



2019

Comprehensive Annual Financial Report



FOR THE FISCAL YEARS ENDED JUNE 30, 2019 AND JUNE 30, 2018

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM - A FIDUCIARY FUND OF THE CITY OF NEW YORK

THE NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM

BROOKLYN, NEW YORK

A FIDUCIARY FUND OF THE CITY OF NEW YORK

COMPREHENSIVE ANNUAL FINANCIAL REPORT

**FOR THE FISCAL YEARS ENDED
JUNE 30, 2019 AND JUNE 30, 2018**

Prepared by: The Finance Division of the
New York City Employees' Retirement System

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Comptroller of the City of New York**

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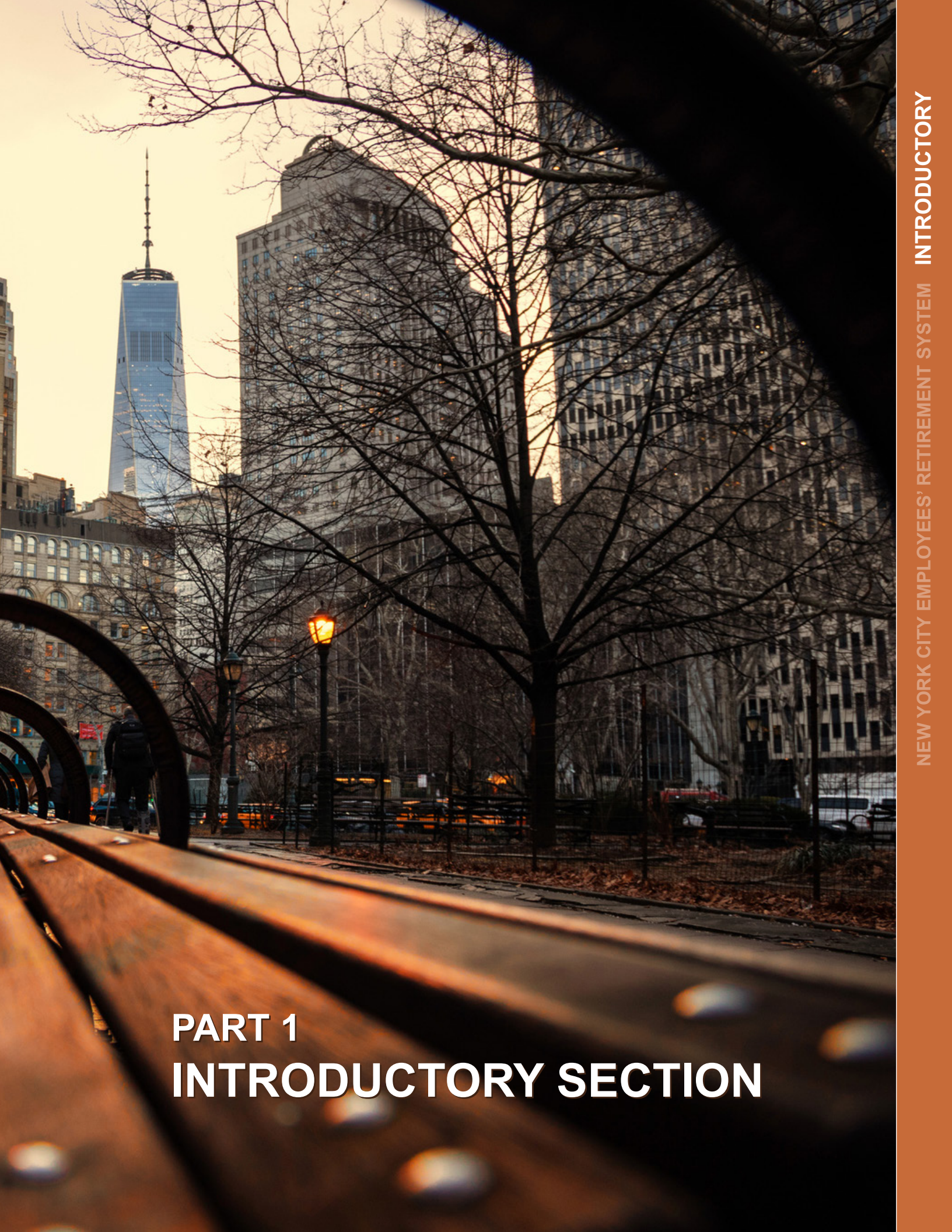
**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
COMPREHENSIVE ANNUAL FINANCIAL REPORT
FOR THE FISCAL YEARS ENDED JUNE 30, 2019 AND JUNE 30, 2018**

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PART 1
INTRODUCTORY SECTION

BOARD OF TRUSTEES

Mayor's Representative

Mr. John Adler, Chairperson

Honorable Scott Stringer
Comptroller of the City of New York

Honorable Ruben Diaz, Jr.
Borough President of The Bronx

Honorable Jumaane Williams
Public Advocate

Honorable James Oddo
Borough President of Staten Island

Honorable Gale Brewer
Borough President of Manhattan

Mr. Henry Garrido
Executive Director
District Council 37, AFSCME

Honorable Eric Adams
Borough President of Brooklyn

Mr. Anthony Utano
President
Transport Workers Union, Local 100

Honorable Melinda Katz
Borough President of Queens

Mr. Gregory Floyd
President
International Brotherhood of Teamsters,
Local 237

Melanie Whinnery

NYCERS Executive Director



Government Finance Officers Association

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

Presented to

**New York City
Employees' Retirement System
New York**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2018

Christopher P. Morill

Executive Director/CEO



Public Pension Coordinating Council

***Recognition Award for Administration
2019***

Presented to

***New York City
Employees' Retirement System***

In recognition of meeting professional standards for
plan administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

A handwritten signature in black ink that reads "Alan H. Winkle".

Alan H. Winkle
Program Administrator



December 31, 2019

Board of Trustees
 New York City Employees' Retirement System
 335 Adams Street
 Brooklyn, NY 11201-3724

We are pleased to submit the Comprehensive Annual Financial Report (CAFR) of the New York City Employees' Retirement System (Plan) for the fiscal year ended June 30, 2019. The CAFR consists of five sections:

1. The *Introductory Section* contains this Letter of Transmittal, the Administrative Organization, the Certificate of Achievement for Excellence in Financial Reporting, the Public Pension Standards Award, the Summary of Plan Provisions, and a summary of legislation enacted during the fiscal year.
2. The *Financial Section* contains the opinion of the independent certified public accountant, the Management Discussion and Analysis (MD&A), the financial statements of the Plan, and other required supplementary financial information and tables. The MD&A provides an overview of the current year's financial activity with an analysis of the effects of any significant changes from the prior year.
3. The *Investment Section* contains a report on investment policies and activity, investment results, and various investment schedules.
4. The *Actuarial Section* contains the Plan's actuarial certification letter and various actuarial tables.
5. The *Statistical Section* contains various statistical tables consisting of significant data pertaining to the Plan.

ACCOUNTING SYSTEM AND REPORTS

This CAFR has been prepared in conformity with generally accepted accounting principles (GAAP) for governmental units, as set forth by the Governmental Accounting Standards Board (GASB), as well as the reporting requirements prescribed by the Government Finance Officers Association of the United States and Canada (GFOA). Preparation of the CAFR is the responsibility of the Plan's management. The accrual basis of accounting is used to record assets and liabilities and revenue and expenses. Revenue for the system is taken into account when earned, without regard to date of collection, and expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made. Investments are valued at fair value.

The management of the Plan is responsible for establishing and maintaining a system of internal accounting control. In fulfilling this responsibility, estimates and judgments made by management are required to assess the expected benefits and related costs of control procedures so that the cost of a control does not exceed the derived benefit. The objective of a system of internal accounting controls

is to provide management with reasonable assurance that assets are safeguarded against loss from unauthorized use or disposition. Internal accounting controls should also ensure that transactions are executed in accordance with management's authorization and recorded properly to permit the preparation of financial statements in conformity with GAAP.

The internal accounting controls of the system are adequate to meet the above objectives. There have been no irregularities that have had a material effect on the financial statements. The supporting schedules and statistical tables fairly reflect the status and operations of the system.

In fiscal year 2015, the Plan adopted GASB Statement No. 72, *Fair Value Measurement and Application*. GASB 72 requires the funds to use valuation techniques which are appropriate under the circumstances and are either a market approach, a cost approach, or an income approach. GASB 72 also requires additional related note disclosures. There was no material impact on the Plan's financial statement as a result of the implementation of Statement No. 72.

INDEPENDENT AUDIT

The New York City Employees' Retirement System (NYCERS) undergoes a comprehensive audit conducted by the City's Independent Certified Public Accountant on an annual basis. The audit is performed in accordance with auditing standards generally accepted in the United States of America as established by the American Institute of Certified Public Accountants.

In the opinion of Marks Paneth, the City's Independent Auditor, the Plan's Combining Financial Statements presented fairly, in all material respects, the combining fiduciary net position as of June 30, 2019 and 2018, and the changes in combining fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

AWARDS

The GFOA awarded a Certificate of Achievement for Excellence in Financial Reporting to NYCERS for its CAFR for the fiscal year ended June 30, 2018. In order to be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized CAFR, the contents of which conform to program standards. Such financial reports must satisfy both generally accepted accounting principles and applicable legal requirements. The Plan has received this certificate for the last 33 years.

A Certificate of Achievement is valid for a period of one year only. We believe our CAFR for the fiscal year ended June 30, 2019 continues to conform to the Certificate of Achievement Program requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

The Public Pension Coordinating Council (PPCC) awarded a Recognition Award for Administration to NYCERS for 2019. This is the tenth year that NYCERS has applied for and received an award from the PPCC. In order to be awarded a Public Pension Standards Award, a public pension program must meet professional standards for plan design, administration, and/or funding, as set forth in the Public Pension Standards. The Public Pension Standards are intended to reflect minimum expectations for public retirement system management and administration, as well as serve as a benchmark by which all defined benefit public plans should be measured. A Public Pension Standards Award is valid for a period of one year.

ADMINISTRATION

NYCERS was established by an act of the Legislature of the State of New York under Chapter 427 of the Laws of 1920. Chapter 427 created a retirement system in accordance with sound actuarial principles. The governing statutes are contained in the New York State Retirement and Social Security Law (RSSL) and the New York City Administrative Code. The head of the retirement system is the Board of Trustees. The system became operational on October 1, 1920 with 13,331 original members. As of June 30, 2017, the date of the Plan's most recent actuarial valuation, the Plan's membership included 189,792 members in active pay status, 150,419 retirees and beneficiaries receiving benefits, 8,417 terminated vested members who are not yet receiving benefits, and 19,180 members who are no longer on payroll, but not otherwise classified.

INITIATIVES

Governance:

During the past year, NYCERS has established and/or formalized several governance boards and committees as described below:

Executive Governance Board (EGB)

The EGB provides the necessary executive oversight of certain decisions throughout major project lifecycles and/or material operational changes in areas involving conflict resolution, treatment of project and operational risks, treatment of administrative risks, organizational change, and project constraints (e.g., time and budget). Members of the Executive Governance Board are the Executive Director, Deputy Executive Director, and Chief Operations Officer. The General Counsel, Chief Information Officer, and Chief Information Security Officer are consulted on legal, information technology, and information security matters.

Business Advisory Committee (BAC)

The BAC evaluates the business impact to other areas related to proposed new applications or application changes and recommended data quality remediation. It renders decisions (approved, denied, deferred) on these items and prioritizes for Information Technology to address.

Enterprise Risk Committee (ERC)

The ERC's functions are to assume responsibility for the oversight and continuous development of the Enterprise Risk Management Framework, establish policies and procedures to govern risk management practices, promote a culture of risk awareness across the organization, and monitor high and medium risks identified throughout the organization to ensure that risk acceptance conforms with the agency's risk appetite and that the management and mitigation of risks identified as high and medium are sufficient.

Program Management Office (PMO)

Under the direction of the Chief Information Officer and the Chief Operations Officer (as major project sponsor), the PMO ensures that all project management requirements and policies are met, as well as any change control requirements initiated by requests for changes. The PMO also works closely with all project risk management teams.

Organizational Change Management Committee (OCM)

The OCM is responsible for reviewing and making recommendations to ensure the thoroughness of division organizational change plans and assists in the review and execution of agency organizational plans resulting from major project and/or operational changes.

Legacy Replacement Project:

The Legacy Replacement Project (LRP) is a multi-year initiative to modernize NYCERS' business processes and related technologies. The principal objective of the LRP is to replace NYCERS' legacy production application with a new pension administration system. This new pension administration system is intended to transform the way NYCERS does business and interacts with its members, pensioners, employers, and other City agencies. This will be accomplished using flexible up-to-date technologies that will provide ongoing value into the future. NYCERS issued a Request for Proposal (RFP) for the LRP on April 8, 2019. Proposals were received on July 15, 2019 and are currently under review.

Customer Relationship Management Project:

NYCERS began work on a Customer Relationship Management System (CRM), which is at the heart of our digital transformation. The CRM platform will offer many tangible benefits. It will offer multiple channels (e.g., email, chat, and text messaging) by which our members and retirees can interact with NYCERS, faster delivery of written communication, new online applications, the ability to upload medical evidence, and the first MyNYCERS mobile application. The CRM will also expand our service offerings to Employers through the implementation of a new secure online portal. For our internal staff, the CRM provides a 360-degree view of our Clients, enabling employees to resolve inquiries more quickly. It also introduces our very first knowledge-base tool to share content and improve the quality and completeness of information.

Pension Outreach Program:

Since its launch in October 2017, NYCERS' Pension Outreach Program has provided pension benefit information to more than 7,700 clients at pension seminars, new-employee orientations, and benefit fairs all around the city. New NYCERS members registered at offsite events now total more than 3,900. In addition, 17 new city agencies and 3 labor unions have been added to the list of organizations NYCERS has served through the outreach program in 2019. At events held in partnership with other organizations, such as Social Security and the New York City Office of Labor Relations, participants receive a comprehensive perspective on what to expect in retirement, including information about NYCERS pension benefits, defined contribution plans, Social Security benefits, and health insurance.

Succession Planning:

Lastly, NYCERS strengthened succession planning efforts and established several new roles and/or positions to assist in the leadership and management of the organization and to provide additional critical capacity to deliver on the organization's strategic objectives and goals. The new roles include a Chief Operations Officer and Deputy Directors for Human Resources, Communications, Organizational Development and Training, Project Management Office, Administration, and Internal Audit.

MEMBERSHIP

Membership in NYCERS is available to all New York City employees who are not eligible to participate in the New York City Teachers' Retirement System, the New York City Police Pension Fund, the New York City Fire Department Pension Fund, or the New York City Board of Education Retirement System.

All persons holding permanent civil service positions in the competitive or labor class are required to become members of the system six months after their date of appointment, but may voluntarily elect to join the system prior to their mandated membership date. All other eligible employees have the option to join the system upon appointment or at any time thereafter.

All members who joined NYCERS prior to July 1, 1973 are Tier 1 members.

All members who joined NYCERS on or after July 1, 1973, but prior to July 27, 1976, and Investigator members employed in any New York City District Attorney Office who joined NYCERS on or after July 1, 1973, but prior to April 1, 2012, are Tier 2 members subject to Article 11 of the RSSL.

All members of the uniformed force of the NYC Department of Correction who joined NYCERS on or after July 27, 1976, but prior to April 1, 2012, are Tier 3 members subject to Article 14 of the RSSL.

All members (except members of the uniformed force of the Department of Correction and Investigator members employed in a New York City District Attorney Office) who joined NYCERS on or after July 27, 1976, but prior to April 1, 2012, are Tier 4 members subject to Article 15 of the RSSL. Tier 4 members who joined NYCERS on or after July 27, 1976, but prior to September 1, 1983, retain all rights, benefits, and privileges provided under Article 14 of the RSSL (Tier 3).

All members who joined or join NYCERS on or after April 1, 2012 are Tier 6 members, except members of the uniformed force of the Department of Correction, members of the uniformed force of the Department of Sanitation, and Investigator members employed in a New York City District Attorney Office. These members are subject to Article 14 of the RSSL.

EMPLOYERS

The Plan is a cost-sharing, multiple-employer public employee retirement system. In addition to the various departments of the City of New York, members of NYCERS are also employed by the New York City Transit Authority, the Triborough Bridge and Tunnel Authority, the New York City Housing Authority, the New York City Health and Hospitals Corporation, the New York City Housing Development Corporation, the City University of New York, the New York City School Construction Authority, and the New York City Municipal Water Finance Authority. A table listing these employers and the number of their respective participating employees may be found on page 199 in the Actuarial Section.

CONTRIBUTIONS

The benefits of the system are financed by employer contributions, employee contributions, and from earnings on the invested funds of the system.

As of July 1, 1970, Tier 1 and Tier 2 Transit operating-force employees enrolled in the Transit 20-Year Plan are non-contributory. For all other Tier 1 and Tier 2 members, contributions are dependent upon the member's age and the retirement plan elected. For Tier 3 and Tier 4 members, Basic Member Contributions (BMCs) are 3% of gross wages and cease upon the attainment of 10 years of Credited

Service or the tenth anniversary of membership (except for certain Correction, Sanitation and District Attorney members as noted below), whichever occurs first. Tier 4 Transit operating-force members, however, pay 2% of gross wages for as long as they remain in service. Certain Tier 2, Tier 3, and Tier 4 members who are participants in special retirement plans are required to make Additional Member Contributions (AMCs) in addition to their BMCs.

Tier 6 members are generally mandated to contribute BMCs until they separate from City service or until they retire. The BMC rate for most Tier 6 members is dependent on annual wages earned during a plan year; the rate ranges from 3% for salaries up to \$45,000, to 6% for salaries greater than \$100,000. Tier 6 Special Plan members, such as those in the Special Peace Officer 25-Year Plan, must also contribute AMCs in accordance with the rates and durations specified for their particular special plan.

Uniformed members of the Department of Correction, uniformed members of the Department of Sanitation, and District Attorney (“DA”) Investigator members employed in a District Attorney office, who became employed in one of these titles on or after April 1, 2012, participate in a 22-year Plan. These members are required to contribute 3% of gross wages until the later of 25 years of service or until they retire.

The Chief Actuary of the system determines employer contributions annually.

REVENUES

As mentioned previously, the funds needed to finance retirement benefits are accumulated from a combination of employer contributions, employee contributions, and through income on investments. Contributions and investment income for fiscal year 2019 totaled \$8.6 billion, a decrease of \$0.4 billion from \$9.0 billion in fiscal year 2018. As discussed in the Financial Section of the MD&A, the decrease in revenue was due to the fact that investment gains in Fiscal Year 2019 did not reach levels realized in Fiscal Year 2018. Equity markets, however, were relatively strong and accounted for a significant portion of the increase in the value of the portfolio. The Table of Revenue by Source on page 216 presents these amounts for the last 10 years.

EXPENSES

The primary expenses of the Plan relate to the payment of benefits to eligible retirees and beneficiaries. Consequently, recurring monthly retirement benefit payments, death benefit payments, and refunds of contributions to terminated members comprise the major expenses of the Plan. The Table of Benefit Payments by Type on page 218 and the Table of Changes in Fiduciary Net Position on page 217 present the details of the different expenses over the last 10 years.

FUNDING

One of the most important measures of a retirement system is the level of funding. A higher funding percentage translates into a larger ratio of assets available to meet the system’s future obligations. A well-funded plan improves the likelihood that the assets that are irrevocably committed to the payment of benefits will be adequate to cover the required benefit payments. The goal is to fund members’ future retirement benefits during their working careers. As of June 30, 2017, the Plan’s most recent actuarial valuation date, the Plan’s funded ratio is 72.2%, an increase from 71.4% as of June 30, 2016. This ratio was determined by the Actuary using the Entry Age Actuarial Cost Method. Please refer to the Actuarial Section for details concerning the actuarial methods and assumptions used in determining the required funding.

Under the Accounting Standard “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, 2019, the fiduciary net position represents 78.8% of total pension liability for NYCERS and the 5 Variable Supplement Funds.

INVESTMENTS

The investment portfolio is a significant component in the funding of the system. The Administrative Code of the City of New York authorizes the investment of Plan assets subject to the terms, conditions, limitations, and restrictions imposed by law for investments by savings banks. The New York State Retirement and Social Security Law (RSSL) establishes the criteria for permissible investments.

The Plan’s Board of Trustees adopts investment policies. The Board creates the overall investment policy under which the Plan’s funds are invested and, in defining the investment objectives, develops a framework under which specific objectives are established with regard to allocating the assets of the Plan among various investment types. The current policy target mix consists of 29.0% in Domestic Equities, 20.0% in an International Equity fund, 33.0% in Domestic Fixed Income, and 18.0% in Alternative Investments.

For the one-year period that ended on June 30, 2019, the Plan’s rate of return on investments was 7.13%, less than NYCERS’ policy benchmark, which had a rate of return of 7.73%. Further details concerning the criteria for the Plan’s investments, policies, investment performance, and other investment tables may be found in the Investment Section. Listings of the Plan’s major domestic equity and long-term bond holdings can be found on pages 141 and 142. Although this CAFR does not include a full list of the Plan’s investment securities, such information is available upon request from the NYC Comptroller’s Office.

ECONOMIC CONDITIONS¹

The City’s economy in Fiscal Year 2019 grew 3.0% in real gross city product, slightly lower than the 3.1% in fiscal year 2018. The City’s economic growth exceeded the national GDP growth of 2.6% in Fiscal Year 2019, making this the seventh consecutive year that the City’s economic growth has outperformed that of the nation.

The unemployment rate fell to 4.2% in fiscal year 2019, the lowest level on record. The labor force fell by 15,100. All five boroughs within the city enjoyed a broad decline in the unemployment rate during the fiscal year. Overall, the City added 79,700 private sector jobs, a gain of 2%, in fiscal year 2019, less than the 2.4% added in fiscal year 2018. About 74.4% of those new jobs were in the lower-wage sector (below \$63,000 per year); 10.1% were in the middle-wage sector (\$63,000 to \$126,000); 15.5% were in the higher-wage sector (over \$126,000).

Earnings and wages continued to increase in Fiscal Year 2019. Average hourly earnings of all private New York City employees rose 4.1%, the highest on record and higher than the 2.8% growth in Fiscal Year 2018.

¹ Source: 2019 New York City Comprehensive Annual Financial Report

PROFESSIONAL SERVICES

The opinion of the independent certified public accounting firm on the Plan's financial statements is included in this CAFR. The Comptroller of the City of New York is the custodian of the Plan's assets and provides investment services through independent advisors and consultants who are listed in the Investment Section's Schedule of Fees Paid to Investment Managers and Consultants on page 144. A listing of brokerage firms, and the amounts paid to such firms, can be found in the Schedule of Brokers' Commissions on page 153. Other consultant services are shown in the Financial Section's Schedule of Payments to Consultants on page 131. Actuarial services are provided to the Plan by the Chief Actuary of the City of New York, who is appointed by the Board of Trustees. The City's Corporation Counsel provides legal services to the Plan.

ACKNOWLEDGMENTS

The compilation of this CAFR reflects the combined effort of NYCERS' 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.

On behalf of the Board of Trustees, 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 continued successful operation of the system.

Respectfully submitted,



Melanie Whinnery
Executive Director



Charles C. Barkley
Director of Finance

Legislation (enacted between 7/1/18 and 6/30/19)

Laws of 2018

(enacted between July 1, 2018 and December 31, 2018)

Chapter 448 – Allows Special Plan members to use basic or additional member contributions to offset any deficits in MCAF or RRF accounts before or after retirement.

Previously, Chapter 467 of the Laws of 2017 allowed participants in Special Plans to, upon retirement, use a surplus in their Additional Member Contributions (AMCs) to offset any deficit in their basic member contribution account, or to use a surplus in Basic Member Contributions (BMCs) to offset a deficit in the additional member contribution account. Chapter 448 of the Laws of 2018 now permits this offset at any time during membership. Participants in the following Plans are affected by this legislation:

Article 14 Special Plans:

- Twenty-Year Retirement Program for New York City Correction Members below the Rank of Captain (RSSL § 504-a)
- Twenty-Year Retirement Program for New York City Correction Members of the Rank of Captain or above (RSSL § 504-b)
- Twenty-Year Retirement Program for New York City Correction Members (RSSL § 504-d)

Article 15 Special Plans:

- Twenty-Year Retirement Program for New York City Sanitation Members (RSSL § 604-a)
- Twenty-Five-Year and Age Fifty-Five Retirement Program for New York City Transit Authority Members (RSSL § 604-b)
- Optional Twenty-Five-Year Early Retirement Program for Certain New York City Members (RSSL § 604-c)
- Twenty-Year/Age Fifty Retirement Program for Triborough Bridge and Tunnel Members (RSSL § 604-c)
- Age Fifty-Seven Retirement Program for Certain New York City Members (RSSL § 604-d)
- Twenty-Five Year Retirement Program for Dispatcher Members (RSSL § 604-e)
- Twenty-Five Year Retirement Program for EMT Members (RSSL § 604-e)
- Twenty-Five Year Retirement Program for Deputy Sheriff Members (RSSL § 604-f)
- Twenty-Five Year Retirement Program for Special Officer, Parking Control Specialist, School Safety Agent, Campus Peace Officer or New York City Taxi and Limousine Inspector Members (RSSL § 604-f)
- Twenty-Five Year/Age Fifty Retirement Program for Automotive Members (RSSL § 604-g)
- Twenty-Five Year Retirement Program for Police Communications Members (RSSL § 604-h)

This law is effective as of December 21, 2018.

Chapter 266 – Extension of time to File a Notice of Participation in WTC Rescue, Recovery, and Cleanup Operations

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 179 – Increase to the Special Accidental Death Benefit

This law amends the Retirement and Social Security Law (RSSL) § 361-a(c) and General Municipal Law (GML) § 208-f by increasing the deceased member's salary used in the computation of the special accidental death benefit by adding to it an additional percentage. The beneficiaries of the following NYCERS members are covered: Correction Officers, Housing and Transit Police, certain EMTs, TBTA members, and Uniformed Sanitation members. This law is effective as of July 1, 2018.

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SUMMARY OF PLAN PROVISIONS

GLOSSARY OF TERMS

Accumulated Deductions

The total of all contributions made by members, plus compounded interest earned on such contributions (8.25% for Tiers 1 and 2; 5% for Tiers 3, 4 and 6).

Active Service

Service rendered while a member is on the payroll and being paid by the City of New York or a Participating Employer.

Additional Member Contributions (AMCs)

Contributions made by participants in a special plan in addition to Basic Member Contributions. AMC rates vary according to special plan provisions. AMCs are held in the Retirement Reserve Fund for each special plan.

Allowable Correction Service

Service rendered in the uniformed force of the New York City (NYC) Department of Correction or any of the following uniformed forces:

- o NYC Housing Police
- o NYC Transit Police
- o NYC Department of Sanitation
- o NYC Police Department
- o NYC Fire Department

Service in one of the above-mentioned uniformed forces must have been rendered immediately prior to becoming a member of the uniformed force of the NYC Department of Correction to count as Allowable Correction Service.

Note: The 22-Year Plan for Uniformed Correction Force members (CF-22) is a Credited Service plan, not an Allowable Service plan.

Allowable Sanitation Service

Service rendered in the uniformed force of the New York City (NYC) Department of Sanitation or any of the following uniformed forces:

- o NYC Housing Police
- o NYC Transit Police
- o NYC Department of Correction
- o NYC Police Department
- o NYC Fire Department

Service in one of the above-mentioned uniformed forces must have been rendered immediately prior to becoming a member of the uniformed force of the NYC Department of Sanitation to count as Allowable Sanitation Service.

Note: The 22-Year Plan for Uniformed Sanitation Force members (SA-22) is a Credited Service Plan, not an Allowable Service Plan.

Allowable Service as a Dispatcher Member

Service rendered while employed by the City of New York as a Fire Alarm Dispatcher, Supervising Fire Alarm Dispatcher levels 1 and 2, Director of Dispatch Operations or Deputy Director of Dispatch Operations, and all service rendered in the following NYC Civil Service titles, or in a title whose duties require the supervision of employees serving in such titles:

Chief Fire Alarm Dispatcher	Administrative Fire Alarm Dispatcher	Bus Operator (Transit)
Train Dispatcher (Transit)	Firefighter	Police Officer
Correction Officer	Fire Marshal	Probation Officer
Police Communications Technician	Supervising Police Communications Technician	Principal Police Communications Technician
Police Administrative Aide	Senior Police Administrative Aide	Emergency Medical Technician
Advanced Emergency Medical Technician	Emergency Medical Service Specialist, Levels 1 and 2	Fire Prevention Inspector
Fire Protection Inspector	Senior Fire Prevention Inspector	Principal Fire Prevention Inspector
Associate Fire Protection Inspector	County Detective	Detective (NYPD)
Detective Investigator	Senior Detective Investigator	Deputy Sheriff
Senior Deputy Sheriff	Inspector of Fire Alarm Boxes	Radio Operator
Radio Repair Technician	Supervisor of Radio Repair Operations	Taxi and Limousine Inspector
Senior Taxi and Limousine Inspector	MTA Bridge and Tunnel Officer	

Allowable Service as an EMT Member

Service rendered while employed by the City of New York or the NYC Health & Hospitals Corporation in a title whose duties are those of an Emergency Medical Technician or Advanced Emergency Medical Technician, or in a title whose duties require the supervision of employees serving in such titles. Service rendered in the title of Motor Vehicle Operator with the City of New York or NYC Health & Hospitals Corporation is also considered Allowable Service as an EMT Member.

Allowable Service as a Special Officer

Service rendered in the following titles whose duties are those of a peace officer under the NYS Criminal Procedure Law:

- o Special Officer (employed by a City agency, the NYC Health and Hospitals Corporation, or the NYC Housing Authority)
- o Urban Park Ranger (employed by the NYC Parks Department)
- o Parking Control Specialist (employed by the NYC Department of Transportation)
- o School Safety Agent (employed by the NYPD/NYC Department of Education)
- o Campus Peace Officer (employed by the City University of New York)
- o Taxi and Limousine Inspector (employed by the NYC Taxi and Limousine Commission)

Allowable Service in the Transit Authority

Membership Service (not purchased service) while employed by the New York City Transit Authority in a Career and Salary title or Transit Operating Force title.

Annuity

Payments made for the life of a Tier 1 or Tier 2 retiree derived from his or her Accumulated Deductions. These payments are typically based on the contributions the employee made to NYCERS throughout his or her membership.

Average Compensation (applies only to certain Tier 1 and 2 plans)

The average of compensation earned from the completion of 20 years to the date of retirement.

Career Pension Plan Position

Any position in City service other than a Transit Operating Force position, a position in the uniformed force of the NYC Department of Sanitation, or the uniformed force of the NYC Department of Correction.

Career Pension Plan Qualifying Service

In general, Membership Service rendered in a Career Pension Plan position or Membership Service rendered prior to July 1, 1968, Transferred Service from another New York City or New York State public employee retirement system, up to six months of Purchased Service, provided such service was continuous and immediately preceded membership prior to January 1, 1968, or Pension Enhancement Service.

Credited Service

The total amount of service used for members' pension calculations, except for participants of special plans that exclusively have an Allowable Service requirement. The following types of service are included in the total:

- o Service rendered while a member of NYCERS, and
- o Service rendered while a member of another retirement system within New York City or New York State and transferred to NYCERS, and
- o Service purchased under applicable laws and rules for buy-back
- o Membership Reinstatement Service
- o Military Service
- o Union Leave Service

Designated Beneficiary

The person(s) nominated by a member or retiree to receive an Ordinary Death Benefit or Post-Retirement Death Benefit, respectively, upon his or her death. A Designated Beneficiary can be a Primary Beneficiary or a Contingent Beneficiary (entitled to receive benefits only if there are no surviving Primary Beneficiaries).

Eligible Beneficiary

A person who is eligible to be paid an Accidental Death Benefit, in the following order of priority:

- o a surviving spouse who has not remarried (a surviving spouse of a Tier 1, 2, 3, 4, or 6 uniformed worker of the NYC Department of Sanitation may subsequently remarry and still retain the Accidental Death Benefit.)
- o dependent child - up to age 18 for Tiers 1 and 2 members
- o dependent child - up to age 25 for Tiers 3, 4 and 6 members
- o dependent parents, or for Tiers 3, 4 and 6 members only, any person up to age 21 who qualified as a dependent on the member's final Federal income tax return.
- o anyone you name as your beneficiary for your Ordinary Death Benefit (not applicable to 22-Year Plan members)

An Eligible Beneficiary must apply for an Accidental Death Benefit and NYCERS' Medical Board and Board of Trustees must approve the application.

In the event that a class of Eligible Beneficiaries consists of more than one person (for example, two or more children under the age of 25), benefits will be divided equally among such persons.

Enhanced Disability Benefit (EDB)

A retirement benefit enhancement program for eligible 22-Year Plan members of the Uniformed Correction Force and Uniformed Sanitation Force.

Excess Contributions

Contributions a Tier 1 or Tier 2 member makes, and all interest earned on such contributions, after the member has satisfied the requirements for his or her plan.

Excess Increased-Take-Home-Pay

Contributions made by the employer of a Tier 1 or Tier 2 member after the member has satisfied the requirements for his or her plan.

Final Average Salary (FAS)

For Tiers 2, 3 and 4:

The greater of the average annual wages earned during any three consecutive calendar years or the final 36 months immediately preceding a member's retirement date. **But**, if the salary earned during any year included in the calculation of the member's FAS exceeds the specific limits for Tier 2, Tier 3 or Tier 4 members, the amount in excess of such limits is excluded from the computation.

For 22-Year Plans and Tier 6:

The greater of the average annual wages earned during any five consecutive calendar years or the final 60 months immediately preceding a member's retirement date. **But**, if the salary earned during any year included in the calculation of the member's FAS exceeds the specific limits for Tier 6 members, the amount in excess of such limits is excluded from the computation.

Final Compensation

The average compensation earned during the five-year period immediately preceding a member's retirement date or any consecutive five calendar years prior to the member's retirement date that would provide him or her with the greatest average compensation.

Final Salary (Tier 1 Members and Tier 2 DA Investigators in the 20-Year Plan)

For members of the uniformed forces of the departments of Sanitation and Correction who joined the retirement system prior to July 1, 1973:

- o the annual rate of salary earnable on the day before the date of retirement.

For all others:

- o Earned or earnable salary in the year before retirement or the average of annual compensation earned during any three calendar years.

Tier 1 members with a membership date after June 17, 1971 and Tier 2 DA Investigators in the 20-Year Plan are subject to certain limits if their Final Salary exceeds that of the prior year by more than 20%.

Increased-Take-Home-Pay (ITHP)

Contributions for Tier 1 and Tier 2 members that are contributed by their employer equal to 2% of the members' gross salaries; 2.5% for Correction Officers.

Pension Reserve

The total amount computed to pay retirement benefits over a retiree's lifetime, including ITHP but excluding Accumulated Deductions.

Physically-Taxing Position

A position in City service included on the Official List of Physically-Taxing Positions promulgated and maintained by the NYC Office of Labor Relations.

Post-Retirement Death Benefit (Death Benefit Plan 2 only)

A lump-sum death benefit payable to the person(s) designated by certain Tier 2, 3, 4 and 6 members. The amount of the benefit is dependent upon the date of the member's death after retirement. This benefit is in addition to any benefit payable under a retirement option.

Primary Social Security Benefit

The benefit payable by the Social Security Administration, which is determined by a formula based upon wages earned from a public employer from which Social Security deductions were taken.

Reserve for Increased-Take-Home-Pay (ITHP)

For some Tier 1 and Tier 2 members, an amount which at the time of death or retirement is equal to the accumulation of the contributions for ITHP, **plus** interest earned thereon.

Total Reserve

The total amount computed to pay retirement benefits over a retiree's lifetime, including ITHP and Accumulated Deductions.

CAREER PENSION PLAN (PLAN A)

SERVICE RETIREMENT

- ♦ Participants may retire: at age 55 with 25 or more years of Career Pension Plan (CPP) Qualifying Service; at age 50 with 25 or more years of physically-taxing service; with 20 or more years of CPP service, but benefits are payable when member would have completed 25 years of service or reached age 55 (age 50 for physically-taxing)
- ♦ The Service Retirement Benefit is:
 - ♦ For the first 25 years of CPP Qualifying Service: 2.20% of Final Salary; less Required Amount; plus Accumulated Deductions; plus
 - ♦ For all years other than the first 25 years of CPP Qualifying Service: 1.20% of Final Salary (years prior to 07/01/68); plus 1.70% of Final Salary (years after 06/30/68); plus
 - ♦ A Pension for excess Increased-Take-Home-Pay (ITHP) and an Annuity for Excess Contributions

VESTED RETIREMENT

- ♦ No provision for vesting. CPP members must withdraw from Plan A and switch to Plan B (See Plan B)

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: 1.53% x Final Salary for each year after June 30, 1968; 1.20% x Final Salary for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ A Presumptive Death Benefit (Death Gamble): If eligible for Service Retirement at time of death, payable to the Designated Beneficiary(ies)
- ♦ Ordinary: lump sum of ITHP; plus lump sum of Accumulated Deductions; plus if less than 10 years of service - six months of Earnable Salary; 10 or more years - 12 months of Earnable Salary; 20 or more years - 24 months of Earnable Salary
- ♦ Accidental: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Gamble: The greater of the Ordinary Death Benefit or Total Reserve
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

FIFTY-FIVE YEAR INCREASED SERVICE FRACTION PLAN (PLAN B)

SERVICE RETIREMENT

- ♦ Participants may retire at age 55 with benefits payable immediately
- ♦ The Service Retirement Benefit is:
 - ♦ For each year of Credited Service prior to July 1, 1968: 1.20% of Final Salary; plus
 - ♦ For each year of Credited Service after June 30, 1968: 1.53% of Final Salary; plus
 - ♦ a Pension for Increased-Take-Home-Pay (ITHP); plus
 - ♦ Annuity of Accumulated Deductions

VESTED RETIREMENT

- ♦ Eligible with at least five years of service; benefit payable at age 55
- ♦ Vested Retirement Benefit is calculated the same as the Service Retirement Benefit

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: 1.53% x Final Salary for each year after June 30, 1968; 1.20% x Final Salary for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ A Presumptive Death Benefit (Death Gamble): If eligible for Service Retirement at time of death, payable to the Designated Beneficiary(ies)
- ♦ Ordinary: lump sum of ITHP; plus lump sum of Accumulated Deductions; plus if less than 10 years of service - six months of Earnable Salary; 10 or more years - 12 months of Earnable Salary
- ♦ Accidental: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Gamble: The greater of the Ordinary Death Benefit or Total Reserve
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

TRANSIT 20-YEAR RETIREMENT PLAN (T-20) TRANSIT 20-YEAR NON-CONTRIBUTORY RETIREMENT PLAN (20N/C)

SERVICE RETIREMENT

- Participants may retire at age 50 with 20 or more years of Transit Operating Service (TOS)
- The Service Retirement Benefit is:
 - First 20 years of TOS: 50% of Final Salary, plus
 - Each year of TOS above 20: $1.5\% \times \text{Final Compensation} \times \text{TOS rendered on or after 07/01/68}$, plus
 - Each year of other service: $1\% \times \text{Final Compensation} \times \text{years of other service}$, plus
 - Pension for Increased-Take-Home-Pay (ITHP), plus
 - Pension for members prior to 07/01/70 who elected to make voluntary contributions.
 - If 55 with less than 20 years of TOS, may switch to the Age 55 1/100 Plan and retire with immediate payability

VESTED RETIREMENT

- No provision for vesting

DISABILITY RETIREMENT

- Ordinary: Must have ten or more years of Credited Service
- Accidental: No minimum service but disability resulted from an on-the-job accident
 - Ordinary: Less than age 50: $2.5\% \times \text{Final Compensation} \times \text{TOS up to 20}$; plus $1.5\% \times \text{Final Compensation} \times \text{TOS above 20 rendered on or after 07/01/68}$; plus $1\% \times \text{Final Compensation} \times \text{all other service}$. If 20 or more years of TOS and age 50, benefit equals Service Retirement Benefit
 - Accidental: Pension of 75% of Final Compensation; plus a pension based on the ITHP; plus an annuity based on any Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- Members may file for benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- A Presumptive Death Benefit (Death Gamble): If eligible for Service Retirement at time of death, payable to the Designated Beneficiary(ies)
- Ordinary: lump sum of ITHP; plus lump sum of Accumulated Deductions; plus if less than 10 years of service: six months of Earnable Salary; 10 or more years: 12 months of Earnable Salary
- Accidental: Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- Death Gamble: The greater of the Ordinary Death Benefit or Total Reserve
- Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

SANITATION 20-YEAR RETIREMENT PLAN (S-20)

SERVICE RETIREMENT

- Participants may retire with 20 or more years of Allowable Sanitation Service
- The Service Retirement Benefit is:
 - For the first 20 years of Allowable Service: 50% of Final Salary, less Required Amount, plus Accumulated Deductions
 - For each year of service (other than the first 20) prior to July 3, 1965: 1% of Final Compensation; plus
 - For each year of service (other than the first 20) after July 2, 1965: 1.5% of Final Compensation, plus
 - a Pension for excess Increased-Take-Home-Pay (ITHP) and an Annuity for Excess Contributions

VESTED RETIREMENT

- Must have five or more years of Allowable Sanitation Service, but less than 20; payable the date the member would have reached 20 years if he/she had not discontinued service
- For each year of Allowable Service: 2.5% of Final Salary; plus
- For years other than Allowable Service: 1% of Final Compensation

DISABILITY RETIREMENT

- Ordinary - must have five or more years of Credited Service; Accidental - no minimum service, but disability resulted from an on-the-job accident
- Disability Retirement Benefit:
 - Ordinary: If 10 or more years of Allowable Service - 50% of Final Salary; If less than 10 years - 1/3 of Final Salary; if eligible for service retirement, benefit = Service Retirement Benefit
 - Accidental: 75% of Final Salary; plus ITHP; plus Accumulated Deductions; plus if more than 20 years of Allowable Service, $1\% \times \text{Average Compensation} \times \text{years in excess of 20}$; plus $.5\% \times \text{Average Compensation} \times \text{years in excess of 20 rendered on or after July 1, 1967}$
- Heart Presumption: Diseases of the heart resulting in disability presumed accidental; accidental benefit payable
- Members may file for benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- A Presumptive Death Benefit (Death Gamble): If eligible for Service Retirement at time of death, payable to the Designated Beneficiary(ies)
- Ordinary: lump sum of ITHP; plus lump sum of Accumulated Deductions; plus if less than 10 years of service - six months of Earnable Salary; 10 or more years - 12 months of Earnable Salary
- Accidental: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP
- Death Gamble: The greater of the Ordinary Death Benefit or Total Reserve
- Heart Presumption: Death due to heart ailment presumed accidental; accidental death benefit payable
- Death Benefit for Vested Members (See Plan B)
- Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

SANITATION 25-YEAR RETIREMENT PLAN (S-25)

SERVICE RETIREMENT

- ♦ Participants may retire with 25 or more years of Allowable Sanitation Service
- ♦ The Service Retirement Benefit is:
 - ♦ For the first 25 years of Allowable Service: 50% of Final Salary, less Required Amount plus Accumulated Deductions
 - ♦ For each year of service (other than the first 20) prior to July 3, 1965: 1% of Final Compensation; plus
 - ♦ For each year of service (other than the first 20) after July 2, 1965: 1.5% of Final Compensation; plus
 - ♦ a Pension for excess Increased-Take-Home-Pay (ITHP) and an Annuity for Excess Contributions

VESTED RETIREMENT

- ♦ Must have five or more years of Allowable Sanitation Service, but less than 25; benefit payable when member would have reached 25 years if he/she had not discontinued service
- ♦ For each year of Allowable Service: 1% x Final Compensation; plus
- ♦ For each year of Allowable Sanitation Service rendered after July 2, 1965: .5% x Final Compensation

DISABILITY RETIREMENT

- ♦ Ordinary - must have five or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: If 10 or more years of Allowable Service – 50% of Final Salary; If less than 10 years – 1/3 of Final Salary; If eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Salary; plus ITHP; plus Accumulated Deductions
- ♦ Heart Presumption: Diseases of the heart resulting in disability presumed accidental; accidental benefit payable
- ♦ Members may file for benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ A Presumptive Death Benefit (Death Gamble): If eligible for Service Retirement at time of death, payable to the Designated Beneficiary(ies)
- ♦ Ordinary: lump sum of ITHP; plus lump sum of Accumulated Deductions; plus if less than 10 years of service - six months of Earnable Salary; 10 or more years - 12 months of Earnable Salary
- ♦ Accidental: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP
- ♦ Death Gamble: The greater of the Ordinary Death Benefit or Total Reserve
- ♦ Heart Presumption: Death due to heart ailment presumed accidental; accidental death benefit payable
- ♦ Death Benefit for Vested Members (See Plan B)
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

AGE 55 ONE-PERCENT RETIREMENT PLAN (1/100)

SERVICE RETIREMENT

- ♦ Participants may retire at age 55 irrespective of the amount of Credited Service attained by such age
- ♦ The Service Retirement Benefit is:
 - ♦ For each year of Credited Service: 1% of Final Compensation; plus
 - ♦ A Pension for Increased-Take-Home-Pay (ITHP); plus
 - ♦ An Annuity for Accumulated Member Contributions

VESTED RETIREMENT

- ♦ There is no provision for vesting

DISABILITY RETIREMENT

- ♦ Ordinary – must have 10 or more years of Membership Service; Accidental – no minimum service, but disability resulted from on-the-job accident.
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: If age 55, benefit = Service Retirement Benefit
 - ♦ If less than age 55, benefit = $2 \times 1/100$ for each year of service that would have been completed upon reaching age 55 for eligibility for service retirement x Final Compensation, up to 25% of Final Compensation; or, if greater:
 - ♦ $2 \times 1/100$ for each year of actual service completed to date x Final Compensation
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation for same injury
 - ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met.

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ A Presumptive Death Benefit (Death Gamble): If eligible for Service Retirement at time of death, payable to the Designated Beneficiary(ies)
- ♦ Ordinary: lump sum of ITHP; plus lump sum of Accumulated Deductions; plus if less than 10 years of service - six months of Earnable Salary; 10 or more years - 12 months of Earnable Salary
- ♦ Accidental: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Gamble: The greater of the Ordinary Death Benefit or Total Reserve
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DISPATCHERS 25-YEAR RETIREMENT PLAN (D-25)

SERVICE RETIREMENT

- Participants may retire after 25 years of Allowable Service as a Dispatcher Member
- The Service Retirement Benefit is:
 - For the first 25 years of Allowable Service: An Annuity (the actuarial equivalent of the member's required contributions), plus a Pension for Increased-Take-Home-Pay (ITHP), plus a Pension, which when added to the Annuity and Pension for ITHP equals 55% of Final Salary; plus
 - For each year beyond the first 25 years of Allowable Service: 1.70% of Final Salary; plus
 - A Pension for excess ITHP and an Annuity for Excess Contributions

VESTED RETIREMENT

- Must have five or more years of Allowable Service as a Dispatcher Member, but less than 25
- Payability Date: The date the member would have reached 25 years if he/she had not discontinued service
- Vested Benefit: For each year of Allowable Service as a Dispatcher Member: 2.2% of Final Salary

DISABILITY RETIREMENT

- Ordinary - must have ten or more years of Credited Service; Accidental - no minimum service, but disability resulted from an on-the-job accident
- Disability Retirement Benefit:
 - Ordinary: $1.53\% \times$ Final Salary for each year after June 30, 1968; $1.20\% \times$ Final Salary for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- A Presumptive Death Benefit (Death Gamble): If eligible for Service Retirement at time of death, payable to the Designated Beneficiary(ies)
- Ordinary: lump sum of ITHP; plus lump sum of Accumulated Deductions; plus if less than 10 years of service - six months of Earnable Salary; 10 or more years - 12 months of Earnable Salary
- Accidental: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- Death Gamble: The greater of the Ordinary Death Benefit or Total Reserve
- Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

EMERGENCY MEDICAL TECHNICIAN (EMT) 25-YEAR RETIREMENT PLAN (E-25)

SERVICE RETIREMENT

- Participants may retire after 25 years of Allowable Service as an EMT Member
- The Service Retirement Benefit is:
 - For the first 25 years of Allowable Service: An Annuity (the actuarial equivalent of the member's required contributions), plus a Pension for Increased-Take-Home-Pay (ITHP), plus a Pension, which when added to the Annuity and Pension for ITHP equals 55% of Final Salary; plus
 - For each year beyond the first 25 years of Allowable Service: 1.7% of Final Salary; plus
 - A Pension for excess ITHP and an Annuity for Excess Contributions

VESTED RETIREMENT

- Need five or more years of Allowable Service, but less than 25; payable when member would have reached 25 years
- For each year of Allowable Service: 2.2% of Final Salary

DISABILITY RETIREMENT

- Ordinary - must have ten or more years of Credited Service; Accidental - no minimum service, but disability resulted from an on-the-job accident
- Disability Retirement Benefit:
 - Ordinary: $1.53\% \times$ Final Salary for each year after June 30, 1968; $1.20\% \times$ Final Salary for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- Heart Presumption: Heart ailments resulting in disability presumed line-of-duty; accidental benefit payable
- HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed line-of-duty; accidental benefit payable
- Members may file for benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- A Presumptive Death Benefit (Death Gamble): If eligible for Service Retirement at time of death, payable to the Designated Beneficiary(ies)
- Ordinary: lump sum of ITHP; plus lump sum of Accumulated Deductions; plus if less than 10 years of service - six months of Earnable Salary; 10 or more years - 12 months of Earnable Salary
- Accidental: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- Death Gamble: The greater of the Ordinary Death Benefit or Total Reserve
- Heart Presumption: Death due to heart ailment presumed line-of-duty; accidental benefit payable
- Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

SPECIAL OFFICER 25-YEAR RETIREMENT PLAN (SPO)

SERVICE RETIREMENT

- ♦ Participants may retire after 25 years of Allowable Service as a Special Officer Member
- ♦ The Service Retirement Benefit is:
 - ♦ For the first 25 years of Allowable Service: An Annuity (the actuarial equivalent of the member's required contributions), plus a Pension for Increased-Take-Home-Pay (ITHP), plus a Pension, which when added to the Annuity and Pension for ITHP equals 55% of Final Salary; plus
 - ♦ For each year beyond the first 25 years of Allowable Service: 1.70% of Final Salary; plus
 - ♦ A Pension for excess ITHP and an Annuity for Excess Contributions

VESTED RETIREMENT

- ♦ Must have five or more years of Allowable Service as a Special Officer Member, but less than 25
- ♦ Payability Date: The date the member would have reached 25 years if he/she had not discontinued service
- ♦ Vested Benefit: For each year of Allowable Service: 2.2% of Final Salary

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: $1.53\% \times \text{Final Salary}$ for each year after June 30, 1968; $1.20\% \times \text{Final Salary}$ for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ A Presumptive Death Benefit (Death Gamble): If eligible for Service Retirement at time of death, payable to the Designated Beneficiary(ies)
- ♦ Ordinary: lump sum of ITHP; plus lump sum of Accumulated Deductions; plus if less than 10 years of service - six months of Earnable Salary; 10 or more years - 12 months of Earnable Salary
- ♦ Accidental: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Gamble: The greater of the Ordinary Death Benefit or Total Reserve
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

20-YEAR RETIREMENT PLAN FOR CORRECTION OFFICERS (P-20)

SERVICE RETIREMENT

- ♦ Participants may retire with 20 or more years of Allowable Correction Service (ACS) regardless of age
- ♦ The Service Retirement Benefit is:
 - ♦ First 20 years of ACS: 50% of Final Salary, plus
 - ♦ For years other than the first 20 years of ACS: 1.67% of the Average Compensation, plus
 - ♦ a Pension for excess Increased-Take-Home-Pay (ITHP) and an Annuity for Excess Contributions, plus
 - ♦ $75\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service}$ on or after 09/30/51
 - ♦ $55\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service}$ prior to 10/1/51

VESTED RETIREMENT

- ♦ Need at least five years but less than 20 years of ACS; payable when member would have reached 20 years of ACS
- ♦ The Vested Retirement Benefit is:
 - ♦ $2.5\% \times \text{Final Salary} \times \text{Years of ACS}$ up to 20 years, plus
 - ♦ $75\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service}$ on or after 09/30/51, plus
 - ♦ $55\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service}$ prior to 10/1/51

DISABILITY RETIREMENT

- ♦ Ordinary: If less than 10 years of ACS - 1/3 of Final Salary; more than 10, but less than 20 - 50% of Final Salary; more than 20 - $2.5\% \times \text{Final Salary} \times \text{Credited Service}$
- ♦ Accidental: 75% of Final Salary; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Heart Presumption: Diseases of the heart resulting in disability presumed accidental; accidental benefit payable
- ♦ HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed accidental; accidental benefit payable
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary: lump sum of ITHP; plus lump sum of Accumulated Deductions; plus if less than 10 years of service - six months of Earnable Salary; 10 or more years - 12 months of Earnable Salary
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- ♦ Heart Presumption: Diseases of the heart resulting in death presumed accidental; 50% of salary payable
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

TIER 1 RETIREMENT OPTIONS

MAXIMUM RETIREMENT ALLOWANCE

If a member upon retirement does not elect one of the options below, his or her benefit will be paid as a Maximum Retirement Allowance payable in monthly installments throughout his or her life, with all payments ceasing at death.

OPTION 1: UNMODIFIED AND MODIFIED INITIAL RESERVE

Option 1 provides the pensioner with a reduced monthly lifetime allowance. If the pensioner dies before his or her payments equal the total value of the initial reserve set aside to provide his or her benefits on the date of retirement, the balance is paid to the designated beneficiary(ies) in either a lump-sum or monthly payments. More than one beneficiary may be named and the beneficiary(ies) may be changed at any time.

OPTION 2: 100% JOINT-AND-SURVIVOR

The pensioner receives a reduced monthly lifetime allowance. When the pensioner dies, the surviving beneficiary receives 100% of the reduced allowance for life. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

OPTION 3: 50% JOINT-AND-SURVIVOR

The pensioner receives a reduced monthly lifetime allowance. When the pensioner dies, the surviving beneficiary receives 50% of the reduced allowance for life. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

OPTIONS 4-2 AND 4-3: POP-UP JOINT-AND-SURVIVOR OPTIONS

These pop-up options are variations of Options 2 and 3. The pensioner receives a reduced monthly lifetime allowance under either a 100% or 50% joint-and-survivor arrangement, but if the beneficiary dies before the pensioner, the pensioner's benefit "pops-up," that is, it automatically becomes the Maximum Retirement Allowance, and all payments cease at death.

OPTION 4: LUMP-SUM PAYMENT

The pensioner receives a reduced monthly lifetime allowance with the provision that when he or she dies, the beneficiary receives a limited lump-sum payment specified by the pensioner at the time he or she chose this option. More than one beneficiary can be named, and the beneficiary(ies) can be changed at any time.

NOTE: A pensioner may elect to receive any form of payment that is the actuarial equivalent of his or her Maximum Retirement Allowance, as certified by NYCERS' Chief Actuary and approved by the Board of Trustees.

**OPTION 4:
FIVE-YEAR CERTAIN, TEN-YEAR CERTAIN**

The pensioner receives a reduced monthly lifetime benefit. If the pensioner dies within five years (or ten years) from the date of retirement having designated only one primary beneficiary, the reduced monthly retirement benefit will continue to be paid to the designated primary beneficiary for the unexpired balance of the five-year (or ten-year) period. In the event of the death of the primary beneficiary after such beneficiary has begun to receive payment, the unexpended benefit will be paid in a lump sum to the contingent beneficiary or, if no contingent beneficiary exists, to the estate of the primary beneficiary.

If multiple primaries have been designated, the unexpended benefit will be paid in a lump sum divided equally to the surviving primary beneficiaries. In the event that all primary beneficiaries predecease the pensioner, then upon the death of the pensioner the unexpended benefit will be paid in a lump sum divided equally to the surviving contingent beneficiaries. If all beneficiaries predecease the pensioner, the unexpended benefit will be paid in a lump sum to the pensioner's estate. If the pensioner dies later than five years (or ten years) following the effective retirement date, all retirement allowance payments will cease.

The pensioner may change the beneficiary(ies) any time within the five or ten-year period.

**OPTION 4:
CONTINUING BENEFIT**

The pensioner receives a reduced monthly lifetime benefit with the provision that when he or she dies, a percentage of the reduced monthly benefit or a specific dollar amount will continue to be paid to the beneficiary. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

**OPTION 4-4:
CONTINUING BENEFIT WITH POP-UP**

The pensioner receives a reduced monthly lifetime benefit with the provision that when he or she dies, a percentage of the reduced monthly benefit or a specific dollar amount will continue to be paid to the beneficiary. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect. If the beneficiary predeceases the pensioner, the pensioner's benefit "pops up," that is, it automatically becomes the Maximum Retirement Allowance, and all payments cease at death.

SPLIT OPTION

Under certain circumstances, you may split your retirement allowance and receive payment of your Pension Reserve (City portion and ITHP) and your Annuity Reserve (your accumulated salary deductions) under different options. If you wish to elect a split option, NYCERS will supply you with figures and the necessary forms, upon request.

MODIFIED CAREER PENSION PLAN (PLAN C)

SERVICE RETIREMENT

- ♦ Participants may retire at age 62, or 55 on a reduced basis, with 25 years of Career Pension Plan Qualifying Service
- ♦ The Service Retirement Benefit is:
 - ♦ 55% of Final Average Salary (FAS), plus
For all years other than the first 25:
 - ♦ 1.7% x FAS x years after June 30, 1968, plus
 - ♦ 1.2% x FAS x years before July 1, 1968, plus
 - ♦ A Pension based on excess Increased-Take-Home-Pay (ITHP) and an Annuity based on Excess Contributions

VESTED RETIREMENT

- ♦ No provision for Vesting. Plan C members must switch to Plan D to become eligible for a Vested Retirement Benefit (See Plan D). However, all Tier 2 members with at least 10 years of Credited Service are eligible for the Death Benefit for Vested Members (see below).

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service
- ♦ Accidental – no minimum service requirement, but disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: 1.53% x FAS for each year after June 30, 1968; 1.20% x FAS for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions. Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions.
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

MODIFIED INCREASED SERVICE FRACTION PLAN (PLAN D)

SERVICE RETIREMENT

- ♦ Participants may retire at age 62, or 55 on a reduced basis, with five or more years of Credited Service
- ♦ The Service Retirement Benefit is:
 - ♦ 1.53% x Final Average Salary (FAS) x years of service after June 30, 1968, plus
 - ♦ 1.20% x FAS x years of service before July 1, 1968, plus
 - ♦ a Pension based on Increased-Take-Home-Pay (ITHP), plus
 - ♦ An Annuity based on Accumulated Deductions

VESTED RETIREMENT

- ♦ Need a minimum of five years of Credited Service
- ♦ Payability Date: Age 62 on an unreduced basis or age 55 on a reduced basis
- ♦ Vested Retirement Benefit is the same as the Service Retirement Benefit

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service
- ♦ Accidental – no minimum service requirement, but disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: 1.53% x FAS for each year after June 30, 1968; 1.20% x FAS for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions. Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions.
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

AGE 55 IMPROVED BENEFIT RETIREMENT PLAN (CPP-I)

SERVICE RETIREMENT

- ♦ Participants may retire at age 55, or age 50 in a physically-taxing position, with 25 years of Career Pension Plan Qualifying Service
- ♦ The Service Retirement Benefit is:
 - ♦ *First 25 years of Career Pension Plan Qualifying Service: 55% of Final Average Salary (FAS), plus*
 - ♦ *1.7% x FAS x years of service after June 30, 1968, plus*
 - ♦ *1.2% x FAS x years of service before July 1, 1968, plus*
 - ♦ *a Pension based on excess Increased-Take-Home-Pay (ITHP) and an Annuity based on Excess Contributions*

VESTED RETIREMENT

- ♦ No provision for Vesting. Plan CPP-I members must switch to Plan ISF-I to become eligible for a Vested Retirement Benefit (See Plan ISF-I). However, all Tier 2 members with at least 10 years of Credited Service are eligible for the Death Benefit for Vested Members (see below).

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service
- ♦ Accidental – no minimum service requirement, but disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit:
 - ♦ *Ordinary: 1.53% x FAS for each year after June 30, 1968; 1.20% x FAS for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit*
 - ♦ *Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury*
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions (basic and employee portion of Additional Member Contributions). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions (basic and employee portion of Additional Member Contributions).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

AGE 55 IMPROVED INCREASED SERVICE FRACTION PLAN (ISF-I)

SERVICE RETIREMENT

- ♦ Participants may retire at age 55 with twenty-five or more years of Credited Service
- ♦ The Service Retirement Benefit is:
 - ♦ *1.53% x Final Average Salary x years of service after June 30, 1968, plus*
 - ♦ *1.20% x FAS x years of service before July 1, 1968, plus*
 - ♦ *A Pension based on Increased-Take-Home-Pay (ITHP), plus*
 - ♦ *an Annuity based on Accumulated Deductions*

VESTED RETIREMENT

- ♦ Need a minimum of five years of Credited Service
- ♦ Payability Date: Age 62 on an unreduced basis or Age 55 on a reduced basis
- ♦ Vested Retirement Benefit is the same as the Service Retirement Benefit

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service
- ♦ Accidental – No minimum service requirement, but disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit:
 - ♦ *Ordinary: 1.53% x FAS for each year after June 30, 1968; 1.20% x FAS for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit.*
 - ♦ *Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury*
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions. Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental: Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions.
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

MODIFIED 20-YEAR PLAN FOR CORRECTION OFFICERS (P-20)

SERVICE RETIREMENT

- ♦ Participants may retire with an unreduced pension after completing 25 years of Allowable Correction Service (ACS):
- ♦ The Service Retirement Benefit is:
 - ♦ *First 20 years of ACS: 50% of Final Average Salary (FAS), plus*
 - ♦ *Each year of ACS after 20: 1.67% x Average Compensation (or FAS if the comp period is less than 3 years) x the years of ACS in excess of 20, plus*
 - ♦ *Each year of Credited Service: 75% x 1.67% x Final Compensation x Credited Service, plus*
 - ♦ *Pension based on the excess Increased-Take-Home-Pay (ITHP), and an Annuity for excess contributions*
 - ♦ *Benefit limited to 30 years*

VESTED RETIREMENT

- ♦ Need at least five but less than 20 years of ACS; payable when member would have reached 20 years of ACS
- ♦ Vested Retirement Benefit is:
 - ♦ $2.5\% \times \text{FAS} \times \text{the years of ACS}$, plus
 - ♦ $75\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service on or after 10/01/51}$

DISABILITY RETIREMENT

- ♦ Ordinary: If less than 10 years of ACS - 1/3 of FAS; more than 10, but less than 20 - 50% of FAS; more than 20 - $2.5\% \times \text{FAS} \times \text{Credited Service}$
- ♦ Accidental: 75% of FAS; 1.67% x Average Compensation x years of ACS in excess of 20; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Heart Presumption: Diseases of the heart resulting in disability presumed accidental; accidental benefit payable
- ♦ HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed accidental; accidental benefit payable
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Designated Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit: Need more than 90 days of service; benefit equal to three times current salary in a lump sum, plus a return of Accumulated Deductions
- ♦ Accidental Death Benefit: A pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- ♦ Vested Members: With 10 or more years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions
- ♦ Heart Presumption: Diseases of the heart resulting in death presumed accidental; accidental benefit payable
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

MODIFIED ONE PERCENT RETIREMENT PLAN (1/100) TRANSIT ONLY

SERVICE RETIREMENT

- ♦ Participants may retire at age 62 with an unreduced benefit or at age 55 with a reduced benefit regardless of the amount of Credited Service attained
- ♦ The Service Retirement Benefit is:
 - ♦ *For each year of Credited Service 1% of Final Compensation; plus*
 - ♦ *A Pension based on Increased-Take-Home-Pay (ITHP), plus*
 - ♦ *An Annuity based on Accumulated Member Contributions*

VESTED RETIREMENT

- ♦ No provision for Vesting. However, all Tier 2 members with at least 10 years of Credited Service are eligible for the Death Benefit for Vested Members (see below).

DISABILITY RETIREMENT

- ♦ Ordinary – must have 10 or more years of Membership Service; Accidental – no minimum service, but disability resulted from on-the-job accident.
- ♦ Disability Retirement Benefit:
 - ♦ *Ordinary: If age 62, benefit = Service Retirement Benefit*
 - ♦ *If less than age 62, benefit = $2 \times 1/100$ for each year of service that would have been completed upon reaching age 62 for eligibility for service retirement x Final Compensation, up to 25% of Final Compensation; or, if greater:*
 - ♦ $2 \times 1/100$ for each year of actual service completed to date x Final Compensation
 - ♦ *Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation for same injury*
 - ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met.

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary: Need more than 90 days of service; benefit equal to three times current salary in a lump sum
- ♦ Accidental: Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of the death benefit in force at time of separation from service
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

MODIFIED TRANSIT 20-YEAR RETIREMENT PLAN (20N/C)

SERVICE RETIREMENT

- Participants may retire at age 55 with 25 or more years of Transit Operating Service (TOS) but may retire with a reduced benefit as early as age 50 with at least 20 years of TOS.
- The Service Retirement Benefit is:
 - First 20 years of TOS: 50% of Final Average Salary (FAS), plus
 - Each year of TOS above 20: $1.5\% \times \text{Final Compensation} \times \text{years of TOS on or after 07/01/68}$, plus
 - Each year of other service: $1\% \times \text{Final Compensation} \times \text{years of other service}$
- The Reduced Service Retirement Benefit is:
 - $2\% \times \text{FAS} \times \text{Credited Service}$ (exclusive of any benefit provided on account of member contributions)
- Members may switch to the Modified Age 55 1/100 Plan and retire with immediate payability (See Modified 1/100 Plan)

VESTED RETIREMENT

- No provision for Vesting. However, all Tier 2 members with at least 10 years of Credited Service are eligible for the Death Benefit for Vested Members (see below).

DISABILITY RETIREMENT

- Ordinary: Must have ten or more years of Credited Service
- Accidental: No minimum service but disability resulted from an on-the-job accident
 - Ordinary: *Less than age 55 and less than 25 years of TOS: $2.5\% \times \text{Final Compensation} \times \text{TOS up to 20}$; plus $1.5\% \times \text{Final Compensation} \times \text{TOS above 20}$ rendered on or after 07/01/68; plus $1\% \times \text{Final Compensation} \times \text{all other service}$. If 25 or more years of TOS and age 55, benefit equals Service Retirement Benefit*
 - Accidental: *Pension of 75% of Final Compensation; plus a pension based on the ITHP; plus an annuity based on any Accumulated Deductions; less 100% of Workers' Compensation payments for same injury*
- Members may file for benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- Ordinary: Need more than 90 days of service; benefit equal to three times current salary in a lump sum
- Accidental: Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of the death benefit in force at time of separation from service
- Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

20-YEAR PLAN FOR CORRECTION MEMBERS BELOW THE RANK OF CAPTAIN (CI-20)

SERVICE RETIREMENT

- Participants may retire with 20 or more years of Allowable Correction Service (ACS) regardless of age (Benefit limited to 30 years)
- The Service Retirement Benefit is:
 - First 20 years of ACS: 50% of Final Average Salary (FAS), plus
 - For years other than the first 20 years of ACS: 1.67% of the Average Compensation, plus
 - a Pension for excess Increased-Take-Home-Pay (ITHP) and an Annuity based on Excess Contributions, plus
 - $75\% \times 1.67\% \times \text{Final Compensation}$ for each year on or after 09/30/51
 - $55\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service}$ prior to 10/1/51
- Not eligible for service retirement with a deficit in Additional Member Contributions (AMCs).

VESTED RETIREMENT

- Need at least five years but less than 20 years of ACS; benefit payable when member would have reached 20 years of ACS
- The Vested Retirement Benefit is:
 - $2.5\% \times \text{FAS} \times \text{years of ACS up to 20 years}$, plus
 - $75\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service on or after 09/30/51}$, plus
 - $55\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service prior to 10/1/51}$

DISABILITY RETIREMENT

- Ordinary: If less than 10 years of ACS - 1/3 of FAS; more than 10, but less than 20 - 50% of FAS; more than 20 - $2.5\% \times \text{FAS} \times \text{Credited Service}$
- Accidental: 75% of FAS; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- Heart Presumption: Diseases of the heart resulting in disability presumed accidental; accidental benefit payable
- HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed accidental; accidental benefit payable
- Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- Ordinary Death Benefit: Need more than 90 days of service; benefit equal to three times current salary in a lump sum, plus a return of Accumulated Deductions (basic and additional)
- Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions (basic and additional); plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- Vested Members: With 10 or more years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions (basic and additional)
- Heart Presumption: Diseases of the heart resulting in death presumed accidental; accidental benefit payable
- Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

20-YEAR PLAN FOR CORRECTION MEMBERS ABOVE THE RANK OF CAPTAIN (CP-20)

SERVICE RETIREMENT

- ♦ Participants may retire with 20 or more years of Allowable Correction Service (ACS) regardless of age
- ♦ The Service Retirement Benefit is:
 - ♦ *First 20 years of ACS: 50% of Final Average Salary (FAS), plus*
 - ♦ *For years other than the first 20 years of ACS: 1.67% of the Average Compensation, plus*
 - ♦ *a Pension for excess Increased-Take-Home-Pay (ITHP) and an Annuity based on Excess Contribution, plus*
 - ♦ $75\% \times 1.67\% \times \text{Final Compensation}$ for each year on or after 09/30/51
 - ♦ $55\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service}$ prior to 10/1/51
 - ♦ *Benefit limited to 30 years*

VESTED RETIREMENT

- ♦ Need at least five years but less than 20 years of ACS; payable when member would have reached 20 years of ACS
- ♦ The Vested Retirement Benefit is:
 - ♦ $2.5\% \times \text{FAS} \times \text{Years of ACS}$ up to 20 years, plus
 - ♦ $75\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service}$ on or after 09/30/51, plus
 - ♦ $55\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service}$ prior to 10/1/51

DISABILITY RETIREMENT

- ♦ Ordinary: If less than 10 years of ACS - 1/3 of FAS; more than 10, but less than 20 - 50% of FAS; more than 20 - $2.5\% \times \text{FAS} \times \text{Credited Service}$
- ♦ Accidental: 75% of FAS; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Heart Presumption: Diseases of the heart resulting in disability presumed accidental; accidental benefit payable
- ♦ HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed accidental; accidental benefit payable
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit: Need more than 90 days of service; benefit equal to three times current salary in a lump sum, plus a return of Accumulated Deductions (basic and additional)
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions (basic and additional); plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- ♦ Vested Members: With 10 or more years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions (basic and additional)
- ♦ Heart Presumption: Diseases of the heart resulting in death presumed accidental; accidental benefit payable
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

MODIFIED SANITATION 20-YEAR RETIREMENT PLAN (S-20)

SERVICE RETIREMENT

- ♦ Participants may retire with 25 years of Allowable Sanitation Service or with a reduced benefit after 20 years
- ♦ The Service Retirement Benefit is:
 - ♦ *First 20 years of Allowable Sanitation Service: 50% of Final Average Salary (FAS), plus*
 - ♦ $1.5\% \times \text{Final Compensation} \times \text{Allowable Sanitation Service}$ after first 20 years, plus
 - ♦ $1\% \times \text{Final Compensation} \times \text{all other service}$, plus
 - ♦ *A Pension based on excess Increased-Take-Home-Pay (ITHP) and an Annuity based on Excess Contributions*
- ♦ The Reduced Service Retirement Benefit is:
 - ♦ *Same as above except employer portion of the benefit cannot exceed $2\% \times \text{FAS} \times \text{years of Credited Service}$*

VESTED RETIREMENT

- ♦ Need at least 5, but less than 20 years of Allowable Sanitation Service; payable when member would have reached 20 years of such service
- ♦ $2.5\% \times \text{FAS} \times \text{each year of Allowable Sanitation Service}$; plus
- ♦ $1\% \times \text{Final Compensation} \times \text{each year of Credited Service}$

DISABILITY RETIREMENT

- ♦ Ordinary: Need 5 or more years of Credited Service;
- ♦ Accidental: No minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ *Ordinary: Less than 10 years of Allowable Sanitation Service: 1/3 of FAS; 10 - 20 years: 50% of FAS; more than 25 years: Benefit = Service Retirement Benefit*
 - ♦ *Accidental: 75% of FAS; plus ITHP; plus Accumulated Deductions, plus if more than 25 years of Allowable Sanitation Service, $1\% \times \text{Average Compensation} \times \text{years in excess of 20}$, plus $.5\% \times \text{Average Compensation} \times \text{years of Allowable Sanitation Service in excess of 20}$*
- ♦ Heart Presumption: Diseases of the heart resulting in disability presumed accidental; accidental benefit payable
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary: Need more than 90 days of service; benefit equal to three times current salary in a lump sum; plus Accumulated Deductions
- ♦ Accidental: Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of the death benefit in force at time of separation from service, plus Accumulated Deductions
- ♦ Heart Presumption: Death due to heart ailment presumed accidental; accidental death benefit payable
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

20-YEAR RETIREMENT PLAN FOR UNIFORMED SANITATION MEMBERS (SI-20)

SERVICE RETIREMENT

- ♦ Participants may retire with 20 or more years of Allowable Sanitation Service regardless of age
- ♦ The Service Retirement Benefit is:
 - ♦ First 20 years of Allowable Sanitation Service: 50% of Final Average Salary (FAS), plus
 - ♦ Other than the first 20 years of such service: 1.5% of Final Compensation, plus
 - ♦ For each year of all other Credited Service: 1% of Final Compensation, plus
 - ♦ a Pension based on excess Increased-Take-Home-Pay (ITHP) and an Annuity for Excess Contributions
 - ♦ Benefit limited to 30 years
- ♦ Not eligible for service retirement with a deficit in Additional Member Contributions (AMCs).

VESTED RETIREMENT

- ♦ Need at least five years but less than 20 years of Allowable Sanitation Service; benefit payable when member would have reached 20 years of such service
- ♦ The Vested Retirement Benefit is:
 - ♦ $2.5\% \times \text{FAS} \times \text{each year of Allowable Sanitation Service}$, plus
 - ♦ $1\% \times \text{Final Compensation} \times \text{each year of Credited Service}$

DISABILITY RETIREMENT

- ♦ Ordinary - must have five or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: If 10 or more years of Allowable Sanitation Service – 50% of FAS; If less than 10 years – one-third of FAS; If eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of FAS; plus ITHP; plus Accumulated Deductions
- ♦ Heart Presumption: Diseases of the heart resulting in disability presumed accidental; accidental benefit payable
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit: Need more than 90 days of service; benefit equal to three times current salary in a lump sum, plus a return of Accumulated Deductions (basic and additional)
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions (basic and additional); plus a lump sum of ITHP
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions (basic and additional)
- ♦ Heart Presumption: Diseases of the heart resulting in death presumed accidental; accidental benefit payable
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

20-YEAR, AGE-50 RETIREMENT PLAN FOR TBTA OFFICERS, SERGEANTS & LIEUTENANTS (2050I)

SERVICE RETIREMENT

- ♦ Participants may retire with 20 or more years of Allowable Service at age 50
- ♦ The Service Retirement Benefit is:
 - ♦ For the first 20 years of Allowable Service: 50% of Final Average Salary (FAS), plus
 - ♦ For each additional year of Allowable Service (up to a maximum of 30 years): 1.5% x FAS
- ♦ Not eligible for service retirement with a deficit in Additional Member Contributions (AMCs).

VESTED RETIREMENT

- ♦ No provision for Vesting. However, all Tier 2 members with at least 10 years of Credited Service are eligible for the Death Benefit for Vested Members (see below).

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: $1.53\% \times \text{FAS}$ for each year after June 30, 1968; $1.20\% \times \text{FAS}$ for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; If eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions, basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions, basic and additional (if less than 15 years of service); plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions, basic and additional (if less than 15 years of service).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

25-YEAR RETIREMENT PLAN FOR DISTRICT ATTORNEY INVESTIGATORS (25IDA)

SERVICE RETIREMENT

- ♦ Participants may retire with 25 or more years of Credited Service regardless of age
- ♦ The Service Retirement Benefit is:
 - ♦ For the first 25 years of Credited Service: $55\% \times \text{Final Salary}$, plus
 - ♦ For each additional year (up to a maximum of 32): $1.70\% \times \text{Final Average Salary (FAS)}$
 - ♦ A Pension for excess Increased-Take-Home-Pay (ITHP) and an Annuity for Excess Contributions

VESTED RETIREMENT

- ♦ Need at least 15 but less than 25 years of Credited Service
- ♦ Benefit payable when member could have completed 25 years of such service
- ♦ The Vested Retirement Benefit is:
 - ♦ $2.20\% \times \text{FAS} \times \text{each year of Credited Service}$

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: $1.53\% \times \text{FAS}$ for each year after June 30, 1968; $1.20\% \times \text{FAS}$ for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions. Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions.
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

20-YEAR RETIREMENT PLAN FOR DISTRICT ATTORNEY INVESTIGATORS (20IDA)

SERVICE RETIREMENT

- ♦ Participants may retire with credit for 20 or more years of Allowable Service in a District Attorney's Office as an Investigator (Allowable IDA Service)
- ♦ The Service Retirement Benefit is:
 - ♦ For the first 20 years of Allowable IDA Service: 50% of Final Salary, plus
 - ♦ For each additional year of Allowable IDA Service: 1.67% of Average Compensation, plus
 - ♦ $75\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service on or after September 30, 1951}$, plus
 - ♦ $55\% \times 1.67\% \times \text{Final Compensation} \times \text{Credited Service prior to October 1, 1951}$
 - ♦ A Pension for excess Increased-Take-Home-Pay (ITHP) and an Annuity for Excess Contributions
 - ♦ Benefit limited to 32 years

VESTED RETIREMENT

- ♦ Need at least 5 but less than 20 years of Allowable IDA Service
- ♦ Benefit payable when member could have reached 20 years of such service
- ♦ Vested Retirement Benefit is: 2.5% of Final Salary for each year of Allowable IDA Service

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: $1.53\% \times \text{FAS}$ for each year after June 30, 1968; $1.20\% \times \text{FAS}$ for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions. Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions; plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions.
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

25-YEAR RETIREMENT PLAN FOR DISPATCHERS (DIS-D)

SERVICE RETIREMENT

- ♦ Participants may retire with 25 or more years of Allowable Service as a Dispatcher Member
- ♦ The Service Retirement Benefit is:
 - ♦ An Annuity (the actuarial equivalent of contributions for the first 25 years of Allowable Service), plus
 - ♦ A Pension for Increased-Take-Home-Pay (ITHP) for the first 25 years, plus
 - ♦ A Pension, which when added to the Annuity and ITHP equals 50% of Final Average Salary (FAS), plus
 - ♦ 2% of FAS for each year beyond the first 25 years of Allowable Service (not to exceed five years)
 - ♦ A Pension for excess (ITHP) and an Annuity for Excess Contributions

VESTED RETIREMENT

- ♦ No provision for Vesting. However, all Tier 2 members with at least 10 years of Credited Service are eligible for the Death Benefit for Vested Members (see below).

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: $1.53\% \times \text{FAS}$ for each year after June 30, 1968; $1.20\% \times \text{FAS}$ for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions, basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions, basic and additional (if less than 15 years of service); plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions, basic and additional (if less than 15 years of service).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

25-YEAR RETIREMENT PLAN FOR EMERGENCY MEDICAL TECHNICIANS (EMT-D)

SERVICE RETIREMENT

- ♦ Participants may retire with 25 or more years of Allowable Service as an EMT Member
- ♦ The Service Retirement Benefit is:
 - ♦ An Annuity (the actuarial equivalent of contributions for the first 25 years of Allowable Service), plus
 - ♦ A Pension for Increased-Take-Home-Pay (ITHP) for the first 25 years, plus
 - ♦ A Pension, which when added to the Annuity and ITHP equals 50% of Final Average Salary (FAS), plus
 - ♦ 2% of FAS for each year beyond the first 25 years of Allowable Service (not to exceed five years)
 - ♦ A Pension for excess ITHP and an Annuity for Excess Contributions

VESTED RETIREMENT

- ♦ No provision for Vesting. However, all Tier 2 members with at least 10 years of Credited Service are eligible for the Death Benefit for Vested Members (see below).

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: $1.53\% \times \text{FAS}$ for each year after June 30, 1968; $1.20\% \times \text{FAS}$ for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Heart Presumption: Diseases of the heart resulting in disability presumed line-of-duty; accidental benefit payable
- ♦ HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed line-of-duty; accidental benefit payable
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions, basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions, basic and additional (if less than 15 years of service); plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- ♦ Heart Presumption: Diseases of the heart resulting in death presumed line-of-duty; accidental benefit payable
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions, basic and additional (if less than 15 years of service).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

25-YEAR RETIREMENT PLAN FOR NYC DEPUTY SHERIFFS (DSH-I)

SERVICE RETIREMENT

- ♦ Participants may retire after having credit for 25 or more years of Credited Service regardless of age
- ♦ The Service Retirement Benefit is:
 - ♦ An Annuity (the actuarial equivalent of contributions for the first 25 years of Credited Service), plus
 - ♦ A Pension for Increased-Take-Home-Pay (ITHP) for the first 25 years, plus
 - ♦ A Pension, which when added to the Annuity and ITHP equals 55% of Final Average Salary (FAS), plus
 - ♦ 1.7% of FAS for each year beyond the first 25 years of Credited Service (not to exceed five years)
 - ♦ A Pension for excess ITHP and an Annuity for Excess Contributions

VESTED RETIREMENT

- ♦ No provision for Vesting. However, all Tier 2 members with at least 10 years of Credited Service are eligible for the Death Benefit for Vested Members (see below).

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: 1.53% x FAS for each year after June 30, 1968; 1.20% x FAS for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions, basic and additional (if less than five years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions, basic and additional (if less than five years of service); plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions, basic and additional (if less than five years of service).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

25-YEAR/AGE-50 RETIREMENT PLAN FOR AUTOMOTIVE WORKERS (AUT-I)

SERVICE RETIREMENT

- ♦ Participants with 25 or more years of Credited Service may retire at age 50
- ♦ The Service Retirement Benefit is:
 - ♦ An Annuity (the actuarial equivalent of contributions for the first 25 years of Credited Service), plus
 - ♦ A Pension for Increased-Take-Home-Pay (ITHP) for the first 25 years, plus
 - ♦ A Pension, which when added to the Annuity and ITHP equals 50% of Final Average Salary (FAS), plus
 - ♦ 2% of FAS for each year beyond the first 25 years of Credited Service (not to exceed five years)
 - ♦ A Pension for excess ITHP and an Annuity for Excess Contributions

VESTED RETIREMENT

- ♦ No provision for Vesting. However, all Tier 2 members with at least 10 years of Credited Service are eligible for the Death Benefit for Vested Members (see below).

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: 1.53% x FAS for each year after June 30, 1968; 1.20% x FAS for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions, basic and additional (if less than five years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions, basic and additional (if less than five years of service); plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions, basic and additional (if less than five years of service).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

25-YEAR RETIREMENT PLAN FOR SPECIAL OFFICERS (SPO-I)

SERVICE RETIREMENT

- ♦ Participants may retire with 25 or more years of Allowable Service as a Special Officer regardless of age
- ♦ The Service Retirement Benefit is:
 - ♦ An Annuity (the actuarial equivalent of contributions for the first 25 years of Allowable Service), plus
 - ♦ A Pension for Increased-Take-Home-Pay (ITHP) for the first 25 years, plus
 - ♦ A Pension, which when added to the Annuity and ITHP equals 50% of Final Average Salary (FAS), plus
 - ♦ 2% of FAS for each year beyond the first 25 years of Allowable Service (not to exceed five years)
 - ♦ A Pension for excess ITHP and an Annuity for Excess Contributions

VESTED RETIREMENT

- ♦ No provision for Vesting. However, all Tier 2 members with at least 10 years of Credited Service are eligible for the Death Benefit for Vested Members (see below).

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: $1.53\% \times \text{FAS}$ for each year after June 30, 1968; $1.20\% \times \text{FAS}$ for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions, basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions, basic and additional (if less than 15 years of service); plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions, basic and additional (if less than 15 years of service).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

25-YEAR RETIREMENT PLAN FOR POLICE COMMUNICATION OPERATORS (911)

SERVICE RETIREMENT

- ♦ Participants with 25 or more years of Credited Service may retire regardless of age
- ♦ The Service Retirement Benefit is:
 - ♦ An Annuity (the actuarial equivalent of contributions for the first 25 years of Credited Service), plus
 - ♦ A Pension for Increased-Take-Home-Pay (ITHP) for the first 25 years, plus
 - ♦ A Pension, which when added to the Annuity and ITHP equals 50% of Final Average Salary (FAS), plus
 - ♦ 2% of FAS for each year beyond the first 25 years of Credited Service (not to exceed five years)
 - ♦ A Pension for excess ITHP and an Annuity for Excess Contributions

VESTED RETIREMENT

- ♦ No provision for Vesting. However, all Tier 2 members with at least 10 years of Credited Service are eligible for the Death Benefit for Vested Members (see below).

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service; Accidental – no minimum service, but disability resulted from an on-the-job accident
- ♦ Disability Retirement Benefit:
 - ♦ Ordinary: $1.53\% \times \text{FAS}$ for each year after June 30, 1968; $1.20\% \times \text{FAS}$ for each year before July 1, 1968; plus ITHP; plus Accumulated Deductions; if eligible for service retirement, benefit = Service Retirement Benefit
 - ♦ Accidental: 75% of Final Compensation; plus ITHP; plus Accumulated Deductions; less 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions, basic and additional (if less than five years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of Final Compensation; plus a lump sum of Accumulated Deductions, basic and additional (if less than 5 years of service); plus a lump sum of ITHP; less 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions, basic and additional (if less than five years of service).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

TIER 2 RETIREMENT OPTIONS

MAXIMUM RETIREMENT ALLOWANCE

If a member, upon retirement, does not elect one of the options listed below, his or her benefit will be paid as a Maximum Retirement Allowance payable in monthly installments throughout his or her life, with all payments ceasing at death.

OPTION 1: RETURN OF ANNUITY RESERVE

Option 1 provides the pensioner with a reduced monthly lifetime allowance. If the pensioner dies before the Annuity portion of his or her payments equal the total value of the Annuity reserve set aside to pay his or her Annuity on the date of retirement, the balance is paid to the designated beneficiary in either a lump sum or monthly payments. Option 1 cannot be elected for the ITHP or Pension portions of the retirement allowance. More than one beneficiary may be named, and the beneficiary(ies) may be changed at any time.

OPTION 2: 100% JOINT-AND-SURVIVOR

The pensioner receives a reduced monthly lifetime allowance. When the pensioner dies, the surviving beneficiary receives 100% of the reduced monthly allowance for life. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

OPTION 3: 50% JOINT-AND-SURVIVOR

The pensioner receives a reduced monthly lifetime allowance. When the pensioner dies, the surviving beneficiary receives 50% of the reduced monthly allowance for life. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

OPTIONS 4-2 AND 4-3: POP-UP JOINT-AND-SURVIVOR OPTIONS

These options are variations of Options 2 and 3. The pensioner receives a reduced monthly lifetime allowance under either a 100% or 50% joint-and-survivor arrangement, but if the beneficiary dies before the pensioner, the pensioner's benefit "pops-up," that is, it automatically becomes the Maximum Retirement Allowance, and all payments cease at death.

OPTION 4: LUMP-SUM PAYMENT

The pensioner receives a reduced monthly lifetime allowance. When the pensioner dies, the surviving beneficiary(ies) receives a limited lump-sum payment specified by the pensioner at the time he or she chose this option. More than one beneficiary can be named, and the beneficiary(ies) can be changed at any time.

OPTION 4: CONTINUING BENEFIT

The pensioner receives a reduced monthly lifetime benefit with the provision that when he or she dies, a percentage of the reduced monthly benefit or a specific dollar amount will continue to be paid to the beneficiary. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

OPTION 4-4: CONTINUING BENEFIT WITH POP-UP

The pensioner receives a reduced monthly lifetime benefit with the provision that when he or she dies, a percentage of the reduced monthly benefit or a specific dollar amount will continue to be paid to the beneficiary. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect. If the beneficiary predeceases the pensioner, the pensioner's benefit "pops up," that is, it automatically becomes the Maximum Retirement Allowance, and all payments cease at death.

NOTE: A pensioner may elect to receive any form of payment that is the actuarial equivalent of their Maximum Retirement Allowance, as certified by NYCERS' Chief Actuary and approved by the Board of Trustees.

OPTION 5 (FIVE-YEAR CERTAIN)

The pensioner receives a reduced monthly lifetime benefit. If the pensioner dies within five years from the date of retirement having designated only one primary beneficiary, the reduced monthly retirement benefit will continue to be paid to the designated primary beneficiary for the unexpired balance of the five-year period. In the event of the death of the primary beneficiary after such beneficiary has begun to receive payment, the unexpended benefit will be paid in a lump sum to the contingent beneficiary or, if no contingent beneficiary exists, to the estate of the primary beneficiary.

If multiple primaries have been designated, the unexpended benefit will be paid in a lump sum divided equally to the surviving primary beneficiaries. In the event that all primary beneficiaries predecease the pensioner, then upon the death of the pensioner the unexpended benefit will be paid in a lump sum divided equally to the surviving contingent beneficiaries. If all beneficiaries predecease the pensioner, the unexpended benefit will be paid in a lump sum to the pensioner's estate. If the pensioner dies later than five years following the effective retirement date, all retirement allowance payments will cease.

The pensioner may change the beneficiary(ies) any time within the five-year period.

OPTION 6 (TEN-YEAR CERTAIN)

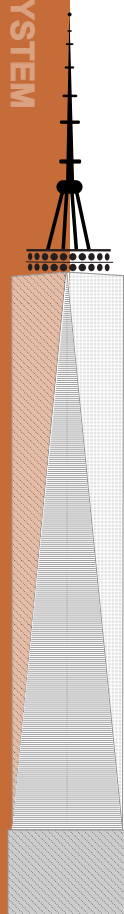
The pensioner receives a reduced monthly lifetime benefit. If the pensioner dies within ten years from the date of retirement having designated only one primary beneficiary, the reduced monthly retirement benefit will continue to be paid to the designated primary beneficiary for the unexpired balance of the ten-year period. In the event of the death of the primary beneficiary after such beneficiary has begun to receive payment, the unexpended benefit will be paid in a lump sum to the contingent beneficiary or, if no contingent beneficiary exists, to the estate of the primary beneficiary.

If multiple primaries have been designated, the unexpended benefit will be paid in a lump sum divided equally to the surviving primary beneficiaries. In the event that all primary beneficiaries predecease the pensioner, then upon the death of the pensioner the unexpended benefit will be paid in a lump sum divided equally to the surviving contingent beneficiaries. If all beneficiaries predecease the pensioner, the unexpended benefit will be paid in a lump sum to the pensioner's estate. If the pensioner dies later than ten years following the effective retirement date, all retirement allowance payments will cease.

The pensioner may change the beneficiary(ies) any time within the ten-year period.

SPLIT OPTION

Under certain circumstances, you may split your retirement allowance and receive payment of your Pension Reserve (City portion and ITHP) and your Annuity Reserve (your accumulated salary deductions) under different options. If you wish to elect a split option, NYCERS will supply you with figures and the necessary forms, upon request.



RETIREMENT PLAN FOR GENERAL MEMBERS

SERVICE RETIREMENT

- ♦ Participants may retire with an unreduced benefit at age 62 and as early as age 55, with a reduced benefit
- ♦ Service Retirement Benefit is:
 - ♦ *Less than 20 years of Credited Service:* $1.67\% \times \text{each year of Credited Service} \times \text{Final Average Salary (FAS)}$
 - ♦ *20 or more years of Credited Service:* $2\% \times \text{each year of Credited Service} \times \text{FAS}$
- ♦ Benefit is reduced by 50% of the Primary Social Security Benefit (PSSB) beginning at age 62
- ♦ Post-retirement escalations depending on age at retirement

VESTED RETIREMENT

- ♦ A member with five or more years of Credited Service at age 62 may receive an unreduced vested retirement benefit or the member may elect to receive a reduced benefit prior to age 62, as early as age 55
- ♦ Benefit calculation same as service retirement benefit calculation

DISABILITY RETIREMENT

- ♦ May receive an Ordinary Disability Benefit (ODB) or Accidental Disability Benefit (ADB)
- ♦ ODB: If you have at least five years of service and deemed disabled by the Social Security Administration the ODB is equal to the greater of one-third of FAS or $2\% \times \text{Credited Service} \times \text{FAS}$ (both are reduced by 50% of the PSSB & 100% of Workers' Compensation payments for any injury)
- ♦ ADB: Eligible if your disability is deemed to be the result of an accidental injury sustained in the performance of duty. The benefit is 60% of FAS minus 50% of the PSSB and 100% of Workers' Compensation payments for any injury.
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum. A return of Basic Member Contributions included. Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Accumulated Deductions
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service. A return of Basic Member Contributions included.
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

UNIFORMED CORRECTION FORCE 25 - YEAR PLAN (CO-25)

SERVICE RETIREMENT

- ♦ Correction Officers appointed after July 27, 1976 can retire after 25 years of Credited Service without regard to age, and without a benefit reduction due to retirement prior to age 62
- ♦ The Service Retirement Benefit is 50% of Final Average Salary (FAS)

VESTED RETIREMENT

- ♦ There is no Vesting provision with this plan; however, members may vest under the basic Tier 3 vesting provisions (See "Retirement Plan for General Members") and are eligible for the Death Benefit for Vested Members if they have 10 or more years of Credited Service (see below)

DISABILITY RETIREMENT

- ♦ May receive an Ordinary Disability Benefit (ODB), special disability benefit, performance of duty disability benefit or Accidental Disability Benefit (ADB)
- ♦ ODB: See "Retirement Plan for General Members"
- ♦ Dual Purpose Disability Benefit: Eligible with 10 or more years of Credited Service. If less than 10 years, may qualify if injury is due to an on-the-job accident. Benefit = $1/3$ of FAS or $1.67\% \times \text{each year of Credited Service} \times \text{FAS}$. If eligible for service retirement, benefit = Service Retirement Benefit.
- ♦ Performance of Duty Disability Benefit: Eligible if your disability is deemed to be the result of an accidental injury sustained in the performance of duty, by an act of an inmate; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury.
- ♦ ADB: See "Retirement Plan for General Members"
- ♦ Heart Presumption: Diseases of the heart resulting in disability presumed line-of-duty; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- ♦ HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed line-of-duty; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit: members with more than 90 days of service will receive a death benefit equal to three times current salary in a lump sum, plus a return of Basic Member Contributions
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable
- ♦ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Basic Member Contributions
- ♦ Heart Presumption: Diseases of the heart resulting in death presumed accidental; accidental benefit payable
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

UNIFORMED CORRECTION OFFICER 20 - YEAR RETIREMENT PLAN (CO-20)

SERVICE RETIREMENT

- Participants may retire with 20 or more years of Credited Service or Allowable Correction Service (ACS) (type of service required depends on membership date), without regard to age.
- The Service Retirement Benefit is:
 - *For the first 20 years of Credited Service or ACS: 50% of FAS*
 - *For all years of Credited Service or ACS, other than the first 20 years of such service, 1.67% x years of service x FAS (not to exceed 30 years)*
- Not eligible for service retirement with a deficit in Additional Member Contributions (AMCs).

VESTED RETIREMENT

- Must have at least five years of Credited Service or ACS, but less than 20 years of such service
- Benefit payable on the earliest date the member could have retired with 20 years of Credited Service or ACS
- The Vested Retirement Benefit is: $2.5\% \times \text{years of service} \times \text{FAS}$
- Not eligible for vested retirement with a deficit in AMCs.

DISABILITY RETIREMENT

- May receive an Ordinary Disability Benefit (ODB), special disability benefit, performance of duty disability benefit or Accidental Disability Benefit (ADB)
- ODB: See "Retirement Plan for General Members"
- Dual Purpose Disability Benefit: Eligible with 10 or more years of Credited Service. If less than 10 years, may qualify if injury is due to an on-the-job accident. Benefit = $1/3$ of FAS or $1.67\% \times$ each year of Credited Service x FAS. If eligible for service retirement, benefit = Service Retirement Benefit.
- Performance of Duty Disability: Eligible if your disability is deemed to be the result of an injury sustained in the performance of duty by an act of an inmate; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- ADB: See "Retirement Plan for General Members"
- Heart Presumption: Diseases of the heart resulting in disability presumed line-of-duty; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed line-of-duty; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- Ordinary Death Benefit: members with more than 90 days of service will receive a death benefit equal to three times current salary in a lump sum, plus a return of Accumulated Deductions, basic and additional
- Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions
- Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions, basic and additional
- Heart Presumption: Diseases of the heart resulting in death presumed accidental; accidental benefit payable
- Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

CORRECTION CAPTAIN 20 - YEAR RETIREMENT PLAN (CC-20)

SERVICE RETIREMENT

- Participants may retire with 20 or more years of Credited Service or Allowable Correction Service (ACS) (type of service required depends on membership date), without regard to age.
- The Service Retirement Benefit is:
 - *For the first 20 years of Credited Service or ACS: 50% of FAS*
 - *For all years of Credited Service or ACS, other than the first 20 years of such service, 1.67% of FAS times the years of such service (not to exceed 30 years)*

VESTED RETIREMENT

- Must have at least five years of Credited Service or ACS, but less than 20 years of such service
- Benefit payable on the earliest date the member could have retired with 20 years of Credited Service or ACS
- The Vested Retirement Benefit is: $2.5\% \times \text{years of service} \times \text{FAS}$

DISABILITY RETIREMENT

- May receive an Ordinary Disability Benefit (ODB), special disability benefit, performance of duty disability benefit or Accidental Disability Benefit (ADB)
- ODB: See "Retirement Plan for General Members"
- Dual Purpose Disability Benefit: Eligible with 10 or more years of Credited Service. If less than 10 years, may qualify if injury is due to an on-the-job accident. Benefit = $1/3$ of FAS or $1.67\% \times$ each year of Credited Service x FAS. If eligible for service retirement, benefit = Service Retirement Benefit.
- Performance of Duty Disability Benefit: Eligible if your disability is deemed to be the result of an injury sustained in the performance of duty by an act of an inmate; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- ADB: See "Retirement Plan for General Members"
- Heart Presumption: Diseases of the heart resulting in disability presumed line-of-duty; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed line-of-duty; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- Ordinary Death Benefit: members with more than 90 days of service will receive a death benefit equal to three times current salary in a lump sum, plus a return of Accumulated Deductions, basic and additional
- Accidental Death Benefit: A pension equal to 50% of salary payable, plus a return of Additional Member Contributions
- Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions, basic and additional
- Heart Presumption: Diseases of the heart resulting in death presumed accidental; accidental benefit payable
- Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

UNIFORMED CORRECTION FORCE 20 - YEAR RETIREMENT PLAN (CF-20)

SERVICE RETIREMENT

- ♦ Participants may retire with 20 or more years of Allowable Correction Service (ACS), without regard to age
- ♦ The Service Retirement Benefit is:
 - ♦ For the first 20 years of ACS: 50% of Final Average Salary (FAS)
 - ♦ For all years of ACS other than the first 20 years of such service: 1.67% of FAS times years of such service (not to exceed 30 years)

VESTED RETIREMENT

- ♦ Must have at least five years of ACS, but less than 20 years of such service
- ♦ Benefit payable on the earliest date the member could have retired with 20 years of ACS
- ♦ The Vested Retirement Benefit is: 2.5% of FAS for each year of ACS

DISABILITY RETIREMENT

- ♦ May receive an Ordinary Disability Benefit (ODB), special disability benefit, performance of duty disability benefit or Accidental Disability Benefit (ADB)
- ♦ ODB: See "Retirement Plan for General Members"
- ♦ Dual Purpose Disability Benefit: Eligible with 10 or more years of Credited Service. If less than 10 years, may qualify if injury is due to an on-the-job accident. Benefit = 1/3 of FAS or 1.67% x each year of Credited Service x FAS. If eligible for service retirement, benefit = Service Retirement Benefit.
- ♦ Performance of Duty Disability Benefit: Eligible if your disability is deemed to be the result of an injury sustained in the performance of duty by an act of an inmate; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- ♦ ADB: See "Retirement Plan for General Members"
- ♦ Heart Presumption: Diseases of the heart resulting in disability presumed line-of-duty; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- ♦ HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed line-of-duty; 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit: members with more than 90 days of service will receive a death benefit equal to three times current salary in a lump sum, plus a return of Accumulated Deductions, basic and additional
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions
- ♦ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions, basic and additional
- ♦ Heart Presumption: Diseases of the heart resulting in death presumed accidental; accidental benefit payable
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DA INVESTIGATORS 22-YEAR RETIREMENT PLAN (DA-22)

SERVICE RETIREMENT

- ♦ Participants may retire for service with 22 years of Credited Service regardless of age
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS), minus
 - ♦ 50% of Primary Social Security Benefit commencing at age 62.
- ♦ Participants may retire with Early Service Retirement benefit with at least 20 years of Credited Service:
 - ♦ 2.1% x FAS x years of Credited Service at the completion of 20 years of Credited Service; plus
 - ♦ .33% x FAS x each month of service in excess of 20 years, but not more than 50% of FAS; minus
 - ♦ 50% of member's Primary Social Security Benefit commencing at age 62

VESTED RETIREMENT

- ♦ Must have at least five years of Credited Service
- ♦ Payability Date: the date member would have attained 20 years of Credited Service
- ♦ The Vested Retirement Benefit is:
 - ♦ 2.1% x FAS x years of Credited Service; minus
 - ♦ 50% of member's Primary Social Security Benefit commencing at age 62
- ♦ May elect to receive reduced vested benefit prior to date member would have attained 20 years of Credited Service but not earlier than age 55

DISABILITY RETIREMENT

- ♦ Ordinary Disability: Must have at least five years of Credited Service and be considered disabled by Social Security Administration. Benefit equal to the greater of:
 - ♦ 1/3 of FAS or
 - ♦ 2% x FAS x Credited Service, if eligible for service retirement, not in excess of 22 years of such service, minus
 - ♦ 50% of Primary Social Security Disability Benefit and 100% of Workers' Compensation payments for any injury
- ♦ Accidental Disability: Disabled because of a natural or proximate result of an accident sustained on the job. Benefit is:
 - ♦ 50% of FAS, minus
 - ♦ 50% of Primary Social Security Disability Benefit or Primary Social Security Benefit, whichever begins first, and 100% of Workers' Compensation payments for any injury

DEATH BENEFITS

- ♦ An Ordinary Death Benefit payable to the designated beneficiary(ies) if member was in City service for at least 90 days and in active service at time of death. Benefit is three times salary lump sum, plus a return of Accumulated Deductions
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law): A Pension equal to 50% of salary payable
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service plus a return of Accumulated Deductions

ESCALATION

- ♦ Escalation of Service Retirement, Vested Retirement, or Early Service Retirement benefit based on years of service and date of election of payment
- ♦ Escalation of Ordinary Disability benefits, Accident Disability benefits, and Accidental Death benefits first day of the month following date retiree or beneficiary becomes eligible for benefit.

UNIFORMED CORRECTION FORCE 22-YEAR RETIREMENT PLAN (CF-22)

SERVICE RETIREMENT

- ◆ Participants may retire for service with 22 years of Credited Service regardless of age
- ◆ The Service Retirement Benefit is:
 - ◆ 50% of Final Average Salary (FAS), minus
 - ◆ 50% of Primary Social Security Benefit commencing at age 62.
- ◆ Participants may retire with Early Service Retirement benefit with at least 20 years of Credited Service:
 - ◆ $2.1\% \times \text{FAS} \times \text{years of Credited Service at the completion of 20 years of Credited Service}$; plus
 - ◆ $.33\% \times \text{FAS} \times \text{each month of service in excess of 20 years, but not more than 50\% of FAS}$; minus
 - ◆ 50% of member's Primary Social Security Benefit commencing at age 62.

VESTED RETIREMENT

- ◆ Must have at least five years of Credited Service
- ◆ Payability Date: the date member would have attained 20 years of Credited Service
- ◆ The Vested Retirement Benefit is:
 - ◆ $2.1\% \times \text{FAS} \times \text{years of Credited Service}$; minus
 - ◆ 50% of member's Primary Social Security Benefit commencing at age 62.
- ◆ May elect to receive reduced vested benefit prior to date member would have attained 20 years of Credited Service but not earlier than age 55

DISABILITY RETIREMENT

- ◆ Ordinary Disability: Must have at least five years of Credited Service and be considered disabled by Social Security Administration. Benefit equal to the greater of:
 - ◆ $1/3$ of FAS or
 - ◆ $2\% \times \text{FAS} \times \text{years of Credited Service, if eligible for service retirement, not in excess of 22 years of such service, minus}$
 - ◆ 50% of Primary Social Security Disability Benefit and 100% of Workers' Compensation payments for any injury
- ◆ Accidental Disability: Disabled because of a natural or proximate result of an accident sustained on the job. Benefit is:
 - ◆ 50% of FAS, minus
 - ◆ 50% of Primary Social Security Disability Benefit or Primary Social Security Benefit, whichever begins first, and 100% of Workers' Compensation payments for any injury

DEATH BENEFITS

- ◆ An Ordinary Death Benefit payable to designated beneficiary(ies) if member was in City service for at least 90 days and in active service at time of death. Benefit is three times salary lump sum, plus a return of Accumulated Deductions
- ◆ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable annually to the Eligible Beneficiary(ies) (defined in law): A Pension equal to 50% of salary payable
- ◆ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments.
- ◆ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service plus a return of Accumulated Deductions

ESCALATION

- ◆ Escalation of Service Retirement, Vested Retirement, or Early Service Retirement benefit based on years of service and date of election of payment
- ◆ Escalation of Ordinary Disability benefits, Accidental Disability benefits, and Accidental Death benefits first day of the month following date retiree or beneficiary becomes eligible for benefit.

UNIFORMED CORRECTION FORCE 22-YEAR ENHANCED DISABILITY RETIREMENT PLAN (CF-22E)

SERVICE RETIREMENT

- ◆ Participants may retire with Service Retirement benefit upon attaining 22 years of Credited Service regardless of age
- ◆ The Service Retirement Benefit is:
 - ◆ 50% of Final Average Salary (FAS), minus
 - ◆ 50% of Primary Social Security Benefit commencing at age 62.
- ◆ Participants may retire with Early Service Retirement benefit after attaining at least 20 years of Credited Service
- ◆ The Early Service Retirement Benefit is:
 - ◆ $2.1\% \times \text{FAS} \times \text{years of Credited Service at the completion of 20 years of Credited Service}$; plus
 - ◆ $.33\% \times \text{FAS} \times \text{each month of service in excess of 20 years, but not more than 50\% of FAS}$; minus
 - ◆ 50% of member's Primary Social Security Benefit commencing at age 62

VESTED RETIREMENT

- ◆ Must have at least five years of Credited Service
- ◆ Payability Date: the date member would have attained 20 years of Credited Service
- ◆ The Vested Retirement Benefit is:
 - ◆ $2.1\% \times \text{FAS} \times \text{years of Credited Service}$; minus
 - ◆ 50% of member's Primary Social Security Benefit commencing at age 62
- ◆ May elect to receive reduced vested benefit prior to date member would have attained 20 years of Credited Service, but not earlier than age 55

ENHANCED DISABILITY RETIREMENT

- ◆ Ordinary Disability Benefit: Must have at least five years of Credited Service and be considered disabled by Social Security Administration. Benefit equal to the greater of:
 - ◆ $1/3$ of FAS or
 - ◆ $2\% \times \text{FAS} \times \text{years of Credited Service, but not in excess of 22 years of such service}$
- ◆ Disability Retirement RSSL §507-a: Must have at least 10 years of Credited Service or disabled because of a natural or proximate result of an accident sustained on-the-job. Benefit equal to the greater of:
 - ◆ $1/3$ of FAS or
 - ◆ $1.67\% \times \text{FAS} \times \text{years of Credited Service up to 22 years, or}$
 - ◆ If eligible to retire for service, the service retirement benefit
- ◆ Accidental Disability Benefit: Must be awarded Primary Social Security Disability Benefits or found to be disabled by NYCERS Medical Board, and the Board of Trustees determines the disability is the natural and proximate result of an accident sustained on-the-job. Benefit equal to:
 - ◆ 60% of FAS less
 - ◆ 50% of Primary Social Security Disability Benefit, if any, and 100% of any Workers' Compensation.
- ◆ Heart Law: Certain diseases of the heart resulting in disability presumed line-of-duty. Benefit equal to 75% of FAS minus 100% of Workers' Compensation payments for same injury.
- ◆ HAT Law: HIV, tuberculosis or hepatitis resulting in disability presumed line-of-duty. Benefit equal to 75% of FAS minus 100% of Workers' Compensation payments for same injury.
- ◆ Act of an Inmate: Eligible for Accidental Disability benefit if disabled as a natural and proximate result of an act of an inmate. Benefit equal to 75% of FAS minus 100% of Workers' Compensation payments for same injury.
- ◆ World Trade Center Law: Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met. Benefit equal to 75% of FAS minus 100% of Workers' Compensation payments for same injury.

DEATH BENEFITS

- ◆ Ordinary Death Benefit payable to the designated beneficiary(ies) if member was in City service for at least 90 days and in active service at time of death. Benefit is three times salary lump sum, plus a return of Accumulated Deductions – basic and additional.
- ◆ Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law). Benefit equal to 50% of member's wages during last year in City service.
- ◆ Death Benefit for Vested Members who die prior to retirement payable if member had at least 10 years of Credited Service. Benefit equal to 50% of death benefit in force at time of separation from service plus a return of Accumulated Deductions.

ESCALATION AND COLA

- ◆ Escalation of Service Retirement, Vested Retirement, or Early Service Retirement benefit based on years of service and date of election of payment.
- ◆ Disability retirees who have been retired for at least five years are eligible for Cost-of-Living Adjustment (COLA), not escalation.

UNIFORMED SANITATION FORCE 22-YEAR RETIREMENT PLAN (SA-22)

SERVICE RETIREMENT

- ◆ Participants may retire for service with 22 years of Credited Service regardless of age
- ◆ The Service Retirement Benefit is:
 - ◆ 50% of Final Average Salary (FAS), minus
 - ◆ 50% of Primary Social Security Benefit commencing at age 62.
- ◆ Participants may retire with Early Service Retirement benefit with at least 20 years of Credited Service:
 - ◆ $2.1\% \times \text{FAS} \times \text{years of Credited Service at the completion of 20 years of Credited Service}$; plus
 - ◆ $.33\% \times \text{FAS} \times \text{each month of service in excess of 20 years, but not more than 50\% of FAS}$; minus
 - ◆ 50% of member's Primary Social Security Benefit commencing at age 62.

VESTED RETIREMENT

- ◆ Must have at least five years of Credited Service
- ◆ Payability Date: the date member would have attained 20 years of Credited Service
- ◆ The Vested Retirement Benefit is:
 - ◆ $2.1\% \times \text{FAS} \times \text{years of Credited Service}$; minus
 - ◆ 50% of member's Primary Social Security Benefit commencing at age 62.
- ◆ May elect to receive reduced vested benefit prior to date member would have attained 20 years of Credited Service but not earlier than age 55

DISABILITY RETIREMENT

- ◆ Ordinary Disability: Must have at least five (5) years of Credited Service and be considered disabled by Social Security Administration. Benefit equal to the greater of:
 - ◆ $1/3$ of FAS or
 - ◆ $2\% \times \text{FAS} \times \text{Credited Service, if eligible for service retirement, not in excess of 22 years of such service, minus}$
 - ◆ 50% of Primary Social Security Disability Benefit
- ◆ Accidental Disability: Disabled because of a natural or proximate result of an accident sustained on the job. Benefit is:
 - ◆ 50% of FAS, minus
 - ◆ 50% of Primary Social Security Disability Benefit or Primary Social Security Benefit, whichever begins first

DEATH BENEFITS

- ◆ An Ordinary Death Benefit payable to designated beneficiary(ies) if member was in City service for at least 90 days and in active service at time of death. Benefit is three times salary lump sum, plus a return of Accumulated Deductions
- ◆ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable annually to an Eligible Beneficiary(ies) (defined in law): A Pension equal to 50% of salary payable
- ◆ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service plus a return of Accumulated Deductions

ESCALATION

- ◆ Escalation of Service Retirement, Vested Retirement, or Early Service Retirement benefit based on years of service and date of election of payment
- ◆ Escalation of Ordinary Disability benefits, Accidental Disability benefits, and Accidental Death benefits first day of the month following date retiree or beneficiary becomes eligible for benefit.

UNIFORMED SANITATION FORCE 22-YEAR ENHANCED DISABILITY RETIREMENT PLAN (SA-22E)

SERVICE RETIREMENT

- ◆ Participants may retire with Service Retirement benefit upon attaining 22 years of Credited Service regardless of age
- ◆ The Service Retirement Benefit is:
 - ◆ 50% of Final Average Salary (FAS), minus
 - ◆ 50% of Primary Social Security Benefit commencing at age 62.
- ◆ Participants may retire with Early Service Retirement benefit after attaining at least 20 years of Credited Service:
 - ◆ The Early Service Retirement Benefit is:
 - ◆ $2.1\% \times \text{FAS} \times \text{years of Credited Service at the completion of 20 years of Credited Service}$; plus
 - ◆ $.33\% \times \text{FAS} \times \text{each month of service in excess of 20 years, but not more than 50\% of FAS}$; minus
 - ◆ 50% of member's Primary Social Security Benefit commencing at age 62

VESTED RETIREMENT

- ◆ Must have at least five years of Credited Service
- ◆ Payability Date: the date member would have attained 20 years of Credited Service
- ◆ The Vested Retirement Benefit is:
 - ◆ $2.1\% \times \text{FAS} \times \text{years of Credited Service}$; minus
 - ◆ 50% of member's Primary Social Security Benefit commencing at age 62
- ◆ May elect to receive reduced vested benefit prior to date member would have attained 20 years of Credited Service but not earlier than age 55

ENHANCED DISABILITY RETIREMENT

- ◆ Ordinary Disability: Must have at least five years of Credited Service and be considered disabled by Social Security Administration. Benefit equal to the greater of:
 - ◆ $1/3$ of FAS or
 - ◆ $2\% \times \text{FAS} \times \text{years of Credited Service, but not in excess of 22 years of such service}$
- ◆ Accidental Disability Benefit: Must be awarded Primary Social Security Disability Benefits or found to be disabled by NYCERS Medical Board, and Board of Trustees determines disability is the natural and proximate result of an accident sustained on-the-job. Benefit equal to 75% of FAS.
- ◆ Heart Law: Certain diseases of the heart resulting in disability presumed line-of-duty. Benefit equal to 75% of FAS.
- ◆ World Trade Center Law: Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met. Benefit equal to 75% of FAS.

DEATH BENEFITS

- ◆ Ordinary Death Benefit payable to the designated beneficiary(ies) if member was in City service for at least 90 days and in active service at time of death. Benefit is three times salary in a lump sum, plus a return of Accumulated Deductions -- basic and additional.
- ◆ Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law). Benefit equal to 50% of member's wages during last year in City service.
- ◆ Death Benefit for Vested Members who die prior to retirement payable if member had at least 10 years of Credited Service. Benefit equal to 50% of death benefit in force at time of separation from service plus a return of Accumulated Deductions.

ESCALATION AND COLA

- ◆ Escalation of Service Retirement, Vested Retirement, or Early Service Retirement benefit based on years of service and date of election of payment.
- ◆ Disability retirees who have been retired for at least five years are eligible for an annual Cost-of-Living Adjustment (COLA), not escalation.

TIER 3 RETIREMENT OPTIONS

MAXIMUM RETIREMENT ALLOWANCE

If a member, upon retirement, does not elect one of the options listed below, his or her benefit will be paid as a Maximum Retirement Allowance, payable in monthly installments throughout his or her life, with all payments ceasing at death.

OPTION 1: 100% JOINT-AND-SURVIVOR

The pensioner receives a reduced monthly lifetime benefit. When the pensioner dies, the surviving beneficiary receives the same reduced monthly benefit for life. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

OPTION 2: OTHER JOINT-AND-SURVIVOR OPTIONS

The pensioner receives a reduced monthly lifetime benefit. When the pensioner dies, the surviving beneficiary receives a benefit of 90% or less (amount depends on the pensioner's choice, in increments of not less than 10%) of the pensioner's reduced monthly benefit for life. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

OPTION 3: FIVE-YEAR CERTAIN

The pensioner receives a reduced monthly lifetime benefit. If the pensioner dies within five years from the date of retirement having designated only one primary beneficiary, the reduced monthly retirement benefit will continue to be paid to the designated primary beneficiary for the unexpired balance of the five-year period. In the event of the death of the primary beneficiary after such beneficiary has begun to receive payment, the unexpended benefit will be paid in a lump sum to the contingent beneficiary or, if no contingent beneficiary exists, to the estate of the primary beneficiary.

If multiple primary beneficiaries have been designated, the unexpended benefit will be paid in a lump sum divided equally to the surviving primary beneficiaries. In the event that all primary beneficiaries predecease the pensioner, then upon the death of the pensioner the unexpended benefit will be paid in a lump sum divided equally to the surviving contingent beneficiaries. If all beneficiaries predecease the pensioner, the unexpended benefit will be paid in a lump sum to the pensioner's estate. If the pensioner dies later than five years following the effective retirement date, all retirement allowance payments will cease. The pensioner may change the beneficiary(ies) any time within the five-year period.

OPTION 4: TEN-YEAR CERTAIN

The pensioner receives a reduced monthly lifetime benefit. If the pensioner dies within ten years from the date of retirement having designated only one primary beneficiary, the reduced monthly retirement benefit will continue to be paid to the designated primary beneficiary for the unexpired balance of the ten-year period.

In the event of the death of the primary beneficiary after such beneficiary has begun to receive payment, the unexpended benefit will be paid in a lump sum to the contingent beneficiary or, if no contingent beneficiary exists, to the estate of the primary beneficiary.

If multiple primary beneficiaries have been designated, the unexpended benefit will be paid in a lump sum divided equally to the surviving primary beneficiaries. In the event that all primary beneficiaries predecease the pensioner, then upon the death of the pensioner the unexpended benefit will be paid in a lump sum divided equally to the surviving contingent beneficiaries. If all beneficiaries predecease the pensioner, the unexpended benefit will be paid in a lump sum to the pensioner's estate. If the pensioner dies later than ten years following the effective retirement date, all retirement allowance payments will cease.

The pensioner may change the beneficiary(ies) any time within the ten-year period.

Members who retire on or after November 21, 1992 are eligible to elect Option 5, the *Pop-Up* Option.

OPTION 5: POP-UP OPTION

The Pop-Up Option is a variation of a joint-and-survivor option. The pensioner receives a reduced monthly lifetime benefit under a 100% or 50% joint-and-survivor option. If the beneficiary dies before the pensioner, the pensioner's benefit "pops-up," that is, it automatically becomes the Maximum Retirement Allowance, and all payments cease at death.

BASIC 62/5 RETIREMENT PLAN

SERVICE RETIREMENT

- ♦ Participants may retire at age 62 with five or more years of Credited Service
- ♦ Participants may retire as early as age 55 with a reduced benefit
- ♦ The Service Retirement Benefit is:
 - ♦ *Less than 20 years of Credited Service: 1.67% x each year of Credited Service x Final Average Salary (FAS)*
 - ♦ *Between 20 and 30 years of Credited Service: 2% x each year of Credited Service x FAS*
 - ♦ *More than 30 years of Credited Service: 2% x each year for first 30 years of Credited Service x FAS, plus 1.5% x each year of Credited Service in excess of 30 years x FAS*

VESTED RETIREMENT

- ♦ Need a minimum of five years of Credited Service, two of which must be Membership Service
- ♦ Payability Date: Age 62
- ♦ Benefit calculation same as Service Retirement Benefit calculation for the 62/5 Plan

DISABILITY RETIREMENT

- ♦ Eligibility: Must have ten or more years of Credited Service, unless disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions. Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions.
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

55/25 RETIREMENT PLAN – CHAPTER 96 OF THE LAWS OF 1995

SERVICE RETIREMENT

- ♦ Participants may retire at age 55 with at least 25 years of Credited Service
- ♦ The Service Retirement Benefit is:
 - ♦ *Between 25 and 30 years of Credited Service: 2% x each year of Credited Service x FAS*
 - ♦ *More than 30 years of Credited Service: 2% x each year for first 30 years of Credited Service x FAS, plus 1.5% x each year of Credited Service in excess of 30 years x FAS*

VESTED RETIREMENT

- ♦ There is no vesting provision under this plan; however, members always retain the right to vest under the basic 62/5 plan and are eligible for the Death Benefit for Vested Members if they have 10 or more years of Credited Service (see below)
- ♦ Benefit calculation same as Service Retirement Benefit calculation

DISABILITY RETIREMENT

- ♦ Eligibility: Must have ten or more years of Credited Service, unless disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions - basic and employee portion (50%) of Additional Member Contributions. Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of the employee portion (50%) of Additional Member Contributions
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions - basic and employee portion (50%) of Additional Member Contributions.
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

57/5 RETIREMENT PLAN – CHAPTER 96 OF THE LAWS OF 1995

SERVICE RETIREMENT

- ♦ Participants may retire at age 57 with five or more years of Credited Service
- ♦ The Service Retirement Benefit is:
 - ♦ *Less than 20 years of Credited Service:* 1.67% x each year of Credited Service x Final Average Salary (FAS)
 - ♦ *Between 20 and 30 years of Credited Service:* 2% x each year of Credited Service x FAS
 - ♦ *More than 30 years of Credited Service:* 2% x each year for first 30 years of Credited Service x FAS, plus 1.5% x each year of Credited Service in excess of 30 years x FAS

VESTED RETIREMENT

- ♦ Need a minimum of five years of Credited Service, two of which must be Membership Service
- ♦ Payability Date: Age 57
- ♦ Benefit calculation same as Service Retirement Benefit calculation

DISABILITY RETIREMENT

- ♦ Eligibility: Must have ten or more years of Credited Service, unless disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions – basic and employee portion (50%) of Additional Member Contributions (AMCs). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of the employee portion (50%) of Additional Member Contributions
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions – basic and employee portion (50%) of Additional Member Contributions (AMCs).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

SANITATION 30-YEAR RETIREMENT PLAN (SA-30)

SERVICE RETIREMENT

- ♦ Participants may retire at age 55 with 30 or more years of Credited Service
- ♦ The Service Retirement Benefit is:
 - ♦ *With 30 years of Credited Service:* 2% x each year of Credited Service x FAS
 - ♦ *More than 30 years of Credited Service:* 2% x each year for first 30 years of Credited Service x FAS, plus 1.5% x each year of Credited Service in excess of 30 years x FAS

VESTED RETIREMENT

- ♦ Need a minimum of five years of Credited Service, two of which must be Membership Service
- ♦ Payability Date: Age 62
- ♦ Benefit calculation same as Service Retirement Benefit calculation in the Basic 62/5 Plan

DISABILITY RETIREMENT

- ♦ Ordinary - must have ten or more years of Credited Service, unless disability resulted from accident sustained on-the-job
- ♦ Accidental - no minimum service, but disability resulted from an on-the-job accident
- ♦ Ordinary: The greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS; If eligible for service retirement, the benefit equals the Service Retirement Benefit
- ♦ Accidental: 75% of FAS
- ♦ Heart Presumption: Heart ailment presumed accidental; member eligible for benefit of 75% of FAS
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary: Need more than 90 days of service; benefit equal to three times current salary in a lump sum, plus Accumulated Deductions
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of the death benefit in force at time of separation from service, plus Accumulated Deductions
- ♦ Heart Presumption: Death due to heart ailment presumed accidental; accidental death benefit payable
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

UNIFORMED SANITATION 20-YEAR RETIREMENT PLAN (SA-20)

SERVICE RETIREMENT

- ♦ Participants may retire after 20 years of Allowable Sanitation Service, without regard to age
- ♦ The Service Retirement Benefit is:
 - ♦ *For the first 20 years of Allowable Sanitation Service: 50% of Final Average Salary (FAS)*
 - ♦ *For all years of Allowable Sanitation Service in excess of the first 20: 1.5% of Final Compensation x years of such service; plus*
 - ♦ *For each year of Credited Service, other than Allowable Sanitation Service: 1% of Final Compensation*
 - ♦ *Benefit limited to 30 years*
- ♦ Not eligible for service retirement with a deficit in Additional Member Contributions (AMCs).

VESTED RETIREMENT

- ♦ Must have five or more years of Allowable Sanitation Service but less than 20
- ♦ Payability Date: The date the participant would have reached 20 years if he/she had not discontinued service
- ♦ Vested Benefit: For each year of Allowable Sanitation Service: 2.5% of FAS; plus, for each year of Credited Service other than Allowable Sanitation Service: 1% of Final Compensation
- ♦ Not eligible for vested retirement with a deficit in AMCs.

DISABILITY RETIREMENT

- ♦ Ordinary Disability: Must have ten or more years of Credited Service: Benefit equals the greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ♦ Accidental Disability: Disabled because of a natural or proximate result of an accident sustained on-the-job; benefit equal to 75% of FAS
- ♦ Heart Presumption: Heart ailment presumed accidental; member eligible for benefit of 75% of FAS
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit: Need at least 90 days of service; benefit equal to three times current salary in a lump sum, plus Accumulated Deductions - basic and additional
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus Accumulated Deductions - basic and additional
- ♦ Heart Presumption: Heart ailment presumed accidental; Accidental Death Benefit payable
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

TRANSIT 25 - YEAR / AGE - 55 RETIREMENT PLAN (T2555)

SERVICE RETIREMENT

- ♦ Participants may retire at age 55 with credit for 25 or more years of Allowable Service in the Transit Authority
- ♦ The Service Retirement Benefit is:
 - ♦ *For the first 25 years of Allowable Service in the Transit Authority, 50% of Final Average Salary (FAS), plus*
 - ♦ *For each additional year beyond the first 25 (up to 30 years of such service), 2% of FAS, plus*
 - ♦ *For each additional year in excess of 30 years of such service, 1 1/2% of FAS*

VESTED RETIREMENT

- ♦ A participant must have at least 25 years of Allowable Service and not have attained age 55; payable on his/her 55th birthday and calculated the same as the Service Retirement Benefit
- ♦ A participant with at least five years of Allowable or Credited Service, but less than 25, can vest under the Basic 62/5 Plan

DISABILITY RETIREMENT

- ♦ Eligibility: Must have ten or more years of Credited Service, unless disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions. Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions.
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY 20 - YEAR / AGE - 50 RETIREMENT PLAN (TBTA-20/50)

SERVICE RETIREMENT

- ♦ Participants may retire with 20 or more years of Credited Service and as early as age 50
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS) for the first 20 years of Credited Service, plus
 - ♦ 1.5% of FAS for each year of Credited Service in excess of 20
 - ♦ Benefit limited to 30 years
- ♦ Not eligible for service retirement with a deficit in Additional Member Contributions (AMCs).

VESTED RETIREMENT

- ♦ Must have at least five years but less than 20 years of Credited Service
- ♦ Payable on the earliest date the member could have retired for service
- ♦ 2.5% of FAS for each year of Credited Service
- ♦ Not eligible for vested retirement with a deficit in AMCs.

DISABILITY RETIREMENT

- ♦ Eligibility: Must have ten or more years of Credited Service, unless disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions – basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than 15 years of service)
- ♦ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions – basic and additional (if less than 15 years of service).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DISPATCHER 25 - YEAR RETIREMENT PLAN (DIS-25)

SERVICE RETIREMENT

- ♦ Participants may retire for service with 25 or more years of Allowable Service as a Dispatcher Member, regardless of age
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS) for the first 25 years of Allowable Service, plus
 - ♦ 2% of FAS for each year of Allowable Service in excess of 25
 - ♦ Benefit limited to 30 years

VESTED RETIREMENT

- ♦ Must have at least five years but less than 25 years of Allowable Service
- ♦ Payable on the date the member would have completed 25 years of Allowable Service
- ♦ 2% of FAS for each year of Allowable Service

DISABILITY RETIREMENT

- ♦ Eligibility: Must have ten or more years of Credited Service, unless disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions – basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than 15 years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions – basic and additional (if less than 15 years of service.)
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

EMERGENCY MEDICAL TECHNICIAN 25-YEAR RETIREMENT PLAN (EMT-25)

SERVICE RETIREMENT

- ♦ Participants may retire for service with 25 or more years of Allowable Service as an EMT Member, regardless of age
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS) for the first 25 years of Allowable Service, plus
 - ♦ 2% of FAS for each year of Allowable Service in excess of 25
 - ♦ Benefit limited to 30 years

VESTED RETIREMENT

- ♦ Must have at least five years but less than 25 years of Allowable Service
- ♦ Payable on the date the member would have completed 25 years of Allowable Service
- ♦ 2% of FAS for each year of Allowable Service

DISABILITY RETIREMENT

- ♦ Ordinary Disability: Must have ten or more years of Credited Service; Benefit equals the greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ♦ Line-of-Duty Disability: Disabled because of an injury sustained in the performance of duty; benefit equal to 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- ♦ Heart Presumption: Heart ailment presumed line-of-duty; benefit equals 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- ♦ HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed line-of-duty; benefit equals 75% of FAS payable minus 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions – basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than 15 years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions – basic and additional (if less than 15 years of service).
- ♦ Heart Presumption: Heart ailment presumed accidental; Accidental Death Benefit payable
- ♦ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 (or 23 if student). A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

NYC DEPUTY SHERIFFS 25 - YEAR RETIREMENT PLAN (DSH-25)

SERVICE RETIREMENT

- ♦ Participants may retire with 25 or more years of Credited Service, without regard to age
- ♦ The Service Retirement Benefit is:
 - ♦ For the first 25 years of Credited Service: 55% of Final Average Salary (FAS), plus
 - ♦ 1.7% of FAS for each year of Credited Service in excess of 25
 - ♦ Benefit limited to 30 years

VESTED RETIREMENT

- ♦ Must have at least five, but less than 25 years of Credited Service
- ♦ Payable on the date the member would have completed 25 years of Credited Service
- ♦ 2.2% of FAS for each year of Credited Service

DISABILITY RETIREMENT

- ♦ Ordinary Disability: Must have ten or more years of Credited Service and are deemed physically or mentally incapacitated
- ♦ Ordinary Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ♦ Accidental Disability: Disabled because of a natural or proximate result of an accident sustained on-the-job; benefit equal to 75% of Final Compensation, minus 100% of Workers' Compensation payments for same injury
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions - basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than 15 years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions - basic and additional (if less than 15 years of service).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

AUTOMOTIVE SERVICE WORKERS 25 - YEAR / AGE - 50 RETIREMENT PLAN (AUT-25)

SERVICE RETIREMENT

- ♦ Participants may retire for service with 25 or more years of Credited Service, at age 50
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS) for the first 25 years of Credited Service, plus
 - ♦ An additional 2% of FAS for each year in excess of 25
 - ♦ Benefit limited to 30 years

VESTED RETIREMENT

- ♦ Must have at least five but less than 25 years of Credited Service
- ♦ Payable on the date the member reaches at least age 50 AND would have completed 25 years of Credited Service
- ♦ 2% of FAS for each year of Credited Service

DISABILITY RETIREMENT

- ♦ Eligibility: Must have ten or more years of Credited Service, unless disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions - basic and additional (if less than five years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than five years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions - basic and additional (if less than five years of service).
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

SPECIAL OFFICER 25 - YEAR RETIREMENT PLAN (SPO-25)

SERVICE RETIREMENT

- ♦ Participants may retire for service with 25 or more years of Allowable Service as a Special Officer, regardless of age
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS) for the first 25 years of Allowable Service, plus
 - ♦ 2% of FAS for each year of Allowable Service in excess of 25
 - ♦ Benefit limited to 30 years

VESTED RETIREMENT

- ♦ Must have at least five years but less than 25 years of Allowable Service
- ♦ Payable on the date the member would have completed 25 years of Allowable Service
- ♦ 2% of FAS for each year of Allowable Service

DISABILITY RETIREMENT

- ♦ Eligibility: Must have ten or more years of Credited Service, unless disability resulted from an accident sustained on-the-job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ♦ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions - basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than 15 years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions - basic and additional (if less than 15 years of service)
- ♦ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

POLICE COMMUNICATIONS (911) TECHNICIANS 25-YEAR RETIREMENT PLAN (PCT 25)

SERVICE RETIREMENT

- ◆ Participants may retire for service with 25 or more years of Credited Service, regardless of age
- ◆ The Service Retirement Benefit is:
 - ◆ 50% of Final Average Salary (FAS) for the first 25 years of Credited Service, plus
 - ◆ 2% of FAS for each year of Credited Service in excess of 25
 - ◆ Benefit limited to 30 years

VESTED RETIREMENT

- ◆ Must have at least five years but less than 25 years of Credited Service
- ◆ Payable on the date the member would have completed 25 years of Credited Service
- ◆ 2% of FAS for each year of Credited Service

DISABILITY RETIREMENT

- ◆ Eligibility: Must have ten or more years of Credited Service, unless disability resulted from an accident sustained on-the-job
- ◆ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x each year of Credited Service x FAS
- ◆ If eligible for Service Retirement, the benefit equals the Service Retirement Benefit if greater than above
- ◆ Members may file for disability benefits in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

DEATH BENEFITS

- ◆ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ◆ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ◆ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum, plus a return of Accumulated Deductions - basic and additional (if less than five years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ◆ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than five years of service)
- ◆ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service, plus a return of Accumulated Deductions - basic and additional (if less than five years of service).
- ◆ Eligible Beneficiaries may file for accidental death benefits if member's death deemed in connection with the World Trade Center tragedy on 9/11/01 provided certain criteria are met

TIER 4 RETIREMENT OPTIONS

MAXIMUM RETIREMENT ALLOWANCE

If a member, upon retirement, does not elect one of the options listed below, his or her benefit will be paid as a Maximum Retirement Allowance payable in monthly installments throughout his or her life, with all payments ceasing at death.

OPTION 1: 100% JOINT-AND-SURVIVOR

The pensioner receives a reduced monthly lifetime allowance. When the pensioner dies, the surviving beneficiary receives the same reduced monthly allowance for life. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

OPTION 2: OTHER JOINT-AND-SURVIVOR OPTIONS

The pensioner receives a reduced monthly lifetime allowance. When the pensioner dies, the surviving beneficiary receives a lifetime benefit of 25%, 50% or 75% of the pensioner's reduced monthly benefit, depending on the pensioner's choice. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

OPTION 3: FIVE-YEAR CERTAIN

The pensioner receives a reduced monthly lifetime benefit. If the pensioner dies within five years from the date of retirement, the reduced monthly benefit will be paid to the surviving designated primary beneficiary for the unexpired balance of the five-year period. If the pensioner's designated primary beneficiary predeceases the pensioner, then upon the death of the pensioner the balance of the payments due for the unexpired balance of the five-year period is paid in a lump sum to the pensioner's contingent beneficiary or, if none exists, to the estate of the pensioner. Should a designated primary beneficiary die after having started to receive payments and before the unexpired balance of the five-year period, the balance will be paid in a lump sum to the designated contingent beneficiary or, if none exists, to the estate of the primary beneficiary. The pensioner may change the beneficiary(ies) any time within the five-year period.

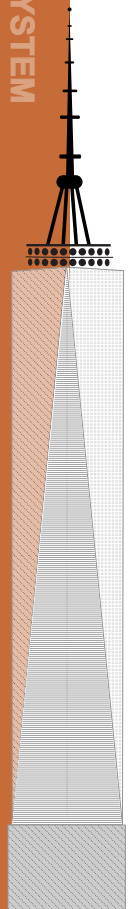
OPTION 4: TEN-YEAR CERTAIN

The pensioner receives a reduced monthly lifetime benefit. If the pensioner dies within 10 years from the date of retirement, the reduced monthly benefit will be paid to the surviving designated primary beneficiary for the unexpired balance of the 10-year period. If the pensioner's designated primary beneficiary predeceases the pensioner, then upon the death of the pensioner the balance of the payments due for the unexpired balance of the 10-year period is paid in a lump sum to the pensioner's contingent beneficiary or, if none exists, to the estate of the pensioner.

Should a designated primary beneficiary die after having started to receive payments and before the unexpired balance of the 10-year period, the balance will be paid in a lump sum to the designated contingent beneficiary or, if none exists, to the estate of the primary beneficiary. The pensioner may change the beneficiary(ies) any time within the ten-year period.

OPTION 5: POP-UP OPTION

The Pop-Up Option is a variation of a joint-and-survivor option. The pensioner receives a reduced monthly lifetime benefit under a 100% or 50% joint-and-survivor option. If the beneficiary dies before the pensioner, the pensioner's benefit "pops-up," that is, it automatically becomes the Maximum Retirement Allowance, and all payments cease at death.



BASIC 63/10 RETIREMENT PLAN

SERVICE RETIREMENT

- ♦ Participants may retire at age 63 with 10 or more years of Credited Service
- ♦ Participants may retire as early as age 55 with a reduced benefit
- ♦ The Service Retirement is:
 - ♦ *Less than 20 years of Credited Service: $1.67\% \times \text{Final Average Salary (FAS)} \times \text{years of Credited Service}$*
 - ♦ *20 or more years of Credited Service: 35% of FAS for the first 20 years of Credited Service, plus $2\% \times \text{FAS} \times \text{each year of Credited Service in excess of 20}$*

VESTED RETIREMENT

- ♦ Need a minimum of 10 years of Credited Service, two of which must be Membership Service
- ♦ Payability Date: age 63
- ♦ Benefit calculation same as Service Retirement calculation for the 63/10 Plan

DISABILITY RETIREMENT

- ♦ Must have 10 or more years of Credited Service unless disability resulted from an accident sustained on the job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or $1.67\% \times \text{FAS} \times \text{years of service}$
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement if greater than above.

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum; plus a return of Accumulated Deductions. Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable.
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service plus return of Accumulated Deductions.

TRANSIT 25-YEAR/AGE 55 RETIREMENT PLAN (6TR-25)

SERVICE RETIREMENT

- ♦ Participants may retire at age 55 with 25 or more years of Allowable Service in the Transit Authority
- ♦ The Service Retirement Benefit is:
 - ♦ $2\% \times \text{Final Average Salary (FAS)} \times \text{the number of years of Allowable Service, up to 30 years of such service, plus}$
 - ♦ $1.5\% \times \text{FAS} \times \text{the number of years of Allowable Service in excess of 30 years of such service.}$

VESTED RETIREMENT

- ♦ A Participant with at least 25 years of Allowable Service who has not yet attained the age of 55 is eligible for a Vested Retirement Benefit that becomes payable at age 63. The Vested Benefit payable is:
 - ♦ $2\% \times \text{Final Average Salary (FAS)} \times \text{the number of years of Allowable Service, up to 30 years of such service, plus}$
 - ♦ $1.5\% \times \text{FAS} \times \text{the number of years of Allowable Service in excess of 30 years of such service.}$
- ♦ A Participant with at least 10 years of Credited Service (all service, at least two years of which are membership service) is entitled to a Vested Retirement Benefit that becomes payable at age 63. The Vested Benefit payable is:
 - ♦ *For a participant with less than 20 years of Credited Service: $1.67\% \times \text{FAS} \times \text{years of Credited Service}$*
 - ♦ *For a participant with more than 20 years of Credited Service: 35% of FAS for the first 20 years of Credited Service, plus $2\% \times \text{FAS} \times \text{each year of Credited Service in excess of 20}$*

DISABILITY RETIREMENT

- ♦ Must have 10 or more years of Credited Service unless disability resulted from an accident sustained on the job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or $1.67\% \times \text{FAS} \times \text{years of service}$
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement if greater than above.

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum; plus a return of Accumulated Deductions. Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable.
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation from service plus return of Accumulated Deductions.

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY 20-YEAR/AGE 50 RETIREMENT PLAN (6TB-20)

SERVICE RETIREMENT

- ♦ Participants may retire with 20 or more years of Credited Service and as early as age 50.
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS) for the first 20 years of Credited Service, plus
 - ♦ $1.5\% \times \text{FAS} \times \text{the number of years of Credited Service in excess of 20, up to a maximum of 30 years.}$
- ♦ Not eligible for service retirement with a deficit in Additional Member Contributions (AMCs).

VESTED RETIREMENT

- ♦ Must have at least 10 but less than 20 years of Credited Service
- ♦ Payability Date: age 63
- ♦ $2.5\% \times \text{FAS} \times \text{the number of years of Credited Service}$
- ♦ Not eligible for vested retirement with a deficit in AMCs.

DISABILITY RETIREMENT

- ♦ Must have 10 or more years of Credited Service, unless disability resulted from an accident sustained on the job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or $1.67\% \times \text{FAS} \times \text{years of service}$
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement if greater than above.

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum; plus a return of Accumulated Deductions -- basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than 15 years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation plus return of Accumulated Deductions -- basic and additional (if less than 15 years of service)
- ♦ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 or child under 23 if student. A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury.

DISPATCHER 25-YEAR RETIREMENT PLAN (6DI-25)

SERVICE RETIREMENT

- ♦ Participants may retire for service with 25 or more years of Allowable Service as a Dispatcher Member regardless of age.
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS) for the first 25 years of Allowable Service, plus
 - ♦ 2% of FAS for each additional year of Allowable Service, up to a maximum of 30 years of such service.

VESTED RETIREMENT

- ♦ Must have at least 10 but less than 25 years of Allowable Service
- ♦ Payability Date: age 63
- ♦ $2\% \times \text{FAS} \times \text{the number of years of Allowable Service}$

DISABILITY RETIREMENT

- ♦ Must have 10 or more years of Credited Service unless disability resulted from an accident sustained on the job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or $1.67\% \times \text{FAS} \times \text{years of service}$
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement if greater than above.

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum; plus a return of Accumulated Deductions -- basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than 15 years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation plus return of Accumulated Deductions -- basic and additional (if less than 15 years of service)

EMERGENCY MEDICAL TECHNICIAN 25-YEAR RETIREMENT PLAN (6EM-25)

SERVICE RETIREMENT

- ♦ Participants may retire for service with 25 or more years of Allowable Service regardless of age.
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS) for the first 25 years of Allowable Service, plus
 - ♦ 2% of FAS for each additional year of Allowable Service, up to a maximum of 30 years of such service.

VESTED RETIREMENT

- ♦ Must have at least 10 but less than 25 years of Allowable Service
- ♦ Payability Date: age 63
- ♦ 2% x FAS x the number of years of Allowable Service

DISABILITY RETIREMENT

- ♦ Ordinary Disability: Must have 10 or more years of Credited Service; benefit equals the greater of 1/3 of FAS or 1.67% x FAS x years of service
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement if greater than above.
- ♦ Line-of-Duty Disability: Disabled because of an injury sustained in the performance of duty; benefit equal to 75% of FAS minus 100% of Workers' Compensation payments for same injury.
- ♦ Heart Presumption: Heart ailment presumed line-of-duty; benefit equals 75% of FAS minus 100% of Workers' Compensation payments for same injury.
- ♦ HAT Presumption: HIV, tuberculosis or hepatitis resulting in disability presumed line-of-duty; benefit equals 75% of FAS minus 100% of Workers' Compensation payments for same injury.

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum; plus a return of Accumulated Deductions -- basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than 15 years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation plus return of Accumulated Deductions – basic and additional (if less than 15 years of service).
- ♦ Special Accidental Death Benefit (resulted from accident on-the-job or while in military service) payable to widow or widower or child under 18 or child under 23 if student. A Pension equal to 50% of salary payable, minus Social Security benefits and 100% of Workers' Compensation payments for same injury.
- ♦ Heart Presumption: Heart ailment presumed accidental; Accidental and Special Accidental Death Benefits payable.

NYC DEPUTY SHERIFF 25-YEAR RETIREMENT PLAN (6DS-25)

SERVICE RETIREMENT

- ♦ Participants may retire for service with 25 or more years of Credited Service regardless of age.
- ♦ The Service Retirement Benefit is:
 - ♦ 55% of Final Average Salary (FAS) for the first 25 years of Credited Service, plus
 - ♦ 1.7% of FAS for each additional year of Credited Service, up to a maximum of 30 years of such service.

VESTED RETIREMENT

- ♦ Must have at least 10 but less than 25 years of Credited Service
- ♦ Payability Date: age 63
- ♦ 2.2% x FAS x the number of years of Credited Service

DISABILITY RETIREMENT

- ♦ Ordinary Disability: Must have 10 or more years of Credited Service; benefit equals the greater of 1/3 of FAS or 1.67% x FAS x years of service
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement if greater than above.
- ♦ Accidental Disability: Disabled because of a natural or proximate result of an accident sustained on the job; benefit equal to 75% of Final Compensation minus 100% of Workers' Compensation payments for same injury.

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum; plus a return of Accumulated Deductions -- basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than 15 years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation plus return of Accumulated Deductions – basic and additional (if less than 15 years of service)

AUTOMOTIVE MEMBER 25-YEAR/AGE 50 RETIREMENT PLAN (6AU-25)

SERVICE RETIREMENT

- ♦ Participants may retire for service with 25 or more years of Credited Service at age 50 or older.
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS) for the first 25 years of Credited Service, plus
 - ♦ 2% of FAS for each additional year of Credited Service, up to a maximum of 30 years of such service.

VESTED RETIREMENT

- ♦ Must have at least 10 but less than 25 years of Credited Service
- ♦ Payability Date: age 63
- ♦ 2% x FAS x the number of years of Credited Service

DISABILITY RETIREMENT

- ♦ Eligibility: Must have 10 or more years of Credited Service unless disability resulted from an accident sustained on the job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x FAS x years of service
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement if greater than above.

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum; plus a return of Accumulated Deductions -- basic and additional (if less than five years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than five years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation plus return of Accumulated Deductions -- basic and additional (if less than five years of service)

SPECIAL PEACE OFFICER 25-YEAR RETIREMENT PLAN (6SO-25)

SERVICE RETIREMENT

- ♦ Participants may retire for service with 25 or more years of Allowable Service as a Special Peace Officer regardless of age.
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS) for the first 25 years of Allowable Service, plus
 - ♦ 2% of FAS for each additional year of Allowable Service, up to a maximum of 30 years of such service.

VESTED RETIREMENT

- ♦ Must have at least 10 but less than 25 years of Allowable Service
- ♦ Payability Date: age 63
- ♦ 2% x FAS x the number of years of Allowable Service

DISABILITY RETIREMENT

- ♦ Eligibility: Must have 10 or more years of Credited Service, unless disability resulted from an accident sustained on the job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x FAS x years of service
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement if greater than above.

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum; plus a return of Accumulated Deductions -- basic and additional (if less than 15 years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than 15 years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation plus return of Accumulated Deductions -- basic and additional (if less than 15 years of service).

POLICE COMMUNICATIONS TECHNICIAN 25-YEAR RETIREMENT PLAN (6PC-25)

SERVICE RETIREMENT

- ♦ Participants may retire for service with 25 or more years of Credited Service regardless of age.
- ♦ The Service Retirement Benefit is:
 - ♦ 50% of Final Average Salary (FAS) for the first 25 years of Credited Service, plus
 - ♦ 2% of FAS for each additional year (or fraction thereof) of Credited Service, up to a maximum of 30 years of such service.

VESTED RETIREMENT

- ♦ Must have at least 10 but less than 25 years of Credited Service
- ♦ Payability Date: age 63
- ♦ 2% x FAS x the number of years of Credited Service

DISABILITY RETIREMENT

- ♦ Eligibility: Must have 10 or more years of Credited Service, unless disability resulted from an accident sustained on the job
- ♦ Disability Retirement Benefit: The greater of 1/3 of FAS or 1.67% x FAS x years of service
- ♦ If eligible for Service Retirement, the benefit equals the Service Retirement if greater than above.

DEATH BENEFITS

- ♦ An Ordinary Death Benefit (need not have been on-the-job) payable to the Designated Beneficiary(ies) (member's designation)
- ♦ An Accidental Death Benefit (resulted from an accident on-the-job or while in military service) payable to the Eligible Beneficiary(ies) (defined in law)
- ♦ Ordinary Death Benefit (Plan 2): 1-2 years of service = one year's current salary in a lump sum; 2-3 years of service = two times current salary in a lump sum; 3 or more years of service = three times current salary in a lump sum; plus a return of Accumulated Deductions -- basic and additional (if less than five years of service). Retirees are eligible for a Post-Retirement Death Benefit.
- ♦ Accidental Death Benefit: A Pension equal to 50% of salary payable, plus a return of Additional Member Contributions (if less than five years of service)
- ♦ Death Benefit for Vested Members: Need at least 10 years of Credited Service; 50% of death benefit in force at time of separation plus return of Accumulated Deductions -- basic and additional (if less than five years of service)

TIER 6 RETIREMENT OPTIONS

MAXIMUM RETIREMENT ALLOWANCE

If a member, upon retirement, does not elect one of the options listed below, his or her benefit will be paid as a Maximum Retirement Allowance payable in monthly installments throughout his or her life, with all payments ceasing at death.

OPTION 1: 100% JOINT-AND-SURVIVOR

The pensioner receives a reduced monthly lifetime allowance. When the pensioner dies, the surviving beneficiary receives the same reduced monthly allowance for life. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

OPTION 2: OTHER JOINT-AND-SURVIVOR OPTIONS

The pensioner receives a reduced monthly lifetime allowance. When the pensioner dies, the surviving beneficiary receives a lifetime benefit of 25%, 50% or 75% of the pensioner's reduced monthly benefit, depending on the pensioner's choice. Only one beneficiary may be named, and the beneficiary may not be changed once named and the option is in effect.

OPTION 3: FIVE-YEAR CERTAIN

The pensioner receives a reduced monthly lifetime benefit. If the pensioner dies within five years from the date of retirement, the reduced monthly benefit will be paid to the surviving designated primary beneficiary for the unexpired balance of the five-year period. If the pensioner's designated primary beneficiary predeceases the pensioner, then upon the death of the pensioner the balance of the payments due for the unexpired balance of the five-year period is paid in a lump sum to the pensioner's contingent beneficiary or, if none exists, to the estate of the pensioner. Should a designated primary beneficiary die after having started to receive payments and before the unexpired balance of the five-year period, the balance will be paid in a lump sum to the designated contingent beneficiary or, if none exists, to the estate of the primary beneficiary. The pensioner may change the beneficiary(ies) any time within the five-year period.

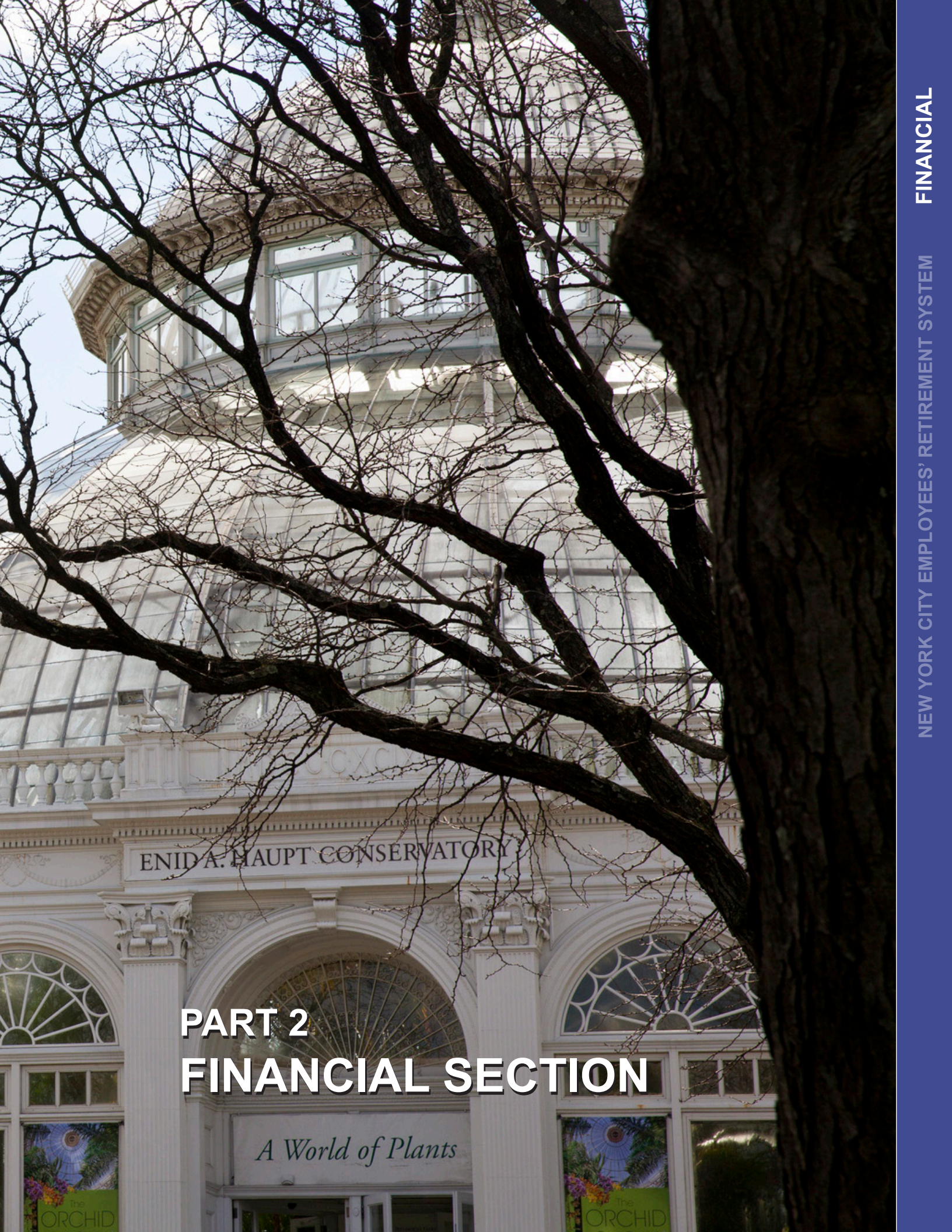
OPTION 4: TEN-YEAR CERTAIN

The pensioner receives a reduced monthly lifetime benefit. If the pensioner dies within 10 years from the date of retirement, the reduced monthly benefit will be paid to the surviving designated primary beneficiary for the unexpired balance of the 10-year period. If the pensioner's designated primary beneficiary predeceases the pensioner, then upon the death of the pensioner the balance of the payments due for the unexpired balance of the 10-year period is paid in a lump sum to the pensioner's contingent beneficiary or, if none exists, to the estate of the pensioner. Should a designated primary beneficiary die after having started to receive payments and before the unexpired balance of the 10-year period, the balance will be paid in a lump sum to the designated contingent beneficiary or, if none exists, to the estate of the primary beneficiary. The pensioner may change the beneficiary(ies) any time within the 10-year period.

**OPTION 5:
POP-UP OPTION**

The Pop-Up Option is a variation of a joint-and-survivor option. The pensioner receives a reduced monthly lifetime benefit under a 100% or 50% joint-and-survivor option. If the beneficiary dies before the pensioner, the pensioner's benefit "pops-up," that is, it automatically becomes the Maximum Retirement Allowance, and all payments cease at death.





PART 2 FINANCIAL SECTION

A World of Plants

INDEPENDENT AUDITORS' REPORT

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

Report on the Combining Financial Statements

We have audited the accompanying combining statements of fiduciary net position of the New York City Employees' Retirement Fund, New York City Correction Officers' Variable Supplements Fund, New York City Housing Police Officers' Variable Supplements Fund, New York City Housing Police Superior Officers' Variable Supplements Fund, New York City Transit Police Officers' Variable Supplements Fund, and New York City Transit Police Superior Officers' Variable Supplements Fund, which collectively comprise the New York City Employees' Retirement System (the "Funds"), a fiduciary fund of the City of New York, as of June 30, 2019 and 2018, 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 Funds' basic combining financial statements as listed in the table of contents.

Management's Responsibility for the Combining Financial Statements

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

Auditors' Responsibility

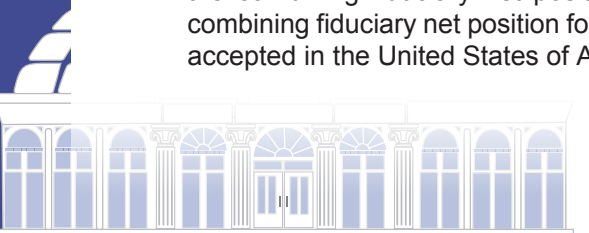
Our responsibility is to express opinions on these combining financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the combining financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the combining financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the combining financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Funds' preparation and fair presentation of the combining financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Funds' internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the combining financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the combining financial statements referred to above present fairly, in all material respects, the combining fiduciary net position of the Funds as of June 30, 2019 and 2018, and the changes in combining fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.



Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Additional Supplementary Information, as listed in the table of contents, be presented to supplement the basic combining financial statements. Such information, although not a part of the basic combining financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic combining financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic combining financial statements, and other knowledge we obtained during our audits 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.

Other Information

Our audits were conducted for the purpose of forming an opinion on the basic combining financial statements. The Introductory Section, Additional Supplementary Information, Investment Section, Actuarial Section, and Statistical Section, as listed in the foregoing table of contents, are presented for the purpose of additional analysis and are not a required part of the basic combining financial statements.

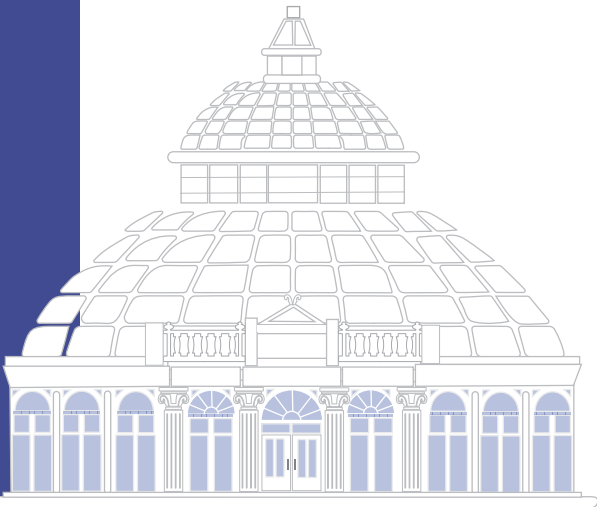
The Additional Supplementary Information (Schedules of Investment Expenses, Administrative Expenses and Payments to Consultants) is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic combining financial statements. Such information has been subjected to the auditing procedures, applied in the audit of the basic combining financial statements and certain additional procedures, including 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 auditing standards generally accepted in the United States of America. In our opinion the Additional Supplementary Information is fairly stated, in all material respects, in relation to the basic combining financial statements taken as a whole.

The Introductory, Investment, Actuarial and Statistical Sections have not been subjected to the auditing procedures applied in the audit of the basic combining financial statements and, accordingly, we do not express an opinion or provide any assurance on them.



New York, NY
October 24, 2019
(except for the Other Information,
as to which the date is December 20, 2019)

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**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2019 AND 2018**

The New York City Employees' Retirement System's (NYCERS or the Funds) discussion and analysis provides an overview of the Funds' combining financial activities for the Fiscal Years ended June 30, 2019 and 2018. It is designed to assist the reader in understanding NYCERS' combining financial statements by providing a review of financial activities during Fiscal Years 2019 and 2018, the effects of any significant changes, and a comparison versus prior year activity. The discussion and analysis is intended to be read in conjunction with the Funds' combining financial statements.

NYCERS administers the New York City Employees' Retirement System Qualified Pension Plan (the QPP), Correction Officers' Variable Supplements Fund (COVSF), Housing Police Officers' Variable Supplements Fund (HPOVSF), Housing Police Superior Officers' Variable Supplements Fund (HPSOVSF), Transit Police Officers' Variable Supplements Fund (TPOVSF), and the Transit Police Superior Officers' Variable Supplements Fund (TPSOVSF) (collectively, the Funds).

OVERVIEW OF BASIC COMBINING FINANCIAL STATEMENTS

The following discussion and analysis are intended to serve as an introduction to the Funds' basic combining financial statements. The basic combining financial statements, which are prepared in accordance with Governmental Accounting Standards Board (GASB) pronouncements and include the financial statements of each of the Funds, are:

- **The Combining Statements of Fiduciary Net Position** — presents the financial position of the Funds at fiscal year-end. It provides information about the nature and amounts of resources with present service capacity that the Funds presently controls (assets), consumption of net assets by the Funds that is applicable to a future reporting period (deferred outflow of resources), present obligations to expend resources that the Funds has little or no discretion to avoid (liabilities), and acquisition of net assets by the Funds that is applicable to a future reporting period (deferred inflow of resources) with the difference between assets/deferred outflow of resources and liabilities/deferred inflow of resources being reported as net position. Investments are shown at fair value. All other assets and liabilities are determined on an accrual basis.
- **The Combining Statements of Changes in Fiduciary Net Position** — presents the results of activities during the fiscal year. All changes affecting the assets/deferred outflow and liabilities/deferred inflow of the Funds 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 Funds' accounting policies, significant account balances and activities, material risks, obligations, contingencies, and subsequent events, if any.
- **Required Supplementary Information** — as required by the GASB includes the management discussion and analysis and information presented after the notes to the combining financial statements.

FINANCIAL HIGHLIGHTS

The Funds' combined net position restricted for benefits increased by \$3.3 billion (5.1%) from \$65.6 billion at June 30, 2018 to \$68.9 billion at June 30, 2019. The increase in combined net position was mainly due to favorable performance on the investment portfolio, primarily in the equity markets.

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2019 AND 2018**

The Funds' combined net position restricted for benefits increased by \$4 billion (6.5%) from \$61.6 billion at June 30, 2017 to \$65.6 billion at June 30, 2018. The main reason for the higher net position was an increase in return on the investment portfolio, primarily in the equity markets.

Cash balances totaled \$73 million at June 30, 2019. The Funds' practice is to fully invest its day-end cash balances in a pooled short-term investment fund. A typical benefit payment account would show an overdrawn balance, since funds are only deposited as outstanding benefit checks are presented to the banks for payment each day. These overdrawn balances are the main component of accounts payable.

Receivables for investment securities sold amounted to \$1.2 billion as of June 30, 2019, an increase of \$683 million (138.1%) from \$495 million as of June 30, 2018, which was a decrease of \$192 million (-28.0%) from \$687 million as of June 30, 2017. Although trades typically do not settle until a few days after trade dates, sales of investment securities are reflected on trade dates. The resulting receivables are caused by these timing differences.

Fiduciary Net Position

June 30, 2019, 2018 and 2017

(in thousands)

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Cash and cash equivalents	\$ 73,004	\$ 21,621	\$ 172,223
Receivables for investment securities sold	1,177,445	494,566	687,047
Receivables for member loans	1,150,018	1,129,906	1,102,986
Receivables for accrued earnings	339,309	326,371	301,717
Other receivables	-	11	12
Investments at fair value	68,452,483	65,450,206	60,784,591
Securities lending collateral	6,406,505	9,918,700	7,034,093
Other assets	128,259	109,895	93,948
Total assets	<u>77,727,023</u>	<u>77,451,276</u>	<u>70,176,617</u>
Accounts payable	464,116	468,687	209,227
Payable for investment securities purchased	1,406,303	1,023,260	955,572
Accrued benefits payable	509,130	430,223	371,690
Due to other retirement systems	617	1,412	1,088
Payables for securities lending transactions	6,406,505	9,918,700	7,034,093
Total liabilities	<u>8,786,671</u>	<u>11,842,282</u>	<u>8,571,670</u>
Net position restricted for pensions	<u>\$ 68,940,352</u>	<u>\$ 65,608,994</u>	<u>\$ 61,604,947</u>



**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2019 AND 2018**

The receivables for member loans increased by \$20 million (1.8%) from \$1.13 billion at June 30, 2018 to \$1.15 billion at June 30, 2019. The main reason for the increase was that the amount of loans issued was higher than that of fiscal year 2018.

The receivables for member loans increased by \$27 million (2.4%) from \$1.10 billion at June 30, 2017 to \$1.13 billion at June 30, 2018. The main reason for the increase was that the amount of loans issued was higher than that of fiscal year 2017.

Fair value of investments, including securities lending collateral at June 30, 2019 was \$74.9 billion, a decrease of \$0.5 billion (0.7%) from the June 30, 2018 investment value of \$75.4 billion. The value of the investment portfolio increased by \$3 billion while the amount of securities lending collateral held at June 30, 2019 decreased \$3.5 billion. Therefore, the combination of the two resulted in a net decrease.

Fair value of investments, including securities lending collateral at June 30, 2018 was \$75.4 billion, an increase of \$7.6 billion (11.1%) from the June 30, 2017 investment value of \$67.8 billion. The investment portfolio increased in value mainly due to favorable performance in the equity markets. Additionally, the amount of securities lending collateral held at June 30, 2018 increased by \$2.9 billion from the amount held at June 30, 2017.

Other assets increased by \$18 million (16.7%) from \$110 million at June 30, 2018 to \$128 million at June 30, 2019. The increase in the receivable resulted from unpaid employer pension contribution by New York City Off-Track Betting Corporation (OTB) for Fiscal Year 2019.

Other assets increased by \$16 million (17.0%) from \$94 million at June 30, 2017 to \$110 million at June 30, 2018. This increase was due to an increase in the receivable resulted from unpaid employer pension contribution by New York City Off-Track Betting Corporation (OTB) for Fiscal Year 2018.

Payables for investment securities purchased amounted to \$1.4 billion as of June 30, 2019, an increase of \$0.4 billion (37.4%) from \$1.0 billion as of June 30, 2018, which was an increase of \$67.7 million (7.1%) from \$956 million as of June 30, 2017. Although trades typically do not settle until a few days after trade dates, purchases of investment securities are reflected on trade dates. The resulting payables are the result of these timing differences.

Accrued benefits payable increased by \$79 million (18.3%) from \$430 million at June 30, 2018 to \$509 million at June 30, 2019. The increase in payable was primarily due to the fact that collective bargaining cases are still being revised and pensioners will be receiving an increased benefit.

Accrued benefits payable increased by \$58 million (15.7%) from \$372 million at June 30, 2017 to \$430 million at June 30, 2018. The increase in payable was primarily due to the fact that collective bargaining cases are still being revised and pensioners will be receiving an increased benefit.

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2019 AND 2018**

**Changes in Fiduciary Net Position
Years Ended June 30, 2019, 2018, and 2017
(in thousands)**

	<u>2019</u>	<u>2018</u>	<u>2017</u>
Additions:			
Member contributions	\$ 547,807	\$ 523,535	\$ 513,514
Employer contributions	3,692,711	3,377,024	3,328,193
Investment earnings:			
Interest and dividend income	1,909,986	1,778,736	1,685,569
Net appreciation in fair value of investments	2,728,030	3,591,521	5,489,005
Net securities lending income	40,758	27,080	31,334
Investment expenses	(240,544)	(241,818)	(223,756)
Net investment income	<u>4,438,230</u>	<u>5,155,519</u>	<u>6,982,152</u>
Other income	<u>3,258</u>	<u>3,422</u>	<u>3,266</u>
Total additions	<u>8,682,006</u>	<u>9,059,500</u>	<u>10,827,125</u>
Deductions:			
Benefit payments and withdrawals	5,258,806	4,986,709	4,648,941
Payments to other retirement systems	9,769	9,055	8,087
Administrative expenses	<u>82,073</u>	<u>59,689</u>	<u>59,671</u>
Total deductions	<u>5,350,648</u>	<u>5,055,453</u>	<u>4,716,699</u>
Net increase in net position	3,331,358	4,004,047	6,110,426
Net position restricted for pensions:			
Beginning of year	65,608,994	61,604,947	55,494,521
End of year	<u>\$ 68,940,352</u>	<u>\$ 65,608,994</u>	<u>\$ 61,604,947</u>

Employer contributions for Fiscal Year 2019 were \$3.7 billion, an increase of \$316 million (9.3%) from \$3.4 billion for Fiscal Year 2018. The increase is primarily due to an increase in the amortization payment for the initial unfunded liability, changes in actuarial methods and assumptions and a coding discrepancy in the census data. Employer contributions remained relatively level in Fiscal Year 2018, increasing by \$49 million (1.5%). The increase was mainly due to the increase in the amortization payment of the initial unfunded actuarial accrued liability.

Net investment income for Fiscal Year 2019 totaled \$4.4 billion compared to \$5.2 billion in Fiscal Year 2018. Although gains in Fiscal Year 2019 did not reach levels achieved in Fiscal Year 2018, domestic and international equity markets were relatively strong and accounted for a significant portion of the increase in the value of the portfolio.



**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2019 AND 2018**

Net investment income for Fiscal Year 2018 totaled \$5.2 billion, compared to \$7 billion in Fiscal Year 2017. Although gains in Fiscal Year 2018 did not reach levels achieved in Fiscal Year 2017, equity markets were relatively strong and accounted for a significant portion of the increase in the value of the portfolio.

Investment expenses for Fiscal Year 2019 remained relatively level at \$241 million, decreasing by only \$1 million (-0.5%). The slight decrease was mainly due to decreases in the investment consultant and legal fees.

Investment expenses for Fiscal Year 2018 were \$242 million, compared to \$224 million in Fiscal Year 2017. The \$18 million increase (8.1%) was primarily due to increases in the private equity, private real estate and international equity expenses.

Benefit payments and withdrawals for Fiscal Year 2019 totaled \$5.3 billion, a \$272 million (5.5%) increase from the \$5 billion of Fiscal Year 2018. The increase is due to the increasing number of retirees and their corresponding higher average retirement allowances.

Benefit payments and withdrawals for Fiscal Year 2018 totaled \$5 billion, a \$338 million (7.3%) increase from the \$4.6 billion of Fiscal Year 2017. The increase is due to the increasing number of retirees and their corresponding higher average retirement allowances.

Administrative expenses for Fiscal Year 2019 were \$82 million, an increase of \$22 million (37.5%) from \$60 million in Fiscal Years 2017 and 2018. The increase was attributable to technology modernization to upgrade NYCERS' information systems in order to better serve our members and pensioners.

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2019 AND 2018**

Investments — The table below summarizes the NYCERS investment allocation.

**Investment Summary
June 30, 2019
(In thousands)**

Investments — At fair value:	<u>QPP</u>	<u>COVSF</u>	<u>Combined</u>
Short-term investments:			
Commercial paper	\$ 608,362	\$ -	\$ 608,362
Discount notes	153,810	-	153,810
Short-term investment fund	600,601	303,529	904,130
U.S. treasury bills and agencies	40,309	-	40,309
Debt securities:			
Bank loans	590,699	-	590,699
Corporate and other	5,899,916	-	5,899,916
Mortgage debt securities	2,429,941	-	2,429,941
Treasury inflation protected securities	2,387,976	-	2,387,976
U.S. government and agency	8,481,413	-	8,481,413
Equity securities:			
Domestic equity	20,979,595	-	20,979,595
International equity	13,129,539	-	13,129,539
Collective trust funds:			
Bank loans	653,292	-	653,292
Corporate and other	-	-	-
Domestic equity	-	-	-
International equity	-	-	-
Mortgage debt securities	435,441	-	435,441
Opportunistic fixed income	210,496	-	210,496
Treasury inflation protected securities	736,640	-	736,640
U.S. government and agency	-	-	-
Alternative investments:			
Infrastructure	654,868	-	654,868
Opportunistic fixed income	1,927,058	-	1,927,058
Private equity	4,657,470	-	4,657,470
Private real estate	3,564,549	-	3,564,549
Hedge fund	6,979	-	6,979
Collateral from securities lending	6,406,505	-	6,406,505
Total	\$ 74,555,459	\$ 303,529	\$ 74,858,988

INVESTMENT PERFORMANCE

Total portfolio performance (net of fees) for Fiscal Year 2019 was 7.13%, less than NYCERS' Policy benchmark, which had a rate of return of 7.73%. Domestic equities returned 8.37%, less than the Russell 3000 benchmark of 8.98%. International equity (non-US equities) holdings returned 0.57%, more than the World EX USA Custom benchmark of 0.16%. International equity (emerging markets) holdings returned 4.06%, more than the NYCERS Custom EM Index benchmark of 4.05%. Fixed income securities returned 7.21%.



**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2019 AND 2018**

Investment Summary

June 30, 2018

(in thousands)

Investments - At fair value:	<u>QPP</u>	<u>COVSF</u>	<u>Combined</u>
Short-term investments:			
Commercial paper	\$ 644,809	\$ -	\$ 644,809
Discount notes	71,958	-	71,958
Short-term investment fund	612,219	213,478	825,697
U.S. treasury bills and agencies	40,216	-	40,216
Debt securities:			
Bank loans	55,456	-	55,456
Corporate and other	5,848,844	-	5,848,844
Mortgage debt securities	1,856,281	-	1,856,281
U.S. government and agency	9,933,718	-	9,933,718
Equity securities:			
Domestic equity	17,979,085	-	17,979,085
Collective trust funds:			
Bank loans	1,107,139	-	1,107,139
Corporate and other	32,046	-	32,046
International equity	13,315,724	-	13,315,724
Mortgage debt securities	704,148	-	704,148
Treasury inflation protected securities	2,858,313	-	2,858,313
Alternative investments:			
Infrastructure	396,468	-	396,468
Opportunistic fixed income	1,850,722	-	1,850,722
Private equity	4,467,161	-	4,467,161
Private real estate	3,395,746	-	3,395,746
Hedge fund	66,675	-	66,675
Collateral from securities lending	9,918,700	-	9,918,700
Total	<u><u>\$ 75,155,428</u></u>	<u><u>\$ 213,478</u></u>	<u><u>\$ 75,368,906</u></u>

INVESTMENT PERFORMANCE

Total portfolio performance (net of fees) for Fiscal Year 2018 was 8.56%, more than NYCERS' Policy benchmark, which had a rate of return of 7.84%. Domestic equities returned 14.71%, less than the Russell 3000 (Daily) benchmark of 14.78%. International equity (non-US equities) holdings returned 11.15%, more than the World ex USA Custom benchmark of 7.82%. International equity (emerging markets) holdings returned 1.57%, less than the FTSE Custom NYCERS All Emerging benchmark of 2.30%. Fixed income securities returned 1.29%.

CONTACT INFORMATION

This financial report is designed to provide a general overview of the New York City Employees' Retirement System's finances. Questions concerning any data provided in this report or requests for additional information should be directed to Charles C. Barkley, Director of Finance, New York City Employees' Retirement System, 335 Adams Street, Suite 2300, Brooklyn, NY 11201-3751.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
COMBINING STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2019
(In thousands)

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	Eliminations	Total
ASSETS:								
Cash and cash equivalents	\$ 64,699	\$ 7,469	\$ 215	\$ 178	\$ 253	\$ 190	\$ -	\$ 73,004
RECEIVABLES:								
Investment securities sold	1,177,445	-	-	-	-	-	-	1,177,445
Member loans (Note 7)	1,150,018	-	-	-	-	-	-	1,150,018
Accrued interest and dividends	338,691	618	-	-	-	-	-	339,309
Other receivables	-	-	-	-	-	-	-	-
Receivables from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	-	-	710	1,130	1,520	1,221	(4,581)	-
COVSF	-	153,411	-	-	-	-	(153,411)	-
Total receivables	2,666,154	154,029	710	1,130	1,520	1,221	(157,992)	2,666,772
INVESTMENTS — At fair value (Notes 2 and 3):								
Short-term investments:								
Commercial paper	608,362	-	-	-	-	-	-	608,362
Discount notes	153,810	-	-	-	-	-	-	153,810
Short-term investment fund	600,601	303,529	-	-	-	-	-	904,130
U.S. treasury bills and agencies	40,309	-	-	-	-	-	-	40,309
Debt securities:								
Bank loans	590,699	-	-	-	-	-	-	590,699
Corporate and other	5,899,916	-	-	-	-	-	-	5,899,916
Mortgage debt securities	2,429,941	-	-	-	-	-	-	2,429,941
Treasury inflation protected securities	2,387,976	-	-	-	-	-	-	2,387,976
U.S. government and agency	8,481,413	-	-	-	-	-	-	8,481,413
Equity securities:								
Domestic equity	20,979,595	-	-	-	-	-	-	20,979,595
International equity	13,129,539	-	-	-	-	-	-	13,129,539
Collective trust funds:								
Bank loans	653,292	-	-	-	-	-	-	653,292
Corporate and other	-	-	-	-	-	-	-	-
Domestic equity	-	-	-	-	-	-	-	-
International equity	-	-	-	-	-	-	-	-
Mortgage debt securities	435,441	-	-	-	-	-	-	435,441
Opportunistic fixed income	210,496	-	-	-	-	-	-	210,496
Treasury inflation protected securities	736,640	-	-	-	-	-	-	736,640
U.S. government and agency	-	-	-	-	-	-	-	-
Alternative investments:								
Infrastructure	654,868	-	-	-	-	-	-	654,868
Opportunistic fixed income	1,927,058	-	-	-	-	-	-	1,927,058
Private equity	4,657,470	-	-	-	-	-	-	4,657,470
Private real estate	3,564,549	-	-	-	-	-	-	3,564,549
Hedge fund	6,979	-	-	-	-	-	-	6,979
Collateral from securities lending	6,406,505	-	-	-	-	-	-	6,406,505
Total investments	74,555,459	303,529	-	-	-	-	-	74,858,988
OTHER ASSETS								
	128,259	-	-	-	-	-	-	128,259
Total assets	77,414,571	465,027	925	1,308	1,773	1,411	(157,992)	77,727,023
LIABILITIES:								
Accounts payable	464,094	-	-	-	22	-	-	464,116
Payable for investment securities purchased	1,406,303	-	-	-	-	-	-	1,406,303
Accrued benefits payable	454,936	48,799	925	1,308	1,751	1,411	-	509,130
Payable from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	4,581	-	-	-	-	-	(4,581)	-
COVSF	153,411	-	-	-	-	-	(153,411)	-
Due to other retirement systems	617	-	-	-	-	-	-	617
Securities lending (Note 2)	6,406,505	-	-	-	-	-	-	6,406,505
Total liabilities	8,890,447	48,799	925	1,308	1,773	1,411	(157,992)	8,786,671
NET POSITION RESTRICTED FOR BENEFITS:								
Benefits to be provided by QPP	68,524,124	-	-	-	-	-	-	68,524,124
Benefits to be provided by VSF	-	416,228	-	-	-	-	-	416,228
Total net position restricted for benefits	\$ 68,524,124	\$ 416,228	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 68,940,352

The accompanying notes are an integral part of these combining financial statements.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
COMBINING STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2018
(In thousands)

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	Eliminations	Total
ASSETS:								
Cash and cash equivalents	\$ 19,139	\$ 1,917	\$ 134	\$ 121	\$ 171	\$ 139	\$ -	\$ 21,621
RECEIVABLES:								
Investment securities sold	494,566	-	-	-	-	-	-	494,566
Member loans (Note 7)	1,129,906	-	-	-	-	-	-	1,129,906
Accrued interest and dividends	326,006	365	-	-	-	-	-	326,371
Other receivables	-	11	-	-	-	-	-	11
Receivables from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	-	-	812	1,202	1,657	1,324	(4,995)	-
COVSF	-	234,000	-	-	-	-	(234,000)	-
Total receivables	1,950,478	234,376	812	1,202	1,657	1,324	(238,995)	1,950,854
INVESTMENTS – At fair value (Notes 2 and 3):								
Short-term investments:								
Commercial paper	644,809	-	-	-	-	-	-	644,809
Discount notes	71,958	-	-	-	-	-	-	71,958
Short-term investment fund	612,219	213,478	-	-	-	-	-	825,697
U.S. treasury bills and agencies	40,216	-	-	-	-	-	-	40,216
Debt securities:								
Bank Loans	55,456	-	-	-	-	-	-	55,456
Corporate and other	5,848,844	-	-	-	-	-	-	5,848,844
Mortgage debt securities	1,856,281	-	-	-	-	-	-	1,856,281
U.S. government and agency	9,933,718	-	-	-	-	-	-	9,933,718
Equity securities:								
Domestic equity	17,979,085	-	-	-	-	-	-	17,979,085
Collective trust funds:								
Bank Loans	1,107,139	-	-	-	-	-	-	1,107,139
Corporate and other	32,046	-	-	-	-	-	-	32,046
International equity	13,315,724	-	-	-	-	-	-	13,315,724
Mortgage debt securities	704,148	-	-	-	-	-	-	704,148
Treasury inflation protected securities	2,858,313	-	-	-	-	-	-	2,858,313
Alternative investments:								
Infrastructure	396,468	-	-	-	-	-	-	396,468
Opportunistic fixed income	1,850,722	-	-	-	-	-	-	1,850,722
Private equity	4,467,161	-	-	-	-	-	-	4,467,161
Private real estate	3,395,746	-	-	-	-	-	-	3,395,746
Hedge fund	66,675	-	-	-	-	-	-	66,675
Collateral from securities lending	9,918,700	-	-	-	-	-	-	9,918,700
Total investments	75,155,428	213,478	-	-	-	-	-	75,368,906
OTHER ASSETS								
Total assets	77,234,940	449,771	946	1,323	1,828	1,463	(238,995)	77,451,276
LIABILITIES:								
Accounts payable	468,665	-	-	-	22	-	-	468,687
Payable for investment securities purchased	1,023,260	-	-	-	-	-	-	1,023,260
Accrued benefits payable	377,156	47,529	946	1,323	1,806	1,463	-	430,223
Payable from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	4,995	-	-	-	-	-	(4,995)	-
COVSF	234,000	-	-	-	-	-	(234,000)	-
Due to other retirement systems	1,412	-	-	-	-	-	-	1,412
Securities lending (Note 2)	9,918,700	-	-	-	-	-	-	9,918,700
Total liabilities	12,028,188	47,529	946	1,323	1,828	1,463	(238,995)	11,842,282
NET POSITION RESTRICTED FOR BENEFITS								
Benefits to be provided by QPP	65,206,752	-	-	-	-	-	-	65,206,752
Benefits to be provided by VSF	-	402,242	-	-	-	-	-	402,242
Total net position restricted for benefits	\$ 65,206,752	\$ 402,242	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 65,608,994

The accompanying notes are an integral part of these combining financial statements.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2019
(In thousands)

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	ELIM	Total
ADDITIONS:								
Contributions:								
Member contributions	\$ 547,807	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 547,807
Employer contributions	3,692,711	-	-	-	-	-	-	3,692,711
Total contributions	<u>4,240,518</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4,240,518</u>
Investment income (Note 2):								
Interest income	988,963	6,304	-	-	-	-	-	995,267
Dividend income	914,719	-	-	-	-	-	-	914,719
Net appreciation in fair value of investments	2,728,030	-	-	-	-	-	-	2,728,030
Total investment income	<u>4,631,712</u>	<u>6,304</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4,638,016</u>
Less:								
Investment expenses	<u>240,544</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>240,544</u>
Net income	<u>4,391,168</u>	<u>6,304</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4,397,472</u>
Securities lending transactions:								
Securities lending income	45,331	-	-	-	-	-	-	45,331
Less - securities lending fees	<u>4,573</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4,573</u>
Net securities lending income	<u>40,758</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>40,758</u>
Net investment income	<u>4,431,926</u>	<u>6,304</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4,438,230</u>
Other - other income	<u>3,258</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>3,258</u>
Transfer from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	-	-	1,722	2,522	3,446	2,799	(10,489)	-
COVSF	-	<u>103,411</u>	-	-	-	-	<u>(103,411)</u>	-
Total additions	<u>8,675,702</u>	<u>109,715</u>	<u>1,722</u>	<u>2,522</u>	<u>3,446</u>	<u>2,799</u>	<u>(113,900)</u>	<u>8,682,006</u>
DEDUCTIONS:								
Benefit payments and withdrawals (Note 1)	5,152,588	95,729	1,722	2,522	3,446	2,799	-	5,258,806
Payments to other retirement systems	9,769	-	-	-	-	-	-	9,769
Transfer from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	10,489	-	-	-	-	-	(10,489)	-
COVSF	103,411	-	-	-	-	-	(103,411)	-
Administrative expenses	<u>82,073</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>82,073</u>
Total deductions	<u>5,358,330</u>	<u>95,729</u>	<u>1,722</u>	<u>2,522</u>	<u>3,446</u>	<u>2,799</u>	<u>(113,900)</u>	<u>5,350,648</u>
NET INCREASE IN NET POSITION	3,317,372	13,986	-	-	-	-	-	3,331,358
NET POSITION RESTRICTED FOR BENEFITS:								
Beginning of year	<u>65,206,752</u>	<u>402,242</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>65,608,994</u>
End of year	<u>\$ 68,524,124</u>	<u>\$ 416,228</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 68,940,352</u>

The accompanying notes are an integral part of these combining financial statements.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2018
(In thousands)

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	ELIM	Total
ADDITIONS:								
Contributions:								
Member contributions	\$ 523,535	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 523,535
Employer contributions	3,377,024	-	-	-	-	-	-	3,377,024
Total contributions	3,900,559	-	-	-	-	-	-	3,900,559
Investment income (Note 2):								
Interest income	878,598	2,265	-	-	-	-	-	880,863
Dividend income	897,873	-	-	-	-	-	-	897,873
Net appreciation in fair value of investments	3,591,521	-	-	-	-	-	-	3,591,521
Total investment income	5,367,992	2,265	-	-	-	-	-	5,370,257
Less:								
Investment expenses	241,818	-	-	-	-	-	-	241,818
Net income	5,126,174	2,265	-	-	-	-	-	5,128,439
Securities lending transactions:								
Securities lending income	30,089	-	-	-	-	-	-	30,089
Less - securities lending fees	3,009	-	-	-	-	-	-	3,009
Net securities lending income	27,080	-	-	-	-	-	-	27,080
Net investment income	5,153,254	2,265	-	-	-	-	-	5,155,519
Other - other income	3,410	12	-	-	-	-	-	3,422
Transfer from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	-	-	1,825	2,573	3,612	2,887	(10,897)	-
COVSF	-	205,000	-	-	-	-	(205,000)	-
Total additions	9,057,223	207,277	1,825	2,573	3,612	2,887	(215,897)	9,059,500
DEDUCTIONS:								
Benefit payments and withdrawals (Note 1)	4,882,612	93,200	1,825	2,573	3,612	2,887	-	4,986,709
Payments to other retirement systems	9,055	-	-	-	-	-	-	9,055
Transfer from QPP to:								
VSFs (HPO, HPSO, TPO, TPSO)	10,897	-	-	-	-	-	(10,897)	-
COVSF	205,000	-	-	-	-	-	(205,000)	-
Administrative expenses	59,689	-	-	-	-	-	-	59,689
Total deductions	5,167,253	93,200	1,825	2,573	3,612	2,887	(215,897)	5,055,453
NET INCREASE IN NET POSITION	3,889,970	114,077	-	-	-	-	-	4,004,047
NET POSITION RESTRICTED FOR BENEFITS:								
Beginning of year	61,316,782	288,165	-	-	-	-	-	61,604,947
End of year	\$ 65,206,752	\$ 402,242	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 65,608,994

The accompanying notes are an integral part of these combining financial statements.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2019 AND 2018

1. PLAN DESCRIPTION

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

NYCERS administers the New York City Employees' Retirement System Qualified Pension Plan (the QPP or Plan), Correction Officers' Variable Supplements Fund (COVSF), Housing Police Officers' Variable Supplements Fund (HPOVSF), Housing Police Superior Officers' Variable Supplements Fund (HPSOVSF), Transit Police Officers' Variable Supplements Fund (TPOVSF), and the Transit Police Superior Officers' Variable Supplements Fund (TPSOVSF) (collectively the Funds), which are included in the combining financial statements.

The QPP is a cost-sharing, multiple-employer PERS. The QPP provides a pension benefit for employees of The City and various related employers not covered by The City's four other main pension systems. The employers (collectively, the Employer), in addition to The City, principally include five authorities, four public benefit corporations, The City University of New York (CUNY) and the State. Substantially all employees of The City not covered by one of the other four pension systems are covered by the QPP. Permanent employees become QPP members after six months of their employment and may elect to become members earlier. All other employees may become members at their option.

The QPP functions in accordance with existing State statutes and City laws, which are the basis by which benefit terms and Employer and member contribution requirements are established and amended. The QPP combines features of a defined benefit pension plan with those of a defined contribution pension plan, but is considered a defined-benefit pension plan for financial reporting purposes.

The COVSF, HPOVSF, HPSOVSF, TPOVSF, and TPSOVSF (collectively, the VSFs) operate pursuant to the provisions of Title 13, Chapter 1 of the Administrative Code of the City of New York (ACNY) and provide supplemental benefits as follows:

COVSF: Retired Members of the Uniformed Correction Force (UCF). To be eligible to receive benefits, members of the UCF must retire on or after July 1, 1999 with 20 or more years of service, and be receiving a service retirement benefit from the QPP.

HPOVSF: QPP retirees who retired for service, with 20 or more years of service as Housing Police Officers and who retired on or after July 1, 1987.

HPSOVSF: QPP retirees who retired for service, with 20 or more years of service as Housing Police Superior Officers and who retired on or after July 1, 1987.

TPOVSF: QPP retirees who retired for service, with 20 or more years of service as Transit Police Officers and who retired on or after July 1, 1987.

TPSOVSF: QPP retirees who retired for service, with 20 or more years of service as Housing Police Superior Officers and who retired on or after July 1, 1987.

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2019 AND 2018**

Under current law, the VSFs are not to be construed as constituting a pension or retirement system. Instead, they provide defined supplemental payments, other than pension or retirement system allowances, in accordance with applicable statutory provisions. While The City guarantees these payments, the New York State Legislature has reserved to itself and the State of New York (the State) the right and power to amend, modify, or repeal the VSFs and the payments they provide. For financial reporting purposes, however, the VSFs are considered single-employer defined benefit pension plans.

NYCERS is a fiduciary component of The City and is in the Pension and Other Employee Benefit Trust Funds section of The City's Comprehensive Annual Financial Report (CAFR).

Boards of Trustees

The QPP's Board of Trustees consists of 11 members; the Mayor's representative is the Chairperson of the Board, Borough Presidents of Manhattan, the Bronx, Brooklyn, Queens, and Staten Island, the Comptroller of the City of New York, the Public Advocate, and Presidents of the three unions with the largest number of participating employees, which are District Council 37 – AFSCME, International Brotherhood of Teamsters, Local 237, and the Transport Workers Union Local 100. The Board of Trustees for the VSFs each have one vote (unless noted otherwise) and consist of the Mayor's representative, the Comptroller and the Commissioner of Finance. Additional trustees are: for the COVSF, an officer of The New York City Correction Officers' Benevolent Association (1 ½ vote) and a representative of the Correction Captains employee organization (1/2 vote). For the HPOVSF, two members of the association designated by the board, each of whom are entitled to cast one vote. For the HPSOVSF, two representatives of the housing police superior officers recognized employee organization, each of whom are entitled to cast one vote. For TPOVSF, two members of the association designated by the board, each of whom are entitled to cast one vote. For TPSOVSF, two representatives of the transit police superior officers recognized employee organization, each of whom are entitled to cast one vote.

At June 30, 2019 (preliminary), June 30, 2018 (preliminary), and June 30, 2017 the QPP's membership consisted of:

	2019	2018	2017
Retirees and beneficiaries receiving benefits	154,655	154,116	150,419
Terminated vested members not yet receiving benefits	18,155	21,389	8,417
Other inactives*	23,195	28,483	19,180
Active members receiving salary	196,879	190,572	189,792
Total	<u><u>392,884</u></u>	<u><u>394,560</u></u>	<u><u>367,808</u></u>

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

Note that 2017 data is final and supports the most recent actuarial valuation. 2018 and 2019 data is preliminary and may be subject to future adjustments as the data is refined.

Beginning with the June 30, 2018 actuarial valuation, all members who have been off payroll for more than five years and are not pensioners but still have member contributions remaining in the QPP are counted as either terminated vested (if they have enough years of service to be vested) or other inactives (if they don't have the required number of years to be vested). Prior to June 30, 2018, these members were excluded from the headcount.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2019 AND 2018

At June 30, 2018 and 2017, the dates of the VSF's most recent actuarial valuations, membership consisted of:

	COVSF		HPOVSF		HPSOVSF		TPOVSF		TPSOVSF	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Retirees currently receiving payments	7,971	7,858	149	153	212	215	294	315	238	243
Active members	10,384	9,568	-	-	-	-	-	-	-	-
Total	18,355	17,426	149	153	212	215	294	315	238	243

The QPP provides three main types of retirement benefits: Service Retirements, Ordinary Disability Retirements (non-job-related disabilities) and Accident Disability Retirements (job-related disabilities) to members who are in different "Tiers." The members' Tiers are generally determined by the date of membership in the Plan.

The Service Retirement benefits provided by the QPP for employees who joined before July 1, 1973 (Tier 1), fall into four categories according to the level of benefits provided and the years of service required. Three of the four categories provide annual benefits of 50% to 55% of "final salary" (as defined within State statutes and City laws) after 20 or 25 years of service, with additional benefits equal to a specified percentage per year of service (currently 1.2% to 1.7%) of "final salary" payable for years in excess of the 20-year or 25-year minimum. These benefits are reduced on an actuarial basis for any loans with unpaid balances outstanding at the date of retirement. These benefits are increased, where applicable, by an annuity attributable to member contributions in excess of the required amount and by any benefits attributable to the Increased-Take-Home-Pay (ITHP) contributions accumulated after the 25th year of member's qualifying service. ITHP represents amounts contributed by The City in lieu of members' own contributions. These amounts reduce the contributions that members would have to make to the QPP during their service and thereby increase their take-home pay. Members have the choice of waiving their ITHP reduction, which would reduce their take-home pay but provide them with additional benefits upon retirement.

The fourth category has no minimum service requirement and instead provides an annual benefit for each year of service equal to a specified percentage (currently 0.7% to 1.53%) of "final salary".

The State Constitution provides that the pension rights of public employees are contractual and shall not be diminished or impaired. In 1973, 1976, 1983, and 2012, significant amendments made to the State Retirement and Social Security Law (RSSL) modified certain benefits for employees joining the Plan on or after the effective date of such amendments.

Members who joined on or after July 1, 1973 and before July 27, 1976 (Tier 2), have provisions similar to Tier 1, 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 benefit limitation was subsequently eliminated under Chapter 574 of the Laws of 2000 for all Tier 2 members who retired after December 8, 2000.

Members who joined the QPP on or after July 27, 1976 and prior to September 1, 1983 (Tier 3), were later mandated into Tier 4, but could retain their Tier 3 rights. Tier 3 requires member contributions of salary for a period not to exceed 30 years, has benefits reduced by one half of the primary Social Security benefit attributable to service with the Employer, and provides for an automatic annual cost-of-living escalator in pension benefits of not more than 3.0%. Effective October 1, 2000, these members are not required to make contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier.



**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2019 AND 2018**

Members who joined the QPP on or after September 1, 1983 and prior to April 1, 2012 (Tier 4) must make basic contributions of 3.0% of salary until termination of service. Effective October 1, 2000, these members, except for certain Transit Authority employees, are not required to make contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. Effective December 2000, certain Transit Authority members make basic contributions of 2.0% of salary in accordance with Chapter 10 of the Laws of 2000. Certain members also make additional member contributions. The annual benefit is 1.67% of "final average salary" per year of service for members with less than 20 years of service, 2% of "final average salary" per year of service for members with 20 to 30 years, plus 1.5% of "final average salary" per year of service for service in excess of 30 years.

The QPP also provides death benefits; and certain retirees also receive supplemental benefits.

Subject to certain conditions, members generally become fully vested as to benefits upon the completion of 5 years of service.

During the Spring 2000 session, the State Legislature approved and the State Governor (Governor) signed laws that provide automatic Cost-of-Living Adjustments (COLA) for certain retirees and beneficiaries (Chapter 125 of the Laws of 2000), additional service credits for certain Tier 1 and Tier 2 members and reduced member contributions for certain Tier 3 and Tier 4 members (Chapter 126 of the Laws of 2000).

Subsequent legislation, affecting members of Tiers 2, 3 and 4, has created various improved early retirement benefit programs under which eligible employees may elect to pay additional contributions. Members first employed after the effective date of such legislation are generally mandated into these programs.

Tier 6 — During March 2012, the Governor signed Chapter 18 of the Laws of 2012 (Chapter 18/12) that placed certain limitations on the Tier 3 and Tier 4 benefits available to participants in most New York State PERS who join a system on and after April 1, 2012, including NYCERS. In general, these changes, commonly referred to as Tier 6, increase the age requirement to 63 for most non-uniformed employees to retire and receive a full pension, require member contributions for all years of service for non-uniformed employees, institute progressive member contributions for non-uniformed employees, lengthen the final average salary (FAS) period from 3 to 5 years, cap FAS for non-uniformed employees to an amount equal to the Governor's salary, extend and harmonize the Tier 3 benefits for POLICE and FIRE to other uniformed forces and to DA Investigators and offer an optional defined-contribution plan to certain non-represented employees. Note that the 22-year retirement plans for Correction, Sanitation and DA Investigator members established under Chapter 18/12 are not considered Tier 6 plans.

Certain members of Tier 1 and Tier 2 have the right to make voluntary member contributions (Voluntary Contributions) in excess of their required member contributions (Required Contributions). Both the Voluntary Contributions and the Required Contributions are credited with interest at a statutory rate (currently 8.25% APR). At the time of retirement or refund of contributions, a member's aggregate balance of actual Required Contributions and Voluntary Contributions, including statutory interest, 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 statutory earnings thereon. The amount of the member's retirement annuity or the refund of contributions that he or she is entitled to is increased by any Excess of Contributions or reduced by any Deficiency of Contributions. The total value of members' Excesses of Contributions, net of all Deficiencies of Contributions, has not been determined, for the years ended June 30, 2018 and 2017, respectively. Actuarial estimates of the impacts of Excesses and Deficiencies are incorporated into calculation of the QPP's net pension liability (see note 6).

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2019 AND 2018**

VSFs

COVSF

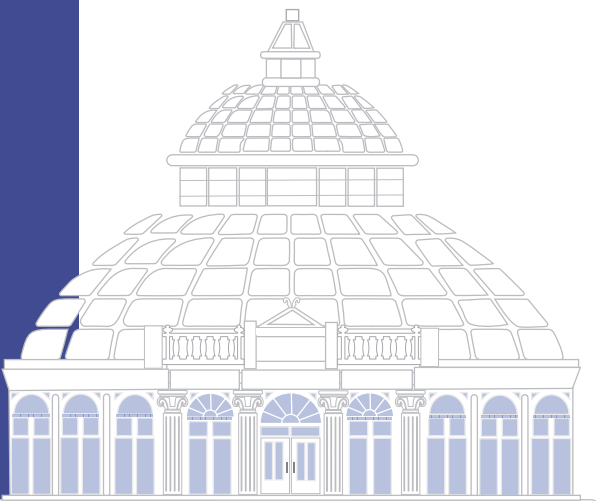
The COVSF provides supplemental benefits, varying by calendar year according to a schedule and available Fund assets, for those NYCERS members who retire for service as UCF members with 20 or more years of service on or after July 1, 1999. The annual scheduled amount is \$8,500 for Calendar Year 2000. The annual scheduled amount increases \$500 each year thereafter to a maximum of \$12,000 for Calendar Year 2007 and thereafter. In the calendar year of retirement or death, the annual scheduled amount is prorated.

Chapter 255/00 provides that prior to Calendar Year 2019, when COVSF provides for a guaranteed schedule of defined supplemental benefits, benefits are payable in a calendar year only if there are sufficient Fund assets to pay that year's scheduled amounts to all who are entitled to it unless The City guarantee becomes effective. The City guarantee of benefits payable prior to Calendar Year 2019 comes into effect if the market value of assets of the Fund exceeds the actuarial present value of the defined schedule of benefits payable through Calendar Year 2018.

The Funds' Chief Actuary (the Actuary) has also determined that benefits were payable for Calendar Year 2000 through Calendar Year 2005. However, the Actuary determined that no benefits were payable for Calendar Years 2006 through 2013. Benefits were payable for Calendar Years 2014 and 2015. No benefits were payable for Calendar Year 2016. Benefits were payable for Calendar Year 2017 and are expected to be paid for Calendar Year 2018 due to the application of the City guarantee of benefits payable prior to Calendar Year 2019.

In the past, the New York State Legislature, in recognition of inflation, has increased retirement benefits to retirees of its public pension systems. Any increase in the amount of ad-hoc cost-of-living increases (Supplementation) or automatic COLA payable from NYCERS to a retiree of the Fund under legislation enacted on or after December 29, 1999 will reduce benefits payable from the Fund to such retiree by an amount equal to such increase until the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) January 1, 2007.

Chapter 125 of the Laws of 2000 (Chapter 125/00) provided Supplementation benefits from NYCERS for certain retirees who retired before Calendar Year 1997 effective September 2000. In addition, Chapter 125/00 provided future COLA increases from NYCERS beginning September 2001 and on each subsequent September to these retirees.



**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
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HPOVSF

For those Housing Police Officers who became members of NYCERS prior to July 1, 1988, and who retired between July 1, 1987 and December 31, 1991, the annual supplemental benefit was \$4,500 for calendar year 1992. For those who retired during 1992, the benefit was a proportion of \$4,500. The benefit increases \$500 each year thereafter to a maximum of \$12,000 in calendar year 2007 and thereafter.

For those who were members of NYCERS prior to July 1, 1988, and who retire after calendar year 1992, the benefit for the first year of retirement is a proportion of the annual scheduled amount as described above for the calendar year of retirement and the full amount thereafter.

For those Housing Police Officers who became members of NYCERS on or after July 1, 1988, the annual supplemental benefit is \$2,500 for the first twelve months of retirement, increasing by \$500 each year until a maximum of \$12,000 is payable in the twentieth and later years of retirement. This was later modified by Chapter 719 of the Laws of 1994 as discussed below.

Chapter 375 of the Laws of 1993 (Chapter 375/93) provided that prior to calendar year 2007, the defined schedules of benefits are payable only if there are sufficient assets available in the Fund, or if the New York City (The City) guarantee comes into effect. The City guarantee of benefits comes into effect prior to calendar year 2007 if the market value of assets of the Fund exceeds the actuarial present value of the defined schedules of benefits payable through calendar year 2006 plus 15% of the assets of the Fund at that time.

Chapter 719 of the Laws of 1994 (Chapter 719/94), signed on August 2, 1994, made further changes to the Fund. Supplemental benefit payments became guaranteed. In addition, Housing Police Officers who became members on or after July 1, 1988, will receive the maximum \$12,000 benefit beginning in calendar year 2008.

Chapter 255 of the Laws of 2000 (Chapter 255/00) provided that in the event that, for any calendar year covered by a payment guarantee, the assets of the Fund are not sufficient to pay benefits, an amount sufficient to pay such benefits shall be appropriated from the Contingent Reserve Fund of NYCERS and transferred to the Fund. The law also provided that transfers to the Fund for supplemental benefits could begin as early as calendar year 2001, if needed.

In the past, the New York State Legislature, in recognition of inflation, has increased retirement benefits to retirees of its public pension systems. Any increase in the amount of ad-hoc cost-of-living increases (Supplementation) or automatic COLA payable from NYCERS to a retiree of the Fund under legislation enacted on or after January 1, 1993 will reduce benefits payable from the Fund to such retiree by an amount equal to such increase until the following date:

- For a retiree with a date of membership before July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) January 1, 2007.
- For a retiree with a date of membership on or after July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) the earlier of (1) the first day of the month following the 19th anniversary of such retiree's date of retirement and January 1, 2008.

Chapter 119 of the Laws of 1995 (Chapter 119/95) provided additional benefits for Supplementation payable from NYCERS on and after December 1, 1996, for certain retirees of the Fund effective as enacted by the City Council on October 25, 1995.

Chapter 390 of the Laws of 1998 (Chapter 390/98) provided additional benefits for Supplementation payable from NYCERS on and after September 1, 1998 (with a second benefit increase commencing September 1, 1999).

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
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Chapter 125 of the Laws of 2000 (Chapter 125/00) provided Supplementation benefits from NYCERS for certain retirees who retired before calendar year 1997 effective September 2000. In addition, Chapter 125/00 provided future COLA increases from NYCERS beginning September 2001 and on each subsequent September to eligible retirees.

HPSOVSF

For those Housing Police Superior Officers who became members of NYCERS prior to July 1, 1988 and who retired between July 1, 1987 and December 31, 1992, the annual supplemental benefit was \$5,000 in calendar year 1993. For those who retired during 1993, the benefit was a proportion of \$5,000. The benefit increases \$500 each year thereafter to a maximum of \$12,000 in calendar year 2007 and thereafter.

For those who were members of NYCERS prior to July 1, 1988 and who retired after calendar year 1993, the benefit for the first year of retirement is a proportion of the annual scheduled amount as described above for the calendar year of retirement and the full amount thereafter.

For those Housing Police Superior Officers who became members of NYCERS on or after July 1, 1988, the annual supplemental benefit is \$2,500 for the first twelve months of retirement, increasing by \$500 each year until a maximum of \$12,000 is payable in the twentieth and later years of retirement.

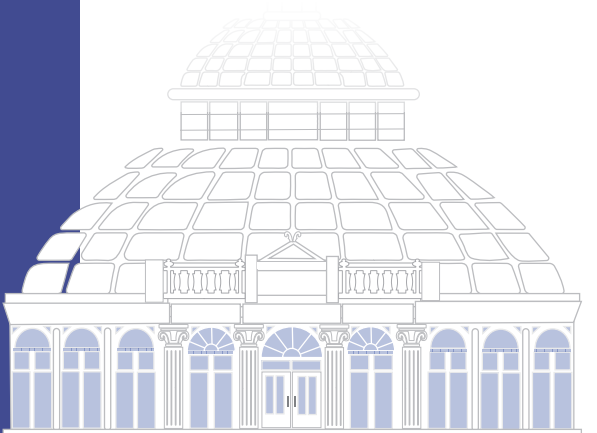
Chapter 719 of the Laws of 1994 (Chapter 719/94) provided that after calendar year 2006 payments are guaranteed, while prior to calendar year 2007, the defined schedules of benefits are payable only if there are sufficient assets available in the Fund, or if The City guarantee comes into effect. The City guarantee of benefits comes into effect prior to calendar year 2007 if the market value of assets of the Fund exceeds the actuarial present value of the defined schedules of benefits payable through calendar year 2006 plus 15% of the assets of the Fund at that time.

Chapter 719/94 also provided that, whenever the guarantee of the defined schedules of benefits comes into effect, the Fund will then transfer 15% of the market value of its assets to The City's General Fund.

Based on the calculations of the Funds' Chief Actuary of the Office of the Actuary (the Actuary), The City guarantee of the defined schedules of benefits prior to calendar year 2007 had not yet come into effect as discussed more fully below.

Also, in conjunction with the April 30, 1995 merger of the Housing Police force into the New York City Police Department (the Merger), The City signed a letter of agreement with affected unions to ensure that the payment of benefits provided under the defined schedules prior to calendar year 2007 will be made. Thus, there will be no suspension of benefits prior to calendar year 2007 even if assets of the Fund become insufficient to pay these benefits.

Chapter 255 of the Laws of 2000 (Chapter 255/00) provided that in the event that, for any calendar year covered by a payment guarantee, the assets of the Fund are not sufficient to pay benefits, an amount sufficient to pay such benefits shall be appropriated from the Contingent Reserve Fund of NYCERS and transferred to the Fund. The law also provided that supplemental benefits become guaranteed commencing with calendar year 2001.



**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2019 AND 2018**

In the past, the New York State Legislature, in recognition of inflation, has increased retirement benefits to retirees of its public pension systems. Any increase in the amount of ad-hoc cost-of-living increases (Supplementation) or automatic COLAs payable from NYCERS to a retiree of the Fund under legislation enacted on or after January 1, 1994 will reduce benefits payable from the Fund to such retiree by an amount equal to such increase until the following date:

- For a retiree with a date of membership before July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) January 1, 2007.
- For a retiree with a date of membership on or after July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) the first day of the month following the 19th anniversary of such retiree's date of retirement.

Chapter 119 of the Laws of 1995 (Chapter 119/95) provided additional benefits for Supplementation from NYCERS payable on and after December 1, 1996 for certain retirees of the Fund, effective as enacted by the City Council on October 25, 1995.

Chapter 390 of the Laws of 1998 (Chapter 390/98) provided additional benefits for Supplementation payable from NYCERS on and after September 1, 1998 (with a second benefit increase commencing September 1, 1999).

Chapter 125 of the Laws of 2000 (Chapter 125/00) provided Supplementation benefits from NYCERS for certain retirees who retired before calendar year 1997 effective September 2000. In addition, Chapter 125/00 provided future COLA increases from NYCERS beginning September 2001 and on each subsequent September to eligible retirees.

TPOVSF

For those Transit Police Officers who became members of NYCERS prior to July 1, 1988 and who retired between July 1, 1987 and December 31, 1991, the annual supplemental benefit was \$4,500 in Calendar Year 1992. For those who retired during 1992, the benefit was a proportion of \$4,500. The benefit increases \$500 each year thereafter to a maximum of \$12,000 in Calendar Year 2007 and thereafter.

For those who were members of NYCERS prior to July 1, 1988, and who retired after Calendar Year 1992, the benefit for the first year of retirement is a proportion of the annual scheduled amount as described above for the calendar year of retirement and the full amount thereafter.

For those Transit Police Officers who became members of NYCERS on or after July 1, 1988, the annual supplemental benefit is \$2,500 for the first 12 months of retirement, increasing by \$500 each year until a maximum of \$12,000 is payable in the twentieth and later years of retirement.

Chapter 577 of the Laws of 1992 (Chapter 577/92) also provided that prior to Calendar Year 2007, the defined schedules of benefits are payable only if there are sufficient assets available in the Fund, or if The City guarantee comes into effect. The City guarantee of benefits comes into effect prior to Calendar Year 2007 if the market value of assets of the Fund exceeds the actuarial present value of the defined schedules of benefits payable through Calendar Year 2006 plus 15% of the assets of the Fund at that time.

Chapter 577/92 also provided that, whenever the guarantee of the defined schedules of benefits comes into effect, the Fund will then transfer 15% of the market value of its assets to The City's General Fund.

As a result of calculations performed by the Funds' Chief Actuary of the Office of the Actuary (the Actuary) during November 1993, The City guarantee became effective.

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
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Chapter 255 of the Laws of 2000 (Chapter 255/00) provided that in the event that, for any calendar year covered by a payment guarantee, the assets of the Fund are not sufficient to pay benefits, an amount sufficient to pay such benefits shall be appropriated from the Contingent Reserve Fund of NYCERS and transferred to the Fund. The law also provides that transfers to the Fund for supplemental benefits can begin as early as Calendar Year 2001, if needed.

In the past, the New York State Legislature, in recognition of inflation, has increased retirement benefits to retirees of its public pension systems. Any increase in the amount of ad-hoc cost-of-living increases (Supplementation) or automatic COLAs payable from NYCERS to a retiree of the Fund under legislation enacted on or after January 1, 1992 will reduce benefits payable from the Fund to such retiree by an amount equal to such increase until the following date:

- For a retiree with a date of membership before July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) January 1, 2007.
- For a retiree with a date of membership on or after July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) the first day of the month following the 19th anniversary of such retiree's date of retirement.

Chapter 119 of the Laws of 1995 (Chapter 119/95) provided additional benefits for Supplementation payable from NYCERS on and after December 1, 1996, for certain retirees of the Fund effective as enacted by the City Council on October 25, 1995.

Chapter 390 of the Laws of 1998 (Chapter 390/98) provided additional benefits for Supplementation payable from NYCERS on and after September 1, 1998 (with a second benefit increase commencing September 1, 1999).

Chapter 125 of the Laws of 2000 (Chapter 125/00) provided Supplementation benefits from NYCERS for certain retirees who retired before Calendar Year 1997 effective September 2000. In addition, Chapter 125/00 provided future COLA increases from NYCERS beginning September 2001 and on each subsequent September to eligible retirees.

TPSOVSF

For those Transit Police Superior Officers who became members of NYCERS prior to July 1, 1988, and who retired between July 1, 1987 and December 31, 1992, the annual supplemental benefit was \$5,000 in calendar year 1993. For those who retired during 1993, the benefit was a proportion of \$5,000. The benefit increases \$500 each year thereafter to a maximum of \$12,000 in calendar year 2007 and thereafter.

For those who were members of NYCERS prior to July 1, 1988, and who retired after calendar year 1993, the benefit for the first year of retirement is a proportion of the annual scheduled amount as described above for the calendar year of retirement and the full amount thereafter.

For those Transit Police Superior Officers who became members of NYCERS on or after July 1, 1988, the annual supplemental benefit is \$2,500 for the first 12 months of retirement, increasing by \$500 each year until a maximum of \$12,000 is payable in the twentieth and later years of retirement.

Chapter 720 of the Laws of 1994 (Chapter 720/94) also provided that after Calendar Year 2006 payments are guaranteed, while prior to calendar year 2007, the defined schedules of benefits are payable only if there are sufficient assets available in the Fund, or if The City guarantee comes into effect. The City guarantee of benefits comes into effect prior to calendar year 2007 if the market value of assets of the Fund exceeds the actuarial present value of the defined schedules of benefits payable through calendar year 2006 plus 15% of the assets of the Fund at that time.

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
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Chapter 720/94 also provided that whenever the guarantee of the defined schedules of benefits comes into effect, the Fund will then transfer 15% of the market value of its assets to The City's General Fund.

Based on the calculations of the Funds' Chief Actuary of the Office of the Actuary (the Actuary), The City guarantee of the defined schedules of benefits prior to calendar year 2007 had not yet come into effect as discussed more fully below.

Also, in conjunction with the April 2, 1995 merger of the Transit Police force into the New York City Police Department (the Merger), The City signed a letter of agreement with the affected unions to ensure that the payment of benefits provided under the defined schedules prior to calendar year 2007 will be made. Thus, there will be no suspension of benefits prior to calendar year 2007, even if assets of the Fund become insufficient to pay these benefits.

Chapter 255 of the Laws of 2000 (Chapter 255/00) provided that in the event that, for any calendar year covered by a payment guarantee, the assets of the Fund are not sufficient to pay benefits, an amount sufficient to pay such benefits shall be appropriated from the Contingent Reserve Fund of NYCERS and transferred to the Fund. The law also provided that supplemental benefits become guaranteed commencing with calendar year 2001.

In the past, the New York State Legislature, in recognition of inflation, has increased retirement benefits to retirees of its public pension systems. Any increase in the amount of ad-hoc cost-of-living increases (Supplementation) or automatic COLAs payable from NYCERS to a retiree of the Fund under legislation enacted on or after January 1, 1994 will reduce benefits payable from the Fund to such retiree by an amount equal to such increase until the following date:

- For a retiree with a date of membership before July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) January 1, 2007.
- For a retiree with a date of membership on or after July 1, 1988, the later of: (a) the first day of the month following the month such retiree attains age 62 and (b) the first day of the month following the 19th anniversary of such retiree's date of retirement.

Chapter 119 of the Laws of 1995 (Chapter 119/95) provided additional benefits for Supplementation from NYCERS payable on and after December 1, 1996, for certain retirees of the Fund effective as enacted by the City Council on October 25, 1995.

Chapter 390 of the Laws of 1998 (Chapter 390/98) provided additional benefits for Supplementation payable from NYCERS on and after September 1, 1998 (with a second benefit increase commencing September 1, 1999).

Chapter 125 of the Laws of 2000 (Chapter 125/00) provided Supplementation benefits from NYCERS for certain retirees who retired before Calendar Year 1997 effective September 2000. In addition, Chapter 125/00 provided future COLA increases from NYCERS beginning September 2001 and on each subsequent September to eligible retirees.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2019 AND 2018

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND PLAN ASSET MATTERS

Basis of Accounting — The Funds 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 Plan members. Employer contributions are recognized when due and the employer has a legal obligation to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the Funds.

Use of Estimates — The preparation of 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 financial statements and revenues and expenses during the reporting period. Actual results could differ from those estimates.

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

Investment Valuation — Investments are reported at fair value. Securities purchased pursuant to agreements to resell are carried at the contract price, exclusive of interest, at which the securities will be resold. Fair value is defined as the closing market value on the last trading day of the period, except for the Short-Term Investment Fund (STIF, a money market fund), International Investment Fund (IIF) and Alternative Investment Funds (ALTINVF). The IIF are private funds of publicly traded securities that are managed by various investment managers on behalf of the QPP. Fair value is determined by NYCERS management based on information provided by the various investment managers. The investment managers determine fair value using the last available quoted price for each security owned, adjusted by any contributions to or withdrawals from the Fund during the period. The ALTINVF are investments for which exchange quotations are not readily available and are valued at estimated fair value, as determined in good faith by the General Partner (GP). These investments are initially valued at cost with subsequent adjustments that reflect third party transactions, financial operating results, and other factors deemed relevant by the GP. Fair value is determined by plan management based on information provided by the various GPs after review by an independent consultant and the custodian bank for NYCERS.

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.

Income Taxes — Income earned by the QPP and VSFs are not subject to Federal Income Tax.

Accounts Payable — Accounts payable is principally comprised of amounts owed to the QPP's banks for overdrawn bank balances. The QPP's practice is to fully invest the cash balances of most bank accounts on a daily basis. Overdrawn balances result primarily from outstanding benefit checks that are presented to the banks for payment on a daily basis. These balances are routinely settled each day.

Accrued Benefits Payable — Accrued benefits payable represent either: (1) benefits due and unpaid by the Funds as of year-end or (2) related to the VSFs, benefits deemed incurred and unpaid (an accrual for a portion of the current calendar year benefit) for the Fiscal Year ended on June 30.

Securities Lending Transactions — State statutes and Board policies permit the QPP to lend its investments to broker-dealers and other entities for collateral, with a simultaneous agreement to return the collateral for the same securities in the future. The QPP's custodian lends the following types of securities: Short-term securities, common stock, long-term corporate bonds, U.S. Government and U.S. Government agencies' bonds, asset-backed securities, and International Equities and bonds held in collective investment funds.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2019 AND 2018

In return, it receives collateral in the form of cash and U.S. Treasury and U.S. Government agency securities at 102 percent to 105 percent of the principal plus accrued interest for reinvestment. At June 30, 2018, management believes the Plan had no credit risk exposure to borrowers because the amounts the Plan owed the borrowers equaled or exceeded the amounts the borrowers owed the Plan. The contracts with the Plan custodian require borrowers to indemnify the Plan if the borrowers fail to return the securities and if the collateral is inadequate to replace the securities loaned or fail to pay the QPP for income distributions by the securities' issuers while the securities are on loan. All securities loans can be terminated on demand within a period specified in each agreement by either the QPP or the borrowers. Cash collateral is invested in the lending agents' short-term investment pools, which have a weighted average maturity of 47 days. The securities lending program in which QPP participates only allows pledging or selling securities in the case of borrower default. The underlying fixed income securities have an average maturity of 5 years.

GASB Statement No. 28, Accounting and Financial Reporting for Securities Lending Transactions, requires that securities loaned as assets and related liabilities be reported in the statements of fiduciary net position. Cash received as collateral on securities lending transactions and investments made with that cash are reported as assets. Securities received as collateral are also reported as assets if the government entity has the ability to pledge or sell them without a borrower default. Accordingly, NYCERS recorded the investments purchased with the cash collateral as collateral from securities lending with a corresponding liability for securities lending.

Securities on loan are carried at fair value and the value as of June 30, 2019 and 2018 was \$6.3 billion and \$9.8 billion, respectively. Cash collateral received related to securities lending as of June 30, 2019 and 2018 was \$6.4 billion and \$9.9 billion, respectively. As of the date of the combining statements of fiduciary net position, the maturities of the investments made by the Plan with cash collateral, on average, exceed the maturities of the securities loans by approximately 30 days.

GASB Statement No. 72, Fair Value Measurement and Application requires the Funds to use valuation techniques which are appropriate under the circumstances and are either a market approach, a cost approach or income approach. GASB 72 establishes a hierarchy of inputs used to measure fair value consisting of three levels. Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Level 2 inputs are inputs, other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs, and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability. GASB 72 also contains note disclosure requirements regarding the hierarchy of valuation inputs and valuation techniques that was used for the fair value measurements. There was no material impact on the Funds' financial statements as a result of the implementation of GASB 72.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2019 AND 2018

3. INVESTMENTS AND DEPOSITS

The City Comptroller (the Comptroller) acts as an investment advisor to the Funds administered by NYCERS that have investments (the QPP and COVSF). In addition, the QPP employs an independent investment consultant as an investment advisor. The QPP utilizes several investment managers to manage the long-term debt and equity portfolios. The managers are regularly reviewed, with regard to both their investment performance and their adherence to investment guidelines. The COVSF investments are held in a short-term investment fund. The other VSFs do not hold investments. The investment policy is approved by the Board of Trustees of the funds within NYCERS. The Board creates the overall investment policy under which the system's funds are invested and, in defining the investment objectives, develops a framework under which specific objectives are established with regard to allocating the assets of the funds among various investment types.

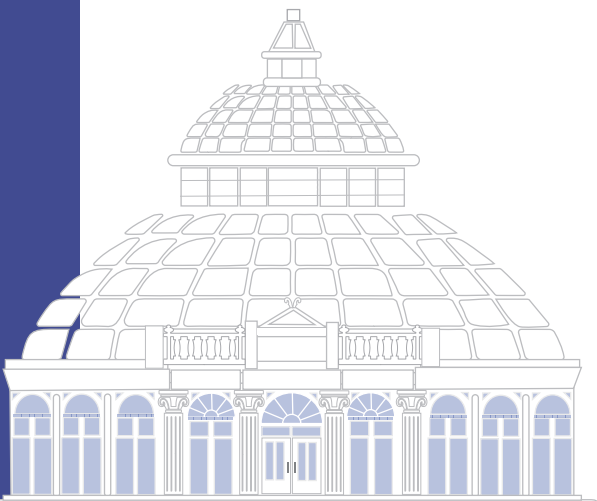
The Funds do not possess an investment risk policy statement. Nor do they actively manage QPP assets to specified risk targets. Rather, investment risk management is an inherent function of our asset allocation process. Assets are diversified over a broad range of asset classes and encompass multiple investment strategies aimed at limiting concentration risk.

The asset allocation targeted for the funds in Fiscal Year 2019 and 2018 included the securities in the following categories:

	<u>2019</u>	<u>2018</u>
Domestic Equities	29.0%	29.0%
International Equity Fund	20.0%	20.0%
Fixed Income	33.0%	33.0%
Alternative Investments	18.0%	18.0%
Total	<u>100.0%</u>	<u>100.0%</u>

Concentrations – The QPP does not have any investments in any one entity that represents 5% or more of fiduciary net position. The COVSF only holds one investment in a short-term investment fund.

Credit Risk – The plausible risk 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 Baa2 and above, except that they are also permitted a 10% maximum exposure to Ba2 & B2 rated securities. While High Yield non-investment grade managers primarily invest in Ba2 & B2 rated securities, they can also invest up to 10% of their portfolio in securities rated Caa2. The quality ratings of the Fund's investments, by percentage of the rated portfolio, as described by nationally recognized rating organizations, at June 30, 2019 and 2018 are as follows:



**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
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JUNE 30, 2019 AND 2018**

Investment Type June 30, 2019 (In percent)	Moody's Quality Ratings											Caa & Below		Total					
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3		B1	B2	B3	Caa1	Not Rated
Corporate Bonds	15.39%	0.21%	0.13%	0.21%	0.48%	1.37%	1.51%	1.98%	2.16%	2.41%	1.36%	2.07%	3.56%	2.91%	3.25%	2.64%	1.61%	13.85%	57.10%
U.S. Government	36.42%	0.03%	0.05%	0.01%	0.04%	0.02%	0.07%	0.01%	0.13%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.53%	37.32%
Commercial Paper	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.68%	2.68%
Pooled Fund	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.05%	2.05%
Discount Notes & T-Bills	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.85%	0.85%
Percent of Rated Portfolio	51.81%	0.24%	0.18%	0.22%	0.52%	1.39%	1.58%	1.99%	2.29%	2.41%	1.36%	2.08%	3.56%	2.91%	3.25%	2.64%	1.61%	19.96%	100.00%

Investment Type June 30, 2018 (In percent)	Moody's Quality Ratings											Caa & Below		Total					
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3		B1	B2	B3	Caa1	Not Rated
U.S. Government	61.01%	0.02%	0.04%	0.01%	0.02%	0.02%	0.09%	0.00%	0.11%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.58%	61.91%
Corporate Bonds	0.77%	0.15%	0.12%	0.23%	0.54%	0.88%	1.78%	2.13%	2.26%	2.34%	1.53%	1.65%	2.86%	2.74%	2.18%	2.30%	1.52%	6.06%	32.04%
Commercial Paper	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.73%	2.73%
Pooled Fund	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.67%	2.67%
Discount Notes & T-Bills	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.48%	0.65%
Percent of Rated Portfolio	61.95%	0.17%	0.16%	0.24%	0.56%	0.90%	1.87%	2.13%	2.37%	2.34%	1.53%	1.66%	2.86%	2.74%	2.18%	2.30%	1.52%	12.52%	100.00%

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The quality ratings of the COVSF investments, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2019 and 2018 are as follows:

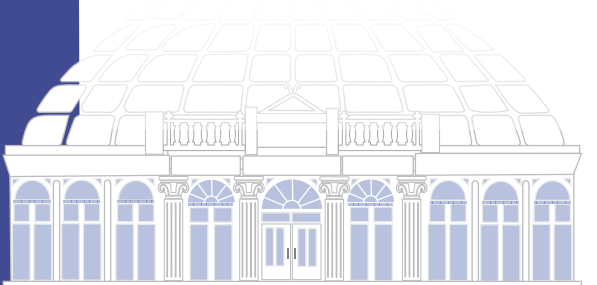
Investment Type (In percent)	Moody's Quality Ratings							Caa & Below Caa1	Not Rated	Total
	Aaa	Aa1	Ba3	B1	B2	B3				
U.S. Government	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Corporate Bonds	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial Paper	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Pooled Funds	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%
Discount Notes & T-Bills	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent of Rated Portfolio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%

Investment Type (In percent)	Moody's Quality Ratings							Caa & Below Caa1	Not Rated	Total
	Aaa	Aa1	Ba3	B1	B2	B3				
U.S. Government	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Corporate Bonds	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Commercial Paper	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Pooled Funds	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%
Discount Notes & T-Bills	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent of Rated Portfolio	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%

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, NYCERS 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 uninsured, are not registered in the name of the QPP or respective VSF and are held by either the counterparty or the counterparty's trust department or agent but not in the QPP or respective VSF's name.

Consistent with NYCERS' investment policy, the investments are held by the NYCERS' custodian and registered in the name of NYCERS or its Funds.

Cash deposits are insured by the Federal Deposit Insurance Corporation for a maximum of \$250,000 per plan member and are, therefore, fully insured.



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All of the NYCERS deposits are insured and or collateralized by securities held by a financial institution separate from NYCERS depository financial institution.

All of NYCERS' securities are held by NYCERS' custodial bank in NYCERS' name.

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

Years to Maturity Investment Type June 30, 2019 (In percent)	Investment Maturities (In Years)				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
Corporate Bonds	57.08%	0.71%	23.80%	15.02%	17.55%
U.S. Government	37.34%	0.14%	14.40%	10.94%	11.86%
Commercial Paper	2.68%	2.68%	0.00%	0.00%	0.00%
Pooled Funds	2.05%	2.05%	0.00%	0.00%	0.00%
Discount Notes & T-Bills	0.85%	0.85%	0.00%	0.00%	0.00%
Percent of Rated Portfolio	<u>100.00%</u>	<u>6.43%</u>	<u>38.20%</u>	<u>25.96%</u>	<u>29.41%</u>

Years to Maturity Investment Type June 30, 2018 (In percent)	Investment Maturities (In Years)				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. Government	61.91%	0.55%	27.02%	15.96%	18.38%
Corporate Bonds	32.04%	0.89%	10.61%	13.78%	6.76%
Commercial Paper	2.73%	2.73%	0.00%	0.00%	0.00%
Pooled Funds	2.67%	2.67%	0.00%	0.00%	0.00%
Discount Notes & T-Bills	0.65%	0.65%	0.00%	0.00%	0.00%
Percent of Rated Portfolio	<u>100.00%</u>	<u>7.49%</u>	<u>37.63%</u>	<u>29.74%</u>	<u>25.14%</u>

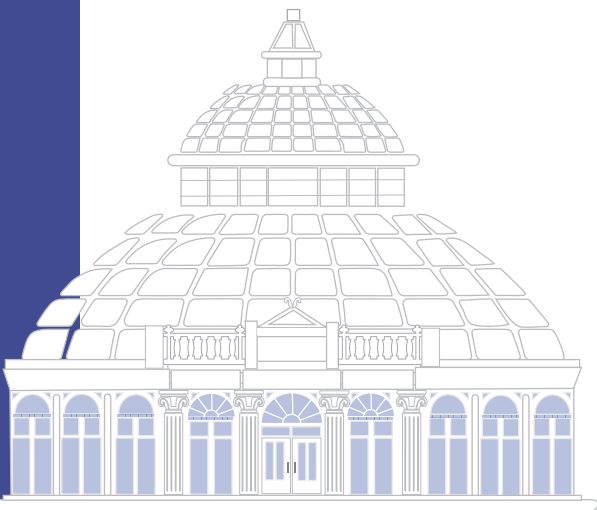
NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
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The length of investment maturities (in years) of the COVSF investments, as shown, by the percent of the rated portfolio, at June 30, 2019 and 2018 are as follows:

Years to Maturity Investment Type June 30, 2019 (In percent)	Investment Maturities (In Years)				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. Government	0.00%	0.00%	0.00%	0.00%	0.00%
Corporate Bonds	0.00%	0.00%	0.00%	0.00%	0.00%
Pooled Funds	100.00%	100.00%	0.00%	0.00%	0.00%
Percent of Rated Portfolio	<u>100.00%</u>	<u>100.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>

Years to Maturity Investment Type June 30, 2018 (In percent)	Investment Maturities (In Years)				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
U.S. Government	0.00%	0.00%	0.00%	0.00%	0.00%
Corporate Bonds	0.00%	0.00%	0.00%	0.00%	0.00%
Pooled Funds	100.00%	100.00%	0.00%	0.00%	0.00%
Percent of Rated Portfolio	<u>100.00%</u>	<u>100.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>

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



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In addition, the QPP has investments in foreign stocks and/or bonds denominated in foreign currencies. QPP's foreign currency exposures as of June 30, 2019 and 2018 are as follows (amounts in thousands of U.S. dollars):

Trade Currency	2019	2018
Euro Currency	\$ 3,283,082	\$ 2,914,358
Japanese Yen	1,794,059	1,729,233
Pound Sterling	1,544,187	1,478,130
South Korean Won	955,339	1,073,952
Indian Rupee	747,974	702,405
New Taiwan Dollar	736,846	758,874
Swiss Franc	736,376	666,898
Brazilian Real	510,170	357,039
Canadian Dollar	485,015	414,281
South African Rand	439,774	496,456
Hong Kong Dollar	387,530	359,346
Australian Dollar	330,041	272,974
Thailand Baht	243,121	212,182
Danish Krone	225,634	219,874
Swedish Krona	198,072	205,135
Mexican Peso (New)	175,214	183,802
Indonesian Rupiah	173,579	141,677
Malaysian Ringgit	170,601	192,798
Singapore Dollar	131,745	113,758
Polish Zloty	111,374	96,969
Turkish Lira	96,060	101,925
Norwegian Krone	94,939	94,687
Philippine Peso	78,751	73,780
Chilean Peso	66,317	69,165
Qatari Rial	55,134	50,418
UAE Dirham	42,884	35,351
Hungarian Forint	34,696	23,087
Colombian Peso	28,768	31,677
New Israeli Sheqel	25,694	20,823
Czech Koruna	15,392	15,776
New Zealand Dollar	12,362	8,099
Moroccan Dirham	11,677	12,281
Peruvian Nouveau Sol	4,452	4,703
Yuan Renminbi	2	3
Total	<u>\$ 13,946,861</u>	<u>\$ 13,131,916</u>

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
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Securities Lending Transactions

Credit Risk — The quality ratings of investments held as collateral for Securities Lending of the QPP at June 30, 2019 and 2018 are as follows:

Investment Type and Fair Value of Securities Lending Transactions June 30, 2019 (in thousands)	Moody's Quality Ratings											
	Aaa & Below	Aa & Below	A1	A2	A3	Baa2 & Below	Ba & Below	B & Below	Caa & Below	Ca & Below	Not Rated	Total
Corporate Bonds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Short Term:												
Reverse Repurchase Agreements	-	-	150,000	504,992	1,987,319	238,333	-	-	-	-	2,686,402	5,567,046
Money Market	89,329	-	-	-	-	-	-	-	-	-	83,999	173,328
U.S. Agency	-	-	-	-	-	-	-	-	-	-	27,740	27,740
Cash or Cash Equivalent	-	-	636,640	-	-	-	-	-	-	-	-	636,640
Uninvested	-	-	-	-	-	-	-	-	-	-	1,751	1,751
Total	\$ 89,329	\$ -	\$ 786,640	\$ 504,992	\$ 1,987,319	\$ 238,333	\$ -	\$ -	\$ -	\$ -	\$ 2,799,892	\$ 6,406,505
Percent of Securities Lending Portfolio	1.39%	0.00%	12.28%	7.88%	31.02%	3.72%	0.00%	0.00%	0.00%	0.00%	43.70%	100.00%

Investment Type and Fair Value of Securities Lending Transactions June 30, 2018 (in thousands)	Moody's Quality Ratings											
	Aaa & Below	Aa & Below	A1	A2	A3	Baa & Below	Ba & Below	B & Below	Caa & Below	Ca & Below	Not Rated	Total
Corporate Bonds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Short Term:												
Reverse Repurchase Agreements	-	-	200,000	554,261	2,283,790	446,247	-	-	-	-	5,316,107	8,800,405
Money Market	136,471	-	-	-	-	-	-	-	-	-	-	136,471
U.S. Agency	-	-	-	-	-	-	-	-	-	-	7,255	7,255
Cash or Cash Equivalent	-	-	972,818	-	-	-	-	-	-	-	-	972,818
Payable/Receivable	-	-	-	-	-	-	-	-	-	-	-	-
Uninvested	-	-	-	-	-	-	-	-	-	-	1,751	1,751
Total	\$ 136,471	\$ -	\$ 1,172,818	\$ 554,261	\$ 2,283,790	\$ 446,247	\$ -	\$ -	\$ -	\$ -	\$ 5,325,113	\$ 9,918,700
Percent of Securities Lending Portfolio	1.38%	0.00%	11.82%	5.59%	23.03%	4.50%	0.00%	0.00%	0.00%	0.00%	53.69%	100.00%

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Interest Rate Risk — The lengths of investment maturities (in years) of the collateral for Securities Lending of the QPP are as follows:

Years to Maturity Investment Type June 30, 2019 (In thousands)	Investment Maturities (In Years)				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
Short-term:					
Reverse Repurchase Agreement	\$ 5,567,046	\$ 5,567,046	\$ -	\$ -	\$ -
Money Market	173,328	173,328	-	-	-
U.S. Agency	27,740	27,740	-	-	-
Cash or Cash Equivalents	636,640	636,640	-	-	-
Uninvested	1,751	1,751	-	-	-
Total	<u>\$ 6,406,505</u>	<u>\$ 6,406,505</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Percent of Securities Lending Portfolio	100.00 %	100.00 %	- %	- %	- %

Years to Maturity Investment Type June 30, 2018 (In thousands)	Investment Maturities (In Years)				
	Fair Value	Less Than One Year	One to Five Years	Six to Ten Years	More Than Ten Years
Short-term:					
Reverse Repurchase Agreement	\$ 8,800,405	\$ 8,800,405	\$ -	\$ -	\$ -
Money Market	136,471	136,471	-	-	-
U.S. Agency	7,255	7,255	-	-	-
Cash or Cash Equivalents	972,818	972,818	-	-	-
Uninvested	1,751	1,751	-	-	-
Total	<u>\$ 9,918,700</u>	<u>\$ 9,918,700</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Percent of Securities Lending Portfolio	100.00 %	100.00 %	- %	- %	- %

Rate of Return – For the years ended June 30, 2019 and 2018, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, for the Funds were as follows:

	<u>2019</u>	<u>2018</u>
QPP	7.07%	8.61%
COVSF	2.41%	1.63%

The money-weighted rate of return expresses investment performance, net of investment expense adjusted for the changing amounts actually invested.

In Fiscal Year 2015, the Fund adopted GASB Statement No. 72 (GASB 72), *Fair Value Measurement and Application*. GASB 72 was issued to address accounting and financial reporting issues related to fair value measurements.

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The Fund 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 Fund has the following recurring fair value measurements as of June 30, 2019 and June 30, 2018:

GASB 72 Disclosure INVESTMENTS — At fair value (In thousands)	2019			Total
	Level One	Level Two	Level Three	
Short-term investments:				
Commercial paper	\$ -	\$ 608,362	\$ -	\$ 608,362
Discount notes	-	153,810	-	153,810
Short-term investment fund	-	904,130	-	904,130
U.S. treasury bills and agencies	-	40,309	-	40,309
Debt securities:				
Bank loans	-	585,681	5,018	590,699
Corporate and other	-	5,899,631	285	5,899,916
Mortgage debt securities	-	1,983,268	446,673	2,429,941
Treasury inflation protected securities	-	2,387,976	-	2,387,976
U.S. government and agency	-	8,481,413	-	8,481,413
Equity securities				
Domestic equity	20,978,098	-	1,497	20,979,595
International equity	13,128,942	-	598	13,129,539
Collective trust funds:				
Bank loans	-	648,736	4,557	653,292
Corporate and other	-	-	-	-
Domestic equity	-	-	-	-
International equity	-	-	-	-
Mortgage debt securities	-	156,030	279,411	435,441
Opportunistic fixed income	8,716	196,839	4,941	210,496
Treasury inflation protected securities	-	736,640	-	736,640
U.S. government and agency	-	-	-	-
Alternative investments:				
Infrastructure	-	-	654,868	654,868
Opportunistic fixed income	-	-	1,927,058	1,927,058
Private equity	12,555	-	4,644,915	4,657,470
Private real estate	-	-	3,564,549	3,564,549
Total investments	<u>\$ 34,128,310</u>	<u>\$ 22,782,825</u>	<u>\$ 11,534,369</u>	<u>68,445,504</u>
Hedge fund investment measured at net asset value				6,979
Total				<u>\$ 68,452,483</u>

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GASB 72 Disclosure INVESTMENTS – At fair value (in thousands)	2018			
	Level One	Level Two	Level Three	Total
Short-term investments:				
Commercial paper	\$ -	\$ 644,809	\$ -	\$ 644,809
Discount notes	-	71,958	-	71,958
Short-term investment fund	-	825,697	-	825,697
U.S. Treasury bills and agencies	39,936	280	-	40,216
Debt securities:				
Bank loans	-	55,456	-	55,456
Corporate and other	-	5,736,321	112,523	5,848,844
Mortgage debt securities	-	1,856,281	-	1,856,281
U.S. government and agency	-	9,933,718	-	9,933,718
Equity securities:				
Domestic equity	17,979,085	-	-	17,979,085
International equity	-	-	-	-
Collective trusts funds:				
Bank loans	-	1,107,139	-	1,107,139
Corporate and other	-	32,046	-	32,046
Domestic equity	-	-	-	-
International equity	13,186,622	-	129,102	13,315,724
Mortgage debt securities	-	160,825	543,323	704,148
Opportunistic fixed income	-	-	-	-
Treasury inflation protected securities	-	2,858,313	-	2,858,313
Alternative investments:				
Infrastructure	-	-	396,468	396,468
Opportunistic fixed income	-	-	1,850,722	1,850,722
Private equity	14,242	-	4,452,919	4,467,161
Private real estate	-	-	3,395,746	3,395,746
Total investments	<u>\$ 31,219,885</u>	<u>\$ 23,282,843</u>	<u>\$ 10,880,803</u>	<u>65,383,531</u>
Hedge fund investment measured at net asset value				66,675
Total				<u>\$ 65,450,206</u>

Equity and Fixed Income Securities

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

Alternative Investments

Alternative investments include private equity, real estate, opportunistic fixed Income, and infrastructure investments. These are investments for which exchange quotations are not readily available and are valued at estimated fair value, as determined in good faith by the General Partner (GP). These investments are initially valued at cost with subsequent adjustments that reflect third party transactions, financial operating results and

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other factors deemed relevant by the GP. The assets in our alternative investment program are classified as Level 3 assets. A more detailed explanation of the Level 3 valuation methodologies follows:

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

Thereafter, or in the interim, if significant developments relating to such portfolio company or industry occur which may suggest a material change in value, the GP should value each investment by applying generally accepted valuation methods including: (1) the market approach (such as market transaction and comparable public company multiples, which are based on a measurement of the company's historical and projected financial performance with typical metrics including enterprise value/latest 12 months EBITDA or projected fiscal year EBITDA) or (2) the income or discounted cash flow approach.

In the market approach, valuation multiples that are relevant to the industry and company in the investments held should be considered and relied upon. Valuation multiples should be assessed and may be adjusted on a go-forward basis based on the business risk associated with the subject company in which the investment is held. In addition, the implied entry multiples should be considered as benchmarks in valuing unlisted equity. In circumstances where no financial performance metrics are available, the GP should rely on other non-financial related metrics applicable to relevant progress from the original investment date to the valuation date. In the income or discounted cash flow approach, forecasted cash flows that may be generated by the subject company are discounted to present value at an appropriate discount rate. These methodologies can be utilized to determine an enterprise value (Enterprise Valuation Methodologies) from which net debt is subtracted to estimate equity value.

The determination of fair value using these methodologies should take into consideration a range of factors, including but not limited to, the price at which the investment was acquired, the nature of the investment, local market conditions, trading values on public exchanges for comparable securities, current and projected operating performance and financing transactions subsequent to the acquisition of the investment. Because of the subjective nature of estimated fair value of the private investments, such value may differ significantly from the values that would have been used had a ready market existed for these investments. These financial instruments have been classified as Level 3 in the fair value hierarchy.

In accordance within the scope of paragraphs 820-10-15-4, alternative investments that are measured at fair value using the net asset value per share (or its equivalent) practical expedient in paragraph 820-10-35-59 have not been classified in the fair value hierarchy. The fair value quantities presented in the table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the entity's financial statements.

Certain alternative investments have additional future commitments. Others have redemption notice requirements and redemption restrictions. Management does not believe these commitments, notice requirements, and redemption restrictions have a material effect on the fair value of the portfolio of investments.

4. TRANSFER TO VARIABLE SUPPLEMENTS FUNDS

The Administrative Code of the City of New York (ACNY) provides that the QPP transfer to the VSFs an amount equal to certain excess earnings in equity investments, limited to the unfunded Accumulated Benefit Obligation (ABO) for each VSF. Excess earnings are defined as the amount by which earnings on equity investments of the QPP exceed what the earnings would have been had such funds been invested at a yield comparable to that available from fixed income securities (Hypothetical Fixed Income Security Earnings or HFISE), less any cumulative deficiencies of prior years' excess earnings that fell below the yield of fixed income investments.

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The calculation of the Hypothetical Fixed Income Security Earnings requires the determination of the Hypothetical Interest Rate (HIR), which is computed by the Comptroller.

Due to the merging of Housing Police and Transit Police into The City's Police Department, there are no active members of the Housing Police and Transit Police; therefore, excess earnings on equity investments from the QPP, if any, do not produce any transfers to the HPOVSF, HPSOVSF, TPOVSF and TPSOVSF (collectively, the Housing and Transit Police VSFs).

However, with the passage of Chapter 255/00, the QPP is required to transfer assets to the Housing and Transit Police VSFs whenever the assets of these VSFs are not sufficient to pay benefits. Such funding is provided through The City's annual required contributions to the QPP, which serves as the initial source of funding of VSF benefits. With respect to the benefits payable from HPSOVSF for Fiscal Years 2019 and 2018, the QPP was required to transfer approximately \$2.6 million for each year. With respect to the benefits payable from TPSOVSF, for Fiscal Years 2019 and 2018, the QPP was required to transfer approximately \$2.9 million and \$3.0 million, respectively. With respect to the benefits payable from HPOVSF for Fiscal Years 2019 and 2018, the QPP was required to transfer approximately \$1.8 million and \$1.9 million, respectively. With respect to the benefits payable from TPOVSF for Fiscal Years 2019 and 2018, the QPP was required to transfer approximately \$3.6 million and \$3.8 million, respectively.

With respect to the COVSF, for Fiscal Year 2019, the excess earnings of the QPP, inclusive of prior years' cumulative deficiencies exceeded zero and a liability and transfer of \$75 million, is due from the QPP to COVSF as of and for the year end June 30, 2019. For Fiscal Year 2018, the excess earnings of the QPP, inclusive of prior years' cumulative deficiencies exceeded zero and a liability and transfer of \$205 million was due from QPP to COVSF as of June 30, 2018.

The amount shown below as the ABO is a measure of the present value of scheduled supplemental benefits estimated to be payable in the future as a result of employee service-to-date. The ABO is calculated as the actuarial present value of credited projected benefits, prorated on service and is intended to help users assess the funded status of the Fund on an ongoing-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due and make a comparison among VSFs.

Actuarial valuations of the VSFs are performed annually as of June 30.

A comparison of the ABO as calculated by the Actuary, with the net position restricted for pensions for the COVSF, HPOVSF, HPSOVSF, TPOVSF and TPSOVSF as of June 30, 2018 and June 30, 2017 follows (in millions):

NYCERS Accumulated Benefit Obligation

	COVSF		HPOVSF		HPSOVSF		TPOVSF		TPSOVSF		Total	
	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Accumulated benefit obligation												
Retirees currently receiving benefits	\$1,039.5	\$1,027.4	\$13.3	\$13.9	\$19.3	\$19.9	\$26.7	\$29.1	\$21.4	\$22.3	\$1,120.2	\$1,112.6
Active Members	291.7	315.0									291.7	315.0
Total accumulated benefit obligation	\$1,331.2	\$1,342.4	\$13.3	\$13.9	\$19.3	\$19.9	\$26.7	\$29.1	\$21.4	\$22.3	\$1,411.9	\$1,427.6
Net position held in trust for benefits	402.2	288.2									402.2	288.2
Unfunded accumulated benefit obligation	\$929.0	\$1,054.2	\$13.3	\$13.9	\$19.3	\$19.9	\$26.7	\$29.1	\$21.4	\$22.3	\$1,009.7	\$1,139.4

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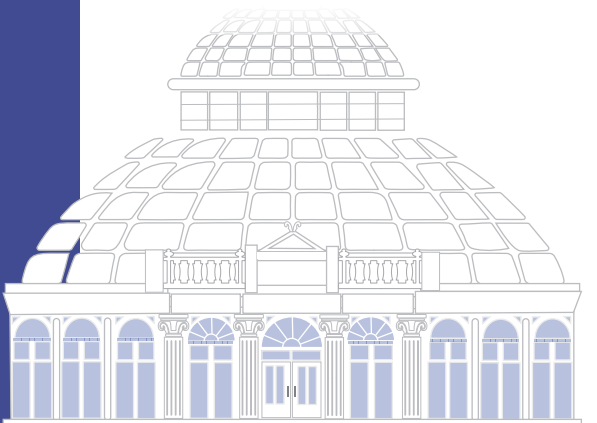
For purposes of the June 30, 2018 and June 30, 2017 actuarial valuations of the Fund, Chapter 125/00 has been taken into account in the determination of the unfunded ABO related to the Supplementation benefit increases that began Fiscal Year 2001 and the automatic COLA that began Fiscal Year 2002 (see Note 1).

Section 13-194 of the ACNY provides that the Board of Trustees of NYCERS shall adopt, upon the recommendation of the Actuary, actuarial assumptions as to interest rate, mortality of retirees and estimated number of active UCF members of NYCERS as of each June 30 who are expected to retire from service with at least 20 or 25 years of service as UCF members, depending on the Plan for use in making annual valuations of liabilities.

The following actuarial assumptions represent the recommendations of the Actuary and were used in the actuarial calculations to determine the preceding ABOs as of June 30, 2018 and June 30, 2017:

	June 30, 2018	June 30, 2017
Investment rate of return	7.0% per annum. ¹	7.0% per annum. ¹
Post-retirement mortality	Tables adopted by NYCERS during Fiscal Year 2019 based on recent experience of UCF members of NYCERS for COVSF and on recent experience of POLICE for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.	Tables adopted by NYCERS during Fiscal Year 2019 based on recent experience of UCF members of NYCERS for COVSF and on recent experience of POLICE for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.
Active service: withdrawal death, and disability	Tables adopted by NYCERS during Fiscal Year 2019 based on recent experience of UCF members of NYCERS for COVSF. NA for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.	Tables adopted by NYCERS during Fiscal Year 2019 based on recent experience of UCF members of NYCERS for COVSF. NA for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.
Service retirement	Tables adopted by NYCERS during Fiscal Year 2019 based on recent experience of UCF members of NYCERS for COVSF. Varies from earliest age member is eligible to retire (age at completion of 20 years (25 years) of service) until age 63. Not applicable for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.	Tables adopted by NYCERS during Fiscal Year 2019 based on recent experience of UCF members of NYCERS for COVSF. Varies from earliest age member is eligible to retire (age at completion of 20 years (25 years) of service) until age 63. Not applicable for HPOVSF, HPSOVSF, TPOVSF and TPSOVSF.
COLA adjustments for future NYCERS' COLA benefits ¹	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 Developed assuming a long-term Consumer Price Inflation assumption of 2.5% per year.



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5. QPP CONTRIBUTIONS

The financial objective of the QPP is to fund members' retirement benefits during their active service and to establish Employer contribution rates which, expressed as a percentage of annualized covered payroll, will remain approximately level from year to year. The Employer contributes amounts that, together with Member Contributions and investment income, 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 based on a normal rate of contribution that is assigned by the Plan at membership. The member normal rate, which is dependent upon age and actuarial tables in effect at the time of membership, is determined to provide approximately one-fourth of the service retirement allowance at the earliest age for service retirement. For age at membership equal to 20, the member normal rate ranges between 5.80% and 9.10%. For age at membership equal to 40, the member normal rate ranges between 4.30% and 4.80%.

Members who joined on or after July 27, 1976 and before April 1, 2012, are mandated to contribute 3.0% of salary during all years of coverage except for Department of Correction members who contribute 3.0% for not more than 30 years. Effective October 1, 2000, certain members are not required to make contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. In addition, certain members who are Tier 2 or Tier 3 correction officers and certain other Tier 2 and Tier 4 members contribute additional amounts ranging from 1.85% to 7.46% for improved early retirement benefits.

Members who join on and after April 1, 2012 (Tier 6) are mandated to contribute Basic Member Contributions (BMC) until they separate from City service or until they retire. The BMC rate is dependent on annual wages earned during a plan year and ranges from 3.0% for salaries up to \$45,000 and as much as 6.0% for salaries greater than \$100,000.

In addition to the BMC, Tier 6 Special Plan members must contribute Additional Member Contributions (AMC). The AMC rate is plan-specific. Tier 6 Special Plan members must contribute AMC until they attain 30 years of service or retire, whichever comes first, except for TBTA 20/50 Plan members who must contribute AMC for 20 years.

Uniformed members of the Department of Correction, uniformed members of the Department of Sanitation and District Attorney (DA) Investigator members employed in a District Attorney office, who became employed in one of these titles on or after April 1, 2012, participate in a 22-year Plan. These members are required to contribute 3% of gross wages until the later of 25 years of service or until they retire, except DA Investigator members who must contribute 3% of gross wages until they retire.

Employer Contributions — Statutorily-required contributions (Statutory Contributions) to the QPP, determined by the Funds' Chief Actuary of the Office of the Actuary (the "Actuary") in accordance with State statutes and City laws, are generally funded by the Employer within the appropriate fiscal year. The Statutory Contribution for the year ended June 30, 2019, based on an actuarial valuation as of June 30, 2017 was \$3,694 million, and the Statutory Contribution for the year ended June 30, 2018, based on an actuarial valuation as of June 30, 2016 was \$3,377 million. The Statutory Contributions for Fiscal Years 2019 and 2018 were equal to the Actuarial Contributions. Refer to the Schedule of Employer Contributions in the accompanying required supplementary information for more information on the actuarial methods and assumptions applied by the Actuary to determine Statutory Contributions.

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6. NET PENSION LIABILITY

The components of the net pension liability of the Employer at June 30, 2019 and 2018, for the Funds, were as follows (in thousands):

	(in thousands)						
	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
June 30, 2019							
Total pension liability	\$ 86,034,569	\$ 1,400,099	\$ 13,554	\$ 19,505	\$ 27,077	\$ 21,671	\$ 87,516,475
Fiduciary net position ¹	68,528,705	465,027	215	178	253	190	68,994,568
Employers' net pension liability	<u>\$ 17,505,864</u>	<u>\$ 935,072</u>	<u>\$ 13,339</u>	<u>\$ 19,327</u>	<u>\$ 26,824</u>	<u>\$ 21,481</u>	<u>\$ 18,521,907</u>
Fiduciary net position as a percentage of the total pension liability	79.65%	33.21%	1.59%	0.91%	0.93%	0.88%	78.84%

	(in thousands)						
	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
June 30, 2018							
Total pension liability	\$ 81,812,947	\$ 1,400,402	\$ 14,457	\$ 20,079	\$ 29,598	\$ 22,295	\$ 83,299,778
Fiduciary net position ¹	65,211,747	449,771	134	121	171	139	65,662,083
Employers' net pension liability	<u>\$ 16,601,200</u>	<u>\$ 950,631</u>	<u>\$ 14,323</u>	<u>\$ 19,958</u>	<u>\$ 29,427</u>	<u>\$ 22,156</u>	<u>\$ 17,637,695</u>
Fiduciary net position as a percentage of the total pension liability	79.71%	32.12%	0.93%	0.60%	0.58%	0.62%	78.83%

¹ Such amounts represent the preliminary Funds' fiduciary net position and may differ from the final Funds' fiduciary net position.

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Actuarial Methods and Assumptions

The total pension liability as of June 30, 2019 and 2018, were determined by actuarial valuations as of June 30, 2018 and June 30, 2016, 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 1.5% per annum for Auto COLA. 2.5% per annum for Escalation.

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

Mortality tables for Service and Disability pensioners and beneficiaries were developed from an experience study of the QPP's pensioners.

The Fiscal Year 2019 results reflect changes in the actuarial assumptions and methods since the prior year. The changes are primarily the result of an experience study performed by Bolton, Inc., which compared actual experience of the systems for the four and ten-year periods ending June 30, 2017 to that expected based on the prior set of actuarial assumptions and methods. These new actuarial assumptions and methods were adopted by the NYCERS Board of Trustees during Fiscal Year 2019 (the "2019 A&M").

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

The Entry Age Normal ("EAN") cost method of funding is utilized by the Plan'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.

The Fiscal Year 2019 and Fiscal Year 2018 Employer Contributions do not reflect any potential impact related to the bankruptcy filing on December 3, 2009 by the New York City Off-Track Betting Corporation (OTB) and to its shutdown on December 7, 2010. The results were developed herein assuming OTB is an ongoing concern. Beginning with Fiscal Year 2019, there was a change in the allocation of pension contributions attributable to OTB. OTB's prior unpaid contributions with interest have been amortized over 15 years (14 payments) beginning in Fiscal Year 2019.

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The Actuary has split this amount evenly between the State of New York, based upon a determination by the NYCERS Board of Trustees that the State is the successor to OTB under Administrative Code Section 13-130, and the City, based upon the City's offer to advance half this amount, subject to appropriations, pending payment by the State.

The PV of projected benefits includes the obligations of the Plan to the HPOVSF, the HPSOVSF, the TPOVSF, the TPOVSF and the COVSF (referred to collectively as the NYCERS VSFs), which are recognized through the Liability Valuation Method.

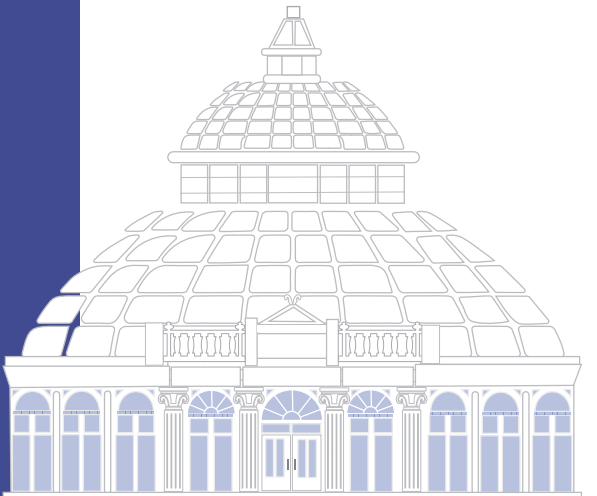
Under this method, the PV of Future SKIM from the Plan to the NYCERS VSFs is included directly as an actuarial liability of the Plan. SKIM is all or a portion of the excess earnings on equity securities of the Plan which are transferrable to the NYCERS VSFs. The PV of Future SKIM is computed as the excess, if any, of the PV of benefits of each individual NYCERS VSF offset by the AVA of that individual NYCERS VSF, respectively. Under the EAN cost method, a portion of the PV of Future SKIM is reflected in the PV of Future Normal Costs and a portion is reflected in the UAL.

In accordance with the Actuarial Asset Valuation Method (AAVM), actual Unexpected Investment Returns (UIR) are phased into the AVA at rates of 15%, 15%, 15%, 15%, 20%, and 20% per year (i.e., cumulative rates of, 15%, 30%, 45%, 60%, 80%, and 100% over a period of six years).

Expected Rate of Return on Investments

The long-term expected rate of return on pension plan 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 investment expenses and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

<u>Asset Class</u>	<u>Asset Allocation</u>	<u>Expected Real Rate of Return</u>
U.S. Public Markets Equities	29%	7.0%
International Public Markets Equities	13%	7.1%
Emerging Public Markets Equities	7%	9.4%
Private Market Equities	7%	10.5%
Fixed Income (Core, TIPS, High Yield, Opportunistic, Convertibles)	33%	2.2%
Alternatives (Real Assets, Hedge Funds)	<u>11%</u>	5.7%
Total	<u>100%</u>	



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Discount Rate

The discount rate used to measure the total pension liability as of both June 30, 2019 and 2018 was 7.0% per annum. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that City's contributions will be made in accordance with the Statutory contributions determined by the Actuary. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan 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 Employer for the Plans, calculated using the discount rate of 7.0%; as well as what the Employer's net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower (6.0%) or 1-percentage point higher (8.0%) than the current rate.

(In thousands)	Discount		
Employer net pension liability	1% Decrease (6%)	Rate (7%)	1% Increase (8%)
June 30, 2019			
QPP	\$ 27,394,806	\$ 17,505,864	\$ 9,155,596
COVSF	1,089,836	935,072	805,394
HPOVSF	14,174	13,339	12,593
HPSOVSF	20,581	19,327	18,212
TPOVSF	28,531	26,824	25,302
TPSOVSF	22,844	21,481	20,266
Total	<u>\$ 28,570,772</u>	<u>\$ 18,521,907</u>	<u>\$ 10,037,363</u>

7. MEMBER LOANS

In general, members are permitted to borrow up to 75% of their own contributions, including accumulated interest. The balance of member loans receivable at June 30, 2019 and 2018 was \$1.2 billion and \$1.1 billion, respectively.

8. RELATED PARTIES

The Comptroller of the City of New York has been appointed by law as custodian for the assets of NYCERS. Securities are held by certain banks under custodial agreements with the Comptroller. The Comptroller also provides cash receipt and cash disbursement services to NYCERS. Actuarial services are provided to NYCERS by the Office of the Actuary employed by the Boards of Trustees of The City's main pension systems. The City's Corporation Counsel provides legal services to NYCERS. Other administrative services are also provided by the City. The aforementioned services are provided by employees or officers of The City who may also be participants in NYCERS.

9. ADMINISTRATIVE AND INVESTMENT EXPENSES

Chapter 593 of the Laws of 1996, effective July 1, 1997, authorized the Board of Trustees to draw upon QPP assets to pay the administrative expenses incurred by the QPP. Prior to that year, The City had directly paid all QPP administrative expenses. Under Chapter 593/96, both the administrative and investment expenses were billed to the participating employers in the following year. Under Chapter 152 of the Laws of 2006, those expenses are billed in the second following fiscal year.

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In Fiscal Year 2019, total non-investment expenses attributable to the Plan were approximately \$89.1 million, of which \$82.1 million was paid from the assets of the QPP and \$7 million was incurred on behalf of the QPP by other City agencies. In Fiscal Year 2018, total non-investment expenses attributable to the Plan were approximately \$67.5 million, of which \$59.7 million was paid from the assets of the QPP and \$7.8 million was incurred on behalf of the QPP by other City agencies.

Investment expenses, exclusive of fees related to securities lending transactions, for Fiscal Year 2019 were \$243 million, of which \$240 million was charged to the investment earnings of the Plan; and \$3 million was incurred by the Comptroller's Office. Investment expenses, exclusive of fees related to securities lending transactions, for Fiscal Year 2018 were \$244 million, of which \$242 million was charged to the investment earnings of the Plan; and \$2 million was incurred by the Comptroller's Office.

During Fiscal Year 2000, the Plan entered into a new lease agreement to rent office space for its headquarters. The agreement expires in 2020, with options to renew the agreement through 2030. The future minimum rental payments required under this operating lease are shown in the table below.

Rent expenses, under the lease agreement, for each of the fiscal years ended June 30, 2019 and 2018, were approximately \$4.5 million each. The current lease agreement is set to expire in Fiscal Year 2020. We are currently in process of finalizing a 15-year lease renewal, which is expected to be fully executed in October 2019.

During Fiscal Year 2006, the Plan entered into a new lease agreement to rent office space for a business recovery site in case its headquarters was not operational. The agreement expired in 2016, and the Plan exercised the options to renew the agreement through April 2021. The future minimum rental payments required under the renewed lease are shown in the table below.

Rent expenses, under the lease agreement, for the Fiscal Years ended June 30, 2019 and 2018, were approximately \$1.3 million and \$1.2 million, respectively.

Fiscal Years Ending	Headquarters		Fiscal Years Ending	Business Recovery Site	
	Minimum Rental Payments			Minimum Rental Payments	
2020	\$	4,535,366	2020	\$	1,290,507
			2021	\$	1,319,538

10. CONTINGENT LIABILITIES AND OTHER MATTERS

Contingent Liabilities — The Fund has a number of claims pending against it and has been named as a defendant in a number of lawsuits and also has certain other contingent liabilities. Management of the Plan, on the advice of legal counsel, believes that such proceedings and contingencies will not have a material effect on the plan's net position or changes in the plan's net position. Under the State statutes and City laws that govern the functioning of the Fund, increases in the obligations of the Fund to members and beneficiaries ordinarily result in increases in the obligations of the employers to the Fund.

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 for a discussion of the most recent actuarial studies for NYCERS.

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

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The most recently completed study was published by Bolton, Inc. dated June 2019. Bolton analyzed experience for the four and ten year periods ending June 30, 2017 and made recommendations with respect to the actuarial assumptions and methods based on their analysis. Based, in part, on these, recommendations, the Actuary proposed new assumptions and methods for use in determining Employer Contributions for Fiscal Years beginning on and after July 1, 2018. These assumptions and methods have been adopted by the Board of Trustees during Fiscal Year 2019. Previously, Gabriel, Roeder, Smith & Company (GRS) published their study in October 2015.

OTB Bankruptcy — During December 2009, the New York City Off-Track Betting Corporation (OTB) filed a petition with the United States Bankruptcy Court of the Southern District of New York under Chapter 9 of the Bankruptcy Code.

The Fiscal Year 2019 and Fiscal Year 2018 employer contributions do not take into account OTB's filing. The Fiscal Year 2019 and Fiscal Year 2018 employer contributions, and the allocation to OTB, assumed that OTB was a going-concern. Any amounts due but unpaid by OTB for Fiscal Year 2019 and Fiscal Year 2018 are treated as a receivable that is expected to be paid in full.

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

Chapter 18 of the Laws of 2012 placed certain limitations on Tier 3 and Tier 4 benefits available to participants hired on and after April 1, 2012 in most New York State PERS, including NYCERS. Some of the provisions in this law are commonly referred to as Tier 6.

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

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

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

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

Chapter 41 of the Laws of 2016 removes the specified periods of time, medal requirements, and theaters of operation in which military service would had to have been rendered for a service purchase pursuant to New York State Retirement and Social Security Law ("RSSL") § 1000. Accordingly, for a member to be eligible to purchase service credit pursuant to RSSL § 1000 for pre-membership military service, the member need only have been honorably discharged from the military; all other requirements of RSSL § 1000 remain the same. This law is not retroactive and does not permit retired members to purchase service credit.

Petition for Retirement Benefit Enhancement, dated August 15, 2016 and signed by the Mayor on August 30, 2016, provides enhanced disability benefits for Accidental Disability Retirement and Ordinary Disability Retirement benefits for Sanitation Workers. Sanitation Workers who become 22-Year Plan members before

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January 1, 2017 have the option to elect participation in the Enhanced Disability Benefits. Sanitation Workers who become 22-Year Plan members on and after January 1, 2017 are mandated into the Enhanced Disability Benefits. Members electing or mandated into this benefit will pay an extra 1.3% of wages.

Petition for Retirement Benefit Enhancement, dated November 2, 2016 and signed by the Mayor on November 29, 2016, provides enhanced disability benefits for Accidental Disability Retirement and Ordinary Disability Retirement benefits for Correction Officers. Correction Officers who become 22-Year Plan members before January 1, 2017 have the option to elect participation in the Enhanced Disability Benefits. Correction Officers who become 22-Year Plan members on and after January 1, 2017 are mandated into the Enhanced Disability Benefits. Members electing or mandated into this benefit will pay an extra 0.8% of wages.

Petition for Retirement Benefit Enhancement, dated November 21, 2016 and signed by the Mayor on November 29, 2016, provides enhanced disability benefits for Accidental Disability Retirement and Ordinary Disability Retirement benefits for Wardens, including Assistant Deputy Wardens, Deputy Wardens and Deputy Wardens in Command (collectively, ADW/DWs). ADW/DWs who become 22-Year Plan members before January 1, 2017 have the option to elect participation in the Enhanced Disability Benefits. ADW/DWs who become 22-Year Plan members on and after January 1, 2017 are mandated into the Enhanced Disability Benefits. Members electing or mandated into this benefit will pay an extra 0.8% of wages.

Petition for Retirement Benefit Enhancement, dated November 25, 2016 and signed by the Mayor on November 29, 2016, provides enhanced disability benefits for Accidental Disability Retirement and Ordinary Disability Retirement benefits for Correction Captains. Correction Captains who become 22-Year Plan members before January 1, 2017 have the option to elect participation in the Enhanced Disability Benefits. Correction Captains who become 22-Year Plan members on and after January 1, 2017 are mandated into the Enhanced Disability Benefits. Members electing or mandated into this benefit will pay an extra 0.8% of wages.

Chapter 61 of the Laws of 2017 permits NYCERS uniformed correction/sanitation revised plan members and investigator revised plan members ("Eligible Members"), who would be ineligible for disability retirement benefits solely on account of being eligible for a normal service retirement benefit, to be eligible for disability benefits. It also relaxed the safeguards provisions regarding restrictions on post-retirement employment for Eligible Members who are awarded Accidental Disability Retirement ("ADR") and modified the process for reducing or eliminating an ADR benefit based on post-retirement earnings, making said process more difficult.

The following outlines the changes for the New York City uniformed correction/sanitation revised plan members (i.e., a 22-Year Plan member).

1. Member Contributions

- Tier 3 Enhanced Members contribute 3% of pensionable earnings PLUS an additional contribution rate to help fund the enhanced disability benefit. Currently, the additional contribution rate is 1.3% for Sanitation Workers and 0.8% for Correction Officers, ADW/AWs and Correction Captains that can be raised to 3% based on a financial analysis by the Office of the Actuary every three years. At no time can the total contribution rate exceed 6%.
- Taxability
 - Base Member Contributions
 - Pre-tax.
 - Increased Member Contributions for Enhanced Disability Provisions
 - Pre-tax for Sanitation Workers appointed September 1, 2016 and later and for Correction Officers, ADW/DWs and Correction Captains appointed January 1, 2017 and later (i.e., the dates the respective new members are mandated into the Plan).
 - Post-tax for those who were eligible to elect the Enhanced Disability Plan provisions and elected such provisions.

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
NOTES TO COMBINING FINANCIAL STATEMENTS
JUNE 30, 2019 AND 2018**

2. Accidental Disability Retirement (ADR)

- The ADR benefit for Tier 3 Enhanced Members is 75% of their Five-Year Final Average Salary (FAS5).
- Tier 3 Enhanced Members have statutory presumptions (i.e. Heart).

3. Ordinary Disability Retirement (ODR)

- The ODR benefit for Tier 3 Enhanced Members is the greater of:
 - 33 1/3% of FAS5; or
 - FAS5 multiplied by years of credited service (not greater than 22 years).

4. Escalation

- Tier 3 Enhanced Members who retire for ODR or ADR are not subject to escalation. Tier 3 Enhanced Members are subject to COLA, the same as Tier 1 and 2 members.

5. Social Security Offset

- Tier 3 Enhanced Members who retire for ODR or ADR are not subject to the Social Security offset.
- Tier 3 Enhanced Members who retire for a Service or Vested Retirement are subject to the Social Security offset.

6. Final Average Salary

- Tier 3 Enhanced Members are subject to a FAS5 calculation for ODR, ADR, Service and Vested Retirement.

The following changes apply to Eligible Members:

1. Eligibility for ADR

- Members no longer cease to be eligible for ADR at 22 years, and can apply at any time as long as they are active.

2. Safeguards

- RSSL § 507(d) no longer applies to ADR retirees. The safeguards in effect prior to April 1, 2012 apply to Uniformed Correction/Sanitation Revised Plan members and those in effect prior to July 1, 2009 apply to retired Investigator Revised Plan Members. The safeguards include earnings limitations and re-employment.
- Safeguards remain unchanged for ODR retirees. Thus, they must continue to be in receipt of Social Security Disability benefits to maintain their receipt of pension benefits.

SCHEDULE 1

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

June 30, 2019

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
Total pension liability:							
Service cost	\$ 2,009,186	\$ 21,807	\$ -	\$ -	\$ -	\$ -	\$ 2,030,993
Interest	5,737,834	96,304	956	1,321	1,956	1,466	5,839,837
Differences between expected and actual experience	1,880,980	(27,412)	(388)	344	(1,441)	392	1,852,475
Changes of assumptions	(933,377)	3,457	170	227	328	266	(928,929)
Changes of benefit terms							-
Benefit payments and withdrawals	(5,153,002)	(94,459)	(1,641)	(2,465)	(3,364)	(2,748)	(5,257,679)
Net change in total pension liability	3,541,621	(303)	(903)	(573)	(2,521)	(624)	3,536,697
Total pension liability – beginning	82,492,948	1,400,402	14,457	20,078	29,598	22,295	83,979,778
Total pension liability – ending (a)	86,034,569	1,400,099	13,554	19,505	27,077	21,671	87,516,475
Plan fiduciary net position:							
Employer contributions	3,692,711	-	-	-	-	-	3,692,711
Member contributions	547,807	-	-	-	-	-	547,807
Net investment income	4,431,926	6,304	-	-	-	-	4,438,230
Benefit payments and withdrawals	(5,153,002)	(94,459)	(1,641)	(2,465)	(3,364)	(2,748)	(5,257,679)
Payments to other retirement systems	(9,769)	-	-	-	-	-	(9,769)
Transfers to VSFs	(10,489)	-	1,722	2,522	3,446	2,799	-
Administrative expenses	(82,073)	-	-	-	-	-	(82,073)
Other	3,258	-	-	-	-	-	3,258
Net change in plan fiduciary net position	3,420,369	(88,155)	81	57	82	51	3,332,485
Accrued transfers to/from VSFs	(103,411)	103,411	-	-	-	-	-
Plan fiduciary net position – beginning	65,211,747	449,771	134	121	171	139	65,662,083
Plan fiduciary net position – ending (b) *	68,528,705	465,027	215	178	253	190	68,994,568
Employers' net pension liability – ending (a)-(b)	\$ 17,505,864	\$ 935,072	\$ 13,339	\$ 19,327	\$ 26,824	\$ 21,481	\$ 18,521,907
Plan fiduciary net position as a percentage of the total pension liability	79.65%	33.21%	1.59%	0.91%	0.93%	0.88%	78.84%
Covered payroll	\$ 14,459,118	N/A	N/A	N/A	N/A	N/A	\$ 14,459,118
Employers' net pension liability as a percentage of covered payroll	121.07%	N/A	N/A	N/A	N/A	N/A	128.10%

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

See Independent Auditors' Report.

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

June 30, 2018

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
Total pension liability:							
Service cost	\$ 1,923,683	\$ 24,029	\$ -	\$ -	\$ -	\$ -	\$ 1,947,712
Interest	5,514,669	94,615	1,004	1,397	2,052	1,552	5,615,289
Differences between expected and actual experience	(1,700,346)	(61,728)	(472)	131	83	(216)	(1,762,548)
Changes of assumptions	17,939	(206)	-	-	-	-	17,733
Changes of benefit terms	42,501	1,498	-	-	-	-	43,999
Benefit payments and withdrawals	(4,883,110)	(90,190)	(1,760)	(2,510)	(3,486)	(2,818)	(4,983,874)
Net change in total pension liability	915,336	(31,982)	(1,228)	(982)	(1,351)	(1,482)	878,311
Total pension liability – beginning	80,897,611	1,432,384	15,685	21,061	30,950	23,777	82,421,468
Total pension liability – ending (a)	81,812,947	1,400,402	14,457	20,079	29,599	22,295	83,299,779
Plan fiduciary net position:							
Employer contributions	3,377,024	-	-	-	-	-	3,377,024
Member contributions	523,535	-	-	-	-	-	523,535
Net investment income	5,153,254	2,265	-	-	-	-	5,155,519
Benefit payments and withdrawals	(4,883,110)	(90,190)	(1,760)	(2,510)	(3,486)	(2,818)	(4,983,874)
Payments to other retirement systems	(9,055)	-	-	-	-	-	(9,055)
Transfers to VSFs	(10,897)	-	1,825	2,573	3,612	2,887	-
Administrative expenses	(59,689)	-	-	-	-	-	(59,689)
Other	3,410	12	-	-	-	-	3,422
Net change in plan fiduciary net position	4,094,472	(87,913)	65	63	126	69	4,006,882
Accrued transfers to/from VSFs	(205,000)	205,000	-	-	-	-	-
Plan fiduciary net position – beginning	61,322,275	332,684	69	58	45	70	61,655,201
Plan fiduciary net position – ending (b) *	65,211,747	449,771	134	121	171	139	65,662,083
Employers' net pension liability – ending (a)-(b)	\$ 16,601,200	\$ 950,631	\$ 14,323	\$ 19,958	\$ 29,428	\$ 22,156	\$ 17,637,696
Plan fiduciary net position as a percentage of the total pension liability	79.71%	32.12%	0.93%	0.60%	0.58%	0.62%	78.83%
Covered payroll	\$ 12,834,130	N/A	N/A	N/A	N/A	N/A	\$ 12,834,130
Employers' net pension liability as a percentage of covered payroll	129.35%	N/A	N/A	N/A	N/A	N/A	137.43%

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

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

See Independent Auditors' Report.

SCHEDULE 1

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

June 30, 2017

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
Total pension liability:							
Service cost	\$ 1,897,067	\$ 23,391	\$ -	\$ -	\$ -	\$ -	\$ 1,920,458
Interest	5,446,543	93,708	1,088	1,464	2,151	1,654	5,546,608
Changes of benefit terms							
Differences between expected and actual experience	(221,856)	(16,615)	(51)	(216)	198	286	(238,254)
Changes of assumptions							
Benefit payments and withdrawals	(4,635,251)	(30)	(1,850)	(2,581)	(3,814)	(2,953)	(4,646,479)
Net change in total pension liability	2,486,503	100,454	(813)	(1,333)	(1,465)	(1,013)	2,582,333
Total pension liability – beginning	78,411,108	1,331,930	16,498	22,394	32,415	24,790	79,839,135
Total pension liability – ending (a)	80,897,611	1,432,384	15,685	21,061	30,950	23,777	82,421,468
Plan fiduciary net position:							
Employer contributions	3,328,193	-	-	-	-	-	3,328,193
Member contributions	513,514	-	-	-	-	-	513,514
Net investment income	6,982,304	(152)	-	-	-	-	6,982,152
Benefit payments and withdrawals	(4,635,251)	(30)	(1,850)	(2,581)	(3,814)	(2,953)	(4,646,479)
Payments to other retirement systems	(8,087)	-	-	-	-	-	(8,087)
Transfers to VSFs	(11,297)	-	1,889	2,595	3,830	2,983	-
Administrative expenses	(59,671)	-	-	-	-	-	(59,671)
Other	3,266	-	-	-	-	-	3,266
Net change in plan fiduciary net position	6,112,971	(182)	39	14	16	30	6,112,888
Accrued transfers to/from VSFs	(285,924)	285,924	-	-	-	-	-
Plan fiduciary net position – beginning	55,495,228	46,942	30	44	29	40	55,542,313
Plan fiduciary net position – ending (b) *	61,322,275	332,684	69	58	45	70	61,655,201
Employers' net pension liability – ending (a)-(b)	\$ 19,575,336	\$ 1,099,700	\$ 15,616	\$ 21,003	\$ 30,905	\$ 23,707	\$ 20,766,267
Plan fiduciary net position as a percentage of the total pension liability	75.80%	23.23%	0.44%	0.28%	0.15%	0.29%	74.80%
Covered payroll	\$ 12,555,242	N/A	N/A	N/A	N/A	N/A	\$ 12,555,242
Employers' net pension liability as a percentage of covered payroll	155.91%	N/A	N/A	N/A	N/A	N/A	165.40%

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

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

See Independent Auditors' Report.

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

June 30, 2016

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
Total pension liability:							
Service cost	\$ 1,875,969	\$ 24,025	\$ -	\$ -	\$ -	\$ -	\$ 1,899,994
Interest	5,276,141	89,794	1,145	1,553	2,251	1,720	5,372,604
Differences between expected and actual experience	(793,016)	(25,259)	(195)	(57)	273	283	(817,971)
Changes of assumptions	2,539,112	21,269	479	625	915	692	2,563,092
Benefit payments and withdrawals	(4,402,729)	(79,917)	(1,968)	(2,643)	(3,932)	(2,957)	(4,494,146)
Net change in total pension liability	4,495,477	29,912	(539)	(522)	(493)	(262)	4,523,573
Total pension liability – beginning	73,915,631	1,302,018	17,037	22,916	32,908	25,052	75,315,562
Total pension liability – ending (a)	78,411,108	1,331,930	16,498	22,394	32,415	24,790	79,839,135
Plan fiduciary net position:							
Employer contributions	3,365,454	-	-	-	-	-	3,365,454
Member contributions	485,508	-	-	-	-	-	485,508
Net investment income	1,171,720	184	-	-	-	-	1,171,904
Benefit payments and withdrawals	(4,402,729)	(79,917)	(1,968)	(2,643)	(3,932)	(2,957)	(4,494,146)
Payments to other retirement systems	(7,440)	-	-	-	-	-	(7,440)
Transfers to VSFs	(11,525)	-	1,968	2,648	3,945	2,964	-
Administrative expenses	(56,683)	-	-	-	-	-	(56,683)
Other	2,928	-	-	-	-	-	2,928
Net change in plan fiduciary net position	547,233	(79,733)	-	5	13	7	467,525
Accrued transfers to/from VSFs	52,724	(52,724)	-	-	-	-	-
Plan fiduciary net position – beginning	54,895,271	179,399	30	39	16	33	55,074,788
Plan fiduciary net position – ending (b) *	55,495,228	46,942	30	44	29	40	55,542,313
Employers' net pension liability – ending (a)-(b)	\$ 22,915,880	\$ 1,284,988	\$ 16,468	\$ 22,350	\$ 32,386	\$ 24,750	\$ 24,296,822
Plan fiduciary net position as a percentage of the total pension liability	70.77%	3.52%	0.18%	0.20%	0.09%	0.16%	69.57%
Covered payroll	\$ 12,336,979	N/A	N/A	N/A	N/A	N/A	\$ 12,336,979
Employers' net pension liability as a percentage of covered payroll	185.75%	N/A	N/A	N/A	N/A	N/A	196.94%

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

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

See Independent Auditors' Report.

SCHEDULE 1

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

June 30, 2015	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
Total pension liability:							
Service cost	\$ 1,808,955	\$ 23,532	\$ -	\$ -	\$ -	\$ -	\$ 1,832,487
Interest	4,976,487	87,727	1,184	1,588	2,288	1,741	5,071,015
Differences between expected and actual experience	(372,645)	84,301	(312)	131	(203)	129	(288,599)
Changes of assumptions	-	-	-	-	-	-	-
Benefit payments and withdrawals	(4,235,644)	(76,606)	(2,083)	(2,682)	(4,047)	(3,073)	(4,324,135)
Net change in total pension liability	2,177,153	118,954	(1,211)	(963)	(1,962)	(1,203)	2,290,768
Total pension liability – beginning	71,738,478	1,183,064	18,248	23,879	34,870	26,255	73,024,794
Total pension liability – ending (a)	73,915,631	1,302,018	17,037	22,916	32,908	25,052	75,315,562
Plan fiduciary net position:							
Employer contributions	3,160,258	-	-	-	-	-	3,160,258
Member contributions	467,129	-	-	-	-	-	467,129
Net investment income	1,175,099	10	-	-	-	-	1,175,109
Benefit payments and withdrawals	(4,235,644)	(76,606)	(2,083)	(2,682)	(4,047)	(3,073)	(4,324,135)
Payments to other retirement systems	(7,142)	-	-	-	-	-	(7,142)
Transfers to VSFs	(11,918)	12	2,100	2,686	4,040	3,080	-
Administrative expenses	(54,635)	-	-	-	-	-	(54,635)
Other	4,140	-	-	-	-	-	4,140
Net change in plan fiduciary net position	497,287	(76,584)	17	4	(7)	7	420,724
Accrued transfers to VSFs	(30,000)	30,000	-	-	-	-	-
Plan fiduciary net position – beginning *	54,427,984	225,983	13	35	23	26	54,654,064
Plan fiduciary net position – ending (b) **	54,895,271	179,399	30	39	16	33	55,074,788
Employers' net pension liability – ending (a)-(b)	\$ 19,020,360	\$ 1,122,619	\$ 17,007	\$ 22,877	\$ 32,892	\$ 25,019	\$ 20,240,774
Plan fiduciary net position as a percentage of the total pension liability	74.27%	13.78%	0.18%	0.17%	0.05%	0.13%	73.13%
Covered payroll	\$ 12,314,958	N/A	N/A	N/A	N/A	N/A	\$ 12,314,958
Employers' net pension liability as a percentage of covered payroll	154.45%	N/A	N/A	N/A	N/A	N/A	164.36%

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

* Includes an adjustment of \$(351,463,000).

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

See Independent Auditors' Report.

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

June 30, 2014

	QPP	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
Total pension liability:							
Service cost	\$ 1,783,734	\$ 23,329	\$ -	\$ -	\$ -	\$ -	\$ 1,807,063
Interest	4,825,904	77,397	1,267	1,655	2,416	1,820	4,910,459
Changes of benefit terms	-	-	-	-	-	-	-
Differences between expected and actual experience	-	-	-	-	-	-	-
Changes of assumptions	-	-	-	-	-	-	-
Benefit payments and withdrawals	(3,990,569)	-	(2,187)	(2,782)	(4,054)	(3,089)	(4,002,681)
Net change in total pension liability	2,619,069	100,726	(920)	(1,127)	(1,638)	(1,269)	2,714,841
Total pension liability – beginning	69,119,408	1,082,338	19,169	25,006	36,508	27,524	70,309,953
Total pension liability – ending (a)	71,738,477	1,183,064	18,249	23,879	34,870	26,255	73,024,794
Plan fiduciary net position:							
Employer contributions	3,114,068	-	-	-	-	-	3,114,068
Member contributions	447,689	-	-	-	-	-	447,689
Net investment income	8,262,467	20	-	-	-	-	8,262,487
Benefit payments and withdrawals	(3,990,569)	-	(2,187)	(2,782)	(4,054)	(3,089)	(4,002,681)
Payments to other retirement systems	(7,228)	-	-	-	-	-	(7,228)
Transfers to VSFs	(12,125)	-	2,168	2,797	4,070	3,090	-
Administrative expenses	(50,431)	-	-	-	-	-	(50,431)
Other	4,881	-	-	-	-	-	4,881
Net change in plan fiduciary net position	7,768,752	20	(19)	15	16	1	7,768,785
Accrued transfers to VSFs	(190,000)	190,000	-	-	-	-	-
Plan fiduciary net position – beginning	47,200,695	35,963	32	20	7	25	47,236,742
Plan fiduciary net position – ending (b) *	54,779,447	225,983	13	35	23	26	55,005,527
Employers' net pension liability – ending (a)-(b)	\$ 16,959,030	\$ 957,081	\$ 18,236	\$ 23,844	\$ 34,847	\$ 26,229	\$ 18,019,267
Plan fiduciary net position as a percentage of the total pension liability	76.36%	19.10%	0.07%	0.15%	0.07%	0.10%	75.32%
Covered payroll	\$ 12,183,011	N/A	N/A	N/A	N/A	N/A	\$ 12,183,011
Employers' net pension liability as a percentage of covered payroll	139.20%	N/A	N/A	N/A	N/A	N/A	147.90%

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

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

See Independent Auditors' Report.

SCHEDULE 2

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULES OF CITY CONTRIBUTIONS**

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially determined contributions	\$ 3,694,365	\$ 3,377,024	\$ 3,328,193	\$ 3,365,454	\$ 3,160,258	\$ 3,114,068	\$ 3,046,845	\$ 3,017,004	\$ 2,387,216	\$ 2,197,717
Contributions in relation to the actuarially determined contributions	<u>3,692,711</u>	<u>3,377,024</u>	<u>3,328,193</u>	<u>3,365,454</u>	<u>3,160,258</u>	<u>3,114,068</u>	<u>3,046,845</u>	<u>3,017,004</u>	<u>2,387,216</u>	<u>2,197,717</u>
Contribution deficiency (excess)	<u>\$ (1,654)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered payroll	<u>14,459,118</u>	<u>12,834,130</u>	<u>12,555,242</u>	<u>12,336,979</u>	<u>12,314,958</u>	<u>12,183,011</u>	<u>11,955,093</u>	<u>11,813,062</u>	<u>11,466,215</u>	<u>10,977,797</u>
Contribution as a percentage of covered payroll	<u>25.54 %</u>	<u>26.31 %</u>	<u>26.51 %</u>	<u>27.28 %</u>	<u>25.66 %</u>	<u>25.56 %</u>	<u>25.49 %</u>	<u>25.54 %</u>	<u>20.82 %</u>	<u>20.02 %</u>

**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULES OF CITY CONTRIBUTIONS**

SCHEDULE 2

Notes 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 2018 contributions were determined using an actuarial valuation as of June 30, 2016). 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	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009- June 30, 2008
Actuarial cost method	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Frozen Initial Liability ¹
Amortization method for Unfunded Actuarial Accrued Liabilities	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	NA ² NA ²
Initial Unfunded Post-2010 Unfunded	15 years (closed)	16 years (closed)	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)	21 years (closed)	22 years (closed)	NA ² NA ²
Remaining amortization period:									
2010 ERI	NA	NA	1 years (closed)	2 years (closed)	3 years (closed)	4 years (closed)	5 years (closed)		
2011 Actuarial Gains/Losses	9 years (closed)	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	
2012 Actuarial Gains/Losses	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	
2013 Actuarial Gains/Losses	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA	
2014 Actuarial Gains/Losses	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA	NA	
2015 Actuarial Gains/Losses	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA	NA	NA	
2016 Actuarial Gains/Losses	14 years (closed)	15 years (closed)	NA	NA	NA	NA	NA	NA	
2017 Actuarial Gains/Losses	15 years (closed)	NA	NA	NA	NA	NA	NA	NA	
2017 Method Change	20 years (closed)	NA	NA	NA	NA	NA	NA	NA	
2017 Assumption Change	20 years (closed)	NA	NA	NA	NA	NA	NA	NA	
2017 Census Data Update	5 years (closed)	NA	NA	NA	NA	NA	NA	NA	
2017 OTB Payments	15 years (closed)	NA	NA	NA	NA	NA	NA	NA	
Actuarial Asset Valuation (AAV) Method ³	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance.	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 1999.
Actuarial assumptions:	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	7.0% per annum, net of investment expenses	7.0% per annum, net of investment expenses	8.0% per annum, gross investment expenses
Assumed rate of return ⁴	Tables adopted by Board of Trustees during Fiscal Year 2019	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2006
Post-retirement mortality	Tables adopted by Board of Trustees during Fiscal Year 2019	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2006
Active services withdrawal, death, disability, service retirement	Tables adopted by Board of Trustees during Fiscal Year 2019	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2006
Salary increases ⁴	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year.	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 ⁴	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.5% per annum for Auto COLA, 2.5% per annum for Escalation	1.3% per annum

¹ Under this actuarial cost method, the Initial Liability was reestablished as of June 30, 1999, by the Entry Age Actuarial Cost Method but with the unfunded actuarial accrued liability (UAAAL) not less than \$0. The financial results using this Frozen Initial Liability Actuarial Cost Method are the same as those that would be produced using the Aggregate Actuarial Cost Method.

² In conjunction with Chapter 85 of the Laws of 2000, there is an amortization method. However, the June 30, 1999 UAAAL for the QPP equaled \$0 and no amortization period was required.

³ As of the June 30, 2014 (Lag) valuation, the AAV is constrained to be no more than 20% from the Market Value

⁴ Developed using a long-term Consumer Price Inflation assumption of 2.5% per year.

See Independent Auditors' Report.

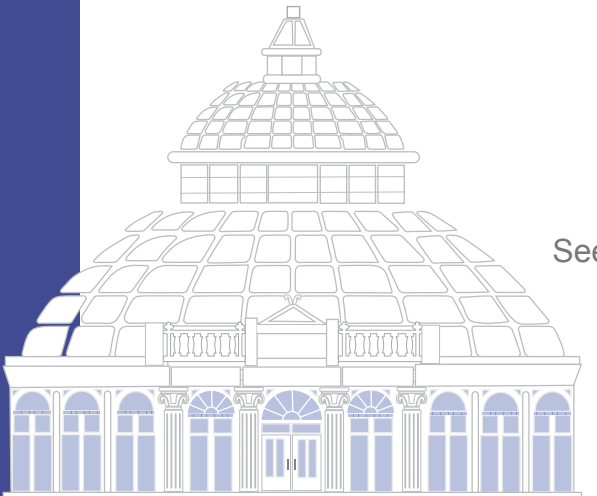
**NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
QUALIFIED PENSION PLAN
SCHEDULE OF INVESTMENT RETURNS**

The following table displays annual money-weighted rate of return, net of investment expense, for the Funds for each of the past six fiscal years:

<u>Fiscal year ended</u>	<u>QPP</u>	<u>COVSF</u>
June 30, 2019	7.07%	2.41%
June 30, 2018	8.61%	1.63%
June 30, 2017	12.99%	0.64%
June 30, 2016	1.45%	0.19%
June 30, 2015	3.10%	0.03%
June 30, 2014	17.01%	0.06%

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

See Independent Auditors' Report.



Additional Supplementary Information
SCHEDULE OF INVESTMENT EXPENSES
Year Ended June 30, 2019

Investment Expenses Paid from the Investment Earnings of the Plan

Fees Paid to Investment Managers for FY 2019 Services ¹	\$ 179,740,161
Fees Paid to Investment Consultants ¹	3,003,667
Investment-related Legal Fees ¹	307,995
Fees Paid to Investment Managers and Consultants	183,051,823
Private Equity Organizational Costs	16,391,650
Real Estate Partnership Organizational Costs	7,859,294
Alternative Opportunity & Global Fixed Organizational Costs	224,458
Foreign Taxes Withheld	26,456,086
Reimbursement to NYC Comptroller's Office for Investment Expenses Paid	4,187,226
Miscellaneous Investment Expenses	2,373,802
Total Investment Expenses Paid Directly by the Plan	240,544,339
Fees Related to Securities Lending Transactions	4,573,014
Total Investment Expenses and Fees Paid Directly by the Plan	245,117,353
Total Paid by the NYC Comptroller's Office	2,849,011
Total Investment Expenses and Fees	247,966,364

Note:

1) For details, see Schedule of Fees Paid to Investment Managers and Consultants beginning on Page 144.

Additional Supplementary Information
SCHEDULE OF ADMINISTRATIVE EXPENSES
 Year Ended June 30, 2019

Personal Services	Employee Compensation	\$ 43,717,712
Professional Services	Consultants ¹	14,387,817
	Medical Board and Medical Consultants	922,792
	NY State Dept. of Financial Services Examiners	500,000
	Steno for Medical and Trustees' Boards	73,809
		15,884,418
Communication	Telephone	509,006
	Postage	467,600
	Printing	137,657
		1,114,263
Rentals	Office and Storage Space	6,637,059
Other	Software, Licenses, and Support	6,033,250
	Office and Data Processing Equipment	4,521,706
	Office Supplies and Services	1,678,862
	Facilities Services	1,321,310
	Equipment Maintenance	1,164,745
		14,719,873
NYCERS' Direct Expenses		82,073,325
Incurred by Other City Agencies	Financial Information Services	4,861,383
	Law Department	816,793
	Office of the Comptroller	762,016
	Office of Payroll Administration	389,794
	Office of Management and Budget	187,872
		7,017,858
Total Administrative Expenses		89,091,183

Note:

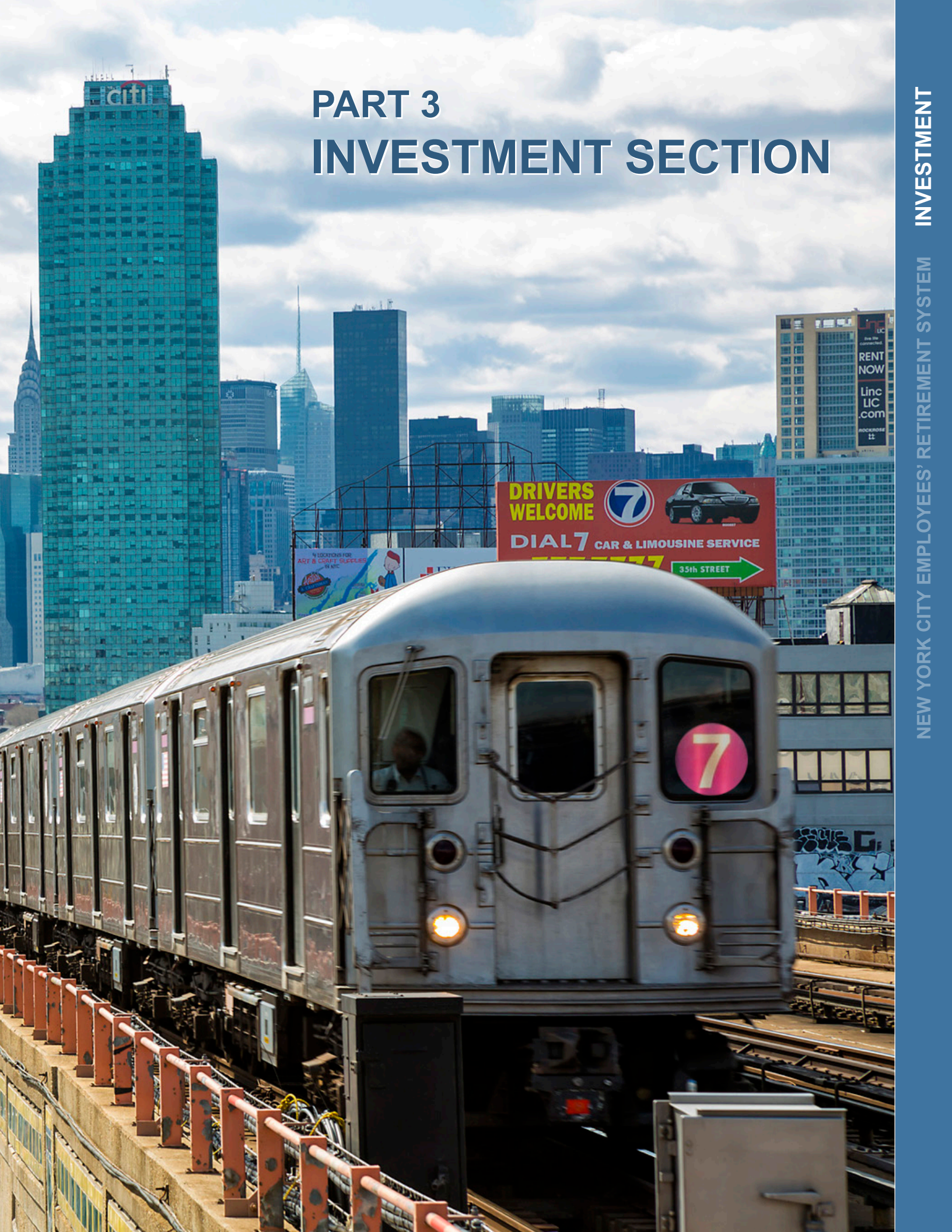
1) For details, see Schedule of Payments to Consultants on next page.

Additional Supplementary Information
SCHEDULE OF PAYMENTS TO CONSULTANTS
Year Ended June 30, 2019

Nature of Service	Firm	Fees
Consultant Services	Gartner Inc	\$ 1,665,620
	CWI Coaching and Consulting	185,000
	The International Foundation of Employee Benefit Plans	49,875
	CEM Benchmarking	45,000
	Presidio Networked Solutions Group LLC	34,513
	Strategies for Change Now	20,000
	DAS	19,800
	Executive Safety & Health Consultants Inc	15,000
	Jean North Brewer	14,150
	Insight Public Sector	13,277
	Mourad Ibrahim	5,219
	MSA Security	3,760
	IBM	(38,198)
Computer Services	Accenture LLP	7,961,315
	Blue Hill Data Services	1,124,800
	Computer Management Resources Corp	372,385
	UTC Associates Inc	223,657
	Enterprise Services LLC	219,553
	QED National	219,325
	Granwood Inc	207,262
	Elegant Enterprise Wide Solutions Inc	194,352
	Diaspark Inc	182,315
	Msquare Systems Inc	176,794
	Geomatrix Software Services Inc	173,388
	Trigyn Technologies Inc	166,329
	CNC Consulting Inc	163,249
	Infojini Inc	161,402
	Integrated Technology Solutions & Services Inc	152,781
	ZebraEdge Inc	94,760
	Direct Technology	80,732
	Tech Valley Talent	70,800
	Zolon Tech Inc	64,940
	22nd Century Technologies Inc	62,351
	Optima Global Solutions Inc	61,242
	Innoee Consulting LLC	58,850
Software Information Resource Corp	47,648	
Astro Tech	19,600	
enChoice	(135,889)	
Architectural Services	Mancini Duffy	242,200
Mechanical and Electrical Engineering	Cosentini	2,160
	Syska Hennessy Group	(13,500)
Total Payment to Consultants		14,387,817



PART 3 INVESTMENT SECTION



REPORT ON INVESTMENT ACTIVITY AND POLICIES

Investment Policies and Objectives

The purpose of the New York City Employees' Retirement System is to provide its members the benefits to which they are legally entitled. The funds necessary to finance these benefits are accumulated through the contributions of the members and participating employers and the investment earnings of the Plan.

The Plan's Board of Trustees adopts investment policies. The Board is composed of eleven members: the Mayor's representative, who is the chairperson; the City Comptroller; the Public Advocate; the heads of the three unions with the largest number of participating employees, which are District Council 37-AFSCME, Transport Workers Union Local 100, and the International Brotherhood of Teamsters; and the five Borough Presidents. The Board creates the overall investment philosophy under which the Plan's funds are invested and, in defining the investment objectives, develops a framework under which specific objectives are established with regard to allocating the assets of the Plan among the various investment types. The following is a brief outline of the Plan's philosophy and objectives:

- In order for the Plan to meet its responsibility of providing its members with their legally entitled retirement and other benefits, the level of investment risk should be prudent and not jeopardize the Plan's financial stability. The Plan's assets must be protected from severe adverse market conditions and wide fluctuations in investment results.
- Since higher investment returns are generally associated with a certain amount of risk, it is reasonable and justified to assume a moderate level of risk in order to strengthen long-term results.
- Diversification fundamentally reduces the overall portfolio risk. This is achieved by allocating funds among different asset categories and then, within each category, having a broad representation of industries and companies. A majority of the portfolio is invested in a wide variety of domestic stocks and bonds. The Policy Mix consists of 29.0% in U.S. equities, 20.0% in an International Equity Fund involving only New York City pension plans, 33.0% in U.S. fixed income, and 18.0% in alternative investments, which includes private equity, real estate, and infrastructure investments. Public equity investments are allocated among actively and passively managed components, market sectors, and approaches that focus on companies of various size capitalizations. Fixed-income securities are primarily allocated among government, government guaranteed mortgage-backed, and corporate securities. The Plan also invests a portion of its fixed-income allocation in inflation-linked treasury securities.
- Since retirement benefits are paid on a monthly basis, and other payments such as loans, refunds, and death benefits are made weekly, the liquidity of the portfolio must be considered. The cash flow from employer contributions, dividends, and interest must be managed so that benefits can be paid in a timely manner. A portion of the portfolio is kept in short-term investments to ensure that this is so.
- Achieving long-term results is a chief objective for an institution such as a retirement system that is accumulating resources for liabilities that are primarily due in the distant future.
- As has been the case for several years, the Plan is continuing to increase its holdings of economically targeted investments (ETIs). ETIs are investments that provide risk-adjusted market rates of return, while providing additional benefits to the geographic target area, which includes the five boroughs and the six New York State counties where City employees are permitted to live (Nassau, Orange, Putnam, Rockland, Suffolk, and Westchester). With the Plan financing the underlying mortgages of low-, moderate-, and

middle-income housing, residents have benefited from the increased access to affordable housing, as well as from the economic effect of the construction industry jobs that have been created. During fiscal year 2019, the ETI Plan issued additional investments and commitments for new loans to finance the rehabilitation or new construction of individual multi-family projects through its Public/Private Apartment Rehabilitation program. The Plan maintained its separately managed account in Access Capital Strategies with RBC Global Asset Management, which invests in mortgage-backed securities comprised of loans screened for anti-predatory lending compliance. The loans can be issued to single-family homeowners making below 200% of the Area Median Income and includes a veterans housing target. In addition, the Plan maintained its investment with the AFL-CIO Housing Investment Trust to invest in union-constructed, affordable multi-family mortgages and bonds. The Plan also maintains an investment in the CPC construction loan facility. The construction loans are for low- and moderate-income housing.

- Investments are only made in accordance with the governing statutes of the New York City Administrative Code and the New York State Retirement and Social Security Law.
- The Board also determines the criteria used in evaluating the investment advisors. While the Board utilizes an investment consultant to provide technical support in evaluating asset mix and its investment advisors, Board members take a very active role in determining the direction that the Plan is taking toward achieving its objectives. In addition, as well as being a Board member, the City Comptroller is the custodian of the funds of the Plan and oversees all of the City's pension trust funds. The Comptroller's Office is the avenue by which the Board's directives are implemented. The Comptroller's Office manages the actual flow of funds to the investment advisors, and it assures that the investments recommended by the advisors meet the legal restrictions for plan investments. It also conducts its own performance analysis of individual advisors and of the different investment categories. The Comptroller is responsible for cash management related to the Plan and provides various cash receipt and cash disbursement services to the Plan.

Investment Accounting

Investments are reported at fair value. Securities purchased pursuant to agreements to resell are carried at the contract price, exclusive of interest, at which the securities will be resold. Fair value is defined as the quoted market value at the end of the last trading day of the period, except for the International Investment Funds (the "IIF") and Alternative Investment Funds (the "ALTINVF"). The IIF are private funds of publicly traded securities which are managed by various investment managers on behalf of the Plan. Fair value is determined by Plan management based on information provided by the various investment managers. The investment managers determine fair value using the last available quoted price for each security owned, adjusted by any contributions to or withdrawals from the Plan during the period. The ALTINVF are investments for which exchange quotations are not readily available and are valued at estimated fair value as determined in good faith by the General Partner (GP). These investments are initially valued at cost with subsequent adjustments that reflect third party transactions, financial operating results and other factors deemed relevant by the GP. Fair value is determined by Plan management based on information provided by the various GPs after review by an independent consultant and the custodian bank for the fund.

Purchases and sales of securities are recorded on the trade date.

Dividend income is recorded on the ex-dividend date. Interest income is accrued as earned.

Investment Criteria

The criteria for non-equity investments are as follows:

Fixed-income investments may be made only in U.S. Government securities, securities of government agencies backed by the U.S. Government, securities of companies rated BBB/Baa2 or better or securities rated below BBB/Baa2 (up to 10% of the total asset allocation) by both Standard & Poor's Corporation and Moody's Investors' Service, or any bond on the list of Legal Investments for New York Savings Banks as published by the Department of Financial Services.

Short-term investments may be made only in the following instruments:

- U.S. Government securities or government agencies' securities which are fully guaranteed by the U.S. Government.
- Commercial paper rated A1 or P1 or F1 by Standard & Poor's Corporation or Moody's Investors' Service, or Fitch, respectively.
- Repurchase agreements collateralized in a range of 102% to 105% of matured value, purchased through primary dealers of U.S. Government securities.
- Investments in bankers' acceptances, certificates of deposit, and time deposits are limited to banks with worldwide assets in excess of \$50 billion that are rated within the highest categories of the leading bank rating services and selected regional banks which are also rated within the highest categories.

The criterion for equity investments is that they may consist only of those stocks that meet the qualifications of the New York State Retirement and Social Security Law, the New York State Banking Law, and the New York City Administrative Code.

In addition, investments of up to 25.0% of total pension fund assets may be made in instruments not specifically covered by the New York State Retirement and Social Security Law.

No investment in any one corporation may represent more than either 2% of the Plan net assets or 5% of the corporation's total outstanding issues.

Cash deposits are insured by the Federal Deposit Insurance Corporation for a maximum of \$250,000 per plan member and are, therefore, fully insured.

Investment Returns

Over time, the Plan's returns on investments have generally constituted the most significant component of total Plan income, whether that is positive or negative for a given year. During Fiscal Year 2019 the net investment income earned by the portfolio, including interest and dividends, contributed \$4.4 billion to the Plan's revenue, which was a decrease from the \$5.2 billion in net investment income that the portfolio earned in Fiscal Year 2018. The Table of Revenue by Source on page 216 outlines the contributions to Plan revenue from investment earnings as well as the contributions of employees and employers.

It is important that in the long term the value of the Plan's investment portfolio continues to grow and generate an adequate return, so that the funding of the Plan does not become an undue burden to the participating employers. To the extent that the investment portfolio provides a sufficiently high return for the Plan, the amount necessary to be provided by employer contributions is decreased. The goal is to maintain a strong, diversified investment portfolio that will provide a significant percentage of the long-term funding required to support benefit payments into the future.

The total Plan's assets as of June 30, 2019 was \$68.2 billion. The detailed asset allocation is shown in the Investment Summary on page 138. The total return on the investment portfolio during Fiscal Year 2019 was 7.13%, which is lower than the NYCERS' Policy Benchmark of 7.73%.

Domestic equities, which comprise 29.3% of the total portfolio, returned 8.37%, slightly lower than the Russell 3000 Index of 8.98%. The majority of the domestic equity portfolio is passively managed, with the remaining being actively managed by various managers with diverse investment strategies, such as specializations in value, growth, small capitalization stocks, or emerging markets.

Total World ex USA (Non-US Equities/EAFE¹), which comprises 12.7% of the portfolio, returned 0.57%, higher than the World ex USA Custom BM Index of 0.16%. The emerging markets portion, constituting 7.1% of the portfolio, returned 4.06%, higher than the NYCERS Custom EM Index of 4.05%.

The total fixed-income segment, constituting 36.7% of the portfolio, returned 7.21%. The structured fixed-income segment returned 8.45%, as compared to the NYC Custom Structured Index - ERS of 9.51%. The high-yield fixed-income segment returned 7.29% as compared to the High Yield Custom Benchmark of 7.48%.

The alternative investment segment accounted for 13.1% of the investment portfolio. This segment is comprised primarily of private equity, which returned 14.66%, and private real estate, which returned 8.47%. The corresponding index performance relating to these components is published in the Schedule of Investment Results on page 143.

The asset allocation used above was derived from the Plan's Performance Overview as of June 30, 2019 provided by the NYC Comptroller's Office, which reports time-weighted fund performance returns at the fund level. Whereas, for financial reporting purposes, as presented in the Financial Section, the valuation of investments are in accordance with GASB 72, which reports fair value measurement based on the security level.

The total fund performance reflects time-weighted returns that are reported net of management fees.

Listings of the Plan's investment securities are available upon request from the NYC Comptroller's Office.

The Finance Division of the Plan has prepared this Report on Investment Activity and Policies. It is based on the investment policies of the Plan's Board of Trustees, New York State regulations governing the Plan, documents provided by the NYC Comptroller as the custodian of the Plan, and the Plan's internal documents.

¹Europe, Australasia and the Far East (EAFE) refers to the most developed geographical areas of the world outside the United States and Canada.

INVESTMENT SUMMARY (QPP & VSF)

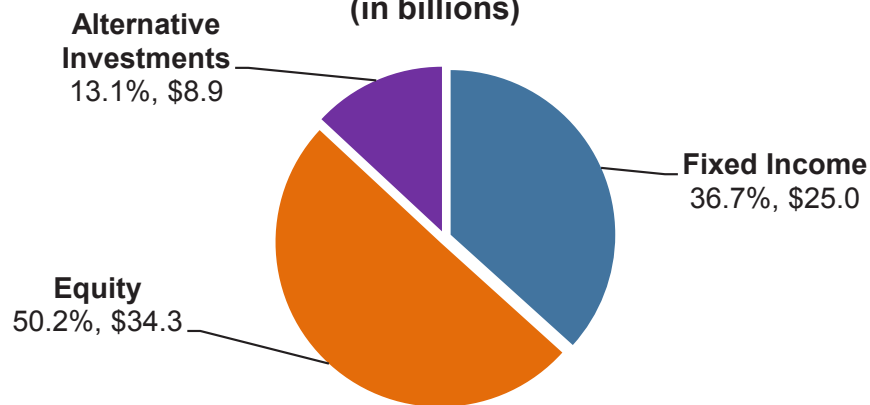
June 30, 2019

Type of Investment	Market Value (in millions)	Percent of Total Market Value
Fixed Income	\$ 25,016	36.7%
Equity		
US Equities	19,970	29.3%
Total World ex USA (Non-US Equities/EAFE)	8,667	12.7%
Emerging Markets	4,867	7.1%
Other Equities	753	1.1%
Total Equity	34,257	50.2%
Alternative Investments		
Private Equity	4,672	6.9%
Private Real Estate	3,579	5.2%
Other Private Holdings	663	1.0%
Total Alternative Investments	8,914	13.1%
Total Investments	68,187	100.0%

Source: Performance Overview report as of June 30, 2019 provided by the NYC Comptroller's Office, which reports time weighted fund performance returns at the fund level.

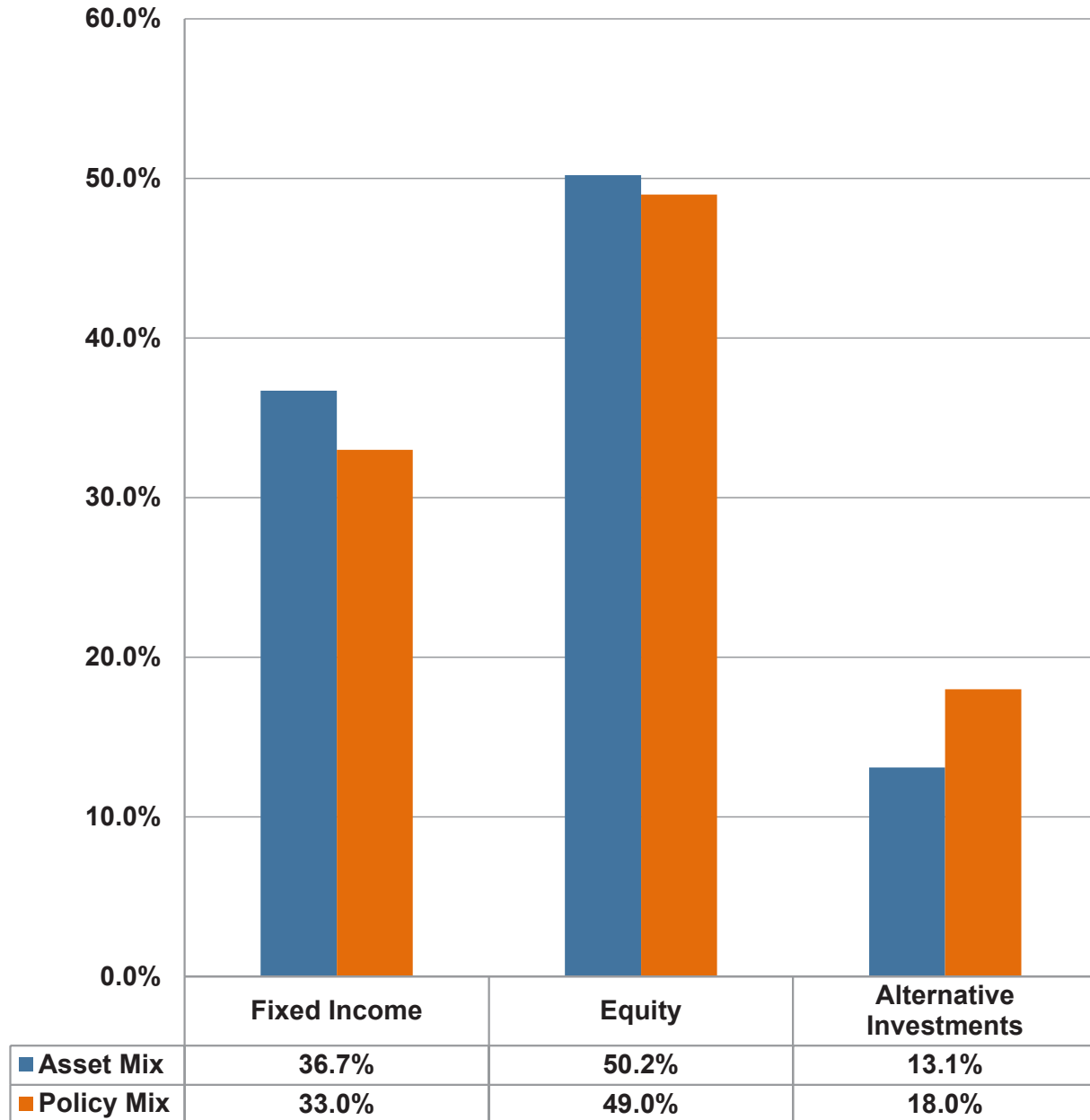
TOTAL INVESTMENT ASSET ALLOCATION

June 30, 2019
(in billions)



COMPARISON OF ASSET ALLOCATION AND POLICY MIX

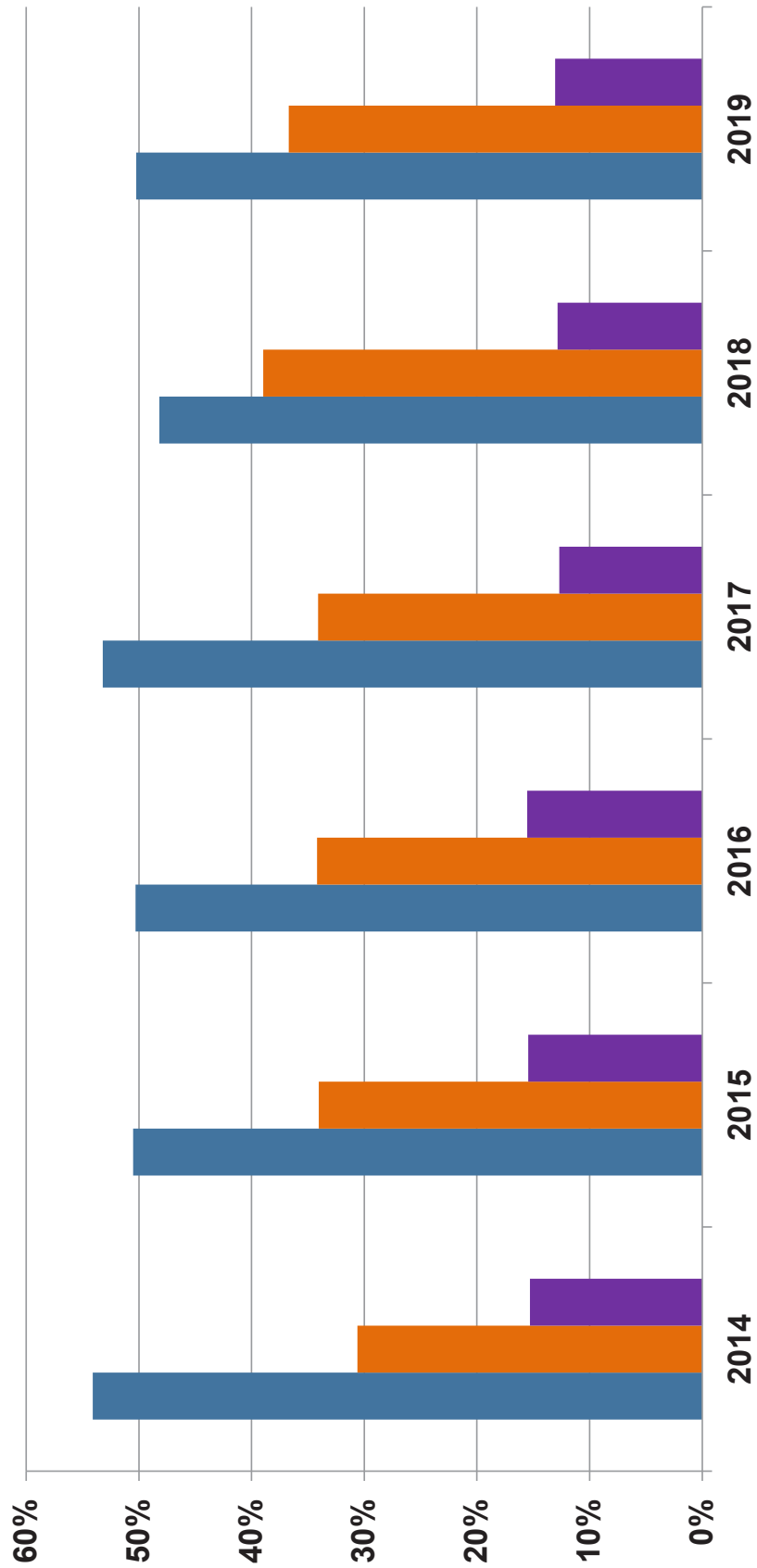
June 30, 2019



Source: NYC Comptroller's Office.

ASSET ALLOCATION June 30, 2014 - June 30, 2019

■ Equity ■ Fixed Income ■ Alternative Investments



Source: NYC Comptroller's Office.

LIST OF LARGEST EQUITY HOLDINGS

(at Fair Value)

June 30, 2019

	Security	Shares	Fair Value	Percent of Domestic Equities
1	Microsoft Corporation	4,386,334	\$ 587,593,303	2.80%
2	Apple Inc	2,847,009	563,480,021	2.69%
3	Amazon.com Inc	224,434	424,994,955	2.03%
4	Alphabet Inc	337,375	364,994,884	1.74%
5	Facebook Inc	1,296,904	250,302,472	1.19%
6	Berkshire Hathaway Inc	1,152,370	245,650,713	1.17%
7	Johnson & Johnson Company	1,727,373	240,588,511	1.15%
8	J.P. Morgan Chase & Company	2,038,239	227,875,120	1.09%
9	Exxon Mobil Corporation	2,936,910	225,055,413	1.07%
10	Pfizer Inc	4,158,298	180,137,469	0.86%
11	Procter & Gamble Company	1,640,646	179,896,834	0.86%
12	Bank Of America Corporation	5,251,698	172,802,823	0.82%
13	Verizon Communications Inc	3,005,229	171,688,733	0.82%
14	AT&T Inc	5,086,893	170,461,784	0.81%
15	Visa Inc	958,248	166,303,940	0.79%
16	Wells Fargo & Company	2,870,755	165,789,978	0.79%
17	The Walt Disney Company	1,164,410	162,598,212	0.78%
18	Chevron Corporation	1,253,130	155,939,497	0.74%
19	Merck & Company Inc	1,830,028	153,447,848	0.73%
20	Cisco Systems Inc	2,786,466	152,503,284	0.73%
21	Mastercard Inc	557,466	147,466,481	0.70%
22	Intel Corporation	3,063,294	146,639,884	0.70%
23	Home Depot Inc	699,461	145,466,904	0.69%
24	UnitedHealth Group Inc	562,177	137,176,810	0.65%
25	PepsiCo Inc	1,001,865	131,374,557	0.63%
26	Coca-Cola Company	2,522,364	129,592,411	0.62%
27	Walmart Inc	1,127,470	124,574,160	0.59%
28	Comcast Corporation	2,935,870	124,128,584	0.59%
29	Citigroup Inc	1,632,547	114,327,266	0.54%
30	International Business Machines Corporation	815,924	112,515,920	0.54%
31	Boeing Company	302,107	109,969,969	0.52%
32	McDonald's Corporation	526,875	109,410,863	0.52%
33	Oracle Corporation	1,661,501	94,655,712	0.45%
34	General Electric Company	8,521,049	89,471,015	0.43%
35	Abbott Laboratories	1,025,752	86,265,743	0.41%
36	Netflix Inc	228,552	83,951,721	0.40%
37	Adobe Inc	279,182	82,260,976	0.39%
38	Qualcomm Inc	1,070,313	81,418,710	0.39%
39	Union Pacific Corporation	473,756	80,116,877	0.38%
40	MercadoLibre Inc	129,407	79,167,320	0.38%
	Total		7,172,057,679	34.19%

Note: A full list of the plan's securities is available upon request from the NYC Comptroller's Office.

LIST OF LARGEST BOND HOLDINGS

(at Fair Value)
June 30, 2019

	Security Description	Fair Value	Percent of Long Term Fixed Income
1	U.S. Treasury Securities	\$ 10,296,629,563	52.03%
2	FNMA Securities	1,052,292,305	5.32%
3	GNMA Securities	578,708,387	2.92%
4	Federal Home Loan Mortgage Corporation	482,873,025	2.44%
5	AFL-CIO Housing Investment Trust	327,680,698	1.66%
6	Federal Home Loan Bank	144,553,845	0.73%
7	Community/Economic Development Bonds	126,015,053	0.64%
8	J.P. Morgan Chase & Subsidiaries	78,013,261	0.39%
9	The Tennessee Valley Authority	76,463,876	0.39%
10	HCP Inc	66,268,657	0.33%
11	Bausch Health Companies Inc	59,403,336	0.30%
12	Morgan Stanley	56,251,924	0.28%
13	CCO Holdings LLC	55,467,114	0.28%
14	Bank of America Corporation	54,024,372	0.27%
15	CSC Holdings LLC	49,482,245	0.25%
16	Sprint Corporation	48,162,103	0.24%
17	Goldman Sachs Group	48,068,409	0.24%
18	Verizon Communications Inc	39,823,790	0.20%
19	Vistra Operations Company LLC	38,282,788	0.19%
20	Wells Fargo & Company	36,394,468	0.18%
21	Citigroup & Subsidiaries	35,137,166	0.18%
22	Dish DBS Corporation	33,300,606	0.17%
23	TransDigm UK Holdings Plc	33,144,327	0.17%
24	Altice Company	32,516,426	0.16%
25	Apple Inc	31,633,245	0.16%
26	Sirius XM Radio Inc	31,202,162	0.16%
27	Intelsat	30,665,270	0.15%
28	Booking Holdings Inc	30,183,045	0.15%
29	Comcast Corporation	29,892,221	0.15%
30	NRG Energy Inc	29,842,799	0.15%
31	Federal Farm Credit Banks	29,662,813	0.15%
32	AT&T Inc	28,933,851	0.15%
33	Anthem Inc	26,753,580	0.14%
34	T-Mobile US Inc	26,729,754	0.14%
35	Fortive Corporation	26,525,574	0.13%
36	Tenet Healthcare Corporation	26,044,245	0.13%
37	General Motors Company	25,517,652	0.13%
38	Targa Resources Corporation	24,962,018	0.13%
39	MGM Resorts International	24,668,906	0.12%
40	CVS Health Corporation	23,845,616	0.12%
	Total	14,296,020,493	72.22%

Note: This table lists the issuers of NYCERS' 40 largest long term fixed income securities. For most issuers, the amount shown is comprised of multiple securities with various maturity dates and interest rates. A full list of the plan's securities is available upon request from the NYC Comptroller's Office.

SCHEDULE OF INVESTMENT RESULTS

Time-Weighted Rates of Return

	Year Ended June 30 ¹			Trailing ²		
	2019	2018	2017	3 Years	5 Years	10 Years
Total Portfolio	7.13%	8.56%	12.99%	9.77%	6.83%	10.03%
NYCERS' Policy Benchmark	7.73%	7.84%	12.93%	9.47%	6.89%	10.28%
Managed by Outside Advisors						
US Equity	8.37%	14.71%	18.09%	13.71%	9.76%	14.43%
Russell 3000 Index	8.98%	14.78%	18.51%	14.02%	10.19%	14.67%
Total World ex USA (Non-US Equities/EAFE)	0.57%	11.15%	22.20%	11.21%	4.38%	8.21%
World ex USA Custom BM ³	0.16%	7.82%	20.67%	9.23%	2.60%	7.28%
Emerging Markets	4.06%	1.57%	23.31%	9.53%	1.36%	6.84%
NYCERS Custom EM Index ⁴	4.05%	2.30%	22.20%	9.16%	1.66%	6.28%
Total Fixed Income	7.21%	1.29%	3.14%	3.98%	3.56%	5.78%
Fixed Income - Structured	8.45%	-0.34%	0.34%	2.80%	3.38%	5.14%
NYC Custom Structured Index - ERS ⁵	9.51%	-0.48%	-0.21%	-	-	-
Fixed Income - High Yield	7.29%	1.65%	11.62%	7.12%	4.32%	8.63%
High Yield Custom Benchmark ⁶	7.48%	2.42%	11.47%	7.06%	4.41%	8.24%
Private Equity	14.66%	17.83%	16.45%	16.31%	13.44%	13.23%
NYC R3000 + 3% Lagged Index	12.01%	17.19%	21.56%	16.86%	13.64%	19.77%
Private Real Estate	8.47%	12.19%	10.24%	10.29%	11.95%	10.43%
NCREIF NFI-ODCE NET + 100 BP Index	6.51%	8.54%	7.96%	7.67%	9.84%	-
In-House Portfolio						
Short Term Investments	2.36%	1.48%	0.72%	1.52%	1.12%	0.82%

Notes:

1) For 2019, 2018, and 2017, the investment returns are reported net of fees.

2) For trailing 3, 5, and 10 years, the investment returns are reported gross of fees.

3) For 2017, the benchmark was MSCI AC World ex US (Net) Index.

4) For 2018 and 2017, the benchmark was FTSE Custom NYCERS All Emerging Index.

5) For 2018 and 2017, the benchmark was NYC - Core Plus Five Index.

6) For 2018 and 2017, the benchmark was FTSE BB & B Index.

SCHEDULE OF FEES PAID TO INVESTMENT MANAGERS AND CONSULTANTS

Year Ended June 30, 2019

Entity Name	Assets under Management (in thousands)	Fees (in dollars)
Investment Managers' Fees		
Fixed Income		
Advent (Convertible Bonds)	\$ 441,561	\$ 2,103,418
Barrow, Hanley, Mewhinney & Strauss (Credit Sector)	385,522	567,638
Blackrock (Corporate)	332,740	143,181
Blackrock (Government Sector)	2,486,113	1,049,488
Blackrock (Mortgage)	1,137,013	481,090
Eaton Vance Management Inc (Enhanced Yield)	277,315	863,226
Fort Washington (Enhanced Yield)	60	(11,400)
GIA Partners LLC (Core Plus)	108,793	266,739
Integrity Fixed Income (Emerging Mgrs)	12,373	42,164
LM Capital-MTA (Core Plus)	300,269	454,330
Loomis Sayles (Enhanced Yield)	2,383	(8,958)
Mackay Shields LLC (Enhanced Yield)	200,055	553,923
Neuberger Berman Fixed Income (Enhanced Yield)	417,783	1,367,478
Neuberger Berman Fixed Income (Mortgage Sector)	523,415	320,220
New Century Advisors-Core Plus (Emerging Mgrs)	27,845	94,880
Nomura Management Inc (Enhanced Yield)	289,606	947,618
Oaktree (Enhanced Yield)	388,332	1,246,893
Optimum Quantvest- fka Hillswick Asset (Emerging Mgrs)	10,072	34,305
Penn Capital Management (Enhanced Yield)	3,234	(3,322)
PIM Ramirez Asset (Emerging Mgrs)	39,688	135,233
Prudential (Corporate)	770,759	577,620
Pugh Capital Management-Core (Emerging Mgrs)	30,997	105,638
Shenkman Capital Management (Enhanced Yield)	308,518	1,064,692
Smith Breeden Associates-TCW (Mortgage)	113,362	24,668
SSGA 1-3 Treasury Inde (Gov't)	3,913,512	408,969
SSGA Int Gov Bond Inde (Gov't)	3,208	304
State Street Bank and Trust Co (Gov't)	2,603,354	1,059,673
Stone Harbor (Enhanced Yield)	241,209	385,845
T. Rowe Price (Corporate)	764,986	1,159,639
T. Rowe Price (Enhanced Yield)	619,389	1,890,952
Taplin Canida & Habacht (Corporate)	204,655	198,187
Victory (Convertible Bonds)	317,455	893,049
Total Fixed Income	17,275,575	18,417,379
Domestic Equity		
BlackRock Inst R 1000 VAL	1,060	32,250
BlackRock Inst R 1000 (Core)	15,025,331	287,128
BlackRock Inst R 1000 (Growth)	1,402	34,879
Ceredex SCV (Small Cap Value)	216,628	1,142,515
LEG - Altravue - SCV	16,060	79,933
LEG - Bowling - SCV	16,494	82,477
LEG - Bridge City - SCG	26,803	132,833
LEG - Dean - SCV	21,526	107,573
LEG - Essex - SCG	21,508	106,835
LEG - Lisanti - SCG	13,609	67,353
LEG - Pacific - SCG	13	(22)

Continued on next page

SCHEDULE OF FEES PAID TO INVESTMENT MANAGERS AND CONSULTANTS

Year Ended June 30, 2019

Entity Name	Assets under Management (in thousands)	Fees (in dollars)
LEG - Transition	\$ 0	\$ (1)
RAFI Enhanced Large Companies	1,895,028	2,193,560
RAFI Enhanced Small Companies	723,274	1,556,407
VTL S&P 500 (Large Cap)	296	(234)
Wellington SCV (Small Cap Value)	237,048	1,689,088
Total Domestic Equities	18,216,078	7,512,574
Private Equity		
Acon Equity Partners III LP	9,257	87,090
Aisling Capital III LP	6,265	38,762
Altaris Health Partners III LP	9,569	142,071
American Securities Partners VII LP	47,772	1,093,204
Apax Partners LLP	69,007	1,682,748
Apollo Investment Fd VII	20,483	163,310
Apollo Investment Fund VIII	123,981	701,109
Apollo Investment Fund IX	17,215	2,944,000
Ardian-ASF VII	35,697	945,000
Ardian-ASF VIII B	605	825,904
Ares Corp Opportunities Fund III	59,222	260,602
Ares Corp Opportunities Fund IV	115,822	624,394
Ares Corp Opportunities Fund V	41,865	1,330,000
Arsenal Capital Partners II	6,388	11,305
ASF VI B	52,026	435,974
Avista Capital Partners	1,381	8,248
AXA Secondary Fund V BLP	23,720	221,326
Axium Infrastructure US Country	26,488	239,097
BC European Capital IX	100,875	1,153,622
BC European Capital X	33,072	1,212,672
BC European Capital X - SC	21,442	173
BDCM Opportunity Fund II	27,530	41,712
BDCM Opportunity Fd III	57,518	549,031
Blackstone Capital Partners VI	114,246	582,363
Bridgepoint Europe IV	13,556	134,464
Bridgepoint Europe V	59,741	563,934
Bridgepoint EUR V SC	23,356	358
Bridgepoint Europe VI	4,245	1,839,737
Capital Partners Private Equity Income Fund II LP	6,343	51,055
Capital Partners III	3,109	325,000
Carlyle Partners V	11,799	46,793
Carlyle Partners VI	69,992	480,424
Carpenter Community Bancfund	1,777	13,110
Catterton Partners VI	21,722	172,141
Centerbridge Cap III	12,711	356,797
CO-Investment Partners Europe	3,666	20,660
Constellation Ventures III	8,302	39,824
Craton Equity Investors I LP	188	55,655
Credit Suisse Emerging Market Domestic Mgrs Fund	77,842	848,223
Crestview Partners II	26,331	289,777
Crestview Partners III	40,965	990,000

Continued on next page

SCHEDULE OF FEES PAID TO INVESTMENT MANAGERS AND CONSULTANTS

Year Ended June 30, 2019

Entity Name	Assets under Management (in thousands)	Fees (in dollars)
CVC Capital Partners VI	\$ 113,588	\$ 1,258,467
CVC Capital Partners VII	17,371	2,169,390
EQT VI LP	65,069	714,832
EQT VII LP	139,914	1,713,706
EQT VIII LP	9,138	1,716,971
Fairview Capl Pttrs III	20,175	105,348
Fairview Emerging Managers I	7,240	47,693
Fairview Emerging Managers II	35,228	108,068
First Reserve Fund XII	9,439	73,491
FS Equity Partners VI	27,599	74,960
FT Ventures Fd III	9,213	94,605
FTV Capital IV	21,306	256,962
FTV Capital V	14,386	430,000
Grain Fund II	2,834	450,577
Green Equity Investors VI	125,868	949,473
Green Equity Investors VII	48,544	1,383,256
Grey MT Pttrs Fund III	4,468	112,000
GSO Capital Opportunities Fund	951	1,755
Halyard Capital II	4,744	27,827
ICV Partners IV LP	1,863	360,000
Incline Equity Partners III LP	10,808	148,122
J.P. Morgan Fleming Trache B	25,549	193,203
J.P. Morgan Investment Management	15,652	131,729
KKR Americas Fund XII LP	49,064	1,659,000
Landmark Fd XIII	11,331	120,667
Landmark Equity Pttrs XIV	22,316	316,031
Landmark Equity Pttrs XV	31,120	749,590
Levine Leichtman CAP Partners IV	7,669	97,091
Lexington Capital Partners VII	14,959	190,300
Lexington Capital Partners VIII	75,927	997,963
Lincolnshire Equity Fund III	21,450	200,731
Lincolnshire Equity Fund IV	14,354	66,738
Midocean Partners III	18,665	156,916
Mill City Capital	3,698	140,000
Montreux Equity Partners IV	17,428	200,377
Nautic Pttrs VI	7,238	35,261
New Mainstream Capital II	7,108	98,643
New Mountain Partners III	66,673	489,679
NGN Biomed Opportunity II	10,066	140,893
NMS Fund III (New MainStream Capital III)	954	210,000
Olympus Growth Fund VI	56,005	531,615
Onex Partners III	36,184	260,730
Paladin Homeland Security III	31,084	319,159
Palladium EQ Partners IV	42,761	379,693
Palladium EQ Partners V	3,846	1,079,589
Patriot Financial Partners II	8,323	150,000
Patriot Financial Partners III	3,757	262,500
PCGAM Clean Energy & Tech Fund	23,349	34,143
Pegasus Partners IV LP	9,045	134,360

Continued on next page

SCHEDULE OF FEES PAID TO INVESTMENT MANAGERS AND CONSULTANTS

Year Ended June 30, 2019

Entity Name	Assets under Management (in thousands)	Fees (in dollars)
Pegasus Partners V LP	\$ 23,418	\$ 152,917
Pine Brook Capital Partners	6,337	37,147
Platinum Equity Small Cap I	1,896	293,079
Prism Venture Partners V	367	24,148
Psilos Group Partners III	23,132	22,967
Quaker BioVentures II LP	5,063	146,799
Raine Partners II	14,629	151,694
Raine Partners III	2,608	130,000
Riverstone/Carlyle GLB EP IV	18,774	123,529
RLJ Equity Partners Fund 1	13,171	93,790
SCP Private Equity Partners II	1,893	42,976
SCP Vitalife Partners II	9,827	227,980
Siris Capital Group LLC	18,961	491,076
Siris Partners IV	12,255	333,750
Snow Phipps Group II	19,421	266,936
Starvest Partners II	14,059	165,452
Stellex Capital Management LP	15,480	382,500
Terra Firma Capital Partner III	7,584	7,335
Thomas, McNerney & Partners II	4,391	16,785
Trident V LP A160	76,347	799,229
Trilantic Capital Partners IV	9,332	63,170
Trilantic Capital Partners V	47,708	385,840
US Power Fund II	23,980	174,051
US Power Fund III	21,668	196,602
Valor Equity Partners	11,487	154,434
Valor Equity Partners IV	18,529	540,000
Vista Equity Partners III	6,870	30,320
Vista Equity Partners IV	81,854	458,288
Vista Equity Partners V	143,363	1,875,000
Vista Equity Partners VI	159,012	2,370,000
Vista Equity Partners VII	16,840	228,004
Vista Foundation Fund II	14,078	300,000
Warburg Pincus Global Growth	906	263,722
Warburg Pincus PE	20,083	1,352,000
Warburg Pincus PE XI	102,632	620,084
Warburg Pincus PE XII	155,810	2,035,005
Webster Capital Management LLC	17,572	275,127
Welsh Carson Anderson & Stowe XI	15,288	95,378
Welsh Carson Anderson & Stowe XII (WCAS XII)	62,433	1,000,876
Welsh Carson Anderson & Stowe XIII	176	233,254
Yucaipa American Alliance Fund II	137,075	297,364
Yucaipa Corp Initiative II	24,081	93,398
Total Private Equity	4,112,806	60,017,776
Private Equity-Opport. & Global Fixed Income		
Angelo Gordon CT ST Partners	156,533	1,141,101
Apollo Centre St. Partnership LP	214,337	1,485,792
Ares Centre Street Partnership	174,194	1,764,831
Brightwood Capital Fund III LP	23,664	419,733

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SCHEDULE OF FEES PAID TO INVESTMENT MANAGERS AND CONSULTANTS
Year Ended June 30, 2019

Entity Name	Assets under Management (in thousands)	Fees (in dollars)
Brightwood Capital Fund IV LP	\$ 40,477	\$ 1,044,850
Contrarian C A LLC	101,032	796,749
Fortress CTR ST Partners	157,173	1,489,287
Golden Tree OD MTA 111	203,880	1,085,130
ICG Centre St Partnership	46,227	417,357
KKR SP-OFI(KKR-NYC Credit)	84,088	622,800
Lone Star Fund VIII	31,020	148,927
Marathon CTR ST Partners	34,748	99,985
Marathon CTR ST Partners, LP	293,649	1,462,485
Oak Hill Ctr. St. Partners	236,777	1,695,162
Oaktree OPP FD IX	77,572	1,145,416
Torchlight Investors	50,033	670,000
Total Private Equity-Opport. & Global Fixed Income	1,925,405	15,489,604
Private Real Estate		
ASF VII Infrastructure	11,765	660,000
Actis GP LLP also known as Actis Energy IV	28,201	900,000
Aermont Capital Real Estate Fund IV	5,301	604,325
Almanac Realty Securities VII	47,079	484,762
Almanac Realty Securities VII-SideCar	12,976	25,991
Almanac Realty Securities VIII	763	317,877
Almanac Realty Securities VIII-SideCar	730	314
AMB Alliance Fd III (Prologis Targeted US Logistics Fd)	45,454	201,404
Amer Value Ptnrs I	5,036	146,929
Apollo Real Estate Fd V	7,812	50,523
Artemis Co-Investment	41,964	375,850
Avanath Capital (Avanath Aff Housing II)	10,776	108,259
Big Real Estate Fund I	6,516	61,403
Blackstone RE Europe IV	93,544	840,365
Blackstone RE PTN EUR III	10,827	180,512
Blackstone Real Estate Ptnrs VI	10,981	18,476
Blackstone Real Estate Ptnrs VII	122,771	1,032,375
Blackstone Real Estate Ptnrs VIII	114,780	943,750
Brookfield Infra Fund II	72,161	295,471
Brookfield Infra Fund III	39,131	899,624
Brookfield Strategic RE Part GP LLC	91,920	341,373
Brookfield Strategic Real Estate Partner III	32,311	396,242
Brookfield Premier Real Estate Partners	111,829	825,259
Capri Urban Investors	17,020	34,390
Carlyle Fund VII	50,919	448,049
Carlyle Property Investors	98,909	397,965
Carlyle R.P. Fd V	5,920	21,216
Carlyle R.P. Fd VI	10,417	79,156
Clarion Partners LLC (Lion Industrial Trust)	94,246	780,818
Divco Fund V Advisor, LLC	27,084	521,560
Divco West FD IV	4,759	54,826
DRA Advisors LLC	24,927	583,174
EIG Energy Partners	9,995	69,492
Exeter Fund II LP	19,483	127,012

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SCHEDULE OF FEES PAID TO INVESTMENT MANAGERS AND CONSULTANTS

Year Ended June 30, 2019

Entity Name	Assets under Management (in thousands)	Fees (in dollars)
Exeter Value Fd IV	\$ 16,364	\$ 345,000
EMMES Interborough Fund LLC (NYC Vanbarton Interborough)	50,249	413,109
EQT Infrastructure III	41,566	847,795
First Reserve Energy Infrastructure GP II	29,176	479,986
FRM Sandy Manager LLC	92,740	657,511
Global Infrastructure Prt. III	79,596	1,777,500
Heitman America RE Trust	252,147	1,536,222
Heitman Credit	38,200	94,572
Hudson Sandy Manager LLC	34,526	328,020
H/2 SO Manager IV LP	13,277	443,739
H/2 Spec Opportunity Fd II	6,784	186,644
H/2 Spec Opportunity Fd III	43,130	532,887
IFM Global Infrastructure	103,825	1,037,915
Jamestown Premier Fund	35,134	209,660
J.P. Morgan Chase SP Fund	304,255	2,409,242
J.P. Morgan Chase SS Fund	129,104	2,005,534
KKR GI Inf. Fd II	76,425	818,410
KKR GI Inf. Fd III	7,897	918,951
KKR Real Estate Credit Opp Prtnrs Agg I	87,087	787,019
KKR Real Estate Partners Americas II LP	29,494	972,139
LaSalle US Property Fund	72,712	325,203
Lone Star RE Fd III	17,409	55,832
Metlife Core Property	62,951	346,858
Pramerica VI LP	21,079	303,099
Prisa	120,928	990,439
Prisa II	211,993	1,994,347
Prisa III	156,590	1,710,568
PW Real Estate Fund III LP	32,290	364,157
RREEF America II Inc	123,775	1,166,274
Silverpeak Legacy Partners III	4,452	11,942
Stockbridge Real Estate Fd	14,653	44,878
Taconic NY Inv Fd LP	3,717	35,379
The City Investment Fd	446	13,125
Thor Urban Property Fd II	17,118	80,928
Tristan European Property Inv	33,986	624,083
UBS Trumbull Property Fund (TPF)	215,885	1,588,918
USAA Eagle Real Estate Fund	82,665	423,826
Walton St Ref VI	20,338	211,835
Westbrook Real Estate VII LP	11,592	128,168
Westbrook Real Estate VIII LP	10,121	100,475
Westbrook RE Fund X CO-INVEST	16,676	317,958
Total Private Real Estate	4,010,659	40,468,884
International Equity		
Acadian (Emerging Markets)	708,507	2,351,032
Acadian (Small Cap)	413,690	1,355,321
Algert EAFE SC	114,017	173,756
Baillie Gifford (Growth)	1,282,642	3,225,567
Baillie Gifford Overseas Ltd (MTA)	777,135	4,095,160

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SCHEDULE OF FEES PAID TO INVESTMENT MANAGERS AND CONSULTANTS
Year Ended June 30, 2019

Entity Name	Assets under Management (in thousands)	Fees (in dollars)
Blackrock-MSCI EM MKTS INDEX MTA	\$ 1,867,004	\$ 271,549
Causeway EAFE Large Cap Value	1,201,656	4,287,009
DFA (Emerging Markets)	750,873	3,135,700
Eaton Vance EM MTA 321 (Emerging Markets)	600,585	1,768,177
Fierra Canada Corporation	254,921	1,392,139
Fidelity WorldUS SCC (fka Pyramis)	177,161	1,239,008
Generation GE (Opportunistic Strategic)	1,758	(661,640)
Sprucegrove (LMCC)	1,241,605	2,602,019
SSGA - WorldUS LMC Passive Core	1,879,164	220,861
SSGA MSCI EAFE Small Cap Index MTA	490,140	243,280
State Street	390	444,526
Total International Bivium	150,910	808,776
Total International FIS	154,922	501,280
Total International Leading Edge	157,070	930,860
Walter Scott EAFE Large Cap	1,273,611	3,789,819
Total International Equity	13,497,762	32,174,197
Hedge Funds		
Brevan Howard	20,016	55,172
Perry Capital	5,794	58,741
Total Hedge Funds	25,809	113,912
Mutual Fund - Mortgages		
Access Capital Strategies	156,524	286,072
AFL-CIO Housing Investment Trust	311,232	1,207,599
Total Mutual Funds - Mortgages	467,756	1,493,670
Treasury Inflation Protected Securities (TIPS)		
Blackrock	706,832	300,627
State Street (Passive)	2,202,702	55,970
Total TIPS	2,909,534	356,597
Mutual Fund - Domestic Equity		
Blackrock Inst R 2000 (Growth)	280,341	11,781
Blackrock Inst R 2000 (Value)	43,038	1,812
Total Mutual Funds - Domestic Equity	323,379	13,593
Mutual Fund - Fixed Income Bank Loan		
Babson Capital Management MTA	316,314	1,044,802
Bain Capital Credit LP	201,986	138,991
Credit Suisse BL MTA	326,230	729,920
Guggenheim BL MTA	153,851	599,587
Invesco BL MTA 161	312,868	1,168,674
Total Mutual Funds - Fixed Income Bank Loan	1,311,248	3,681,974
Total For All Investment Managers	64,076,012	179,740,161

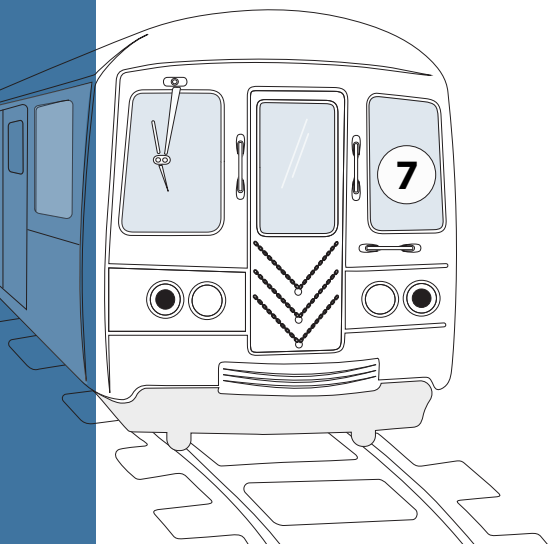
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SCHEDULE OF FEES PAID TO INVESTMENT MANAGERS AND CONSULTANTS
Year Ended June 30, 2019

Entity Name	Assets under Management (in thousands)	Fees (in dollars)
Consultant Fees		
Aksia		\$ 4,005
Burgiss		51,910
Callan Associates Inc		695,000
Courtland Partners Ltd		(90,500)
Ernst & Young		57,105
Foley & Lardner LLP		7,755
Global Trading Analytics		1,783
Institutional Shareholders Services		49,495
MERCER		(0)
MSCI BARRA LLC		385,691
Price Waterhouse Coopers		11,267
Squire Patton Boggs LLP		19,572
Stepstone Group LLC		1,919,655
The Townsend Group		(112,000)
Zeno Consulting Group		2,930
Total Consultant Fees		3,003,667
Legal Fees		
Bryan Cave LLP		381
Cox, Castle & Nicholson LLP		36,774
CSC		3,047
Daypitney LLP		27,137
Foster, Pepper PLLC		57,804
Hitchcock Law Firm		5,760
Morgan, Lewis & Bockius LLP		84,817
Nixon Peabody LLP		1,667
Phillsbury Winthrop Shaw Pittman LLP		32,612
Reinhart Boerner Van Deuren		57,165
Seward Kissel		832
Total Legal Fees		307,995
Total Fees FY 2019		183,051,823

Note: Investment managers' fees paid out of investment income.

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SCHEDULE OF BROKERS' COMMISSIONS Year Ended June 30, 2019

Brokerage Firm	Number of Shares Traded	Total Commissions
ABEL NOSER CORP	460,493	\$ 22,185
ABG SECURITIES AS (STOCKHOLM)	38,200	406
ABG SECURITIES LIMITED	39,315	159
ALLEN & COMPANY LLC	1,900	57
ANAND RATHI SHARE AND STOCK BKR LTD	32,190	448
APEX CLEARING CORPORATION	1,850	19
ARQAAM CAPITAL SOUTH AFRICA (PTY)	224,882	1,901
ARQAAM SECURITIES LLC	83,503	362
ATTIJARIWafa BANK	11,184	1,134
AUTONOMOUS RESEARCH LLP	83,184	3,090
AUTREPAT-DIV RE	50,594	823
B RILEY & CO LLC	62,858	1,448
BAADER BANK AG	28,658	888
BANCO BICE	175,068	850
BANCO ITAU SA	86,443	1,338
BANCO MODAL SA	58,010	325
BANCO PACTUAL SA	113,100	326
BANCO SANTANDER CENTRAL HISPANO	265,007	5,440
BANCO SANTANDER CHILE	81,775	311
BANK J VONTOBEL UND CO AG	105,300	13,277
BANK OF AMERICA CORPORATION	332,682	6,796
BANK OF AMERICA MERRILL LYNCH SECUR INC	2,118,157	11,288
BANQUE PARIBAS	14,097	287
BARCLAYS CAPITAL	3,599,698	39,696
BARCLAYS CAPITAL INC	48,720	1,341
BARCLAYS CAPITAL INC/LE	2,664,183	22,295
BARCLAYS CAPITAL LE	646,528	12,099
BARCLAYS CAPITAL SECURITES LIMITED	2,700	82
BLOOMBERG TRADEBOOK LLC	36,655	1,072
BMO CAPITAL MARKETS	163,684	3,429
BNP PARIBAS PRIME BROKERAGE ACTING AGENT	234	9
BNP PARIBAS SECURITIES (ASIA) LTD	2,100	30
BNP PARIBAS SECURITIES SERVICES	7,532,748	22,144
BNP PARIBAS SECURITIES SERVICES AUSTR BR	16,200	64
BNP PARIBAS SECURITIES SERVICES SA	44,431,025	40,299
BOFA SECURITIES INC	38,939,639	233,482
BRADESCO SA CTVM	2,139,375	10,596
BROADCORT CAPITAL (THRU ML)	2,698	47
BTG PACTUAL CHILE SA CORREDORES DE BOL	5,203,045	1,120
BTIG LLC	606,373	14,526
CABRERA CAPITAL MARKETS	1,977	40
CABRERA CAPITAL MARKETS LLC	348,631	1,287

Continued on next page

SCHEDULE OF BROKERS' COMMISSIONS

Year Ended June 30, 2019

Brokerage Firm	Number of Shares Traded	Total Commissions
CANACCORD GENUITY INC	78,160	\$ 3,098
CANACCORD GENUITY LIMITED	116,599	164
CANADIAN IMPERIAL BANK OF COMMERCE	1,196,952	8,149
CANTOR FITZGERALD & CO	260,471	5,104
CANTOR FITZGERALD EUROPE	1,500	18
CAPEL CURE MYERS GILTS	2,787	131
CAPITAL INSTITUTIONAL SVCS INC EQUITIES	4,880	98
CARNEGIE BANK AS	102,240	3,678
CARNEGIE INVESTMENT BANK AB	53,030	568
CARNEGIE SECURITIES FINLAND	87,540	3,857
CASTLEOAK SECURITIES	7,400	86
CHINA INTERNATIONAL CAPITAL CO	98,000	1,074
CHINA INTERNATIONAL CAPITAL CORPORATION	195,400	1,109
CIBC WORLD MKTS INC	118,206	2,255
CIMB GK SECURITIES PTE LTD	29,000	260
CITIBANK EUROPE PLC	400	178
CITIBANK MEXICO	560,700	1,038
CITIBANK NA	11,100	909
CITIBANK NA ISTANBUL	242,000	1,021
CITIBANK NA SPAIN	1,416	17
CITIBANK NA LIMA	117,362	451
CITIBANK OF COLOMBIA	209,598	1,040
CITIGROUP GLOBAL MARKETS AUSTRALIA PTY	267,445	1,591
CITIGROUP GLOBAL MARKETS INC	5,066,287	28,299
CITIGROUP GLOBAL MARKETS INDIA	437,649	1,298
CITIGROUP GLOBAL MARKETS KOREA SECS LTD	901,311	5,477
CITIGROUP GLOBAL MARKETS LIMITED	33,191,278	161,010
CITIGROUP GLOBAL MARKETS TAIWAN	27,249,342	10,335
CL SECURITIES TAIWAN COMPANY LIMITED	2,492,886	8,926
CLSA AUSTRALIA PTY LTD	2,476,803	4,594
CLSA SECURITIES KOREA LTD	518,340	10,600
CLSA SECURITIES MALAYSIA SDN BHD	2,554,200	2,210
CLSA SINGAPORE PTE LTD	7,801,876	67,695
COL FINANCIAL GROUP INC	1,000,000	141
COMMERCE INTL MERCHANT BANKERS	13,388	17
COMMERCIAL BANK OF QATAR LTD	114,208	1,214
CONVERGEX LLC	31,973	480
CORNERSTONE MACRO LLC	19,230	962
COWEN AND COMPANY LLC	1,214,277	21,532
COWEN EXECUTION SERVICES LLC	26,054,924	101,900
CRAIG HALLUM	82,425	3,566
CREDIBOLSA SOCIEDAD AGENTE	110,315	243

Continued on next page

SCHEDULE OF BROKERS' COMMISSIONS

Year Ended June 30, 2019

Brokerage Firm	Number of Shares Traded	Total Commissions
CREDICORP CAPITAL COLOMBIA SA	80,650	\$ 741
CREDIT LYONNAIS SECURITIES INDIA	7,282,571	21,019
CREDIT LYONNAIS SECURITIES (ASIA)	56,037,733	13,349
CREDIT SUISSE FIRST BOSTON	26,848,143	15,142
CREDIT SUISSE FIRST BOSTON (EUROPE)	85,103	4,360
CREDIT SUISSE FIRST BOSTON SA CTVM	75,771	396
CREDIT SUISSE SECS INDIA PRIVATE LTD	748,249	3,207
CREDIT SUISSE SECURITIES (EUROPE) LTD	21,673,822	61,033
CREDIT SUISSE SECURITIES (USA) LLC	28,520,510	113,003
CREST DEPOSITORY LIMITED	9,336	466
CS FIRST BOSTON (HONG KONG) LIMITED	1,527,053	8,316
CSFB AUSTRALIA EQUITIES LTD	579,427	1,409
CUTTONE & CO INC	31,198	312
DAIWA SBCM EUROPE	454,200	18,294
DAIWA SECURITIES (HK) LTD	153,800	599
DAIWA SECURITIES AMERICA INC	723,828	44,134
DAIWA SECURITIES COMPANY LTD	13,355	1,980
DANARESKA SECURITIES PT	4,256,500	350
DANSKE BANK AS	28,100	174
DAVIDSON DA & COMPANY INC	17,202	645
DAVY STOCKBROKERS	252,940	4,033
DBS VICKERS (HONG KONG) LIMITED	96,500	1,706
DBS VICKERS SECURITIES (SINGAPORE)	544,000	3,874
DEN NORSKE BANK	19,700	87
DEUTSCHE BANK AG	1,549,900	1,436
DEUTSCHE BANK AG LONDON	861,967	3,059
DEUTSCHE BANK SECURITIES INC	5,604,981	22,128
DEUTSCHE MORGAN GRENFELL SECS	654,904	2,050
DEUTSCHE SECURITIES ASIA LIMITED	1,654,385	2,961
DEUTSCHE SECURITIES ASIA LTD	101,625	876
DOLAT CAPITAL MARKETS LTD	44,520	333
DOUGHERTY & COMPANY LLC	48,344	1,606
DSP MERRILL LYNCH LTD	1,031,876	13,266
EDELWEISS SECURITIES PVT LTD	1,920	26
ERSTE BANK BEFEKTETESI RT	31,552	1,606
EUROCLEAR BANK SA NV	100	7
EVERCORE GROUP LLC	134,602	3,078
EXANE SA	1,455,499	48,696
FBR CAPITAL MARKETS & CO	1,281	26
FIDELITY CAPITAL MARKETS	14,329	322
FIDELITY CLEARING CANADA	53,400	317
FIDELITY CLEARING CANADA ULC	284,352	5,687

Continued on next page

SCHEDULE OF BROKERS' COMMISSIONS

Year Ended June 30, 2019

Brokerage Firm	Number of Shares Traded	Total Commissions
FIG PARTNERS LLC	11,456	\$ 229
FINANCIAL BROKERAGE GROUP (FBG)	688,074	7,326
FLOW CORRETORA DE MERCADORIAS LTDA	6,443,812	21,517
FOKUS BANK ASA	41,200	269
FUBON SECURITIES CO LTD	100,930	305
GMP SECURITIES LP	6,014	120
GOLDMAN SACHS (ASIA) LLC	6,727,164	2,884
GOLDMAN SACHS (INDIA)	1,512,609	2,449
GOLDMAN SACHS & CO INTL	41,940	158
GOLDMAN SACHS & CO LLC	34,619,017	164,131
GOLDMAN SACHS AUSTRALIA PTY LTD	831,750	2,016
GOLDMAN SACHS DO BRASIL CORRETORA	1,036,800	2,965
GOLDMAN SACHS INTERNATIONAL	3,350,620	28,254
GOODBODY STOCKBROKERS	410,587	1,307
GREEN STREET TRADING LLC	4,000	80
GUGGENHEIM CAPITAL MARKETS LLC	86,644	1,170
GUZMAN AND COMPANY	630,718	3,614
HANWHA SECURITIES SEOUL	14,955	74
HEIGHT SECURITIES LLC	33,601	634
HILLTOP SECURITIES INC	8,636	345
HONGKONG AND SHANGHAI BANKING CORPORATION	17,000	13
HSBC BANK AUSTRALIA LIMITED	44,410	744
HSBC BANK PLC	26,036,531	106,167
HSBC BANK USA	78,841	398
HSBC BROKERAGE (USA) INC	42,215	422
HSBC SECURITIES (USA) INC	37,954,645	14,023
HSBC SECURITIES INDIA HOLDINGS	1,650,509	4,821
HYUNDAI SECURITIES	4,873	225
ICBCFS LLC	17,661	208
ICICI BROKERAGE SERVICES	13,258,646	29,346
IM TRUST SA CORREDORES DE BOLSA	7,204,071	5,632
INDIA INFOLINE LTD	77,106	308
INSTINET	3,717,049	23,573
INSTINET AUSTRALIA CLEARING SRVC PTY LTD	5,405,445	12,555
INSTINET LLC	20,430,670	58,964
INSTINET PACIFIC LIMITED	81,662,360	45,734
INSTINET SINGAPORE SERVICES PT	4,933,296	8,010
INSTINET UK LTD	33,442,474	220,348
INTERFUND TRANSFER	37,800	449
INVESTEC BANK PLC	808,286	1,617
INVESTEC SECURITIES LTD	366,203	865
INVESTMENT TECHNOLOGY GROUP INC	1,569,727	26,953

Continued on next page

SCHEDULE OF BROKERS' COMMISSIONS

Year Ended June 30, 2019

Brokerage Firm	Number of Shares Traded	Total Commissions
INVESTMENT TECHNOLOGY GROUP LTD	7,452,581	\$ 55,176
IS YATIRIM MENKUL DEGERLER AS	2,035,220	2,518
ISI GROUP INC	777,303	9,529
ITG AUSTRALIA LTD	23,288,091	22,059
ITG CANADA	548,543	2,948
ITG INC	2,167,203	1,416
IVY SECURITIES INC	996,461	32,883
IXE CASA DE BOLSA SA DE CV	55,700	114
JANNEY MONTGOMERY SCOTT INC	41,537	891
JEFFERIES & COMPANY INC	3,834,080	52,442
JEFFERIES HONG KONG LIMITED	6,000	14
JEFFERIES INDIA PRIVATE LIMITED	1,803,671	7,556
JEFFERIES INTERNATIONAL LTD	26,796,598	26,088
JM FINANCIAL INSTITUTIONAL SECURITIES PR	1,128,280	9,351
JMP SECURITIES	94,828	2,120
JOH BERENBERG GOSSLER & CO KG	2,085,243	23,503
JONESTRADING INSTITUTIONAL SERVICES LLC	891,769	16,174
JP MORGAN CLEARING CORP	493,299	2,419
JP MORGAN INDIA PRIVATE LTD	757,021	1,968
JP MORGAN SECURITIES (ASIA PACIFIC) LTD	31,076,449	14,473
JP MORGAN SECURITIES (TAIWAN) LTD	12,344,406	5,567
JP MORGAN SECURITIES AUSTRALIA LTD	2,807,368	4,301
JP MORGAN SECURITIES INC	5,887,155	12,448
JP MORGAN SECURITIES LIMITED	44,404	1,305
JP MORGAN SECURITIES LLC	1,167,385	22,805
JP MORGAN SECURITIES PLC	10,538,935	127,578
JP MORGAN SECURITIES SINGAPORE	990,515	1,091
JP MORGAN SECURITIES (FAR EAST) LTD SEOUL	381,392	5,196
KAS-ASSOCIATIE NV	6,366	79
KEEFE BRUYETTE & WOODS INC	136,420	4,193
KEMPEN & CO NV	21,206	284
KEPLER EQUITIES PARIS	213,001	6,690
KEYBANC CAPITAL MARKETS INC	178,197	5,506
KGI SECURITIES CO LTD	190,000	763
KIM ENG SECURITIES (HK) LTD	481,085	4,254
KING CL & ASSOCIATES INC	121,704	4,672
KOREA INVESTMENT AND SECURITIES CO LTD	456,483	9,500
KOTAK SECURITIES LTD	2,132,672	16,443
KT ZMICO SECURITIES COMPANY LIMITED	12,500	636
LARRAIN VIAL	8,209,600	1,238
LEERINK PARTNERS LLC	14,182	378
LIBERUM CAPITAL LIMITED	9,000	178

Continued on next page

SCHEDULE OF BROKERS' COMMISSIONS

Year Ended June 30, 2019

Brokerage Firm	Number of Shares Traded	Total Commissions
LIQUIDNET CANADA INC	271,800	\$ 98
LIQUIDNET EUROPE LIMITED	41,651	2,645
LIQUIDNET INC	2,272,461	24,297
LONGBOW SECURITIES LLC	3,277	98
LOOP CAPITAL MARKETS	16,177,548	91,636
LOOP CAPITAL MARKETS LLC	1,652,520	6,854
LUMINEX TRADING AND ANALYTICS LLC	308,112	5,282
MACQUARIE BANK LIMITED	52,986,330	62,351
MACQUARIE CAPITAL (EUROPE) LTD	75,644	558
MACQUARIE CAPITAL (USA) INC	5,401	28
MACQUARIE SEC NZ LTD	21,017	88
MACQUARIE SECURITIES (INDIA) PVT LTD	48,805	88
MACQUARIE SECURITIES (USA) INC	9,060	196
MACQUARIE SECURITIES KOREA LIMITED	151,934	3,846
MAINFIRST BANK DE	77,627	1,255
MAYBANK KIM ENG SECURITIES PTE LTD	895,400	448
MEDIOBANCA SPA	186,488	2,424
MELLON BANK NA	38,414	590
MERRILL LYNCH	15,620	781
MERRILL LYNCH EQUITIES (AUSTRALIA)	1,000	4
MERRILL LYNCH FAR EAST LTD	13,600	28
MERRILL LYNCH INTERNATIONAL	55,886,858	141,106
MERRILL LYNCH INTL LONDON	11,000	25
MERRILL LYNCH PIERCE FENNER & SMITH INC	4,462,742	19,714
MIRABAUD SECURITIES LLP	30,280	1,963
MIRAE ASSET DAEWOO CO LTD	110,146	6,500
MIRAE ASSET SEC USA	25,246	888
MISCHLER FINANCIAL GROUP INC EQUITIES	18,454	187
MITSUBISHI UFJ SECURITIES (USA)	459,477	24,728
MITSUBISHI UFJ SECURITIES INT PLC	16,300	998
MIZUHO INTERNATIONAL PLC	63,800	2,011
MIZUHO SECURITIES ASIA LIMITED	2,400	147
MIZUHO SECURITIES USA INC	204,378	12,359
MKM PARTNERS LLC	38,261	1,506
MORGAN STANLEY AND CO INTERNATIONAL	19,282,205	41,832
MORGAN STANLEY CO INCORPORATED	34,303,082	131,304
MORGAN STANLEY DEAN WITTER AUSTRALIA	364,840	650
MORGAN STANLEY INDIA COMPANY PVT LTD	2,642,344	3,372
MORGAN STANLEY TAIWAN LIMITED	4,965,721	6,599
NATIONAL FINANCIAL SERVICES CORPORATION	99,904	1,047
NATIONAL FINANCIAL SERVICES LLC	9,485	217
NBCN CLEARING INC	5,790	232

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SCHEDULE OF BROKERS' COMMISSIONS

Year Ended June 30, 2019

Brokerage Firm	Number of Shares Traded	Total Commissions
NEEDHAM AND COMPANY LLC	65,871	\$ 3,122
NESBITT BURNS	134,725	2,088
NH INVESTMENT AND SECURITIES CO LTD	231,251	4,427
NOMURA FINANCIAL ADVISORY & SEC INDIA	4,152,329	9,727
NOMURA SECURITIES CO LTD	31,000	363
NOMURA SECURITIES INTERNATIONAL INC	94,446	1,834
NORDEA BANK AB (PUBL) FINNISH BRANCH	139,000	766
NORTH SOUTH CAPITAL LLC	29,000	590
NORTHLAND SECURITIES INC	12,156	486
NUMIS SECURITIES INC	133,085	924
NUMIS SECURITIES LIMITED	132,900	541
ODDO CIE	1,650	32
ODDO ET CIE	22,211	565
OLIVETREE USA LLC	6,843	137
OPPENHEIMER & CO INC	105,272	3,293
OSK SECURITIES (THAILAND) PUBLIC COMPANY	27,560	306
PAREL	386,967	10,849
PARIBAS	1,200	19
PAVILION GLOBAL MARKETS LTD	807,017	5,794
PEEL HUNT LLP	2,777,260	505
PENSERRA SECURITIES	2,103,124	21,031
PENSERRA SECURITIES LLC	9,882,473	14,482
PERSHING LIMITED	1,454	63
PERSHING LLC	369,451,653	191,099
PERSHING SECURITIES CANADA LIMITED	1,950,000	607
PERSHING SECURITIES LIMITED	1,300,175	4,438
PETERS & CO LIMITED	25,766	258
PICTET (CANADA) LP	28,714	220
PICTET AND CIE	1,093,012	4,443
PICTET AND CIE GENEVA	29,483	123
PICTET CANADA LP	145,161	1,452
PIPER JAFFRAY & CO	155,700	5,245
RBC DOMINION SECURITIES CORPORATION	277,651	5,594
RAIFFEISEN ZENTRALBANK OESTERREICH AG	237,386	2,060
RAYMOND JAMES AND ASSOCIATES	42,283	976
RAYMOND JAMES AND ASSOCIATES INC	168,528	5,958
RAYMOND JAMES LTD	137,944	2,399
RBC CAPITAL MARKETS LLC	10,128,015	63,106
RBC DOMINION SECURITIES INC	1,800,902	14,101
REDBURN (EUROPE) LIMITED	1,782,026	23,837
RENAISSANCE MACRO SECURITIES LLC	9,031	181
RHB INVESTMENT BANK BERHAD	538,500	1,060

Continued on next page

SCHEDULE OF BROKERS' COMMISSIONS

Year Ended June 30, 2019

Brokerage Firm	Number of Shares Traded	Total Commissions
ROBERT W BAIRD CO INCORPORATED	1,714,063	\$ 36,558
ROYAL BANK OF CANADA EUROPE LTD	1,389,526	15,840
SAMSUNG SECURITIES CO LTD	57,172	867
SANDLER O'NEILL AND PARTNERS LP	11,100	404
SANFORD C BERNSTEIN CO LLC	2,497,052	24,209
SANFORD C BERNSTEIN AND CO LLC	987,918	2,176
SANFORD C BERNSTEIN LTD	3,542,326	68,623
SBICAP SECURITIES LIMITED	45,483	606
SCOTIA CAPITAL INC	178,000	1,029
SEAPORT GROUP SECURITIES LLC	160,657	2,565
SECURITIES SERVICES NOMINEES	123,109	789
SECURITY CAPITAL BROKERAGE INC	10,336	181
SG AMERICAS SECURITIES LLC	481,849	505
SG ASIA SECURITIES (INDIA) PVT LTD	1,785,596	4,821
SG SECURITIES (LONDON) LTD	17,666,488	6,306
SG SECURITIES HK	49,872,301	12,897
SIDOTI & COMPANY LLC	8,121	244
SKANDINAVISKA ENSKILDA BANKEN	12,192	223
SKANDINAVISKA ENSKILDA BANKEN LONDON	17,069	191
SMBC NIKKO CAPITAL MARKETS LIMITED	336,700	21,602
SMBC NIKKO SECURITIES (HONG KONG) LTD	108,281	1,141
SMBC SECURITIES INC	218,554	1,884
SOCIETE GENERALE	628,617	3,452
SOCIETE GENERALE LONDON BRANCH	12,769,455	51,223
STANDARD CHARTERED BANK	45,535	541
STEPHENS INC	192,870	8,155
STIFEL NICOLAUS & CO INC	427,166	11,641
STIFEL NICOLAUS EUROPE LIMITED	16,264	206
SUMITOMO MITSUI BANKING CORP	1,200	128
SUNTRUST CAPITAL MARKETS INC	177,718	5,749
SVENSKA HANDELSBANKEN	7,012	79
TD SECURITIES (USA) LLC	16,237	516
TELSEY ADVISORY GROUP LLC	46,462	2,197
THE FIG GROUP LLC	1,900	255.66
THE HONGKONG AND SHANGHAI BANK	709,625	5,585
TORONTO DOMINION SECURITIES INC	1,139,400	6,452
TRIGON DOM MAKLERSKI SA	33,489	181
UBS AG	35,772,620	105,179
UBS AG LONDON	13,370,200	1,172
UBS AG LONDON BRANCH	294,189	4,867
UBS LIMITED	15,520,067	88,566
UBS SECURITIES ASIA LTD	9,285,507	24,061

Continued on next page

SCHEDULE OF BROKERS' COMMISSIONS
Year Ended June 30, 2019

Brokerage Firm	Number of Shares Traded	Total Commissions
UBS SECURITIES CANADA INC	1,691,053	\$ 12,217
UBS SECURITIES INDIA PRIVATE LTD	561,442	4,915
UBS SECURITIES LLC	2,439,388.00	18,396
UBS SECURITIES PTE LTD	3,118,901	13,895
UBS SECURITIES PTE LTD SEOUL	299,818	16,746
UBS WARBURG AUSTRALIA EQUITIES	3,271,378.00	4,491
UOB KAY HIAN PTE LIMITED	548,467	853
VIRTU AMERICAS LLC	677,142	14,318
WALL STREET ACCESS	210,271	1,320
WEDBUSH MORGAN SECURITIES INC	11,583	274
WEEDEN & CO	20,919,301	121,188
WELLS FARGO SECURITIES LLC	163,664	3,800
WILLIAM BLAIR & COMPANY LLC	214,225	8,648
WILLIAMS CAPITAL GROUP LP (THE)	4,855,762	58,797
WILSON HTM LTD	4,927	16
WINTERFLOOD SECURITIES LTD	40,100	102
WOLFE TRAHAN SECURITIES	915	27
XP INVESTIMENTOS CCTVM SA	401,361	835
YUANTA SECURITIES CO LTD	1,150,800	1,779
ZANNEX SECURITIES	469,300	412
TOTAL	1,659,137,357	4,506,260



Wonder Wheel

Wonder Wheel

T SHOPPE
apples - churros - funnel cake

BUCKETS

MORE RIDES

BUCKETS

Souvenirs

PART 4 ACTUARIAL SECTION





OFFICE OF THE ACTUARY

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

SHERRY S. CHAN
CHIEF ACTUARY

December 9, 2019

Board of Trustees
New York City Employees' Retirement System
335 Adams Street, Suite 2300
Brooklyn, NY 11201-3751

Re: Actuarial Information for the Comprehensive Annual Financial Report (CAFR) for the Fiscal Year Ended June 30, 2019

Dear Members of the Board of Trustees:

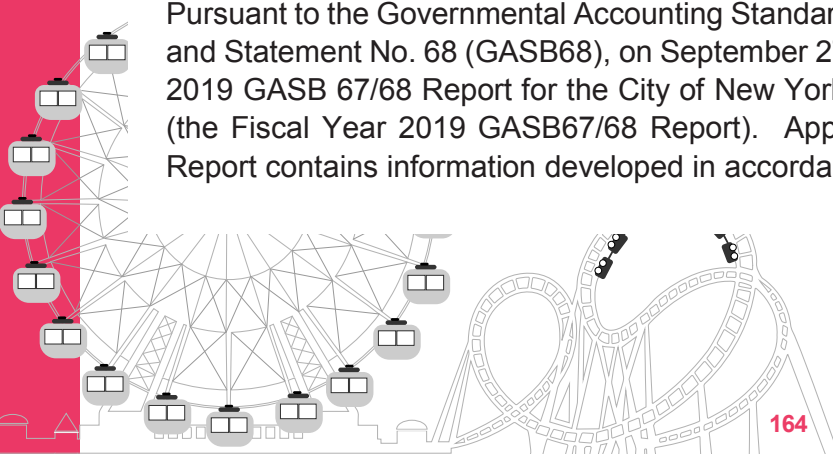
The financial objective of the New York City Employees' Retirement System (NYCERS or the Plan) is to fund members' retirement benefits during their active service by establishing employer normal contribution rates that, expressed as a percentage of active member annualized covered payroll, would remain 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. June 30, 2017 (Lag) actuarial valuation to determine Fiscal Year 2019 Employer Contributions (the 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 2019, the Actuarial Contributions to NYCERS, are equal to those recommended by the Actuary of the New York City Pension Funds and Retirement Systems (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 27, 2019, the Actuary published the "Fiscal Year 2019 GASB 67/68 Report for the City of New York and the New York City Retirement Systems" (the Fiscal Year 2019 GASB67/68 Report). Appendix A of the Fiscal Year 2019 GASB67/68 Report contains information developed in accordance with GASB67 for NYCERS.



Board of Trustees
New York City Employees' Retirement System
December 9, 2019
Page 2

Actuarial Assumptions and Methods

The Actuary issued a Report entitled "Proposed Changes in Actuarial Assumptions and Methods Used in Determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2018 for the New York City Employees' Retirement System," dated December 31, 2018. The Actuarial Assumptions and Methods described in that report were adopted by the Board of Trustees at the February 14, 2019 Board meeting and are referred to as the "2019 A&M." These new actuarial assumptions and methods are effective beginning with Fiscal Year 2019.

These actuarial assumptions and methods meet the parameters set forth by the Actuarial Standards of Practice (ASOPs).

Benefits and Census Data

A summary of the benefits applicable to Plan members included in the June 30, 2017 (Lag) actuarial valuation is shown in the Introductory Section of the CAFR. There are no changes in any of the plan provisions since the prior year.

Census data is submitted by the Plan's administrative staff and by the employer's payroll facilities and is reviewed by the Office of the Actuary (OA) for consistency and reasonability.

A summary of the census data used in the June 30, 2017 (Lag) actuarial valuation is included in this CAFR. A summary of the census data used in the June 30, 2016 (Lag) actuarial valuation of the Plan is available in the Fiscal Year 2018 CAFR.

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 CAFR is a schedule of funded status based on the Entry Age Normal cost method (Table 16).

Also included in the Actuarial Section of the CAFR is a Solvency Test (i.e. Comparative Summary of Accrued Liabilities Funded by Actuarial Value of Assets) (Table 17) 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 Financial Section of the CAFR were prepared by the OA:

- Summary of Actuarial Assumptions and Methods in Effect for the June 30, 2017 (Lag) Actuarial Valuation.
- Active Member Valuation Data.
- Number and Salary of Active Members by Occupational Position as of the June 30, 2017 (Lag) Actuarial Valuation.
- Number of Active Members by Occupational Position and Age as of the June 30, 2017 (Lag) Actuarial Valuation.
- Number of Active Members by Occupational Position and Years of Service as of the June 30, 2017 (Lag) Actuarial Valuation.
- Active Member Valuation Data by Participating Employers.
- Summary of Plan Membership.
- Retirees and Beneficiaries Added to and Removed from Rolls.
- Statutory vs. Actuarial Contributions.
- 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 CAFR 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 any of the information in this Actuarial Section or any of the actuarial information presented elsewhere in this CAFR, please do not hesitate to contact Mr. Michael J. Samet, Mr. Edward Hue, or me.

Acknowledgement of Qualification

I, Sherry S. Chan, am the Chief Actuary for, and independent of, the New York City Retirement Systems and Pension Funds. I am a Fellow of the Society of Actuaries, an Enrolled Actuary under the Employee Retirement Income and Security Act of 1974, a Member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting 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,



Sherry S. Chan, FSA, EA, MAAA, FCA
Chief Actuary

SC/eh

Att.

cc: Mr. Charles Barkley - New York City Employees' Retirement System
Mr. Frankie Chen - New York City Office of the Actuary
Mr. Craig Chu - New York City Office of the Actuary
Ms. Chun Gong - New York City Employees' Retirement System
Mr. Edward Hue - New York City Office of the Actuary
Mr. Michael Samet - New York City Office of the Actuary
Keith Snow, Esq. - New York City Office of the Actuary
Ms. Melanie Whinnery - New York City Employees' Retirement System

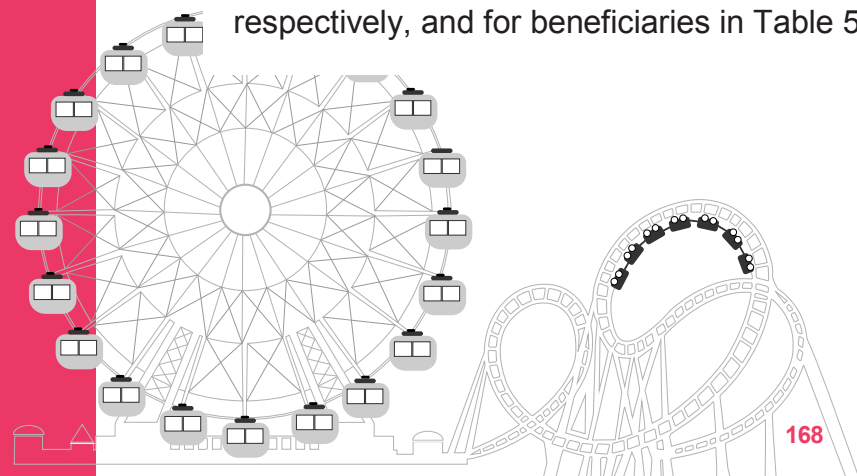
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION

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.

Based on the most recent actuarial experience study and recommendations prepared by Bolton, Inc. in their 10-year experience study ending on June 30, 2017, the Actuary issued a Report entitled “Proposed Changes in Actuarial Assumptions and Methods Used in Determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2018 for the New York City Employees’ Retirement System,” dated December 31, 2018. The actuarial assumptions and methods described in that report were adopted by the Board of Trustees at the February 14, 2019 Board meeting and are referred to as the “2019 A&M.” These new actuarial assumptions and methods are effective beginning with Fiscal Year 2019.

2. The Actuarial Interest Rate (AIR) assumption is 7.0% per annum, net of investment expenses.
3. Active service tables by certain occupational groups are used to estimate various withdrawals from active service. Probabilities are shown in Table 1 for members withdrawing from active service for service retirement, in Table 2 for members terminating from active service without employer-provided benefits or with vested benefits, and in Tables 3 and 4 for members withdrawing from active service due to disability or death, respectively.
4. The service retiree mortality, disabled retiree mortality, and beneficiary mortality base tables are projected from 2012 using mortality improvement scale MP-2018. The base tables are also multiplied by adjustment factors to convert them 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.



SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)

5. A salary scale is used to estimate salaries at termination, retirement, or death. Percentage increases are shown in Table 6 by certain occupational groups. The Salary Scales include a General Wage Increase (GWI) assumption of 3.0% per annum.
6. The salary data was adjusted to reflect overtime earnings. A Baseline Overtime assumption is applied to most years and a separate overtime assumption, known as a Dual Overtime assumption, is applied to the years included in the calculation of Final Salary or Final Average Salary. Baseline Overtime and Dual Overtime percentages are shown in Table 7 for certain occupational groups.
7. 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 Auto COLA and 2.5% per annum for escalation.
8. The valuation assumes a closed group of members.
9. The Entry Age Normal (EAN) cost method of funding is used by the Plan's 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 earnings between the age a member enters the plan 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 Employer 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, 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.

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

10. One-Year Lag Methodology (OYLM) uses a June 30, XX-2 valuation date to determine Fiscal Year XX Employer Contributions.

This methodology requires adjustments to certain components used to determine the Fiscal Year XX Employer Contributions:

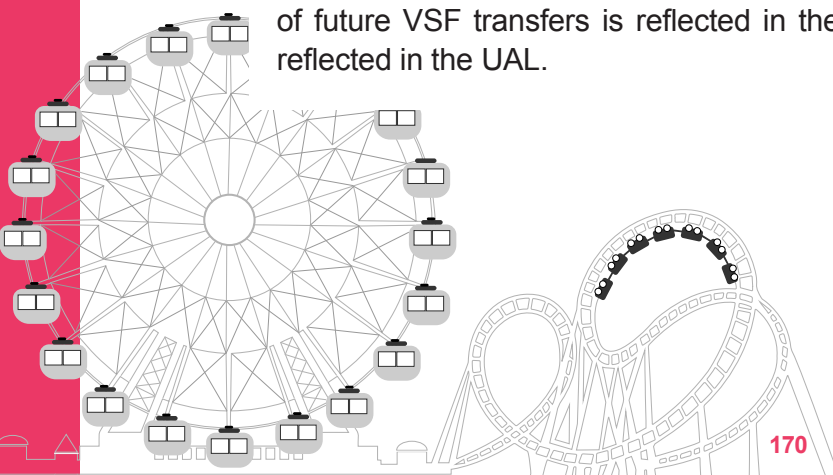
- a. Normal Cost: The normal cost as of June 30, XX-2 is rolled forward with the AIR of 7.0% to derive the mid-year normal cost for Fiscal Year XX.
- b. UAL Payments: For determining the UAL payments for Fiscal Year XX, and to be consistent with the OYLM, the UAL as of June 30, XX-2 is adjusted by the discounted value of employer normal cost and UAL payments paid during Fiscal Year XX-1 and the discounted value of the administrative expenses reimbursed during Fiscal Years XX-1 and XX.

11. The Actuarial Asset Valuation Method (AAVM) recognizes investment returns greater or less than expected over a period of six years.

In accordance with this AAVM, actual Unexpected Investment Returns (UIR) are phased into the AVA at rates of 15%, 15%, 15%, 15%, 20%, and 20% per year, respectively, (i.e. cumulative rates of 15%, 30%, 45%, 60%, 80%, and 100%).

The AVA is further constrained to be within a corridor of 80% to 120% of the Market Value of Asset (MVA).

12. The obligations of the New York City Employees' Retirement System (NYCERS) to the Correction Officers' Variable Supplements Fund (COVSF), Housing Police Officers' Variable Supplements Fund (HPOVSF), Housing Police Superior Officers' Variable Supplements Fund (HPSOVSF), Transit Police Officers' Variable Supplements Fund (TPOVSF), and Transit Police Superior Officers' Variable Supplements Fund (TPSOVSF) are recognized through a methodology where the PV of future VSF transfers from NYCERS to the COVSF, HPOVSF, HPSOVSF, TPOVSF, and TPSOVSF is included directly as an actuarial liability of NYCERS. This amount is computed as the excess, if any, of the PV of benefits of the COVSF, HPOVSF, HPSOVSF, TPOVSF, and TPSOVSF over the AVA of the COVSF, HPOVSF, HPSOVSF, TPOVSF, and TPSOVSF, respectively. Under EAN, a portion of the PV of future VSF transfers is reflected in the PV of future normal costs and a portion is reflected in the UAL.



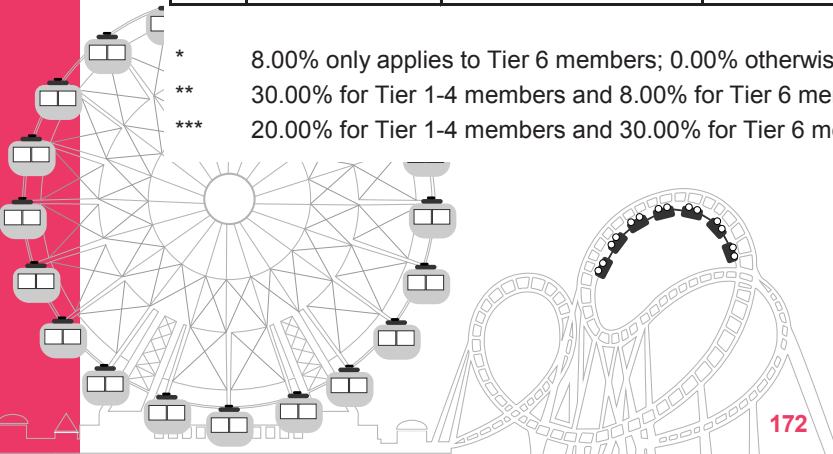
SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)

13. Obligations attributable to the WTC Disability Law and to the WTC Death Benefits Law are determined through the use of explicit assumptions in the 2019 A&M, and through estimation techniques for post-retirement reclassifications.
14. For the June 30, 2017 actuarial valuation, the New York City Off-Track Betting Corporation (OTB) was valued on a going-concern basis.
15. For actuarial valuation purposes, members are separated into six groups:
 - a. General (for calculation purposes, these are further subdivided into Plan Groups).
 - b. Transit Operating positions.
 - c. MTA Bridges and Tunnels members.
 - d. Sanitation members.
 - e. Members of the Housing and Transit Police Forces.
 - f. Members of the Correction Force.

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 1					
PROBABILITIES OF SERVICE RETIREMENT: GENERAL					
Age	Reduced Service Retirement	Unreduced Service Retirement For Members Mandated Into Their Retirement Program		Unreduced Service Retirement For Members Who Elected an Improved Retirement Program	
		Year 1	Ultimate	Year 1	Ultimate
≤ 54	0.00%	8.00%	5.00%	40.00%	15.00%
55	3.50%	8.00%	5.00%	40.00%	15.00%
56	3.50%	8.00%	5.00%	40.00%	15.00%
57	3.50%	8.00%	5.00%	40.00%	15.00%
58	3.50%	8.00%	5.00%	40.00%	15.00%
59	5.25%	8.00%	5.00%	40.00%	15.00%
60	7.00%	8.00%	5.00%	40.00%	15.00%
61	8.00%	8.00%	7.50%	40.00%	15.00%
62	8.00%*	30.00%/8.00%**	10.00%	60.00%	25.00%
63	0.00%	20.00%/30.00%***	15.00%	40.00%	20.00%
64	0.00%	20.00%	15.00%	40.00%	20.00%
65	0.00%	30.00%	20.00%	60.00%	25.00%
66	0.00%	20.00%	15.00%	40.00%	20.00%
67	0.00%	20.00%	15.00%	40.00%	20.00%
68	0.00%	20.00%	15.00%	40.00%	20.00%
69	0.00%	20.00%	15.00%	40.00%	20.00%
70	0.00%	25.00%	25.00%	40.00%	25.00%
71	0.00%	25.00%	25.00%	40.00%	25.00%
72	0.00%	25.00%	25.00%	40.00%	25.00%
73	0.00%	25.00%	25.00%	40.00%	25.00%
74	0.00%	25.00%	25.00%	40.00%	25.00%
75	0.00%	25.00%	25.00%	40.00%	25.00%
76	0.00%	25.00%	25.00%	40.00%	25.00%
77	0.00%	25.00%	25.00%	40.00%	25.00%
78	0.00%	25.00%	25.00%	40.00%	25.00%
79	0.00%	25.00%	25.00%	40.00%	25.00%
≥ 80	N/A	100.00%	100.00%	100.00%	100.00%

* 8.00% only applies to Tier 6 members; 0.00% otherwise.
 ** 30.00% for Tier 1-4 members and 8.00% for Tier 6 members.
 *** 20.00% for Tier 1-4 members and 30.00% for Tier 6 members.



**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 1 (Cont'd)				
PROBABILITIES OF SERVICE RETIREMENT: CORRECTION				
	Reduced Service Retirement Tiers 1-3		Reduced Service Retirement Tier 3R*	
	Age	Rate	Service	Rate
		≤ 54 55 56 57 58 59 60 61 62 ≥ 63	0.00% 2.00% 2.00% 2.00% 2.00% 3.00% 4.00% 5.00% 0.00% N/A	≤ 19 20 21 22 23 24 ≥ 25
Age	Unreduced Service Retirement For Members Mandated Into Their Retirement Program		Unreduced Service Retirement For Members Who Elected an Improved Retirement Program	
	Year 1	Ultimate	Year 1	Ultimate
≤ 54 55 56 57 58 59 60 61 62 ≥ 63	60.00% 60.00% 60.00% 60.00% 60.00% 60.00% 60.00% 60.00% 60.00% 100.00%	20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 30.00% 40.00% 100.00%	70.00% 70.00% 70.00% 70.00% 70.00% 70.00% 70.00% 70.00% 100.00%	20.00% 20.00% 20.00% 20.00% 20.00% 20.00% 30.00% 40.00% 100.00%

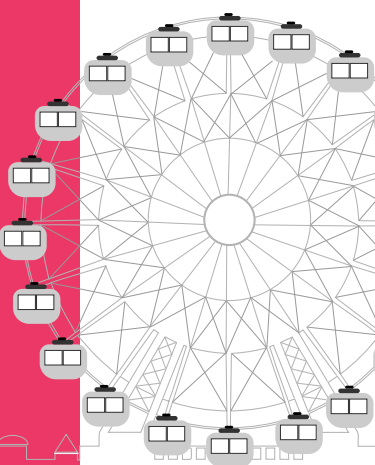
* Assumption also used for IDA Tier 3R members.

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 1 (Cont'd)				
PROBABILITIES OF SERVICE RETIREMENT: SANITATION				
	Reduced Service Retirement Tiers 1-4		Reduced Service Retirement Tier 3R	
	Age	Rate	Service	Rate
	≤ 54	0.00%	≤ 19	0.00%
	55	4.00%	20	5.00%
	56	4.00%	21	2.00%
	57	4.00%	22	5.00%
	58	4.00%	23	2.00%
	59	6.00%	24	2.00%
	60	8.00%	≥ 25	N/A
	61	10.00%		
	62	0.00%		
	63	0.00%		
	64	0.00%		
	65	0.00%		
	66	0.00%		
	67	0.00%		
	68	0.00%		
	69	0.00%		
	≥ 70	N/A		
Age	Unreduced Service Retirement For Members Mandated Into Their Retirement Program		Unreduced Service Retirement For Members Who Elected an Improved Retirement Program	
	Year 1	Ultimate	Year 1	Ultimate
≤ 45	30.00%	10.00%	40.00%	15.00%
46	30.00%	10.00%	42.00%	15.00%
47	30.00%	10.00%	44.00%	15.00%
48	30.00%	10.00%	46.00%	15.00%
49	30.00%	10.00%	48.00%	15.00%
50	30.00%	10.00%	50.00%	15.00%
51	30.00%	10.00%	52.00%	15.00%
52	30.00%	10.00%	54.00%	15.00%
53	30.00%	10.00%	56.00%	15.00%
54	30.00%	10.00%	58.00%	15.00%
55	30.00%	10.00%	60.00%	15.00%
56	30.00%	10.00%	60.00%	16.00%
57	30.00%	10.00%	60.00%	17.00%
58	30.00%	10.00%	60.00%	18.00%
59	30.00%	10.00%	60.00%	19.00%
60	30.00%	10.00%	60.00%	20.00%
61	30.00%	15.00%	60.00%	25.00%
62	45.00%/30.00%*	20.00%/15.00%**	60.00%	30.00%
63	30.00%	15.00%	40.00%	20.00%
64	30.00%	15.00%	40.00%	20.00%
65	45.00%	20.00%	60.00%	30.00%
66	30.00%	15.00%	40.00%	20.00%
67	30.00%	15.00%	40.00%	20.00%
68	30.00%	15.00%	40.00%	20.00%
69	30.00%	15.00%	40.00%	20.00%
≥ 70	100.00%	100.00%	100.00%	100.00%

*45.00% for Tier 1-4 members and 30.00% for Tier 3R members.

**20.00% for Tier 1-4 members and 15.00% for Tier 3R members.



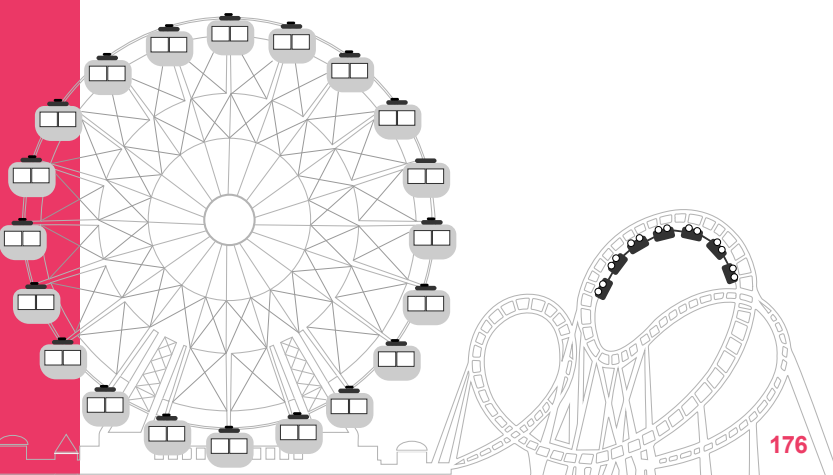
**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 1 (Cont'd)					
PROBABILITIES OF SERVICE RETIREMENT: TBTA					
Age	Members Mandated Into Their Retirement Program			Members Who Elected an Improved Retirement Program	
	Reduced Service Retirement	Unreduced Service Retirement		Unreduced Service Retirement	
		Year 1	Ultimate	Year 1	Ultimate
≤ 54	0.00%	30.00%	20.00%	60.00%	30.00%
55	2.00%	30.00%	20.00%	60.00%	30.00%
56	2.00%	30.00%	20.00%	60.00%	30.00%
57	2.00%	30.00%	20.00%	60.00%	30.00%
58	2.00%	30.00%	20.00%	60.00%	30.00%
59	3.00%	30.00%	20.00%	60.00%	30.00%
60	4.00%	30.00%	20.00%	60.00%	30.00%
61	5.00%	30.00%	30.00%	60.00%	30.00%
62	0.00%	40.00%	40.00%	60.00%	40.00%
63	0.00%	30.00%	30.00%	40.00%	30.00%
64	0.00%	30.00%	30.00%	40.00%	30.00%
65	0.00%	40.00%	40.00%	60.00%	40.00%
66	0.00%	30.00%	30.00%	40.00%	30.00%
67	0.00%	30.00%	30.00%	40.00%	30.00%
68	0.00%	30.00%	30.00%	40.00%	30.00%
69	0.00%	30.00%	30.00%	40.00%	30.00%
70	0.00%	30.00%	30.00%	40.00%	30.00%
71	0.00%	30.00%	30.00%	40.00%	30.00%
72	0.00%	30.00%	30.00%	40.00%	30.00%
73	0.00%	30.00%	30.00%	40.00%	30.00%
74	0.00%	30.00%	30.00%	40.00%	30.00%
75	0.00%	30.00%	30.00%	40.00%	30.00%
76	0.00%	30.00%	30.00%	40.00%	30.00%
77	0.00%	30.00%	30.00%	40.00%	30.00%
78	0.00%	30.00%	30.00%	40.00%	30.00%
79	0.00%	30.00%	30.00%	40.00%	30.00%
≥ 80	N/A	100.00%	100.00%	100.00%	100.00%

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 1 (Cont'd)					
PROBABILITIES OF SERVICE RETIREMENT: TRANSIT					
Age	Reduced Service Retirement	Unreduced Service Retirement For Members Mandated Into Their Retirement Program		Unreduced Service Retirement For Members Who Elected an Improved Retirement Program	
		Year 1	Ultimate	Year 1	Ultimate
≤ 54	0.00%	30.00%	15.00%	25.00%	15.00%
55	2.00%	30.00%	15.00%	25.00%	15.00%
56	2.00%	30.00%	15.00%	25.00%	15.00%
57	2.00%	30.00%	15.00%	25.00%	15.00%
58	2.00%	30.00%	15.00%	25.00%	15.00%
59	3.00%	30.00%	15.00%	25.00%	15.00%
60	4.00%	35.00%	15.00%	30.00%	15.00%
61	5.00%	45.00%	20.00%	40.00%	20.00%
62	5.00%*	20.00%	20.00%	50.00%	40.00%
63	0.00%	20.00%	20.00%	40.00%	30.00%
64	0.00%	20.00%	20.00%	40.00%	30.00%
65	0.00%	25.00%	25.00%	50.00%	40.00%
66	0.00%	20.00%	20.00%	40.00%	30.00%
67	0.00%	20.00%	20.00%	40.00%	30.00%
68	0.00%	20.00%	20.00%	40.00%	30.00%
69	0.00%	20.00%	20.00%	40.00%	30.00%
70	0.00%	25.00%	25.00%	40.00%	30.00%
71	0.00%	25.00%	25.00%	40.00%	30.00%
72	0.00%	25.00%	25.00%	40.00%	30.00%
73	0.00%	25.00%	25.00%	40.00%	30.00%
74	0.00%	25.00%	25.00%	40.00%	30.00%
75	0.00%	25.00%	25.00%	40.00%	30.00%
76	0.00%	25.00%	25.00%	40.00%	30.00%
77	0.00%	25.00%	25.00%	40.00%	30.00%
78	0.00%	25.00%	25.00%	40.00%	30.00%
79	0.00%	25.00%	25.00%	40.00%	30.00%
≥ 80	N/A	100.00%	100.00%	100.00%	100.00%

*5.00% only applies to Tier 6 members; 0.00% otherwise.

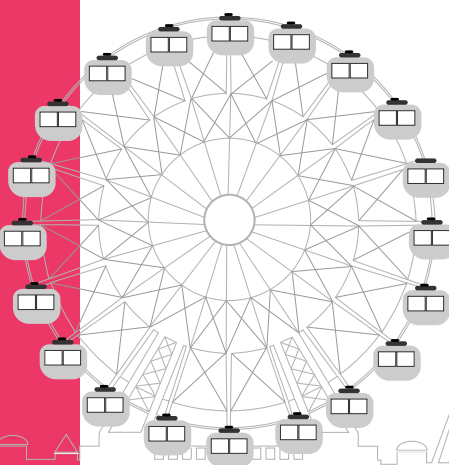


**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 2					
PROBABILITIES OF TERMINATION					
	Probabilities of Termination				
Years of Service	General	Correction	Sanitation	TBTA	Transit
0	8.40%	7.50%	4.00%	9.00%	9.00%
1	7.00%	6.00%	2.00%	4.50%	4.50%
2	5.60%	4.50%	1.00%	2.00%	2.00%
3	4.20%	3.00%	1.00%	1.50%	1.50%
4	4.20%	2.25%	1.00%	1.25%	1.25%
5	4.20%	1.50%	1.00%	1.10%	1.10%
6	4.00%	1.35%	0.90%	1.10%	1.10%
7	3.80%	1.20%	0.80%	1.10%	1.10%
8	3.60%	1.05%	0.70%	1.10%	1.10%
9	3.40%	0.90%	0.60%	1.10%	1.10%
10	3.20%	0.75%	0.50%	1.10%	1.10%
11	3.00%	0.75%	0.50%	1.00%	1.00%
12	2.80%	0.75%	0.50%	0.90%	0.90%
13	2.60%	0.75%	0.50%	0.80%	0.80%
14	2.40%	0.75%	0.50%	0.70%	0.70%
15	2.20%	0.75%	0.50%	0.55%	0.55%
16	2.00%	0.75%	0.50%	0.55%	0.55%
17	1.80%	0.75%	0.50%	0.55%	0.55%
18	1.60%	0.75%	0.50%	0.55%	0.55%
19	1.40%	0.75%	0.50%	0.55%	0.55%
20+	1.40%	0.75%	0.50%	0.55%	0.55%

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 3				
PROBABILITIES OF DISABILITY FOR ACTIVE MEMBERS: GENERAL				
Age	Ordinary Disability		Accidental Disability	
	Males	Females	Males	Females
15	0.140%	0.140%	0.028%	0.014%
16	0.140%	0.140%	0.028%	0.014%
17	0.140%	0.140%	0.028%	0.014%
18	0.140%	0.140%	0.028%	0.014%
19	0.140%	0.140%	0.028%	0.014%
20	0.140%	0.140%	0.028%	0.014%
21	0.140%	0.140%	0.028%	0.014%
22	0.140%	0.140%	0.028%	0.014%
23	0.140%	0.140%	0.028%	0.014%
24	0.140%	0.140%	0.028%	0.014%
25	0.140%	0.140%	0.028%	0.014%
26	0.140%	0.140%	0.028%	0.014%
27	0.140%	0.140%	0.028%	0.014%
28	0.140%	0.140%	0.028%	0.014%
29	0.140%	0.140%	0.028%	0.014%
30	0.140%	0.140%	0.028%	0.014%
31	0.154%	0.140%	0.028%	0.014%
32	0.168%	0.140%	0.028%	0.014%
33	0.182%	0.140%	0.028%	0.014%
34	0.196%	0.140%	0.028%	0.014%
35	0.210%	0.140%	0.028%	0.014%
36	0.224%	0.147%	0.028%	0.014%
37	0.238%	0.154%	0.028%	0.014%
38	0.252%	0.161%	0.028%	0.014%
39	0.266%	0.168%	0.028%	0.014%
40	0.280%	0.175%	0.028%	0.014%
41	0.294%	0.182%	0.028%	0.014%
42	0.308%	0.189%	0.028%	0.014%
43	0.322%	0.196%	0.028%	0.014%
44	0.336%	0.203%	0.028%	0.014%
45	0.350%	0.210%	0.028%	0.014%
46	0.364%	0.238%	0.028%	0.014%
47	0.378%	0.266%	0.028%	0.014%
48	0.392%	0.294%	0.028%	0.014%
49	0.406%	0.322%	0.028%	0.014%
50	0.420%	0.350%	0.028%	0.014%
51	0.434%	0.378%	0.028%	0.014%
52	0.448%	0.406%	0.028%	0.014%
53	0.462%	0.434%	0.028%	0.014%
54	0.476%	0.462%	0.028%	0.014%
55	0.490%	0.490%	0.028%	0.014%
56	0.490%	0.490%	0.028%	0.014%
57	0.490%	0.490%	0.028%	0.014%
58	0.490%	0.490%	0.028%	0.014%
59	0.490%	0.490%	0.028%	0.014%
60	0.490%	0.490%	0.028%	0.014%
61	0.490%	0.490%	0.028%	0.014%
62	0.490%	0.490%	0.028%	0.014%
63	0.490%	0.490%	0.028%	0.014%
64	0.490%	0.490%	0.028%	0.014%
65	0.490%	0.490%	0.028%	0.014%
66	0.490%	0.490%	0.028%	0.014%
67	0.490%	0.490%	0.028%	0.014%
68	0.490%	0.490%	0.028%	0.014%
69	0.490%	0.490%	0.028%	0.014%
70	0.490%	0.490%	0.028%	0.014%
71	0.490%	0.490%	0.028%	0.014%
72	0.490%	0.490%	0.028%	0.014%
73	0.490%	0.490%	0.028%	0.014%
74	0.490%	0.490%	0.028%	0.014%
75	0.490%	0.490%	0.028%	0.014%
76	0.490%	0.490%	0.028%	0.014%
77	0.490%	0.490%	0.028%	0.014%
78	0.490%	0.490%	0.028%	0.014%
79	0.490%	0.490%	0.028%	0.014%
≥ 80	N/A	N/A	N/A	N/A

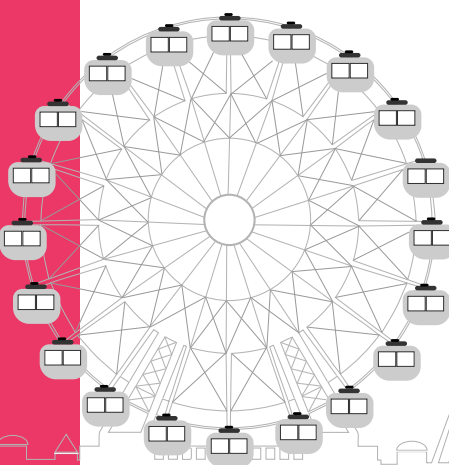


**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 3 (Cont'd)						
PROBABILITIES OF DISABILITY FOR ACTIVE MEMBERS: UNIFORMED GROUPS						
Age	Correction			Sanitation		
	Ordinary Disability	Accidental Disability: Tier 3R Non-enhanced Plan	Accidental Disability: All Other Plans	Ordinary Disability	Accidental Disability: Tier 3R Non-enhanced Plan	Accidental Disability: All Other Plans
15	0.100%	0.125%	0.250%	0.100%	0.050%	0.100%
16	0.100%	0.125%	0.250%	0.100%	0.050%	0.100%
17	0.100%	0.125%	0.250%	0.100%	0.050%	0.100%
18	0.100%	0.125%	0.250%	0.100%	0.050%	0.100%
19	0.100%	0.125%	0.250%	0.100%	0.050%	0.100%
20	0.100%	0.125%	0.250%	0.100%	0.050%	0.100%
21	0.100%	0.138%	0.263%	0.100%	0.050%	0.100%
22	0.100%	0.138%	0.275%	0.100%	0.050%	0.100%
23	0.100%	0.150%	0.288%	0.100%	0.050%	0.100%
24	0.100%	0.150%	0.300%	0.100%	0.050%	0.100%
25	0.100%	0.163%	0.313%	0.100%	0.050%	0.100%
26	0.100%	0.163%	0.325%	0.120%	0.055%	0.110%
27	0.100%	0.175%	0.338%	0.140%	0.060%	0.120%
28	0.100%	0.175%	0.350%	0.160%	0.065%	0.130%
29	0.100%	0.188%	0.363%	0.180%	0.070%	0.140%
30	0.100%	0.188%	0.375%	0.200%	0.075%	0.150%
31	0.120%	0.200%	0.388%	0.220%	0.080%	0.160%
32	0.140%	0.200%	0.400%	0.240%	0.085%	0.170%
33	0.160%	0.213%	0.413%	0.260%	0.090%	0.180%
34	0.180%	0.213%	0.425%	0.280%	0.095%	0.190%
35	0.200%	0.225%	0.438%	0.300%	0.100%	0.200%
36	0.220%	0.225%	0.450%	0.320%	0.105%	0.210%
37	0.240%	0.238%	0.463%	0.340%	0.110%	0.220%
38	0.260%	0.238%	0.475%	0.360%	0.115%	0.230%
39	0.280%	0.250%	0.488%	0.380%	0.120%	0.240%
40	0.300%	0.250%	0.500%	0.400%	0.125%	0.250%
41	0.320%	0.263%	0.513%	0.420%	0.130%	0.260%
42	0.340%	0.263%	0.525%	0.440%	0.135%	0.270%
43	0.360%	0.275%	0.538%	0.460%	0.140%	0.280%
44	0.380%	0.275%	0.550%	0.480%	0.145%	0.290%
45	0.400%	0.288%	0.563%	0.500%	0.150%	0.300%
46	0.420%	0.288%	0.575%	0.520%	0.170%	0.340%
47	0.440%	0.300%	0.588%	0.540%	0.190%	0.380%
48	0.460%	0.300%	0.600%	0.560%	0.210%	0.420%
49	0.480%	0.313%	0.613%	0.580%	0.230%	0.460%
50	0.500%	0.313%	0.625%	0.600%	0.250%	0.500%
51	0.520%	0.325%	0.650%	0.620%	0.280%	0.560%
52	0.540%	0.338%	0.675%	0.640%	0.310%	0.620%
53	0.560%	0.350%	0.700%	0.660%	0.340%	0.680%
54	0.580%	0.363%	0.725%	0.680%	0.370%	0.740%
55	0.600%	0.375%	0.750%	0.700%	0.400%	0.800%
56	0.620%	0.388%	0.775%	0.720%	0.440%	0.880%
57	0.640%	0.400%	0.800%	0.740%	0.480%	0.960%
58	0.660%	0.413%	0.825%	0.760%	0.520%	1.040%
59	0.680%	0.425%	0.850%	0.780%	0.560%	1.120%
60	0.700%	0.438%	0.875%	0.800%	0.600%	1.200%
61	0.720%	0.450%	0.900%	0.820%	0.650%	1.300%
62	0.740%	0.463%	0.925%	0.840%	0.700%	1.400%
63	N/A	N/A	N/A	0.860%	0.750%	1.500%
64	N/A	N/A	N/A	0.880%	0.800%	1.600%
65	N/A	N/A	N/A	0.900%	0.850%	1.700%
66	N/A	N/A	N/A	0.920%	0.910%	1.820%
67	N/A	N/A	N/A	0.940%	0.970%	1.940%
68	N/A	N/A	N/A	0.960%	1.030%	2.060%
69	N/A	N/A	N/A	0.980%	1.090%	2.180%
≥ 70	N/A	N/A	N/A	N/A	N/A	N/A

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 3 (Cont'd)				
PROBABILITIES OF DISABILITY FOR ACTIVE MEMBERS: OTHERS				
	TBTA		Transit	
Age	Ordinary Disability	Accidental Disability	Ordinary Disability	Accidental Disability
15	0.100%	0.020%	0.100%	0.020%
16	0.100%	0.020%	0.100%	0.020%
17	0.100%	0.020%	0.100%	0.020%
18	0.100%	0.020%	0.100%	0.020%
19	0.100%	0.020%	0.100%	0.020%
20	0.100%	0.020%	0.100%	0.020%
21	0.100%	0.020%	0.100%	0.020%
22	0.100%	0.020%	0.100%	0.020%
23	0.100%	0.020%	0.100%	0.020%
24	0.100%	0.020%	0.100%	0.020%
25	0.100%	0.020%	0.100%	0.020%
26	0.100%	0.020%	0.100%	0.020%
27	0.100%	0.020%	0.100%	0.020%
28	0.100%	0.020%	0.100%	0.020%
29	0.100%	0.020%	0.100%	0.020%
30	0.100%	0.020%	0.100%	0.020%
31	0.120%	0.020%	0.120%	0.020%
32	0.140%	0.020%	0.140%	0.020%
33	0.160%	0.020%	0.160%	0.020%
34	0.180%	0.020%	0.180%	0.020%
35	0.200%	0.020%	0.200%	0.020%
36	0.220%	0.020%	0.220%	0.020%
37	0.240%	0.020%	0.240%	0.020%
38	0.260%	0.020%	0.260%	0.020%
39	0.280%	0.020%	0.280%	0.020%
40	0.300%	0.020%	0.300%	0.020%
41	0.320%	0.020%	0.320%	0.020%
42	0.340%	0.020%	0.340%	0.020%
43	0.360%	0.020%	0.360%	0.020%
44	0.380%	0.020%	0.380%	0.020%
45	0.400%	0.020%	0.400%	0.020%
46	0.420%	0.020%	0.420%	0.020%
47	0.440%	0.020%	0.440%	0.020%
48	0.460%	0.020%	0.460%	0.020%
49	0.480%	0.020%	0.480%	0.020%
50	0.500%	0.020%	0.500%	0.020%
51	0.520%	0.020%	0.520%	0.020%
52	0.540%	0.020%	0.540%	0.020%
53	0.560%	0.020%	0.560%	0.020%
54	0.580%	0.020%	0.580%	0.020%
55	0.600%	0.020%	0.600%	0.020%
56	0.600%	0.020%	0.600%	0.020%
57	0.600%	0.020%	0.600%	0.020%
58	0.600%	0.020%	0.600%	0.020%
59	0.600%	0.020%	0.600%	0.020%
60	0.600%	0.020%	0.600%	0.020%
61	0.600%	0.020%	0.600%	0.020%
62	0.600%	0.020%	0.600%	0.020%
63	0.600%	0.020%	0.600%	0.020%
64	0.600%	0.020%	0.600%	0.020%
65	0.600%	0.020%	0.600%	0.020%
66	0.600%	0.020%	0.600%	0.020%
67	0.600%	0.020%	0.600%	0.020%
68	0.600%	0.020%	0.600%	0.020%
69	0.600%	0.020%	0.600%	0.020%
70	0.600%	0.020%	0.600%	0.020%
71	0.600%	0.020%	0.600%	0.020%
72	0.600%	0.020%	0.600%	0.020%
73	0.600%	0.020%	0.600%	0.020%
74	0.600%	0.020%	0.600%	0.020%
75	0.600%	0.020%	0.600%	0.020%
76	0.600%	0.020%	0.600%	0.020%
77	0.600%	0.020%	0.600%	0.020%
78	0.600%	0.020%	0.600%	0.020%
79	0.600%	0.020%	0.600%	0.020%
≥ 80	N/A	N/A	N/A	N/A

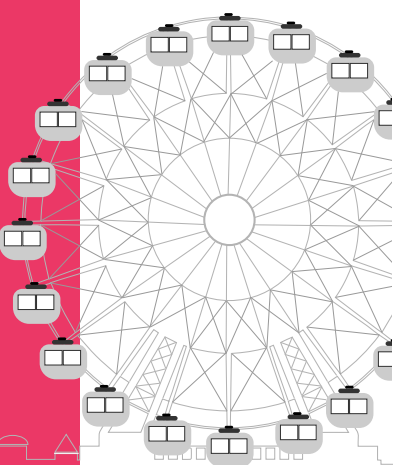


**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 4						
PROBABILITIES OF MORTALITY FOR ACTIVE MEMBERS: CORRECTION AND SANITATION						
	Correction			Sanitation		
	Ordinary Death		Accidental Death	Ordinary Death		Accidental Death
Age	Males	Females	All	Males	Females	All
15	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
16	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
17	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
18	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
19	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
20	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
21	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
22	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
23	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
24	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
25	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
26	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
27	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
28	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
29	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
30	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
31	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
32	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
33	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
34	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
35	0.025%	0.015%	0.005%	0.050%	0.030%	0.010%
36	0.030%	0.018%	0.005%	0.060%	0.036%	0.010%
37	0.035%	0.021%	0.005%	0.070%	0.042%	0.010%
38	0.040%	0.024%	0.005%	0.080%	0.048%	0.010%
39	0.045%	0.027%	0.005%	0.090%	0.054%	0.010%
40	0.050%	0.030%	0.005%	0.100%	0.060%	0.010%
41	0.055%	0.033%	0.005%	0.110%	0.066%	0.010%
42	0.060%	0.036%	0.005%	0.120%	0.072%	0.010%
43	0.065%	0.039%	0.005%	0.130%	0.078%	0.010%
44	0.070%	0.042%	0.005%	0.140%	0.084%	0.010%
45	0.075%	0.045%	0.005%	0.150%	0.090%	0.010%
46	0.080%	0.048%	0.005%	0.160%	0.096%	0.010%
47	0.085%	0.051%	0.005%	0.170%	0.102%	0.010%
48	0.090%	0.054%	0.005%	0.180%	0.108%	0.010%
49	0.095%	0.057%	0.005%	0.190%	0.114%	0.010%
50	0.100%	0.060%	0.005%	0.200%	0.120%	0.010%
51	0.105%	0.064%	0.005%	0.210%	0.128%	0.010%
52	0.110%	0.068%	0.005%	0.220%	0.136%	0.010%
53	0.115%	0.072%	0.005%	0.230%	0.144%	0.010%
54	0.120%	0.076%	0.005%	0.240%	0.152%	0.010%
55	0.125%	0.080%	0.005%	0.250%	0.160%	0.010%
56	0.130%	0.084%	0.005%	0.260%	0.168%	0.010%
57	0.135%	0.088%	0.005%	0.270%	0.176%	0.010%
58	0.140%	0.092%	0.005%	0.280%	0.184%	0.010%
59	0.145%	0.096%	0.005%	0.290%	0.192%	0.010%
60	0.150%	0.100%	0.005%	0.300%	0.200%	0.010%
61	0.160%	0.105%	0.005%	0.320%	0.210%	0.010%
62	0.170%	0.110%	0.005%	0.340%	0.220%	0.010%
63	N/A	N/A	N/A	0.360%	0.230%	0.010%
64	N/A	N/A	N/A	0.380%	0.240%	0.010%
65	N/A	N/A	N/A	0.400%	0.250%	0.010%
66	N/A	N/A	N/A	0.440%	0.280%	0.010%
67	N/A	N/A	N/A	0.480%	0.310%	0.010%
68	N/A	N/A	N/A	0.520%	0.340%	0.010%
69	N/A	N/A	N/A	0.560%	0.370%	0.010%
≥ 70	N/A	N/A	N/A	N/A	N/A	N/A

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 4 (Cont'd)						
PROBABILITIES OF MORTALITY FOR ACTIVE MEMBERS: PLAN GROUPS OTHER THAN CORRECTION AND SANITATION						
	General			Transit and TBTA		
	Ordinary Death		Accidental Death	Ordinary Death		Accidental Death
Age	Males	Females	All	Males	Females	All
15	0.0240%	0.0180%	0.0000%	0.0240%	0.0180%	0.0060%
16	0.0240%	0.0180%	0.0000%	0.0240%	0.0180%	0.0060%
17	0.0240%	0.0180%	0.0000%	0.0240%	0.0180%	0.0060%
18	0.0240%	0.0180%	0.0000%	0.0240%	0.0180%	0.0060%
19	0.0240%	0.0180%	0.0000%	0.0240%	0.0180%	0.0060%
20	0.0240%	0.0180%	0.0000%	0.0240%	0.0180%	0.0060%
21	0.0240%	0.0180%	0.0000%	0.0240%	0.0180%	0.0060%
22	0.0240%	0.0180%	0.0000%	0.0240%	0.0180%	0.0060%
23	0.0240%	0.0180%	0.0000%	0.0240%	0.0180%	0.0060%
24	0.0240%	0.0180%	0.0000%	0.0240%	0.0180%	0.0060%
25	0.0240%	0.0180%	0.0000%	0.0240%	0.0180%	0.0060%
26	0.0264%	0.0192%	0.0000%	0.0264%	0.0192%	0.0060%
27	0.0288%	0.0204%	0.0000%	0.0288%	0.0204%	0.0060%
28	0.0312%	0.0216%	0.0000%	0.0312%	0.0216%	0.0060%
29	0.0336%	0.0228%	0.0000%	0.0336%	0.0228%	0.0060%
30	0.0360%	0.0240%	0.0000%	0.0360%	0.0240%	0.0060%
31	0.0384%	0.0252%	0.0000%	0.0384%	0.0252%	0.0060%
32	0.0408%	0.0264%	0.0000%	0.0408%	0.0264%	0.0060%
33	0.0432%	0.0276%	0.0000%	0.0432%	0.0276%	0.0060%
34	0.0456%	0.0288%	0.0000%	0.0456%	0.0288%	0.0060%
35	0.0480%	0.0300%	0.0000%	0.0480%	0.0300%	0.0060%
36	0.0504%	0.0312%	0.0000%	0.0504%	0.0312%	0.0060%
37	0.0528%	0.0324%	0.0000%	0.0528%	0.0324%	0.0060%
38	0.0552%	0.0336%	0.0000%	0.0552%	0.0336%	0.0060%
39	0.0576%	0.0348%	0.0000%	0.0576%	0.0348%	0.0060%
40	0.0600%	0.0360%	0.0000%	0.0600%	0.0360%	0.0060%
41	0.0660%	0.0408%	0.0000%	0.0660%	0.0408%	0.0060%
42	0.0720%	0.0456%	0.0000%	0.0720%	0.0456%	0.0060%
43	0.0780%	0.0504%	0.0000%	0.0780%	0.0504%	0.0060%
44	0.0840%	0.0552%	0.0000%	0.0840%	0.0552%	0.0060%
45	0.0900%	0.0600%	0.0000%	0.0900%	0.0600%	0.0060%
46	0.0960%	0.0660%	0.0000%	0.0960%	0.0660%	0.0060%
47	0.1020%	0.0720%	0.0000%	0.1020%	0.0720%	0.0060%
48	0.1080%	0.0780%	0.0000%	0.1080%	0.0780%	0.0060%
49	0.1140%	0.0840%	0.0000%	0.1140%	0.0840%	0.0060%
50	0.1200%	0.0900%	0.0000%	0.1200%	0.0900%	0.0060%
51	0.1320%	0.0960%	0.0000%	0.1320%	0.0960%	0.0060%
52	0.1440%	0.1020%	0.0000%	0.1440%	0.1020%	0.0060%
53	0.1560%	0.1080%	0.0000%	0.1560%	0.1080%	0.0060%
54	0.1680%	0.1140%	0.0000%	0.1680%	0.1140%	0.0060%
55	0.1800%	0.1200%	0.0000%	0.1800%	0.1200%	0.0060%
56	0.1920%	0.1260%	0.0000%	0.1920%	0.1260%	0.0060%
57	0.2040%	0.1320%	0.0000%	0.2040%	0.1320%	0.0060%
58	0.2160%	0.1380%	0.0000%	0.2160%	0.1380%	0.0060%
59	0.2280%	0.1440%	0.0000%	0.2280%	0.1440%	0.0060%
60	0.2400%	0.1500%	0.0000%	0.2400%	0.1500%	0.0060%
61	0.2520%	0.1560%	0.0000%	0.2520%	0.1560%	0.0060%
62	0.2640%	0.1620%	0.0000%	0.2640%	0.1620%	0.0060%
63	0.2760%	0.1680%	0.0000%	0.2760%	0.1680%	0.0060%
64	0.2880%	0.1740%	0.0000%	0.2880%	0.1740%	0.0060%
65	0.3000%	0.1800%	0.0000%	0.3000%	0.1800%	0.0060%
66	0.3240%	0.1920%	0.0000%	0.3240%	0.1920%	0.0060%
67	0.3480%	0.2040%	0.0000%	0.3480%	0.2040%	0.0060%
68	0.3720%	0.2160%	0.0000%	0.3720%	0.2160%	0.0060%
69	0.3960%	0.2280%	0.0000%	0.3960%	0.2280%	0.0060%
70	0.4000%	0.2400%	0.0000%	0.4000%	0.2400%	0.0060%
71	0.4240%	0.2580%	0.0000%	0.4240%	0.2580%	0.0060%
72	0.4480%	0.2760%	0.0000%	0.4480%	0.2760%	0.0060%
73	0.4720%	0.2940%	0.0000%	0.4720%	0.2940%	0.0060%
74	0.4960%	0.3120%	0.0000%	0.4960%	0.3120%	0.0060%
75	0.5200%	0.3300%	0.0000%	0.5200%	0.3300%	0.0060%
76	0.5680%	0.3660%	0.0000%	0.5680%	0.3660%	0.0060%
77	0.6160%	0.4020%	0.0000%	0.6160%	0.4020%	0.0060%
78	0.6640%	0.4380%	0.0000%	0.6640%	0.4380%	0.0060%
79	0.7120%	0.4740%	0.0000%	0.7120%	0.4740%	0.0060%
≥ 80	N/A	N/A	N/A	N/A	N/A	N/A

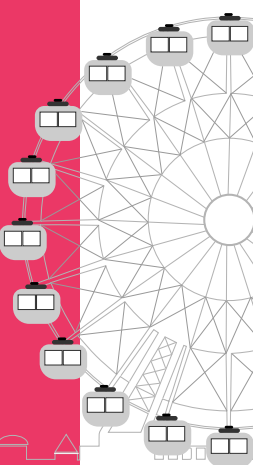


**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 5a					
PROBABILITIES OF MORTALITY FOR SERVICE RETIREES: PLAN GROUPS OTHER THAN HOUSING POLICE AND TRANSIT POLICE BASE TABLE					
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%

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 5a (Cont'd)					
PROBABILITIES OF MORTALITY FOR SERVICE RETIREES: HOUSING POLICE AND TRANSIT POLICE BASE TABLE					
Age	Males	Females	Age	Males	Females
15	0.0100%	0.0084%	68	1.4988%	1.0632%
16	0.0135%	0.0103%	69	1.6917%	1.1644%
17	0.0181%	0.0112%	70	1.8929%	1.2629%
18	0.0217%	0.0131%	71	2.1028%	1.4563%
19	0.0240%	0.0140%	72	2.3212%	1.6586%
20	0.0251%	0.0142%	73	2.5833%	1.8689%
21	0.0268%	0.0150%	74	2.8558%	2.0889%
22	0.0284%	0.0158%	75	3.1397%	2.3314%
23	0.0301%	0.0168%	76	3.4343%	2.6045%
24	0.0315%	0.0179%	77	3.7415%	2.8700%
25	0.0327%	0.0191%	78	4.2304%	3.1787%
26	0.0342%	0.0204%	79	4.7399%	3.4795%
27	0.0354%	0.0217%	80	5.2682%	3.8105%
28	0.0371%	0.0231%	81	5.7202%	4.3289%
29	0.0394%	0.0247%	82	6.1782%	4.8678%
30	0.0427%	0.0265%	83	7.0179%	5.4288%
31	0.0492%	0.0316%	84	7.8631%	5.9122%
32	0.0556%	0.0360%	85	8.7167%	6.3661%
33	0.0616%	0.0398%	86	9.5810%	7.1650%
34	0.0669%	0.0427%	87	10.4516%	8.0050%
35	0.0724%	0.0455%	88	11.8437%	8.8541%
36	0.0755%	0.0474%	89	13.2486%	9.6498%
37	0.0779%	0.0497%	90	14.6752%	10.5687%
38	0.0808%	0.0521%	91	16.3354%	12.0267%
39	0.0845%	0.0551%	92	18.0374%	13.4340%
40	0.0901%	0.0588%	93	19.7642%	14.8636%
41	0.1003%	0.0633%	94	21.5622%	16.4543%
42	0.1106%	0.0702%	95	23.4692%	17.7952%
43	0.1212%	0.0792%	96	25.3619%	19.0707%
44	0.1323%	0.0907%	97	27.1816%	20.2419%
45	0.1439%	0.1052%	98	29.0095%	21.1759%
46	0.1563%	0.1228%	99	30.6920%	21.8544%
47	0.1693%	0.1427%	100	32.1584%	22.1859%
48	0.1827%	0.1652%	101	33.7521%	23.0680%
49	0.1964%	0.1865%	102	35.1259%	24.0803%
50	0.2104%	0.1992%	103	36.3671%	25.2770%
51	0.2802%	0.2104%	104	37.3834%	26.6309%
52	0.3506%	0.2186%	105	38.1051%	28.0912%
53	0.4209%	0.2250%	106	38.4698%	29.6244%
54	0.4903%	0.2863%	107	38.6325%	31.1943%
55	0.5297%	0.3409%	108	38.8076%	32.7579%
56	0.5857%	0.3910%	109	38.9794%	34.2712%
57	0.6387%	0.4376%	110	50.0000%	50.0000%
58	0.6875%	0.4613%	111	50.0000%	50.0000%
59	0.7316%	0.5005%	112	50.0000%	50.0000%
60	0.7720%	0.5393%	113	50.0000%	50.0000%
61	0.8439%	0.5785%	114	50.0000%	50.0000%
62	0.9155%	0.6152%	115	50.0000%	50.0000%
63	0.9888%	0.6536%	116	50.0000%	50.0000%
64	1.0644%	0.7279%	117	50.0000%	50.0000%
65	1.1433%	0.8032%	118	50.0000%	50.0000%
66	1.2263%	0.8884%	119	50.0000%	50.0000%
67	1.3135%	0.9736%	120	100.0000%	100.0000%



**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

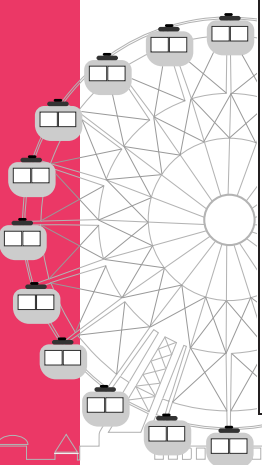
Table 5b					
PROBABILITIES OF MORTALITY FOR DISABLED RETIREES: GENERAL PLANS BASE TABLE					
Age	Males	Females	Age	Males	Females
15	0.2163%	0.1980%	68	3.8171%	2.9280%
16	0.2927%	0.2680%	69	3.8682%	2.9997%
17	0.3945%	0.3612%	70	3.9318%	3.0865%
18	0.4581%	0.3913%	71	4.1518%	3.1548%
19	0.4963%	0.4214%	72	4.3957%	3.4254%
20	0.5178%	0.4416%	73	4.6660%	3.7295%
21	0.5589%	0.4807%	74	4.9632%	3.9658%
22	0.6029%	0.5231%	75	5.2904%	4.2453%
23	0.6500%	0.5662%	76	5.7355%	4.5234%
24	0.7005%	0.6186%	77	6.2253%	4.7961%
25	0.7524%	0.6680%	78	6.7606%	5.1502%
26	0.8054%	0.7165%	79	7.3471%	5.5873%
27	0.8591%	0.7727%	80	7.9843%	6.0964%
28	0.9126%	0.8346%	81	8.6745%	6.6521%
29	0.9647%	0.9008%	82	9.4240%	7.2551%
30	1.0136%	0.9373%	83	10.2386%	7.9112%
31	1.0584%	0.9629%	84	11.1186%	8.6209%
32	1.0978%	0.9955%	85	12.0742%	9.3370%
33	1.1310%	1.0289%	86	12.8184%	10.0511%
34	1.1597%	1.0577%	87	13.3550%	10.8029%
35	1.1838%	1.0841%	88	14.0470%	11.4531%
36	1.2035%	1.1092%	89	14.7705%	12.5564%
37	1.2211%	1.1344%	90	15.5356%	14.1031%
38	1.2388%	1.1618%	91	17.3803%	15.7291%
39	1.2591%	1.1939%	92	19.4620%	17.1860%
40	1.2846%	1.2249%	93	21.5002%	18.5029%
41	1.3114%	1.2570%	94	23.5320%	19.6588%
42	1.3750%	1.2982%	95	25.5906%	20.8223%
43	1.4416%	1.3497%	96	27.4494%	21.5778%
44	1.5115%	1.4058%	97	29.1839%	21.9133%
45	1.5849%	1.4809%	98	30.8635%	22.0663%
46	1.6617%	1.5639%	99	32.2842%	23.0087%
47	1.7422%	1.6535%	100	33.4447%	23.1230%
48	1.8267%	1.7359%	101	35.1022%	23.6022%
49	1.9153%	1.8218%	102	36.5309%	24.5619%
50	2.0462%	1.8919%	103	37.8218%	25.7825%
51	2.2291%	1.9830%	104	38.8787%	27.1635%
52	2.4215%	2.0502%	105	39.6293%	28.6530%
53	2.6231%	2.1047%	106	40.0086%	30.2169%
54	2.8293%	2.1904%	107	40.1778%	31.8182%
55	3.0344%	2.2636%	108	40.3599%	33.4131%
56	3.1146%	2.3429%	109	40.5386%	34.9566%
57	3.1774%	2.4285%	110	50.0000%	50.0000%
58	3.2218%	2.5412%	111	50.0000%	50.0000%
59	3.2493%	2.5588%	112	50.0000%	50.0000%
60	3.2648%	2.5795%	113	50.0000%	50.0000%
61	3.3472%	2.6067%	114	50.0000%	50.0000%
62	3.4295%	2.6272%	115	50.0000%	50.0000%
63	3.5199%	2.6579%	116	50.0000%	50.0000%
64	3.6208%	2.7759%	117	50.0000%	50.0000%
65	3.7368%	2.8107%	118	50.0000%	50.0000%
66	3.7511%	2.8328%	119	50.0000%	50.0000%
67	3.7776%	2.8725%	120	100.0000%	100.0000%

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 5b (Con't)

PROBABILITIES OF MORTALITY FOR DISABLED RETIREES: CORRECTION
BASE TABLE

Age	Males	Females	Age	Males	Females
15	0.1529%	0.1504%	68	2.0976%	1.9435%
16	0.2068%	0.2034%	69	2.2316%	2.0901%
17	0.2788%	0.2742%	70	2.3817%	2.2370%
18	0.3328%	0.3273%	71	2.5774%	2.3979%
19	0.3687%	0.3507%	72	2.7948%	2.5741%
20	0.3762%	0.3604%	73	3.0370%	2.7665%
21	0.3973%	0.3851%	74	3.3054%	3.0122%
22	0.4195%	0.4042%	75	3.6032%	3.3026%
23	0.4428%	0.4278%	76	3.9499%	3.6022%
24	0.4673%	0.4574%	77	4.3346%	3.9080%
25	0.4920%	0.4832%	78	4.7588%	4.2919%
26	0.5163%	0.5076%	79	5.2279%	4.7080%
27	0.5402%	0.5362%	80	5.7433%	5.1937%
28	0.5630%	0.5555%	81	6.3425%	5.7290%
29	0.5840%	0.5755%	82	6.9496%	6.3165%
30	0.6026%	0.5962%	83	7.5636%	6.9627%
31	0.6179%	0.6177%	84	8.1812%	7.7122%
32	0.6297%	0.6268%	85	8.8050%	8.4245%
33	0.6376%	0.6361%	86	9.7703%	9.0849%
34	0.6427%	0.6422%	87	10.8005%	9.7986%
35	0.6554%	0.6466%	88	12.0443%	10.5221%
36	0.6683%	0.6504%	89	13.3397%	11.5771%
37	0.6814%	0.6538%	90	14.6958%	12.7805%
38	0.6949%	0.6583%	91	16.4185%	14.0140%
39	0.7086%	0.6655%	92	18.1416%	15.1826%
40	0.7225%	0.6718%	93	19.8574%	16.3730%
41	0.7368%	0.6785%	94	21.6187%	18.3891%
42	0.7513%	0.6898%	95	23.5884%	20.4768%
43	0.7661%	0.7059%	96	25.4266%	21.5778%
44	0.7812%	0.7241%	97	27.2119%	21.9133%
45	0.7966%	0.7516%	98	29.0202%	22.0663%
46	0.8123%	0.7820%	99	30.6654%	23.0087%
47	0.8283%	0.8124%	100	32.1584%	23.1230%
48	0.8446%	0.8431%	101	33.7521%	23.6022%
49	0.8613%	0.8604%	102	35.1259%	24.5619%
50	0.8782%	0.8758%	103	36.3671%	25.7825%
51	0.8956%	0.8871%	104	37.3834%	27.1635%
52	0.9574%	0.8938%	105	38.1051%	28.6530%
53	1.0214%	0.8945%	106	38.4698%	30.2169%
54	1.0859%	0.9896%	107	38.6325%	31.8182%
55	1.1487%	1.0949%	108	38.8076%	33.4131%
56	1.2131%	1.1161%	109	38.9794%	34.9566%
57	1.2733%	1.1402%	110	50.0000%	50.0000%
58	1.3280%	1.1770%	111	50.0000%	50.0000%
59	1.3775%	1.2195%	112	50.0000%	50.0000%
60	1.4231%	1.2648%	113	50.0000%	50.0000%
61	1.4854%	1.3147%	114	50.0000%	50.0000%
62	1.5489%	1.3627%	115	50.0000%	50.0000%
63	1.6175%	1.4176%	116	50.0000%	50.0000%
64	1.6924%	1.5072%	117	50.0000%	50.0000%
65	1.7762%	1.5987%	118	50.0000%	50.0000%
66	1.8712%	1.7097%	119	50.0000%	50.0000%
67	1.9777%	1.8212%	120	100.0000%	100.0000%



**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

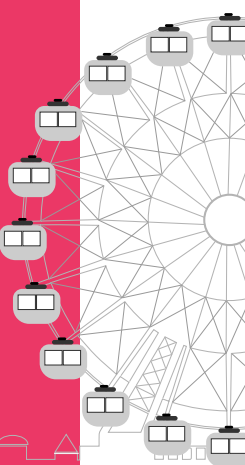
Table 5b (Cont'd)					
PROBABILITIES OF MORTALITY FOR DISABLED RETIREES: SANITATION BASE TABLE					
Age	Males	Females	Age	Males	Females
15	0.1891%	0.1809%	68	2.4678%	1.9435%
16	0.2558%	0.2447%	69	2.6254%	2.0901%
17	0.3448%	0.3299%	70	2.8020%	2.2370%
18	0.4004%	0.3831%	71	3.0322%	2.3979%
19	0.4338%	0.4126%	72	3.2880%	2.5741%
20	0.4426%	0.4240%	73	3.5729%	2.7665%
21	0.4674%	0.4530%	74	3.8887%	3.0122%
22	0.4935%	0.4755%	75	4.2391%	3.3026%
23	0.5209%	0.5033%	76	4.6469%	3.6022%
24	0.5498%	0.5381%	77	5.0995%	3.9080%
25	0.5788%	0.5685%	78	5.5986%	4.2919%
26	0.6074%	0.5972%	79	6.1505%	4.7080%
27	0.6355%	0.6308%	80	6.7568%	5.1937%
28	0.6623%	0.6535%	81	7.4618%	5.7290%
29	0.6871%	0.6771%	82	8.1760%	6.3165%
30	0.7089%	0.7014%	83	8.8984%	6.9627%
31	0.7269%	0.7267%	84	9.6249%	7.7122%
32	0.7408%	0.7374%	85	10.3588%	8.4245%
33	0.7501%	0.7484%	86	11.4945%	9.0849%
34	0.7561%	0.7555%	87	12.6389%	9.7986%
35	0.7710%	0.7607%	88	13.8008%	10.5221%
36	0.7862%	0.7652%	89	14.9732%	11.5771%
37	0.8017%	0.7692%	90	16.1654%	12.7805%
38	0.8175%	0.7745%	91	18.1783%	14.0140%
39	0.8336%	0.7829%	92	20.1433%	15.1826%
40	0.8500%	0.7904%	93	22.0331%	16.3730%
41	0.8668%	0.7982%	94	23.8872%	18.3891%
42	0.8839%	0.8115%	95	25.7371%	20.4768%
43	0.9013%	0.8305%	96	27.1672%	21.5778%
44	0.9191%	0.8519%	97	28.5248%	21.9133%
45	0.9372%	0.8842%	98	29.8950%	22.0663%
46	0.9556%	0.9200%	99	31.1005%	23.0087%
47	0.9745%	0.9558%	100	32.1584%	23.1230%
48	0.9937%	0.9919%	101	33.7521%	23.6022%
49	1.0133%	1.0122%	102	35.1259%	24.5619%
50	1.0332%	1.0303%	103	36.3671%	25.7825%
51	1.0536%	1.0437%	104	37.3834%	27.1635%
52	1.1263%	1.0515%	105	38.1051%	28.6530%
53	1.2016%	1.0523%	106	38.4698%	30.2169%
54	1.2775%	1.0767%	107	38.6325%	31.8182%
55	1.3514%	1.0949%	108	38.8076%	33.4131%
56	1.4272%	1.1161%	109	38.9794%	34.9566%
57	1.4980%	1.1402%	110	50.0000%	50.0000%
58	1.5624%	1.1770%	111	50.0000%	50.0000%
59	1.6206%	1.2195%	112	50.0000%	50.0000%
60	1.6742%	1.2648%	113	50.0000%	50.0000%
61	1.7475%	1.3147%	114	50.0000%	50.0000%
62	1.8222%	1.3627%	115	50.0000%	50.0000%
63	1.9029%	1.4176%	116	50.0000%	50.0000%
64	1.9910%	1.5072%	117	50.0000%	50.0000%
65	2.0897%	1.5987%	118	50.0000%	50.0000%
66	2.2014%	1.7097%	119	50.0000%	50.0000%
67	2.3267%	1.8212%	120	100.0000%	100.0000%

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 5b (Cont'd)

PROBABILITIES OF MORTALITY FOR DISABLED RETIREES: SANITATION
BASE TABLE

Age	Males	Females	Age	Males	Females
15	0.1891%	0.1809%	68	2.4678%	1.9435%
16	0.2558%	0.2447%	69	2.6254%	2.0901%
17	0.3448%	0.3299%	70	2.8020%	2.2370%
18	0.4004%	0.3831%	71	3.0322%	2.3979%
19	0.4338%	0.4126%	72	3.2880%	2.5741%
20	0.4426%	0.4240%	73	3.5729%	2.7665%
21	0.4674%	0.4530%	74	3.8887%	3.0122%
22	0.4935%	0.4755%	75	4.2391%	3.3026%
23	0.5209%	0.5033%	76	4.6469%	3.6022%
24	0.5498%	0.5381%	77	5.0995%	3.9080%
25	0.5788%	0.5685%	78	5.5986%	4.2919%
26	0.6074%	0.5972%	79	6.1505%	4.7080%
27	0.6355%	0.6308%	80	6.7568%	5.1937%
28	0.6623%	0.6535%	81	7.4618%	5.7290%
29	0.6871%	0.6771%	82	8.1760%	6.3165%
30	0.7089%	0.7014%	83	8.8984%	6.9627%
31	0.7269%	0.7267%	84	9.6249%	7.7122%
32	0.7408%	0.7374%	85	10.3588%	8.4245%
33	0.7501%	0.7484%	86	11.4945%	9.0849%
34	0.7561%	0.7555%	87	12.6389%	9.7986%
35	0.7710%	0.7607%	88	13.8008%	10.5221%
36	0.7862%	0.7652%	89	14.9732%	11.5771%
37	0.8017%	0.7692%	90	16.1654%	12.7805%
38	0.8175%	0.7745%	91	18.1783%	14.0140%
39	0.8336%	0.7829%	92	20.1433%	15.1826%
40	0.8500%	0.7904%	93	22.0331%	16.3730%
41	0.8668%	0.7982%	94	23.8872%	18.3891%
42	0.8839%	0.8115%	95	25.7371%	20.4768%
43	0.9013%	0.8305%	96	27.1672%	21.5778%
44	0.9191%	0.8519%	97	28.5248%	21.9133%
45	0.9372%	0.8842%	98	29.8950%	22.0663%
46	0.9556%	0.9200%	99	31.1005%	23.0087%
47	0.9745%	0.9558%	100	32.1584%	23.1230%
48	0.9937%	0.9919%	101	33.7521%	23.6022%
49	1.0133%	1.0122%	102	35.1259%	24.5619%
50	1.0332%	1.0303%	103	36.3671%	25.7825%
51	1.0536%	1.0437%	104	37.3834%	27.1635%
52	1.1263%	1.0515%	105	38.1051%	28.6530%
53	1.2016%	1.0523%	106	38.4698%	30.2169%
54	1.2775%	1.0767%	107	38.6325%	31.8182%
55	1.3514%	1.0949%	108	38.8076%	33.4131%
56	1.4272%	1.1161%	109	38.9794%	34.9566%
57	1.4980%	1.1402%	110	50.0000%	50.0000%
58	1.5624%	1.1770%	111	50.0000%	50.0000%
59	1.6206%	1.2195%	112	50.0000%	50.0000%
60	1.6742%	1.2648%	113	50.0000%	50.0000%
61	1.7475%	1.3147%	114	50.0000%	50.0000%
62	1.8222%	1.3627%	115	50.0000%	50.0000%
63	1.9029%	1.4176%	116	50.0000%	50.0000%
64	1.9910%	1.5072%	117	50.0000%	50.0000%
65	2.0897%	1.5987%	118	50.0000%	50.0000%
66	2.2014%	1.7097%	119	50.0000%	50.0000%
67	2.3267%	1.8212%	120	100.0000%	100.0000%

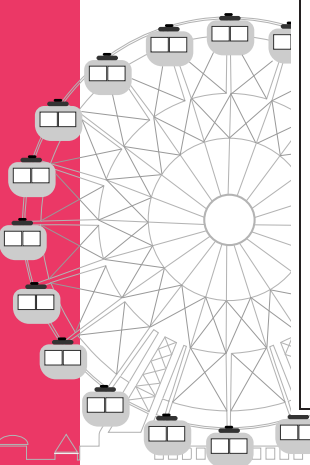


**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 5b (Cont'd)					
PROBABILITIES OF MORTALITY FOR DISABLED RETIREES: TRANSIT AND TBTA BASE TABLE					
Age	Males	Females	Age	Males	Females
15	0.2122%	0.1981%	68	3.7437%	2.9280%
16	0.2871%	0.2680%	69	3.7938%	2.9997%
17	0.3869%	0.3612%	70	3.8562%	3.0865%
18	0.4493%	0.3913%	71	4.0719%	3.1548%
19	0.4867%	0.4214%	72	4.3111%	3.4254%
20	0.5079%	0.4416%	73	4.5762%	3.7295%
21	0.5481%	0.4807%	74	4.8677%	3.9658%
22	0.5913%	0.5231%	75	5.1886%	4.2453%
23	0.6375%	0.5662%	76	5.6252%	4.5234%
24	0.6871%	0.6186%	77	6.1056%	4.7961%
25	0.7380%	0.6680%	78	6.6306%	5.1502%
26	0.7899%	0.7165%	79	7.2058%	5.5873%
27	0.8426%	0.7727%	80	7.8307%	6.0964%
28	0.8951%	0.8346%	81	8.5077%	6.6521%
29	0.9462%	0.9008%	82	9.2427%	7.2551%
30	0.9941%	0.9373%	83	10.0417%	7.9112%
31	1.0381%	0.9629%	84	10.9048%	8.6209%
32	1.0767%	0.9955%	85	11.8420%	9.3370%
33	1.1093%	1.0289%	86	12.5719%	10.0511%
34	1.1374%	1.0577%	87	13.0981%	10.8029%
35	1.1611%	1.0841%	88	13.7768%	11.4531%
36	1.1803%	1.1092%	89	14.4864%	12.5564%
37	1.1976%	1.1344%	90	15.2369%	14.1031%
38	1.2150%	1.1618%	91	17.0460%	15.7291%
39	1.2349%	1.1939%	92	19.0878%	17.1860%
40	1.2599%	1.2249%	93	21.0868%	18.5029%
41	1.2862%	1.2570%	94	23.0794%	19.6588%
42	1.3485%	1.2982%	95	25.0984%	21.1183%
43	1.4139%	1.3497%	96	26.9216%	22.4310%
44	1.4825%	1.4058%	97	28.6226%	23.5901%
45	1.5544%	1.4809%	98	30.2699%	24.4460%
46	1.6298%	1.5639%	99	31.6634%	24.9756%
47	1.7087%	1.6535%	100	32.8016%	25.0896%
48	1.7915%	1.7359%	101	34.4271%	26.0668%
49	1.8784%	1.8218%	102	35.8284%	27.2107%
50	2.0069%	1.8919%	103	37.0944%	28.5630%
51	2.1863%	1.9830%	104	38.1311%	30.0929%
52	2.3750%	2.0502%	105	38.8672%	31.7431%
53	2.5726%	2.1047%	106	39.2392%	33.4756%
54	2.7749%	2.1904%	107	39.4052%	35.2496%
55	2.9761%	2.2636%	108	39.5838%	37.0164%
56	3.0547%	2.3429%	109	39.7590%	38.7265%
57	3.1163%	2.4285%	110	50.0000%	50.0000%
58	3.1599%	2.5412%	111	50.0000%	50.0000%
59	3.1868%	2.5588%	112	50.0000%	50.0000%
60	3.2020%	2.5795%	113	50.0000%	50.0000%
61	3.2829%	2.6067%	114	50.0000%	50.0000%
62	3.3636%	2.6272%	115	50.0000%	50.0000%
63	3.4522%	2.6579%	116	50.0000%	50.0000%
64	3.5511%	2.7759%	117	50.0000%	50.0000%
65	3.6650%	2.8107%	118	50.0000%	50.0000%
66	3.6789%	2.8328%	119	50.0000%	50.0000%
67	3.7049%	2.8725%	120	100.0000%	100.0000%

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 5b (Cont'd)					
PROBABILITIES OF MORTALITY FOR DISABLED RETIREES: HOUSING POLICE AND TRANSIT POLICE BASE TABLE					
Age	Males	Females	Age	Males	Females
15	0.0138%	0.0095%	68	1.8368%	1.2141%
16	0.0187%	0.0117%	69	2.0342%	1.3912%
17	0.0252%	0.0127%	70	2.2544%	1.5837%
18	0.0301%	0.0148%	71	2.5045%	1.7848%
19	0.0334%	0.0159%	72	2.7644%	1.9944%
20	0.0347%	0.0168%	73	3.0535%	2.2258%
21	0.0371%	0.0185%	74	3.3359%	2.4880%
22	0.0402%	0.0205%	75	3.6300%	2.7766%
23	0.0431%	0.0227%	76	4.1253%	3.0785%
24	0.0467%	0.0251%	77	4.6178%	3.3525%
25	0.0503%	0.0274%	78	5.1289%	3.6752%
26	0.0544%	0.0298%	79	5.5682%	4.1794%
27	0.0586%	0.0322%	80	6.0116%	4.7030%
28	0.0633%	0.0348%	81	6.7832%	5.2484%
29	0.0681%	0.0374%	82	7.6009%	5.7185%
30	0.0730%	0.0400%	83	8.4279%	6.1948%
31	0.0781%	0.0425%	84	9.2040%	7.0110%
32	0.0830%	0.0450%	85	10.1002%	7.8321%
33	0.0898%	0.0476%	86	11.5115%	8.6046%
34	0.0933%	0.0491%	87	12.7944%	9.3702%
35	0.0972%	0.0512%	88	14.1662%	10.2595%
36	0.1019%	0.0534%	89	15.7578%	11.5941%
37	0.1080%	0.0563%	90	17.3856%	12.9378%
38	0.1153%	0.0590%	91	19.0388%	14.3081%
39	0.1286%	0.0629%	92	20.6360%	15.3704%
40	0.1417%	0.0688%	93	22.5718%	16.4875%
41	0.1550%	0.0766%	94	24.4562%	17.6613%
42	0.1690%	0.0865%	95	26.1404%	18.7606%
43	0.1838%	0.0992%	96	28.0695%	19.7397%
44	0.1997%	0.1148%	97	29.6855%	20.6328%
45	0.2170%	0.1330%	98	30.9177%	21.2676%
46	0.2279%	0.1538%	99	32.6552%	21.8544%
47	0.2387%	0.1769%	100	33.9880%	22.1859%
48	0.2492%	0.2017%	101	34.9681%	23.0680%
49	0.3237%	0.2316%	102	35.9346%	24.0803%
50	0.3948%	0.2637%	103	36.6434%	25.2770%
51	0.4620%	0.2870%	104	37.3834%	26.6309%
52	0.5249%	0.3323%	105	38.1051%	28.0912%
53	0.5528%	0.3677%	106	38.4698%	29.6244%
54	0.5891%	0.4196%	107	38.6325%	31.1943%
55	0.6260%	0.4722%	108	38.8076%	32.7579%
56	0.6814%	0.5135%	109	38.9794%	34.2712%
57	0.7288%	0.5258%	110	50.0000%	50.0000%
58	0.7710%	0.5452%	111	50.0000%	50.0000%
59	0.8525%	0.5823%	112	50.0000%	50.0000%
60	0.9273%	0.6153%	113	50.0000%	50.0000%
61	1.0007%	0.6486%	114	50.0000%	50.0000%
62	1.0735%	0.7169%	115	50.0000%	50.0000%
63	1.1411%	0.7851%	116	50.0000%	50.0000%
64	1.2250%	0.8630%	117	50.0000%	50.0000%
65	1.3055%	0.9419%	118	50.0000%	50.0000%
66	1.4653%	1.0252%	119	50.0000%	50.0000%
67	1.6473%	1.1204%	120	100.0000%	100.0000%



**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 5c					
PROBABILITIES OF MORTALITY FOR BENEFICIARIES: ALL PLAN GROUPS BASE TABLE					
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%

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 6
ANNUAL RATES OF MERIT AND SALARY INCREASE

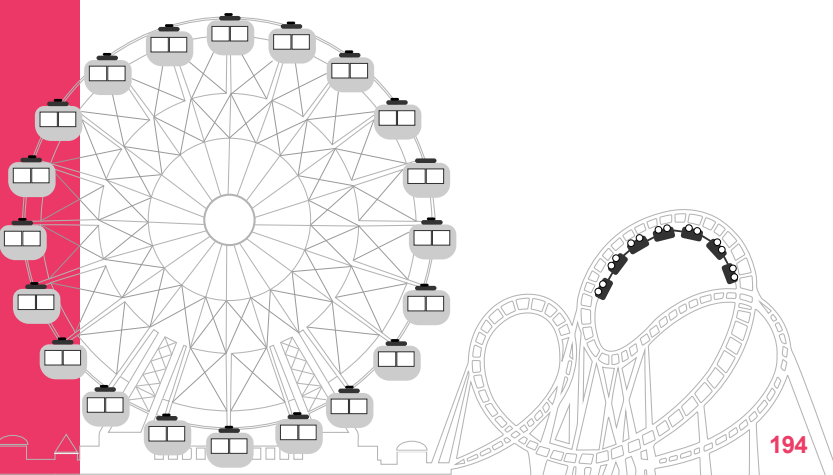
Years of Service	General		Correction		Sanitation		TBTA		Transit	
0	6.00%	9.00%	11.00%	14.00%	4.00%	7.00%	8.00%	11.00%	16.00%	19.00%
1	5.00%	8.00%	10.00%	13.00%	6.00%	9.00%	7.00%	10.00%	11.00%	14.00%
2	4.00%	7.00%	9.00%	12.00%	8.00%	11.00%	6.00%	9.00%	7.00%	10.00%
3	3.00%	6.00%	8.00%	11.00%	13.00%	16.00%	5.00%	8.00%	6.00%	9.00%
4	2.50%	5.50%	46.00%	49.00%	22.00%	25.00%	4.00%	7.00%	3.00%	6.00%
5	2.00%	5.00%	1.20%	4.20%	15.00%	18.00%	3.00%	6.00%	2.00%	5.00%
6	1.90%	4.90%	1.40%	4.40%	1.00%	4.00%	2.00%	5.00%	1.50%	4.50%
7	1.80%	4.80%	1.60%	4.60%	1.10%	4.10%	1.00%	4.00%	1.50%	4.50%
8	1.70%	4.70%	1.80%	4.80%	1.20%	4.20%	0.80%	3.80%	1.50%	4.50%
9	1.60%	4.60%	3.20%	6.20%	2.10%	5.10%	0.60%	3.60%	1.50%	4.50%
10	1.50%	4.50%	2.00%	5.00%	1.40%	4.40%	0.50%	3.50%	1.50%	4.50%
11	1.50%	4.50%	1.90%	4.90%	1.30%	4.30%	0.50%	3.50%	1.50%	4.50%
12	1.50%	4.50%	1.80%	4.80%	1.20%	4.20%	0.50%	3.50%	1.50%	4.50%
13	1.50%	4.50%	1.70%	4.70%	1.10%	4.10%	0.50%	3.50%	1.50%	4.50%
14	1.50%	4.50%	2.90%	5.90%	2.00%	5.00%	0.50%	3.50%	1.50%	4.50%
15	1.50%	4.50%	1.50%	4.50%	1.00%	4.00%	0.50%	3.50%	1.50%	4.50%
16	1.45%	4.45%	1.40%	4.40%	1.00%	4.00%	0.50%	3.50%	1.50%	4.50%
17	1.40%	4.40%	1.30%	4.30%	0.90%	3.90%	0.50%	3.50%	1.50%	4.50%
18	1.35%	4.35%	1.20%	4.20%	0.80%	3.80%	0.50%	3.50%	1.50%	4.50%
19	1.30%	4.30%	2.40%	5.40%	1.60%	4.60%	0.50%	3.50%	1.50%	4.50%
20	1.25%	4.25%	1.00%	4.00%	0.70%	3.70%	0.50%	3.50%	1.50%	4.50%
21	1.20%	4.20%	0.90%	3.90%	0.60%	3.60%	0.50%	3.50%	1.50%	4.50%
22	1.15%	4.15%	0.80%	3.80%	0.50%	3.50%	0.50%	3.50%	1.50%	4.50%
23	1.10%	4.10%	0.70%	3.70%	0.50%	3.50%	0.50%	3.50%	1.00%	4.00%
24	1.05%	4.05%	0.60%	3.60%	0.50%	3.50%	0.50%	3.50%	1.00%	4.00%
≥ 25	1.00%	4.00%	0.50%	3.50%	0.50%	3.50%	0.50%	3.50%	1.00%	4.00%

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 7		
OVERTIME ASSUMPTION: GROUPS OTHER THAN CORRECTION		
Plan Group	Overtime Type	Assumption
General	All Overtime	5.00%
Sanitation	Baseline	12.00%
	Dual Service	16.00%
	Dual Disability	8.00%
TBTA	Baseline	20.00%
	Dual Service	24.00%
	Dual Disability	18.00%
Transit	Baseline	8.00%
	Dual Service	10.00%
	Dual Disability	6.00%

**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS
IN EFFECT FOR THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION (Cont'd)**

Table 7 (Con't)		
NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM		
OVERTIME ASSUMPTION: CORRECTION		
	Correction	
Years of Service	Baseline and Dual Service	Dual Disability
0-15	15.00%	8.00%
16	16.50%	9.00%
17	18.00%	10.00%
18	19.50%	11.00%
19	21.00%	12.00%
20+	22.50%	13.00%



June 30 (Lag) Actuarial Valuation	Number	Annual Salary	Average Annual Salary	Percentage Increase/ (Decrease) In Avg. Salary
2008	183,654	\$11,305,974,384	\$61,561	3.2%
2009	186,284	11,880,993,974	63,779	3.6%
2010	184,982	12,101,416,579	65,419	2.6%
2011	182,021	12,233,572,536	67,210	2.7%
2012	187,114	12,478,129,812	66,687	(0.8)%
2013	185,971	12,642,482,697	67,981	1.9%
2014	184,762	12,672,386,846	68,588	0.9%
2015	185,758	12,917,466,528	69,539	1.4%
2016	185,481	13,216,539,355	71,255	2.5%
2017	189,792	14,065,241,654	74,109	4.0%

Salaries shown are base salary plus assumed overtime paid and reflect the impact of recent labor contract settlements and certain non-union salary increases with retroactive effective dates, if any.

Table 9 NUMBER AND SALARY OF ACTIVE MEMBERS BY OCCUPATIONAL POSITION AS OF JUNE 30, 2017 (LAG) ACTUARIAL VALUATION			
Occupation – Main Groups	Number	Annual Payroll	Average Annual Salary
General	134,570	\$ 9,403,080,130	\$ 69,875
Transit Operating Positions	36,864	2,965,552,487	80,446
MTA Bridges and Tunnels	1,293	130,046,839	100,578
Uniform Sanitation	7,497	697,365,811	93,019
Uniform Correction Force	<u>9,568</u>	<u>869,196,387</u>	90,844
Total	189,792	\$ 14,065,241,654	\$ 74,109

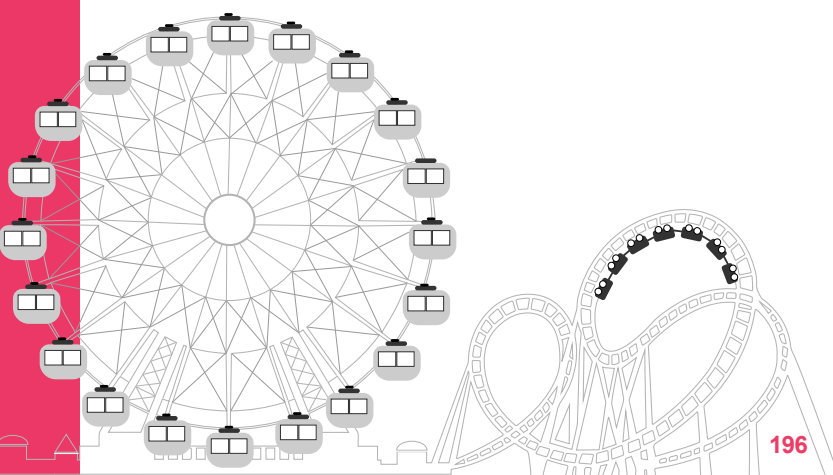


Table 10

NUMBER OF ACTIVE MEMBERS
BY OCCUPATIONAL POSITION AND AGE
AS OF JUNE 30, 2017 (LAG) ACTUARIAL VALUATION

Age	Total	General	Transit Operating	MTA Bridges & Tunnels	Sanitation	Correction
Under 20	25	6	19	0	0	0
20 – 24	1,623	1,198	125	4	33	263
25 – 29	9,673	7,235	1,020	28	249	1,141
30 – 34	17,604	12,006	2,600	68	1,103	1,827
35 – 39	20,885	14,065	3,536	134	1,441	1,709
40 – 44	21,783	14,491	4,088	239	1,469	1,496
45 – 49	25,578	17,052	5,515	259	1,337	1,415
50 – 54	31,010	21,276	7,510	212	999	1,013
55 – 59	30,203	22,428	6,518	197	561	499
60 – 64	20,514	16,065	3,943	105	241	160
65 – 69	7,871	6,231	1,517	29	52	42
70 +	<u>3,023</u>	<u>2,517</u>	<u>473</u>	<u>18</u>	<u>12</u>	<u>3</u>
Total	189,792	134,570	36,864	1,293	7,497	9,568

Table 11 NUMBER OF ACTIVE MEMBERS BY OCCUPATIONAL POSITION AND YEARS OF SERVICE AS OF JUNE 30, 2017 (LAG) ACTUARIAL VALUATION						
Years Of Service	Total	General	Transit Operating	MTA Bridges & Tunnels	Sanitation	Correction
Under 5	45,143	31,144	9,120	146	1,536	3,197
5 – 9	39,220	30,925	5,202	158	1,006	1,929
10 – 14	33,709	23,557	5,514	394	2,275	1,969
15 – 19	28,324	18,066	7,031	349	1,589	1,289
20 – 24	17,805	12,804	3,680	86	622	613
25 – 29	15,080	10,258	4,012	107	306	397
30 – 34	7,264	5,184	1,772	38	132	138
35 – 39	2,628	2,058	501	12	24	33
40 +	<u>619</u>	<u>574</u>	<u>32</u>	<u>3</u>	<u>7</u>	<u>3</u>
Total	189,792	134,570	36,864	1,293	7,497	9,568

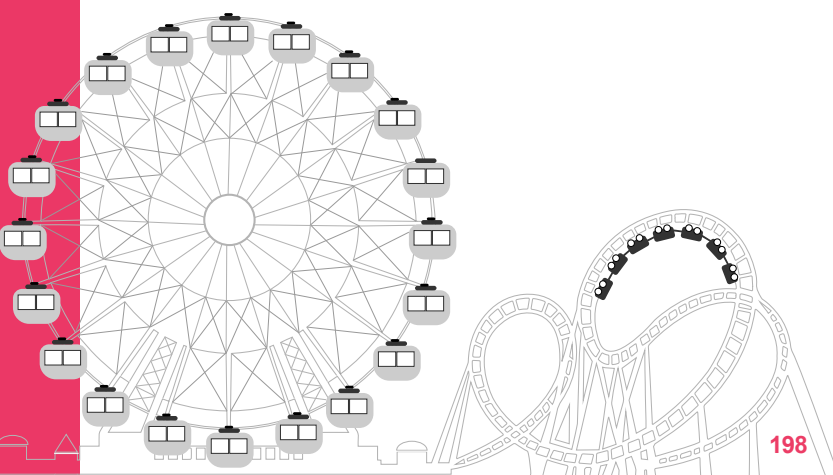


Table 12
ACTIVE MEMBER VALUATION DATA BY PARTICIPATING EMPLOYERS

Employer	June 30, 2017 (Lag)		June 30, 2008 (Lag)	
	Number of Employees	Annual Salary	Number of Employees	Annual Salary
City of New York	103,073	\$ 7,506,519,411	93,899	\$ 5,745,742,820
NYC Transit Authority	39,836	3,255,696,136	40,506	2,739,396,998
NYC Housing Authority	9,590	636,367,679	11,175	598,541,692
NYC Health and Hospitals Corporation	31,224	2,259,387,580	30,887	1,851,935,638
MTA Bridges and Tunnels	1,293	130,046,839	1,682	119,783,586
NYC Off-Track Betting Corporation	0	0	1,143	45,834,802
NYC School Construction Authority	65	7,859,318	70	6,665,652
NYC Housing Development Corporation	96	9,686,834	65	5,710,051
City University of New York – Senior Colleges	4,605	258,733,799	4,208	190,917,651
New York State Courts	0	0	11	696,967
NYC Municipal Water Authority	<u>10</u>	<u>944,058</u>	<u>8</u>	<u>748,527</u>
Total	189,792	\$ 14,065,241,654	183,654	\$ 11,305,974,384

As of the June 30, 2017 (Lag) and June 30, 2016 (Lag) actuarial valuations, the Plan's membership consisted of the following:

Table 13		
SUMMARY OF PLAN MEMBERSHIP		
Group	June 30, 2017 (Lag)	June 30, 2016 (Lag)
Active members	189,792	185,481
Active off payroll ¹	19,180	17,989
Terminated vested members not yet receiving benefits	8,417	8,895
Retirees and beneficiaries currently receiving benefits	<u>150,419</u>	<u>147,514</u>
Total	367,808	359,879

¹Represents members no longer on payroll, but not otherwise classified.

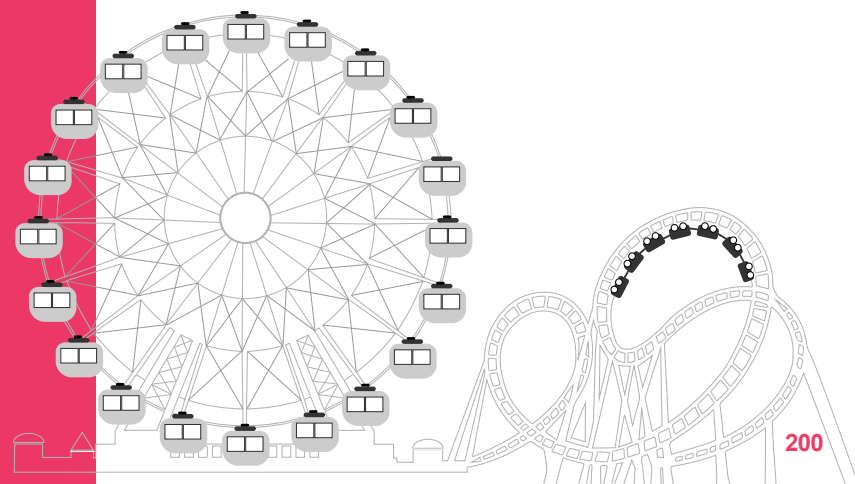


Table 14 RETIRES AND BENEFICIARIES ADDED TO AND REMOVED FROM THE ROLLS									
June 30 (Lag) Actuarial Valuation	Added to Rolls		Removed from Rolls		End of Year Rolls		% Increase in Annual Allowances	Average Annual Allowances	% Increase In Average Annual Allowances
	Number	Annual Allowances ¹	Number	Annual Allowances	Number	Annual Allowances ²			
2008	6,999	\$ 222,985,559	5,616	\$ 142,159,662	130,664	\$ 2,987,069,409	2.8%	22,861	1.7%
2009	5,821	147,278,673	5,454	70,493,395	131,031	3,063,854,687	2.6%	23,383	2.3%
2010	6,997	201,129,110	5,541	72,297,965	132,487	3,192,685,832	4.2%	24,098	3.1%
2011	8,564	261,133,473	5,583	101,421,090	135,468	3,352,398,215	5.0%	24,747	2.7%
2012	7,628	274,865,758	5,109	95,823,182	137,987	3,531,440,791	5.3%	25,593	3.4%
2013	7,334	244,447,724	5,922	116,360,332	139,399	3,659,528,183	3.6%	26,252	2.6%
2014	8,132	276,606,560	5,436	107,547,552	142,095	3,828,587,191	4.6%	26,944	2.6%
2015	8,219	289,143,851	5,788	117,910,540	144,526	3,999,820,502	4.5%	27,675	2.7%
2016	8,407	295,570,322	5,419	115,894,203	147,514	4,179,496,621	4.5%	28,333	2.4%
2017	8,756	329,831,284	5,851	127,341,967	150,419	4,381,985,938	4.8%	29,132	2.8%

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

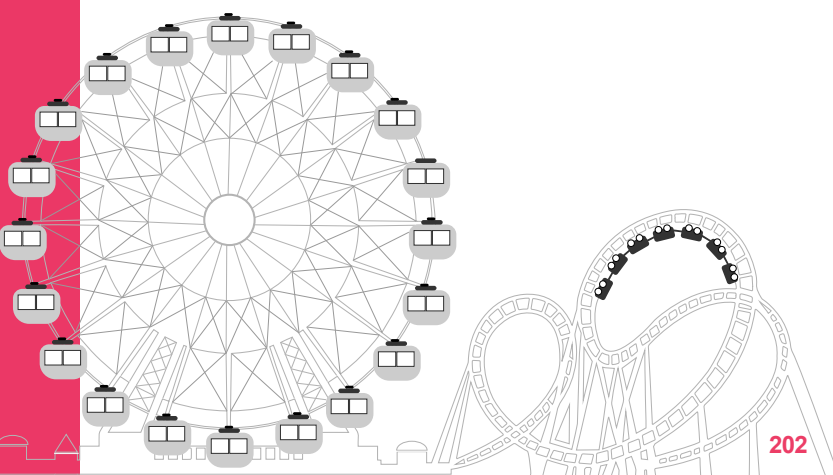
² Allowances shown are those used in the actuarial valuation as of the Year End date and are not adjusted for anticipated changes due to finalization of benefit calculations or contract settlements.

Table 15			
STATUTORY VS ACTUARIAL CONTRIBUTIONS			
Fiscal Year Ended June 30	Statutory Contribution ¹	Actuarial Contribution	Employer Rate of Contribution ²
2010	\$ 2,197,717,073	\$ 2,197,717,073	20.0%
2011	2,387,215,772	2,387,215,772	20.8%
2012	3,017,004,318	3,017,004,318	25.5%
2013	3,046,845,264	3,046,845,264	25.5%
2014	3,114,068,148	3,114,068,148	25.6%
2015	3,160,257,868	3,160,257,868	25.7%
2016	3,365,454,212	3,365,454,212	27.3%
2017	3,328,192,582	3,328,192,582	26.5%
2018	3,377,024,173	3,377,024,173	26.3%
2019	3,694,364,590	3,681,746,978 ³	26.7%

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 increased to reflect overtime earnings and adjusted, where applicable, to be consistent with collective bargaining agreements estimated to be achieved.

³Represents the actual amount contributed. The actuarial contribution calculated for the fiscal year 2019 is \$3,694,364,590.



FUNDED STATUS BASED ON ENTRY AGE NORMAL COST METHOD

Prior to the June 30, 2010 (Lag) Actuarial Valuation, the Frozen Initial Liability (FIL) cost method was used to develop the funding requirements for the Plan. Under this method, following establishment of any Initial UAL, actuarial gains and losses are financed over the working lifetimes of active participants and are not identified as separate UAL.

The funding status and funding progress information provided in the schedule below has been prepared using the Entry Age Normal (EAN) cost method where the Present Value (PV) of any obligations of the Plan not provided by the PV of Future Contributions (Employer and Employee), as determined under the EAN cost method, equals the Accrued Liability (AL). Under the EAN cost method, the UAL equals the AL minus the Actuarial Value of Assets.

Table 16 FUNDED STATUS BASED ON ENTRY AGE NORMAL COST METHOD (\$ Thousands)						
June 30 (Lag) 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	(6) UAL as a % of Covered Payroll (3) / (5)
2008	\$ 40,722,228	\$ 51,114,399	\$ 10,392,171	79.7%	\$ 11,305,974	91.9%
2009	41,710,159	53,052,658	11,342,499	78.6%	11,880,994	95.5%
2010	40,433,344	62,935,267	22,501,923	64.2%	12,101,417	185.9%
2011	42,409,059	65,269,251	22,860,192	65.0%	12,233,573	186.9%
2012	44,676,721	67,417,018	22,740,297	66.3%	12,478,130	182.2%
2013	47,282,884	70,028,252	22,745,368	67.5%	12,642,483	179.9%
2014	50,505,971	74,123,437	23,617,466	68.1%	12,672,387	186.4%
2015	53,573,694	76,678,220	23,104,526	69.9%	12,917,467	178.9%
2016	56,491,829	79,081,183	22,589,354	71.4%	13,216,539	170.9%
2017	59,573,653	82,462,951	22,889,298	72.2%	14,065,242	162.7%

Effective June 30, 2010, AL is based on the Entry Age Normal cost method. Previously, the Frozen Initial Liability cost method was used. Salaries shown are base salaries plus assumed overtime paid and reflect the impact of recent labor contract settlements and certain non-union salary increases with retroactive effective dates, if any.

Table 17
COMPARATIVE SUMMARY OF ACCRUED LIABILITIES FUNDED BY ACTUARIAL VALUE OF ASSETS
SOLVENCY TEST
 (\$ Thousands)

June 30 (Lag) 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)	Actuarial Value of Assets (D)		(A)	(B)	(C)
						100%	100%	100%
2008	\$5,984,631	\$25,700,882	\$21,020,157	\$40,722,228	100%	100%	43%	
2009	6,336,353	26,124,122	22,459,541	41,710,159	100%	100%	41%	
2010	6,712,979	31,446,478	28,431,003	40,433,344	100%	100%	8%	
2011	7,010,301	33,116,897	29,062,680	42,409,059	100%	100%	8%	
2012	7,261,912	35,028,113	29,336,710	44,676,721	100%	100%	8%	
2013	7,611,951	36,181,288	30,646,015	47,282,884	100%	100%	11%	
2014	7,958,544	38,662,825	32,009,068	50,505,971	100%	100%	12%	
2015	8,328,939	40,648,703	32,711,419	53,573,694	100%	100%	14%	
2016	8,692,025	42,399,551	33,445,905	56,491,829	100%	100%	16%	
2017	9,080,025	44,751,281	34,346,628	59,573,653	100%	100%	17%	

See following "SOLVENCY TEST – NOTES."

COMPARATIVE SUMMARY OF ACCRUED LIABILITIES FUNDED BY ACTUARIAL VALUE OF ASSETS

SOLVENCY TEST – NOTES

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

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

The Accrued Liabilities are the PV of projected benefits produced by the projected benefit attribution approach prorated on service. The Accrued Liabilities were calculated in accordance with Governmental Accounting Standards Board Statement No. 5 (GASB 5).

This comparative summary allocated assets as if they were priority groups, somewhat similar to (but not identical to) the priority categories of Section 4044 of the Employee Retirement Income Security Act of 1974.

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

To fully evaluate trends in financial soundness, changes in assumptions need to be evaluated. Beginning with the June 30, 2010 (Lag) actuarial valuation, the Actuarial Interest Rate assumption equals 7.0% per annum, net of investment expenses, and the General Wage Increase assumption equals 3.0% per annum. Prior to the June 30, 2010 (Lag) actuarial valuation, the Actuarial Interest Rate assumption was 8.0% per annum, gross of expenses. The two most recent changes in assumptions and methods occurred in the June 30, 2017 (Lag) valuation used to compute the Employer Contributions for Fiscal Year 2019 and in the June 30, 2014 (Lag) valuation used to compute the Employer contribution for Fiscal Year 2016.

CONTRIBUTIONS

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

A. MEMBER CONTRIBUTIONS

A member of Article 15 who joined NYCERS on or after April 1, 2012 (Tier 6) and is not a member of the Tier 3 22-Year Plan is required to contribute between 3.0% and 6.0% of salary, depending on salary level, for all years of service. Members in the 22-Year Plan contribute 3.0% of salary. A member of Article 15 (Coordinated Retirement Plan) who joined NYCERS on or before March 31, 2012, is mandated to contribute 3% of salary during all years of coverage. Effective October 1, 2000, these members, except for certain Transit Authority employees, are not required to make contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. A member of Article 14 (currently only Correction Officers) is mandated to contribute 3% of salary for not more than thirty years. Effective October 1, 2000, these members are not required to make contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. This is in addition to the Social Security contribution. Should a member die, resign, or be otherwise terminated from City service prior to completing five years of credited service (10 years for Tier 6 members), all of the members' contributions, with 5% interest, will be refunded for Article 14 members and Article 15 members upon request, or may be left on deposit for a maximum period of 5 years earning interest, so that the member retains membership.

All other members contribute by salary deductions on the basis of a rate of contribution which is assigned by the System at the time they elect their plan. This rate, which is dependent upon the member's age and plan as well as the tables in effect for such purpose, is determined to provide an annuity of approximately one-fourth of the service retirement allowance at the earliest age for service retirement in those contributory plans for which a fixed number of years of service is required for service retirement, except that in the case of the career pension plan, the rates of members' contributions are determined so as to provide an annuity of approximately one-fourth of the benefit on account of the first 25 years of service. In plans which permit retirement for service at age 55 regardless of the number of years of service earned, the rate of contribution is calculated to provide an annuity equal to 1.0% of final compensation for each year of service at the earliest age for service retirement. Beginning July 1, 1970, no contributions are required from members who elected the Transit 20-Year Plan.

Member contributions are accumulated with interest in individually maintained accounts. Except under Articles 14 and 15, upon retirement the amount credited (i.e. accumulated deductions) is used to purchase an annuity on the basis of the tables adopted by the Board of Trustees (Board). Upon death, 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 1960, on a year-to-year basis, the members' contribution rates of certain categories of members were reduced by an Increased-Take-Home-Pay (ITHP) rate equal to either 2.0%, 2.5%, 4.0%, or 5.0% of salary. At present, the reduction is 2.5% of salary for Sanitation and Correction members and 2.0% of salary for all others except for (1) members in transit operating positions who, beginning July 1, 1970, were not required to contribute to the System, and (2) members in the Coordinated-Escalator and Coordinated Retirement Plans. In general, the retirement and death benefits payable to, or on account of members, are supplemented by the reserve for ITHP, accumulated from City contributions equal to the ITHP rate times salary, so that the total benefit is equal to the benefit which would have been paid if the members' rate of contribution had not been reduced. However, the reserve for ITHP is not payable upon the death of a member who joins after June 30, 1973.

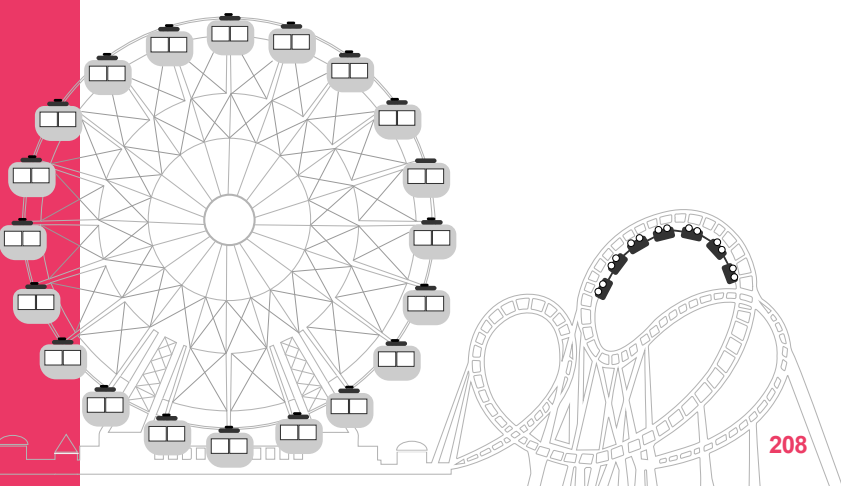
In addition to the member contributions described previously, there are certain Additional Member Contributions ranging from 1.85% to 7.46% required for improved early retirement benefits.

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 employer.

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

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NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
 DATA USED IN THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION
 FOR DETERMINING FINAL FISCAL YEAR 2019 EMPLOYER
 CONTRIBUTIONS MALES AND FEMALES

AGE \ SVC	UNDER 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & UP	ALL YEARS
NUMBER:										
UNDER 20	25	0	0	0	0	0	0	0	0	25
20 TO 24	1,608	15	0	0	0	0	0	0	0	1,623
25 TO 29	8,382	1,249	42	0	0	0	0	0	0	9,673
30 TO 34	9,592	6,574	1,395	43	0	0	0	0	0	17,604
35 TO 39	7,475	7,506	4,907	993	4	0	0	0	0	20,885
40 TO 44	5,413	6,089	6,094	3,679	494	14	0	0	0	21,783
45 TO 49	4,455	5,381	6,037	5,766	2,945	961	33	0	0	25,578
50 TO 54	3,725	4,761	5,591	6,153	4,754	4,671	1,294	61	0	31,010
55 TO 59	2,723	3,837	4,577	5,572	4,754	4,992	2,957	787	4	30,203
60 TO 64	1,296	2,399	3,210	3,861	3,235	3,079	2,138	1,182	114	20,514
65 TO 69	353	1,084	1,383	1,620	1,153	1,003	605	431	239	7,871
70 & UP	96	325	473	637	466	360	237	167	262	3,023
TOTAL	45,143	39,220	33,709	28,324	17,805	15,080	7,264	2,628	619	189,792

SALARIES (IN THOUSANDS):

UNDER 20	1,146	0	0	0	0	0	0	0	0	1,146
20 TO 24	73,577	769	0	0	0	0	0	0	0	74,346
25 TO 29	445,531	74,977	3,165	0	0	0	0	0	0	523,674
30 TO 34	572,235	447,845	111,332	3,611	0	0	0	0	0	1,135,023
35 TO 39	472,825	537,454	387,721	82,471	333	0	0	0	0	1,480,804
40 TO 44	355,423	445,729	482,676	309,926	42,906	1,012	0	0	0	1,637,672
45 TO 49	295,723	392,451	470,109	470,383	255,854	84,284	3,241	0	0	1,972,045
50 TO 54	245,986	341,223	420,790	495,076	400,655	402,767	116,711	5,907	0	2,429,115
55 TO 59	187,238	270,325	338,644	444,406	399,326	417,955	255,839	65,240	395	2,379,368
60 TO 64	93,274	166,002	232,368	300,121	268,285	254,558	177,119	99,589	8,907	1,600,224
65 TO 69	26,192	75,629	100,115	126,785	93,551	80,584	48,748	36,796	20,450	608,851
70 & UP	6,202	22,381	31,559	46,450	35,369	27,760	17,674	13,419	22,158	222,973
TOTAL *	2,775,352	2,774,785	2,578,480	2,279,230	1,496,278	1,268,921	619,333	220,951	51,911	14,065,242

AVERAGE SALARIES: **

UNDER 20	45,851	0	0	0	0	0	0	0	0	45,851
20 TO 24	45,757	51,259	0	0	0	0	0	0	0	45,808
25 TO 29	53,153	60,030	75,365	0	0	0	0	0	0	54,138
30 TO 34	59,658	68,124	79,808	83,982	0	0	0	0	0	64,475
35 TO 39	63,254	71,603	79,014	83,052	83,125	0	0	0	0	70,903
40 TO 44	65,661	73,202	79,205	84,242	86,854	72,288	0	0	0	75,181
45 TO 49	66,380	72,933	77,871	81,579	86,877	87,705	98,202	0	0	77,099
50 TO 54	66,036	71,671	75,262	80,461	84,278	86,227	90,194	96,841	0	78,333
55 TO 59	68,762	70,452	73,988	79,757	83,998	83,725	86,520	82,897	98,824	78,779
60 TO 64	71,971	69,196	72,389	77,732	82,932	82,676	82,843	84,254	78,130	78,006
65 TO 69	74,197	69,768	72,390	78,263	81,137	80,343	80,576	85,373	85,567	77,354
70 & UP	64,600	68,864	66,722	72,921	75,898	77,112	74,575	80,352	84,574	73,759
TOTAL	61,479	70,749	76,492	80,470	84,037	84,146	85,261	84,076	83,863	74,109

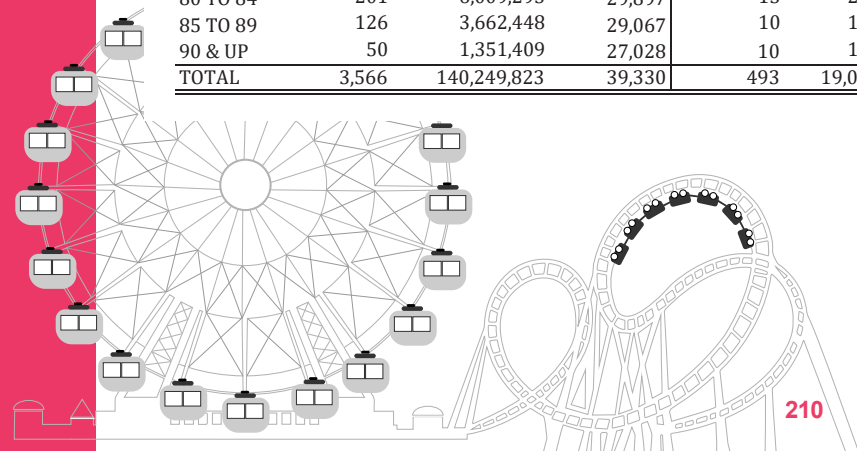
Note: Age is last birthday. Service is completed years.

* Total may not add up due to rounding.

** Average based on unrounded salary.

NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
 DATA USED IN THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION
 FOR DETERMINING FINAL FISCAL YEAR 2019 EMPLOYER
 CONTRIBUTIONS SUMMARY OF PENSIONERS BY CAUSE AND GENDER

ALL FILES (ALL BENEFITS)									
AGE	MALE			FEMALE			BOTH MALE & FEMALE		
	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE
SERVICE RETIREMENT:									
UNDER 30	0	0	0	0	0	0	0	0	0
30 TO 34	0	0	0	0	0	0	0	0	0
35 TO 39	0	0	0	0	0	0	0	0	0
40 TO 44	20	985,448	49,272	6	302,736	50,456	26	1,288,184	49,546
45 TO 49	465	23,370,194	50,258	257	12,423,510	48,341	722	35,793,704	49,576
50 TO 54	2,358	112,897,279	47,878	975	45,142,398	46,300	3,333	158,039,677	47,417
55 TO 59	5,290	232,401,597	43,932	2,432	85,529,445	35,168	7,722	317,931,042	41,172
60 TO 64	10,733	420,586,126	39,186	6,069	178,374,059	29,391	16,802	598,960,185	35,648
65 TO 69	15,366	565,900,473	36,828	10,118	283,208,381	27,991	25,484	849,108,854	33,319
70 TO 74	14,573	502,000,743	34,447	9,538	250,419,677	26,255	24,111	752,420,420	31,207
75 TO 79	11,258	347,759,714	30,890	6,982	162,121,783	23,220	18,240	509,881,497	27,954
80 TO 84	7,217	198,708,955	27,533	4,499	88,202,035	19,605	11,716	286,910,990	24,489
85 TO 89	4,363	115,781,551	26,537	3,189	58,958,386	18,488	7,552	174,739,937	23,138
90 & UP	2,569	62,864,431	24,470	2,770	41,381,765	14,939	5,339	104,246,196	19,525
TOTAL	74,212	2,583,256,511	34,809	46,835	1,206,064,175	25,751	121,047	3,789,320,686	31,305
ORDINARY DISABILITY:									
UNDER 30	0	0	0	0	0	0	0	0	0
30 TO 34	3	56,348	18,783	1	8,424	8,424	4	64,772	16,193
35 TO 39	15	254,808	16,987	18	296,650	16,481	33	551,458	16,711
40 TO 44	58	1,463,215	25,228	45	874,504	19,433	103	2,337,719	22,696
45 TO 49	221	4,784,184	21,648	156	2,620,414	16,798	377	7,404,598	19,641
50 TO 54	642	13,935,338	21,706	461	8,361,065	18,137	1,103	22,296,403	20,214
55 TO 59	1,058	22,410,667	21,182	750	13,358,913	17,812	1,808	35,769,580	19,784
60 TO 64	1,242	25,241,236	20,323	821	14,421,046	17,565	2,063	39,662,282	19,226
65 TO 69	1,241	23,620,139	19,033	676	11,105,106	16,428	1,917	34,725,245	18,114
70 TO 74	1,024	19,621,100	19,161	445	6,561,678	14,745	1,469	26,182,778	17,824
75 TO 79	608	11,198,539	18,419	282	3,648,108	12,937	890	14,846,647	16,682
80 TO 84	254	4,493,028	17,689	129	1,638,365	12,701	383	6,131,393	16,009
85 TO 89	126	2,069,745	16,427	53	495,524	9,350	179	2,565,269	14,331
90 & UP	52	988,704	19,014	23	234,618	10,201	75	1,223,322	16,311
TOTAL	6,544	130,137,051	19,886	3,860	63,624,415	16,483	10,404	193,761,466	18,624
ACCIDENTAL DISABILITY:									
UNDER 30	0	0	0	1	16,844	16,844	1	16,844	16,844
30 TO 34	16	706,256	44,141	4	191,212	47,803	20	897,468	44,873
35 TO 39	65	3,563,064	54,816	8	374,143	46,768	73	3,937,207	53,934
40 TO 44	103	5,403,854	52,465	27	1,377,478	51,018	130	6,781,332	52,164
45 TO 49	231	12,301,679	53,254	71	3,209,174	45,200	302	15,510,853	51,360
50 TO 54	445	20,834,104	46,818	101	4,453,919	44,098	546	25,288,023	46,315
55 TO 59	432	19,270,019	44,607	94	3,549,110	37,756	526	22,819,129	43,382
60 TO 64	426	18,698,784	43,894	74	3,108,377	42,005	500	21,807,161	43,614
65 TO 69	490	17,643,034	36,006	26	834,157	32,083	516	18,477,191	35,809
70 TO 74	614	19,709,959	32,101	31	800,065	25,809	645	20,510,024	31,798
75 TO 79	367	11,095,920	30,234	23	519,252	22,576	390	11,615,172	29,782
80 TO 84	201	6,009,293	29,897	13	209,279	16,098	214	6,218,572	29,059
85 TO 89	126	3,662,448	29,067	10	198,934	19,893	136	3,861,382	28,393
90 & UP	50	1,351,409	27,028	10	189,250	18,925	60	1,540,659	25,678
TOTAL	3,566	140,249,823	39,330	493	19,031,194	38,603	4,059	159,281,017	39,241



NEW YORK CITY EMPLOYEES' RETIREMENT SYSTEM
DATA USED IN THE JUNE 30, 2017 (LAG) ACTUARIAL VALUATION
FOR DETERMINING FINAL FISCAL YEAR 2019 EMPLOYER
CONTRIBUTIONS SUMMARY OF PENSIONERS BY CAUSE AND GENDER

ALL FILES (ALL BENEFITS)									
AGE	MALE			FEMALE			BOTH MALE & FEMALE		
	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE
ACCIDENTAL DEATH:									
UNDER 30	2	69,825	34,913	1	37,386	37,386	3	107,211	35,737
30 TO 34	3	127,293	42,431	2	45,700	22,850	5	172,993	34,599
35 TO 39	2	65,198	32,599	2	68,369	34,185	4	133,567	33,392
40 TO 44	2	81,217	40,609	5	153,331	30,666	7	234,548	33,507
45 TO 49	3	115,565	38,522	11	456,834	41,530	14	572,399	40,886
50 TO 54	1	27,023	27,023	15	924,992	61,666	16	952,015	59,501
55 TO 59	0	0	0	21	974,635	46,411	21	974,635	46,411
60 TO 64	0	0	0	24	1,004,957	41,873	24	1,004,957	41,873
65 TO 69	3	157,313	52,438	15	753,836	50,256	18	911,149	50,619
70 TO 74	1	58,821	58,821	25	1,061,146	42,446	26	1,119,967	43,076
75 TO 79	2	115,580	57,790	16	473,561	29,598	18	589,141	32,730
80 TO 84	1	24,122	24,122	4	107,707	26,927	5	131,829	26,366
85 TO 89	0	0	0	3	75,792	25,264	3	75,792	25,264
90 & UP	0	0	0	2	37,659	18,830	2	37,659	18,830
TOTAL	20	841,957	42,098	146	6,175,905	42,301	166	7,017,862	42,276
OTHER BENEFICIARIES:									
UNDER 30	86	1,743,476	20,273	124	2,198,710	17,732	210	3,942,186	18,772
30 TO 34	73	1,009,100	13,823	90	1,174,998	13,056	163	2,184,098	13,399
35 TO 39	87	1,202,449	13,821	127	1,435,491	11,303	214	2,637,940	12,327
40 TO 44	100	1,278,031	12,780	168	2,341,630	13,938	268	3,619,661	13,506
45 TO 49	121	1,139,591	9,418	249	3,020,641	12,131	370	4,160,232	11,244
50 TO 54	147	1,324,598	9,011	350	5,025,586	14,359	497	6,350,184	12,777
55 TO 59	151	1,672,773	11,078	547	8,232,133	15,050	698	9,904,906	14,190
60 TO 64	149	1,679,307	11,271	873	16,328,426	18,704	1,022	18,007,733	17,620
65 TO 69	156	1,718,413	11,015	1,233	23,307,162	18,903	1,389	25,025,575	18,017
70 TO 74	150	1,688,976	11,260	1,676	32,722,526	19,524	1,826	34,411,502	18,845
75 TO 79	134	1,536,517	11,467	1,748	30,560,693	17,483	1,882	32,097,210	17,055
80 TO 84	96	1,059,864	11,040	1,848	30,296,276	16,394	1,944	31,356,140	16,130
85 TO 89	77	749,204	9,730	1,915	29,569,509	15,441	1,992	30,318,713	15,220
90 & UP	77	739,172	9,600	2,191	27,849,655	12,711	2,268	28,588,827	12,605
TOTAL	1,604	18,541,471	11,560	13,139	214,063,436	16,292	14,743	232,604,907	15,777
ALL PENSIONERS AND BENEFICIARIES:									
UNDER 30	88	1,813,301	20,606	126	2,252,940	17,880	214	4,066,241	19,001
30 TO 34	95	1,898,997	19,989	97	1,420,334	14,643	192	3,319,331	17,288
35 TO 39	169	5,085,519	30,092	155	2,174,653	14,030	324	7,260,172	22,408
40 TO 44	283	9,211,765	32,550	251	5,049,679	20,118	534	14,261,444	26,707
45 TO 49	1,041	41,711,213	40,068	744	21,730,573	29,208	1,785	63,441,786	35,542
50 TO 54	3,593	149,018,342	41,475	1,902	63,907,960	33,600	5,495	212,926,302	38,749
55 TO 59	6,931	275,755,056	39,786	3,844	111,644,236	29,044	10,775	387,399,292	35,954
60 TO 64	12,550	466,205,453	37,148	7,861	213,236,865	27,126	20,411	679,442,318	33,288
65 TO 69	17,256	609,039,372	35,294	12,068	319,208,642	26,451	29,324	928,248,014	31,655
70 TO 74	16,362	543,079,599	33,192	11,715	291,565,092	24,888	28,077	834,644,691	29,727
75 TO 79	12,369	371,706,270	30,051	9,051	197,323,397	21,801	21,420	569,029,667	26,565
80 TO 84	7,769	210,295,262	27,069	6,493	120,453,662	18,551	14,262	330,748,924	23,191
85 TO 89	4,692	122,262,948	26,058	5,170	89,298,145	17,272	9,862	211,561,093	21,452
90 & UP	2,748	65,943,716	23,997	4,996	69,692,947	13,950	7,744	135,636,663	17,515
TOTAL	85,946	2,873,026,813	33,428	64,473	1,508,959,125	23,405	150,419	4,381,985,938	29,132



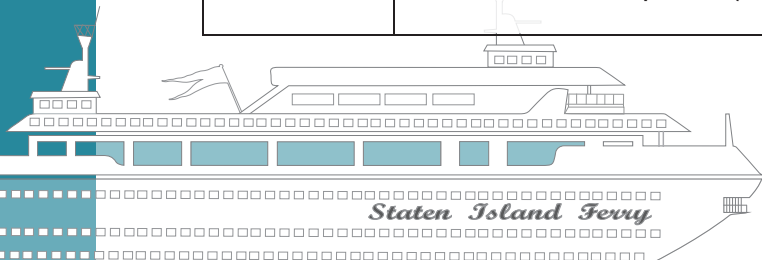
PART 5 STATISTICAL SECTION



Statistical Section Overview

The Statistical Section assists users in understanding the basic financial statements by presenting detailed relevant financial and demographic information that provides historical perspective to the Plan's economic condition, trends, and operations. All data in this section is derived from the Plan's internal sources.

Page #	Table Name	Table Description
Page 215	<ul style="list-style-type: none"> Cash Receipts and Disbursements 	Activity of the year on a cash basis, for the Plan and the five Variable Supplements Funds
Page 216 - 219	<ul style="list-style-type: none"> Revenue by Source Changes in Fiduciary Net Position Benefit Payments by Type Benefit Payments (VSF) Benefits Paid 	10 year financial information that helps the reader understand how financial activities have changed over time for the Plan and the five Variable Supplements Funds
Page 220 - 223	<p><u>Service Retirement Experience</u></p> <ul style="list-style-type: none"> Average Annual Benefit Payments (6 year summary) Average Retirement Allowance by Age and Service Distribution of Retirement Allowance by Age Distribution of Retirement Allowance by Service 	Profile of a substantial percentage of members who retired during calendar year 2018, with information concerning years of service, average salary base, age of retirees, and range of retirement allowances. The benefits stated reflect the maximum benefit to which the retirees in question would have been entitled as a Single Life retirement benefit, which does not provide payments to beneficiaries
Page 224 - 225	<p><u>Disability Retirement Experience</u></p> <ul style="list-style-type: none"> Ordinary Disability Accidental Disability 	10 year history of the average ages, benefit payments, and salary bases of new disability recipients of each calendar year
Page 226 - 227	<ul style="list-style-type: none"> Recipients by Benefit Type and Pension Option Retirement Benefits by Type (10 year history) 	Profiles of the entire retiree and beneficiary population and the types of benefits and options under which they are being paid
Page 228 - 229	<ul style="list-style-type: none"> Table of Pensioners and Active Members Table of Recipients (VSF) 	Changes over the last 10 years in the number of pensioners and active members of the Plan; and the recipients of five Variable Supplements Funds



CASH RECEIPTS AND DISBURSEMENTS

Year Ended June 30, 2019
(in thousands)

	NYCERS	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPOVSF	TPSOVSF	TOTAL
Cash Balance July 1, 2018	\$ 19,139	\$ 1,917	\$ 134	\$ 121	\$ 171	\$ 139	\$ 21,621	
Receipts								
Member Contributions	547,810	-	-	-	-	-	-	547,810
Employer Contributions	3,674,978	-	-	-	-	-	-	3,674,978
Member Loan Payments	396,530	-	-	-	-	-	-	396,530
Interest and Dividends	1,931,779	6,053	-	-	-	-	-	1,937,832
Investments Redeemed	70,200,785	100,002	-	-	-	-	-	70,300,787
Transfers to Variable Supplement Funds	-	284,000	1,824	2,594	3,584	2,902	-	294,904
Miscellaneous	3,222	11	-	-	-	-	-	3,233
Total Cash Receipts	76,755,104	390,066	1,824	2,594	3,584	2,902	2,902	77,156,074
Total Cash Available	76,774,243	391,983	1,958	2,715	3,755	3,041	3,041	77,177,695
Disbursements								
Benefit Payments and Withdrawals	5,061,879	94,459	1,743	2,536	3,501	2,850	-	5,166,968
Transfers to other Retirement Systems	10,564	-	-	-	-	-	-	10,564
Transfers to Variable Supplement Funds	194,904	100,000	-	-	-	-	-	294,904
Loans to Members	419,507	-	-	-	-	-	-	419,507
Investments Purchased	70,782,676	190,053	-	-	-	-	-	70,972,729
Investment Expenses	168,645	-	-	-	-	-	-	168,645
Administrative Expenses	70,612	-	-	-	-	-	-	70,612
Miscellaneous	757	2	-	1	1	1	-	762
Total Cash Disbursements	76,709,544	384,514	1,743	2,537	3,502	2,851	2,851	77,104,691
Cash Balance June 30, 2019	64,699	7,469	215	178	253	190	190	73,004

TABLE OF REVENUE BY SOURCE (QPP & VSF)
 Fiscal Years 2010 through 2019
 (in thousands)

Fiscal Year Ended June 30	Member Contributions	Employer Contributions	Net Investment Income (QPP)	Net Investment Income (VSF)	Net Investment Income (QPP+VSF)	Other Income	Total Revenue
2019	\$ 547,807	\$ 3,692,711	\$ 4,431,926	\$ 6,304	\$ 4,438,230	\$ 3,258	\$ 8,682,006
2018	523,535	3,377,024	5,153,254	2,265	5,155,519	3,422	9,059,500
2017	513,514	3,328,193	6,982,304	(152)	6,982,152	3,266	10,827,125
2016	485,508	3,365,454	1,171,720	184	1,171,904	2,928	5,025,794
2015	467,129	3,160,258	1,175,099	10	1,175,109	4,140	4,806,636
2014	447,689	3,114,068	7,911,004	20	7,911,024	4,648	11,477,429
2013	437,775	3,046,845	4,967,018	38	4,967,056	5,072	8,456,748
2012	403,641	3,017,004	578,893	n/a	578,893	4,772	4,004,310
2011	413,740	2,387,216	7,851,456	n/a	7,851,456	4,707	10,657,119
2010	398,964	2,197,717	4,318,810	n/a	4,318,810	4,696	6,920,187

Note: Effective 2013 and forward, the financial statements include the Variable Supplements Funds.

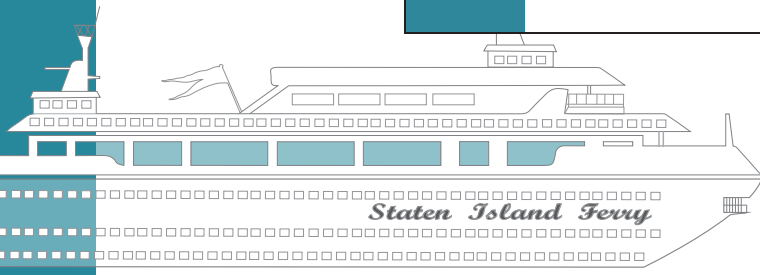


TABLE OF CHANGES IN FIDUCIARY NET POSITION (QPP & VSF)

Fiscal Years 2010 through 2019
(in thousands)

Fiscal Year Ended June 30	Additions to Fiduciary Net Position ¹	Deductions from Plan Net Position				Net Change in Fiduciary Net Position	
		Benefit Payments ²	Refunds	Payments To Other Pension Systems and Funds	Administrative Expenses		Total Deductions
2019	\$ 8,682,006	\$ 5,168,846	\$ 89,960	\$ 9,769	\$ 82,073	\$ 5,350,648	\$ 3,331,358
2018	9,059,500	4,897,216	89,493	9,055	59,689	5,055,453	4,004,047
2017	10,827,125	4,573,176	75,765	8,087	59,671	4,716,699	6,110,426
2016	5,025,794	4,382,120 ³	72,135	7,440	56,683	4,518,378 ³	507,416
2015	4,806,636	4,259,018	66,738	7,142	54,635	4,387,533	419,103
2014	11,477,429	3,973,698	66,747	7,228	50,431	4,098,104	7,379,325
2013	8,456,748	3,803,312	60,179	5,250	48,666	3,917,407	4,539,341
2012	4,004,310	3,642,520	59,151	17,418	51,385	3,770,474	233,836
2011	10,657,119	3,518,109	63,148	16,773	46,374	3,644,404	7,012,715
2010	6,920,187	3,332,785	58,325	11,710	49,676	3,452,496	3,467,691

Notes:

- 1) Per Table of Revenue by Source.
- 2) Per Table of Benefit Payments by Type. Includes payments from Variable Supplements Funds. For details, please refer to Table of Benefit Payments (VSF).
- 3) Excludes an accrual of \$41,925 that was included in the June 30 2016 financial statements. In November 2016, after issuance of the financial statements, the NYC Office of the Actuary provided a memo to the COVSF Board of Trustees confirming that assets were insufficient to provide a COVSF benefit in December 2016. Management doesn't believe this change in estimated benefit payments has a material effect on the 2016 and 2017 combining financial statements.

TABLE OF BENEFIT PAYMENTS BY TYPE (QPP & VSF)

Fiscal Years 2010 through 2019
(in thousands)

Fiscal Year Ended June 30	Total Retirement Benefits (QPP)	Total Benefit Payments (VSF)	Total Retirement Benefits (QPP+VSF)	Total Death Benefits	Change in Accrued Benefits Payable	Total Benefit Payments
2019	\$ 4,884,580	\$ 106,218	\$ 4,990,798	\$ 98,297	\$ 79,752	\$ 5,168,846
2018	4,633,853	104,097	4,737,950	101,419	57,847	4,897,216
2017	4,400,869	13,921	4,414,790	101,907	56,479	4,573,176
2016	4,155,638	51,749	4,207,387	118,379	56,354	4,382,120
2015	4,058,520	90,191	4,148,711	95,068	15,239	4,259,018
2014	3,855,575	50,139	3,905,714	98,532	(30,548)	3,973,698
2013	3,692,992	12,274	3,705,266	85,132	12,914	3,803,312
2012	3,544,078	12,441	3,556,519	85,546	455	3,642,520
2011	3,384,811	12,550	3,397,361	96,192	24,556	3,518,109
2010	3,220,938	12,687	3,233,625	121,586	(22,426)	3,332,785

TABLE OF BENEFIT PAYMENTS (VSF)¹

Fiscal Years 2010 through 2019
(in thousands)

Fiscal Year Ended June 30	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	Total
2019	\$ 95,729	\$ 1,722	\$ 2,522	\$ 3,446	\$ 2,799	\$ 106,218
2018	93,200	1,825	2,573	3,612	2,887	104,097
2017	2,624	1,889	2,595	3,830	2,983	13,921
2016	40,224 ²	1,968	2,648	3,945	2,964	51,749
2015	78,285	2,100	2,686	4,040	3,080	90,191
2014	38,014	2,168	2,797	4,070	3,090	50,139
2013	-	2,188	2,823	4,142	3,121	12,274
2012	-	2,257	2,867	4,160	3,157	12,441
2011	-	2,323	2,878	4,191	3,158	12,550
2010	9	2,344	2,902	4,242	3,190	12,687

Notes:

1) NYCERS administers the following Variable Supplements Funds:

- Correction Officers' Variable Supplements Fund (COVSF)
- Housing Police Officers' Variable Supplements Fund (HPOVSF)
- Housing Police Superior Officers' Variable Supplements Fund (HPSOVSF)
- Transit Police Officers' Variable Supplements Fund (TPOVSF)
- Transit Police Superior Officers' Variable Supplements Fund (TPSOVSF)

TPOVSF, TPSOVSF, HPOVSF, and HPSOVSF are closed to new entrants.

2) Excludes an accrual of \$41,925 that was included in the June 30 2016 financial statements. In November 2016, after issuance of the financial statements, the NYC Office of the Actuary provided a memo to the COVSF Board of Trustees confirming that assets were insufficient to provide a COVSF benefit in December 2016. Management doesn't believe this change in estimated benefit payments has a material effect on the 2016 and 2017 combining financial statements.

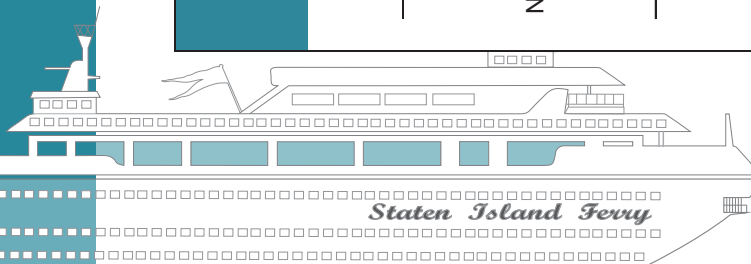
TABLE OF BENEFITS PAID (QPP & VSF)
 Fiscal Years 2010 through 2019
 (in thousands)

Fiscal Year Ended June 30	Retirement Benefits	Member Loans		Refunds	Death Benefits	
		Amount Paid	No. Loans		In Service	After Retirement
2019	\$ 4,990,798	\$ 417,795	45,205	\$ 89,960	\$ 59,493	\$ 38,804
2018	4,737,950	406,811	48,478	89,493	63,161	38,259
2017	4,414,790	404,624	47,877	75,765	69,383	32,524
2016	4,207,387	389,619	49,142	72,135	72,354	46,025
2015	4,148,711	381,243	48,449	66,738	60,493	34,575
2014	3,905,714	397,705	51,702	66,747	63,598	34,934
2013	3,705,266	392,580	52,952	60,179	57,590	27,542
2012	3,556,519	359,882	52,461	59,151	58,955	26,591
2011	3,397,361	374,382	51,881	63,148	69,659	26,533
2010	3,233,625	376,319	52,923	58,325	81,074	40,512

Note: Retirement benefits per Table of Benefit Payments by Type include payments from Variable Supplements Funds. For details, please refer to Table of Benefit Payments (VSF).

SERVICE RETIREMENT EXPERIENCE – 6 YEAR HISTORY
TABLE OF AVERAGE ANNUAL BENEFIT PAYMENTS BY YEARS OF SERVICE
 Calendar Years 2013 through 2018

Calendar Year	Years of Service										Total Population
	5 - 9.9	10 - 14.9	15 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 & Up			
Number of Retirees	133	552	446	1,178	1,715	1,426	558	154			6,162
	130	525	408	1,164	1,624	1,242	531	122			5,746
	143	439	376	1,057	1,873	1,134	396	150			5,568
	152	499	371	949	2,043	1,095	285	171			5,565
	134	456	347	1,075	1,884	996	250	189			5,331
	149	447	322	1,239	1,709	915	216	204			5,201
Average Retirement Benefit	\$ 7,936	\$ 13,886	\$ 20,433	\$ 41,284	\$ 48,786	\$ 59,195	\$ 65,713	\$ 87,357	\$	\$	\$ 46,197
	8,909	13,979	19,396	41,249	49,424	56,972	64,653	88,699			45,353
	7,913	13,123	19,191	40,187	47,836	55,647	64,058	88,142			44,518
	7,649	13,223	19,352	35,501	46,515	53,945	59,082	81,760			41,968
	7,243	13,312	18,431	35,761	44,660	52,326	61,222	89,189			41,316
	6,741	12,536	17,987	34,628	42,273	50,889	59,072	77,790			38,980
Average Salary Base	\$ 63,996	\$ 69,778	\$ 71,694	\$ 89,360	\$ 91,018	\$ 96,566	\$ 95,237	\$ 85,981	\$	\$	\$ 88,331
	71,270	70,602	68,536	89,478	91,526	93,550	93,836	83,521			87,555
	67,056	64,965	69,281	87,362	88,750	91,375	92,837	81,162			85,447
	64,281	64,821	69,363	78,541	86,944	88,146	85,010	77,424			81,491
	60,359	64,622	65,592	79,117	84,265	85,921	87,335	85,512			80,226
	58,112	61,601	64,599	76,020	80,120	82,524	80,735	77,442			76,392
Average Retirement Benefit As A % of Salary Base	12%	20%	29%	46%	54%	61%	69%	102%			52%
	13%	20%	28%	46%	54%	61%	69%	106%			52%
	12%	20%	28%	46%	54%	61%	69%	109%			52%
	12%	20%	28%	45%	54%	61%	70%	106%			52%
	12%	21%	28%	45%	53%	61%	70%	104%			52%
	12%	20%	28%	46%	53%	62%	73%	101%			51%

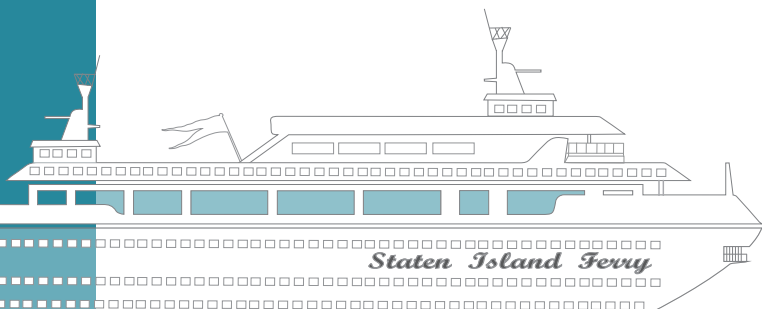


SERVICE RETIREMENT EXPERIENCE
TABLE OF AVERAGE RETIREMENT ALLOWANCE BY AGE AND YEARS OF SERVICE
 Calendar Year 2018

Age at Retirement	Years of Service										Total Population
	5 - 9.9	10 - 14.9	15 - 19.9	20 - 24.9	25 - 29.9	30 - 34.9	35 - 39.9	40 & Up			
Number of Retirees	0	1	0	136	36	0	0	0	0	0	173
	0	1	0	108	126	95	8	0	0	0	338
	28	56	61	159	538	437	88	0	0	0	1,367
	43	181	151	393	651	597	317	53	0	0	2,386
	41	228	149	258	276	225	113	61	0	0	1,351
	21	85	85	124	88	72	32	40	0	0	547
Average Retirement Allowance	\$ -	\$ 11,223	\$ -	\$ 64,469	\$ 60,421	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 63,319
	-	15,866	-	62,424	61,312	70,873	80,655	-	-	-	64,678
	7,040	12,944	17,816	41,761	50,408	62,554	70,087	-	-	-	50,674
	8,413	13,406	19,688	33,898	46,248	58,065	64,203	67,318	0	0	45,170
	8,343	14,129	20,985	34,360	46,376	53,754	66,977	90,757	0	0	39,641
	7,355	14,884	22,665	34,651	42,501	49,773	60,444	108,722	0	0	38,848
Average Retirement Allowance As A % of Salary Base	0%	22%	0%	51%	54%	0%	0%	0%	0%	0%	51%
	0%	32%	0%	51%	55%	60%	70%	0%	0%	0%	56%
	12%	20%	27%	45%	52%	60%	66%	0%	0%	0%	53%
	14%	20%	28%	44%	54%	62%	69%	83%	0%	0%	54%
	12%	20%	28%	44%	55%	63%	70%	98%	0%	0%	49%
	12%	20%	30%	43%	54%	64%	73%	133%	0%	0%	50%

**SERVICE RETIREMENT EXPERIENCE
TABLE OF DISTRIBUTION OF RETIREMENT ALLOWANCE
BY AGE OF RETIREMENT
Calendar Year 2018**

Allowance / Age	Under 50	50-54	55-59	60-64	65-69	70 & Up	Total
\$4,999 or Less	-	-	12	12	11	7	42
5,000 - 9,999	-	-	35	95	94	30	254
10,000 - 14,999	1	-	53	113	124	55	346
15,000 - 19,999	-	5	67	126	118	51	367
20,000 - 24,999	1	8	72	191	135	66	473
25,000 - 29,999	1	9	78	185	130	62	465
30,000 - 34,999	2	8	76	213	92	51	442
35,000 - 39,999	1	13	83	211	95	42	445
40,000 - 44,999	3	13	91	173	97	27	404
45,000 - 49,999	14	19	98	159	76	22	388
50,000 - 54,999	27	32	127	161	63	15	425
55,000 - 59,999	33	39	91	154	48	28	393
60,000 - 64,999	20	36	112	124	48	16	356
65,000 - 69,999	22	36	81	125	59	11	334
70,000 - 74,999	12	28	77	69	40	12	238
75,000 - 79,999	13	17	54	55	25	7	171
80,000 - 84,999	9	11	37	50	14	3	124
85,000 - 89,999	6	18	30	42	16	6	118
90,000 - 94,999	4	16	30	40	10	2	102
95,000 - 99,999	1	10	22	18	10	10	71
\$100,000 or more	3	20	41	70	46	24	204
Total	173	338	1,367	2,386	1,351	547	6,162



**SERVICE RETIREMENT EXPERIENCE
TABLE OF DISTRIBUTION OF RETIREMENT ALLOWANCE
BY YEARS OF SERVICE
Calendar Year 2018**

Allowance / Service	5-9.9 Yrs	10-14.9 Yrs	15-19.9 Yrs	20-24.9 Yrs	25-29.9 Yrs	30-34.9 Yrs	35-39.9 Yrs	40 & Up Yrs	Total
\$4,999 or Less	41	1	-	-	-	-	-	-	42
5,000 - 9,999	62	178	12	2	-	-	-	-	254
10,000 - 14,999	19	177	140	10	-	-	-	-	346
15,000 - 19,999	4	110	102	122	26	3	-	-	367
20,000 - 24,999	5	56	88	156	132	32	4	-	473
25,000 - 29,999	-	17	58	142	158	78	12	-	465
30,000 - 34,999	1	8	22	125	161	88	35	2	442
35,000 - 39,999	-	2	10	82	167	132	45	7	445
40,000 - 44,999	-	2	3	73	175	99	42	10	404
45,000 - 49,999	1	-	6	82	163	93	39	4	388
50,000 - 54,999	-	-	2	84	160	139	34	6	425
55,000 - 59,999	-	1	1	86	143	115	38	9	393
60,000 - 64,999	-	-	-	58	119	137	36	6	356
65,000 - 69,999	-	-	1	57	97	117	55	7	334
70,000 - 74,999	-	-	-	42	48	91	42	15	238
75,000 - 79,999	-	-	-	22	44	64	30	11	171
80,000 - 84,999	-	-	-	9	22	53	31	9	124
85,000 - 89,999	-	-	-	10	25	48	26	9	118
90,000 - 94,999	-	-	-	10	23	41	19	9	102
95,000 - 99,999	-	-	-	2	20	26	16	7	71
\$100,000 or more	-	-	1	4	32	70	54	43	204
Total	133	552	446	1,178	1,715	1,426	558	154	6,162

ORDINARY DISABILITY RETIREMENT EXPERIENCE
TABLE OF AVERAGE ANNUAL BENEFIT PAYMENTS
 Calendar Years 2009 through 2018

Calendar Year	Number of Retirees	Average Age	Average Years of Service	Average Retirement Benefit	Average Salary Base	Average Retirement Benefit As A % of Salary Base
2018	301	55	18	\$ 25,370	\$ 70,126	36%
2017	321	55	18	24,455	67,931	36%
2016	318	54	19	25,229	70,080	36%
2015	357	54	18	25,142	67,952	37%
2014	400	54	18	23,948	66,522	36%
2013	446	54	18	23,201	64,447	36%
2012	436	54	18	22,111	61,419	36%
2011	475	54	18	21,687	60,242	36%
2010	516	53	18	20,789	59,397	35%
2009	464	53	18	19,870	55,194	36%

**ACCIDENTAL DISABILITY RETIREMENT EXPERIENCE
TABLE OF AVERAGE ANNUAL BENEFIT PAYMENTS
Calendar Years 2009 through 2018**

Calendar Year	Number of Retirees	Average Age	Average Years of Service	Average Retirement Benefit	Average Salary Base	Average Retirement Benefit As A % of Salary Base
2018	74	48	n/a	\$ 71,670	\$ 98,313	73%
2017	78	47	n/a	70,933	97,168	73%
2016	106	46	n/a	70,330	96,342	73%
2015	108	47	n/a	67,799	91,621	74%
2014	70	47	n/a	69,676	94,157	74%
2013	77	45	n/a	63,221	85,434	74%
2012	89	48	n/a	64,179	86,728	74%
2011	89	49	n/a	62,119	83,945	74%
2010	75	46	n/a	55,944	75,600	74%
2009	80	46	n/a	52,653	70,204	75%

Note: Certain accidental disability benefits are reduced by amounts awarded by the New York State Workers' Compensation Board.

TABLE OF RECIPIENTS BY BENEFIT TYPE AND PENSION OPTION

Year Ended June 30, 2019

Pension Option	Service	Disability (Non-Duty)	Disability and Deaths (Duty)	Total ¹
Single Life	77,682	6,416	4,142	88,240
Joint and Survivor	28,533	1,057	135	29,725
Lump Sum or Term Certain	13,675	2,000	462	16,137
Advanced Payments ²	5,925	236	75	6,236
Surviving Annuitants	17,035	2,201	289	19,525
Total	142,850	11,910	5,103	159,863

Notes:

- 1) Total includes alternative payees such as recipients being paid pursuant to domestic relations orders and similar judgments.
- 2) Retirees have not yet selected a retirement option.

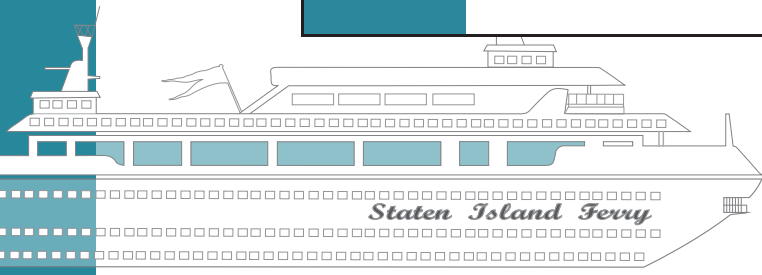


TABLE OF RETIREMENT BENEFITS BY TYPE 10 YEAR HISTORY

Fiscal Years 2010 through 2019

Year Ended June 30	Service		Disability (Non-Duty)		Disability (Duty)		Surviving Beneficiaries		Total	
	No. of Recipients	Average Annual Allowance	No. of Recipients	Average Annual Allowance	No. of Recipients	Average Annual Allowance	No. of Recipients	Average Annual Allowance	No. of Recipients	Average Annual Allowance
2019	125,815	\$ 32,784	9,709	\$ 19,450	4,814	\$ 37,578	19,525	\$ 20,866	159,863	\$ 30,663
2018	123,093	32,106	9,802	19,241	4,826	36,683	18,776	20,109	156,497	30,002
2017	119,943	31,259	9,786	18,764	4,777	36,400	18,283	19,013	152,789	29,154
2016	117,625	30,203	9,759	18,485	4,739	34,513	17,817	18,121	149,940	28,141
2015	115,139	29,613	9,795	18,056	4,701	33,328	17,177	17,694	146,812	27,567
2014	113,507	28,788	9,697	17,771	4,681	31,974	16,652	16,903	144,537	26,783
2013	113,291	27,959	9,580	17,560	4,637	31,882	16,360	16,314	143,868	26,069
2012	110,205	27,292	9,468	17,086	4,583	31,351	16,110	15,339	140,366	25,365
2011	108,161	26,544	9,248	16,581	4,581	29,563	15,834	14,881	137,824	24,636
2010	105,711	25,900	9,024	16,080	4,550	28,833	15,765	14,146	135,050	23,971

TABLE OF PENSIONERS AND ACTIVE MEMBERS

Fiscal Years 2010 through 2019

Year Ended June 30 ²	Pensioners		Active Members ¹			Total		
	Counts	Percentage Change	Year Ended June 30 ²	Counts	Percentage Change	Year Ended June 30 ²	Counts	Percentage Change
2019	154,655	0.3	2019	238,229	(0.9)	2019	392,884	(0.4)
2018	154,116	2.5	2018	240,444	10.6	2018	394,560	7.3
2017	150,419	2.0	2017	217,389	2.4	2017	367,808	2.2
2016	147,514	2.1	2016	212,365	0.1	2016	359,879	0.9
2015	144,526	1.7	2015	212,067	0.5	2015	356,593	1.0
2014	142,095	1.9	2014	210,963	(0.7)	2014	353,058	0.3
2013	139,399	1.0	2013	212,539	0.1	2013	351,938	0.5
2012	137,987	1.9	2012	212,347	1.2	2012	350,334	1.4
2011	135,468	2.3	2011	209,904	(1.6)	2011	345,372	(0.1)
2010	132,487	1.1	2010	213,255	(1.6)	2010	345,742	(0.6)

Notes:

- 1) Active Members include:
 - Terminated vested members not yet receiving benefits
 - Inactive members who are no longer on payroll but not otherwise classified
 - An estimate of members terminated for more than 5 years that appear to be vested (for 2019 only)
- 2) 2017 and prior data is final. 2018 and 2019 data is preliminary and may be subject to future adjustments as the data is refined.

TABLE OF RECIPIENTS (VSF)¹

Fiscal Years 2010 through 2019

Year Ended June 30	COVSF	HPOVSF	HPSOVSF	TPOVSF	TPSOVSF	TOTAL
2019	8,188	142	208	279	230	9,047
2018	7,844	147	212	293	238	8,734
2017	7,488	154	214	313	244	8,413
2016	7,064 ²	161	218	324	248	8,015
2015	6,663	172	224	333	256	7,648
2014	6,389	179	234	342	260	7,404
2013	-	187	241	347	265	1,040
2012	-	192	246	354	271	1,063
2011	-	195	250	361	273	1,079
2010	-	200	253	368	276	1,097

Notes:

1) NYCERS administers the following Variable Supplements Funds:

- Correction Officers' Variable Supplements Fund (COVSF)
 - Housing Police Officers' Variable Supplements Fund (HPOVSF)
 - Housing Police Superior Officers' Variable Supplements Fund (HPSOVSF)
 - Transit Police Officers' Variable Supplements Fund (TPOVSF)
 - Transit Police Superior Officers' Variable Supplements Fund (TPSOVSF)
- TPOVSF, TPSOVSF, HPOVSF, and HPSOVSF are closed to new entrants

2) COVSF benefits were not authorized to be paid in December 2016. This number represents the count of individuals eligible, if a benefit had been authorized to be paid.



CONTACT INFORMATION

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347-643-3501 - TTY (hearing impaired)

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WEBSITE

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CUSTOMER SERVICE HOURS

Monday & Wednesday 8 am – 6 pm
Tuesday & Thursday 8 am – 5 pm
Friday 8 am – 3 pm