.00 | 2,462 |
| The Benchmark Company LLC | 88,433 | 0.04 | 3,490 |
| The Hongkong and Shanghai Bank | 187,777 | 0.03 | 4,917 |
| The Northern Trust Company | 464,232 | 0.00 | 687 |

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Schedule of Payments of Commissions to Brokers (Pension Fund)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|--|---------------------------------|---------------------------------|----------------------------|
| Tigress Financial Partners LLC | 26,859 | \$0.02 | \$537 |
| Toronto Dominion Securities Inc | 1,919,581 | 0.01 | 9,850 |
| UBS Ag | 226,061,075 | 0.00 | 332,949 |
| UBS Ag London | 522,536 | 0.02 | 9,817 |
| UBS Securities Asia LTD | 200,099,910 | 0.00 | 60,290 |
| UBS Securities Canada Inc | 273,780 | 0.00 | 1,152 |
| Ubs Securities Hong Kong Limited | 2,563,900 | 0.00 | 1,278 |
| UBS Securities India Private LTD | 16,465,341 | 0.00 | 49,799 |
| UBS Securities LLC | 11,288,508 | 0.01 | 59,341 |
| UBS Securities Pte LTD | 14,038,620 | 0.00 | 23,197 |
| UBS Securities Pte LTD, Seoul | 1,324,484 | 0.03 | 44,159 |
| Ubs Securities Singapore Pte | 280,300 | 0.00 | 118 |
| UBS Switzerland AG | 2,748,167 | 0.00 | 8,988 |
| UBS Warburg Australia Equities | 2,028,859 | 0.00 | 759 |
| UOB Kay Hian Pte Limited | 325,150 | 0.00 | 1,434 |
| Valeurs Mobilières Desjardins | 2,323 | 0.01 | 24 |
| Vietcap Securities Joint Stock Company | 50,168 | 0.00 | 205 |
| Virtu Americas LLC | 4,146,338 | 0.01 | 53,726 |
| Virtu ITG Europe Limited | 394,374 | 0.02 | 8,534 |
| Virtu ITG Hong Kong Limited | 5,754,453 | 0.00 | 10,746 |
| Wachovia Securities International Ltd | 697,283 | 0.00 | 302 |
| Wedbush Morgan Securities Inc | 24,854 | 0.02 | 621 |
| Wedbush Securities Inc | 26,274 | 0.04 | 994 |
| Wells Fargo Securities LLC | 950,045 | 0.03 | 25,772 |
| William Blair & Company LLC | 882,322 | 0.03 | 29,684 |
| Williams Capital Group Lp (The) | 73,408 | 0.01 | 772 |
| Wood and Company | 517,577 | 0.02 | 8,493 |
| Wood Gundy Inc | 38,494 | 0.01 | 343 |
| XP Investimentos Cctvm SA | 30,504,313 | 0.00 | 44,184 |
| Yuanta Securities Co, LTD | 325,000 | 0.01 | 2,728 |
| Zurcher Kantonal Zurich | 1,921 | 0.34 | 656 |

Schedule of Payments of Commissions to Brokers (Variable-Return Funds)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|-------------------------------------|-------------------------|-------------------------|--------------------|
| Abel Noser | 7,140,658 | \$0.03 | \$214,381 |
| ABG Securities AS (Stockholm) | 144,804 | 0.00 | 133 |
| ABG Securities, Oslo | 79,522 | 0.01 | 503 |
| ABN Amro Clearing Bank N.V. | 111,459 | 0.01 | 742 |
| Agora Corretora De Titulos E Valore | 267,626 | 0.00 | 958 |
| Allen and Company LLC | 26,074 | 0.04 | 965 |
| Ambit Capital Pvt LTD | 24,880 | 0.00 | 58 |
| Aviate Global LLP | 18,237,271 | 0.01 | 114,883 |
| Banco Itau Sao Paulo | 410,600 | 0.00 | 1,113 |
| Banco JP Morgan Chase SA | 76,600 | 0.00 | 114 |
| Banco Pactual SA Rio De Janeiro | 561,600 | 0.00 | 853 |
| Bank Of Americas Securities Inc | 2,663,565 | 0.02 | 49,140 |
| Barclays Bank London | 3,645,705 | 0.00 | 15,712 |
| Barclays Capital Inc/Le | 99,464 | 0.03 | 2,860 |
| Barclays Capital Le | 1,331,507 | 0.02 | 26,130 |
| Barrenjoey Markets PTY Limited | 5,336 | 0.00 | 16 |
| Baypoint Trading LLC | 1,010,005 | 0.02 | 20,319 |
| Berenberg Bank Hamburg | 325,574 | 0.02 | 6,190 |
| Berenberg Capital Markets LLC | 726 | 0.04 | 27 |
| Bernstein Institutional Services LL | 188,199 | 0.02 | 4,064 |
| BMO Capital Markets | 92,218 | 0.02 | 1,804 |
| BNP Paribas Arbitrage | 1,005,860 | 0.01 | 12,745 |
| BNP Paribas Prime Brokerage Inc | 42,009 | 0.01 | 444 |
| BNP Paribas Securities (Asia) LTD | 5,690,447 | 0.00 | 1,010 |
| BNP Paribas Securities Services | 28,013,447 | 0.01 | 170,048 |
| BNP Paribas Securities Services SA | 2,021,069 | 0.00 | 2,540 |
| BNP Paribas Security Svcs London | 533,957 | 0.01 | 2,887 |
| BNY Convergenx Execution Solutions | 2,071,417 | 0.02 | 47,370 |
| BNY/Suntrust Captial Markets | 12,092 | 0.03 | 412 |
| Bofa Securities Inc | 462,298 | 0.01 | 2,401 |
| Bradesco SA | 252,923 | 0.00 | 466 |
| BRiley & Co, LLC | 1,302 | 0.03 | 33 |
| Brockhouse & Cooper Inc Montreal | 202,363 | 0.03 | 6,408 |

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Schedule of Payments of Commissions to Brokers (Variable-Return Funds)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|---------------------------------------|---------------------------------|---------------------------------|----------------------------|
| BTG Pactual Casa De Bolsa SA DE CV | 673,199 | \$0.00 | \$1,952 |
| Caceis Bank France | 61,513 | 0.01 | 613 |
| Canaccord Adams Inc, Boston | 32,546 | 0.01 | 486 |
| Canaccord Capital Corp Vancouver | 21,653 | 0.01 | 159 |
| Cantor Fitzgerald & Co Inc | 148,871 | 0.02 | 3,236 |
| Carnegie AS | 19,788 | 0.03 | 618 |
| Carnegie Secs Helsinki | 76,552 | 0.00 | 375 |
| Celfin Capital Sa Corredores De Bolsa | 151,557 | 0.00 | 22 |
| China Intl Capital Corp Hk Secs LTD | 294,790 | 0.02 | 5,191 |
| CIBC World Markets Toronto | 127,125 | 0.01 | 1,278 |
| CIMB Securities (HK) LTD | 59,500 | 0.00 | 48 |
| Citadel Securities Institutional LLC | 4,727 | 0.01 | 35 |
| Citibank Mexico City | 54,884 | 0.00 | 134 |
| Citibank NA | 1,221,084 | 0.00 | 4,218 |
| Citigroup Global Markets Europe AG | 1,161,843 | 0.01 | 17,185 |
| Citigroup Global Markets Inc | 34,364,234 | 0.00 | 44,567 |
| Citigroup Global Markets Limited | 3,129,741 | 0.01 | 24,255 |
| Citigroup Global Mkt Ind Pvt LTD | 511,641 | 0.00 | 1,575 |
| Citigroup Global Mkt Secs LTD | 191,661 | 0.02 | 4,346 |
| Citigroup Global Mkts Australia Pty | 8,628 | 0.00 | 32 |
| CLSA Americas | 5,160 | 0.04 | 191 |
| CLSA Australia Pty LTD | 75,788 | 0.03 | 2,276 |
| CLSA LTD Hong Kong | 20,575,900 | 0.00 | 12,897 |
| CLSA Singapore Pte LTD | 5,055,911 | 0.00 | 10,106 |
| Collins Stewart LLC | 461,589 | 0.02 | 9,258 |
| Convergex LLC | 86,020 | 0.04 | 3,100 |
| Cowen And Company LLC | 2,035,844 | 0.03 | 64,299 |
| Craig - Hallum | 8,497 | 0.01 | 86 |
| Craig-Hallum Capital Group LLC | 3,555 | 0.02 | 71 |
| Credit Agricole Investor Service BK | 54,085 | 0.04 | 2,185 |
| Credit Lyonnais Sec Seoul | 14,146 | 0.02 | 251 |
| Credit Lyonnais Secs (Asia) Taipei | 125,000 | 0.01 | 1,486 |
| Credit Lyonnais Secs Singapore | 671,155 | 0.01 | 8,377 |

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Schedule of Payments of Commissions to Brokers (Variable-Return Funds)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|--|-------------------------|-------------------------|--------------------|
| Credit Mutuel-Cic Banques | 2,169 | \$0.01 | \$27 |
| D Carnegie AB Stockholm | 786,539 | 0.02 | 14,288 |
| DADavidson & Co | 21,722 | 0.02 | 434 |
| Daiwa Capital Markets America Inc | 1,129,408 | 0.02 | 26,024 |
| Daiwa Capital Markets Hong Kong | 18,504 | 0.01 | 213 |
| Daiwa Secs SB Capital Markets, Singapore | 260,499 | 0.01 | 3,026 |
| Daiwa Securities Taipei LTD | 91,000 | 0.01 | 960 |
| Davy Stockbrokers | 32,423 | 0.02 | 659 |
| Dbs Vickers Ballas Hong Kong LTD | 87,422 | 0.00 | 16 |
| DBS Vickers Secs (Sing) Pte LTD | 1,784,600 | 0.00 | 6,187 |
| Den Norske Bank ASA | 37,397 | 0.01 | 367 |
| Deutsche Bank Securities Inc NY | 3,614 | 0.02 | 81 |
| Direct Trading Institutional Inc | 766,529 | 0.01 | 10,190 |
| Drexel Hamilton LLC | 6,153 | 0.02 | 123 |
| DSP Merrill Lynch LTD Mumbai | 715,179 | 0.02 | 12,645 |
| Edelweiss Securities Pvt LTD | 15,159 | 0.00 | 36 |
| Evercore Group LLC | 6,125 | 0.01 | 33 |
| Exane SA | 424,399 | 0.01 | 3,066 |
| Fidelity Capital Markets | 558,822 | 0.01 | 5,543 |
| Financial Brokerage Group | 752,401 | 0.01 | 3,893 |
| First Union Capital Markets | 174,127 | 0.03 | 4,413 |
| French American Banking Corporation | 12,218 | 0.01 | 120 |
| Friedman Billings & Ramsey | 42,923 | 0.02 | 858 |
| Goldman Sachs | 2,578,479 | 0.02 | 53,440 |
| Goldman Sachs (Asia) LLC Seoul | 250,183 | 0.01 | 2,149 |
| Goldman Sachs (Asia) Taipei | 1,546,519 | 0.00 | 2,908 |
| Goldman Sachs (India) Securities | 3,226,210 | 0.00 | 7,261 |
| Goldman Sachs Australia Pty LTD | 103,401 | 0.00 | 409 |
| Goldman Sachs Bank London | 2,766,153 | 0.01 | 17,615 |
| Goldman Sachs New York | 18,357,326 | 0.00 | 32,913 |
| Goodbody Stockbrokers | 39,124 | 0.00 | 107 |
| Goodbody Stockbrokers Dublin | 6,100 | 0.00 | 5 |
| Guggenheim Capital Markets LLC | 29,154 | 0.04 | 1,039 |

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Schedule of Payments of Commissions to Brokers (Variable-Return Funds)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|---------------------------------------|---------------------------------|---------------------------------|----------------------------|
| Haitong Intl Securities Co Limited | 28,700 | \$0.00 | \$23 |
| Hongkong & Shanghai Bnking Corp LTD | 13,752 | 0.05 | 634 |
| HSBC Bank PLC | 3,222 | 0.02 | 74 |
| HSBC Bank PLC London | 13,817,430 | 0.00 | 16,004 |
| HSBC Brokerage (USA) Inc | 783,077 | 0.00 | 3,109 |
| HSBC Secs & Cap Mkts India Privt LTD | 1,211,900 | 0.01 | 7,116 |
| HSBC Secs Taipei | 62,000 | 0.01 | 826 |
| HSBC Securities Brokers (Asia) LTD | 310,197 | 0.00 | 592 |
| HSBC Securities USA | 40,659,709 | 0.00 | 29,233 |
| Hyundai Securities | 119,327 | 0.02 | 2,828 |
| Ichiyoshi Securities | 2,700 | 0.04 | 115 |
| ICICI Brokerage Services Mumbai | 6,571,068 | 0.00 | 13,151 |
| IM Trust SA Corredores De Bolsa | 287,553 | 0.00 | 64 |
| Instinet | 2,030,691 | 0.02 | 34,252 |
| Instinet Australia Clearing Svcs | 875,478 | 0.00 | 2,271 |
| Instinet Clearing Services Inc | 56,318 | 0.04 | 2,251 |
| Instinet Corp New York | 51,706 | 0.01 | 668 |
| Instinet Europe Limited | 3,399,683 | 0.01 | 28,567 |
| Instinet Pacific LTD Hong Kong | 25,003,087 | 0.00 | 19,263 |
| Instinet Singapore Services Pte LTD | 120,990 | 0.00 | 399 |
| International Advisory Services Group | 111,892 | 0.09 | 9,961 |
| Investec Henderson Crosthwaite Secs | 181,325 | 0.01 | 1,459 |
| ISI Group Inc | 1,744,808 | 0.02 | 43,438 |
| ITG Australia Limited Melbourne | 197,505 | 0.01 | 1,221 |
| ITG Canada Corp Toronto | 161,423 | 0.01 | 1,605 |
| ITG London | 259,003 | 0.02 | 4,666 |
| Janney Montgomery Scott Inc | 956 | 0.03 | 26 |
| Jefferies & Company | 3,396,824 | 0.03 | 87,543 |
| Jefferies & Company Inc NY | 949,449 | 0.01 | 9,965 |
| Jefferies Australia Pty LTD | 42,926 | 0.00 | 187 |
| Jefferies Hong Kong Limited | 1,034,098 | 0.00 | 358 |
| Jefferies India Private Limited | 445,481 | 0.01 | 4,852 |
| Jefferies International | 10,093,487 | 0.00 | 14,847 |

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Schedule of Payments of Commissions to Brokers (Variable-Return Funds)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|--|-------------------------|-------------------------|--------------------|
| JM Morgan Stanley Secs Pvt LTD | 2,848,601 | \$0.00 | \$8,281 |
| JMP Securities | 18,482 | 0.02 | 370 |
| Jones Trading Institutional Services | 257,896 | 0.02 | 4,116 |
| JP Morgan Broking HK LTD | 229,180 | 0.01 | 2,178 |
| JP Morgan Chase Bank | 5,408 | 1.83 | 9,923 |
| JP Morgan India Private LTD | 3,705,233 | 0.00 | 5,443 |
| JP Morgan Secs Inc NY | 15,154,919 | 0.00 | 9,582 |
| JP Morgan Secs London | 230,148 | 0.02 | 3,946 |
| JP Morgan Securities (Asia Pacific) | 23,780,523 | 0.00 | 15,795 |
| JP Morgan Securities (Far East) LTD | 218,724 | 0.01 | 2,631 |
| JP Morgan Securities Australia Limited | 218,115 | 0.00 | 863 |
| JP Morgan Securities Limited | 4,694,853 | 0.01 | 38,014 |
| JP Morgan Securities LLC | 2,147,094 | 0.02 | 38,146 |
| JP Morgan Securities Singapore | 5,122,300 | 0.00 | 1,921 |
| JP Morganchase / CustJPMCC | 259,540 | 0.03 | 7,012 |
| KBC Peel Hunt | 765,782 | 0.00 | 1,130 |
| Keefe Bruyette & Woods Inc | 26,293 | 0.04 | 999 |
| Kempen And Co | 32,372 | 0.03 | 947 |
| Keybanc Capital Markets Inc | 31,716 | 0.04 | 1,206 |
| Kim Eng Securities (HK) LTD | 484,200 | 0.00 | 296 |
| KM Partners LLC | 3,167 | 0.04 | 114 |
| Knight Equity Markets Lp | 1,505 | 0.01 | 8 |
| Knight Securities LP, Jersey City | 3,121,100 | 0.00 | 1,578 |
| Korea Investment And Securities Co | 137,161 | 0.01 | 1,515 |
| Kotak Securities Mumbai | 213,340 | 0.00 | 1,066 |
| Landenburg Brothers & Co | 4,741 | 0.03 | 119 |
| Leerink Swann And Company | 1,943 | 0.02 | 35 |
| Liquidnet Canada Inc | 53,499 | 0.01 | 796 |
| Liquidnet Europe LTD London | 131,258 | 0.01 | 1,462 |
| Liquidnet Inc | 188,072 | 0.02 | 2,863 |
| Loop Capital Markets | 55,938 | 0.04 | 2,234 |
| Luminex Trading And Analytics LLC | 32,738 | 0.01 | 164 |
| Macquarie Bank Limited | 124,171 | 0.01 | 1,122 |

Continued on page 140

Continued from page 139

Schedule of Payments of Commissions to Brokers (Variable-Return Funds)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|---------------------------------------|---------------------------------|---------------------------------|----------------------------|
| Macquarie Capital (Aust) LTD | 1,568,252 | \$0.00 | \$5,073 |
| Macquarie Capital (Europe) LTD LDN | 21,546 | 0.01 | 248 |
| Macquarie Securities (Singapore) | 107,603 | 0.00 | 216 |
| Macquarie Securities (USA) Inc | 556 | 0.02 | 11 |
| Macquarie Securities Indian Pvt LTD | 132,713 | 0.02 | 2,737 |
| Macquarie Securities Limited,Taiwan | 9,000 | 0.01 | 67 |
| Macquarie Securities LTD Seoul | 162,629 | 0.14 | 22,887 |
| Maybank Kim Eng Securities PTE LTD | 23,200 | 0.01 | 198 |
| Merrill Lynch & Co Inc (Atlas Gbl) NY | 152,503 | 0.01 | 1,099 |
| Merrill Lynch And Co Inc | 270,366 | 0.02 | 4,192 |
| Merrill Lynch International London | 12,278,447 | 0.00 | 37,178 |
| Mitsubishi UFJ Securities (USA) | 119,100 | 0.00 | 83 |
| Mizuho Securities Asia LTD | 5,254 | 0.02 | 127 |
| Mizuho Securities Inc | 203,107 | 0.02 | 3,205 |
| Mizuho Securities USA Inc | 9,536 | 0.03 | 256 |
| Monness, Crespi, Hardt & Co | 7,768 | 0.03 | 242 |
| Morgan Stanley & Co | 30,378,060 | 0.00 | 64,891 |
| Morgan Stanley And Co Inc Dtco0050 | 31,276,010 | 0.00 | 18,869 |
| Morgan Stanley And Co Intl Taipei | 4,793,387 | 0.00 | 7,920 |
| Morgan Stanley Dean Witter Sydney | 25,770 | 0.01 | 190 |
| Morgan Stanley Intl Seoul | 361,681 | 0.01 | 3,213 |
| National Bank Financial Inc | 46,604 | 0.02 | 771 |
| National Finl Svcs Corp | 10,044,231 | 0.01 | 51,534 |
| Needham And Company LLC | 4,198 | 0.02 | 78 |
| Nesbitt Burns Toronto | 168,614 | 0.02 | 3,567 |
| Nomura Securities Taipei | 1,000 | 0.02 | 15 |
| Nordea Bank Finland PLC | 21,059 | 0.03 | 576 |
| Northern Trust Securities Inc | 21,062 | 0.02 | 426 |
| Numis Securities London | 100,550 | 0.01 | 844 |
| Numis Securities, New York | 18,415 | 0.01 | 241 |
| Oddo Et Cie Paris | 30,543 | 0.20 | 6,016 |
| Oppenheimer & Co Inc | 53,876 | 0.02 | 1,069 |
| Optiver VOF | 13,630 | 0.04 | 514 |

Continued on page 141

Continued from page 140

Schedule of Payments of Commissions to Brokers (Variable-Return Funds)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|-------------------------------------|---------------------------------|---------------------------------|----------------------------|
| Parel | 38,708 | \$0.01 | \$472 |
| Penserra Securities | 160,382 | 0.03 | 4,291 |
| Pershing LLC | 798,351 | 0.04 | 28,410 |
| Pershing LLC Dtc00443 | 109,903 | 0.03 | 3,397 |
| Pershing Securities | 2,596,996 | 0.01 | 18,093 |
| Piper Jaffray & Co | 1,329,947 | 0.02 | 27,359 |
| Raymond James & Associates Inc | 334,931 | 0.04 | 11,976 |
| Raymond James And Assoc, St P'Sburg | 5,275 | 0.03 | 155 |
| Raymond James LTD Toronto | 17,826 | 0.02 | 345 |
| RBC Capital Markets Corporation | 342,798 | 0.02 | 6,495 |
| RBC Capital Markets, LLC | 36,347 | 0.01 | 371 |
| RBC Dominion Secs Toronto | 651,132 | 0.01 | 8,788 |
| Redburn Partners LLP London | 46,920 | 0.00 | 187 |
| Renaissance Macro Securities, LLC | 382 | 0.04 | 14 |
| Robert W Baird & Co | 222,568 | 0.03 | 5,874 |
| Roth Capital Partners, LLC | 95,730 | 0.02 | 1,915 |
| Royal Bank Of Canada | 318,455 | 0.01 | 2,407 |
| Royal Bank Of Canada Europe Limited | 2,062,453 | 0.01 | 10,528 |
| Salisbury Bkt Securities Corporatio | 65,500 | 0.00 | 10 |
| Salomon Smith Barney Taipei Brch | 678,000 | 0.00 | 1,472 |
| Samsung Securities | 203,987 | 0.02 | 4,864 |
| Sanford C Bernstein & Co Inc | 1,961,391 | 0.01 | 28,561 |
| Sanford C Bernstein LTD London | 608,809 | 0.03 | 19,837 |
| Santander Investment Securities | 25,506 | 0.04 | 943 |
| Santander Investment Securities Inc | 1,586,008 | 0.00 | 2,655 |
| SBI Securities (Hong Kong) Limited | 9,300 | 0.02 | 228 |
| Scotia Capital Mkts Toronto | 73,096 | 0.02 | 1,219 |
| Scotia Capital USA Inc | 51,438 | 0.01 | 324 |
| Seaport Group Securities, Llc | 709 | 0.02 | 14 |
| SG Americas Securities LLC (Sgas) | 238,975 | 0.01 | 3,070 |
| SMBC Nikko Securities (Hong Kong) | 22,047 | 0.01 | 211 |
| SMBC Securities Inc | 72,280 | 0.02 | 1,249 |

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Continued from page 141

Schedule of Payments of Commissions to Brokers (Variable-Return Funds)

Fiscal Year Ended June 30, 2024

| Brokerage Firm | No. of Shares Traded | Commission Per Share | Commission Paid |
|-----------------------------------|-------------------------|-------------------------|--------------------|
| Societe Generale | 2,300,101 | \$0.01 | \$22,103 |
| State Street Global Markets, LLC | 13,014 | 0.01 | 130 |
| Stephens Inc | 5,868 | 0.03 | 152 |
| Stifel Nicolaus & Co Inc | 1,017,768 | 0.03 | 28,975 |
| Suntrust Capital Markets Inc | 558,154 | 0.03 | 16,759 |
| Telsey Advisory Group | 8,555 | 0.04 | 317 |
| Toronto Dominion Bank | 44,100 | 0.02 | 976 |
| Toronto Dominion Secs Toronto | 3,056 | 0.01 | 17 |
| UBS AG | 122,327 | 0.00 | 238 |
| UBS AG London | 20,052,767 | 0.00 | 40,141 |
| UBS AG London Branch | 94,554 | 0.02 | 2,149 |
| UBS AG Stamford CT | 806,139 | 0.00 | 1,385 |
| UBS Securities Asia LTD | 15,254,521 | 0.00 | 9,120 |
| UBS Securities Canada Inc | 11,316 | 0.01 | 63 |
| UBS Securities LLC (Warburg) | 1,040,692 | 0.01 | 9,764 |
| UBS Warburg LLC | 1,283,833 | 0.00 | 1,813 |
| Ubs Warburg Pte LTD | 15,100 | 0.00 | 13 |
| UBS Warburg Secs India Pvt Mumbai | 887,266 | 0.00 | 2,922 |
| UBS Warburg Securities LTD Seoul | 145,400 | 0.06 | 8,139 |
| UBS Warburg Securities Taiwan | 735,000 | 0.00 | 1,944 |
| UBS-AG Zurich | 13,688 | 0.07 | 952 |
| Unpublished | 7,859,917 | 0.00 | 21,036 |
| Wells Fargo Securities LLC | 29,211 | 0.04 | 1,103 |
| William Blair & Company | 264,889 | 0.03 | 8,493 |
| Winterflood Securities Limited | 308,998 | 0.01 | 2,157 |
| Woori Investment And Securities | 2,381 | 0.03 | 61 |
| XP Investments Cctvm SA | 1,286,242 | 0.00 | 4,417 |
| Yuanta Securities Co, LTD | 77,400 | 0.01 | 724 |

Actuarial Section



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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 2, 2024

Board of Trustees
Teachers' Retirement System of the City of New York
55 Water Street, 16th Floor
New York, NY 10041

Re: Actuarial Information for the Annual Comprehensive Financial Report (ACFR) for the
Fiscal Year Ended June 30, 2024

Dear Members of the Board of Trustees:

The financial objective of the Teachers' Retirement System of the City of New York - Qualified Pension Plan (TRS-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, 2022 actuarial valuation is used to determine Fiscal Year 2024 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 2024, the Actuarial Contributions to TRS, 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 20, 2024, the Office of the Actuary (OA) published the "Fiscal Year 2024 GASB 67/68 Report for the City of New York and the New York City Retirement Systems" (the Fiscal Year 2024 GASB67/68 Report). Appendix B of the Fiscal Year 2024 GASB67/68 Report contains information developed in accordance with GASB67 for TRS.

Actuarial Assumptions and Methods

The assumptions and methods used for the June 30, 2022 valuation were presented in the memorandum titled "Proposed Changes to Actuarial Assumptions and Methods (Revised 2021 A&M)" dated July 23, 2021 and were adopted by the Retirement Board at the September 20, 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, 2022 and June 30, 2021 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, 2022 actuarial valuation is included in this ACFR. A summary of the census data used in the June 30, 2021 actuarial valuation of the Plan is available in the Fiscal Year 2023 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 are unchanged from the prior valuation.

Note that the Employer Contribution includes a cost of \$4,419,008 for member contribution receivable amounts including interest for cases processed through June 30, 2022 due to *Gulino vs. Department of Education*, 96 Civ. 8414 (KMW). Also, pension payments that exceed the Internal Revenue Code Section 415 Limit which have been or are expected to be made from the Excess Benefit Plan are excluded from this valuation.

Funded Status

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

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

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

Presentation Style and Sources of Information

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

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

- Summary of Actuarial Assumptions and Methods in Effect for the June 30, 2022 Actuarial Valuation.
- Summary of Active Member Valuation Data.
- Summary of Plan Membership Data.
- Schedule of Retirees and Beneficiaries Added to and Removed from Rolls.
- Actuarial and Statutory Contribution History.
- Funded Status Based on Entry Age Normal Cost Method.
- Comparative Summary of Accrued Liabilities Funded by Actuarial Value of Assets - Solvency Test.
- Contributions.

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

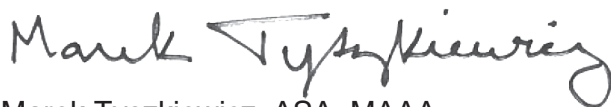
- Membership Data.
- Net Pension Liability.
- Actuarial Assumptions and Methods.
- Schedule of Changes in Employers' Net Pension Liability and Related Ratios.
- Schedule of Employer Contributions.

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

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,

A handwritten signature in black ink that reads "Marek Tyszkiewicz". The signature is fluid and cursive, with the first name "Marek" and last name "Tyszkiewicz" clearly distinguishable.

Marek Tyszkiewicz, ASA, MAAA
Chief Actuary

MT/eh

Att.

cc: Dolores Capone, ASA, EA – New York City Office of the Actuary
Edward Hue, EA – New York City Office of the Actuary
Thad McTigue – New York City Teachers' Retirement System
Paul Raucci - New York City Teachers' Retirement System
Patricia Reilly – New York City Teachers' Retirement System
Keith Snow, Esq. – New York City Office of the Actuary

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 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 23, 2021. The actuarial assumptions and methods described in that memorandum were adopted by the Board of Trustees at the September 20, 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.

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 ACTUARIAL VALUATION (Cont'd)

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

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).

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 ACTUARIAL VALUATION (Cont'd)

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 TRS during the second prior fiscal year.

11. 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

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 ACTUARIAL VALUATION (Cont'd)

(4) New amortization bases.

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

12. Excess Benefit Plan: The valuation excludes liabilities and costs, if any, associated with benefits in excess of the Internal Revenue Code Section 415 limitation.
13. 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 for non-UFT members.
14. Additional Assumptions used for the TDA fixed fund:
 - a. Active TDA members would contribute 8.0% of compensation to the TDA fixed fund and 3.5% of compensation to the TDA variable 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 2.0% of pay to the TDA fixed fund and approximately 0.9% to the variable fund.
 - d. The probability that a member elects 4% per year withdrawals from the TDA fixed fund starting from the later of age 60 and the age at termination is 25%.
 - e. The probability that a member elects required minimum distributions from the TDA fixed fund starting from the later of age 72 and the age at termination is 75%.
 - f. Estimate techniques have been used to account for the difference in liabilities due to future annuitization of TDA funds.

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 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% | 18.00% | 0.00% | 37.50% | 0.00% |
| 56 | 2.50% | 18.00% | 20.00% | 37.50% | 22.00% |
| 57 | 2.50% | 18.00% | 20.00% | 37.50% | 22.00% |
| 58 | 2.50% | 18.00% | 20.00% | 37.50% | 22.00% |
| 59 | 3.75% | 18.00% | 20.00% | 37.50% | 22.00% |
| 60 | 5.00% | 18.00% | 20.00% | 37.50% | 22.00% |
| 61 | 6.25% | 18.00% | 20.00% | 37.50% | 22.00% |
| 62 | 7.50% ¹ | 27.00%/18.00% ² | 20.00% | 50.00% | 33.00% |
| 63 | 0.00% | 18.00%/27.00% ³ | 20.00% | 37.50% | 22.00% |
| 64 | 0.00% | 18.00% | 20.00% | 37.50% | 22.00% |
| 65 | 0.00% | 27.00% | 20.00% | 50.00% | 33.00% |
| 66 | 0.00% | 18.00% | 20.00% | 37.50% | 22.00% |
| 67 | 0.00% | 18.00% | 20.00% | 37.50% | 22.00% |
| 68 | 0.00% | 18.00% | 20.00% | 37.50% | 22.00% |
| 69 | 0.00% | 18.00% | 20.00% | 37.50% | 22.00% |
| 70 | 0.00% | 20.00% | 20.00% | 37.50% | 22.00% |
| 71 | 0.00% | 20.00% | 20.00% | 37.50% | 22.00% |
| 72 | 0.00% | 20.00% | 20.00% | 37.50% | 22.00% |
| 73 | 0.00% | 20.00% | 20.00% | 37.50% | 22.00% |
| 74 | 0.00% | 20.00% | 20.00% | 37.50% | 22.00% |
| 75 | 0.00% | 20.00% | 20.00% | 37.50% | 22.00% |
| 76 | 0.00% | 20.00% | 20.00% | 37.50% | 22.00% |
| 77 | 0.00% | 20.00% | 20.00% | 37.50% | 22.00% |
| 78 | 0.00% | 20.00% | 20.00% | 37.50% | 22.00% |
| 79 | 0.00% | 20.00% | 20.00% | 37.50% | 22.00% |
| 80+ | N/A | 100.00% | 100.00% | 100.00% | 100.00% |

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

² 27.00% for Tier 1, 2, & 4 members and 18.00% for Tier 6 members.

³ 18.00% for Tier 1, 2, & 4 members and 27.00% for Tier 6 members.

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 ACTUARIAL VALUATION (Cont'd)

| Table 2 | |
|------------------------------|----------------------------|
| PROBABILITIES OF TERMINATION | |
| Years of Service | Probability of Termination |
| 0 | 9.00% |
| 1 | 8.00% |
| 2 | 7.00% |
| 3 | 6.00% |
| 4 | 5.00% |
| 5 | 4.00% |
| 6 | 3.50% |
| 7 | 3.05% |
| 8 | 2.65% |
| 9 | 2.30% |
| 10 | 2.00% |
| 11 | 1.75% |
| 12 | 1.55% |
| 13 | 1.40% |
| 14 | 1.30% |
| 15 | 1.25% |
| 16 | 1.20% |
| 17 | 1.15% |
| 18 | 1.10% |
| 19 | 1.05% |
| 20 | 1.00% |
| 21 | 0.90% |
| 22 | 0.80% |
| 23 | 0.70% |
| 24 | 0.60% |
| 25+ | 0.50% |

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 ACTUARIAL VALUATION (Cont'd)

| Table 3 | | | | |
|--|---------------------|---------|-----------------------|---------|
| PROBABILITIES OF DISABILITY RETIREMENT | | | | |
| | Ordinary Disability | | Accidental Disability | |
| Age | Males | Females | Males | Females |
| 15 | 0.01% | 0.01% | 0.00% | 0.00% |
| 16 | 0.01% | 0.01% | 0.00% | 0.00% |
| 17 | 0.01% | 0.01% | 0.00% | 0.00% |
| 18 | 0.01% | 0.01% | 0.00% | 0.00% |
| 19 | 0.01% | 0.01% | 0.00% | 0.00% |
| 20 | 0.01% | 0.01% | 0.00% | 0.00% |
| 21 | 0.01% | 0.01% | 0.00% | 0.00% |
| 22 | 0.01% | 0.01% | 0.00% | 0.00% |
| 23 | 0.01% | 0.01% | 0.00% | 0.00% |
| 24 | 0.01% | 0.01% | 0.00% | 0.00% |
| 25 | 0.01% | 0.01% | 0.00% | 0.00% |
| 26 | 0.01% | 0.01% | 0.00% | 0.00% |
| 27 | 0.01% | 0.01% | 0.00% | 0.00% |
| 28 | 0.01% | 0.01% | 0.00% | 0.00% |
| 29 | 0.01% | 0.01% | 0.00% | 0.00% |
| 30 | 0.01% | 0.01% | 0.00% | 0.00% |
| 31 | 0.02% | 0.01% | 0.00% | 0.00% |
| 32 | 0.03% | 0.02% | 0.00% | 0.00% |
| 33 | 0.04% | 0.03% | 0.01% | 0.00% |
| 34 | 0.05% | 0.04% | 0.01% | 0.00% |
| 35 | 0.06% | 0.05% | 0.01% | 0.01% |
| 36 | 0.07% | 0.06% | 0.01% | 0.01% |
| 37 | 0.08% | 0.07% | 0.01% | 0.01% |
| 38 | 0.08% | 0.08% | 0.02% | 0.01% |
| 39 | 0.09% | 0.09% | 0.02% | 0.01% |
| 40 | 0.10% | 0.10% | 0.02% | 0.01% |
| 41 | 0.11% | 0.11% | 0.02% | 0.01% |
| 42 | 0.12% | 0.12% | 0.02% | 0.01% |
| 43 | 0.13% | 0.13% | 0.02% | 0.02% |
| 44 | 0.14% | 0.14% | 0.02% | 0.02% |
| 45 | 0.15% | 0.15% | 0.03% | 0.02% |
| 46 | 0.15% | 0.16% | 0.03% | 0.02% |
| 47 | 0.15% | 0.17% | 0.03% | 0.02% |
| 48 | 0.15% | 0.18% | 0.03% | 0.03% |
| 49 | 0.15% | 0.19% | 0.03% | 0.03% |
| 50 | 0.15% | 0.20% | 0.03% | 0.03% |
| 51 | 0.15% | 0.20% | 0.03% | 0.03% |
| 52 | 0.15% | 0.20% | 0.03% | 0.03% |
| 53 | 0.15% | 0.20% | 0.03% | 0.03% |
| 54 | 0.15% | 0.20% | 0.03% | 0.03% |
| 55 | 0.15% | 0.20% | 0.04% | 0.04% |
| 56 | 0.15% | 0.20% | 0.04% | 0.04% |
| 57 | 0.15% | 0.20% | 0.04% | 0.04% |
| 58 | 0.15% | 0.20% | 0.04% | 0.04% |
| 59 | 0.15% | 0.20% | 0.04% | 0.04% |
| 60 | 0.15% | 0.20% | 0.04% | 0.04% |
| 61 | 0.15% | 0.20% | 0.04% | 0.04% |
| 62 | 0.15% | 0.20% | 0.04% | 0.04% |
| 63 | 0.15% | 0.20% | 0.04% | 0.04% |
| 64 | 0.15% | 0.20% | 0.04% | 0.04% |
| 65 | 0.15% | 0.20% | 0.04% | 0.04% |
| 66 | 0.15% | 0.20% | 0.04% | 0.04% |
| 67 | 0.15% | 0.20% | 0.04% | 0.04% |
| 68 | 0.15% | 0.20% | 0.04% | 0.04% |
| 69 | 0.15% | 0.20% | 0.04% | 0.04% |
| 70 | 0.15% | 0.20% | 0.04% | 0.04% |
| 71 | 0.15% | 0.20% | 0.04% | 0.04% |
| 72 | 0.15% | 0.20% | 0.04% | 0.04% |
| 73 | 0.15% | 0.20% | 0.04% | 0.04% |
| 74 | 0.15% | 0.20% | 0.04% | 0.04% |
| 75 | 0.15% | 0.20% | 0.04% | 0.04% |
| 76 | 0.15% | 0.20% | 0.04% | 0.04% |
| 77 | 0.15% | 0.20% | 0.04% | 0.04% |
| 78 | 0.15% | 0.20% | 0.04% | 0.04% |
| 79 | 0.15% | 0.20% | 0.04% | 0.04% |
| 80+ | N/A | N/A | N/A | N/A |

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 ACTUARIAL VALUATION (Cont'd)

| Table 4 PROBABILITIES OF MORTALITY FOR ACTIVE MEMBERS BASE RATES | | | |
|--|----------------|---------|------------------|
| | Ordinary Death | | Accidental Death |
| Age | Males | Females | |
| 15 | 0.040% | 0.025% | 0.000% |
| 16 | 0.040% | 0.025% | 0.000% |
| 17 | 0.040% | 0.025% | 0.000% |
| 18 | 0.040% | 0.025% | 0.000% |
| 19 | 0.040% | 0.025% | 0.000% |
| 20 | 0.040% | 0.025% | 0.000% |
| 21 | 0.040% | 0.025% | 0.000% |
| 22 | 0.040% | 0.025% | 0.000% |
| 23 | 0.040% | 0.025% | 0.000% |
| 24 | 0.040% | 0.025% | 0.000% |
| 25 | 0.040% | 0.025% | 0.000% |
| 26 | 0.040% | 0.025% | 0.000% |
| 27 | 0.040% | 0.025% | 0.000% |
| 28 | 0.040% | 0.025% | 0.000% |
| 29 | 0.040% | 0.025% | 0.000% |
| 30 | 0.040% | 0.025% | 0.000% |
| 31 | 0.042% | 0.026% | 0.000% |
| 32 | 0.044% | 0.028% | 0.000% |
| 33 | 0.046% | 0.029% | 0.000% |
| 34 | 0.048% | 0.030% | 0.000% |
| 35 | 0.050% | 0.031% | 0.000% |
| 36 | 0.052% | 0.033% | 0.000% |
| 37 | 0.054% | 0.034% | 0.000% |
| 38 | 0.056% | 0.035% | 0.000% |
| 39 | 0.058% | 0.036% | 0.000% |
| 40 | 0.060% | 0.038% | 0.000% |
| 41 | 0.070% | 0.044% | 0.000% |
| 42 | 0.080% | 0.050% | 0.000% |
| 43 | 0.090% | 0.056% | 0.000% |
| 44 | 0.100% | 0.063% | 0.000% |
| 45 | 0.110% | 0.069% | 0.000% |
| 46 | 0.120% | 0.075% | 0.000% |
| 47 | 0.130% | 0.081% | 0.000% |
| 48 | 0.140% | 0.088% | 0.000% |
| 49 | 0.150% | 0.094% | 0.000% |
| 50 | 0.160% | 0.100% | 0.000% |
| 51 | 0.170% | 0.106% | 0.000% |
| 52 | 0.180% | 0.113% | 0.000% |
| 53 | 0.190% | 0.119% | 0.000% |
| 54 | 0.200% | 0.125% | 0.000% |
| 55 | 0.210% | 0.131% | 0.000% |
| 56 | 0.220% | 0.138% | 0.000% |
| 57 | 0.230% | 0.144% | 0.000% |
| 58 | 0.240% | 0.150% | 0.000% |
| 59 | 0.250% | 0.156% | 0.000% |
| 60 | 0.260% | 0.163% | 0.000% |
| 61 | 0.270% | 0.169% | 0.000% |
| 62 | 0.280% | 0.175% | 0.000% |
| 63 | 0.290% | 0.181% | 0.000% |
| 64 | 0.300% | 0.188% | 0.000% |
| 65 | 0.320% | 0.200% | 0.000% |
| 66 | 0.350% | 0.219% | 0.000% |
| 67 | 0.390% | 0.244% | 0.000% |
| 68 | 0.440% | 0.275% | 0.000% |
| 69 | 0.500% | 0.313% | 0.000% |
| 70 | 0.540% | 0.350% | 0.000% |
| 71 | 0.600% | 0.388% | 0.000% |
| 72 | 0.650% | 0.425% | 0.000% |
| 73 | 0.700% | 0.463% | 0.000% |
| 74 | 0.750% | 0.525% | 0.000% |
| 75 | 0.800% | 0.588% | 0.000% |
| 76 | 0.890% | 0.650% | 0.000% |
| 77 | 0.980% | 0.713% | 0.000% |
| 78 | 1.070% | 0.775% | 0.000% |
| 79 | 1.160% | 0.925% | 0.000% |
| 80+ | N/A | N/A | N/A |

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 ACTUARIAL VALUATION (Cont'd)

| Table 5a | | | | | |
|---|---------|---------|-----|-----------|-----------|
| PROBABILITIES OF MORTALITY FOR SERVICE RETIREES BASE RATES | | | | | |
| Age | Males | Females | Age | Males | Females |
| 15 | 0.0108% | 0.0105% | 68 | 1.3827% | 0.8399% |
| 16 | 0.0146% | 0.0128% | 69 | 1.5070% | 0.8992% |
| 17 | 0.0197% | 0.0140% | 70 | 1.6306% | 0.9855% |
| 18 | 0.0222% | 0.0145% | 71 | 1.7953% | 1.1072% |
| 19 | 0.0235% | 0.0151% | 72 | 1.9579% | 1.2311% |
| 20 | 0.0246% | 0.0153% | 73 | 2.1191% | 1.3549% |
| 21 | 0.0263% | 0.0162% | 74 | 2.2784% | 1.4775% |
| 22 | 0.0278% | 0.0171% | 75 | 2.4370% | 1.5961% |
| 23 | 0.0295% | 0.0181% | 76 | 2.7233% | 1.8356% |
| 24 | 0.0309% | 0.0193% | 77 | 3.0074% | 2.0765% |
| 25 | 0.0320% | 0.0206% | 78 | 3.2885% | 2.3162% |
| 26 | 0.0335% | 0.0220% | 79 | 3.5677% | 2.5533% |
| 27 | 0.0347% | 0.0234% | 80 | 3.8824% | 2.7842% |
| 28 | 0.0364% | 0.0249% | 81 | 4.4474% | 3.3221% |
| 29 | 0.0386% | 0.0267% | 82 | 5.0193% | 3.8708% |
| 30 | 0.0418% | 0.0286% | 83 | 5.5977% | 4.4089% |
| 31 | 0.0476% | 0.0348% | 84 | 6.1798% | 5.0027% |
| 32 | 0.0532% | 0.0401% | 85 | 6.7676% | 5.5878% |
| 33 | 0.0583% | 0.0449% | 86 | 7.7139% | 6.2981% |
| 34 | 0.0629% | 0.0489% | 87 | 8.6843% | 6.9333% |
| 35 | 0.0673% | 0.0527% | 88 | 9.6857% | 7.5758% |
| 36 | 0.0698% | 0.0557% | 89 | 10.7135% | 8.5620% |
| 37 | 0.0720% | 0.0591% | 90 | 11.7744% | 9.6778% |
| 38 | 0.0745% | 0.0626% | 91 | 13.6049% | 10.8390% |
| 39 | 0.0782% | 0.0672% | 92 | 15.5105% | 11.9717% |
| 40 | 0.0837% | 0.0726% | 93 | 17.4679% | 13.1425% |
| 41 | 0.0941% | 0.0775% | 94 | 19.5105% | 15.1670% |
| 42 | 0.1051% | 0.0838% | 95 | 21.6689% | 17.3761% |
| 43 | 0.1167% | 0.0918% | 96 | 23.7343% | 19.5275% |
| 44 | 0.1294% | 0.1013% | 97 | 25.7571% | 21.6213% |
| 45 | 0.1432% | 0.1132% | 98 | 27.8633% | 23.3643% |
| 46 | 0.1582% | 0.1271% | 99 | 29.8272% | 23.8705% |
| 47 | 0.1744% | 0.1429% | 100 | 31.5152% | 23.9898% |
| 48 | 0.1918% | 0.1597% | 101 | 33.0771% | 24.9134% |
| 49 | 0.2102% | 0.1774% | 102 | 34.4234% | 26.0067% |
| 50 | 0.2317% | 0.1950% | 103 | 35.6398% | 27.2992% |
| 51 | 0.2657% | 0.2130% | 104 | 36.6357% | 28.7614% |
| 52 | 0.3011% | 0.2304% | 105 | 37.3430% | 30.3385% |
| 53 | 0.3373% | 0.2472% | 106 | 37.7004% | 31.9944% |
| 54 | 0.3744% | 0.2638% | 107 | 37.8599% | 33.6898% |
| 55 | 0.4112% | 0.2806% | 108 | 38.0314% | 35.3785% |
| 56 | 0.4578% | 0.3034% | 109 | 38.1998% | 37.0129% |
| 57 | 0.5025% | 0.3264% | 110 | 50.0000% | 50.0000% |
| 58 | 0.5448% | 0.3498% | 111 | 50.0000% | 50.0000% |
| 59 | 0.5843% | 0.3732% | 112 | 50.0000% | 50.0000% |
| 60 | 0.6211% | 0.3973% | 113 | 50.0000% | 50.0000% |
| 61 | 0.7018% | 0.4321% | 114 | 50.0000% | 50.0000% |
| 62 | 0.7804% | 0.4686% | 115 | 50.0000% | 50.0000% |
| 63 | 0.8588% | 0.5072% | 116 | 50.0000% | 50.0000% |
| 64 | 0.9371% | 0.5479% | 117 | 50.0000% | 50.0000% |
| 65 | 0.9994% | 0.5912% | 118 | 50.0000% | 50.0000% |
| 66 | 1.1295% | 0.6619% | 119 | 50.0000% | 50.0000% |
| 67 | 1.2569% | 0.7367% | 120 | 100.0000% | 100.0000% |

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 ACTUARIAL VALUATION (Cont'd)

| Table 5b PROBABILITIES OF MORTALITY FOR DISABLED RETIREES BASE RATES | | | | | |
|---|---------|---------|-----|-----------|-----------|
| Age | Males | Females | Age | Males | Females |
| 15 | 0.3819% | 0.3483% | 68 | 2.8007% | 2.0012% |
| 16 | 0.5167% | 0.4712% | 69 | 2.8946% | 2.0043% |
| 17 | 0.6964% | 0.5141% | 70 | 3.0268% | 2.0073% |
| 18 | 0.7863% | 0.5351% | 71 | 3.1148% | 2.0103% |
| 19 | 0.8312% | 0.5569% | 72 | 3.2684% | 2.1811% |
| 20 | 0.8353% | 0.5649% | 73 | 3.3926% | 2.3760% |
| 21 | 0.8659% | 0.5961% | 74 | 3.5875% | 2.5968% |
| 22 | 0.8978% | 0.6295% | 75 | 3.7271% | 2.8417% |
| 23 | 0.9464% | 0.6597% | 76 | 3.9657% | 3.0808% |
| 24 | 0.9977% | 0.6908% | 77 | 4.2691% | 3.3373% |
| 25 | 1.0424% | 0.7150% | 78 | 4.5349% | 3.6085% |
| 26 | 1.0960% | 0.7387% | 79 | 4.8252% | 3.8944% |
| 27 | 1.1348% | 0.7520% | 80 | 5.1378% | 4.1909% |
| 28 | 1.1774% | 0.7625% | 81 | 5.6917% | 4.6921% |
| 29 | 1.2163% | 0.7686% | 82 | 6.2841% | 5.1536% |
| 30 | 1.2878% | 0.7763% | 83 | 6.8835% | 5.5061% |
| 31 | 1.3554% | 0.9885% | 84 | 7.7954% | 6.1180% |
| 32 | 1.3755% | 1.1922% | 85 | 8.8286% | 6.7342% |
| 33 | 1.3953% | 1.3874% | 86 | 9.9032% | 7.3088% |
| 34 | 1.4153% | 1.3942% | 87 | 10.8837% | 8.2536% |
| 35 | 1.4357% | 1.4012% | 88 | 11.9567% | 9.3264% |
| 36 | 1.4563% | 1.4082% | 89 | 13.8059% | 10.3734% |
| 37 | 1.4772% | 1.4152% | 90 | 15.7270% | 11.4459% |
| 38 | 1.4985% | 1.4223% | 91 | 17.7012% | 12.6271% |
| 39 | 1.5200% | 1.4294% | 92 | 19.6428% | 14.1350% |
| 40 | 1.5418% | 1.4366% | 93 | 21.9234% | 15.4424% |
| 41 | 1.5640% | 1.4436% | 94 | 24.0761% | 16.9560% |
| 42 | 1.5865% | 1.4509% | 95 | 26.0577% | 18.4261% |
| 43 | 1.6093% | 1.4581% | 96 | 28.3614% | 20.1727% |
| 44 | 1.6324% | 1.4654% | 97 | 30.3483% | 21.6213% |
| 45 | 1.6559% | 1.5299% | 98 | 31.8739% | 23.3643% |
| 46 | 1.6797% | 1.6016% | 99 | 33.6652% | 23.8705% |
| 47 | 1.7038% | 1.6623% | 100 | 35.0392% | 23.9898% |
| 48 | 1.7283% | 1.7238% | 101 | 36.0496% | 24.9134% |
| 49 | 1.7531% | 1.7485% | 102 | 37.0460% | 26.0067% |
| 50 | 1.7783% | 1.7736% | 103 | 37.7767% | 27.2992% |
| 51 | 1.8039% | 1.7991% | 104 | 38.1460% | 28.7614% |
| 52 | 1.9408% | 1.8530% | 105 | 38.3076% | 30.3385% |
| 53 | 2.0713% | 1.8909% | 106 | 38.4698% | 31.9944% |
| 54 | 2.2040% | 1.9173% | 107 | 38.6325% | 33.6898% |
| 55 | 2.3207% | 1.9622% | 108 | 38.8076% | 35.3785% |
| 56 | 2.4304% | 1.9652% | 109 | 38.9794% | 37.0129% |
| 57 | 2.4937% | 1.9681% | 110 | 50.0000% | 50.0000% |
| 58 | 2.5070% | 1.9711% | 111 | 50.0000% | 50.0000% |
| 59 | 2.5245% | 1.9741% | 112 | 50.0000% | 50.0000% |
| 60 | 2.5362% | 1.9770% | 113 | 50.0000% | 50.0000% |
| 61 | 2.5394% | 1.9801% | 114 | 50.0000% | 50.0000% |
| 62 | 2.5426% | 1.9831% | 115 | 50.0000% | 50.0000% |
| 63 | 2.5480% | 1.9861% | 116 | 50.0000% | 50.0000% |
| 64 | 2.5797% | 1.9891% | 117 | 50.0000% | 50.0000% |
| 65 | 2.6258% | 1.9921% | 118 | 50.0000% | 50.0000% |
| 66 | 2.6510% | 1.9951% | 119 | 50.0000% | 50.0000% |
| 67 | 2.7083% | 1.9982% | 120 | 100.0000% | 100.0000% |

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 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% |

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

QUALIFIED PENSION PLAN

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2022 ACTUARIAL VALUATION (Cont'd)

| Table 6 ANNUAL RATES OF MERIT AND SALARY INCREASE | | |
|---|-----------------------|------------------------------------|
| Years of Service | Merit Increase | Salary Increase¹ |
| 0 | 10.00% | 13.00% |
| 1 | 8.00% | 11.00% |
| 2 | 6.00% | 9.00% |
| 3 | 5.00% | 8.00% |
| 4 | 6.00% | 9.00% |
| 5 | 5.00% | 8.00% |
| 6 | 5.00% | 8.00% |
| 7 | 4.00% | 7.00% |
| 8 | 2.00% | 5.00% |
| 9 | 5.00% | 8.00% |
| 10 | 1.00% | 4.00% |
| 11 | 1.00% | 4.00% |
| 12 | 3.00% | 6.00% |
| 13 | 1.00% | 4.00% |
| 14 | 5.00% | 8.00% |
| 15 | 1.00% | 4.00% |
| 16 | 1.00% | 4.00% |
| 17 | 2.00% | 5.00% |
| 18 | 1.00% | 4.00% |
| 19 | 9.00% | 12.00% |
| 20 | 1.00% | 4.00% |
| 21 | 5.00% | 8.00% |
| 22+ | 1.00% | 4.00% |

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

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK QUALIFIED PENSION PLAN

SUMMARY OF ACTIVE MEMBER VALUATION DATA

| <p style="text-align: center;">Table 7</p> <p style="text-align: center;">ACTIVE MEMBER VALUATION DATA</p> | | | | |
|---|---------------|--------------------------|----------------------------------|---|
| June 30 Actuarial Valuation | Number | Annual Salary | Average Annual Salary | Percentage Increase/ (Decrease) In Avg. Salary |
| 2013 | 112,481 | \$ 8,128,378,071 | \$ 72,264 | 1.4% |
| 2014 | 111,726 | 8,274,685,657 | 74,062 | 2.5% |
| 2015 | 114,652 | 8,844,650,633 | 77,143 | 4.2% |
| 2016 | 118,201 | 9,224,267,647 | 78,039 | 1.2% |
| 2017 | 120,826 | 9,848,899,232 | 81,513 | 4.5% |
| 2018 | 121,764 | 10,404,403,684 | 85,447 | 4.8% |
| 2019 | 123,336 | 10,903,755,059 | 88,407 | 3.5% |
| 2020 | 124,276 | 11,203,878,026 | 90,153 | 2.0% |
| 2021 | 123,211 | 11,469,452,986 | 93,088 | 3.3% |
| 2022 | 123,674 | 11,825,123,918 | 95,615 | 2.7% |

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

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK QUALIFIED PENSION PLAN

SUMMARY OF PLAN MEMBERSHIP DATA

As of the June 30, 2022 and June 30, 2021 actuarial valuations, the Plan's Membership consisted of:

| <p style="text-align: center;">Table 8</p> <p style="text-align: center;">SUMMARY OF PLAN MEMBERSHIP</p> | | |
|---|---------------|---------------|
| Group | June 30, 2022 | June 30, 2021 |
| Active members | 123,674 | 123,211 |
| Terminated Nonvested Members | 5,106 | 4,574 |
| Deferred vested members not yet receiving benefits | 19,604 | 15,128 |
| Retirees and beneficiaries currently receiving benefits | <u>92,282</u> | <u>89,997</u> |
| Total | 240,666 | 232,910 |

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

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 | | Average Annual Allowances |
| | Number | Annual Allowances ¹ | Number | Annual Allowances | Number | Annual Allowances ² | |
| 2013 | 4,078 | \$ 248,087,233 | 2,440 | \$ 77,107,240 | 78,177 | \$ 3,537,880,567 | \$ 45,255 |
| 2014 | 4,356 | 275,947,759 | 2,114 | 67,585,789 | 80,419 | 3,746,242,537 | 46,584 |
| 2015 | 4,728 | 219,769,491 | 2,370 | 81,986,287 | 82,777 | 3,884,025,741 | 46,922 |
| 2016 | 3,808 | 157,518,432 | 2,492 | 86,890,450 | 84,093 | 3,954,653,723 | 47,027 |
| 2017 | 3,519 | 254,567,439 | 2,842 | 111,573,800 | 84,770 | 4,097,647,362 | 48,338 |
| 2018 | 4,107 | 240,586,776 | 2,582 | 103,957,220 | 86,295 | 4,234,276,918 | 49,067 |
| 2019 | 4,921 | 249,898,766 | 2,709 | 113,559,733 | 88,507 | 4,370,615,951 | 49,382 |
| 2020 | 4,144 | 201,792,665 | 3,115 | 135,202,307 | 89,536 | 4,437,206,309 | 49,558 |
| 2021 | 3,540 | 386,120,726 | 3,079 | 132,194,571 | 89,997 | 4,691,132,464 | 52,125 |
| 2022 | 5,392 | 138,630,390 | 3,107 | 144,982,709 | 92,282 | 4,684,780,145 | 50,766 |

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.

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

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 Contributed ¹ | Employer Rate of Contribution^{2,3,4} |
| 2015 | \$ 3,270,006,920 | \$ 3,270,006,920 | 40.5% |
| 2016 | 3,702,569,102 | 3,702,569,102 | 44.8% |
| 2017 | 3,888,399,470 | 3,888,399,470 | 44.1% |
| 2018 | 3,889,709,927 | 3,889,709,927 | 42.3% |
| 2019 | 3,696,685,559 | 3,696,685,559 | 37.7% |
| 2020 | 3,590,801,261 | 3,590,801,261 | 34.6% |
| 2021 | 3,131,606,535 | 3,131,606,535 | 28.8% |
| 2022 | 3,303,797,557 | 3,303,797,557 | 29.6% |
| 2023 | 3,086,081,819 | 3,086,081,819 | 27.0% |
| 2024 | 3,161,752,125 | 3,161,752,125 | 26.8% |

¹Represents total employer contributions accrued for fiscal year.

²The 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.

³Starting with the Fiscal Year ended June 30, 2019, the Employer Rate of Contribution is calculated before offsetting for Annuity Savings Accumulation Fund (ASAF).

⁴For Fiscal Year ended June 30, 2020, the Employer Rate of Contribution is calculated before offsetting for the Pre-Payment credit as well as the ASAF credit.

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
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) |
| 2013 | \$ 35,186,072 | \$ 61,988,933 | \$ 26,802,861 | 56.8% | \$ 8,128,378 | 329.7% |
| 2014 | 37,521,424 | 67,309,977 | 29,788,553 | 55.7% | 8,274,686 | 360.0% |
| 2015 | 39,290,072 | 69,625,608 | 30,335,536 | 56.4% | 8,844,651 | 343.0% |
| 2016 | 41,015,087 | 69,964,412 | 28,949,325 | 58.6% | 9,224,268 | 313.8% |
| 2017 | 44,381,706 | 69,552,380 | 25,170,674 | 63.8% | 9,848,899 | 255.6% |
| 2018 | 50,012,149 | 72,205,318 | 22,193,169 | 69.3% | 10,404,404 | 213.3% |
| 2019 | 57,990,211 | 73,938,547 | 15,948,336 | 78.4% | 10,903,755 | 146.3% |
| 2020 | 60,693,821 | 75,452,987 | 14,759,166 | 80.4% | 11,203,878 | 131.7% |
| 2021 | 66,328,295 | 79,153,122 | 12,824,827 | 83.8% | 11,469,453 | 111.8% |
| 2022 | 69,597,755 | 81,371,174 | 11,773,419 | 85.5% | 11,825,124 | 99.6% |

¹ Salaries reflect the impact of recent labor contract settlements and certain non-union salary increases with retroactive effective dates, if any.

**TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK
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 (A) | Current Retirees and Beneficiaries (B) | Active Members' Employer-Financed Portion (C) | | (A) | (B) | (C) |
| | | | | | | | |
| 2013 | \$ 3,330,541 | \$ 37,451,527 | \$ 18,565,932 | \$ 35,186,072 | 100 | 85 | 0 |
| 2014 | 3,547,779 | 40,753,340 | 20,193,955 | 37,521,424 | 100 | 83 | 0 |
| 2015 | 3,646,765 | 42,095,109 | 20,888,473 | 39,290,072 | 100 | 85 | 0 |
| 2016 | 3,765,740 | 41,651,524 | 21,465,314 | 41,015,087 | 100 | 89 | 0 |
| 2017 | 3,291,234 | 42,149,684 | 23,681,032 | 44,381,706 | 100 | 97 | 0 |
| 2018 | 3,431,852 | 43,150,865 | 25,230,752 | 50,012,149 | 100 | 100 | 14 |
| 2019 | 3,617,468 | 43,741,267 | 26,579,812 | 57,990,211 | 100 | 100 | 40 |
| 2020 | 3,829,592 | 44,132,285 | 27,491,110 | 60,693,821 | 100 | 100 | 46 |
| 2021 | 4,083,490 | 46,175,315 | 28,894,317 | 66,328,295 | 100 | 100 | 56 |
| 2022 | 4,299,234 | 46,131,609 | 30,940,331 | 69,597,755 | 100 | 100 | 62 |

See following "SOLVENCY TEST – NOTES."

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK 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.

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK

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

1. Coordinated Retirement Plan (Article 15):

A Tier III/IV member of this Plan is mandated to contribute 3% of annual wages during all the years of coverage. If a member resigns or is otherwise terminated from City Service prior to eligibility for a benefit, all of his or her contributions with 5% interest will be refunded upon request.

Beginning October 1, 2000, Tier III and IV members are not required to make basic required contributions after the 10th anniversary of their membership date or completion of 10 years of City Service, whichever is earlier. Effective February 27, 2008, active members were eligible to enroll in a 55/25 plan (age 55 with 25 years of service). Those that chose the 55/25 plan were required to contribute an additional 1.85% of pay from February 28, 2008 until June 29, 2008, or until they have accumulated 25 years of service, whichever is later. New members joining after February 27, 2008 are automatically enrolled in a 55/27 plan (age 55 with 27 years of service). These members are required to pay an additional 1.85% of pay for the first 27 years of service. New members after December 10, 2009 who are represented by the UFT are required to contribute 4.85% of salary for the first 27 years of service and 1.85% of salary thereafter.

A Tier VI member is mandated to contribute between 3.0% and 6.0% of salary until the later of separation from service or retirement.

2. Twenty-Year Pension Plan:

A member of this Plan is required to contribute a percentage of salary which, if paid from the date of entry until the date of completion of 20 years of City Service, would provide at the payability date, an annuity of approximately one-eighth of the member's final salary as of the completion of 20 years of City Service. Tier II members who elected to join the 55/25 plan pay an additional 1.85% of pay.

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK QUALIFIED PENSION PLAN

CONTRIBUTIONS (Cont'd)

3. Age-55-Increased-Benefits Pension Plan:

A member of this Plan is required to contribute a percentage of salary, which if paid to the age for service retirement under the law in effect prior to July 1, 1970, would provide an annuity equal to approximately 1% of the average annual compensation during the last five years of service multiplied by years of service. Tier II members who elected to join the 55/25 plan pay an additional 1.85% of pay.

Member contributions are accumulated with interest in individually maintained accounts. Except under Article 15, upon retirement, the amount to the member's credit (i.e., Accumulated Deductions) is used to purchase an annuity on the basis of the tables adopted by the Teachers' Retirement Board. Upon death in service, the death benefits, including the Accumulated Deductions, are paid to the beneficiary and, on termination of employment other than by death or retirement, the Accumulated Deductions are returned to the member.

Beginning July 1, 1960, on a year-to-year basis, the required contributions of members were reduced by an Increased-Take-Home-Pay rate initially equal to 2.5% of salary. The following table shows effective periods and Increased-Take-Home-Pay rate.

| PERIOD | INCREASED-TAKE-HOME-PAY RATE |
|---|------------------------------|
| Board of Education Employees | |
| 07/01/60 – 06/30/61 | 2.5% |
| 07/01/61 – 08/31/67 | 5.0% |
| 09/01/67 – 08/31/68 | 8.0% |
| Board of Higher Education Employees | |
| 09/01/67 – 08/31/68 | 5.0% |
| Twenty-Year and Age-55-Increased-Benefits Pension Plan Members | |
| 09/01/68 – 06/30/70 | 8.0% |
| 07/01/70 – 12/31/75 | 5.0% |
| 01/01/76 and later | 2.5% |
| Article 15 Members | |
| All | 0.0% |

TEACHERS' RETIREMENT SYSTEM OF THE CITY OF NEW YORK QUALIFIED PENSION PLAN

CONTRIBUTIONS (Cont'd)

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.

Statistical Section



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Statistical Section Overview

This part of the Annual Comprehensive Financial Report presents detailed information as a context for understanding how the information in the Financial Section relates to the Teachers' Retirement System's overall condition. The following are the categories of the various schedules that are included in this Section:

QPP Financial Trend Information

Schedules 1 through 3 contain trend information to help the reader understand how the QPP's financial performance and condition have changed over time.

QPP Demographic and Economic Information of In-Service Members

Schedules 4 through 7 offer demographic and economic information of in-service members to help the reader understand this segment of the QPP membership population.

QPP Benefit Payment, and Demographic and Economic Information of Retired Members

Schedules 8 through 17 present information to help the reader assess the QPP's current and future benefit payment obligations based on financial and demographic information of retired members.

QPP and TDA Operating Expense Information

Schedule 18 contains trend information as it relates to investment and administrative expenses of the System.

TDA Financial Trend Information

Schedules 19 through 21 contain trend information to help the reader understand how the TDA Program's financial performance and condition have changed over time.

TDA Membership Information of In-Service and Retired Members

Schedules 22 through 26 present membership information to help the reader assess the TDA Program's demographics and financial activity.

Schedule 1: Net Position and Changes in Net Position — QPP

In Thousands

| Year Ended | Pension Fund | Diversified Equity | Balanced Fund* | International Equity | Inflation Protection** | Sustainable Equity*** | U.S. Equity Index**** | International Equity Index ***** | Net Position | Changes in Net Position |
|------------|--------------|--------------------|----------------|----------------------|------------------------|-----------------------|-----------------------|----------------------------------|--------------|-------------------------|
| 2015 | \$41,452,046 | \$2,740,658 | \$34,034 | \$15,071 | \$4,747 | \$8,108 | — | — | \$44,254,664 | (\$235,275) |
| 2016 | 41,440,456 | 2,142,217 | 22,786 | 12,262 | 3,930 | 7,894 | — | — | 43,629,545 | (625,119) |
| 2017 | 43,920,339 | 6,058,218 | 83,594 | 16,685 | 4,760 | 12,127 | — | — | 50,095,723 | 6,466,178 |
| 2018 | 48,172,801 | 6,256,312 | 69,477 | 16,458 | 4,553 | 12,875 | — | — | 54,532,476 | 4,436,753 |
| 2019 | 51,949,650 | 5,947,790 | 61,152 | 15,470 | 3,904 | 12,245 | — | — | 57,990,211 | 3,457,735 |
| 2020 | 53,732,776 | 5,499,519 | 57,166 | 13,813 | — | 12,791 | 2,795 | 90 | 59,318,950 | 1,328,739 |
| 2021 | 71,185,752 | 7,070,829 | 54,015 | 15,200 | — | 16,554 | 4,825 | 123 | 78,347,298 | 19,028,348 |
| 2022 | 58,724,228 | 5,213,617 | 40,692 | 12,835 | — | 13,532 | 4,081 | 443 | 64,009,428 | (14,337,870) |
| 2023 | 62,344,218 | 5,517,287 | 36,135 | 11,934 | — | 15,579 | 8,826 | 277 | 67,934,256 | 3,924,828 |
| 2024 | 68,550,169 | 5,864,920 | 31,400 | 11,845 | — | 18,212 | 11,313 | 530 | 74,488,389 | 6,554,133 |

* Bond Fund prior to January 1, 2018

** Fund discontinued as of April 1, 2020

*** Socially responsive equity fund prior to October 1, 2019

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

| Schedule 2: 2024 Changes in Net Position — QPP | | | | | | | | |
|---|--------------|--------------------|---------------|----------------------|--------------------|-------------------|----------------------------|--------------|
| In Thousands | | | | | | | | |
| | Pension Fund | Diversified Equity | Balanced Fund | International Equity | Sustainable Equity | U.S. Equity Index | International Equity Index | Total |
| 2023 Net Position | \$62,344,218 | \$5,517,287 | \$36,135 | \$11,934 | \$15,579 | \$8,826 | \$277 | \$67,934,256 |
| Member Contributions | 331,484 | 183 | 7 | — | — | — | — | 331,674 |
| Employer Contributions | 3,218,634 | 4 | — | — | — | — | — | 3,218,638 |
| Interest & Misc Income | 1,482,593 | 3,714 | 5 | 6 | 15 | 3 | — | 1,486,336 |
| Dividend Income | 1,018,335 | 94,467 | — | 171 | 82 | — | — | 1,113,055 |
| Realized Profit/Loss | 1,564,007 | 218,123 | 1,809 | 147 | 726 | 94 | 5 | 1,784,911 |
| Unrealized Profit/Loss | 6,030,858 | 747,823 | 1,290 | 466 | 3,321 | 1,370 | 17 | 6,785,145 |
| Benefit Payments | (4,489,972) | (613,247) | (6,245) | (1,442) | (1,765) | (1,169) | (50) | (5,113,890) |
| Refunds & Withdrawals | (25,660) | (413) | — | — | — | — | — | (26,073) |
| Interest Paid to TDA Funds | (2,393,665) | — | — | — | — | — | — | (2,393,665) |
| Transfer to other Systems | (9,244) | — | — | — | — | — | — | (9,244) |
| Interfund Transfer | 83,970 | (85,850) | (1,547) | 607 | 337 | 2,201 | 282 | — |
| TDA Rebalance | 94,273 | — | — | — | — | — | — | 94,273 |
| Provision for Expenses* | (699,662) | (17,171) | (54) | (44) | (83) | (12) | (1) | (717,027) |
| 2024 Net changes | \$6,205,951 | \$347,633 | (\$4,735) | (\$89) | \$2,633 | \$2,487 | \$253 | \$6,554,133 |
| 2024 Net Position | \$68,550,169 | \$5,864,920 | \$31,400 | \$ 11,845 | \$18,212 | \$11,313 | \$530 | \$74,488,389 |
| * Includes Administrative and Investment Expenses | | | | | | | | |

Schedule 3: Changes in Net Position — QPP

In Thousands

| Year Ended June 30* | 1 | 2 | 3 | 4a | 4b | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|--------------------------|------------------------|-----------------------|----------------------------------|---------------|-----------------------------|---------------------------|------------------|-------------|------------------|-------------------------|------------------------|----|
| Net Member Contributions | Employer Contributions | Net Investment Income | Transfer from / to Other Systems | TDA Rebalance | TDA Fixed Interest Payments | Total Retirement Benefits | Loan Liquidation | Withdrawals | Other** Benefits | Administrative Expenses | Change in Net Position | |
| 2015 | \$158,590 | \$3,325,528 | \$1,611,929 | \$329 | — | (\$3,884,026) | (\$28,775) | (\$14,312) | (\$97,159) | (\$58,391) | (\$235,275) | |
| 2016 | 173,696 | 3,760,714 | 960,267 | 1,233 | — | (3,954,654) | (20,126) | (13,639) | (119,036) | (59,367) | (625,119) | |
| 2017 | 180,076 | 3,945,768 | 8,133,280 | (2,291) | (43,938) | (4,097,646) | (16,958) | (13,493) | (91,215) | (60,790) | 6,466,178 | |
| 2018 | 195,241 | 3,949,689 | 6,275,115 | (3,534) | 32,704 | (4,234,277) | (17,935) | (17,262) | (82,450) | (65,076) | 4,436,753 | |
| 2019 | 217,205 | 3,759,199 | 5,721,310 | 1,222 | 27,449 | (4,370,616) | (12,800) | (16,580) | (87,684) | (64,291) | 3,457,735 | |
| 2020 | 226,920 | 3,652,570 | 3,911,187 | (2,798) | 42,651 | (4,437,206) | (14,476) | (15,033) | (124,371) | (64,532) | 1,328,739 | |
| 2021 | 247,751 | 3,193,270 | 22,362,988 | (5,550) | (4,175) | (4,691,132) | (10,305) | (18,021) | 20,010 | (68,100) | 19,028,348 | |
| 2022 | 273,686 | 3,364,379 | (10,853,862) | (2,993) | 2,537 | (4,684,780) | (23,305) | (22,332) | (179,071) | (71,490) | (14,337,870) | |
| 2023 | 292,473 | 3,143,803 | 7,844,384 | (6,564) | (66,064) | (4,875,015) | (18,846) | (25,817) | (106,220) | (73,784) | 3,924,828 | |
| 2024 | 331,674 | 3,218,638 | 10,528,010 | (9,244) | 94,273 | (5,003,538) | (20,356) | (26,073) | (89,996) | (75,590) | 6,554,133 | |

Total Retirement Benefits By Type

| Year Ended June 30* | 6a Service | 6b Ordinary Disability | 6c Accident Disability | 6d Death Benefits | Total Retirement**** |
|---------------------|---------------|------------------------|------------------------|-------------------|----------------------|
| 2015 | (\$3,660,115) | (\$54,633) | (\$30,276) | (\$139,002) | (\$3,884,026) |
| 2016 | (3,721,783) | (56,624) | (30,912) | (145,335) | (3,954,654) |
| 2017 | (3,855,232) | (58,447) | (31,470) | (152,497) | (4,097,646) |
| 2018 | (3,979,655) | (61,606) | (32,700) | (160,316) | (4,234,277) |
| 2019 | (4,094,412) | (64,061) | (33,510) | (178,633) | (4,370,616) |
| 2020 | (4,151,269) | (65,477) | (32,766) | (187,694) *** | (4,437,206) |
| 2021 | (4,378,692) | (65,481) | (34,123) | (212,836) *** | (4,691,132) |
| 2022 | (4,375,276) | (65,648) | (33,529) | (210,327) *** | (4,684,780) |
| 2023 | (4,546,489) | (69,342) | (35,652) | (223,532) *** | (4,875,015) |
| 2024 | (4,674,252) | (69,775) | (36,283) | (223,228) | (5,003,538) |

* Benefit Payment categories for 2015-2023 take into account retirement valuation reports.

** Other Benefits consists of Retiree Advances, delayed interest payments, Active Death Payments, Accidental Death, and excluding Fiscal Year 2024, adjustment of retirement benefits is based on retirement valuation reports.

**** Death Benefits for 2020 include \$1,469 of Accidental Death benefits; Death Benefits for 2021 include \$1,644 of Accidental Death benefits; Death Benefits for 2022 include \$1,721 of Accidental Death benefits; Death Benefits for 2023 include \$1,865 of Accidental Death benefits; (see schedule 17)

Note: Benefit payments and withdrawals include columns 6, 7, 8, and 9.

Schedule 4: Participating Employers — QPP

As of June 30, 2022 (Lag)

| Employer | | | Number of In-Service Members* | Annual Payroll* |
|---|------------|----------------------------|-------------------------------------|-------------------------|
| NYC Department of Education and City University of New York | | | 116,660 | \$11,263,366,641 |
| City University of New York | | | | |
| Senior Colleges & Community Colleges | | | 6,459 | 507,554,406 |
| Charter Schools** | Start Date | Type | | |
| Future Leaders Institute | 09/2005 | DOE Conversion - UFT | 34 | 3,178,488 |
| Harriet Tubman | 09/2005 | DOE Conversion - Non Union | 58 | 4,695,433 |
| Imagine Me Leadership | 09/2017 | Non Conversion - Non Union | 16 | 1,066,219 |
| Kipp Academy | 09/2000 | DOE Conversion - UFT | 77 | 7,394,135 |
| Kipp NYC | 07/2016 | Non Conversion - Non Union | 28 | 4,230,931 |
| Opportunity | 09/2004 | Non Conversion - UFT | 59 | 6,005,701 |
| Renaissance | 09/2000 | DOE Conversion - UFT | 54 | 5,468,864 |
| South Bronx | 09/2015 | Non Conversion - UFT | 38 | 3,393,902 |
| University Prep | 09/2008 | Non Conversion - UFT | 94 | 8,947,777 |
| Voice | 09/2008 | Non Conversion - Non Union | 77 | 7,534,987 |
| Wildcat | 09/2000 | DOE Conversion - UFT | 20 | 2,286,434 |
| SUBTOTAL | | | 555 | \$54,202,871 |
| TOTAL | | | 123,674 | \$11,825,123,918 |

* The number of in service employees and their corresponding Annual Payroll include only current active members receiving salary as of each June 30th.

** Charter Schools that were converted from the NYC Department of Education Schools became participating employers when they were first converted to Charter Schools. Unless restricted by a collective bargaining agreement, a non-conversion Charter School decision to participate is voluntary and at the discretion of the individual school.

Schedule 5: Active Membership Summary — QPP

| Year | As of July 1 | Contributors Registered | Payroll Updates | Contributors Withdrawn | As of June 30th |
|------|-----------------|----------------------------|--------------------|---------------------------|--------------------|
| 2014 | 112,481 | 7,915 | (4,032) | (4,638) | 111,726 |
| 2015 | 111,726 | 8,727 | (2,499) | (3,302) | 114,652 |
| 2016 | 114,652 | 10,239 | (2,519) | (4,171) | 118,201 |
| 2017 | 118,201 | 9,466 | (2,894) | (3,947) | 120,826 |
| 2018 | 120,826 | 8,797 | (3,619) | (4,240) | 121,764 |
| 2019 | 121,764 | 7,357 | (1,844) | (3,941) | 123,336 |
| 2020 | 123,336 | 7,074 | (1,438) | (4,696) | 124,276 |
| 2021 | 124,276 | 3,630 | (837) | (3,858) | 123,211 |
| 2022 | 123,211 | 11,920 | (1,446) | (10,011) | 123,674 |
| 2023 | 123,674 | 7,807 | (324) | (6,789) | 124,368 |

Active membership summary based on latest valuation reports. Estimated active memberships of 127,000 for 2024.

Schedule 6: Table of Average Salaries of In-Service Members — QPP

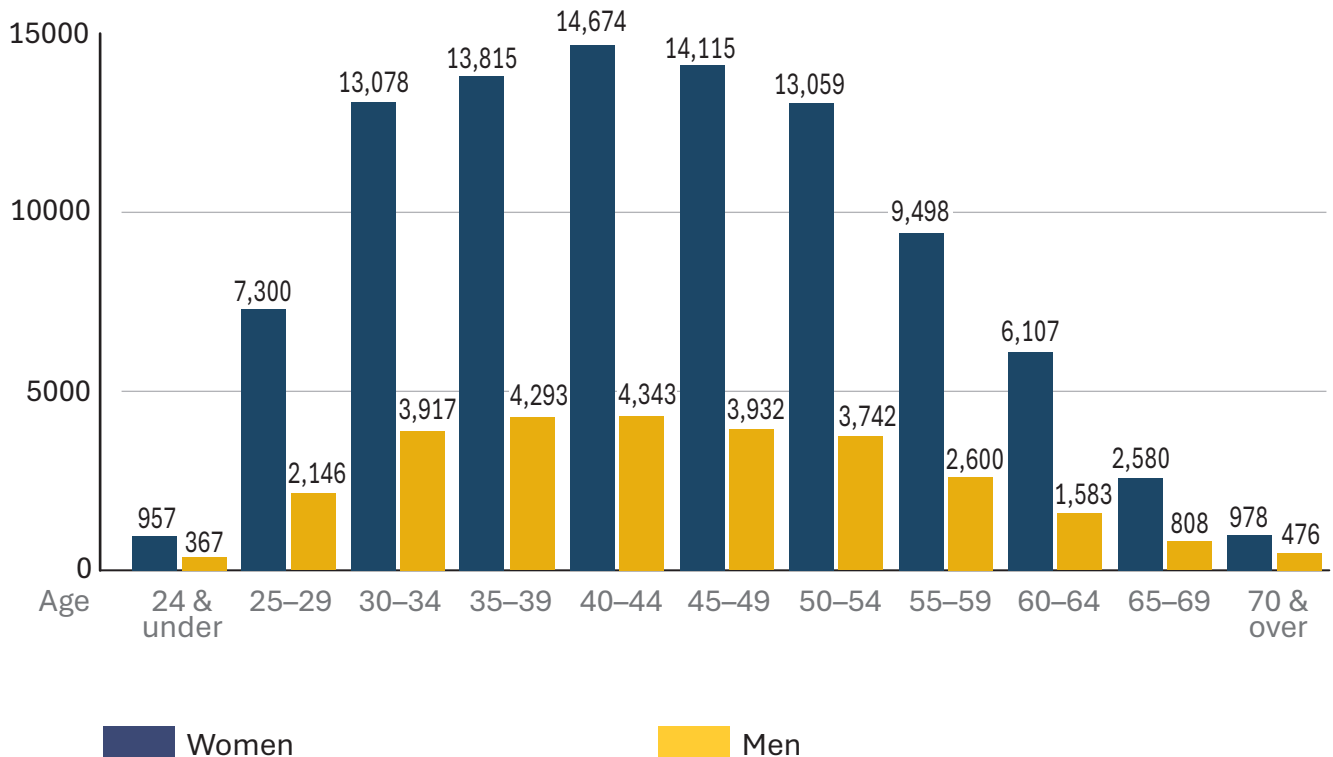
As of June 30, 2023

| Men | | | Women | | |
|------------------------------|-------------------------------|------------------------|------------------------------|-------------------------------|------------------------|
| Age | Number of In-Service Members* | Average Salaries* | Age | Number of In-Service Members* | Average Salaries* |
| 24 & under | 367 | \$50,712 | 24 & under | 957 | \$55,188 |
| 25-29 | 2,146 | 68,446 | 25-29 | 7,300 | 72,961 |
| 30-34 | 3,917 | 83,028 | 30-34 | 13,078 | 85,606 |
| 35-39 | 4,293 | 96,874 | 35-39 | 13,815 | 94,784 |
| 40-44 | 4,343 | 108,020 | 40-44 | 14,674 | 103,122 |
| 45-49 | 3,932 | 117,854 | 45-49 | 14,115 | 107,962 |
| 50-54 | 3,742 | 121,581 | 50-54 | 13,059 | 109,175 |
| 55-59 | 2,600 | 117,914 | 55-59 | 9,498 | 100,788 |
| 60-64 | 1,583 | 110,989 | 60-64 | 6,107 | 94,526 |
| 65-69 | 808 | 106,312 | 65-69 | 2,580 | 92,320 |
| 70 & over | 476 | 93,064 | 70 & over | 978 | 92,875 |
| Total | 28,207 | \$103,044 | Total | 96,161 | \$97,137 |
| Total Annual Salaries | | \$2,906,555,483 | Total Annual Salaries | | \$9,340,797,974 |

* The member count and the annual payroll include only those who were on the June 30th payroll.

In-Service Members on Payroll—Distribution By Age

As of June 30, 2023



Schedule 7: In-Service Membership By Tier and By Title — QPP

| In-Service Membership By Tier | | | | | | | | In-Service Membership By Title | | | | |
|-------------------------------|-------------|--------|---------|----------|---------|---------|----------|--------------------------------|-------------------------------|------------------------|--------------------------|--------|
| Year | Average Age | Tier I | Tier II | Tier III | Tier IV | Tier VI | Teachers | Paraprofessionals | Principals and Administrators | Full-Time CUNY Faculty | Adjunct CUNY Instructors | Others |
| 2015 | 44.8 | 0.4% | 0.2% | 0.7% | 81.3% | 17.4% | 64.5% | 16.8% | 5.4% | 3.3% | 2.3% | 7.7% |
| 2016 | 44.7 | 0.3% | 0.2% | 0.6% | 81.0% | 17.9% | 63.6% | 17.3% | 5.6% | 3.4% | 2.3% | 7.8% |
| 2017 | 44.6 | 0.2% | 0.1% | 0.5% | 71.6% | 27.6% | 62.9% | 17.7% | 5.6% | 3.7% | 2.3% | 7.8% |
| 2018 | 44.7 | 0.2% | 0.1% | 0.4% | 67.7% | 31.6% | 62.9% | 17.6% | 5.6% | 3.9% | 2.3% | 7.7% |
| 2019 | 44.8 | 0.1% | 0.1% | 0.3% | 64.5% | 35.0% | 62.5% | 17.8% | 5.6% | 4.2% | 2.3% | 7.6% |
| 2020 | 44.9 | 0.1% | 0.1% | 0.2% | 61.3% | 38.3% | 62.3% | 17.8% | 5.4% | 4.2% | 2.4% | 7.9% |
| 2021 | 45.3 | 0.1% | 0.1% | 0.2% | 59.4% | 40.2% | 62.4% | 17.8% | 5.4% | 4.2% | 2.4% | 7.8% |
| 2022 | 45.1 | 0.1% | 0.0% | 0.1% | 54.3% | 45.5% | 61.1% | 18.6% | 5.4% | 4.3% | 2.3% | 8.3% |
| 2023 | 45.2 | 0.1% | 0.0% | 0.1% | 51.1% | 48.7% | 60.7% | 18.9% | 5.4% | 4.4% | 2.2% | 8.4% |
| 2024 | 45.3 | 0.1% | 0.0% | 0.1% | 48.2% | 51.6% | 60.4% | 19.2% | 5.4% | 4.5% | 2.1% | 8.4% |

Schedule 8: Retiree Summary — QPP

| Year | As of July 1 | Retirees Registered | Payroll Status Changes | Retirees Withdrawn | As of June 30th |
|------|--------------|---------------------|------------------------|--------------------|-----------------|
| 2014 | 78,177 | 3,791 | (186) | (1,363) | 80,419 |
| 2015 | 80,419 | 4,171 | (308) | (1,505) | 82,777 |
| 2016 | 82,777 | 3,267 | (16) | (1,935) | 84,093 |
| 2017 | 84,093 | 3,030 | (153) | (2,200) | 84,770 |
| 2018 | 84,770 | 3,578 | (21) | (2,032) | 86,295 |
| 2019 | 86,295 | 4,122 | 198 | (2,108) | 88,507 |
| 2020 | 88,507 | 3,477 | 19 | (2,467) | 89,536 |
| 2021 | 89,536 | 2,921 | 8 | (2,468) | 89,997 |
| 2022 | 89,997 | 4,706 | 19 | (2,440) | 92,282 |
| 2023 | 92,282 | 3,874 | 50 | (2,447) | 93,759 |

Retiree membership summary based on latest valuation reports. Estimated retiree memberships of 96,000 for 2024.

Schedule 9: Average Years of Service of New Retirees — QPP

Average Years of Service

| Year | Men | Women | Men and Women | Total Number of Retirees* |
|------|------|-------|---------------|---------------------------|
| 2014 | 24.2 | 24.7 | 24.6 | 3,791 |
| 2015 | 24.9 | 24.0 | 24.2 | 4,171 |
| 2016 | 24.5 | 24.3 | 24.4 | 3,267 |
| 2017 | 25.6 | 25.0 | 25.1 | 3,030 |
| 2018 | 25.6 | 25.1 | 25.2 | 3,578 |
| 2019 | 25.6 | 25.0 | 25.1 | 4,122 |
| 2020 | 26.1 | 25.4 | 25.5 | 3,477 |
| 2021 | 26.1 | 25.0 | 25.3 | 2,921 |
| 2022 | 26.2 | 25.6 | 25.7 | 4,706 |
| 2023 | 26.9 | 25.7 | 25.9 | 3,874 |

* Total number of new retirees based on the latest valuation reports.

Schedule 10: Payment Options Chosen at Retirement — QPP

| Options Chosen By Tier I/II Members | | | | | | | Options Chosen by Tier III/IV/VI Members | | | |
|-------------------------------------|-------------|----------------|-----------------|---------------------|------------------|-------------------------------|--|-----------------|---------------------|-------------------------------|
| Year | Average Age | Maximum Payout | Pop-Up Payments | Continuing Payments | Lump-Sum Payment | Guaranteed Number of Payments | Maximum Payout | Pop-Up Payments | Continuing Payments | Guaranteed Number of Payments |
| 2015 | 60.8 | 50.8% | 25.4% | 20.0% | 1.5% | 2.3% | 68.5% | 18.1% | 10.6% | 2.8% |
| 2016 | 60.9 | 59.4% | 20.3% | 17.6% | 0.7% | 2.0% | 68.2% | 19.6% | 10.7% | 1.5% |
| 2017 | 60.9 | 62.4% | 23.7% | 11.9% | 0.0% | 2.0% | 67.8% | 19.4% | 10.9% | 1.9% |
| 2018 | 61.0 | 56.1% | 27.1% | 15.0% | 0.9% | 0.9% | 66.6% | 20.3% | 11.6% | 1.5% |
| 2019 | 61.0 | 56.4% | 15.4% | 25.6% | 1.3% | 1.3% | 66.7% | 20.5% | 11.4% | 1.4% |
| 2020 | 61.0 | 59.1% | 18.2% | 16.6% | 6.1% | 0.0% | 66.3% | 20.4% | 12.0% | 1.3% |
| 2021 | 61.1 | 58.7% | 10.9% | 26.1% | 2.1% | 2.2% | 65.6% | 18.6% | 13.4% | 2.4% |
| 2022 | 61.2 | 54.9% | 21.6% | 19.6% | 3.9% | 0.0% | 66.5% | 16.5% | 14.4% | 2.6% |
| 2023 | 62.0 | 66.7% | 9.5% | 19.0% | 0.0% | 4.8% | 68.4% | 16.5% | 13.1% | 2.0% |
| 2024 | 61.7 | 50.0% | 16.7% | 27.8% | 0.0% | 5.5% | 68.8% | 16.4% | 12.8% | 2.0% |

Schedule 11: Retirees' Average Monthly Benefit Payments and Final Average Salary

Organized By Years Of Credited Service — QPP

| | Year* | Survivor | Other | Under 5 Yrs** | 5 - 9 Yrs | 10 - 14 Yrs | 15 - 19 Yrs | 20 - 24 Yrs | 25 - 29 Yrs | 30 - 34 Yrs | 35 & up Yrs | Total |
|----------------------|---------|----------|--------|---------------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|--------|
| Retirees | 2015 | 4,403 | 4,620 | 68 | 1,481 | 5,543 | 6,374 | 10,588 | 18,260 | 19,649 | 11,791 | 82,777 |
| Retirees | 2016 | 4,564 | 4,989 | 67 | 1,516 | 5,794 | 6,535 | 10,854 | 18,568 | 19,536 | 11,670 | 84,093 |
| Retirees | 2017 | 4,635 | 3,879 | 69 | 1,566 | 5,975 | 6,713 | 11,266 | 19,106 | 19,912 | 11,649 | 84,770 |
| Retirees | 2018 | 4,651 | 3,264 | 67 | 1,679 | 6,290 | 6,909 | 11,720 | 19,784 | 20,279 | 11,652 | 86,295 |
| Retirees | 2019 | 4,734 | 7,064 | 65 | 1,722 | 6,245 | 6,757 | 11,661 | 19,027 | 19,839 | 11,393 | 88,507 |
| Retirees | 2020 | 4,798 | 8,839 | 64 | 1,790 | 6,235 | 6,615 | 11,655 | 18,807 | 19,576 | 11,157 | 89,536 |
| Retirees | 2021 | 5,067 | 11,166 | 66 | 1,832 | 6,083 | 6,340 | 11,398 | 18,137 | 19,068 | 10,840 | 89,997 |
| Retirees | 2022 | 5,169 | 10,711 | 64 | 1,857 | 6,377 | 6,637 | 12,232 | 18,857 | 19,596 | 10,782 | 92,282 |
| Retirees | 2023 | 5,295 | 1,067 | 274 | 2,134 | 7,487 | 7,868 | 14,603 | 21,816 | 21,928 | 11,287 | 93,759 |
| Retirees | 2024*** | 5,416 | 2,168 | 235 | 2,310 | 7,589 | 7,984 | 14,945 | 22,113 | 22,073 | 11,167 | 96,000 |
| | Year* | Survivor | Other | Under 5 Yrs** | 5 - 9 Yrs | 10 - 14 Yrs | 15 - 19 Yrs | 20 - 24 Yrs | 25 - 29 Yrs | 30 - 34 Yrs | 35 & up Yrs | Total |
| Avg Monthly Benefit | 2015 | | | \$1,324 | \$606 | \$1,046 | \$1,541 | \$2,609 | \$4,054 | \$5,279 | \$7,350 | |
| Avg Monthly Benefit | 2016 | | | \$1,290 | \$681 | \$1,118 | \$1,555 | \$2,601 | \$4,065 | \$5,202 | \$6,895 | |
| Avg Monthly Benefit | 2017 | | | \$1,360 | \$648 | \$1,112 | \$1,626 | \$2,693 | \$4,198 | \$5,368 | \$7,061 | |
| Avg Monthly Benefit | 2018 | | | \$1,442 | \$995 | \$1,219 | \$1,714 | \$2,792 | \$4,266 | \$5,481 | \$7,240 | |
| Avg Monthly Benefit | 2019 | | | \$1,506 | \$906 | \$1,153 | \$1,620 | \$2,741 | \$4,276 | \$5,475 | \$7,232 | |
| Avg Monthly Benefit | 2020 | | | \$1,562 | \$688 | \$1,189 | \$1,649 | \$2,790 | \$4,319 | \$5,541 | \$7,285 | |
| Avg Monthly Benefit | 2021 | | | \$1,670 | \$643 | \$1,139 | \$1,740 | \$2,877 | \$4,493 | \$5,867 | \$7,873 | |
| Avg Monthly Benefit | 2022 | | | \$1,611 | \$672 | \$1,164 | \$1,743 | \$2,962 | \$4,510 | \$5,822 | \$7,734 | |
| Avg Monthly Benefit | 2023 | | | \$2,456 | \$808 | \$1,210 | \$1,855 | \$3,011 | \$4,586 | \$5,844 | \$7,753 | |
| Avg Monthly Benefit | 2024*** | | | \$2,467 | \$706 | \$1,309 | \$1,867 | \$3,119 | \$4,714 | \$6,070 | \$8,106 | |
| | Year* | Survivor | Other | Under 5 Yrs** | 5 - 9 Yrs | 10 - 14 Yrs | 15 - 19 Yrs | 20 - 24 Yrs | 25 - 29 Yrs | 30 - 34 Yrs | 35 & up Yrs | Total |
| Final Average Salary | 2015 | | | \$30,946 | \$44,441 | \$49,831 | \$50,645 | \$63,802 | \$73,796 | \$77,860 | \$84,692 | |
| Final Average Salary | 2016 | | | \$30,465 | \$44,767 | \$51,350 | \$52,142 | \$65,096 | \$75,755 | \$78,660 | \$85,340 | |
| Final Average Salary | 2017 | | | \$30,945 | \$45,569 | \$52,882 | \$54,286 | \$67,606 | \$78,798 | \$80,914 | \$86,726 | |
| Final Average Salary | 2018 | | | \$32,029 | \$45,696 | \$53,990 | \$55,783 | \$69,233 | \$80,890 | \$82,536 | \$87,830 | |
| Final Average Salary | 2019 | | | \$32,819 | \$45,373 | \$53,449 | \$55,695 | \$69,782 | \$81,534 | \$83,186 | \$88,424 | |
| Final Average Salary | 2020 | | | \$34,330 | \$45,396 | \$53,968 | \$56,659 | \$70,950 | \$82,503 | \$84,193 | \$89,319 | |
| Final Average Salary | 2021 | | | \$33,943 | \$45,370 | \$53,757 | \$56,937 | \$71,560 | \$83,173 | \$84,663 | \$89,814 | |
| Final Average Salary | 2022 | | | \$34,667 | \$45,446 | \$54,828 | \$59,023 | \$73,283 | \$85,716 | \$86,718 | \$91,222 | |
| Final Average Salary | 2023 | | | \$35,259 | \$45,751 | \$56,661 | \$62,277 | \$76,642 | \$89,679 | \$90,623 | \$93,811 | |
| Final Average Salary | 2024*** | | | \$34,315 | \$46,255 | \$57,210 | \$63,610 | \$78,310 | \$91,592 | \$92,330 | \$95,165 | |

* Retiree figures for 2015-2023 take into account retirement valuation reports.

** Retirees include Service Retirement, Accidental Disability and Ordinary Disability. The majority of retirees with under 5 Yrs. of service are Accidental Disability.

*** Retiree figures for 2024 include Service or FAS retirement revision cases previously categorized as "Other".

Note: If elected, total monthly benefits for tier I and tier II members depend on current unit value.

Schedule 12: Average Annual Benefit Payment Amounts — QPP

| Service Retirement Benefits | | | Ordinary (Non-Duty) Disability Benefits | | Accidental (Duty) Disability Benefits | | Survivors' Benefits | |
|-----------------------------|--------|--------------------------|---|--------------------------|---------------------------------------|--------------------------|---------------------|--------------------------|
| Year | Number | Average Annual Allowance | Number | Average Annual Allowance | Number | Average Annual Allowance | Number | Average Annual Allowance |
| 2014 | 73,069 | \$48,325 | 2,379 | \$21,641 | 714 | \$40,738 | 4,257 | \$31,619 |
| 2015 | 75,251 | 48,639 | 2,481 | 22,020 | 732 | 41,360 | 4,313 | 32,229 |
| 2016 | 76,346 | 48,749 | 2,541 | 22,284 | 745 | 41,492 | 4,461 | 32,579 |
| 2017 | 76,973 | 50,086 | 2,549 | 22,929 | 744 | 42,299 | 4,504 | 33,858 |
| 2018 | 78,364 | 50,784 | 2,640 | 23,336 | 757 | 43,197 | 4,534 | 35,359 |
| 2019 | 80,048 | 51,149 | 2,728 | 23,483 | 776 | 43,183 | 4,955 | 36,051 |
| 2020 | 80,915 | 51,304 | 2,731 | 23,975 | 750 | 43,689 | 5,140 | 36,516* |
| 2021 | 81,213 | 53,916 | 2,655 | 24,663 | 758 | 45,017 | 5,371 | 39,627** |
| 2022 | 83,363 | 52,485 | 2,654 | 24,735 | 749 | 44,764 | 5,516 | 38,131*** |
| 2023 | 84,665 | 53,700 | 2,715 | 25,540 | 777 | 45,885 | 5,602 | 39,902**** |

* Survivors' benefits for 2020 include 30 Accidental Deaths with average annual benefit of \$48,956.

** Survivors' benefits for 2021 include 35 Accidental Deaths with an average annual benefits of \$46,967.

*** Survivors' benefits for 2022 include 37 Accidental Deaths with an average annual benefits of \$46,519.

**** Survivors' benefits for 2023 include 39 Accidental Deaths with an average annual benefits of \$47,821 (see Schedule 17).

Schedule 13: Service Retirement Allowances — QPP

As of June 30, 2023

| Men | | | Women | | |
|-------------------------------------|--------------------|--------------------------|-------------------------------------|--------------------|--------------------------|
| Age | Number of Retirees | Average Annual Allowance | Age | Number of Retirees | Average Annual Allowance |
| under 30 | — | — | under 30 | — | — |
| 30-34 | — | — | 30-34 | — | — |
| 35-39 | — | — | 35-39 | — | — |
| 40-44 | — | — | 40-44 | — | — |
| 45-49 | — | — | 45-49 | — | — |
| 50-54 | — | — | 50-54 | — | — |
| 55-59 | 705 | \$64,969 | 55-59 | 2,300 | \$60,072 |
| 60-64 | 1,714 | 57,910 | 60-64 | 5,664 | 52,370 |
| 65-69 | 2,704 | 52,010 | 65-69 | 10,220 | 46,371 |
| 70-74 | 3,932 | 55,233 | 70-74 | 13,865 | 50,730 |
| 75-79 | 6,561 | 68,806 | 75-79 | 13,483 | 55,746 |
| 80-84 | 3,518 | 65,882 | 80-84 | 8,545 | 50,606 |
| 85-89 | 1,845 | 64,336 | 85-89 | 4,669 | 44,742 |
| 90 & over | 1,154 | 63,061 | 90 & over | 3,786 | 43,295 |
| Total | 22,133 | \$62,240 | Total | 62,532 | \$50,677 |
| Total Annual Allowances Paid | | \$1,377,557,735 | Total Annual Allowances Paid | | \$3,168,931,155 |

Schedule 14: Ordinary Disability Retirement Allowances — QPP

As of June 30, 2023

| Men | | | Women | | |
|-------------------------------------|--------------------|--------------------------|-------------------------------------|--------------------|--------------------------|
| Age | Number of Retirees | Average Annual Allowance | Age | Number of Retirees | Average Annual Allowance |
| under 30 | — | — | under 30 | — | — |
| 30-34 | — | — | 30-34 | — | — |
| 35-39 | — | — | 35-39 | 4 | \$26,889 |
| 40-44 | 7 | \$28,079 | 40-44 | 26 | 32,287 |
| 45-49 | 16 | 28,874 | 45-49 | 74 | 26,996 |
| 50-54 | 41 | 33,432 | 50-54 | 176 | 28,885 |
| 55-59 | 49 | 30,150 | 55-59 | 223 | 26,863 |
| 60-64 | 74 | 27,709 | 60-64 | 350 | 25,603 |
| 65-69 | 87 | 26,417 | 65-69 | 407 | 23,599 |
| 70-74 | 108 | 27,726 | 70-74 | 398 | 24,151 |
| 75-79 | 99 | 29,781 | 75-79 | 294 | 24,465 |
| 80-84 | 45 | 28,820 | 80-84 | 143 | 19,974 |
| 85-89 | 11 | 25,454 | 85-89 | 57 | 20,034 |
| 90 & over | 3 | 21,285 | 90 & over | 23 | 22,431 |
| Total | 540 | \$28,590 | Total | 2,175 | \$24,783 |
| Total Annual Allowances Paid | | \$15,438,758 | Total Annual Allowances Paid | | \$53,903,460 |

Schedule 15: Accident Disability Retirement Allowances — QPP

As of June 30, 2023

| Men | | | Women | | |
|-------------------------------------|--------------------|--------------------------|-------------------------------------|--------------------|--------------------------|
| Age | Number of Retirees | Average Annual Allowance | Age | Number of Retirees | Average Annual Allowance |
| under 30 | — | — | under 30 | — | — |
| 30-34 | — | — | 30-34 | — | — |
| 35-39 | 1 | \$66,157 | 35-39 | 2 | \$46,515 |
| 40-44 | 2 | 49,589 | 40-44 | 8 | 51,544 |
| 45-49 | 6 | 48,287 | 45-49 | 13 | 44,903 |
| 50-54 | 9 | 54,205 | 50-54 | 29 | 48,172 |
| 55-59 | 9 | 71,637 | 55-59 | 48 | 44,247 |
| 60-64 | 15 | 43,420 | 60-64 | 76 | 44,905 |
| 65-69 | 23 | 59,262 | 65-69 | 100 | 42,576 |
| 70-74 | 30 | 46,997 | 70-74 | 116 | 44,924 |
| 75-79 | 57 | 53,779 | 75-79 | 113 | 42,091 |
| 80-84 | 19 | 49,970 | 80-84 | 48 | 48,635 |
| 85-89 | 7 | 50,155 | 85-89 | 25 | 30,804 |
| 90 & over | 5 | 47,648 | 90 & over | 16 | 42,753 |
| Total | 183 | \$52,547 | Total | 594 | \$43,832 |
| Total Annual Allowances Paid | | \$9,616,019 | Total Annual Allowances Paid | | \$26,036,411 |

Schedule 16: Survivors' Benefit — QPP

As of June 30, 2023

| Men | | | Women | | |
|-----------------------------------|-------------------------|------------------------|-----------------------------------|-------------------------|------------------------|
| Age | Number of Beneficiaries | Average Annual Benefit | Age | Number of Beneficiaries | Average Annual Benefit |
| under 30 | 4 | \$23,855 | under 30 | 14 | \$21,637 |
| 30-34 | 8 | 36,521 | 30-34 | 17 | 23,990 |
| 35-39 | 14 | 21,504 | 35-39 | 15 | 19,059 |
| 40-44 | 23 | 24,133 | 40-44 | 28 | 29,413 |
| 45-49 | 26 | 29,474 | 45-49 | 37 | 24,866 |
| 50-54 | 36 | 25,676 | 50-54 | 39 | 22,709 |
| 55-59 | 49 | 19,852 | 55-59 | 79 | 20,614 |
| 60-64 | 88 | 26,544 | 60-64 | 162 | 26,948 |
| 65-69 | 119 | 30,367 | 65-69 | 206 | 35,847 |
| 70-74 | 200 | 35,067 | 70-74 | 484 | 44,079 |
| 75-79 | 325 | 37,925 | 75-79 | 709 | 47,854 |
| 80-84 | 314 | 35,957 | 80-84 | 775 | 47,293 |
| 85-89 | 224 | 30,250 | 85-89 | 615 | 47,754 |
| 90 & over | 282 | 30,904 | 90 & over | 671 | 40,837 |
| Total | 1,712 | \$32,697 | Total | 3,851 | \$43,025 |
| Total Annual Benefits Paid | | \$55,977,370 | Total Annual Benefits Paid | | \$165,689,246 |

Schedule 17: Accidental Death — QPP

As of June 30, 2023

| Men | | | Women | | |
|-----------------------------------|-------------------------|------------------------|-----------------------------------|-------------------------|------------------------|
| Age | Number of Beneficiaries | Average Annual Benefit | Age | Number of Beneficiaries | Average Annual Benefit |
| under 30 | 1 | \$22,601 | under 30 | 2 | \$35,962 |
| 30-34 | 2 | 31,553 | 30-34 | — | — |
| 35-39 | — | — | 35-39 | 1 | 48,176 |
| 40-44 | — | — | 40-44 | — | — |
| 45-49 | 1 | 58,442 | 45-49 | 2 | 54,233 |
| 50-54 | 3 | 55,699 | 50-54 | 4 | 61,546 |
| 55-59 | 1 | 53,607 | 55-59 | 3 | 63,148 |
| 60-64 | 4 | 50,274 | 60-64 | 7 | 44,904 |
| 65-69 | 3 | 37,857 | 65-69 | 3 | 33,978 |
| 70-74 | — | — | 70-74 | 1 | 39,000 |
| 75-79 | — | — | 75-79 | — | — |
| 80-84 | — | — | 80-84 | 1 | 66,049 |
| 85-89 | — | — | 85-89 | — | — |
| 90 & over | — | — | 90 & over | — | — |
| Total | 15 | \$45,301 | Total | 24 | \$49,396 |
| Total Annual Benefits Paid | | \$679,519 | Total Annual Benefits Paid | | \$1,185,509 |

Schedule 18: Number and Cost of Investment and Administrative Services (QPP & TDA)

| Year Ended | Investment Agent Count | Investment Expenses | TRS Employees Count* | Administrative Expenses |
|------------|------------------------|---------------------|----------------------|-------------------------|
| 2015 | 228 | \$205,719,517 | 370 | \$84,173,556 |
| 2016 | 230 | 209,422,244 | 365 | 91,998,934 |
| 2017 | 221 | 308,283,033 | 351 | 93,821,614 |
| 2018 | 227 | 352,816,375 | 347 | 87,532,002 |
| 2019 | 228 | 299,613,733 | 350 | 88,255,115 |
| 2020 | 230 | 291,433,988 | 338 | 88,488,346 |
| 2021 | 238 | 419,445,615 | 336 | 86,389,714 |
| 2022 | 246 | 559,477,326 | 338 | 91,362,734 |
| 2023 | 246 | 530,096,588 | 361 | 91,781,807 |
| 2024 | 246 | 663,483,930** | 359 | 95,305,633 |

* Employee count does not include Consultants, Temporary Employees, and Summer Interns.

** 2024 details are found in the schedule: Summary of Investment Managers and Fees of the Investment Section.

Schedule 19: Net Position and Changes in Net Position — TDA Program

In Thousands

| Year Ended | Pension Fund | Diversified Equity | Balanced Fund* | International Equity | Inflation Protection** | Sustainable Equity*** | U.S. Equity Index**** | International Equity Index**** | Net Position | Changes in Net Position |
|------------|--------------|--------------------|----------------|----------------------|------------------------|-----------------------|-----------------------|--------------------------------|--------------|-------------------------|
| 2015 | \$18,922,602 | \$7,869,896 | \$302,816 | \$97,942 | \$39,437 | \$100,889 | — | — | \$27,333,582 | \$1,460,093 |
| 2016 | 20,511,536 | 7,365,430 | 312,613 | 96,081 | 41,444 | 117,236 | — | — | 28,444,340 | 1,110,758 |
| 2017 | 22,223,301 | 8,194,607 | 310,195 | 120,211 | 50,138 | 153,641 | — | — | 31,052,093 | 2,607,753 |
| 2018 | 23,963,722 | 8,704,088 | 316,507 | 143,858 | 60,281 | 192,526 | — | — | 33,380,982 | 2,328,889 |
| 2019 | 25,745,844 | 8,804,658 | 340,687 | 156,367 | 67,024 | 218,815 | — | — | 35,333,395 | 1,952,413 |
| 2020 | 27,638,167 | 8,481,059 | 432,171 | 162,175 | — | 290,399 | 16,492 | 3,062 | 37,023,525 | 1,690,130 |
| 2021 | 29,976,852 | 11,670,982 | 527,697 | 235,938 | — | 476,762 | 60,581 | 10,663 | 42,959,475 | 5,935,950 |
| 2022 | 31,779,391 | 9,197,288 | 495,935 | 197,309 | — | 432,814 | 86,396 | 14,936 | 42,204,069 | (755,406) |
| 2023 | 33,573,229 | 10,349,400 | 531,232 | 240,339 | — | 550,203 | 135,450 | 23,593 | 45,403,446 | 3,199,377 |
| 2024 | 35,477,917 | 11,780,028 | 580,699 | 272,938 | — | 746,950 | 216,670 | 35,684 | 49,110,886 | 3,707,440 |

* Bond Fund prior to January 1, 2018.

** Fund discontinued as of April 1, 2020.

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

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

| Schedule 20: Changes in Net Position — TDA Program | | | | | | | | | | |
|--|--------------------------|--|-----------------------|---------------|-------------------------|------------------|-----------------|---------------------|-------------------------|------------------------|
| In Thousands | | | | | | | | | | |
| Year Ended | Net Member Contributions | Fixed Interest from TRS NYC Pension Fund | Net Investment Income | TDA Rebalance | Refunds and Withdrawals | Loan Liquidation | Other Benefits* | Annuitized Payments | Administrative Expenses | Change in Net Position |
| 2015 | \$662,601 | \$1,248,988 | \$435,632 | — | (\$646,446) | (\$12,058) | (\$157,994) | (\$44,847) | (\$25,783) | \$1,460,093 |
| 2016 | 717,566 | 1,354,207 | (11,194) | — | (699,250) | (9,221) | (164,384) | (44,334) | (32,632) | 1,110,758 |
| 2017 | 743,663 | 1,466,615 | 1,398,500 | 43,938 | (768,207) | (13,069) | (183,628) | (47,027) | (33,032) | 2,607,753 |
| 2018 | 856,294 | 1,595,462 | 1,055,191 | (32,704) | (874,483) | (8,511) | (188,227) | (51,677) | (22,456) | 2,328,889 |
| 2019 | 995,035 | 1,716,679 | 669,540 | (27,449) | (985,941) | (10,889) | (328,641) | (51,957) | (23,964) | 1,952,413 |
| 2020 | 1,029,758 | 1,846,173 | 327,613 | (42,651) | (964,232) | (7,946) | (422,068) | (52,560)** | (23,957) | 1,690,130 |
| 2021 | 1,060,833 | 1,998,388 | 3,910,934 | 4,175 | (567,119) | (7,828) | (390,990) | (54,153) | (18,290) | 5,935,950 |
| 2022 | 1,088,219 | 2,140,639 | (2,087,044) | (2,537) | (1,318,714) | (11,145) | (486,852) | (58,100) | (19,872) | (755,406) |
| 2023 | 1,061,225 | 2,261,718 | 1,852,551 | 66,064 | (1,434,357) | (16,056) | (515,452) | (58,318) | (17,998) | 3,199,377 |
| 2024 | 1,207,169 | 2,393,665 | 2,359,120 | (94,273) | (1,510,540) | (15,191) | (550,045) | (62,749) | (19,716) | 3,707,440 |

* Other Benefits consists of active death payments and delayed interest payments.

** Adjusted for \$40,525 of TDAB annuity under Other Benefits (originally classified under Annuitized Payments).

Schedule 21: 2024 Changes in Net Position — TDA Program

In Thousands

| | Pension Fund | Diversified Equity | Balanced Fund | International Equity | Sustainable Equity | U.S. Equity Index | International Equity Index | Total |
|---|---------------------|---------------------|------------------|----------------------|--------------------|-------------------|----------------------------|---------------------|
| 2023 Net Position | \$33,573,229 | \$10,349,400 | \$531,232 | \$240,339 | \$550,203 | \$135,450 | \$23,593 | \$45,403,446 |
| Member Contributions | 816,595 | 230,090 | 42,161 | 24,105 | 52,794 | 33,496 | 7,928 | 1,207,169 |
| Payment of interest on TDA fixed return funds | 2,393,665 | — | — | — | — | — | — | 2,393,665 |
| Interest & Misc Income | 34,678 | 7,218 | 1,037 | 213 | 633 | 16 | 6 | 43,801 |
| Dividend Income | — | 183,553 | — | 6,212 | 3,217 | — | — | 192,982 |
| Realized Profit/Loss | — | 423,821 | 28,165 | 5,346 | 28,307 | 2,308 | 770 | 488,717 |
| Unrealized Profit/Loss | — | 1,453,051 | 20,082 | 16,969 | 129,498 | 33,597 | 2,470 | 1,655,667 |
| Benefit Payments | (605,954) | (21,070) | (438) | (77) | (309) | (126) | (11) | (627,985) |
| Refunds & Withdrawals | (1,203,391) | (269,552) | (16,609) | (5,454) | (11,466) | (3,553) | (515) | (1,510,540) |
| Interfund Transfer | 493,498 | (484,770) | (18,032) | (10,955) | 3,830 | 15,200 | 1,229 | — |
| TDA Rebalance | (24,403) | (56,875) | (5,188) | (2,138) | (6,491) | 559 | 263 | (94,273) |
| Provision for Expenses* | — | (34,838) | (1,711) | (1,622) | (3,266) | (277) | (49) | (41,763) |
| 2024 Net changes | \$1,904,688 | \$1,430,628 | \$49,467 | \$32,599 | \$196,747 | \$81,220 | \$12,091 | \$3,707,440 |
| 2024 Net Position | \$35,477,917 | \$11,780,028 | \$580,699 | \$272,938 | \$746,950 | \$216,670 | \$35,684 | \$49,110,886 |

* Includes Administrative and Investment Expenses.

Schedule 22: TDA Program Summary (Excludes Annuitants)

| Year | As of July 1 | Contributors Registered | Payroll Status Changes | Contributors Withdrawn | As of June 30th |
|------|--------------|-------------------------|------------------------|------------------------|-----------------|
| 2014 | 77,773 | 1,914 | 1,587 | (3,569) | 77,705 |
| 2015 | 77,705 | 2,751 | 3,168 | (2,440) | 81,184 |
| 2016 | 81,184 | 3,367 | 3,464 | (3,108) | 84,907 |
| 2017 | 84,907 | 2,851 | 3,037 | (3,101) | 87,694 |
| 2018 | 87,694 | 2,774 | 3,436 | (3,256) | 90,648 |
| 2019 | 90,648 | 2,179 | 3,934 | (3,161) | 93,600 |
| 2020 | 93,600 | 1,948 | 3,389 | (3,826) | 95,111 |
| 2021 | 95,111 | 1,049 | 3,840 | (3,210) | 96,790 |
| 2022 | 96,790 | 3,180 | 2,348 | (8,321) | 93,997 |
| 2023 | 93,997 | 2,047 | 3,738 | (5,551) | 94,231 |

Active membership summary based on latest valuation reports.

Schedule 23: TDA Program Annuitants Summary

| Year | As of July 1 | Annuitants Registered | Payroll Status Changes | Annuitants Withdrawn | As of June 30th |
|------|--------------|-----------------------|------------------------|----------------------|-----------------|
| 2014 | 3,055 | 120 | (5) | (134) | 3,036 |
| 2015 | 3,036 | 105 | (18) | (132) | 2,991 |
| 2016 | 2,991 | 86 | 16 | (163) | 2,930 |
| 2017 | 2,930 | 97 | 3 | (164) | 2,866 |
| 2018 | 2,866 | 91 | 28 | (174) | 2,811 |
| 2019 | 2,811 | 64 | 74 | (122) | 2,827 |
| 2020 | 2,827 | 51 | 26 | (149) | 2,755 |
| 2021 | 2,755 | 107 | 21 | (159) | 2,724 |
| 2022 | 2,724 | 109 | 22 | (125) | 2,730 |
| 2023 | 2,730 | 99 | 66 | (125) | 2,770 |

Annuitant membership summary based on latest valuation reports.

Schedule 24: Membership By Age (Active, Deferral & Beneficiary Accounts as of June 30, 2024)
TDA Program

| Contributing | | Non-Contributing | | Deferred* | | Beneficiary | | Loans** | |
|--------------|--------|------------------|-------|--------------|--------|---------------|-------|--------------|--------|
| Age | Count | Fund Balance | Count | Fund Balance | Count | Fund Balance | Count | Fund Balance | Count |
| =<25 | 6,292 | \$111,615,038 | 381 | \$3,639,536 | 8 | \$278,712 | 9 | \$2,737,234 | 748 |
| 30 | 11,132 | 479,871,527 | 1,148 | 43,453,393 | 46 | 2,535,446 | 19 | 3,036,955 | 4,142 |
| 35 | 13,467 | 986,751,381 | 1,656 | 95,264,963 | 146 | 11,326,705 | 27 | 6,535,243 | 8,512 |
| 40 | 14,966 | 1,937,967,974 | 1,280 | 108,510,674 | 461 | 47,795,507 | 24 | 6,807,118 | 12,035 |
| 45 | 14,730 | 2,765,290,564 | 859 | 93,737,126 | 570 | 70,546,390 | 54 | 23,690,441 | 13,500 |
| 50 | 13,786 | 3,445,814,677 | 720 | 101,194,720 | 723 | 119,978,335 | 72 | 26,229,019 | 13,580 |
| 55 | 9,298 | 2,381,462,205 | 575 | 79,583,014 | 3,586 | 1,410,931,023 | 92 | 25,655,821 | 10,068 |
| 60 | 5,617 | 1,374,548,939 | 360 | 46,351,280 | 6,805 | 2,719,523,817 | 147 | 46,835,756 | 7,063 |
| 65 | 2,199 | 622,985,288 | 156 | 20,708,711 | 10,435 | 4,307,227,016 | 154 | 48,563,175 | 4,501 |
| 70 | 590 | 186,849,517 | 74 | 4,995,454 | 13,309 | 6,993,553,795 | 150 | 61,296,909 | 3,070 |
| 75 | 164 | 92,890,868 | 33 | 4,383,986 | 15,032 | 8,890,883,651 | 183 | 79,701,406 | 1,792 |
| 80 | 23 | 20,698,741 | 11 | 2,762,407 | 8,536 | 4,695,677,096 | 186 | 81,046,827 | 717 |
| 85 | 10 | 11,308,409 | 1 | 56,116 | 4,105 | 1,912,800,061 | 122 | 44,977,412 | 204 |
| 90 | — | — | 2 | 111,349 | 2,316 | 720,240,567 | 78 | 13,809,278 | 57 |

Source: TRS query reports

* Includes inactive memberships

** Loan balances include interest and insurance receivable amounts.

| Schedule 25: Withdrawals By Age (From Active, Deferral, & Beneficiary Accounts, Fiscal Year 2024) | | | | | | | | | | | |
|---|-------|----------------------|--------------|-------------------------|--------------|-------------------|--------------|----------------------|--------------|-----------------------|--------------|
| TDA Program | | | | | | | | | | | |
| Age | | Partial Withdrawals* | | 401(a) Service Purchase | | RMD Withdrawals** | | Total Withdrawals*** | | Survivor Payments**** | |
| | | Count | Distribution | Count | Distribution | Count | Distribution | Count | Distribution | Count | Distribution |
| =<25 | 29 | \$277,281 | 5 | \$21,788 | 11 | \$32,904 | 118 | \$1,951,244 | 8 | \$25,598 | |
| 30 | 81 | 1,075,080 | 14 | 75,160 | 20 | 36,260 | 341 | 8,011,765 | 4 | 129,275 | |
| 35 | 177 | 2,882,784 | 31 | 141,449 | 22 | 106,568 | 384 | 15,231,678 | 7 | 162,181 | |
| 40 | 305 | 6,072,150 | 40 | 178,046 | 24 | 151,405 | 307 | 17,430,198 | 29 | 885,597 | |
| 45 | 396 | 7,214,148 | 61 | 265,586 | 53 | 449,506 | 216 | 12,555,835 | 26 | 1,321,682 | |
| 50 | 563 | 12,472,165 | 103 | 519,945 | 64 | 589,412 | 166 | 10,313,406 | 48 | 4,136,529 | |
| 55 | 2,855 | 73,480,371 | 90 | 583,197 | 84 | 762,413 | 168 | 15,087,725 | 73 | 8,194,875 | |
| 60 | 6,200 | 108,152,258 | 66 | 541,271 | 135 | 1,248,844 | 304 | 18,065,142 | 101 | 15,469,649 | |
| 65 | 5,314 | 88,862,881 | 27 | 241,927 | 124 | 1,496,544 | 169 | 14,709,728 | 123 | 25,872,422 | |
| 70 | 4,845 | 81,712,271 | 6 | 40,987 | 5,905 | 123,338,397 | 142 | 23,379,373 | 204 | 61,246,902 | |
| 75 | 3,447 | 60,666,389 | 3 | 5,120 | 13,393 | 334,779,202 | 74 | 13,383,189 | 317 | 130,353,128 | |
| 80 | 1,232 | 24,096,613 | — | — | 7,577 | 216,685,032 | 53 | 12,670,482 | 387 | 130,786,738 | |
| 85 | 458 | 13,129,349 | — | — | 3,535 | 117,434,156 | 19 | 4,004,825 | 339 | 103,831,642 | |
| 90 | 258 | 6,765,859 | — | — | 1,639 | 58,248,062 | 10 | 1,074,250 | 293 | 74,221,055 | |

Source: TRS query reports.

* Category includes 157 Partial Withdrawals to Beneficiaries.

** Category includes 1,174 RMD Withdrawals to Beneficiaries.

*** Category includes 27 Total Withdrawals to Beneficiaries.

Schedule 26: Fund Conversion of Investment Balances By Age
(Fiscal Year 2024) — TDA Program

| From | To | <25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90+ |
|------|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| FX | VA | 8.1% | 12.7% | 14.7% | 8.3% | 9.2% | 3.6% | 2.5% | 6.0% | 7.8% | 3.6% | 9.6% | 14.9% | 0.1% | 0.0% |
| FX | VB | 0.3% | 0.1% | 0.5% | 1.1% | 0.5% | 0.4% | 0.1% | 0.3% | 0.0% | 0.6% | 0.1% | 0.0% | 0.0% | 0.0% |
| FX | VC | 0.4% | 0.4% | 0.6% | 0.4% | 0.5% | 0.2% | 0.2% | 0.1% | 0.2% | 0.4% | 0.1% | 0.1% | 0.0% | 0.0% |
| FX | VE | 10.8% | 11.7% | 9.8% | 6.6% | 5.4% | 4.0% | 1.5% | 2.7% | 7.1% | 2.5% | 2.5% | 3.7% | 2.1% | 0.0% |
| FX | VF | 8.8% | 11.3% | 11.7% | 6.2% | 6.0% | 1.8% | 0.8% | 1.1% | 0.8% | 0.2% | 0.3% | 0.7% | 0.1% | 0.0% |
| FX | VG | 0.6% | 0.9% | 2.1% | 1.0% | 0.8% | 0.2% | 0.1% | 0.0% | 0.0% | 0.0% | 0.1% | 0.1% | 0.0% | 0.0% |
| VA | FX | 14.6% | 23.0% | 22.4% | 43.4% | 48.2% | 72.1% | 79.6% | 73.4% | 66.0% | 78.1% | 70.2% | 71.7% | 83.9% | 47.6% |
| VA | VB | 0.0% | 0.2% | 0.1% | 0.8% | 0.1% | 0.5% | 0.1% | 0.7% | 0.7% | 1.2% | 0.0% | 0.0% | 0.0% | 35.2% |
| VA | VC | 0.1% | 0.1% | 0.3% | 0.0% | 0.4% | 0.1% | 0.1% | 0.0% | 0.2% | 0.1% | 0.1% | 0.1% | 0.0% | 1.2% |
| VA | VE | 0.3% | 1.4% | 2.9% | 3.7% | 2.3% | 1.7% | 1.9% | 0.7% | 2.1% | 2.2% | 2.1% | 2.9% | 0.8% | 0.5% |
| VA | VF | 7.5% | 7.0% | 8.8% | 6.5% | 5.2% | 1.9% | 1.6% | 1.7% | 0.8% | 2.9% | 0.1% | 2.1% | 0.0% | 2.0% |
| VA | VG | 2.9% | 0.5% | 0.9% | 0.6% | 0.3% | 0.1% | 0.1% | 0.3% | 0.1% | 0.0% | 0.0% | 0.1% | 0.0% | 2.0% |
| VB | FX | 3.8% | 2.2% | 2.7% | 2.1% | 4.5% | 3.5% | 2.7% | 3.4% | 4.0% | 1.4% | 0.3% | 0.4% | 0.5% | 11.5% |
| VB | VA | 8.0% | 0.5% | 0.3% | 0.7% | 1.0% | 0.4% | 0.3% | 0.2% | 0.3% | 0.0% | 0.3% | 0.0% | 0.0% | 0.0% |
| VB | VC | 0.0% | 0.1% | 0.0% | 0.0% | 0.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VB | VE | 0.5% | 0.4% | 0.5% | 0.3% | 0.7% | 0.2% | 0.3% | 0.5% | 0.2% | 0.0% | 0.3% | 0.0% | 0.0% | 0.0% |
| VB | VF | 0.6% | 0.7% | 0.9% | 0.4% | 0.3% | 0.2% | 0.2% | 0.4% | 0.2% | 0.0% | 0.9% | 0.0% | 0.0% | 0.0% |
| VB | VG | 0.0% | 0.0% | 0.0% | 0.1% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VC | FX | 3.7% | 5.7% | 3.9% | 2.4% | 1.7% | 1.7% | 1.4% | 1.6% | 1.5% | 1.8% | 2.3% | 0.4% | 1.0% | 0.0% |
| VC | VA | 0.6% | 0.6% | 0.8% | 0.5% | 0.5% | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.3% | 0.6% | 0.0% | 0.0% |
| VC | VB | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VC | VE | 1.2% | 0.5% | 0.4% | 0.4% | 2.4% | 0.0% | 0.3% | 0.1% | 0.2% | 0.2% | 0.5% | 0.0% | 0.0% | 0.0% |
| VC | VF | 1.1% | 0.5% | 1.2% | 0.6% | 0.4% | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% |
| VC | VG | 0.1% | 0.3% | 0.5% | 0.2% | 0.1% | 0.2% | 0.1% | 0.0% | 0.3% | 0.0% | 0.0% | 0.0% | 0.5% | 0.0% |
| VE | FX | 6.4% | 6.1% | 6.1% | 9.1% | 5.5% | 5.7% | 3.8% | 4.8% | 6.6% | 3.4% | 1.3% | 1.8% | 9.0% | 0.0% |
| VE | VA | 1.7% | 1.5% | 0.8% | 0.8% | 0.4% | 0.7% | 0.2% | 0.2% | 0.1% | 0.2% | 0.4% | 0.3% | 0.0% | 0.0% |
| VE | VB | 0.0% | 0.2% | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VE | VC | 0.0% | 0.1% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VE | VF | 5.1% | 5.2% | 1.1% | 1.0% | 0.9% | 0.2% | 0.0% | 0.0% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VE | VG | 0.5% | 0.7% | 0.4% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 1.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VF | FX | 6.7% | 3.3% | 3.5% | 1.4% | 1.6% | 0.3% | 1.2% | 0.6% | 0.1% | 0.2% | 0.0% | 0.0% | 1.3% | 0.0% |
| VF | VA | 0.3% | 0.4% | 0.4% | 0.2% | 0.1% | 0.0% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VF | VB | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VF | VC | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VF | VE | 1.7% | 0.6% | 0.7% | 0.1% | 0.0% | 0.0% | 0.0% | 0.7% | 0.0% | 0.0% | 7.8% | 0.0% | 0.0% | 0.0% |
| VF | VG | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VG | FX | 2.6% | 0.3% | 0.3% | 0.8% | 0.3% | 0.1% | 0.3% | 0.4% | 0.2% | 0.0% | 0.0% | 0.0% | 0.7% | 0.0% |
| VG | VA | 0.3% | 0.2% | 0.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% |
| VG | VB | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VG | VC | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| VG | VE | 0.3% | 0.3% | 0.1% | 0.0% | 0.2% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.3% | 0.0% | 0.0% | 0.0% |
| VG | VF | 0.2% | 0.2% | 0.1% | 0.1% | 0.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

FX refers to the Fixed Return Fund

VD refers to the Inflation Protection Fund

VA refers to the Diversified Equity Fund

VE refers to the Sustainable Equity Fund

VB refers to the Balanced Fund

VF refers to the U.S. Equity Index Fund

VC refers to the International Equity Fund

VG refers to the International Equity Index Fund

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