
New York City Fire Pension Funds



**Comprehensive Annual Financial Report
A Pension Trust Fund of The City of New York
For The Fiscal Years Ended
June 30, 2018 and June 30, 2017**

New York City Fire Pension Funds

9 MetroTech Center, Brooklyn, N.Y. 11201 - 3857
(718) 999 - 7057



Comprehensive Annual Financial Report A Pension Trust Fund of The City of New York For Fiscal Years Ended June 30, 2018 and June 30, 2017

Prepared under the
Direction of:

Patrick M. Dunn
Executive Director

Prepared By:

Maureen V. Dale
Chief Accountant

Agnes S. Chan
Deputy Chief Accountant

Actuary:

Sherry S. Chan
Chief Actuary
255 GREENWICH ST, 9th FLOOR
NEW YORK, NY 10007

Custodian of the Funds:

Scott Stringer
Comptroller of The City of New York
1 CENTRE STREET
NEW YORK, NY 10007

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New York City Fire Pension Funds
Comprehensive Annual Financial Report
A Pension Trust Fund of The City of New York



Introductory Section

Part I

Fiscal Year Ended June 30, 2018

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Government Finance Officers Association

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

Presented to

**New York Fire Department
Pension Funds**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2017

Christopher P. Morill

Executive Director/CEO

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FIRE PENSION FUND

9 METROTECH CENTER

BROOKLYN N.Y. 11201-3857

December 10, 2018

**TO: The Board of Trustees
New York City Fire Pension Funds**

I hereby present the Comprehensive Annual Financial Report (“CAFR”) of the New York City Fire Pension Funds (“Fire” or the “Funds”) for the Fiscal Year ended June 30, 2018. Our CAFR contains combined financial statements and disclosures for the New York City Fire Pension Fund qualified pension plan (“QPP”) and two additional funds administered by Fire: the New York City Firefighters’ Variable Supplements Fund (“FFVSF”) and the New York City Fire Officers’ Variable Supplements Fund (“FOVSF”). Management is responsible for the preparation, accuracy and completeness of this presentation. We believe that the data in this report is a fair representation of the financial position and results of operations of the Funds, and to the best of our knowledge the information is accurate and includes all required disclosures. Our report is organized into the Introductory, Financial, Investment, Actuarial and Statistical sections. Users of the financial statements are encouraged to review the Management Discussion and Analysis (MD&A) presented in the financial section.

Profile of the Funds

The New York City Fire Pension Fund, formerly known as the New York Fire Department Subchapter Two Pension Fund (formerly Article 1-B), was established pursuant to Local Law No. 53, enacted July 14, 1941. On that date, all participants covered under Article 1-A and subsequent appointees to the Fire Department were granted the option of membership in either Article 1-A or Subchapter Two, in accordance with the legislation. At that time, all members of the Article 1-A Fund became participants in the Fund established under Subchapter Two and, with one exception, all new appointees elected membership in the Subchapter Two Pension Fund.

Effective July 1, 1980, the Article 1-A Fund was terminated and its assets transferred to the Subchapter Two Pension Fund. Prior to July 1, 1980, each member contributed by salary deduction an amount determined to provide approximately 25% of the cost of their benefits, while the City contributed the remaining 75%. The total contributions under this arrangement proved inadequate to finance benefits, and the Pension Fund became actuarially unsound.

Effective July 1, 1980, July 1, 1981, and July 1, 1982, new state laws amended the benefit provisions of the Fund by establishing a new Plan known as the Improved Benefits Plan (“IBP”). The IBP provides increased benefits supported by higher member and City contributions. The Original Plan (“OP”) was closed to new entrants on July 1, 1981 and membership in the IBP became mandatory for employees hired on or after that date. Members of the OP have the option, during specified periods each year, to transfer to the IBP.

The new laws were expected to correct previous under-funding of the Pension Fund. The provisions of these laws increased City contributions annually to provide an amount deemed sufficient to cover benefits, excluding annuities and refunds from member contribution accounts. These contributions cover the normal costs of operation each year.

The Firefighters’ Variable Supplements Fund (“FFVSF”) and the Fire Officers’ Variable Supplements Fund (“FOVSF”) (collectively the “VSFs”) operate pursuant to the provisions of Title 13, Chapter 3 of the New York City Administrative Code and provide supplemental benefits to retired Firefighters, Fire Marshals, Marine Titles, Fire Officers and Supervising Fire Marshals, respectively. To receive benefits from the VSFs, eligible participants must retire on or after October 1, 1968, and be receiving a service retirement benefit from the QPP. The VSFs are not considered pension plans; they provide defined supplemental payments other than pension or retirement system benefits.

Effective September 8, 2016, the New York City Fire Pension Fund, formerly known as the New York Fire Department Pension Fund, was granted corpus funding pursuant to Chapter 298 of the Laws of 2016. Under the new law, the Pension Fund ceased to be part of the Fire Department and became a separate entity. The law mandates budgetary approval by the offices of the Mayor and Comptroller, and authorizes the Board of Trustees to pay for operational expenses from the assets of the Fund. The City later reimburses these expenses.

Current Initiatives

Management’s goal is to administer the Funds in a manner that will ensure the highest level of accountability and responsiveness to the needs of our members. This includes providing accurate information to facilitate retirement planning and timely payment of benefits to retirees and beneficiaries.

During the past year our new management team, in coordination with technology consultants, began work on several projects to modernize our systems. In Phase 1 of our efforts we began the conversion of our extensive system of paper files to an electronic format. The electronic files will be secure, accessible only to designated staff and will help generate efficiencies in our daily activities.

Self Service Portal

Our pension information system’s (“e-UPS”) self-service portal has become an integral part of our customer service delivery. E-UPS is available through the Fire Department’s intranet and may be accessed from computers at the firehouses. Each year, the number of members accessing the portal has increased. Also, members can download their Annual Pension Statement, manuals and forms, view updated account details, and get current estimates of their retirement benefits.

New Member Applications

During Fiscal Year 2018, the pension managers and key personnel of the Fund successfully completed the processing of approximately 600 new membership applications. The Fund conducted two classes for probationary firefighters hired by the Fire Department during that period. These firefighters have since become members of the Fund under the new Tier 3 modified (Tier 6) legislation.

Retirement Counseling

The Retirement Counseling Unit consulted with numerous prospective retirees and processed retirement applications for approximately 400 members during Fiscal Year 2018. These applicants are now receiving 90% of their expected retirement benefit, pending finalization of calculations.

Finalizations

During the fiscal period, our Calculations and Pension Payroll Units worked diligently to finalize approximately 950 retirees and beneficiaries who had been receiving 90% of their benefits. These retirees and beneficiaries now receive the full amount of their benefits.

Financial Information**Economic Conditions in Fiscal Year 2018 and Outlook for Fiscal Year 2019**

Revenues derived from investment activities is a significant factor in the financing of pension benefits. The state of the economy and conditions in financial markets are therefore always of great concern. During the fiscal year, the U.S economy continued to grow at a strong rate, resulting in solid investment returns, particularly in equity markets. The Bureau of Economic Analysis (“BEA”) reported that the U.S. economy, as measured by the change in real Gross Domestic Product (“GDP”), grew at the rate of 2.9% during Fiscal Year 2018. The labor market also continued to improve, showing solid job growth and declining unemployment levels. A current Bureau of Labor Statistics report revealed that the unemployment rate had fallen from 4.3% in July 2017 to 3.9% in July 2018. Federal Reserve Bank (“FRB”) press releases during September 2018, disclosed that the Open Market Committee (“OMC”) would continue gradual adjustments to monetary policy allowing for additional expansion in economic activity and the strengthening of labor market conditions. It is anticipated that this policy will also promote the Committee’s statutory mandate to foster maximum employment and price stability, while keeping inflation levels at or near the current objective of 2%. Also, the OMC will gradually increase the target range for the federal funds rate, to keep pace with the current state of economic activity. The target range for the federal funds short-term interest rate now stands between 2.00% and 2.25%.

The City’s economy, as measured by change in Real Gross City Product (GCP), grew by 3.1% during Fiscal Year 2018, compared to the 2.2% rate achieved in Fiscal Year 2017. As reported by the Comptroller’s Office, the City’s economic growth was largely supported by gains in employment and growth in the commercial and residential sectors of the real estate market. New York City’s private-sector created 76,600 new jobs during the period. The City’s unemployment rate also improved, falling from 4.8% in Fiscal Year 2017 to 4.3% in Fiscal Year 2018.

After assessing the effects of current global conditions and domestic fiscal policies, the Comptroller’s Office concluded that both the U.S economy and the City’s economy will continue to grow at a strong pace in Fiscal Year 2019. The Comptroller’s Office believes that the major economic factors that will likely support continued growth are; rising consumer confidence, growing corporate profits, expansionary fiscal policy and higher government spending. They also identify risks that could negatively affect economic growth such as the high interest rates which could result from current monetary and fiscal policies. Additionally, ongoing trade tensions could help increase prices of imported goods, fuel inflation and reduce exports of our agricultural and manufactured goods. Overall, the Comptroller’s Office expects the national economy to experience stronger growth in fiscal 2019, providing a favorable environment for further growth in the City’s economy.

Investments

The Comptroller of the City of New York is the designated custodian of the Funds' investment portfolio, subject to the direction, control and approval of the Boards of Trustees. The investment policy adopted by the Funds' Boards of Trustees is one that promotes growth through increasing returns. The strategy used to implement this policy is the allocation of assets, which are diversified into a broad array of instruments, to minimize overall risk, maintain liquidity and generate competitive returns.

The Funds' portfolio is comprised largely of holdings in domestic, international, private equities and fixed income securities. For Fiscal Year 2018, Fire's QPP investment portfolio of approximately \$13.4 billion under management, posted gains of 9.3 %, while the corresponding Policy Index posted gains of 8.6%. The FFVSF's investment portfolio of approximately \$519.8 million gained 7.3 %, matching the corresponding Policy Index also at 7.3%. The FOVSF's investment portfolio of approximately \$354.5 million gained 7.8%, while the corresponding Policy Index gained 7.3%. A detailed discussion of our investment policy, activities and results is presented in the Investment Section of our report.

Funding

Adequate funding is essential to ensure the financial soundness of a pension plan. If funding levels are adequate, the total amount of accumulated assets will be comparable to the total amount of benefit obligations of the Funds. The City's funding policy is to contribute statutorily-required contributions, which, combined with member contributions and investment returns, meet current and future obligations. A well-funded plan gives Fund participants the confidence that their pension benefits are secure.

Fire's Fiduciary Net Position as a Percentage of Total Pension Liability, formerly "funded ratio," is calculated in accordance with newly adopted Governmental Accounting Standards Board Statements Numbers 67 and 68. This ratio stands at 64.4% for Fiscal Year 2018, an increase from 60.9% in the previous period (Net Pension Liability - Note 6 of Notes to Financial Statements). Funding is further addressed in the actuarial section of our report.

Accounting and Reporting

This report was prepared to conform to principles of governmental accounting and reporting as promulgated by the Governmental Accounting Standards Board ("GASB"), and according to guidelines adopted and published by the Government Finance Officers Association of the United States and Canada ("GFOA"). The requirements of GASB Statement No. 67, "Financial Reporting for Pension Plans," have been adhered to in determining the information in the financial statements.

The accrual basis of accounting is used to record all transactions executed by the Pension Funds. Under this method, revenues are recognized when earned and expenses are recognized when the Funds incur an unconditional obligation to pay. The accrual basis of accounting provides a realistic picture of the financial activity and performance of the Pension Funds for each period.

Internal Control

The management of New York City Fire Pension Funds is responsible for establishing and maintaining an internal control structure, designed to ensure that the assets of the Funds are adequately safeguarded. Additionally, the control structure should ensure that all transactions are properly recorded to allow for the preparation of financial statements in conformity with generally accepted accounting principles. The objective of internal control is to provide reasonable rather than absolute assurance that the financial statements are free of material misstatements. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived, and also that the evaluation of costs and benefits requires estimates and judgments to be made by management.

Procedures that reinforce established controls are periodically reviewed and evaluated by management, the Internal Audit Unit of the Fire Department, and the New York City Comptroller's Office through its assessment of the Funds' Financial Integrity Compliance statement. In addition, independent certified public accountants audit the financial statements each year.

Professional Services

The Comptroller of the City of New York is the custodian of the Funds' assets and provides investment services through independent advisors and consultants. These advisors and consultants are disclosed in the Financial section of the CAFR in the schedule of Investment Expenses on pages 95 through 107 and the schedules of Administrative Expenses and Payments to Consultants on pages 108 and 109. We also include a listing of brokerage firms and the amounts paid to each firm in the Investment section of the CAFR in the schedule of Broker's Commissions and Fees on pages 125 through 131. Additionally, the Chief Actuary of the City's pension systems provides actuarial services to the Funds, while the Corporation Counsel provides legal services to the Funds. The City of New York defrays the expenses associated with these services.

Independent Audit

The New York City Fire Pension Funds are required to undergo an annual audit by independent certified public accountants in accordance with generally accepted auditing standards. The accounting firm of Marks Paneth LLP was selected to perform the annual audits for the Fiscal Years ended June 30, 2016 through June 30, 2019. The Independent Auditor's Report for the Fiscal Years ended June 30, 2018 and 2017 on the general-purpose financial statements and schedules of historical information required by the Governmental Accounting Standard Board ("GASB") is presented in the Financial section of this report. The Financial section also contains Management Discussion and Analysis (MD&A) with comparative data for Fiscal Years 2018, 2017 and 2016. The contents of this letter should be considered along with additional information contained in the MD&A.

Other Information

Awards

The Government Finance Officers' Association of the United States and Canada ("GFOA") awarded a Certificate of Achievement for Excellence in Financial Reporting to the New York Fire Department Pension Funds for its Comprehensive Annual Financial Report for the Fiscal Year ended June 30, 2017. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to conform to the Certificate of Achievement program's requirements, and we are submitting it to the GFOA to determine its eligibility for Fiscal Year 2018.

Acknowledgements

The timely preparation of this annual report reflects the combined efforts of the Pension Administration management and staff, whom I thank for their professionalism and dedication. Our report presents complete and reliable information to provide a basis for making management decisions, to comply with legal provisions, and to ensure responsible stewardship of the assets of the Funds.

I wish to thank the Office of the Actuary and the Office of the Comptroller for their expertise and for providing the wide range of valuable actuarial and statistical data that is an integral part of this report. I am also very grateful to the Board of Trustees for the leadership and counsel they have provided during this period.

In closing, I wish to express my sincere gratitude to the managers and staff of the Fund, whom have worked diligently to fulfill our agency's mission, enhance the delivery of member services and assure the successful daily operations of the New York City Fire Pension Funds.

Respectfully submitted,



Patrick M. Dunn
Executive Director

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MEMBERS OF THE BOARD OF TRUSTEES

As of June 30, 2018

Bill de Blasio	Mayor, City of New York
Daniel A. Nigro	Fire Commissioner and Chairperson
Scott M. Stringer	Comptroller, City of New York
Jacques Jiha	Commissioner, Department of Finance
Paul Mannix	Chiefs' Representative of the Uniformed Fire Officers' Association of Greater New York
John Farina	Captains' Representative of the Uniformed Fire Officers' Association of Greater New York
Jack Kielty	Lieutenants' Representative of the Uniformed Fire Officers' Association of Greater New York
Gerard Fitzgerald	President of the Uniformed Firefighters' Association of Greater New York
Leroy C. McGinnis	Vice President of the Uniformed Firefighters' Association of Greater New York
Edward Brown	Treasurer of the Uniform Firefighters' Association of Greater New York
John Kelly	Vice Chairman of the Uniformed Firefighters' Association of Greater New York
Peter De Vita	Representative of the Uniformed Pilots' and Marine Engineers' Association of Greater New York

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New York City Fire Pension Funds

Summary of Funds Benefits



Tier I - Tier II & Tier III

Fiscal Year Ended June 30, 2018

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Summary Funds and Options Benefits

TIERS I & II

The Fire Department Pension Fund, Subchapter II, (the “Fund”) is a corporation, separate from the Fire Department of The City of New York, your employer. All uniformed employees of the Department become members of the Fund upon appointment.

MEMBERSHIP

TIERS

Firefighters who became members of the Fund before July 1, 1973 are Tier 1 members. Firefighters who became members of the Fund on or after July 1, 1973 are Tier II members.

ORIGINAL PLAN – PRE-JULY 1, 1981 MEMBERS

Prior to July 1, 1981, all members of the Fund were enrolled in the “Original Plan”. After the Fund was financially restructured in 1981, the “Original Plan” was closed to new entrants, and the “Improved Benefits Plan,” which covers all firefighters hired on or after July 1, 1981, was adopted. It provides some increases in benefits, along with somewhat higher member and City contributions.

Although closed to new entrants, the “Original Plan” covered pre-7/1/81 members who had not elected to transfer to the “Improved Benefits Plan.” Legislation enacted in 1986 permitted such transfers in June, July, and August of every year.

IMPROVED BENEFITS PLAN (IBP) – POST-JUNE 30, 1981 MEMBERS

All firefighters who become members of the Fire Department Pension Fund on or after July 1, 1981 are covered only by the “Improved Benefits Plan.” Unless specifically stated otherwise, all information in this Summary Plan Description refers to members of the IBP only.

SUMMARY

Date of Membership	Tier	Applicable Plan
Pre-7/1/73	1	Original of Improved Benefits Plan
7/1/73-6/30/81	2	Original of Improved Benefits Plan
Post-6/30/81	2	Improved Benefits Plan

If your membership date or equated date is between June 17, 1971 and June 30, 1973, you are subject to the limitations on final salary imposed by the Kingston Law.

KINGSTON LAW LIMITATIONS

For all members of the Fund appointed between June 17, 1971 and June 30, 1973, the pensionable compensation for the final year of service is limited to 120% of the pensionable compensation for the year immediately preceding the final year. For example, a member's final year of service is July 6, 2009 through July 5, 2010. If between July 6, 2008 and July 5, 2009 the member earned \$90,000.00 in pensionable salary, holiday pay, night-shift differential, and overtime, the final year pensionable compensation cannot exceed \$108,000 (\$90,000 X 120%).

CONTRIBUTIONS

REQUIRED EMPLOYEE CONTRIBUTIONS

Tier I and Tier II members contribute a percentage of all earnings through payroll deductions to a 20-year plan. Contribution rate is based on age at appointment. Member contributions earn interest, currently 8 ¼% per year. Contributions are required for the first twenty (20) years of allowable fire service. After 20 years, contributions will continue unless the member submits a written request to the Pension Bureau to discontinue the contributions.

Contributions and any interest earned are referred to as "accumulated deductions". The amount of accumulated deductions required to be in the member's account at any given time is referred to as the "minimum required contribution." The total minimum required contribution is determined on the member's 20th anniversary. Contributions made above the minimum required are referred to as "excess" contributions.

TAXATION

Contributions made before December 1989 were federally taxed. Regular contributions made since December 1989 are federally tax-deferred as per section 414(h) of the Internal Revenue Code, but are subject to state and local income taxation. Thus, upon retirement or termination, withdrawal of these contributions and interest earnings will be subject to federal taxation only. Members who are under the age 50 may be subject to an additional 10% Federal tax penalty and should consult a tax advisor before withdrawing excess contributions at retirement. Minimum required contributions may not be withdrawn except upon separation from service before retirement (i.e. resignation or termination).

VOLUNTARY EMPLOYEE CONTRIBUTIONS 50% INDICATOR

Members may make additional contributions equal to 50% of their required employee contributions on a voluntary basis. Since these contributions are not covered by section 414(h) of the Internal Revenue Code, they are subject to immediate federal, state and city income taxation. These additional contributions will also increase a member's excess contributions, which will provide an additional annuity, or may be withdrawn as a lump sum, at retirement.

ITHP WAIVER

The City of New York makes employer contributions to the Fund. The City of New York also pays a portion of employee contributions. These contributions are called "Increased-Take-Home-Pay" (ITHP) and currently equal 5% of gross salary. For example, assume an employee contribution rate of 7.3% of pay. With ITHP, the member contributes 2.3% (the "minimum required contribution") and the City contributes 5%.

Members may waive the ITHP and contribute at the full employee rate. These additional contributions are covered by section 414(h) of the Internal Revenue Code, and are therefore federally tax-deferred. Although this lowers take-home pay during employment, it results in either a greater annuity at retirement or a lump-sum return of any excess. For example, assume a contribution rate of 7.3% of pay, and the employee waives the ITHP. While the employee contributes 7.3% of pay, the City of New York continues to make ITHP contributions equal to 5%. Excess tax-deferred 414(h) contributions are taxable in the year withdrawn.

NOTE: From March 27, 1976 through September 30, 2000, the ITHP rate was 2.5%.

HOW TO REDUCE PAYROLL DEDUCTIONS (138-b REGULATIONS)

To increase take-home pay, required employee contributions may be reduced up to the amount of Social Security (FICA) contributions. If required contributions are less than FICA contributions, the member will not be making any pension contributions, thereby creating a deficit in his/her retirement account. For example, assume a member has a pension contribution rate of 7.5%. The required contribution rate is 2.5%, and the ITHP is 5%. Under the 138-B election, the member will not be making any pension contributions since his/her required contribution rate of 2.5% is less than the current Social Security rate of 6.2%. If the percentages change and the required contribution rate becomes greater than the FICA rate, the member would contribute the difference into the retirement account.

If the 138-B option is elected, Social Security benefits will not be affected. However, the value of the retirement allowance will be reduced because it is based in part on required employee contributions and the interest earned thereon. After maximum Social Security contributions have been reached during any calendar year, pension contributions will resume.

EXCESS CONTRIBUTIONS

At retirement, Service and Accidental Disability retirees can choose to take any excess contributions as either a lump-sum payment or as an additional annuity. Members retiring for Ordinary Disability are required to take a lump-sum payment of any excess. Members considering requesting a refund of excess contributions are reminded that withdrawal of 414(h) contributions and interest is subject to federal tax in the year withdrawn. In addition, members who are under age 50 at retirement may also be subject to an additional 10% Federal tax penalty and should consult a tax advisor prior to withdrawal. Retiring members may request a direct rollover of any taxable excess into a qualified plan such as the NYC Deferred Compensation/401K plans, or an IRA in order to defer payment of federal tax.

CREDITED SERVICE

Credited service is classified as uniformed service or non-uniformed service.

ALLOWABLE FIRE SERVICE

Twenty (20) years of allowable fire service are required for Service Retirement. Such service includes:

All member service rendered as a uniformed member of The New York City Fire Department in the competitive class of the civil service.

Credit for service rendered in the uniformed force of The New York City Police Department immediately preceding service in the uniformed force of the New York City Fire Department, provided application for such credited service is made within prescribed time limits and such credited service is transferred to the Fund.

New York City Employees' Retirement System (NYCERS) uniformed force service rendered immediately before appointment as a uniformed member of The New York City Fire Department, provided application for such credited service is made within prescribed time limits and such credited service is transferred to the Fund. Uniformed service from NYCERS includes uniformed service in the Department of Correction, Sanitation as well as service as an Emergency Medical Technician (EMT) of Fire Alarm Dispatcher.

It also includes all allowable Peace Officer service (as defined in Section 2.10 of the Criminal Procedure Law), service as Sheriff, Marshal, or D.A. Investigator, and any position specified in Appendix A of the agreement dated October 27, 2005 among The City of New York, the Uniformed Firefighters' Association and the Uniformed Fire Officers' Association.

Credit for any service rendered while a member of The New York State Policemen's and Firemen's Retirement System or the New York State & Local Retirement System, provided application for such credited service is made within prescribed time limits and such credited service is transferred to the Fund.

Credit for up to five (5) years of military service provided you were a member of a City retirement system at the time you entered military service and you immediately returned to City service upon discharge from the military.

Uniformed Services Employment & Reemployment Rights Act (USERRA) credit for members called off a Military Preferred List.

BUYBACK CREDIT

Chapter 548 of the Laws of 2000 allows members to purchase pension credit for up to three (3) years of certain wartime military service rendered prior to the commencement of the public employment. A member must have at least five (5) years of credited service to be eligible to receive credit under this law.

Chapter 646 of the Laws of 1999 – Tier Reinstatement: This law amends §645 of the RSSL and permits a member, who was previously a member of any New York public retirement system, to be deemed to have become a member of the current retirement system as of the original date of such previous ceased membership. If membership in the prior retirement system is based on certain designated law enforcement service, such service will be credited as “allowable” up-front service, towards the required 20-year period. For this purpose, such service shall include:

- a) Uniformed service in the police department, fire department or sanitation department of The City of New York or the State of New York or any agency or political subdivision thereof;
- b) Service as a peace officer as specified in §2.10 of the Criminal Procedure law (CPL); or
- c) Service in the title of sheriff, deputy sheriff, marshal district attorney investigator, or other State law enforcement positions. This benefit is available only where the member restores his or her refunded contribution balance with interest. In some cases, this may provide for a reinstatement of Tier status.

- * Chapter 552 of the Laws of 2000 – Prior Service Credit: This law allows members who were eligible for membership in any of the New York State or New York City retirement systems, but did not become members of such system, to buy pension credit for the time that was eligible for membership. If membership in the prior retirement system is based on certain designated law enforcement service, such service will be credited as “allowable” up-front service. For this purpose, such service shall include:
- a) Uniformed service in the police department, fire department or sanitation department of the City of New York or the State of New York or any agency or political subdivision thereof;
 - b) Service as a peace officer as specified in §2.10 of the Criminal Procedure Law (CPL); or
 - c) Service in the title of sheriff, deputy sheriff, marshal, district attorney investigator, or other State law enforcement positions. Except for the service indicated above, all other service will be “Other Credited Service,” which counts as additional service credit after the completion of twenty (20) years in the fire pension system.

OTHER CREDITED SERVICE

Other Credited Service is any New York City service (except Teachers’ Retirement System service) which is not considered allowable credited service. It counts as additional service credit after completing the required twenty (20) years and includes service rendered while a member in a non-uniformed position with the New York City Employees’ Retirement System and membership in the Board of Education Retirement System.

However, there is no credit for prior non-uniformed service for members who are granted an accidental disability pension. Uniformed service credit that does not immediately precede uniformed service in the New York City Fire Department is Other Credited Service. Time not transferred can be purchased as a buyback under Chapter 646 or Chapter 552. All such Other Credited Service must be applied for within the time limits prescribed by law and transferred to the Fire Department Pension Fund.

RETIREMENT PROCESS

SERVICE RETIREMENT

Members may retire for service (non-disability) after completing 20 years of uniformed service. To initiate Service Retirement, Form BP-165 must be submitted through the chain of command. The Retirement Counseling Unit must receive the form at least (30) days before the date on which the member wishes to retire and at least ten (10) days before the date on which usage of accrued and terminal leave begins.

WITHDRAWAL OF SERVICE RETIREMENT APPLICATION

If a member has begun to utilize terminal leave and decides to withdraw the application for retirement, the FDNY Medical Board must evaluate the member for a duty determination before he/she can return to full duty.

DISABILITY RETIREMENT

A member may apply either for ordinary disability (non-service connected) retirement or accidental disability (service connected) retirement, or both. Applications for service or non-service incurred disability retirement shall be submitted to the Fire Commissioner on Form BP-409 (2 copies). The following steps are necessary before disability retirement is considered.

STEP I: SUBMISSION OF APPLICATION***Member's Application for Disability Retirement:***

A member may initiate the disability retirement process by submitting Form BP-409, whether or not there has been an examination by a Bureau of Health Services (BHS) physician or by the BHS Medical Board. However, the BHS Medical Board is required to make a determination of the member's fitness for duty status prior to or during the disability pension application process. When any officer submits an application for disability retirement, vacation leaves, accrued and terminal leaves must begin immediately.

Depending upon the results of an initial examination by a medical officer at the Fire Department's Bureau of Health Services, the member will be referred to the BHS Medical Board, which is comprised of three or more FDNY medical officers. The BHS Medical Board makes fitness for duty determinations. The BHS Medical Board examines the member and may make one of the following determinations:

- a) Temporarily unfit for full duty. In this case, the member is placed on light duty or medical leave with an exception of being returned to full duty.
- b) Permanently unfit for full duty. This category is also known as REC/LSS (Recommended Limited Service Squad or Long Term Light Duty). Pursuant to Mayoral Directive 78-14, the member may remain on Light Duty for up to one year.
- c) Undetermined. This requires examination by the full BHS Medical Board at the monthly meeting of all medical officers.
- d) Full Duty.

Fire Commissioner's Application for Disability Retirement:

Pursuant to Mayoral Executive Order No. 78-14, the Fire Commissioner must apply for the disability retirement of any member found permanently unfit for full firefighting duty by the BHS Medical Board. Within thirty days of the BHS Medical Board's determination that a member is permanently unfit for full firefighting duty (REC/LSS), the transcript or minutes from the BHS Medical Board are forwarded to the Pension Bureau Retirement Desk. The Pension Bureau Retirement Desk is then required to file a Fire Commissioner's Application for Disability Retirement with the 1-B Medical Board.

STEP II: REVIEW OF APPLICATION BY THE 1-B MEDICAL BOARD

The 1-B Medical Board is composed of three physicians and is independent of both the Fire Department and the Pension Board of Trustees. The 1-B Medical Board meets weekly and is the sole authority in determining whether a member is disabled for retirement/pension purposes. In reviewing an application, the 1-B Medical Board addresses the following questions:

- a) Is the member disabled for retirement purposes?
- b) If the member is disabled for retirement purposes, is the disability due to a line-of-duty accident? (a.k.a. the *Causation* question). Please note that while the 1-B Medical Board's disability determination is binding upon the Pension Board of Trustees, it may only make recommendations with respect to the causation component.

The applicant has the right to submit any and all evidence in support of a disability retirement and the 1-B Medical Board must evaluate all of the evidence and report its conclusions and recommendations to the Pension Board of Trustees.

The 1-B Medical Board's recommendation on the cause of a disability for retirement purposes is based on a review of the relevant medical records contained in the member's medical chart (from the Bureau of Health Services) and any additional documents submitted by the member, including relevant CD-72s.

Often, during its initial review of a case, the 1-B Medical Board may request that one of its impartial medical consultants evaluate the member.

The medical consultant will be a specialist that deals with the member's specific medical condition. After its initial review, the 1-B Medical Board reaches one of the following conclusions:

- a) Disabled due to line-of-duty accident (Accidental Disability)
- b) Disabled due to non-line-of-duty condition (Ordinary Disability)
- c) Not Disabled for retirement purposes (Denied)
- d) Decision deferred until the 1-B Medical Board has evaluated the consultant's report or other additional evidence.

The 1-B Medical Board's certification of each is forwarded to the Board of Trustees for a final determination of the disability application.

STEP III: REVIEW BY THE BOARD OF TRUSTEES

The Board of Trustees consists of City and Union representatives, each with an equal number of votes. During its monthly meetings, the Board reviews the reports of the 1-B Medical Board, the relevant medical records and the relevant CD-72s. Although the Board of Trustees cannot change the 1-B Medical Board's decision on whether a member is permanently disabled from full duty, it can overrule the 1-B Medical Board's recommendation on causation. When the Board of Trustees cannot reach the vote necessary to pass a motion (7/12 or 14 votes) on the cause of the disability, the member will be retired for ordinary disability. This is based on a court case known as the "Schoeck Decision."

WITHDRAWAL OF DISABILITY RETIREMENT APPLICATION

If the Fire Commissioner applied for a member's disability retirement, only the Fire Commissioner can stop the process. If a member has applied for disability retirement, the member may stop the process by withdrawing the application. If the 1-B Medical Board's doctors have found the member disabled for retirement purposes, the member may not return to full duty. However, members found to be disabled by the 1-B Medical Board will be afforded the opportunity to request a reasonable accommodation as outlined in PAID 1/2000.

A request to withdraw a disability retirement application by the member shall be made on a letter-head report to the Fire Commissioner and processed through the chain of command. The report shall include:

NAME, RANK, UNIT, SOCIAL SECURITY NUMBER, REASON MEMBER SUBMITTED RETIREMENT APPLICATION, REASON FOR REQUESTING WITHDRAWAL, DATE(S) OF PREVIOUS RETIREMENT APPLICATIONS AND WITHDRAWAL REQUEST

Upon receipt of the request, the Bureau of Human Resources shall direct the member to the Bureau of Health Services for examination. The Fire Commissioner may elect to either withdraw or keep in effect the Fire Commissioner's application for retirement.

An application to withdraw shall be denied for either of the following reasons:

The member is found unfit for any duty by the Fire Department BHS Medical Board or the member has had disability certified by the Board of Trustees prior to receipt of his/her withdrawal application.

If the application to withdraw is approved, member will be notified to report to the Bureau of Human Resources for clarification of duty status and suitable assignment.

RETIREMENT PROCEDURES FOR ALL RETIREES

During the retirement process, retirees will be advised regarding health insurance, pension options, post-retirement employment restrictions, withholding tax, and related issues. At this time, the member's projected retirement date will be determined, and an estimate of the final pension allowable, as well as the amount of the partial allowance, will be determined. NOTE: Health insurance is not provided for members with less than ten (10) years of service, retiring on an ordinary disability.

Members are generally entitled to take all vacation leave, accrued and terminal leave (normally one (1) day per four (4) completed months of service) after their last day on duty, and remain on the active payroll during this time. Terminal leave is not granted for vested separations. Under limited circumstances, service retirees and vested separations may submit a request for withdrawal of their retirement application before going off the payroll. To do so, the Retirement Counseling Unit must be notified at least ten (10) business days before the date on which the member is requesting a return to active status. (Note: Service retirees who have begun to utilize terminal leave must be evaluated by the FDNY Medical Board prior to return to full duty).

Upon retirement, a member must return all Department property and obtain a Property Release Form (BP-71) from the Bureau of Personnel. The retiree must forward a copy of the Property Release Form to the Pension Bureau before any pension checks are issued. In addition, a copy of the Property Release Form must also be forwarded to Uniformed Payroll for release of the final active paycheck.

TIERS I and II: SERVICE RETIREMENT ALLOWANCE

Members will be eligible to receive a retirement allowance after completing 20 years of allowable fire service.

The Service retirement allowance is calculated as follows:

50% of final salary
plus
 $1/60^{\text{th}}$ x total earnings after your 20th anniversary

plus
 $1/80^{\text{th}}$ x average annual earnings of the last 5 years x the years and days of other credited service, if applicable

plus
a pension based on the actuarial value of the ITHP contributions made after completion of 20 years of allowable fire service, together with the interest earned on those contributions

plus
an annuity based on any accumulations in excess of minimum required contributions remaining in the member's account at retirement, including interest earned on those contributions

less
the annuity value of any shortage in the member's account (shortages result from a contribution rate deficiency, prior loans, unpaid loans, and/or nonpayment of contributions).

TIERS I and II: DISABILITY RETIREMENT ALLOWANCE**ORDINARY DISABILITY RETIREMENT**

A member is eligible to receive an ordinary disability retirement allowance, regardless of age or years of credited service, provided the 1-B Medical Board and the Board of Trustees have found the member physically or mentally unable to perform his/her regular job duties.

An Ordinary Disability retirement allowance is calculated as follows:

years and days of all service, (uniformed and other credited service)
divided by 40 and multiplied by final salary
less
the annuity value of any shortages in the member's account (shortages result from prior
loans, unpaid loans, and/or nonpayment of contributions)
plus
a lump-sum return of any accumulated deductions in excess of the minimum required
contributions remaining in the account at retirement, including interest earned on these
contributions.

ACCIDENTAL DISABILITY RETIREMENT

There is no minimum service requirement for accidental disability retirement. The 1-B Medical Board must find a member physically (includes the presumptive Lung Law and the Heart/Cancer/Infectious Diseases/WTC Bills) or mentally unable to perform his/her regular job duties because of an accidental injury received in the line-of-duty. Such disability must not be the result of a member's own negligence.

An Accidental Disability retirement allowance is calculated as follows:

a pension equal to 75% of final salary
plus
 $1/60^{\text{th}}$ x total earnings after the member's 20th anniversary
plus
an additional pension based on the actuarial value of the ITHP reserve account as of the
effective date or retirement
plus
an annuity based on the actuarial value of accumulated deductions as of the effective date
of retirement
less
a deduction for the annuity value of any loan outstanding at time of retirement.

Notes:

For members retiring on or after January 1, 2009, accidental disability pensions are federally taxed on the 1/60th portion, ITHP over 20 years, and the annuity based on contributions attributed to 414H and interest. The balance of an accidental disability pension is Federally tax-free. However, the entire accidental disability is exempt from New York State and New York City Income Tax.

There is no credit for prior non-uniformed City service for IBP members granted an accidental disability pension.

TIERS I and II: OPTIONS**MAXIMUM RETIREMENT ALLOWANCE (NO OPTION)**

At retirement, a member may elect to receive the maximum retirement allowance. The maximum retirement allowance is the largest benefit that can be received. Payments are made throughout the retiree's lifetime and cease upon death. There are no survivor benefits under the maximum retirement allowance.

OPTIONS

An option is an election that provides a continued pension benefit or lump-sum payment to a beneficiary. When electing an option, the member accepts a reduced retirement allowance during his/her lifetime. The reduction is based on the option selected, age, and sometimes the age of the beneficiary. After certification by the Office of the Actuary, the pension is finalized. Once the member receives his/her full pension check, the option selected cannot be changed. There are four options available to Tier I members.

OPTION 1

Option 1 is available only to Tier 1 members appointed prior to July 1, 1973.

This option sets up an initial pension reserve. If the retiree dies before receiving payments equal to this total pension reserve (the reserve set aside to pay benefits over a retiree's lifetime), the difference between the total pension reserve and all payments received will be awarded to the beneficiary. This option may be selected for the annuity reserve, the pension reserve, or both. More than one beneficiary may be named, and the beneficiary (ies) may be changed at any time.

OPTION 2

Joint and 100% Survivor: The retiree receives a reduced monthly lifetime allowance. Upon the death of the retiree, this option allows the named beneficiary to receive 100% of the reduced pension allowance for life. Only one beneficiary may be named, and the designated beneficiary may not be changed once the option is in effect.

OPTION 3

Joint and 50% Survivor: The retiree receives a reduced monthly lifetime allowance. Upon the death of the retiree, this option allows the named beneficiary to receive 50% of the reduced pension allowance for life. Only one beneficiary may be named, and the designated beneficiary may not be changed once this option is in effect.

OPTION 4

Lump Sum: The retiree receives a reduced annual pension allowance for life with the provision that upon the death of the retiree, the beneficiary(ies) will receive a limited lump-sum payment specified by the retiree at the time the option is chosen. More than one beneficiary may be named and the beneficiary(ies) may be changed at any time;

Annuity: The retiree receives a reduced annual pension allowance for life with the provision that upon the death of the retiree, the beneficiary will receive a specified annual annuity, as pre-determined by the retiree. Only one beneficiary may be named, and the designated beneficiary may not be changed once the option is in effect.

“POP-UP” OPTION MODIFICATION

Under this option modification, if the named beneficiary predeceases the retiree, the retirement allowance reverts back to the maximum retirement allowance. The “Pop-up” may ONLY be applied to Option 2, Option 3, and Option 4 annuities. There is an extra cost for this option.

FIVE YEAR OR TEN-YEAR CERTAIN

The Five-Year or Ten-Year Certain Options are available only to Tier 2 members appointed after July 1, 1973.

FIVE-YEAR CERTAIN: The Retiree receives a reduced monthly lifetime allowance. If the retiree dies within five years of his /her retirement, the benefit is paid to the retiree’s beneficiary either in a lump sum or in monthly payments for the remainder of the five years.

TEN-YEAR CERTAIN: The Retiree receives a reduced monthly lifetime allowance. If the retiree dies within ten years of his /her retirement, the benefit is paid to the retiree’s beneficiary either in a lump sum or in monthly payments for the remainder of the ten years.

Should the beneficiary predecease the retiree, upon the death of the retiree, a lump sum will be paid to the estate of said retiree. The beneficiary may be changed at any time with this option.

Notes:

Fifty percent (50%) of any cost-of-living adjustments (COLAs) are paid to a spouse under Options 2 and 3, under Option 4 Annuity, and any “Pop-up” option, whose deceased spouse, if alive, would be eligible for a COLA benefit increase.

Under current tax laws, for the beneficiary(ies) of line-of-duty (accidental) disability retirees, all options are federally taxed on a portion of the pension that was taxable to the retiree, however, the total pension received under an option is exempt from New York State and New York City taxation.

TIERS I and II: SURVIVOR BENEFITS

Tier I survivor benefits are paid if a member dies before retirement, whether death occurs on or off the job.

There are two types of death benefits:

Death Gamble Benefit – for ordinary (non-line-of-duty) deaths.
Accidental Death Benefit (Line-of-Duty)

DEATH GAMBLE BENEFIT

For non-line-of-duty deaths, the benefit is computed as though the member had retired the day before his/her death. The designated beneficiary(ies) will be eligible to receive an amount equal to the reserve for the service retirement allowance that would have been payable had the member retired on the day before his/her death. If the beneficiary predeceases the member, this death benefit is paid to the member’s estate.

ACCIDENTAL (LINE –OF-DUTY) DEATH BENEFIT

If the 1-B Medical Board determines that death is the result of an accidental injury received in the line of duty, an accidental death benefit will be paid as follows:

a pension equal to 50% of final compensation will be paid to a surviving spouse, to continue for life;

or

if there is no surviving spouse or if a surviving spouse dies before any eligible child attains 18 years of age (or, if a student, 23 years of age), then to such child or children under such age, until every such child dies or attains such age;

or

if there is no surviving spouse or eligible child under the age of 18 years (or 23 years, if a student), then to the member's dependent parent(s) to continue for life;

plus

a lump sum equal to the balance of the member's ITHP reserve account

plus

a lump sum equal to the member's accumulated deductions/contributions will be paid to the designated beneficiary(ies)

plus

a Special Accidental Death benefit under Section 208-f of the General Municipal Law (State portion)

This Special Accidental Death benefit, when added to the 50% of final compensation pension paid by the City, and any Social Security Death benefits payable to a surviving spouse, equal to 100% of the member's final salary (final salary is defined as the last 12 months of earnings, and is never less than the full salary of a first-grade Firefighter). The Special Accidental Death benefit is increased from time to time by act of the New York State Legislature and is not payable to dependent parents. Effective September 1, 2000, any COLA (Cost of Living Adjustment) received on the 50% pension payable from the Fund shall be subtracted from the Special Accidental Death Benefit (State's portion).

BENEFICIARY DESIGNATION

Upon membership in the Fund, a beneficiary(ies) for the Life Insurance benefit and for Death Benefits is (are) elected. A member may change beneficiary(ies) at any time by filing the appropriate form(s) with the Pension Bureau. Please note that the beneficiary(ies) designated on the Death Benefits beneficiary form will receive this benefit in the event of the member's non-line-of-duty death. In the event of Accidental Death (Line-of-Duty), benefits will be paid to the appropriate beneficiary(ies) in accordance with the Administrative Code of the City of New York and other applicable sections of the law.

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Summary Funds Benefits

TIER III

This Summary Plan Description (SPD) summarizes the benefits provided by the New York City Fire Department Pension Fund, Subchapter II (the “Fire Pension Fund”), for Tier 3 members. Anyone who became a member of the Fire Pension Fund between July 1, 2009 and March 31, 2012 is a Tier 3 member. Those who become members of the Fire Pension Fund on or after April 1, 2012 are “modified Tier 3” members, also known as Tier 6. The primary difference is that “Modified Tier 3” members have a 5 year Final Average Salary (FAS) calculation upon retirement. Unless otherwise noted, the information presented in this SPD is applicable to both Tier 3 and Modified Tier 3 members, and will be collectively referred to as “Tier 3.” On September 8, 2016 Governor Andrew Cuomo signed into law Chapter 298 of the Laws of 2016, granting “Enhanced Plan” benefits to current Tier 3 members of the New York City Fire Department Pension Fund (FDNY Pension) who opt into the Enhanced Plan. All Tier 3 members with the exception of two joined the enhanced Benefit plan. All new employees appointed after 09/08/2016 will become enhanced benefit members. The new law grants these members of the Fire Pension Fund ¾ Disability Benefits, and Presumptive Benefits for certain illnesses covered under the Heart, Lung, Cancer and Infectious Diseases Bills. Enhanced members who join will be required to pay an additional 2% contribution, which could eventually rise to a maximum of 3%, after a three year look-back period, based on actuarial assumptions made by the City of New York.

This summary is as accurate as possible. However, in the event of conflict between this summary and any applicable law, including but not limited to, the Administrative Code of the City of New York (ACNY), the Retirement and Social Security Law (RSSL), and the rules of the Fire Pension Fund, the applicable Law or Rule will govern.

MEMBERSHIP

Uniformed members of the FDNY appointed on or after July 1, 2009 are subject to Article 14 of the RSSL, also known as Tier 3.

CONTRIBUTIONS

The Enhanced Plan members are required to contribute the basic 3% and an additional 2 % of pensionable salary for the first 25 years of credited service (RSSL § 517). Member contributions are federally tax-deferred as per section 414(h) of the Internal Revenue Code, but are subject to state and local income taxation. In the future, the additional contributions may range from 2% to 3% depending on specified future cost calculations. For members appointed before 09/08/2016 who opted to join the enhanced benefit plan, the additional contributions are taxable under Federal, State and Local regulations, and will continue until the 25th year of credited service.

MINIMUM REQUIRED AND INTEREST

Member contributions and any interest earned are referred to as “accumulated contributions.” The Tier 3 rate of interest on member contributions is currently 5%. The amount of accumulated contributions required to be in a member’s account at any given time is referred to as the “minimum required.” In order to be eligible for a benefit at retirement, a member must have the “minimum required” of accumulated contributions, which is equal to the 3% contribution rate, the Enhanced Plan 2% contribution rate plus the statutory interest earned.

DEFICITS

A deficit occurs when a member’s pension account balance falls below the minimum required. Deficits may occur because of delays in contract settlements. Pension contributions on retroactive pay from a contract settlement do not include the interest that would have been earned on those contributions. Since interest earned on contributions is part of a member’s minimum required, a deficit can occur.

Members are not permitted to retire with a deficit, and are responsible for any account shortages. Members may opt to make a lump sum payment or bi-weekly payroll deductions to reduce and eliminate any deficit.

REFUNDS

Upon separation from the Fire Pension Fund for reasons other than retirement, such as resignation or termination, a written request for a refund of accumulated contributions plus interest may be made. If contributions are not withdrawn, the money will continue to earn interest for a maximum of five years from the date of separation.

WITHDRAWAL OF CONTRIBUTIONS

In the event of a resignation or termination, a member who is not vested or entitled to any other benefit under Tier 3 may withdraw accumulated contributions, and thereby terminate his or her Fire Pension Fund membership. A member, who separates from service as a vested member, but with less than 10 years of credited service, may also withdraw his or her accumulated contributions. A withdraw of contributions by such a vested member, however, will terminate all membership rights, include the right to receive a vested retirement benefit in the future. After 10 years of service, contributions may not be withdrawn and members will receive a vested retirement benefit.

LOANS

There is no provision in Tier 3 that allows a member to take loans.

CREDITED SERVICE

Unless otherwise stated, “credited service” is defined as allowable Uniformed service. Participation in the Fire Pension Fund is mandatory for Uniformed employees hired on or after July 1, 2009. Members receive credit for all Uniformed service time while on active payroll, up to a maximum, of 22 years.

ALLOWABLE UNIFORMED SERVICE

Twenty-two (22) years of allowable Uniformed service are required for Normal Service Retirement, or twenty (20) years for Early Service Retirement. Such service includes:

All member service rendered as a Uniformed member of the New York City Fire Department in the competitive class of the civil service.

Credit for service rendered in the Uniformed force of the New York City Police Department acquired pursuant to applicable law.

Credit for any service rendered while a member of the New York State and Local Police and Fire Retirement System as a Police Officer or Firefighter.

Credit for military service acquired pursuant to applicable law.

PRIOR SERVICE CREDIT

A member may obtain prior credited service for any New York State Police or Fire Time, or for Uniformed service with the New York City Police Department, by filing for transfer or buy-back. This prior credit service counts toward the requirements for vesting and retirement.

MILITARY SERVICE CREDIT

Military service with the federal government may be credited pursuant to New York State Military Law 243, the federal Uniformed Services Employment and Reemployment Right Act (USERRA), and RSSL 1000. Members who join the Fire Pension Fund on or after April 1, 2012, and who wish to purchase credit for military service under RSSL 1000, pay an amount for such credit equal to the number of years of military credit being purchased multiplied by 6% of the compensation earned by the member during the 12 months of credited service immediately preceding the member's application to purchase such credit. Members who joined the Fire Pension Fund prior to April 1, 2012 and who wish to purchase credit for military service under RSSL 1000, pay an amount for such credit equal to the number of years of military credit being purchased multiplied by 3% of the compensation earned by the member during the 12 months of credited service immediately preceding the member's application to purchase such credit.

TRANSFER TO THE FIRE PENSION FUND

A member may transfer to the Fire Pension Fund from another public retirement system within the State of New York. In Tier 3, transferring prior City or State service, other than Uniformed Police of Fire service, does not provide any additional monetary benefit, nor does it change your Service Retirement eligibility date. However, members with a membership in a New York public pension fund that began prior to July 1, 2009 will become Tier 2 members of the Fire Pension Fund upon completion of a proper transfer. Before deciding whether to transfer service from another pension system, eligible members should contact the Fire Pension Fund Administration Office at (718) 999-2300.

New York City Fire Pension Funds
Comprehensive Annual Financial Report
A Pension Trust Fund of The City of New York



Financial Section

Part II

Fiscal Years Ended June 30, 2018 and June 30, 2017

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INDEPENDENT AUDITORS' REPORT

To the Board of Trustees of the
New York City Fire Pension Funds:

Report on the Combining Financial Statements

We have audited the accompanying combining statements of fiduciary net position of the New York City Fire Pension Fund, New York City Firefighters' Variable Supplements Fund, and New York City Fire Officers' Variable Supplements Fund, which collectively comprise the New York City Fire Pension Funds (the "Funds"), a fiduciary component unit of the City of New York, as of June 30, 2018 and 2017, 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 audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit 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, 2018 and 2017, 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 Analysis, Schedule 1, Schedule 2, and Schedule 3, 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 the 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 Supplementary 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 (Schedule 4, 5 and 6) 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 Section, Investment Section, Actuarial Section and Statistical Section 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.

Marks Paneth LLP

October 26, 2018

(except for the Other Supplementary Information,
as to which the date is December 18, 2018)

**NEW YORK CITY FIRE PENSION FUNDS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2018 AND 2017**

This narrative discussion and analysis of the New York City Fire Pension Funds' ("FIRE" or the "Funds") financial performance provides an overview of the Funds' combining financial activities for the Fiscal Years ended June 30, 2018 and 2017. It is meant to assist the reader in understanding the Funds' combining financial statements by providing an overall review of the combining financial activities during the years and the effects of significant changes, as well as a comparison with the prior years' activity and results. This discussion and analysis is intended to be read in conjunction with the Funds' combining financial statements.

FIRE administers the New York City Fire Pension Fund, which is generally referred to as the New York Fire Department Pension Fund - Qualified Pension Plan ("QPP") - as set forth in the Administrative Code of The City of New York ("ACNY") Section 13-313.1. FIRE also administers the New York City Firefighters' Variable Supplements Fund ("FFVSF") and the New York City Fire Officers' Variable Supplements Fund ("FOVSF").

OVERVIEW OF BASIC COMBINING FINANCIAL STATEMENTS

The following discussion and analysis is 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 each fiscal year end. It provides information about the nature and amounts of resources with present service capacity that the Funds presently control (assets), consumption of net assets by the Funds that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the Funds have 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.

**NEW YORK CITY FIRE PENSION FUNDS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2018 AND 2017**

FINANCIAL HIGHLIGHTS

For Fiscal Year ended June 30, 2018, the Funds' net position restricted for benefits exceeded \$14.1 billion. This amount reflects an increase of approximately \$1,182.4 million (9.1%) over the Funds' net position restricted for benefits in Fiscal Year 2017. The growth for Fiscal Year 2018 can be attributed to the excess of total contributions, net investment income and other receipts over pension benefits paid. In addition, a significant net appreciation of invested assets served to increase net investment income reported for the period.

For Fiscal Year ended June 30, 2017, the Funds' net position restricted for benefits exceeded \$12.9 billion. This amount reflects an increase of approximately \$1,253.7 million (10.7%) over the Funds' net position restricted for benefits in Fiscal Year 2016. The growth for Fiscal Year 2017 can be attributed to the fact that total contributions, net investment income and other receipts greatly exceeded pension benefits paid. Additionally, a net appreciation in the fair value of the Funds' investment portfolio resulted in a significant increase in the amount of net investment income reported for the period.

**Changes in Fiduciary Net Position
Years Ended June 30, 2018, 2017 and 2016
(In thousands)**

	2018	2017	2016
Additions:			
Member contributions	\$ 108,338	\$ 108,368	\$ 116,619
Employer contributions	1,200,417	1,061,170	1,054,478
Net investment income	1,249,731	1,371,721	203,104
Other	<u>9,411</u>	<u>47,284</u>	<u>43,673</u>
Total	<u>2,567,897</u>	<u>2,588,543</u>	<u>1,417,874</u>
Deductions:			
Benefit payments and withdrawals	<u>1,385,499</u>	<u>1,334,807</u>	<u>1,358,431</u>
Net increase in net position	1,182,398	1,253,736	59,443
Net position restricted for benefits			
Beginning of year	<u>12,961,358</u>	<u>11,707,622</u>	<u>11,648,179</u>
End of year	<u>\$14,143,756</u>	<u>\$12,961,358</u>	<u>\$11,707,622</u>

For Fiscal Year ended June 30, 2018, member contributions of approximately \$108.3 million was slightly lower compared to member contributions for Fiscal Year 2017. For Fiscal Year ended June 30, 2017, member contributions were approximately \$108.4 million or a decrease of \$8.2 million (7.0%) compared to member contributions for Fiscal Year 2016. Generally, increases or decreases in member contributions are primarily due to changes in the number of active Fund members making voluntary contributions in addition to their required contributions and changes in the average annual pay of Plan members.

**NEW YORK CITY FIRE PENSION FUNDS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2018 AND 2017**

Employer contributions are made on a statutory basis determined by the actuarial valuations performed as of June 30, 2016 and 2015 under the One-Year Lag Methodology ("OYLM"). Employer contributions for Fiscal Year 2018 totaled approximately \$1,200.4 million, an increase of \$139.2 million (13.1%) compared to employer contributions for Fiscal Year 2017. Employer contributions for Fiscal Year 2017 totaled approximately \$1,061.2 million, an increase of \$6.7 million (.6%) compared to employer contributions for Fiscal Year 2016.

For Fiscal Year ended June 30, 2018, the Funds had a net investment gain of \$1,249.7 million; this amount was 8.9% lower than the net investment gain of \$1,371.7 million recorded for Fiscal Year 2017. The net investment gain for Fiscal year 2018 can be attributed to the overall net appreciation of invested assets in the combined investment portfolio of the Funds.

For Fiscal Year ended June 30, 2017, the Funds had a net investment gain of \$1,371.7 million; this amount was an increase of 575.4% compared to the net investment gain of \$203.1 million recorded for Fiscal Year 2016. The net investment gain for Fiscal year 2017 can be attributed to the overall net appreciation in fair value of the combined investment portfolio of the Funds, primarily the increase in value of equity investments.

Benefit payments and withdrawals recorded were \$1,385.5 million for the Fiscal Year ended June 30, 2018; this was an increase of 3.8% compared to benefit payments and withdrawals recorded for Fiscal Year 2017. During Fiscal Year 2017, the Funds recorded benefit payments and withdrawals totaled \$1,334.8 million, this was a slight decrease of 1.7% compared to benefit payments and withdrawals for Fiscal Year 2016. Increases in benefit payments and withdrawals are primarily due to changes in the number of new retirees and the amount of payments made to beneficiaries. Members are also able to withdraw their excess or voluntary contributions made to the fund. In addition, legislatively enacted cost of living increases for certain retirees and beneficiaries also serve to increase benefit payments each year.

**NEW YORK CITY FIRE PENSION FUNDS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2018 AND 2017**

FIDUCIARY NET POSITION

For Fiscal Year 2018, the Funds' net position restricted for benefits increased by 9.1% to \$14.1 billion, compared to the net position restricted for benefits of \$12.9 billion in Fiscal Year 2017. The overall growth for Fiscal Year 2018 can be attributed to the excess of total contributions and net investment income over pension benefits paid. In addition, a significant net appreciation of invested assets served to increase net investment income reported for the period.

For Fiscal Year 2017, the Funds' net position restricted for benefits increased by 10.7% to \$12.9 billion, compared to the net position restricted for benefits of \$11.7 billion in Fiscal Year 2016. The overall growth for Fiscal Year 2017 can be attributed to the excess of total contributions and net investment income over pension benefits paid. Additionally, a net appreciation in the fair value of the Funds' investment portfolio contributed to the significant increase in net investment income reported for the period.

Outstanding member loans for Fiscal Year 2018 totaled \$25.2 million; this amount is 6.3% less than member loans reported in Fiscal Year 2017. Outstanding member loans for Fiscal Year 2017 totaled \$26.9 million; this amount was essentially unchanged from member loans reported in FY 2016. Changes in member loans can be attributed to changes in the number and amounts of new loans disbursed and the amount of repayments received. Members are permitted to borrow up to 75% (for certain members up to 90%) of their required contributions, including accumulated interest.

**Fiduciary Net Position
June 30, 2018, 2017 and 2016
(In thousands)**

	2018	2017	2016
Cash	\$ 5,435	\$ 39,332	\$ 48,755
Receivables	195,552	247,937	226,755
Investments — at fair value	14,361,915	13,070,975	11,802,778
Collateral from securities lending	1,169,286	1,110,853	922,481
Other assets	<u>2,899</u>	<u>2,508</u>	<u>6,176</u>
Total assets	<u>15,735,087</u>	<u>14,471,605</u>	<u>13,006,945</u>
Accounts payable	177,634	148,167	92,147
Payables for investments purchased	204,073	205,595	235,314
Accrued benefits payable	40,338	45,632	49,381
Payables for securities lending transactions	<u>1,169,286</u>	<u>1,110,853</u>	<u>922,481</u>
Total liabilities	<u>1,591,331</u>	<u>1,510,247</u>	<u>1,299,323</u>
Net position restricted for benefits	<u>\$ 14,143,756</u>	<u>\$ 12,961,358</u>	<u>\$ 11,707,622</u>

The Funds' receivables and payables are primarily generated through the timing difference between the trade and settlement dates for investment securities purchased or sold.

**NEW YORK CITY FIRE PENSION FUNDS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2018 AND 2017**

**Investment Summary
June 30, 2018
(In thousands)**

Investments - At fair value:	<u>QPP</u>	<u>FFVSF</u>	<u>FOVSF</u>	<u>Combined</u>
Short term investments:				
U.S. treasury bills and agency	\$ 53,484	\$ -	\$ -	\$ 53,484
Commercial paper	189,200	503	1,903	191,606
Short-term investment fund	97,891	21	118	98,030
Discount notes	2,498	-	-	2,498
Debt securities:				
U.S. government and agency	1,767,633	-	-	1,767,633
Corporate and other	900,285	-	-	900,285
Mortgage debt securities	353,129	-	-	353,129
Bank loans	8,044	-	-	8,044
Equity securities	3,848,728	-	111,494	3,960,222
Alternative investments:				
Infrastructure	70,510	-	-	70,510
Opportunistic Fixed Income	392,612	-	-	392,612
Private Equity	1,596,436	-	-	1,596,436
Private Real Estate	548,159	-	-	548,159
Collective trust funds:				
Bank Loans	200,689	-	-	200,689
Corporate and other	363,336	-	-	363,336
International equity	2,264,395	156,502	106,597	2,527,494
Domestic equity	88,801	179,243	10,050	278,094
Mortgage debt securities	99,102	-	-	99,102
Treasury inflation protected securities	590,072	-	124,324	714,396
U.S. Government and agency	52,540	183,616	-	236,156
Collateral from securities lending	1,140,436	16,842	12,008	1,169,286
	<u>\$ 14,627,980</u>	<u>\$ 536,727</u>	<u>\$ 366,494</u>	<u>\$ 15,531,201</u>

**NEW YORK CITY FIRE PENSION FUNDS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2018 AND 2017**

**Investment Summary
June 30, 2017
(In thousands)**

Investments - At fair value:	<u>QPP</u>	<u>FFVSF</u>	<u>FOVSF</u>	<u>Combined</u>
Short term investments:				
U.S. treasury bills and agency	\$ -	\$ -	\$ -	\$ -
Commercial paper	136,416	-	-	136,416
Short-term investment fund	91,493	6,971	2,637	101,101
Discount notes	-	-	-	-
Debt securities:				
U.S. government and agency	1,273,214	-	1,263	1,274,477
Corporate and other	946,424	-	-	946,424
Equity securities	1,878,641	-	-	1,878,641
Alternative investments	2,391,376	-	-	2,391,376
Collective trust funds:				
International equity	2,209,426	142,644	93,185	2,445,255
Domestic equity	2,149,785	156,098	102,508	2,408,391
Mortgage debt security	89,229	-	-	89,229
Treasury inflation protected securities	543,317	1,316	1,544	546,177
Fixed income	598,070	154,461	100,957	853,488
Collateral from securities lending	1,080,020	18,539	12,294	1,110,853
	<u>\$ 13,387,411</u>	<u>\$ 480,029</u>	<u>\$ 314,388</u>	<u>\$ 14,181,828</u>

**NEW YORK CITY FIRE PENSION FUNDS
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
JUNE 30, 2018 AND 2017**

The tables above summarize the Funds' investment portfolio including collateralized securities lending. Due to the long-term nature of the Funds' benefit obligations, the Funds' assets are invested with a long-term investment horizon. Assets are invested in a diversified portfolio of capital market securities. Investments in these assets are expected to produce higher returns, but are also subject to greater volatility and may produce negative returns. For example, the Russell 3000 index, a broad measure of the United States stock market posted gains of 14.8% in Fiscal Year 2018, compared to gains posted of 18.5% in Fiscal Year 2017. Investment results for Fiscal Year 2018 were generally consistent with related benchmarks, within asset classes. FIRE QPP's investment portfolio posted gains of 9.3% for Fiscal Year 2018 compared to the gain of 12.8% for Fiscal Year 2017. For the three-year period ended June 30, 2018, the overall rate of return on the QPP's investment portfolio was 7.7 %.

The FFVSF's investment portfolio posted gains of 7.3% for Fiscal Year 2018 compared to the gain of 13.5% for Fiscal Year 2017. For the three-year period ended June 30, 2018, the overall rate of return on the Plan's investment portfolio was 7.1%.

Similarly, the FOVSF's investment portfolio posted gains of 7.8% for Fiscal Year 2018 compared to the gain of 14.5% for Fiscal Year 2017. For the five-year period ended June 30, 2018, the overall rate of return on the Plan's investment portfolio was 7.5. %.

OTHER MATTERS

Chapter 298 of the laws of 2016 provides corpus funding of administrative expense for the Plan commencing September 8, 2016. This means that the administrative expense will be paid for out of the assets on the Plan instead of being paid for by the City of New York. Chapter 298 also allows for the appointment of an executive director of the Plan.

CONTACT INFORMATION

This financial report is designed to provide a general overview of the New York City Fire Pension Funds' finances. Questions concerning any data provided in this report or requests for additional information should be directed to Chief Accountant, New York City Fire Pension Funds, 9 Metrotech Center, 6W- 03-K, Brooklyn, NY 11201-3751.

NEW YORK CITY FIRE PENSION FUNDS
COMBINING STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2018
(In thousands)

	QPP	FFVSF	FOVSF	Eliminations	Combined Funds
ASSETS:					
Cash	\$ 2,883	\$ 1,467	\$ 1,085	\$ -	\$ 5,435
Receivables:					
Investment securities sold	143,921	-	-	-	143,921
Member loans (Note 7)	25,248	-	-	-	25,248
Accrued interest and dividends	25,777	199	245	-	26,221
Accounts receivables	129	-	33	-	162
Transferrable earnings due from QPP to Variable Supplements Funds	-	29,000	-	(29,000)	-
Total receivables	195,075	29,199	278	(29,000)	195,552
INVESTMENTS — At fair value (Notes 2 and 3):					
Short-term investments:					
Commercial paper	189,200	503	1,903	-	191,606
Short-term investment fund	97,891	21	118	-	98,030
U.S. treasury bills and agencies	53,484	-	-	-	53,484
Discount notes	2,498	-	-	-	2,498
Debt securities:					
U.S. government and agency	1,767,633	-	-	-	1,767,633
Corporate and other	900,285	-	-	-	900,285
Mortgage debt securities	353,129	-	-	-	353,129
Bank loans	8,044	-	-	-	8,044
Equity securities	3,848,728	-	111,494	-	3,960,222
Alternative investments:					
Infrastructure	70,510	-	-	-	70,510
Opportunistic fixed income	392,612	-	-	-	392,612
Private equity	1,596,436	-	-	-	1,596,436
Private real estate	548,159	-	-	-	548,159
Collective trust funds:					
Bank loans	200,689	-	-	-	200,689
Corporate and other	363,336	-	-	-	363,336
International equity	2,264,395	156,502	106,597	-	2,527,494
Domestic equity	88,801	179,243	10,050	-	278,094
Mortgage debt securities	99,102	-	-	-	99,102
Treasury inflation protected securities	590,072	-	124,324	-	714,396
U.S. Government and agency	52,540	183,616	-	-	236,156
Collateral from securities lending (Note 2)	1,140,436	16,842	12,008	-	1,169,286
Total investments	14,627,980	536,727	366,494	-	15,531,201
OTHER ASSETS	2,899	-	-	-	2,899
Total assets	14,828,837	567,393	367,857	(29,000)	15,735,087
LIABILITIES:					
Accounts payable	177,540	44	50	-	177,634
Payables for investment securities purchased	203,986	-	87	-	204,073
Accrued benefits payable (Note 1)	10,832	20,427	9,079	-	40,338
Transferrable earnings due from QPP to Variable Supplements Funds	29,000	-	-	(29,000)	-
Securities lending (Note 2)	1,140,436	16,842	12,008	-	1,169,286
Total liabilities	1,561,794	37,313	21,224	(29,000)	1,591,331
NET POSITION RESTRICTED FOR BENEFITS:					
Benefits to be provided by QPP	13,267,043	-	-	-	13,267,043
Benefits to be provided by VSF	-	530,080	346,633	-	876,713
Total net position restricted for benefits	\$ 13,267,043	\$ 530,080	\$ 346,633	\$ -	\$ 14,143,756

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

NEW YORK CITY FIRE PENSION FUNDS
COMBINING STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2017
(In thousands)

	<u>QPP</u>	<u>FFVSF</u>	<u>FOVSF</u>	<u>Eliminations</u>	<u>Combined Funds</u>
Assets:					
Cash	\$ 37,035	\$ 1,391	\$ 906	\$ -	\$ 39,332
Receivables:					
Investment securities sold	138,400	33,517	24,791	-	196,708
Member loans (Note 7)	26,951	-	-	-	26,951
Accrued interest and dividends	23,004	631	432	-	24,067
Accounts Receivables	178	-	33	-	211
Transferrable earnings due from QPP to Variable Supplements Funds	-	83,653	50,963	(134,616)	-
Total receivables	188,533	117,801	76,219	(134,616)	247,937
INVESTMENTS — At fair value (Notes 2 and 3):					
Short-term investments:					
Commercial paper	136,416	-	-	-	136,416
Short-term investment fund	91,493	6,971	2,637	-	101,101
U.S. treasury bills and agencies	-	-	-	-	-
Discount notes	-	-	-	-	-
Debt securities:					
U.S. government and agencies	1,273,214	-	1,263	-	1,274,477
Corporate and other	946,424	-	-	-	946,424
Equity securities	1,878,641	-	-	-	1,878,641
Alternative investments	2,391,376	-	-	-	2,391,376
Collective trust funds:					
International equity	2,209,426	142,644	93,185	-	2,445,255
Fixed income	598,070	154,461	100,957	-	853,488
Domestic equity	2,149,785	156,098	102,508	-	2,408,391
Mortgage debt security	89,229	-	-	-	89,229
Treasury inflation protected securities	543,317	1,316	1,544	-	546,177
Collateral from securities lending (Note 2)	1,080,020	18,539	12,294	-	1,110,853
Total investments	13,387,411	480,029	314,388	-	14,181,828
OTHER ASSETS	2,508	-	-	-	2,508
Total assets	13,615,487	599,221	391,513	(134,616)	14,471,605
LIABILITIES:					
Accounts payable	147,979	96	92	-	148,167
Payables for investment securities purchased	147,296	33,509	24,790	-	205,595
Accrued benefits payable (Note 1)	15,680	20,831	9,121	-	45,632
Transferrable earnings due from QPP to Variable Supplements Funds	134,616	-	-	(134,616)	-
Securities lending (Note 2)	1,080,020	18,539	12,294	-	1,110,853
Total liabilities	1,525,591	72,975	46,297	(134,616)	1,510,247
NET POSITION RESTRICTED FOR BENEFITS:					
Benefits to be provided by QPP	12,089,896	-	-	-	12,089,896
Benefits to be provided by VSF	-	526,246	345,216	-	871,462
Total net position restricted for benefits	\$ 12,089,896	\$ 526,246	\$ 345,216	\$ -	\$ 12,961,358

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

NEW YORK CITY FIRE PENSION FUNDS
COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
YEAR ENDED JUNE 30, 2018
(In thousands)

	<u>QPP</u>	<u>FFVSF</u>	<u>FOVSF</u>	<u>Eliminations</u>	<u>Total</u>
ADDITIONS:					
Contributions:					
Member contributions	\$ 108,338	\$ -	\$ -	\$ -	\$ 108,338
Employer contributions	<u>1,200,417</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1,200,417</u>
Total contributions	<u>1,308,755</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1,308,755</u>
Investment income (Note 3):					
Interest income	168,451	4,584	3,103	-	176,138
Dividend income	159,918	8,123	5,448	-	173,489
Net appreciation in fair value of investments	<u>952,687</u>	<u>22,865</u>	<u>17,000</u>	<u>-</u>	<u>992,552</u>
Total investment income	1,281,056	35,572	25,551	-	1,342,179
Less investment expenses	<u>96,936</u>	<u>404</u>	<u>248</u>	<u>-</u>	<u>97,588</u>
Net income	<u>1,184,120</u>	<u>35,168</u>	<u>25,303</u>	<u>-</u>	<u>1,244,591</u>
Securities lending transactions:					
Securities lending income	5,267	265	180	-	5,712
Securities lending fees	<u>(527)</u>	<u>(27)</u>	<u>(18)</u>	<u>-</u>	<u>(572)</u>
Net securities lending income	<u>4,740</u>	<u>238</u>	<u>162</u>	<u>-</u>	<u>5,140</u>
Net investment income	1,188,860	35,406	25,465	-	1,249,731
Net receipts from other retirement systems	8,697	-	-	-	8,697
Transferrable earnings from QPP to Variable Supplements Funds	-	15,000	-	(15,000)	-
Litigation income	<u>714</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>714</u>
Total additions	<u>2,507,026</u>	<u>50,406</u>	<u>25,465</u>	<u>(15,000)</u>	<u>2,567,897</u>
DEDUCTIONS:					
Benefit payments and withdrawals (Note 1)	1,308,467	46,572	24,048	-	1,379,087
Administrative expenses	6,412	-	-	-	6,412
Transferrable earnings from QPP to Variable Supplements Funds	<u>15,000</u>	<u>-</u>	<u>-</u>	<u>(15,000)</u>	<u>-</u>
Total deductions	<u>1,329,879</u>	<u>46,572</u>	<u>24,048</u>	<u>(15,000)</u>	<u>1,385,499</u>
NET INCREASE IN NET POSITION	1,177,147	3,834	1,417	-	1,182,398
NET POSITION RESTRICTED FOR BENEFITS					
Beginning of year	<u>12,089,896</u>	<u>526,246</u>	<u>345,216</u>	<u>-</u>	<u>12,961,358</u>
End of year	<u>\$ 13,267,043</u>	<u>\$ 530,080</u>	<u>\$ 346,633</u>	<u>\$ -</u>	<u>\$ 14,143,756</u>

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

NEW YORK CITY FIRE PENSION FUNDS
COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
YEAR ENDED JUNE 30, 2017
(In thousands)

	<u>OPP</u>	<u>FFVSF</u>	<u>FOVSF</u>	<u>Eliminations</u>	<u>Total</u>
ADDITIONS:					
Contributions:					
Member contributions	\$ 108,368	\$ -	\$ -	\$ -	\$ 108,368
Employer contributions	<u>1,061,170</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1,061,170</u>
Total contributions	<u>1,169,538</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1,169,538</u>
Investment income (Note 3):					
Interest income	135,642	4,600	3,107	-	143,349
Dividend income	159,972	7,504	4,135	-	171,611
Net appreciation in fair value of investments	<u>1,067,973</u>	<u>34,802</u>	<u>32,860</u>	<u>-</u>	<u>1,135,635</u>
Total investment income	1,363,587	46,906	40,102	-	1,450,595
Less investment expenses	<u>84,438</u>	<u>439</u>	<u>247</u>	<u>-</u>	<u>85,124</u>
Net income	<u>1,279,149</u>	<u>46,467</u>	<u>39,855</u>	<u>-</u>	<u>1,365,471</u>
Securities lending transactions:					
Securities lending income	6,150	309	257	-	6,716
Securities lending fees	<u>(428)</u>	<u>(21)</u>	<u>(17)</u>	<u>-</u>	<u>(466)</u>
Net securities lending income	<u>5,722</u>	<u>288</u>	<u>240</u>	<u>-</u>	<u>6,250</u>
Net investment income	1,284,871	46,755	40,095	-	1,371,721
Net receipts from other retirement systems	44,999	-	-	-	44,999
Transferrable earnings from QPP to Variable Supplements Funds	-	23,914	21,829	(45,743)	-
Litigation income	<u>2,285</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>2,285</u>
Total additions	<u>2,501,693</u>	<u>70,669</u>	<u>61,924</u>	<u>(45,743)</u>	<u>2,588,543</u>
DEDUCTIONS:					
Benefit payments and withdrawals (Note 1)	1,265,817	47,273	21,717	-	1,334,807
Transferrable earnings from QPP to Variable Supplements Funds	<u>45,743</u>	<u>-</u>	<u>-</u>	<u>(45,743)</u>	<u>-</u>
Total deductions	<u>1,311,560</u>	<u>47,273</u>	<u>21,717</u>	<u>(45,743)</u>	<u>1,334,807</u>
NET INCREASE IN NET POSITION	1,190,133	23,396	40,207	-	1,253,736
NET POSITION RESTRICTED FOR BENEFITS					
Beginning of year	<u>10,899,763</u>	<u>502,850</u>	<u>305,009</u>	<u>-</u>	<u>11,707,622</u>
End of year	<u>\$ 12,089,896</u>	<u>\$ 526,246</u>	<u>\$ 345,216</u>	<u>\$ -</u>	<u>\$ 12,961,358</u>

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

**NEW YORK CITY FIRE PENSION FUNDS
NOTES TO THE COMBINING FINANCIAL STATEMENTS
JUNE 30, 2018 AND 2017**

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 Fire Pension Funds ("FIRE"), 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"), and the New York City Police Pension Funds ("POLICE"). Each pension system is a separate Public Employee Retirement System ("PERS") with a separate oversight body and is financially independent of the others.

FIRE administers the New York City Fire Subchapter Two Pension Fund, which is generally referred to as the New York City Fire Pension Fund ("QPP") as set forth in the Administrative Code of The City of New York ("ACNY") Section 13-313.1. FIRE also administers the New York City Firefighters' Variable Supplements Fund ("FFVSF") and the New York City Fire Officers' Variable Supplements Fund ("FOVSF").

The QPP is a single-employer pension plan. The QPP provides pension benefits for full-time uniformed employees of the New York City Fire Pension Fund (the "Employer"). All full-time uniformed employees of the New York City Fire Department become members of the QPP upon appointment. 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 FFVSF and the FOVSF (collectively, the "VSFs") operate pursuant to the provisions of Title 13, Chapter 3 of the ACNY and provide supplemental benefits to retired Firefighters and Wipers, and Fire Officers, respectively. To be eligible to receive benefits from the VSFs, Firefighters and Wipers, and Fire Officers must retire, on or after October 1, 1968, with 20 or more years of uniformed services and be receiving a service retirement benefit from the QPP. 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 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.

FIRE is a fiduciary fund of The City and is included 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 twelve members. The Trustees and their voting rights are as follows: the City Fire Commissioner, Mayor, Comptroller, and Commissioner of Finance (three votes each); the President, the Vice President, Treasurer, and Chairperson of the Board of Trustees of the Uniformed Firefighters Association of Greater New York ("UFA") (two votes each); the President of the Uniformed Fire Officers' Association of Greater New York ("UFOA") and three elected members of the Executive Board of the UFOA, one of whom shall be an officer with rank above that of captain (one vote), one of whom shall be a captain (one vote) and one of whom shall be a lieutenant (one and one-half votes); and a representative of the Uniformed Pilots' and Marine Engineers' Association of Greater New York (one-half vote).

The FFVSF's Board of Trustees consists of five members. The Trustees are as follows: the City Mayor, Comptroller, Commissioner of Finance, and two representatives of the UFA who are members of the QPP Board of Trustees with one vote each.

**NEW YORK CITY FIRE PENSION FUNDS
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The FOVSF's Board of Trustees consists of five members. The Trustees are as follows: the City Mayor, Comptroller, Commissioner of Finance, and two of the representatives of the UFOA who are members of the QPP Board of Trustees with one vote each.

Membership Data

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

	<u>2018*</u>	<u>2017</u>	<u>2016</u>
Retirees and beneficiaries receiving benefits	17,226	16,636	16,647
Terminated vested members not yet receiving benefits	61	58	58
Other inactives **	19	15	21
Active members receiving salary	<u>11,244</u>	<u>11,091</u>	<u>10,951</u>
Total	<u><u>28,550</u></u>	<u><u>27,800</u></u>	<u><u>27,677</u></u>

* Estimated headcount

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

At June 30, 2018, June 30, 2017, and June 30, 2016 the FFVSF and FOVSF membership consisted of:

	<u>FFVSF</u>			<u>FOVSF</u>		
	<u>2018*</u>	<u>2017</u>	<u>2016</u>	<u>2018*</u>	<u>2017</u>	<u>2016</u>
Retirees currently receiving payments	3,430	3,474	3,535	1,521	1,536	1,553
Active members**	<u>8,512</u>	<u>8,431</u>	<u>8,399</u>	<u>2,732</u>	<u>2,660</u>	<u>2,552</u>
Total	<u><u>11,942</u></u>	<u><u>11,905</u></u>	<u><u>11,934</u></u>	<u><u>4,253</u></u>	<u><u>4,196</u></u>	<u><u>4,105</u></u>

* Estimated headcount

** Represents the number of actively employed Firefighters and Fire Officers, respectively, as of the June 30 valuation dates.

**NEW YORK CITY FIRE PENSION FUNDS
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Summary of Benefits

QPP

The New York State Constitution provides that the pension rights of public employees are contractual and shall not be diminished or impaired. In 1973, amendments were made to the New York State Retirement and Social Security Law ("RSSL") to modify certain benefits for employees joining the QPP on or after the effective date of such amendments. These amendments, which affect employees who joined the QPP on and after July 1, 1973, established certain benefit limitations relating to eligibility for retirement, the salary base for benefits and maximum benefits. Recent laws, including but not limited to Chapter 372 of the Laws of 2000 which provides a revised definition of salary base to be used in the computation of certain benefits for Tier 2 members of the QPP and Chapter 589 of the Laws of 2001 which eliminated the Tier 2 maximum 30 years of service limitation, have lessened these limitations.

The QPP currently administers the following pension tiers: Tier 1, Tier 2, Tier 3, and Tier 6 (Tier 3 Modified).

The QPP provides four main types of retirement benefits for all tiers: Vested Retirement benefits, Service Retirements, Ordinary Disability Retirements (non-job-related disabilities), and Accident Disability Retirements (job-related disabilities). Additionally, the QPP provides death benefits for all tiers.

Tier 1 is applicable to members appointed to the FDNY prior to July 1, 1973. Tier 2 is applicable to members appointed between July 1, 1973 and June 30, 2009. Benefits are generally the same for Tier 1 and Tier 2.

For Tier 1 and Tier 2 members, the QPP generally provides the following:

- A Vested retirement benefit is payable to Tier 1 and 2 members with at least five years of uniformed service. Tier 1 and 2 members who commenced their membership with the QPP prior to February 4, 2000 must have 15 years of uniformed service to be eligible for a vested retirement benefit. This benefit is generally comprised of a pension equal to 1/40 of their final average salary for every year of uniformed service and is reduced or increased based on the actuarial value of an account shortage or excess. The benefit can also be increased for any purchased non-uniformed service.
- A Service retirement benefit, in both tiers, provides an allowance of one-half of "final salary" after 20 years or 25 years of uniformed service (as elected), with additional benefits equal to a specified percentage per year of service (currently approximately 1.67%) of "average salary" times the number of years of credited service in excess of the 20-year or 25-year minimum. Under the new program, these additional benefits are increased, where applicable, by an annuity attributable to employee contributions accumulated with interest with respect to service over the 20-year or 25-year minimum and an annuity attributable to the Increased-Take-Home-Pay ("ITHP") contributions accumulated after required member qualifying service. ITHP represents amounts contributed by The City in lieu of members' own contributions. These amounts reduce the contributions that the 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 and increase pension contributions made to the plan.

**NEW YORK CITY FIRE PENSION FUNDS
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- An Ordinary Disability Retirement (“ODR”) benefit generally provides a pension equal to 1/40 of “final salary” times the number of years of service but not less than one-half of “final salary” if 10 or more years of service were completed, or one-third of “final salary” if less than 10 years of service were completed. Members of the Improved Benefits Plan with years of service in excess of 20 years receive the actuarial equivalent of their Annuity Savings Fund balance.
- An Accident Disability Retirement (“ADR”) benefit provides a pension of three-fourths of “final salary” plus an increment, as described above based on years of credited service in excess of the 20-years or 25-years minimum plus: (i) under the Original Plan, accumulated employee contributions without interest as a lump sum or an actuarially equivalent annuity, (ii) under the Improved Benefits Plan, an annuity based on the member’s contributions and ITHP contributions both of which are accumulated with interest.
- Tier 1 and Tier 2 members 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 (“Actual Balance”), 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 Required Amount. The Required Amount is the sum of the Required Contributions which a member should have made during his or her first 20 years of credited service, plus statutory interest 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 the actuarial value of any Excess of Contributions or reduced by any Deficiency of Contributions. The collective value of Required Amount, Actual Balance, and outstanding member loans, as of June 30, 2018, is as follows:

	Tier 1	Tier 2	Total
Required amount	\$ 95,139	\$ 487,349,124	\$ 487,444,263
Actual balance	508,535	1,803,696,762	1,804,205,297
Outstanding loans	-	25,247,862	25,247,862

Annuities attributable to member contributions are reduced on an actuarial basis for any loans with unpaid balances outstanding at the date of retirement.

Cost of living adjustments (“COLA”) are automatically payable to members who are either: (1) at least age 62 and have been retired for at least 5 years or (2) at least age 55 and have been retired for at least 10 years. Additionally, COLA are payable to members who retired for disability after being retired for 5 or more years and to beneficiaries receiving accidental death benefits who have been receiving them for at least 5 years. Beginning September 2001, COLA benefits equal 50% of the increase in the CPI-U based on the year ending March 31, rounded to the next higher .1% not less than 1% nor greater than 3% of the first \$18,000 of the sum of maximum pension allowance and prior COLA.

In June of 2009, the Governor vetoed legislation that would have extended Tier 2 to members hired after June 30, 2009. As a result of the Governor’s veto, QPP members hired on and after July 1, 2009 are covered under Tier 3, as governed by Article 14 of the New York State Retirement and Social Security Law (“RSSL”). As a result of Chapter 18 of the Laws of 2012, there are certain limitations on Tier 3 benefits available to participants hired on and after April 1, 2012. In most New York State PERS, including the QPP, these changes are sometimes referred to as Tier 6 or Tier 3 Modified.

NEW YORK CITY FIRE PENSION FUNDS
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For Tier 3/Tier 3 Modified members, the QPP generally provides the following:

- A Normal Service Retirement benefit is payable after completion of 22 years of uniformed service.
- An Early Service Retirement is payable upon completion of 20 years or age 62 for Tier 3 or upon completion of 20 years for Tier 3 Modified and is payable as a pension equal to 2.1% of Final Average Salary plus 1/3% of Final Average Salary for each month in excess of 20 years of uniformed service, such benefit not to exceed 50% of Final Average Salary.
- A Vested benefit is payable to members with at least five years of uniformed service. The benefit is equal to 2.1% of final average salary for every year of uniformed service payable upon attainment of eligibility for early age, or 55.
- An ODR retirement allowance is payable to a Non-Enhanced Member who has at least 5 years of service and is in receipt of Social Security Disability Benefits. An ODR benefit is 1/3 of Final Average Salary or 2% of Final Average Salary for each year of credited service, whichever is greater and does not exceed 50% of Final Average Salary. The ODR retirement allowance for Enhanced Members is described on page 42.
- An ADR retirement allowance is payable to a Non-Enhanced Member who was disabled as the result of a line-of-duty accident not attributable to his own willful negligence. An ADR pension is 50% of a member's Final Average Salary. The ADR retirement allowance for Enhanced Members is described on page 42.

The Normal Service, Early Service and Vested retirement allowances are reduced by one-half of the member's Social Security Benefit attributable to New York State public earnings, at age 62, regardless of eligibility for Social Security.

Tier 3/Tier 3 Modified members are also eligible for annual escalation on the retirement allowance: (1) in full, if they have retired for Service after completing 25 or more years of uniformed service (or elected to defer commencement of their benefit to that 25-year date) or on a reduced basis, by 1/36 for each month that their retirement precedes 25 years or (2) in full, if they have retired for disability and are Non-Enhanced Members or (3) in full, to their beneficiary for accidental death benefits. Escalation is determined from the change in the CPI-U based on the prior year ending December 31, not greater than 3%.nor less than - 3% in the event of a decrease. Tier 3/Tier 3 Modified members, when eligible, receive the greater of the applicable increase from COLA or escalation.

VSFs

The FFVSF provides a guaranteed schedule of supplemental benefits for Firefighters who retire (or have retired) as Firefighters on Service retirement with at least 20 years of credited service as follows:

- For those Firefighters who retired from service as Firefighters before July 1, 1988, the annual supplemental benefit was \$2,500 in Calendar Year 1988. For those who retired during Calendar Year 1988, the annual \$2,500 benefit payment was prorated. The annual benefit increases \$500 each year thereafter to a maximum of \$12,000 in Calendar Year 2007. The 1988 benefits included any payments made under the prior program.

For those Firefighters hired before July 1, 1988 and who retire after Calendar Year 1988, the annual benefit payment is the scheduled amount as described above, prorated in the year of retirement and the full amount thereafter.

- For those who become members of QPP on or after July 1, 1988, the annual supplemental benefit is \$2,500 for the first 12 months of retirement, which increases 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 500 of the Laws of 1995 ("Chapter 500/95") such that these members will receive the maximum \$12,000 benefit beginning Calendar Year 2008 and thereafter.

**NEW YORK CITY FIRE PENSION FUNDS
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The FOVSF provides a guaranteed schedule of supplemental benefits for Fire Officers who retire (or have retired) as Fire Officers on Service retirement with at least 20 years of credited uniformed service as follows:

- A Fire Officer hired before July 1, 1988, who retired from service as a Fire Officer on or after October 1, 1988, and prior to Calendar Year 1993 receives a defined schedule of benefits starting at \$5,000 payable in January 1994 for the Calendar Year 1993 payment. For those who retired during Calendar Year 1993, the annual \$5,000 benefit payment was prorated. The annual benefit increases \$500 each year thereafter to a maximum of \$12,000 for Calendar Year 2007 (payable by January 31, 2008) and thereafter.

For those who were members of QPP prior to July 1, 1988, and who retire after Calendar Year 1993, the annual benefit payment is the scheduled amount as described above, prorated in the year of retirement and the full amount thereafter.

- For those who become members of the QPP on or after July 1, 1988, the annual supplemental benefit is \$2,500 for the first twelve months of retirement, which increases 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 500 of the Laws of 1998 ("Chapter 500/98") such that these members will receive the maximum \$12,000 benefit beginning Calendar Year 2008 and thereafter.

Chapter 500/95 permitted certain active employees with prior service credit before entering the QPP to utilize their original dates of hire for determining eligibility for benefits from the FFVSF and the FOVSF. In addition, this law permitted certain active employees with prior service credit before entering the QPP to utilize their original dates of hire for determining eligibility for benefits from the FFVSF and the FOVSF.

Additionally, Chapter 216 of the Laws of 2002 ("Chapter 216/02") provides that participants of the VSFs who retire from the QPP on and after January 1, 2002 with more than 20 years of credited service are entitled to an additional one-time special lump sum payment, the Deferred Retirement Option Plan ("DROP"). The DROP also known as "Banked Variable" represents the amount the member would have received had he/she retired for Service upon reaching eligibility. The DROP payment is an eligible distribution that may be rolled over pursuant to IRS regulations. Members who retired for a disability or die in active service are not eligible for the VSF DROP. Accumulated VSF DROP balances for Fiscal Year 2018 were \$58.7 million for FFVSF and \$112.0 million for FOVSF. Similarly, for Fiscal Year 2017 the balances were \$58.1 million for FFVSF and \$110.1 million for FOVSF.

Any increase in the amount of ad hoc cost-of-living increases ("Supplementation") or automatic Cost-of-Living Adjustments ("COLA") payable from the QPP to a retiree of the FFVSF under legislation enacted on or after July 1, 1988 or to a retiree of the FOVSF under legislation enacted on or after January 1, 1993, will reduce benefits payable from the FFVSF or FOVSF 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 (2) January 1, 2008.

NEW YORK CITY FIRE PENSION FUNDS
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2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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 by the QPP when the Employer makes payroll deductions from QPP 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 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 quoted market value on the last trading day of the period, except for the Short-Term Investment Fund (“STIF”) (a money market fund), International Investment funds (“IIF”) and Alternative Investment funds (“ALTINVF”). The IIF are private funds of publicly traded securities which are managed by various investment managers on behalf of the Funds. Fair value is determined by FIRE 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 FIRE management based on information provided by the various GP’s after review by an independent consultant and the custodian bank for the fund.

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 Funds is not subject to Federal income tax.

Accounts Payable – Accounts payable is principally comprised of amounts owed to the Funds’ banks for overdrawn bank balances. The Funds’ practice is to fully invest cash balances in most bank accounts daily. Overdrawn balances result primarily from outstanding benefit checks that are presented to the banks for payment on a daily basis, and these balances are routinely settled each day.

Accrued Benefits Payable – Accrued benefits payable represent 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 end of June 30.

Securities Lending Transactions – State statutes and Board policies permit the Funds to lend its investments to broker-dealers and other entities for collateral, for the same securities in the future with a simultaneous agreement to return the collateral in the form of cash, treasury and U.S. Government securities. The Funds’ agent lends the following types of securities: short term securities, common stocks, long-term corporate bonds, U.S. Government and U.S. Government agency bonds, asset-backed securities, and international equities and bonds held in collective investment funds.

**NEW YORK CITY FIRE PENSION FUNDS
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In return, the Funds receive collateral in the form of cash, U.S. Treasury and U.S. Government agency securities at 100% to 105% of the principal plus accrued interest for reinvestment. At June 30, 2018 and 2017, management believes that the Funds had no credit risk exposure to borrowers because the amounts the Funds owed the borrowers equaled or exceeded the amounts the borrowers owed the Funds. The contracts with the Fund's Custodian require the Securities Lending Agent to Indemnify the Funds.

In the situation when a borrower goes into default, the Agent will liquidate the collateral to purchase replacement securities. Any shortfall before the replacement securities cost and the collateral value is covered by the Agent. All Securities loans can be terminated on demand within a period specified in each agreement by either the Funds or the borrowers. Cash collateral is invested by the securities lending agent using approved Lender's Investment guidelines. The weighted average maturity is 30.46 days. The securities lending program in which the Funds participate only allows pledging or selling securities in the case of borrower default.

GASB Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions*, requires that securities loaned as assets and related liabilities be reported in the statements of fiduciary net position. Cash received as collateral on securities lending transactions and investments made with that cash are reported as assets. Securities received as collateral are also reported as assets if the government entity has the ability to pledge or sell them without a borrower default. Accordingly, the Funds 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, 2018 and 2017 was \$1,131.3 million and \$1,056.9 million, respectively for the QPP, \$18.0 million and \$18.2 million, respectively for the FFVSF, and \$12.8 million and \$12.1 million, respectively for the FOVSF. Cash collateral received related to securities lending as of June 30, 2018 and 2017 was \$1,140.4 million and \$1,080.0 million, respectively for the QPP, \$16.8 million and \$18.5 million, respectively for the FFVSF, and \$12.0 million and \$12.3 million, respectively for the FOVSF. As of the date of the statements of fiduciary net position, the maturities of the investments made 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.

**NEW YORK CITY FIRE PENSION FUNDS
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3. INVESTMENTS AND DEPOSITS

The City Comptroller (the "Comptroller") acts as an investment advisor to the Funds. In addition, the Funds employ an independent investment consultant as an investment advisor. The Funds utilize 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 Boards of Trustees of the respective Funds set investment objectives to assure adequate accumulation of reserves and to protect the long-term value of the assets. The Boards' investment policy is implemented using a strategic allocation of assets that meet the objectives of the Funds, while working within the confines of the legislative guidelines. The guidelines dictate that fixed income, equity and other investments may be made permitted by the New York State Retirement and Social Security Laws ("RSSL") and State Banking Law, the ACNY, and the Legal Investments for New York Savings Banks list as published by The New York State Banking Department. The Funds' asset allocation policy is constructed to meet both short-term funding requirements and long-term pension obligations. Investments up to 25% of assets of the Funds may be made in instruments not expressly permitted by the State RSSL.

The Funds do not possess an investment risk policy statement, nor does it actively manage assets to specific 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 2018 and 2017. Includes securities in the following categories:

	<u>2018</u>		<u>2017</u>	
U.S. Equity	31	%	31	%
Core U.S. Fixed	11		11	
EAFE Markets	9		9	
Private Equities	7		7	
Emerging Markets	6		6	
Enhanced Yield Bonds	7		7	
Real Estate	8		8	
Private Real Estate	2		2	
Hedge Funds	6		6	
Reits	0		0	
Tips	4		4	
Opportunistic Fixed	5		5	
Cash	0		0	
Bank Loans	2		2	
Eti	2		2	
Convertible Bonds	0		0	
Total	<u>100.0</u>	<u>%</u>	<u>100</u>	<u>%</u>

State Street Bank is the primary custodian for substantially all of the securities of the Funds.

Concentrations — None of the Funds have any investments in any one entity that represent 5% or more of their fiduciary net position.

NEW YORK CITY FIRE PENSION FUNDS
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Credit Risk — Portfolios other than U.S. Government and related portfolios have credit rating limitations. Investment Grade portfolios are limited to mostly ratings of BBB and above except that they are also permitted a 10% maximum exposure to BB & B rated securities. While non-investment grade managers are primarily invested in BB & B rated securities, they can also invest up to 7% of their portfolio in securities rated CCC. Non-rated securities are considered to be non-investment grade. The quality ratings of Funds' investments, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2018 are as follows:

June 30, 2018	Moody's Quality Ratings																	Caa &		
	Below	Not	Total																	
Investment Type	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Ca1	Rated	Not	Total
(in percent)																				
U.S. Government	56.74%	0.02%	0.05%	0.01%	0.02%	0.02%	0.09%	0.00%	0.10%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.64%	59.70%
Corporate bonds	0.86%	0.14%	0.13%	0.27%	0.57%	0.66%	1.72%	1.92%	2.37%	2.28%	1.45%	1.57%	2.53%	2.58%	2.60%	2.64%	1.95%	6.70%	32.94%	
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%	3.88%	3.88%	
Slif	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%	3.48%	3.48%	
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%	0.00%	0.00%	0.00%
Percent of Rated Portfolio	57.60%	0.16%	0.18%	0.28%	0.59%	0.68%	1.81%	1.92%	2.47%	2.29%	1.45%	1.57%	2.53%	2.58%	2.60%	2.64%	1.95%	16.70%	100.00%	

U.S. Treasury Bonds, Notes, and Tips are obligations of the U.S. government or explicitly guaranteed by the U.S. Government and therefore are not considered to have credit risk and are not included above.

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Credit Risk — Portfolios other than U.S. Government and related portfolios have credit rating limitations. Investment Grade portfolios are limited to mostly ratings of BBB and above except that they are also permitted a 10% maximum exposure to BB & B rated securities. While non-investment grade managers are primarily invested in BB & B rated securities, they can also invest up to 7% of their portfolio in securities rated CCC. Non-rated securities are considered to be non-investment grade. The quality ratings of Funds' investments, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2017 are as follows:

June 30, 2017 Investment Type (in percent)	Moody's Quality Ratings													Caa &		Total						
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2		B3	Below	Not			
U.S. Government	37.54%	0.02%	0.02%	0.01%	0.00%	0.03%	0.11%	0.00%	0.15%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.70%	52.71%	
Corporate bonds	0.53%	0.33%	0.36%	0.58%	1.68%	1.17%	3.29%	5.19%	5.38%	5.91%	2.44%	1.12%	1.94%	1.28%	1.31%	1.80%	0.89%	0.89%	4.03%	39.23%		
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%	0.00%	0.00%	5.65%	5.65%	
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%	0.00%	0.00%	2.41%	2.41%	
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%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent of Rated Portfolio	38.07%	0.35%	0.38%	0.59%	1.68%	1.20%	3.40%	5.19%	5.53%	6.04%	2.44%	1.12%	1.94%	1.28%	1.31%	1.80%	0.89%	0.89%	4.03%	26.79%	100.00%	

U.S. Treasury Bonds, Notes, and Tips are obligations of the U.S. government or explicitly guaranteed by the U.S. Government and therefore are not considered to have credit risk and are not included above.

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Custodial Credit Risk — Deposits are exposed to custodial credit risk if they are uninsured and uncollateralized. Custodial credit risk is the risk that, in the event of a failure of the counterparty, the Funds will not be able to recover the value of their 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 Funds and are held by either the counterparty or the counterparty's trust department or agent but not in the name of the Funds.

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

All of the Funds' deposits are insured by the Federal Deposit Insurance Corporation and collateralized by securities held by a financial institution separate from the Funds' depository financial institution.

Interest Rate Risk — Interest rate risk is the risk that the fair value of investments could be adversely affected by the change in interest rates. Duration limits are used to control the portfolios exposure to interest rate changes. In the investment grade core Fixed Income portfolios duration is limited to a range of one year shorter than the benchmark duration to 0.75 years longer than the duration of the benchmark indices. Duration range is a measure of the overall portfolio, while statements of the stated maturity reflect the specific maturities of the individual securities held. The Funds have no formal risk policy. The lengths of investment maturities (in years) of the Funds' investments, as shown by the percent of the rated portfolio, at June 30, 2018 and 2017 are as follows:

Investment Maturities					
Years to Maturity	Fair	Less Than	One to Five	Six to Ten	More Than
June 30, 2018	Value	One Year	Years	Rated	Ten Years
U.S. Government	59.7 %	1.68 %	22.09 %	11.08 %	24.85 %
Corporate bonds	32.94	0.85	12.13	14.10	5.86
Yankee bonds	-	-	-	-	-
Short-term:					
Commercial Paper	3.88	3.88	-	-	-
Stif	3.48	3.48	-	-	-
U.S. Treasuries & Agencies	-	-	-	-	-
Discount Notes	-	-	-	-	-
Percent of rated portfolio	<u>100 %</u>	<u>9.89 %</u>	<u>34.22 %</u>	<u>25.18 %</u>	<u>30.71 %</u>

Investment Maturities					
Years to Maturity	Fair	Less Than	One to Five	Six to Ten	More Than
June 30, 2017	Value	One Year	Years	Rated	Ten Years
U.S. Government	52.73 %	0.18 %	13.20 %	7.89 %	31.46 %
Corporate bonds	39.21	1.37	17.17	11.02	9.65
Yankee bonds	-	-	-	-	-
Short-term:					
Commercial Paper	5.65	5.65	-	-	-
Pooled fund	2.41	2.41	-	-	-
U.S. Treasuries & Agencies	-	-	-	-	-
Discount Notes	-	-	-	-	-
Percent of rated portfolio	<u>100 %</u>	<u>9.61 %</u>	<u>30.37 %</u>	<u>18.91 %</u>	<u>41.11 %</u>

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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, the Funds have numerous managers that invest globally. In general, currency exposure is viewed as a benefit for its diversification reasons and not as an inherent risk within the portfolio. The Funds' combined foreign currency holdings as of June 30, 2018 and 2017 are as follows:

Trade Currency	Fair Value	Fair Value
AUSTRALIAN DOLLAR	\$ 45,737	\$ 47,333
BOTSWANA PULA	378	413
BRAZILIAN REAL	47,957	48,858
CANADIAN DOLLAR	61,987	47,315
CHILEAN PESO	9,478	8,609
COLOMBIAN PESO	4,770	4,412
CROATIAN KUNA	1,173	900
CZECH KORUNA	2,389	2,178
DANISH KRONE	37,778	33,476
EGYPTIAN POUND	1,704	1,840
EURO CURRENCY	510,273	475,686
GHANA CEDI	310	236
HONG KONG DOLLAR	274,438	267,466
HUNGARIAN FORINT	2,798	3,037
INDIAN RUPEE	98,099	98,060
INDONESIAN RUPIAH	22,662	23,726
JAPANESE YEN	284,564	281,714
JORDANIAN DINAR	1,187	934
KENYAN SHILLING	1,461	1,152
KUWAITI DINAR	3,051	2,618
MALAYSIAN RINGGIT	21,476	21,018
MAURITIUS RUPEE	1,057	960
MEXICAN PESO (NEW)	24,907	28,661
MOROCCAN DIRHAM	1,125	913
NEW ISRAELI SHEQEL	3,793	4,736
NEW TAIWAN DOLLAR	99,901	111,920
NEW ZEALAND DOLLAR	1,105	2,539
NIGERIAN NAIRA	1,076	506
NORWEGIAN KRONE	16,193	13,014
OMANI RIAL	1,197	857
PAKISTAN RUPEE	2,500	2,342
PERUVIAN NOUVEAU SOL	914	674
PHILIPPINE PESO	10,472	12,042
POLISH ZLOTY	15,163	14,505
POUND STERLING	259,676	241,118
QATARI RIAL	7,074	5,146
ROMANIAN LEU	1,336	1,113
RUSSIAN RUBLE	953	568
SINGAPORE DOLLAR	20,472	19,853
SOUTH AFRICAN RAND	56,476	55,112
SOUTH KOREAN WON	136,375	146,243
SWEDISH KRONA	29,019	42,659
SWISS FRANC	112,299	122,901
THAILAND BAHT	28,542	26,938
TUNISIAN DINAR	472	383
TURKISH LIRA	17,066	19,131
UAE DIRHAM	4,696	4,864
YUAN RENMINBI	3,326	36
Total	\$ 2,290,855	\$ 2,249,811

**NEW YORK CITY FIRE PENSION FUNDS
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Securities Lending Transactions

Credit Risk — The quality ratings of investments held as collateral for securities lending by the Funds' at June 30, 2018 and 2017 are as follows:

Investment Type and Fair Value
of Securities Lending Transactions
(In thousands)

S&P Quality Ratings

AAA+ & Below	AA+ & AA	AA- A+	A	A-	BBB+ & Below	BB+ & Below	B+ & Below	CCC+ & Below	Not Rated	Total
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June 30, 2018

U.S. Government	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Corporate	-	-	-	-	-	-	-	-	-	-	
Short Term:	-	-	-	-	-	-	-	-	-	-	
Repurchase Agreements	-	-	-	-	-	-	-	-	-	-	
Reverse Repurchase Agreements	-	-	50,000	289,655	155,087	123,647	17,630	-	414,233	1,050,252	
Money Market	3,274	-	-	520	-	-	4,885	-	85	8,764	
Bank Notes	-	-	-	-	-	-	-	-	2,598	2,598	
Cash or Cash Equivalent	-	-	-	101,733	-	-	-	-	-	101,733	
Payable/Receivable	-	-	-	-	-	-	-	-	-	-	
Uninvested	-	-	-	-	-	-	-	-	5,939	5,939	
Total	\$ 3,274	\$ -	\$ 50,000	\$ 391,908	\$ 155,087	\$ 123,647	\$ 22,515	\$ -	\$ 422,855	\$ 1,169,286	
Percent of securities lending portfolio	0.28%	0.00%	4.28%	33.52%	13.26%	10.57%	1.93%	0.00%	0.00%	36.16%	100.00%

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Investment Type and Fair Value
of Securities Lending Transactions
(In thousands)

	S&P Quality Ratings										Total	
	AAA+ & Below	AA	AA-	A+	A	A-	BBB+ & Below	BB+ & Below	B+ & Below	CCC+ & Below		Not Rated
June 30, 2017												
U.S. Government Corporate	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Short Term:												
Repurchase Agreements	-	-	-	-	-	-	-	-	-	-	-	-
Reverse Repurchase Agreements	-	-	298,283	247,803	158,081	120,000	10,000	-	-	-	165,112	999,279
Money Market	-	-	-	-	-	-	-	-	-	-	-	-
Bank Notes	-	-	-	-	-	-	-	-	-	-	-	-
Cash or Cash Equivalent	-	-	-	110,400	-	-	-	-	-	-	-	110,400
Payable/Receivable	-	-	-	-	-	-	-	-	-	-	705	705
Uninvested	-	-	-	-	-	-	-	-	-	-	469	469
Total	\$ -	\$ -	\$ 298,283	\$ 358,203	\$ 158,081	\$ 120,000	\$ 10,000	\$ -	\$ -	\$ -	\$ 166,286	\$ 1,110,853
Percent of securities lending portfolio	0.00%	0.00%	26.85%	32.25%	14.23%	10.80%	0.90%	0.00%	0.00%	0.00%	14.97%	100.00%

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Interest Rate Risk — The lengths of investment maturities (in years) of the collateral for securities lending held by the Funds' are as follows:

Years to Maturity
Investment Type
(In Thousands)

	Investment Maturities (in years)				
	Fair Value	Less Than One Year	One To Five Years	Six to Ten Years	More Than Ten Years
June 30, 2018					
Government	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate	-	-	-	-	-
Yankee	-	-	-	-	-
Short Term:					
Repurchase Agreements	-	-	-	-	-
Reverse Repurchase Agreements	1,050,252	1,050,252	-	-	-
Certificate of Deposits	-	-	-	-	-
Commercial Paper	-	-	-	-	-
Money Market	8,764	8,764	-	-	-
Bank Notes	2,598	2,598	-	-	-
Cash or Cash Equivalent	101,733	101,733	-	-	-
Uninvested	5,939	5,939	-	-	-
Total	\$ 1,169,286	\$ 1,169,286	\$ -	\$ -	\$ -
Percent of Securities lending portfolio	100.00%	100.00%	0.00%	0.00%	0.00%

Years to Maturity
Investment Type
(In Thousands)

	Investment Maturities (in years)				
	Fair Value	Less Than One Year	One To Five Years	Six to Ten Years	More Than Ten Years
June 30, 2017					
Government	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate	-	-	-	-	-
Yankee	-	-	-	-	-
Short Term:					
Reverse Repurchase Agreements	999,279	999,279	-	-	-
Certificate of Deposits	-	-	-	-	-
Commercial Paper	-	-	-	-	-
Cash or Cash Equivalent	110,400	110,400	-	-	-
Uninvested	1,174	1,174	-	-	-
Total	\$ 1,110,853	\$ 1,110,853	\$ -	\$ -	\$ -
Percent of Securities lending portfolio	100.00%	100.00%	0.00%	0.00%	0.00%

**NEW YORK CITY FIRE PENSION FUNDS
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Rate of return — For the years ended June 30, 2018 and 2017, the annual money weighted rate of return on investments, net of investment expense, for the Funds was as follows:

	<u>2018</u>	<u>2017</u>
QPP	9.34%	12.82%
FFVSF	7.28%	13.48%
FOVSF	7.75%	14.53%

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

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In Fiscal Year 2015, the Funds 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. The Funds categorize their 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 Funds have the following recurring fair value measurements as of June 30, 2018 and June 30, 2017:

GASB 72 Disclosure (in thousands) INVESTMENTS – At fair value	2018			
	Level One	Level Two	Level Three	Total
Short-term investments:				
Commercial paper	\$ -	\$ 191,606	\$ -	\$ 191,606
Short-term investment fund	-	98,030	-	98,030
U.S. treasury bills and agencies	53,484	-	-	53,484
Discount notes	-	2,498	-	2,498
Debt securities:				
U.S. government and agency	-	1,767,633	-	1,767,633
Corporate and other	-	900,285	-	900,285
Mortgage debt security	-	353,129	-	353,129
Bank loans	-	8,044	-	8,044
Equity securities:				
Domestic equity	3,959,523	350	349	3,960,222
Alternative investments:				
Infrastructure	-	-	70,510	70,510
Opportunistic fixed income	-	-	392,612	392,612
Private equity	3,267	-	899,664	902,931
Private real estate	-	-	548,159	548,159
Collective trust funds:				
Bank loans	-	200,689	-	200,689
Corporate and other	-	363,329	6	363,335
Domestic equity	277,093	-	1,001	278,094
International equity	2,527,227	-	267	2,527,494
Mortgage debt security	-	27,149	71,953	99,102
Treasury inflation protected securities	-	590,072	-	590,072
U.S. government and agency	-	360,480	-	360,480
Total investments	<u>\$ 6,820,594</u>	<u>\$ 4,863,294</u>	<u>\$ 1,984,521</u>	<u>13,668,409</u>
Alternative investments valued at net asset value				693,506
Total				<u>\$ 14,361,915</u>

NEW YORK CITY FIRE PENSION FUNDS
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	2017			Total
	Level One	Level Two	Level Three	
GASB 72 Disclosure				
(in thousands)				
INVESTMENTS – At fair value				
Short-term investments:				
Commercial paper	\$ -	\$ 136,416	\$ -	\$ 136,416
Short-term investment fund	-	101,101	-	101,101
Debt securities:				
U.S. government and agency	-	1,274,477	-	1,274,477
Corporate and other	-	941,855	4,569	946,424
Equity securities	1,878,265	347	29	1,878,641
Alternative investments	1,103	25,975	1,698,138	1,725,216
Collective trusts funds:				
International equity	2,405,030	39,804	421	2,445,255
Fixed income	2,067	663,571	187,850	853,488
Domestic equity	2,408,391	-	-	2,408,391
Mortgage debt security	-	17,393	71,836	89,229
Treasury inflation protected securities	-	544,633	1,544	546,177
Total investments	<u>\$ 6,694,856</u>	<u>\$ 3,745,572</u>	<u>\$ 1,964,387</u>	<u>12,404,815</u>
Alternative Investments valued at net asset value				666,160
Total				<u>\$ 13,070,975</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 of the fair value are securities whose stated market price is unobservable by the market place; 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.

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 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 should be 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

NEW YORK CITY FIRE PENSION FUNDS
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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 this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the entity's financial statements.

4. TRANSFER TO VARIABLE SUPPLEMENTS FUNDS

The ACNY provides that the QPP transfer to the VSFs an amount equal to certain excess earnings on equity investments limited to the unfunded Accumulated Benefit Obligation ("ABO") of the 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"), less any cumulative deficiencies. The VSFs also receive credit for investment earnings on their respective assets.

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

For Fiscal Year 2018, the excess earnings of the QPP, inclusive of prior year's cumulative deficiencies, are estimated to be equal to \$788 million. After application of the ABO Gate, a liability and transfer of \$15 million to FFVSF and a liability and transfer of \$0 million to FOVSF have been reported by the QPP as of and for the year ended June 30, 2018, respectively.

For Fiscal Year 2017, the excess earnings of the QPP, inclusive of prior year's cumulative deficiencies, are estimated to be equal to \$971 million. After application of the ABO Gate, a liability and transfer of \$14 million to FFVSF and a liability and transfer of \$0 million to FOVSF have been reported by the QPP as of and for the year ended June 30, 2017, respectively.

In addition, Chapter 583 of the Laws of 1989 states that if the assets of the FFVSF or FOVSF are less than the amount required to pay the retirees' guaranteed scheduled annual supplemental benefit payments, then The City is required by law to fund the difference.

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The amount shown below as the ABO is the 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 VSFs on a going-concern basis, assess progress made in accumulating sufficient assets to pay benefits when due and make comparisons among Variable Supplements Funds.

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

A comparison of the ABO as calculated by the Funds' Chief Actuary (the "Actuary") with the net position restricted for benefits for the FFVSF and the FOVSF as of June 30, 2017 and June 30, 2016, follows:

	<u>FFVSF</u>		<u>FOVSF</u>	
	<u>2017</u>	<u>2016</u>	<u>2017</u>	<u>2016</u>
	(in millions)		(in millions)	
Accumulated benefit obligation ¹				
for:				
Retirees currently receiving benefits	\$ 340.6	\$ 348.9	\$ 146.7	\$ 148.9
Active employees	<u>184.6</u>	<u>178.6</u>	<u>189.7</u>	<u>181.4</u>
Total accumulated benefit obligation ^{2,3}	525.2	527.5	336.4	330.3
Plan net position held in trust for benefits ⁴	<u>526.2</u>	<u>502.9</u>	<u>345.2</u>	<u>305.0</u>
Unfunded accumulated benefit obligation	<u>\$ (1.0)</u>	<u>\$ 24.6</u>	<u>\$ (8.8)</u>	<u>\$ 25.3</u>

¹ Based on actuarial assumptions adopted by the Board of Trustees of the QPP during Fiscal Year 2012 with revisions adopted during Fiscal Year 2016.

² The June 30, 2017 and the June 30, 2016 ABOs for FFVSF decreased by approximately \$1.6 million and decreased by approximately \$1.9 million, respectively, and the June 30, 2017 and the June 30, 2016 ABOs for FOVSF decreased by approximately \$0.6 million and \$0.7 million, respectively, compared to those projected prior to the enactment of Chapters 119/95, 390/98 and 125/00.

³ These total ABOs have been reduced by accrued benefits payable. This basis of reporting the total ABO is consistent with that used to report net position restricted for benefits in these financial statements, but may differ from the bases used for other purposes.

⁴ See Note 2 for valuation of investments in the calculation of net position restricted for benefits.

For purposes of the June 30, 2017 and the June 30, 2016 actuarial valuations of the VSFs, Chapter 125/00 has been taken into account in the determination of the unfunded ABO relative to the Supplementation benefit increases that began Fiscal Year 2001 and to the automatic COLA benefits provided for Fiscal Year 2002 and each future year.

Sections 13-384 and 13-394 of the ACNY provide that the Boards of Trustees of the FFVSF and the FOVSF shall adopt, upon the recommendation of the Actuary, actuarial assumptions as to interest rate, mortality of retirees and estimated number of active members of the QPP in service as of each June 30 who will retire for service with 20 or more years of service as Firefighters and Fire Officers, for use in making annual valuations of liabilities.

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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, 2017 and June 30, 2016, respectively:

	<u>June 30, 2017</u>	<u>June 30, 2016</u>
Investment rate of return	7.0% per annum. ^{1,2}	7.0% per annum. ^{1,2}
Post-retirement mortality	Tables adopted by the Board of Trustees during Fiscal Year 2016.	Tables adopted by the Board of Trustees during Fiscal Year 2016.
Active service: withdrawal, death, disability	Tables adopted by the Board of Trustees during Fiscal Year 2012.	Tables adopted by the Board of Trustees during Fiscal Year 2012.
Service retirement	Tables adopted by the Board of Trustees during Fiscal Year 2012.	Tables adopted by the Board of Trustees during Fiscal Year 2012.
Percentage of all active Fire members estimated to retire for service with 20 or more years of service as Firefighters	68%	68%
Percentage of all active Fire Officers estimated to retire for service with 20 or more years of service as Fire Officers	100%	100%
Cost-of-Living Adjustments 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.

² Net of Investment Expenses.

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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 — Tier 1 and Tier 2 members contribute by salary deductions on the basis of a normal rate of contribution which is assigned by the QPP at membership. A member's normal rate is dependent upon age and actuarial tables in effect at the time of membership. These member contributions are reduced by 5.0% under the ITHP program.

Members may voluntarily increase their rates of contribution by 50% for the purpose of purchasing an additional annuity. Members are permitted to borrow up to 90% of their own contributions including accumulated interest.

Tier 3 and Tier 3 Modified members contribute 3.0% of salary until they have 25 years of credited service.

Employer Contributions — Statutory Contributions to the QPP, determined by 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, 2018, based on an actuarial valuation as of June 30, 2016 was \$1,200.4 million and the Statutory Contribution for the year ended June 30, 2017, based on an actuarial valuation as of June 30, 2015 was \$1,061.2 million. The Statutory Contributions for Fiscal Years 2018 and 2017 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 the Statutory Contributions.

6. NET PENSION LIABILITY

The components of net pension liability of the Employer at June 30, 2018 and 2017 for the Funds were as follows:

	(in thousands)			
June 30, 2018	QPP	FFVSF	FOVSF	TOTAL
Total Pension liability*	\$ 21,073,770	\$ 545,063	\$ 373,079	\$ 21,991,912
Fiduciary net position**	13,267,043	550,507	355,712	14,173,262
Employers' net pension liability	<u>\$ 7,806,727</u>	<u>\$ (5,444)</u>	<u>\$ 17,367</u>	<u>\$ 7,818,650</u>
Fiduciary net position as a percentage of the total	<u>62.96%</u>	<u>101.00%</u>	<u>95.34%</u>	<u>64.45%</u>

	(in thousands)			
June 30, 2017	QPP	FFVSF	FOVSF	TOTAL
Total Pension liability*	\$ 20,384,622	\$ 557,073	\$ 372,535	\$ 21,314,230
Fiduciary net position**	12,089,896	547,077	354,337	12,991,310
Employers' net pension liability	<u>\$ 8,294,726</u>	<u>\$ 9,996</u>	<u>\$ 18,198</u>	<u>\$ 8,322,920</u>
Fiduciary net position as a percentage of the total	<u>59.31%</u>	<u>98.21%</u>	<u>95.12%</u>	<u>60.95%</u>

*Includes Liabilities from Special Accidental Death Benefits pursuant to Section 208-f of the General Municipal Law.

**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, 2018 and 2017 was determined by actuarial valuations as of June 30, 2016 and June 30, 2015 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.

The mortality tables for Service and Disability pensioners were developed from an experience study of the QPP's and the predecessor QPP's pensioners. The mortality tables for beneficiaries were also developed from an experience review.

Pursuant to Section 96 of the New York City Charter, a study of the actuarial assumptions used to value liabilities of the Funds is conducted every two years.

The obligations of the QPP to the FFVSF and the FOVSF are recognized through the Liability Valuation Method. Under this method the actuarial present value ("APV") of Future SKIM from the QPP to the FFVSF and FOVSF is included directly as an actuarial liability to the QPP. SKIM is all or a portion of the excess earnings on equity securities of the QPP which are transferable to the FFVSF and FOVSF. The APV of Future SKIM is computed as the excess, if any, of the APV of benefits of the FFVSF and FOVSF offset by the AAV of the FFVSF and FOVSF, respectively.

Expected Rate of Return on Investments

The long-term expected rate of return on the Funds' investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (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:

Asset Class	Target Asset Allocation	Long-Term Expected Real Rate of Return
U.S Public Market Equities	31 %	6.3 %
International Public Market Equities	9	7.0
Emerging Public Market Equities	6	9.5
Private Market Equities	7	10.4
Fixed Income	31	2.2
Alternative Investments	16	5.5
Total	<u>100 %</u>	

Discount Rate

The discount rate used to measure the total pension liability was 7.0%. The projection of cash flows used to determine the discount rate assumes that employee contributions will be made at the rates applicable to

**NEW YORK CITY FIRE PENSION FUNDS
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JUNE 30, 2018 AND 2017**

the current tier for each member and that Employer contributions will be made at rates as determined by the Actuary. Based on those assumptions, the Funds' fiduciary net position was projected to be available to make all projected future benefit payments of current active and non-active members. Therefore, the long-term expected rate of return on the Funds' 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 Funds as of June 30, 2018, 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)		
	1%	Discount	1%
	Decrease (6.0%)	Rate (7.0%)	Increase (8.0%)
QPP	\$ 9,926,984	\$ 7,806,727	\$ 5,986,228
FFVSF	42,807	(5,444)	(45,418)
FOVSF	51,574	17,367	(10,674)
Total	\$ 10,021,365	\$ 7,818,650	\$ 5,930,136

7. MEMBER LOANS

Tier 1 and Tier 2 members are permitted to borrow up to 90% of their own accumulated contributions including accumulated interest. The balance of QPP member loans receivable at June 30, 2018 and 2017 was \$25.2 million and \$26.9 million, respectively. Members repay their loans at the statutory rate of 4% per annum. Upon termination of employment before retirement, certain members are entitled to refunds of their own contributions including, for new program members, accumulated interest less any loans outstanding. Certain prior year loans to retirees were removed from member loans receivables. Such balances should be reduced at the effective date of retirement as a result of payoff or future benefit reductions.

8. RELATED PARTIES

The Comptroller of The City of New York has been appointed by law as custodian for Fixed Annuity Program assets with revocable discretionary authority. Securities are held by certain banks under custodial agreements with the Comptroller. The Comptroller also provides cash receipt and cash disbursement services to the Funds. Actuarial services are provided to the Funds 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 the Funds. Other administrative services are also provided by The City. The cost of providing such services amounted to \$2.3 million and \$2.1 million in Fiscal Years 2018 and 2017, respectively.

9. ADMINISTRATIVE AND INVESTMENT EXPENSES

During fiscal year 2018, in accordance with Chapter 298 of the New York State Laws of 2016, the QPP Plan provided corpus funding for administrative expenses in the amount of \$6.4 million. Additionally, services, as set out in Note 8 on "Related Parties" are provided by various City Agencies. The City defrayed the cost associated with these services. In fiscal year 2017, there were no administrative expenses paid out of the corpus of the Fund. Investment expenses charged to the investment earnings of the QPP, exclusive of expenses relating to securities-lending transactions amounted to approximately \$96.9 million and \$84.4 million in 2018 and 2017, respectively.

**NEW YORK CITY FIRE PENSION FUNDS
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In March 2018, the Fund entered into a lease agreement for office space. The agreement is for a term of 15 years and 4 months and requires a total commitment of approximately \$17,474,000 over the term of the lease.

10. CONTINGENT LIABILITIES AND OTHER MATTERS

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

Other Matters — During Fiscal Years 2016 and 2015, certain events described below took place which, in the opinion of FIRE management, could have the effect of increasing benefits to members and/or their beneficiaries. The effect of such events has not been fully quantified. However, it is the opinion of FIRE management that such developments would not have a material effect on the Funds' net position restricted for benefits or cause changes in Funds' net position restricted for benefits.

Actuarial Audit — Pursuant to Section 96 of the New York City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarially-funded New York City Retirement Systems ("NYCRS") are conducted every two years. Refer to Note 6 for the results of the most recent actuarial studies for FIRE.

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

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JUNE 30, 2018 AND 2017**

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

Chapter 18 of the Laws of 2012 placed certain limitations on the Tier 3 and Tier 4 benefits available to participants hired on and after April 1, 2012 in most New York State PERS, including FIRE.

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

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

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

Chapter 41 of the Laws of 2016 ("Chapter 427/14") 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.

Chapter 326 of the Laws of 2016 ("Chapter 326/16") extended the deadline to file a Notice of Participation in the World Trade Center Rescue, Recovery, and Clean-up Operations to September 11, 2018.

Chapter 298 of the Laws of 2016 ("Chapter 298/16") amended the Accidental Disability Retirement and Ordinary Disability Retirement benefits for Tier 3 and Tier 3 Modified members with dates of membership prior to June 15, 2016 who elect to participate in the Enhanced Disability Benefits. Tier 3 Modified members with dates of membership June 15, 2016 and later are mandated into the Enhanced Disability Benefits. Members electing or mandated into this benefit will pay an extra 2% of wages.

The following outlines the changes to Tier 3 and Tier 3 Modified provisions with the Enhanced Disability legislation:

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 2% 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 members appointed June 15, 2016 and later (i.e., the date new members are mandated into the Plan).

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- Post-tax for those who were eligible to elect the Enhanced Disability Plan provisions and elected such provisions.

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/HHAT/Lung)

3. Ordinary Disability Retirement (ODR)

- The ODR benefit for Tier3 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 have a FAS5 calculation.
- The Tier 3 Original Members who opt into the Tier 3 Enhanced benefit have their FAS5 applied for ODR or ADR, but their Three-Year Final Average Salary (FAS3) applied for Service or Vested Retirements.

Additionally, Chapter 298/16 allows the Board of Trustees of FIRE to establish a budget for the administration of FIRE and authorized payment from the assets of FIRE to cover such Administrative Expenses. The Administrative Expenses will be charged against FIRE in the first instance and then reimbursed with interest by the City of New York as an Employer Contribution in the following fiscal year. This structure is commonly referred to as a "corpus-funded entity." Accordingly, starting in Fiscal Year 2019, Administrative Expenses will be reflected in the Employer Contribution and the UAAL Payments.

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Chapter 61 of the Laws of 2017 permits FIRE members subject to Retirement and Social Security Law ("RSSL") Article 14 ("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.

The following changes apply to all Tier 3 members (Original, Revised and Enhanced):

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 Tier 3 ADR retirees; the Tier 2 safeguard provisions contained in New York City Administrative Code § 13-254 apply. Therefore, **all** Tier 3 ADR retirees will be treated identically to Tier 2 ADR retirees for Safeguards purposes. This includes 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.

* * * * *

NEW YORK CITY FIRE PENSION FUNDS
REQUIRED SUPPLEMENTAL INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2018	QPP*	FFVSF	FOVSF	TOTAL
Total pension liability:				
Service cost	\$ 419,209	\$ 12,234	\$ 4,926	\$ 436,369
Interest	1,422,180	37,221	25,208	1,484,609
Changes of benefit terms	14,335	(2,416)	(317)	11,602
Differences between expected and actual experience	141,892	(12,073)	(5,183)	124,636
Changes of assumptions	-	-	-	-
Benefit payments and withdrawals	(1,308,467)	(46,976)	(24,090)	(1,379,533)
Net change in total pension liability	689,149	(12,010)	544	677,683
Total pension liability – beginning	20,384,622	557,073	372,535	21,314,230
Total pension liability – ending (a)	21,073,771	545,063	373,079	21,991,913
Plan fiduciary net position:				
Employer contributions	1,200,417	-	-	1,200,417
Member contributions	108,338	-	-	108,338
Net investment income	1,188,860	35,406	25,465	1,249,731
Benefit payments and withdrawals	(1,308,467)	(46,976)	(24,090)	(1,379,533)
Administrative expenses	(6,412)	-	-	(6,412)
Other changes	9,411	-	-	9,411
Net change in plan fiduciary net position	1,192,147	(11,570)	1,375	1,181,952
Accrued transfers To/From VSF's	(15,000)	15,000	-	-
Plan fiduciary net position – beginning	12,089,896	547,077	354,337	12,991,310
Plan fiduciary net position – ending (b) **	13,267,043	550,507	355,712	14,173,262
Employer's net pension liability – ending (a)-(b)	\$ 7,806,728	\$ (5,444)	\$ 17,367	\$ 7,818,651
Plan fiduciary net position as a percentage of the total pension liability	62.96%	101.00%	95.34%	64.45%
Covered payroll	\$ 1,164,528	N/A	N/A	\$ 1,164,528
Employer's net pension liability as a percentage of covered payroll	670.38%	N/A	N/A	671.40%

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 Fund's fiduciary net position and may differ from the final Fund's fiduciary net position.

** Includes liabilities from Special Accidental Death Benefits pursuant to Section 208-F of the General Municipal Law.

NEW YORK CITY FIRE PENSION FUNDS
REQUIRED SUPPLEMENTAL INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2017	QPP*	FFVSF	FOVSF	TOTAL
Total pension liability:				
Service cost	\$ 415,221	\$ 12,180	\$ 5,081	\$ 432,482
Interest	1,375,677	38,029	25,099	1,438,805
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	148,046	(13,683)	115	134,478
Changes of assumptions	-	-	-	-
Benefit payments and withdrawals	(1,265,817)	(47,667)	(21,859)	(1,335,343)
Net change in total pension liability	673,127	(11,141)	8,436	670,422
Total pension liability – beginning	19,711,495	568,214	364,099	20,643,808
Total pension liability – ending (a)	20,384,622	557,073	372,535	21,314,230
Plan fiduciary net position:				
Employer contributions	1,061,170	-	-	1,061,170
Member contributions	108,368	-	-	108,368
Net investment income	1,284,871	46,755	40,095	1,371,721
Benefit payments and withdrawals	(1,265,817)	(47,667)	(21,859)	(1,335,343)
Administrative expenses	-	-	-	-
Other changes	47,284	-	-	47,284
Net change in plan fiduciary net position	1,235,876	(912)	18,236	1,253,200
Accrued transfers to/from VSF's	(45,743)	23,914	21,829	-
Plan fiduciary net position – beginning	10,899,763	524,075	314,272	11,738,110
Plan fiduciary net position – ending (b) **	12,089,896	547,077	354,337	12,991,310
Employer's net pension liability – ending (a)-(b)	\$ 8,294,726	\$ 9,996	\$ 18,198	\$ 8,322,920
Plan fiduciary net position as a percentage of the total pension liability	59.31%	98.21%	95.12%	60.95%
Covered payroll	\$ 1,145,919	N/A	N/A	\$ 1,145,919
Employer's net pension liability as a percentage of covered payroll	723.85%	N/A	N/A	726.31%

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 Fund's fiduciary net position and may differ from the final Fund's fiduciary net position.

** Includes liabilities from Special Accidental Death Benefits pursuant to Section 208-F of the General Municipal Law.

NEW YORK CITY FIRE PENSION FUNDS
REQUIRED SUPPLEMENTAL INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2016	QPP*	FFVSF	FOVSF	TOTAL
Total pension liability:				
Service cost	\$ 414,614	\$ 11,652	\$ 5,002	\$ 431,268
Interest	1,332,473	38,716	24,546	1,395,735
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	324,429	3,728	(4,548)	323,609
Changes of assumptions	386,534	12,421	6,544	405,499
Benefit payments and withdrawals	<u>(1,290,862)</u>	<u>(46,407)</u>	<u>(21,826)</u>	<u>(1,359,095)</u>
Net change in total pension liability	1,167,188	20,110	9,718	1,197,016
Total pension liability – beginning	<u>18,544,307</u>	<u>548,104</u>	<u>354,381</u>	<u>19,446,792</u>
Total pension liability – ending (a)	<u>19,711,495</u>	<u>568,214</u>	<u>364,099</u>	<u>20,643,808</u>
Plan fiduciary net position:				
Employer contributions	1,054,478	-	-	1,054,478
Member contributions	116,619	-	-	116,619
Net investment income	197,398	4,669	1,037	203,104
Benefit payments and withdrawals	<u>(1,290,862)</u>	<u>(46,407)</u>	<u>(21,826)</u>	<u>(1,359,095)</u>
Administrative expenses	-	-	-	-
Other changes	<u>43,673</u>	<u>-</u>	<u>-</u>	<u>43,673</u>
Net change in plan fiduciary net position	<u>121,306</u>	<u>(41,738)</u>	<u>(20,789)</u>	<u>58,779</u>
Accrued transfers to/from VSF's	<u>(36,873)</u>	<u>18,739</u>	<u>18,134</u>	
Plan fiduciary net position – beginning	<u>10,815,330</u>	<u>547,074</u>	<u>316,927</u>	<u>11,679,331</u>
Plan fiduciary net position – ending (b) **	<u>10,899,763</u>	<u>524,075</u>	<u>314,272</u>	<u>11,738,110</u>
Employer's net pension liability – ending (a)-(b)	<u>\$ 8,811,732</u>	<u>\$ 44,139</u>	<u>\$ 49,827</u>	<u>\$ 8,905,698</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>55.30%</u>	<u>92.23%</u>	<u>86.31%</u>	<u>56.86%</u>
Covered payroll	<u>\$ 1,129,470</u>	N/A	N/A	<u>\$ 1,129,470</u>
Employer's net pension liability as a percentage of covered payroll	<u>780.2%</u>	N/A	N/A	<u>788.5%</u>

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 final Funds' fiduciary net position.

** Includes liabilities from Special Accidental Death Benefits pursuant to Section 208-F of the General Municipal Law.

NEW YORK CITY FIRE PENSION FUNDS
REQUIRED SUPPLEMENTAL INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2015	QPP*	FFVSF	FOVSF	TOTAL
Total pension liability:				
Service cost	\$ 403,514	\$ 11,500	\$ 4,561	\$ 419,575
Interest	1,251,448	37,447	23,920	1,312,815
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	180,533	(4,324)	(4,862)	171,347
Changes of assumptions				
Benefit payments and withdrawals	<u>(1,150,505)</u>	<u>(47,819)</u>	<u>(22,117)</u>	<u>(1,220,441)</u>
Net change in total pension liability	684,990	(3,196)	1,502	683,296
Total pension liability – beginning	<u>17,859,317</u>	<u>551,300</u>	<u>352,879</u>	<u>18,763,496</u>
Total pension liability – ending (a)	<u>18,544,307</u>	<u>548,104</u>	<u>354,381</u>	<u>19,446,792</u>
Plan fiduciary net position:				
Employer contributions	988,784	-	-	988,784
Member contributions	108,582	-	-	108,582
Net investment income	271,430	18,888	12,249	302,567
Benefit payments and withdrawals	(1,150,505)	(47,819)	(22,117)	(1,220,441)
Administrative expenses	-	-	-	-
Other changes	<u>41,201</u>	<u>-</u>	<u>-</u>	<u>41,201</u>
Net change in plan fiduciary net position	<u>259,492</u>	<u>(28,931)</u>	<u>(9,868)</u>	<u>220,693</u>
Accrued transfers to/from VSF's	(40,000)	30,000	10,000	-
Plan fiduciary net position – beginning	<u>10,595,838</u>	<u>546,005</u>	<u>316,795</u>	<u>11,458,638</u>
Plan fiduciary net position – ending (b) **	<u>10,815,330</u>	<u>547,074</u>	<u>316,927</u>	<u>11,679,331</u>
Employer's net pension liability – ending (a)-(b)	<u>\$ 7,728,977</u>	<u>\$ 1,030</u>	<u>\$ 37,454</u>	<u>\$ 7,767,461</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>71.46%</u>	<u>0.19%</u>	<u>11.82%</u>	<u>66.51%</u>
Covered payroll	\$ 1,111,744	N/A	N/A	\$ 1,111,744
Employer's net pension liability as a percentage of covered payroll	<u>619.2%</u>	<u>N/A</u>	<u>N/A</u>	<u>622.7%</u>

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 Fund's fiduciary net position and may differ from the final Fund's fiduciary net position.

** Includes liabilities from Special Accidental Death Benefits pursuant to Section 208-F of the General Municipal Law.

NEW YORK CITY FIRE PENSION FUNDS
REQUIRED SUPPLEMENTAL INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS
(In thousands)

June 30, 2014	QPP*	FFVSF	FOVSF	TOTAL
Total pension liability:				
Service cost	\$ 397,037	\$ 11,403	\$ 4,471	\$ 412,911
Interest	1,153,702	37,757	23,818	1,215,277
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	-	-	-	-
Changes of assumptions	-	-	-	-
Benefit payments and withdrawals	<u>(1,099,162)</u>	<u>(50,822)</u>	<u>(22,014)</u>	<u>(1,171,998)</u>
Net change in total pension liability	451,577	(1,662)	6,275	456,190
Total pension liability – beginning	<u>16,624,736</u>	<u>552,962</u>	<u>346,604</u>	<u>17,524,302</u>
Total pension liability – ending (a)	<u>17,076,313</u>	<u>551,300</u>	<u>352,879</u>	<u>17,980,492</u>
Plan fiduciary net position:				
Employer contributions	969,956	-	-	969,956
Member contributions	108,859	-	-	108,859
Net investment income	1,569,013	69,027	51,445	1,689,485
Benefit payments and withdrawals	<u>(1,099,162)</u>	<u>(50,822)</u>	<u>(22,014)</u>	<u>(1,171,998)</u>
Administrative expenses	-	-	-	-
Other changes	<u>39,980</u>	<u>-</u>	<u>-</u>	<u>39,980</u>
Net change in plan fiduciary net position	<u>1,588,646</u>	<u>18,205</u>	<u>29,431</u>	<u>1,636,282</u>
Accrued transfers to/from VSF's	(120,000)	110,000	10,000	-
Plan fiduciary net position – beginning	<u>9,127,192</u>	<u>417,800</u>	<u>277,364</u>	<u>9,822,356</u>
Plan fiduciary net position – ending (b) **	<u>10,595,838</u>	<u>546,005</u>	<u>316,795</u>	<u>11,458,638</u>
Employer's net pension liability – ending (a)-(b)	<u>\$ 6,480,475</u>	<u>\$ 5,295</u>	<u>\$ 36,084</u>	<u>\$ 6,521,854</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>62.05%</u>	<u>99.04%</u>	<u>89.77%</u>	<u>63.73%</u>
Covered payroll	\$ 1,102,396	N/A	N/A	\$ 1,102,396
Employer's net pension liability as a percentage of covered payroll	<u>587.85%</u>	<u>N/A</u>	<u>N/A</u>	<u>591.61%</u>

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 Fund's fiduciary net position and may differ from the final Fund's fiduciary net position.

** Includes liabilities from Special Accidental death Benefits pursuant to Section 208-F of the General Municipal Law.

**NEW YORK CITY FIRE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF EMPLOYER CONTRIBUTIONS
(In thousands)**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined contribution	\$ 1,200,417	\$1,061,170	\$ 1,054,478	\$ 988,784	\$ 969,956	\$ 962,173	\$ 976,895	\$ 890,706	\$ 874,331	\$ 843,751
Contributions in relation to the actuarially determined contribution	<u>1,200,417</u>	<u>1,061,170</u>	<u>1,054,478</u>	<u>988,784</u>	<u>969,956</u>	<u>962,173</u>	<u>976,895</u>	<u>890,706</u>	<u>874,331</u>	<u>843,751</u>
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ <u>1,164,528</u>	\$ <u>1,145,919</u>	\$ <u>1,129,470</u>	\$ <u>1,111,744</u>	\$ <u>1,102,396</u>	\$ <u>1,129,921</u>	\$ <u>1,149,423</u>	\$ <u>1,057,243</u>	\$ <u>1,059,911</u>	\$ <u>1,013,661</u>
Contributions as a percentage of covered payroll	103.08%	92.60%	93.36%	88.94%	87.99%	85.15%	84.99%	84.25%	82.49%	83.24%

SCHEDULE 2 (CONTINUED)
NEW YORK CITY FIRE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
NOTES TO SCHEDULE OF EMPLOYER CONTRIBUTIONS

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, 2016	June 30, 2015	June 30, 2014	June 30, 2013	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009- June 30, 2006 (lag)
Actuarial cost method	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:								
Initial Unfunded Post-2010 Unfunded	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 ²
Remaining amortization period:								NA
Initial Unfunded	16 years (closed)	17 years (closed)	18 years (closed)	19 years (closed)	20 years (closed)	21 years (closed)	22 years (closed)	All-Outstanding components of reestablished UAAL are being amortized over an 11-year closed period beginning in Fiscal Year 2000 ³
2011 Actuarial Gain/Loss	10 years (closed)	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA
2012 Actuarial Gain/Loss	11 years (closed)	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA
2013 Actuarial Gain/Loss	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA	NA
2014 Actuarial Gain/Loss	13 years (closed)	14 years (closed)	15 years (closed)	NA	NA	NA	NA	NA
2015 Actuarial Gain/Loss	14 years (closed)	15 years (closed)	NA	NA	NA	NA	NA	NA
2016 Actuarial Gain/Loss	15 years (closed)	NA	NA	NA	NA	NA	NA	NA
Actuarial Asset Valuation (AAV) Method	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:								
Assumed rate of return ³	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	6.0% per annum
Post-retirement mortality	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 2012
Active service withdrawal, death, disability, service retirement	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 2012	Tables adopted by Board of Trustees during Fiscal Year 2006
Salary increases ³	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 ³	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.	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per year.

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 (UAAL) 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 Frozen Entry Age Cost Method.

² In conjunction with Chapter 85 of the Laws of 2000, there is an amortization method. It reestablished UAAL and eliminated BSL as of June 30, 1999. The schedule of payments toward the reestablished UAAL (referred to in the ACNY as the Fire Pension Fund ("FFP")) 1999 UAAL and elsewhere as the UAAL) provided that the UAAL be amortized over a period of 11 years beginning Fiscal Year 2000, where each annual payment after the first equals 103% of its preceding annual payment.

³ Developed using a long-term Consumer Price Inflation assumption of 2.5% per year.

**NEW YORK CITY FIRE PENSION FUNDS
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
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 five fiscal years:

Fiscal year ended	<u>QPP</u>	<u>FFVSF</u>	<u>FOVSF</u>
June 30, 2018	9.34 %	7.28 %	7.75 %
June 30, 2017	12.82	13.48	14.53
June 30, 2016	1.37	0.88	0.24
June 30, 2015	3.28	4.13	4.02
June 30, 2014	17.51	18.03	19.57

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

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
US Equities		
Brown AM	67.25	589,052
Ceredex	89.58	425,618
Dalton Greiner	66.30	373,014
Blackrock R2000 Growth	81.68	1,390
Blackrock R2000 Value	4.25	187
Iridian Asset MCV	126.34	702,696
Wellington Mgmt MCC	160.88	925,638
RAFI Enhanced Large Co.	384.74	220,950
Blackrock R1000 Growth	1.16	36,556
Blackrock R1000 Value	1.72	33,225
Blackrock R1000 Core	2,107.17	14,358
TOTAL Legato	21.28	98,268
SSGA Russell Top 200	724.57	94,746
SSGA R3000	0.00	60,127
Total US Equities	3,836.92	3,575,825
NON-US Equities		
Baillie Gifford MTA	209.37	549,169
Walter Scott EAFE Large Cap	245.96	722,560
Causeway EAFE Large Cap MTA	207.45	794,943
Sprucegrove	243.39	516,035
Acadian EAFE Small Cap MTA	79.90	266,574
Pyramis EAFE Small Cap MTA	82.09	495,097
SSGA MSCI EAFE Small Cap	36.66	13,117
SSGA MTA	70.86	8,075
Governance of Owners	0.00	-
REBAL-Transition	0.01	-
Acadian	140.22	506,540
Baillie Gifford	151.88	794,210
DFA	143.17	554,455
Parametric	148.50	514,912
Blackrock EM	265.89	113,921
Total Intl FIS	72.96	257,723
Morgan Stanley-ACWI	99.65	60,617
Total NON-US Equities	2,197.96	6,167,948

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
Fixed Income		
Fischer Francis - Gov't	174.15	146,498
SSGA Int Gov Bond Index	1.16	2,919
SSGA 1-3 Treasury Index	753.66	20,420
State Street - Gov't	296.50	119,666
SSGA Long Duration Treasury	460.10	41,482
Blackrock - Mortgage	228.66	99,767
Neuberger Berman - Mortgage	102.59	63,673
Blackrock - Credit	108.74	71,929
Prudential - Credit	115.42	88,705
Taplin Canida - Credit	73.48	88,329
T. Rowe Price - Credit	244.05	302,466
LM CAPITAL	22.41	34,491
GIA	21.17	52,661
Total Core Fixed Income - Progress	29.95	103,070
Blackrock TIPS	150.96	77,796
SSGA - State Street TIPS	443.21	20,504
Penn Capital Mgt - High Yield	15.02	462,558
Loomis Sayles - High Yield	4.06	391,561
T. Rowe Price - High Yield	354.78	1,088,322
High Yield Transition	246.48	-
Babson BL	101.72	330,480
Guggenheim BL	103.61	403,149
Advent	229.04	957,817
Adelante Capital Management	99.75	322,363
European REIT MTA	0.01	-
MS REIT MTA	68.72	456,101
Access RBC	27.22	46,363
AFL-CIO Housing Inv Trust	54.57	222,004
CPC Facility	1.90	-
BOA-PPAR 2013	2.86	-
CFSB-PPAR	0.37	-
CCD-PPAR	0.92	-
CCD-PPAR 2013	1.80	-
CPC-PPAR 2013	2.18	-
JPMC-PPAR	4.70	-

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
LIIF-PPAR	0.43	-
LIFF-PPAR 2013	2.32	-
NCBCI-PPAR	0.24	-
NCB-CI PPAR 2013	0.02	-
WELLS FARGO-PPAR MTA 2013 (FNMA)	0.15	-
Security lending	0.20	-
SHORT TERM Accounts	238.63	-
Cash Account (C/D - Fail Float Earnings)	0.01	-
KKR SP CASH ACCOUNT	0.00	-
Total Fixed Income	4,787.92	6,015,094
Opportunistic Fixed Income		
Ave Special Situations Fd VI	1.16	-
Brightwood Capital Fund III, LP	5.38	55,098
Brightwood IV, LP	4.08	650,215
Fortress Ptnrs LP	29.16	879,967
Oaktree Opp Fd IX LP	23.22	475,186
Torchlight Debt Opportunity Fund III	0.07	475,254
Torchlight Debt Opp V	13.98	494,826
Angelo Gordon Ptnrs LP	26.87	291,524
Apollo Prtnrshp LP	40.33	497,452
Ares Center Street	35.73	514,992
Contrarian C A LLC	18.35	159,854
Goldentree OD MTA	45.70	158,594
ICG Centre St Partnership	21.88	140,035
KKR SP-OFI (KKR-NYC Credit)	15.15	31,361
Marathon Centre Street Partnership, L.P.	63.72	1,433,878
Oak Hill Ptnrs LP	47.81	492,974
Total Opportunistic Fixed Income	392.59	6,751,210
Hedge Funds		
Permal accounts w/o CITY Plan	2.89	193,395
Altimeter Capital	22.09	866,481
Brevan Howard	0.00	68,499
Brevan Howard Opp	64.96	262,886
Caspian Select CF	24.48	660,606
CCP Quant Fd	0.22	479,998
D.E. Shaw	80.03	4,404,374
Fir Tree Val Fd	40.95	427,178

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
Gotham Asset Management	11.97	135,164
GSA Capital Partners LLP	57.32	186,031
Key Square LP	63.47	604,438
Luxor Capital	62.13	591,782
Perry Capital	1.45	17,419
Pharo Gaia Fd Ltd	53.05	2,411,338
Pharo Macro Fd Ltd	48.96	1,747,054
Quest Partners	58.79	337,185
SRS Investment Management	43.64	1,189,728
Standard General	15.81	307,970
Turiya Fund LP	41.52	2,098,497
Total Hedge Funds	693.73	16,990,023
Private Equity		
ACON Equity Partners III LP	0.75	21,133
Aisling Capital II, LP	0.14	579
Aisling Capital III, L.P.	2.47	34,631
Altaris Health Partners III, L.P.	1.50	7,249
American Securities Partners VI, L.P.	9.66	2,358,144
American Securities Partners VII, L.P.	8.83	90,376
Ampersand 2011 L.P.	5.78	50,571
Apax Partners IX	10.20	450,979
Apollo Investment Fund V, L.P.	0.24	4,032
Apollo Investment Fund VI, L.P.	4.43	31,124
Apollo Investment Fund VII, L.P.	5.75	162,796
Apollo Investment Fund VIII	35.25	783,629
Ardian Secondary VI	18.71	253,439
Ares Corporate Opportunities Fund I, L.P.	0.26	845
Ares Corporate Opportunities Fund II, L.P.	0.38	746
Ares Corporate Opportunities Fund III, L.P.	9.88	456,253
Ares Corporate Opportunities Fund IV, L.P.	18.65	881,835
ACOF V	5.26	265,556
ASF VI Co-Invest	5.64	140,101
ASF VII	5.99	204,662
ASF VII Side Car	6.21	10,278
Arlington Capital Partners II, L.P.	0.20	26,097
Atlantic Equity Partners IV, L.P.	1.73	10,278
Arsenal Capital Partners II	1.93	2,750
Aurora Equity Partners III, L.P.	0.16	-

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
Avista Capital Partners, L.P.	0.00	9,763
Avista Capital Partners II, L.P.	2.84	6,244
AXA Secondary Fund V B L.P.	7.89	2,485,257
BC European Capital IX	18.41	172,731
BC Partners X	3.57	116,603
BC Partners X - SC	1.83	2,235
BDCM Opportunity Fund III, L.P.	13.14	162,359
Blackstone Capital Partners IV, L.P.	1.43	35,854
Blackstone Capital Partners V, L.P.	0.81	63,184
Blackstone Capital Partners VI, L.P.	9.92	228,775
Blackstone Mezzanine Partners II L.P.	0.02	1,127
Blue Wolf Capital Fund II, L.P.	1.11	23,706
Bridgepoint Europe IV	3.69	26,832
Bridgepoint Europe V	8.24	166,961
Bridgepoint Europe V SC	3.06	4,739
Capital Partners PE Income Fund, L.P.	0.38	61,112
Capital Partners PE Income Fund II, L.P.	1.05	52,357
Capital Partners III	0.21	10,348
Capital Point Partners	1.28	401,303
Carlyle Acosta	1.37	198
Carlyle Partners IV, L.P.	0.12	-
Carlyle Partners V, L.P.	1.83	261,604
Carlyle Partners VI, L.P.	18.65	180,762
Carpenter Community BancFund-A, L.P.	0.63	181,609
Catterton Partners VI, L.P.	2.33	48,253
CCMP Capital Investors II, L.P.	0.04	127,839
Celtic Pharmaceutical Holdings, L.P.	0.39	-
Centerbridge Cap III	2.26	121,475
Coller International Partners V, L.P.	0.56	25,210
ComVest Investment Partners IV, L.P.	11.35	72,438
Constellation Venture Capital III, L.P.	2.57	20,806
Crestview Partners II, L.P.	5.37	299,959
Crestview Partners III, L.P.	9.87	523,558
Crestview III SC	6.02	12,817
CS Emerging Manager Fund, L.P.	5.82	213,492
CVC Capital Partners VI	30.35	416,238
CVC Capital Partners VII	0.00	127,612
CVC European Equity Partners III, L.P.	0.72	2,274

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
CVC European Equity Partners V, L.P.	4.61	793,743
Cypress Merchant Banking Partners II, L.P.	0.01	-
EQT VI, L.P.	14.00	162,939
EQT VII, L.P.	20.24	641,733
Erasmus New York City Growth Fund IA	0.38	-
New York Fairview Emerging Mgrs Fund (A)	4.73	5,813
Fairview EM Tranche B	-0.01	-
Falconhead Capital Partners II, L.P.	0.98	21,175
FdG Capital Partners, L.P.	2.91	-
FdG Capital Partners II LP	0.27	12,882
Fenway Partners Capital Fund III, L.P.	2.19	55,304
FirstMark IV, L.P.	6.31	
First Reserve Fund XI, L.P.	0.26	562
First Reserve Fund XII, L.P.	1.10	24,893
The Fourth Cinven Fund	0.00	90,017
FS Equity Partners V, L.P.	0.61	3,937
FS Equity Partners VI, L.P.	15.25	1,322,597
FTVentures III, L.P.	1.14	155,994
FTV IV, LP	3.30	46,904
FTV V, LP	1.17	81,360
GI Partners Fund III	1.12	354,222
GF Capital	1.82	3,414
Gleacher Mezzanine Fund II, LP	0.02	-
Green Equity Investors VI	23.71	1,162,048
Green Equity Investors VII	6.05	245,206
Grey Mountain Partners Fund III, LP	0.58	19,365
GSO Capital Opportunities Fund, L.P.	0.20	8,596
Highland Consumer Fund I	0.78	5,041
ICV Partners III, L.P.	2.23	821
ICV Partners IV, L.P.	0.18	57,396
Incline Equity Partners III, L.P.	1.15	611
Intermedia Partners VII, L.P.	1.39	3,024
JP Morgan Fleming, L.P. Tranche A	1.18	22,584
KKR Americas Fund XII L.P.	3.68	956,176
Landmark Equity Partners XI, L.P.	0.00	18,105
Landmark Equity Partners XIV, L.P.	3.46	98,534
Landmark Equity Partners XV	11.86	384,129
Landmark NYC Fund I	6.43	5,880

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
Lee Equity Partners, L.P.	0.03	-
Levine Leichtman Capital Partners IV LP	1.91	21,698
Lexington Capital Partners VII, L.P.	3.32	136,785
Lexington Capital Partners VIII, L.P.	22.72	587,533
Lincolnshire Equity Fund II, L.P.	0.26	-
Lincolnshire Equity Fund III, L.P.	1.95	28,888
Lincolnshire Equity Fund IV, L.P.	1.44	17,433
Euro Choice II (Delaware) L.P.	0.40	-
Euro Choice III L.P.	0.83	18,349
Euro Choice IV L.P.	4.92	27,745
Markstone Capital Partners, L.P.	0.02	-
Medica III Investments (Intl) L.P.	0.94	-
MidOcean Partners III, L.P.	2.92	1,391,697
Milestone Partners III, LP	0.52	17,284
Mill City Capital II	0.71	17,851
Montreux Equity Partners IV L.P.	4.42	-
NorthBound Emerging Manager Custom Fd LP	2.27	16,838
New MainStream Capital II	1.09	38,078
New MainStream Capital III	0.23	18,790
New Mountain Partners II, L.P.	0.08	207
New Mountain Partners III, L.P.	6.79	485,019
NGN BioMed Opportunity II, L.P.	3.11	35,237
Olympus Capital Asia III	2.80	-
Olympus Growth Fund VI, L.P.	10.44	412,939
Onex Partners III LP	2.75	127,816
Paladin Homeland Security Fund L.P.	0.06	27,361
Paladin III, L.P.	6.85	137,623
Palladium Equity Partners III, L.P.	1.75	23,295
Palladium Equity Partners IV	7.20	614,491
Patriot Partners II	1.50	27,403
Patriot Partners III	0.26	53,931
PCG Clean Energy Tech Fund East, L.P.	2.54	1,125
Pegasus Partners IV, L.P.	2.64	158,613
Pegasus Partners V, L.P.	7.46	145,470
Permira IV	0.63	288,570
Perseus Partners VII, L.P.	0.00	9,521
Pine Brook Capital Partners	1.57	44,007
Platinum Equity Capital Partners III, LP	17.77	659,567

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
Platinum Equity Partners Small Cap I	0.35	-
Platinum IV	9.24	369,171
Platinum IV SC	0.00	-
Post Capital II	0.42	-
Prism Venture Partners V, L.P.	0.11	-
Psilos Group Partners III, L.P.	1.61	-
Raine Partners II	1.99	103,364
Relativity Fund, L.P.	0.02	-
Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	3.43	17,794
RRE Ventures IV, L.P.	2.94	8,411
Scale Venture Partners III, LP	3.35	8,137
SCP Private Equity Partners II, L.P.	1.95	-
SCP Vitalife Partners II, L.P.	3.04	-
Siris Partners III	4.21	75,365
Snow Phipps Group, L.P.	2.19	22,776
Snow Phipps II, L.P.	4.98	86,014
Stellex Capital Management LP	1.63	62,713
Summit Partners Growth Equity VIII-A	22.16	3,603,692
Terra Firma Capital Partners III, L.P.	1.02	-
Thomas, McNerney & Partners II, L.P.	0.56	-
Trident V, L.P.	12.45	115,044
Trilantic Capital Partners III, L.P.	0.01	2,657
Trilantic Capital Partners IV L.P.	0.98	86,304
Trilantic Capital Partners V L.P.	6.85	773,088
US Power Fund II, L.P.	2.16	31,972
US Power Fund III, L.P.	1.73	46,000
Valor Equity III	1.63	24,494
Valor Equity Partners IV	1.46	124,057
Vista Equity Partners Fund III, L.P.	2.06	16,812
Vista Equity Partners Fund IV, L.P.	23.90	273,485
Vista Equity Partners Fund V, L.P.	52.23	631,984
Vista Equity Partners Fund VI, L.P.	22.20	330,820
Vista Foundation Fund II, L.P.	3.15	163,162
VSS Communications Partners IV, L.P.	0.00	-
WCAS XII	9.17	258,490
Warburg Pincus	2.12	290,624
Warburg Pincus Private Equity XI, LP	32.27	843,018
Warburg Pincus Private Equity XII, LP	20.92	476,274

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
Webster Capital III	2.41	35,112
Wellspring Capital Partners V, L.P.	3.28	29,258
Welsh, Carson, Anderson & Stowe XI, L.P.	3.89	256,226
Yucaipa American Alliance Fund I, L.P.	1.98	-
Yucaipa American Alliance Fund II, LP	18.21	116,242
Yucaipa Corporate Initiatives Fund II LP	2.89	15,480
Total Private Equity	904.67	34,569,926
Private Real Estate		
AG Realty Fd VII	0.96	165,001
American Value Partners Fund I	0.57	20,107
Apollo Europe III	1.15	43,203
ARA Asia Dragon Fd	0.00	-
Artemis Co-Investment	7.32	59,180
Avanath Aff Housing II	2.89	29,530
Big Real Estate Fund I	0.93	30,728
Blackstone Real Estate Ptnrs EU III	1.66	332,625
Blackstone Real Estate Ptnrs EU IV	16.16	1,729,397
Blackstone Real Estate Ptnrs IV	0.73	2,297
Blackstone Real Estate Ptnrs VI	1.23	139,043
Blackstone Real Estate Ptnrs VII	24.22	927,165
Blackstone Real Estate Ptnrs VIII	18.62	654,942
Brookfield Strategic RE Ptnrs	15.90	183,422
Brookfield Property Group	22.02	211,202
Canyon Johnson Urban Fd II	0.03	-
Canyon Johnson Urban Fd III	0.01	31,717
Carlyle Property Investors GP	19.64	125,688
Carlyle R.P. Fd V	1.56	27,809
Carlyle Realty VI	3.61	321,485
Carlyle Realty VII	10.08	124,022
Colony Investors VIII	0.55	10,304
Colony Realty Ptnrs II	0.00	112,000
DivCo West Fd III	4.78	492,785
DivCo West Fd IV	6.17	1,555,945
Divco Fund V Advisor, LLC	4.31	150,586
DRA Advisors LLC - G&I Fund IX	2.96	71,030
NYC Vanbarton Interborough Fund LLC (NYC Asset Inve	5.78	187,666
Exeter Fund II LP	3.37	22,734
Exeter Value Fnd IV	3.12	124,052

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
H/2 Spec Opportunity Fd II	3.71	104,470
H/2 Spec Opportunity Fd III	13.34	241,481
H/2 SO MANAGER IV, LP	1.90	163,695
Heitman America Fd	18.93	120,015
Hudson Superstorm Sandy Rebuilding Fund (NYC Asset	4.01	39,921
Jamestown Premier Fund	6.97	568,268
JPM Strategic Prop Fd	48.79	373,467
JPM Special Sit Fd	7.01	105,811
KKR Real Estate Credit Opp Prtnrs Agg I	13.83	170,172
KKR Real Estate Partners Americas II LP	1.72	206,982
KTR Ind Fd III	0.00	8,610
Lasalle US Property Fd	42.66	234,653
Lion Industrial Trust	13.91	128,563
Lone Star RE Fd III	7.49	794,110
Lone Star RE Partner V, L.P.	2.09	348,581
MetLife Core Property	18.47	118,237
Metro Workforce Housing Fd	0.14	-
Pramerica VI LP	3.24	48,590
PRISA	9.61	81,534
PRISA II	29.54	281,713
Prologis Targeted US Logistics Fd	8.41	339,693
PW Real Estate Fund III LP	5.61	98,365
RFM NYCERS Sandy LLC (NYC Asset Investors #2 LLC)	10.94	109,685
RREEF America REIT II	9.82	90,169
RREEF America REIT III	0.00	152
Silverpeak RE Ptnrs Fd III	0.52	6,256
Stockbridge Real Estate Fd	7.31	57,295
Taconic NY Inv Fd	0.94	13,476
The City Investment Fd	0.05	13,311
Thor Urban Property Fd II	2.48	23,616
Tristan European Property Inv	5.30	149,762
UBS Trumbull Property Fd	49.58	341,255
USAA Eagle Real Estate Fund	13.55	77,201
Walton St RE Fd VI	2.00	25,293
Westbrook RE Fd VIII	1.05	16,983
Westbrook RE X CO-INV	2.92	184,260
Total Real Estate	548.17	13,571,310

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
Infrastructure		
Axium Can Country Fund	0.00	66,480
Axium US Country Fund	0.25	21,450
Actis Energy IV	3.67	192,773
ASF VII (ARDIAN SECONDARY)	0.76	137,696
Brookfield Infr Fd II	14.04	161,219
Brookfield Infrastructure Fund III	4.48	213,601
EIG Credit Management	0.75	22,551
EQT Infrastructure III	4.87	682,477
First Reserve EIF II (Global Energy & Power Infrastructure)	5.47	216,091
Global Infrastructure Partners III	11.24	416,168
IFM Global Infrastructure	14.30	273,043
KKR Gbl Infra II	10.68	64,691
KKR Gbl Infra III	0.00	-
Total Infrastructure	70.51	2,468,240
Total Management Expenses	13,432.47	90,109,576
Consultant Expenses		
AKSIA LLC		163,151
COURTLAND PARTNERS LTD		13,266
ERNST AND YOUNG LLP		5,619
MERCER		3,400
MSCI - ESG RESEARCH LLC		2,548
MSCI - RISKMETRICS GROUP		22,313
MSCI BARRA LLC		66,186
NEW ENGLAND PENSION CONSULTANT		551,250
PRICEWATERHOUSECOOPERS TAIWAN		1,446
S&P TRUCOST LIMITED		1,174
STEPSTONE GROUP LLC		567,797
TOWNSEND HOLDINGS		120,461
Total Consultant Expenses		1,518,611
Legal Expenses		
BRYAN CAVE LEIGHTON PAISNER LLP		1,014
BRYAN CAVE LLP		3,126
COX CASTLE NICHOLSON LLP		10,585
DAY PITNEY LLP		14,956
FOLEY AND LARDNER LLP		6,933

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
FOSTER PEPPER PLLC		23,550
HITCHCOCK LAW FIRM PLLC		600
MORGAN LEWIS BOCKIUS LLP		31,332
MORGAN, LEWIS AND BOCKIUS, LLP		5,560
MORRIS NICHOLS ARSHT TUNNELL LLP		220
NIXON PEABODY LLP		1,429
PILLSBURY WINTHROP SHAW PITTMAN LLP		6,709
REINHART BOERNER VAN DUEREN		4,945
SEWARD KISSEL LLP		719
SQUIRE PATTON BOGGS (US) LLP		3,272
Total Legal Expenses		114,950
Total Consultant & Legal Expenses		1,633,561
Other Miscellaneous Expenses		
Tax expense fixed inc		18,786
Tax expense equity		35,336
Tax expense mutual fixed		953
Tax expense mutual equity		1,012
Tax expense Intl -dividend inc		4,185,278
Tax expense intl - nybu		102,998
Misc expense fixed income		2,390
Misc expense mutual fixed income		972
Misc exp mutual equity		1,040
Misc exp Intl		19,266
Misc exp Intl-nybu		128,665
Misc exp Alt. equity		104
Misc Exp Alt Fixed		1,287
Misc exp hedge funds		(10,764)
misc chgs fail flt		67,514
other exp bonds s		41,636
other exp intl eq		606
Securities lending 3r party fee f flt		122
Securities lending 3r party fees		431,735
FX Service Fees fl flt		65
FX Service Fees Intl		137,442
FX Service Fees Intl-nybu		8,062
FX Service fees Alt Equity		14,138

Additional Supplementary Information
Schedule of Investment Expenses
For Fiscal year Ended June 30, 2018

Schedule 4

Investment Manager	Average Assets Under Management (\$MMS)	Total Fees
FX Service fees Alt Fixed		10
FX Service fees Alt Real Est		2,313
Hard Dollar Compensation Bank Chgs IT		457
Hard Dollar Compensation Bank Chgs eq		332
Hard Dollar Compensation Bank Chgs mut fx		72
Hard Dollar Compensation Bank Chgs mut eq		48
Hard Dollar Compensation Bank Chgs mut mtg		30
Hard Dollar Compensation Bank Chgs mut itl		636
Hard Dollar Compensation Bank Chgs int nybu		294
Hard Dollar Compensation Bank Chgs alt fxd		48
Hard Dollar Compensation Bank Chgs alt re		15
Total Other Miscellaneous Expenses		5,192,898
Total Investment Expenses	13,432.47	96,936,035

**Additional Supplementary Information
Schedule of Administrative Expenses
For Fiscal Year Ended June 30, 2018**

Schedule 5

EXPENSE TYPE:

PERSONNEL SERVICES

Salaries and fringe Benefits paid to Personnel 3,431,666

TOTAL PERSONNEL SERVICES 3,431,666

PROFESSIONAL SERVICES

Consultants¹ 148,412

Medical Board and Medical Consultants 870,645

Trading & Investment Services 1,118,506

TOTAL PROFESSIONAL SERVICES 2,137,563

RENTALS

Office Space & Equipment 763,583

TOTAL RENTALS 763,583

COMMUNICATION & GENERAL SERVICES

Computer Software & Accessories 25,347

Office Supplies and Materials 12,890

Transportation 7,784

Printing & General 33,531

TOTAL COMMUNICATION & GENERAL SERVICES 79,552

FIRE DIRECT EXPENSES FY 2018 6,412,364

EXPENSES INCURRED BY OTHER CITY AGENCIES:

Financial Information Services 560,280

Law Department 135,180

Office of the Comptroller 1,448,915

Office of Payroll Administration 43,190

Office of Management and Budget 84,065

TOTAL OTHER EXPENSES 2,271,630

TOTAL ADMINISTRATIVE EXPENSES : 8,683,994

1) For details see Schedule of Payments to Consultants
Schedule 6

**Additional Supplementary Information
Schedule of Payments to Consultants
Fire Qualified Pension Plan
For Fiscal year Ended June 30, 2018**

Schedule 6

Nature of Services	Firm Name	Total Fees
Consultant Services	GRM Document Management Services	65,567.00
	DJ Associates Architect	20,000
	Burstiq Analytics Corporation	20,000
	Butler Associates LLC	20,000
	Blue Diamond Solutions Inc	22,845
Total Payments to Consultants		148,412.00

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New York City Fire Pension Funds

Comprehensive Annual Financial Report

A Pension Trust Fund of The City of New York



Investment Section

Part III

Fiscal Year Ended June 30, 2018

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INVESTMENT REPORT

This report is prepared by management on the basis of data provided by the investment managers of the New York City Fire Pension Funds and the Comptroller of the City of New York through the Bureau of Asset Management. The Bureau of Asset Management in overseeing the Funds' investment portfolio provides investment advice, implements Board decisions and reports on investment performance. The Boards of Trustees of the respective funds are responsible for ensuring that assets of the Funds are managed efficiently and prudently, in full compliance with the Administrative code of the City of New York (ACNY) and the State Retirement and Social Security Laws, for the benefit of the Funds' membership.

Investment Policy

The Qualified Pension Fund's primary purpose is to provide retirement benefits for members and beneficiaries, while the Variable Supplements' Funds provide supplemental payments other than pension benefits for eligible members. These benefits and payments are financed through accumulated employer contributions, member contributions and investment earnings. The Boards of Trustees therefore set investment objectives to assure adequate accumulation of reserves and to protect the long term value of assets. The Boards' overall philosophy on strategic factors, i.e. risk tolerance, returns, diversification and liquidity requirements determine the objectives of the investment policy adopted. Listed below are key objectives of the Boards' philosophy:

- To assure that members and beneficiaries receive benefits now and in the future, the level of investment risk in the portfolio will be prudent and not exceed levels that may jeopardize objectives.
- To enhance portfolio returns moderate risk levels are assumed, since over the long term there is a relationship between the level of risk taken and the rate of return realized.
- To reduce portfolio risk by investing in a broad array of investments and by allocating funds among many asset categories, industries and geographic locations.
- To maintain liquidity requirements through the structuring of cash flows from contributions, investment income and short term investments; thus assuring timely payment of benefits.

The Funds utilize several investment managers to manage the long term debt and equity portfolio. In addition, the Funds employ independent investment consultants as advisors. The Funds' managers are periodically reviewed for performance and adherence to investment guidelines.

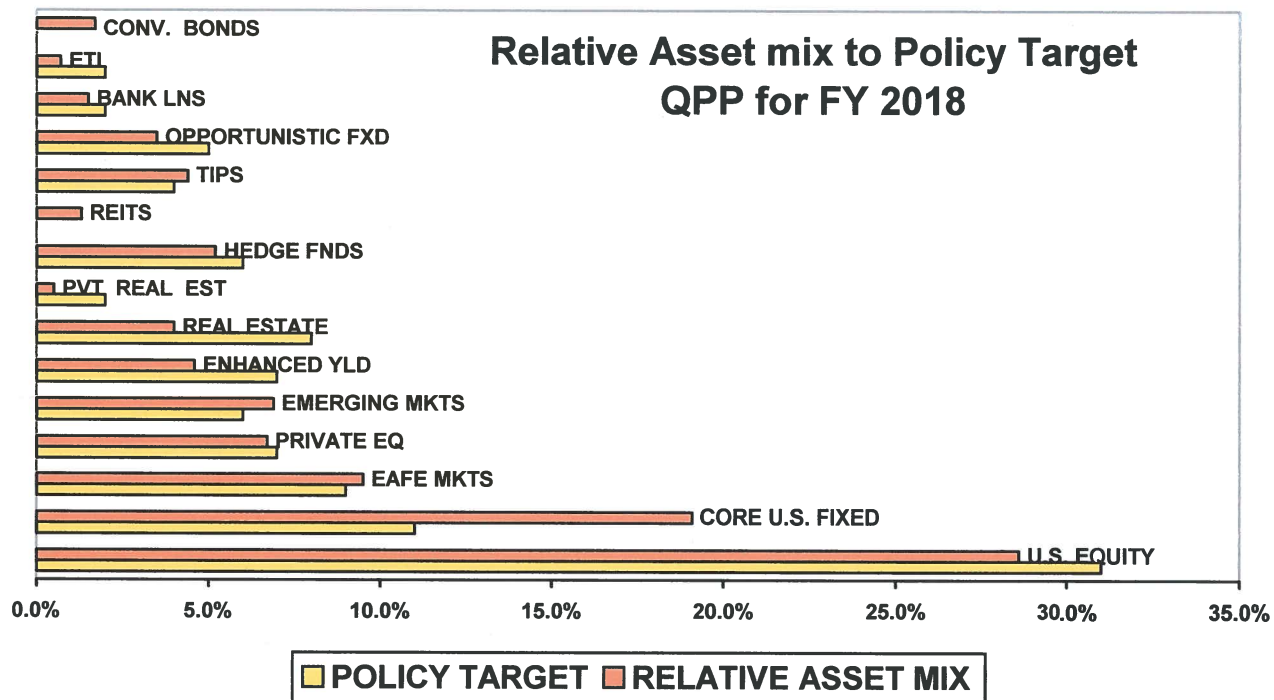
Investment Criteria and Asset Allocation

The Boards' investment policies are implemented using a strategic allocation of assets that meet the objectives of the Funds, while working within the confines of the legislative guidelines. The guidelines dictate that Fixed income, equity and other investments may be made as permitted by The New York State Retirement and Social Security Laws (RSSL) §§ 176-178(a) and State Banking Law § 235, the New York City Administrative Code, and the Legal Investments for New York Savings Banks list published by The New York State Banking Department, subject to Note 3, of Notes to the financial statements. Additionally, investments of up to 25% of the Funds' total assets may be invested in instruments not specifically covered by RSSL.

Investment Section

New York City Fire Pension Funds

Each Fund's asset allocation policy is constructed to meet both short-term funding requirements and long-term benefit obligations. The Funds' portfolio is largely invested in publicly traded domestic stocks, bonds, international securities and private equities through a collective fund investment vehicle. The percentages assigned each category of assets held in the Funds are based in part on the results of an analytical study, which indicates the expected rates of return, levels of risk and correlations for various allocations. These allocations are reviewed periodically to address fluctuating market events and new investment opportunities.



The chart above shows a comparison of relative asset mix to policy targets for the QPP as at June 30, 2018. The current targeted policy allocations include investments in the following major categories: U.S equity, Core U.S. fixed income, International equity(EAFE Markets), Private equity, Emerging markets, Enhanced yield bonds, Real Estate investments, Private Real Estate investments, Hedge Funds, Treasury inflation protected securities(TIPS), Opportunistic Fixed, Bank loans and Economically Targeted Investments(ETI). The Funds' assets are periodically re-balanced to keep in line with long term asset allocation objectives, and actual allocation may vary from policy weights as market values shift and investments are added or terminated. As indicated in the chart, the Fund exceeded targeted allocations of Core U.S Fixed, EAFE, Emerging Markets, REITS, TIPS and Convertible bonds. However, U.S. equity, Private equity, Enhanced Yield bonds, Real estate, Private Real Estate, Hedge Funds, Opportunistic Fixed, Bank Loans and ETI fell below the current targeted allocations.

Actual asset allocation in effect on 6/30/2018 for the QPP and the VSF's are presented in the chart titled "Asset Allocation" (Exhibit 1a -1b). Changes in actual asset allocation for the QPP over the ten years from June 2009 through June 2018 are presented in bar charts showing the major categories and amount of assets held at the end of each fiscal period (Exhibit 1a).

Summary of Investment Results for fiscal year 2018

The Qualified Pension Fund's portfolio of approximately \$13.4 billion returned 9.3 %¹ on a net basis, for the fiscal year ended June 2018. This return exceeded the 8.6% gain posted by the Fund's policy benchmark and also the actuarial assumed rate of return at 7.0%, for the period. The QPP closed fiscal year 2018 with a net position restricted for pension benefits totaling \$13.3 billion.

For the fiscal period ended June 30, 2018, performance across asset classes was mixed. The overall performance was led by equities, which as a group returned approximately 13.3% for the period. U.S. equities, the largest segment in the equity portfolio, gained overall 14.9%, just ahead of its benchmark the Russell 3000 index, which gained 14.8%. For the quarter ended June 30, 2018, U S Equities, posted gains averaging 3.9%.

Private Equities were the best performers within the equities portfolio. The group returned 21.9% for the period, well ahead of its benchmark the NYC R3000+3% Lagged, which gained 17.2%. Within the non-domestic equities category, International equities (EAFE markets) were among the better performers. The group gained 12.4%, as compared to its benchmark, the MSCI AC world ex Index which gained 7.8% for the fiscal period. The Emerging markets group although among the lower performers in this category, gained 7.6%, as compared to its benchmark, the MSCI emerging markets index, which gained 8.2% over the same period.

The fixed income composite portfolio was the lowest performing group of the asset classes, closing fiscal year 2018 with gains averaging 1.5%. The largest segment within this category, the structured or core investment grade fixed income group closed on a negative note at .3%, although ahead of its benchmark the New York City core plus 5 indexes, which lost .5%. The Opportunistic Fixed Income group was among the best performers in this category, posting gains of 7.5%, well ahead of its benchmark the JPM/GHYCSFB index, which gained 6.7%. Treasury Inflation Protected securities were also among the better performers in this category, gaining 2.2%, slightly ahead of its benchmark the Barclays Global inflation linked TIPS index which gained 2.1% for the period. Overall, the fixed income sector returned approximately .4% for the quarter ended June 30, 2018.

For the five-year period ended June 30, 2018, the QPP's portfolio annualized returns remained positive at 8.9% and ahead of the portfolio policy benchmark return at 8.6%.

Investment returns for the Variable supplements funds' were generally in line with results posted by the QPP. The Fire Fighters' Variable Supplements Fund, with assets under management of \$519.9 million posted overall gains of 7.3% for the period; equaling the gain posted by the policy benchmark. The Fire Officers Variable Supplements Fund with assets under management of \$354.5 million posted overall returns of 7.8% for the period, well above the policy benchmark with gains of 7.3%.

For the five- year period ended June 30, 2018, the FFVSF's and the FOVSF 's annualized returns stood at 8.6 % and 9.2% respectively, while the corresponding policy benchmarks returned 8.7%.

Schedule 1A-1B presents our Consolidated Performance Reports, displaying the percentage of portfolio market values and returns for the QPP and the Variable Supplements Funds'. The schedules include returns for each major investment asset class along with the returns for corresponding benchmarks as at June 30, 2018.

¹ Calculations on the rate of return for investments were prepared using a time -weighted rate of return, based on the market rate of return consistent with Global Investment Performance Standards (GIPS).

Investment Section

New York City Fire Pension Funds

The Funds' combined investments including Collateral from securities lending rose from \$14,181.9 million to \$15,531.2 million, by the end of fiscal year 2018. This change is depicted in **Exhibit 2**, a chart showing changes in total investment at market value over the ten fiscal periods between 2009 and 2018.

The Funds' Portfolio assets invested during fiscal year 2018 returned net gains of \$1,249.7 million. The overall gains were due mainly to solid performances in the Equity sector of the Funds' investment portfolio. Exhibit 3 shows a summary of the changes in investment income over the ten-year period 2009 through 2018.

Listings of the Fund's largest bonds and stocks holdings are presented in Schedule 2A & 3A respectively.

Fees and Brokers' commissions are calculated based on total assets under management for the period. Summaries of Brokers' commissions for investments traded are presented in schedule 4A.

The Summary of investments presented in Schedule 5A shows the overall market values of each major investment asset class in the Funds' portfolio, including short-term holdings and collateral from securities lending. The schedule also shows the percentage value of each category in relation to total investments in the Funds for fiscal year 2018.

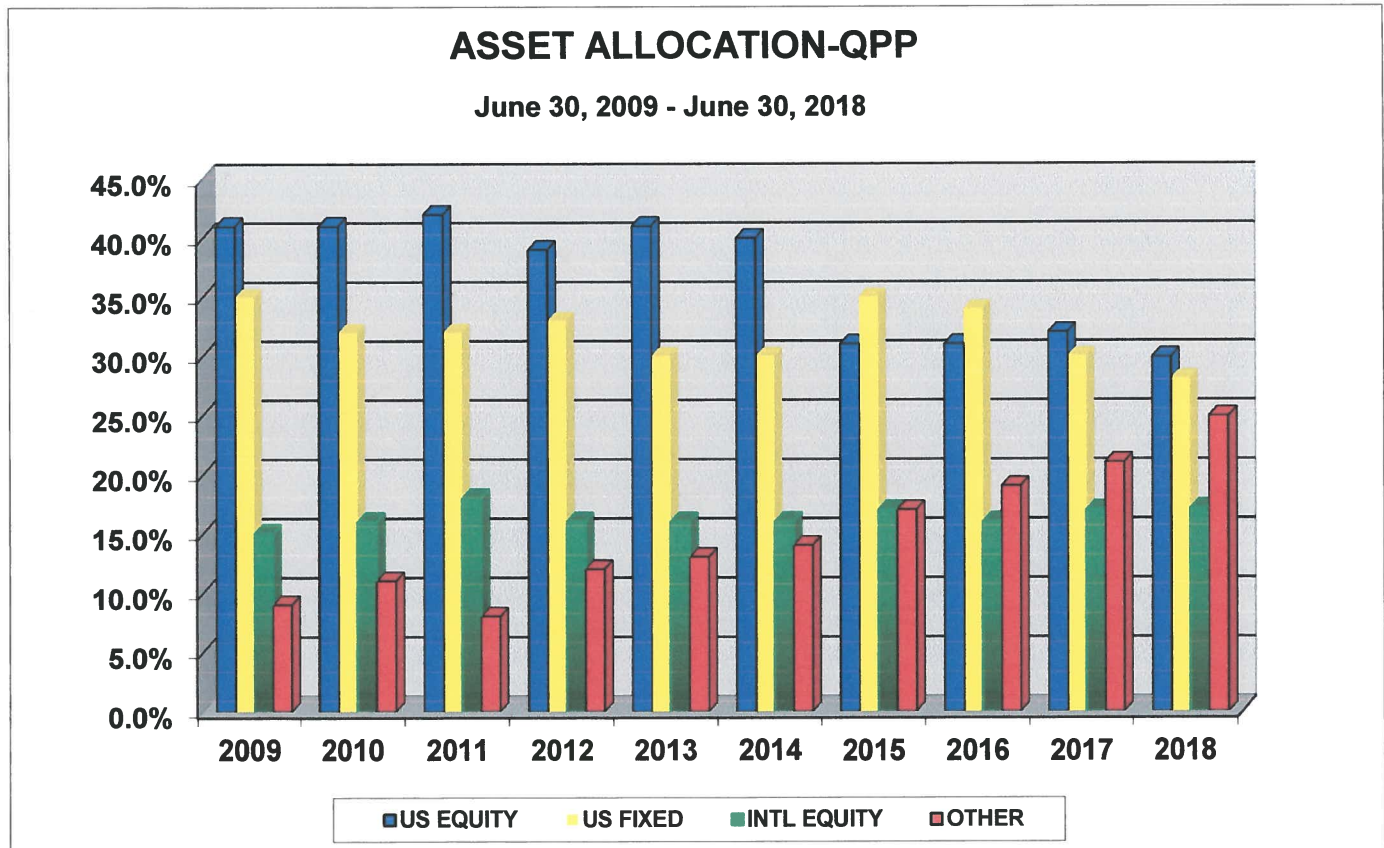
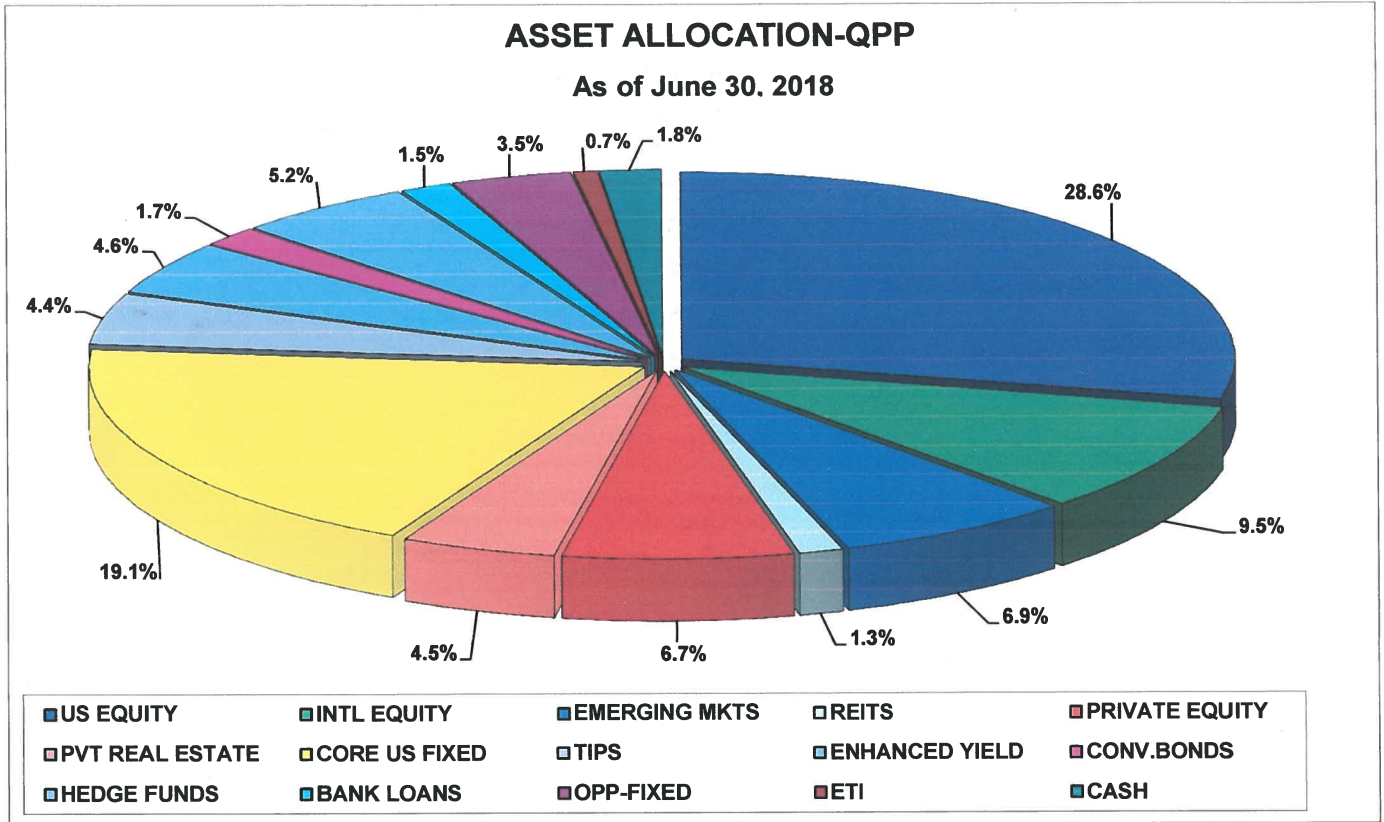


Exhibit 1B

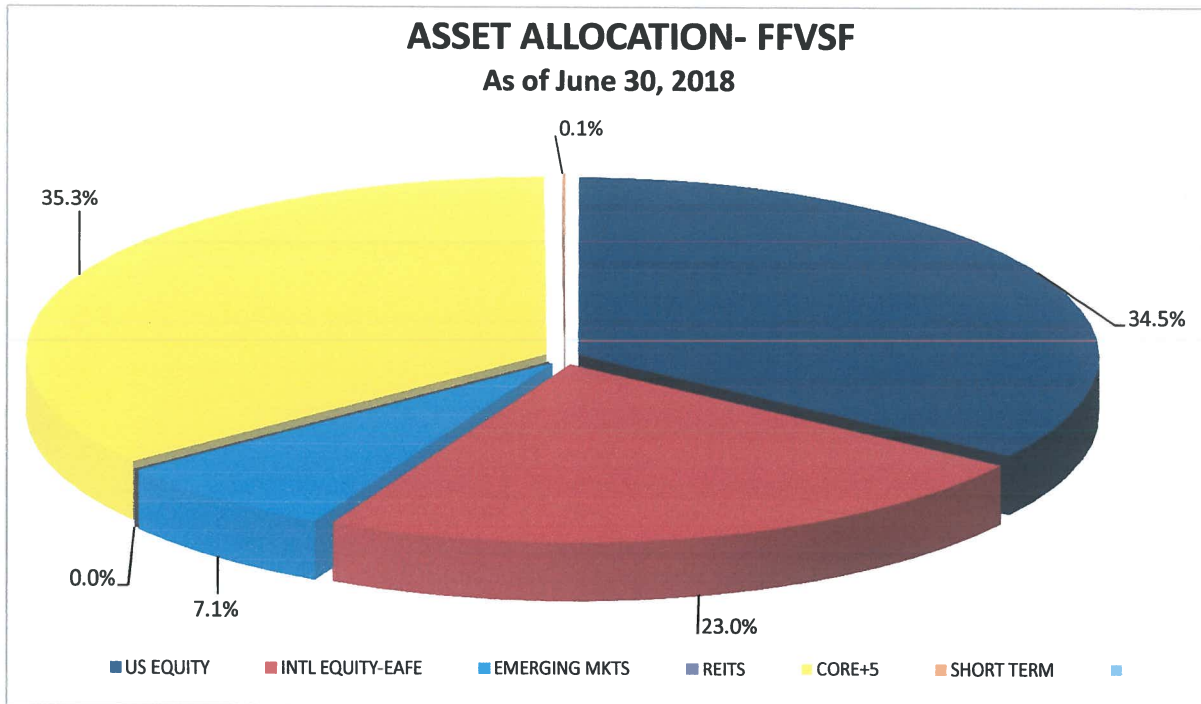
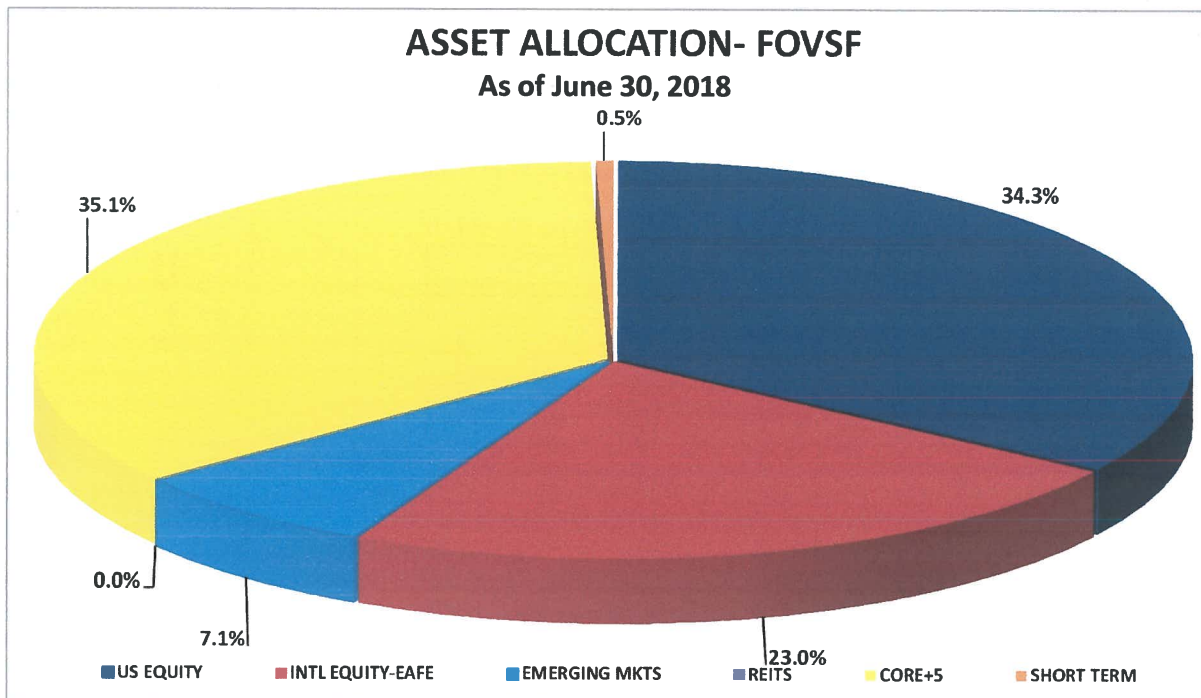


Exhibit 1C

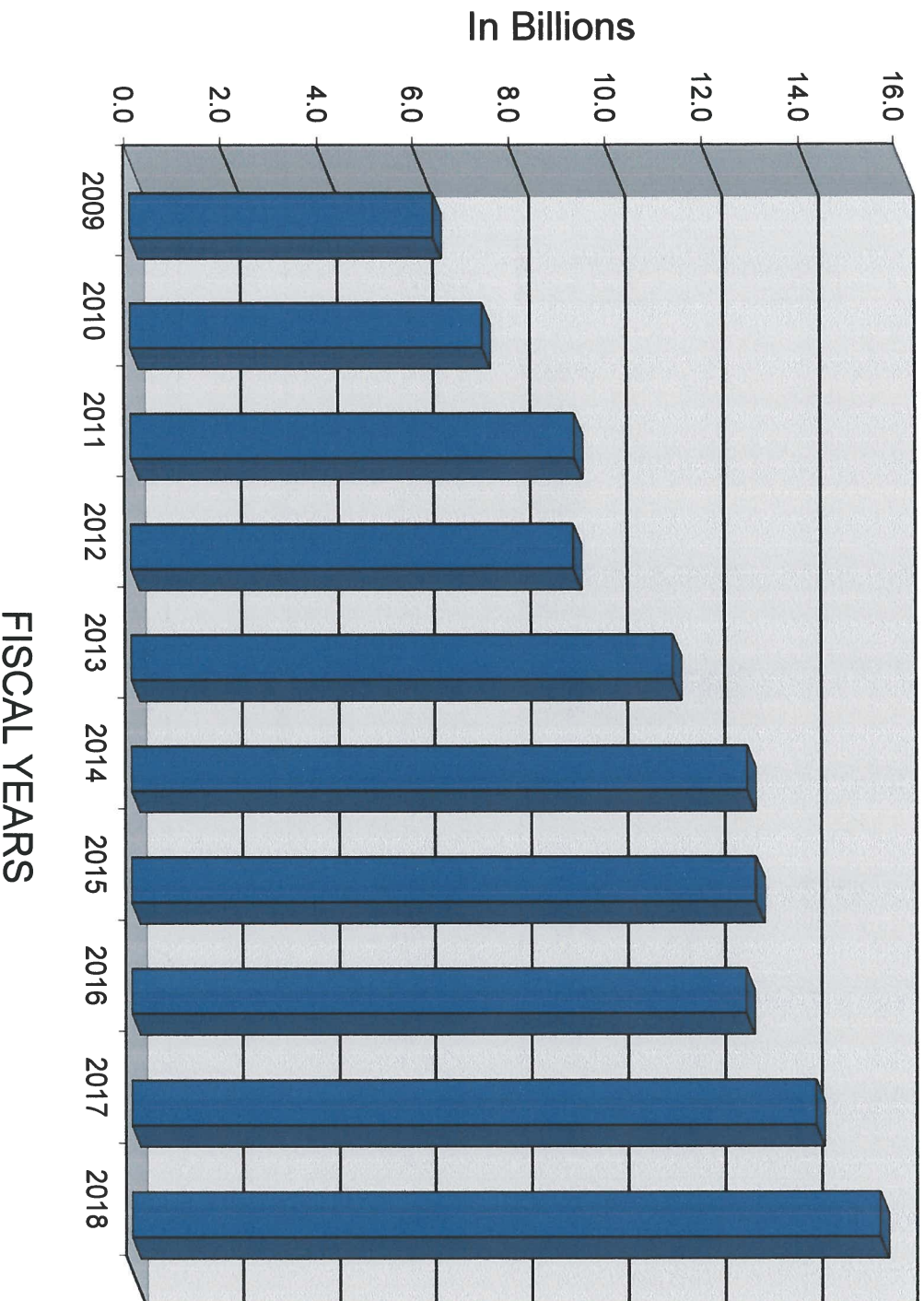


TOTAL INVESTMENTS

Fire Funds Combined

(At Market - Value)

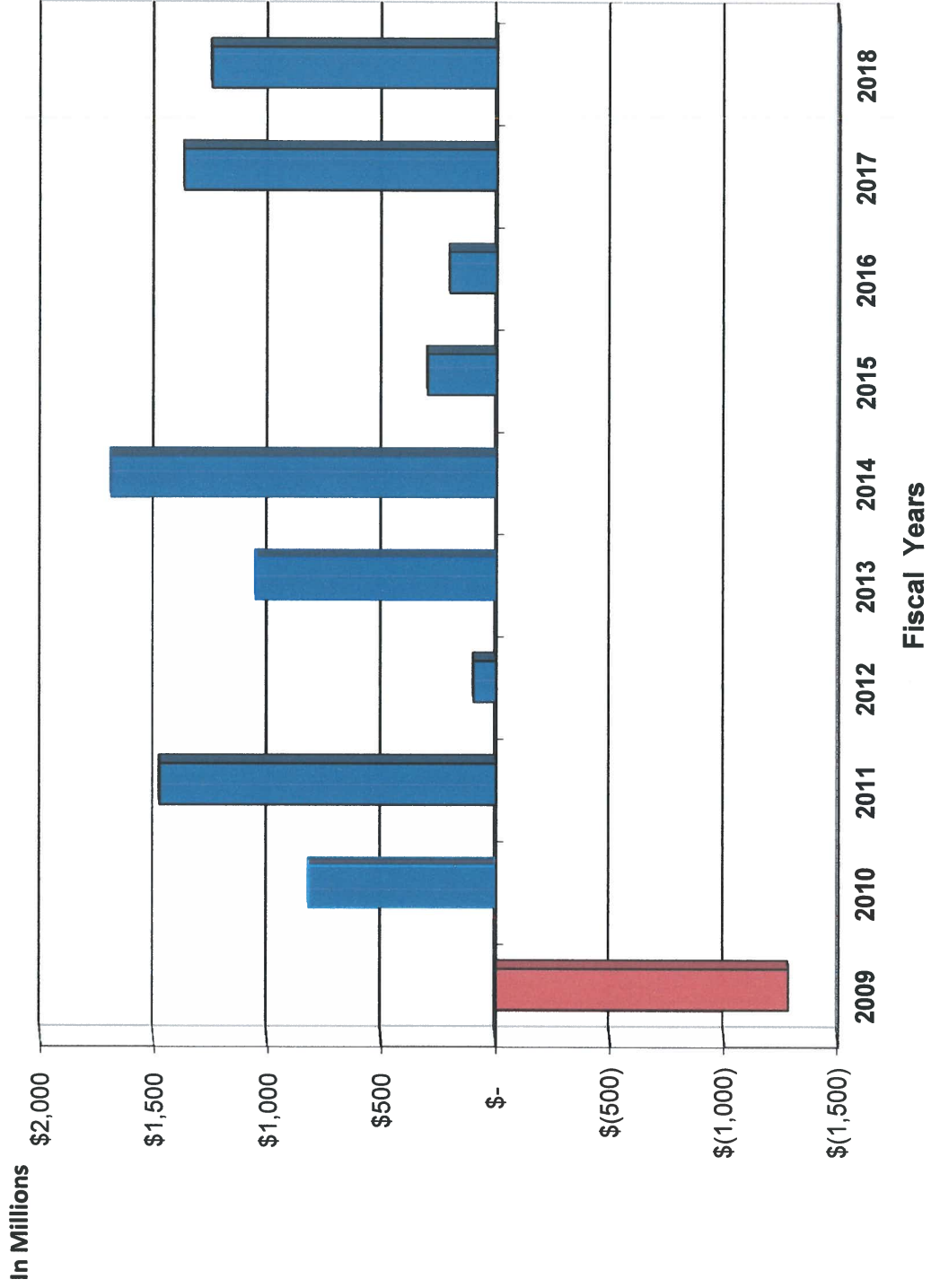
Exhibit 2



INVESTMENT INCOME

Fire Funds Combined

Exhibit 3



New York City Fire Pension Funds

Investment Section

Schedule 1A

Schedule of Portfolio Returns* Fire QPP
June 30, 2018

Assets (\$MM)	% Total	Asset Class	3 Mos Apr-18 Jun-18	YTD Jan-18 Jun-18	1 YR Jul-17 Jun-18	3 YRS Jul-15 Jun-18	5 YRS Jul-13 Jun-18	10 YRS Jul-08 Jun-18
3,836.92	28.56	U.S. Equities Russell 3000	3.89 3.89	3.34 3.22	14.92 14.78	11.28 11.58	13.20 13.29	10.14 10.23
1,175.68	8.75	Total International - World ex-USA MSCI AC WORLD EX US (Net) Benchmark	-0.67 -0.77	-1.06 -2.57	12.43 7.82	8.15 5.67	8.66 7.12	4.13 3.35
849.65	6.33	Total International Emerging mkts MSCI Emerging mkts index	-8.71 -7.96	-7.32 -6.66	7.58 8.20	6.20 5.60	6.04 5.01	2.50 2.26
72.97	0.54	Total International Fund of Funds MSCI ACWI EX USA IMI Net	-2.38 -2.61	-2.62 -3.65	8.82 7.75	n/a n/a	n/a n/a	n/a n/a
693.90	5.19	Total Hedge Funds HFRI Funds of funds composite index 1%	0.26 0.66	3.26 1.18	8.76 6.18	4.22 2.95	4.59 4.49	n/a n/a
99.66	0.74	Total Global Equity MSC AC World (Daily Const)	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a
168.47	1.25	Total Real Estate Sec.(REITS) DJ US Select Real Estate Securities Index	7.77 9.99	0.14 1.82	4.57 4.23	5.97 7.67	7.93 8.27	7.52 7.54
904.66	6.73	Total Private Equity NYC R3000+3% Lagged	2.87 0.09	8.67 7.21	21.91 17.19	15.58 13.51	15.55 16.21	10.39 13.73
548.17	4.08	Total Private Real Estate NCREIF NFI-ODCE NET+100BP	2.25 2.06	5.93 4.33	12.04 8.54	12.00 9.45	13.52 11.12	4.04 n/a
70.51	0.52	Total Infrastructure CPI+ 4%	1.97 1.55	2.33 3.19	18.56 6.91	15.25 5.90	n/a n/a	n/a n/a
		Total Equity Segment	1.38	2.04	13.32	10.02	11.40	7.86
2,558.50	19.05	Total Structured Program NYC Core Plus Five Index	-0.08 -0.28	-2.35 -2.08	-0.34 -0.48	2.27 2.10	3.07 2.77	4.79 4.38
620.34	4.62	Total High Yield Citigroup BB & B	0.73 0.92	-0.40 -0.10	1.88 2.42	4.61 4.80	5.30 5.07	7.40 6.62
43.59	0.32	Total Core FI-Developing MGRS Barclays Capital Aggregate index	-0.38 -0.16	-1.99 -1.62	-0.73 -0.40	2.03 1.72	2.86 2.27	n/a n/a
29.95	0.22	Total Core FI-Emerging MGRS Barclays Capital Aggregate index	-0.15 -0.16	-1.50 -1.62	0.07 -0.40	2.07 1.72	2.86 2.27	n/a n/a
594.17	4.42	Total Tips Managers Barclays Global Inflation linked US Tips	0.77 0.77	0.01 -0.02	2.17 2.11	1.91 1.93	1.74 1.68	3.16 3.03
205.33	1.53	Total Bank Loans Credit Suisse FB Leveraged Loan index	0.71 0.78	2.05 2.38	4.55 4.67	4.02 4.33	4.74 4.24	n/a n/a
229.04	1.71	Total Convertible Bonds BofA ML All Conv. Ex mandatory index	1.41 3.69	1.10 6.60	3.88 13.41	4.09 8.91	5.72 10.78	6.25 9.15
392.59	2.92	Total Opportunistic Fixed JPM GHY/CSFB 50/50 BLEND PLUS 300	1.77 1.22	4.04 2.42	7.54 6.72	5.84 8.18	6.59 8.10	9.54 9.84
99.67	0.74	Total Targeted Investments (No cash) Fire custom Benchmark	-0.10 0.07	-1.54 -1.16	-0.51 -0.01	2.15 1.77	2.70 2.32	3.79 3.59
		Total Fixed Income Segment	0.40	-0.68	1.51	2.95	3.57	5.08
238.64	1.78	State Street Short Term	0.47	0.87	1.53	0.98	0.70	0.82
0.21	0.00	Cd fail fit /Sec	n/a	n/a	n/a	n/a	n/a	n/a
13,432.62	100.00	Total Portfolio Policy Benchmark	1.05 1.05	1.14 0.91	9.30 8.61	7.74 7.73	8.89 8.62	7.11 7.71

*Calculations on the rate of return for Investments were prepared using a time weighted rate of return, based on the market rate of return-consistent with Global Investment Performance Standards (GIPS).

New York City Fire Pension Funds

Investment Section

Schedule 1B

**Schedule of Portfolio Returns FFVSF*
June 30, 2018**

Assets (\$MM)	% Total	Asset Class	3 Mos	YTD	1 YR	3 YRS	5 YRS	10 YRS
			Apr-18 Jun-18	Jan-18 Jun-18	Jul-17 Jun-18	Jul-15 Jun-18	Jul-13 Jun-18	Jul-08 Jun-18
179.24	34.48	U.S. Equities Russell 3000 Daily	3.89 3.89	3.33 3.22	14.90 14.78	11.71 11.58	13.35 13.29	10.27 10.23
119.44	22.97	Total WORLD ex-USA MSCI EAFE Benchmark	-0.64 -1.24	-2.61 -2.75	7.91 6.84	4.49 4.90	5.42 6.44	3.22 2.84
37.04	7.13	Total Emerging Markets MSCI Emerging Markets	-7.89 -7.96	-6.51 -6.66	8.07 8.20	5.58 5.60	3.67 5.01	0.57 2.26
0.02	0.00	Total Real Estate Sec.(REITS) DJ US Select Real Estate Securities Index	8.52 9.99	0.07 1.82	5.24 4.23	5.46 7.67	7.65 8.27	8.12 7.54
183.62	35.32	Total structured Fixed Income BBG BARC AGG (DLY)	-0.20 -0.16	-1.88 -1.62	-0.74 -0.40	2.00 1.72	2.91 2.27	4.66 3.72
0.50	0.10	Fire Fighters short term	0.16	0.41	n/a	n/a	n/a	n/a
0.02	0.00	Securities Lending	n/a	n/a	n/a	n/a	n/a	n/a
519.88	100.00	Total Portfolio Policy Benchmark	0.48 0.48	-0.52 -0.51	7.27 7.28	7.13 7.28	8.57 8.66	7.57 7.41

*Calculations on the rate of return for Investments were prepared using a time weighted rate of return, based on the market rate of return consistent with Global Investment Performance Standards (GIPS).

Investment Section

Schedule 1C

**Schedule of Portfolio Returns FOVSF*
June 30, 2018**

Assets (\$MM)	% Total	Asset Class	3 Mos	YTD	1 YR	3 YRS	5 YRS	10 YRS
			Apr-18 Jun-18	Jan-18 Jun-18	Jul-17 Jun-18	Jul-15 Jun-18	Jul-13 Jun-18	Jul-08 Jun-18
121.66	34.32	U.S. Equities Russell 3000/S&P500	3.90 3.89	3.37 3.22	14.98 14.78	11.76 11.58	13.45 13.29	10.39 10.27
81.43	22.97	Total WORLD ex-USA MSCI EAFE Benchmark	-0.54 -1.24	-2.23 -2.75	8.45 6.84	6.85 4.90	8.92 6.44	3.22 2.84
25.17	7.10	Total Emerging Markets MSCI Emerging Markets	-7.89 -7.96	-6.51 -6.66	8.07 8.20	5.58 5.60	3.67 5.01	0.57 2.26
0.01	0.00	Total Real Estate Sec.(REITS) DJ US SELECT REAL ESTATE SEC INDEX	8.52 9.99	0.07 1.82	5.24 4.23	5.40 7.67	7.62 8.27	8.02 7.54
124.32	35.07	Total structured Fixed Income BBG BARC AGG (DLY)	-0.17 -0.16	-1.85 -1.62	-0.72 -0.40	1.87 1.72	2.98 2.27	5.01 3.72
1.90	0.54	Fire Officers' short term	0.31	0.56	n/a	n/a	n/a	n/a
0.01	0.00	Securities Lending	n/a	n/a	n/a	n/a	n/a	n/a
354.50	100.00	Total Portfolio Policy Benchmark	0.50 0.48	-0.19 -0.51	7.79 7.28	7.51 7.28	9.16 8.66	7.80 7.42

*Calculations on the rate of return for Investments were prepared using a time weighted rate of return, based on the market rate of return consistent with Global Investment Performance Standards (GIPS).

Investment Section

New York City Fire Pension Funds

List of Largest Bond Holdings as of June 30, 2018

Schedule 2A

<u>Cusip Number</u>	<u>Security Descriptipn</u>	<u>Maturity Date</u>	<u>Interest Rate</u>	<u>Par Value</u>	<u>Fair Value</u>
912828K74	US TREASURY N/B	8/15/2025	2.0%	31,980,000	30,293,695
912828WJ5	US TREASURY N/B	5/15/2024	2.5%	15,370,000	15,128,691
912828V98	US TREASURY N/B	2/15/2027	2.3%	11,930,000	11,384,322
912810RV2	US TREASURY N/B	2/15/2047	3.0%	11,210,000	11,250,244
912828U24	US TREASURY N/B	11/15/2026	2.0%	11,500,000	10,777,225
912810RN0	US TREASURY N/B	8/15/2045	2.9%	8,760,000	8,585,150
912810FJ2	US TREASURY N/B	8/15/2029	6.1%	5,730,000	7,499,825
912810QN1	US TREASURY N/B	2/15/2041	4.8%	5,080,000	6,584,340
912810QZ4	US TREASURY N/B	2/15/2043	3.1%	6,150,000	6,313,590
912810RD2	US TREASURY N/B	11/15/2043	3.8%	5,330,000	6,059,357
9128282R0	US TREASURY N/B	8/15/2027	2.6%	6,160,000	5,862,842
912810RH3	US TREASURY N/B	8/15/2044	3.2%	4,640,000	4,764,538
912810RG5	US TREASURY N/B	5/15/2044	3.4%	4,260,000	4,565,357
912810QB7	US TREASURY N/B	5/15/2039	4.3%	3,170,000	3,823,939
912828B66	US TREASURY N/B	2/15/2024	2.8%	3,210,000	3,205,731
912828VS6	US TREASURY N/B	8/15/2023	2.5%	2,900,000	2,865,896
912810FB9	US TREASURY N/B	11/15/2027	6.1%	2,240,000	2,840,768
912810RM2	US TREASURY N/B	5/15/2045	3.0%	2,700,000	2,710,449
912810QY7	US TREASURY N/B	11/15/2042	2.8%	2,720,000	2,616,504
912810RC4	US TREASURY N/B	8/15/2043	3.6%	2,320,000	2,586,081
912828X88	US TREASURY N/B	5/15/2027	2.4%	2,170,000	2,089,732
912810PX0	US TREASURY N/B	5/15/2038	4.5%	1,670,000	2,070,082
31359MEU3	FANNIE MAE NOTES	5/15/2029	6.3%	1,490,000	1,913,816
023135BF2	AMAZON.COM INC	8/22/2037	3.9%	1,935,000	1,888,773
9128284N7	US TREASURY N/B	5/15/2028	2.9%	1,680,000	1,683,343
00774MAD7	AERCAP IRELAND	1/23/2023	3.3%	1,710,000	1,643,618
015271AL3	ALEXANDRIA ESTATE	4/30/2025	3.5%	1,610,000	1,540,448
9128283R9	TSY INFL IX N/B	1/15/2028	0.5%	1,574,180	1,540,068
912828UN8	US TREASURY N/B	2/15/2023	2.0%	1,570,000	1,521,000
3134A4KX1	FREDDIE MAC NOTES	7/15/2032	6.3%	1,020,000	1,365,137
002824BG4	ABBOTT LABORATORY	11/30/2036	4.8%	1,240,000	1,305,968
912810FT0	US TREASURY N/B	2/15/2036	4.5%	1,050,000	1,283,867
912828P38	US TREASURY N/B	1/31/2023	1.8%	1,300,000	1,245,712
9128282L3	TSY INFL IX N/B	7/15/2027	0.4%	1,095,787	1,066,047
912810QE1	US TREASURY N/B	2/15/2040	4.6%	800,000	1,015,376

A complete listing of our portfolio holdings is available from our office upon request

Investment Section

New York City Fire Pension Funds

List of Largest Stock Holdings as of June 30, 2018

Schedule 3A

Cusip Number	Security Name	Share/Par Value	Fair Value
37833100	APPLE INC COMMON STOCK USD.00001	397,288	73,541,982
594918104	MICROSOFT CORP COMMON STOCK USD.00000625	611,910	60,340,445
23135106	AMAZON.COM INC COMMON STOCK USD.01	32,838	55,818,032
30303M102	FACEBOOK INC A COMMON STOCK USD.000006	192,121	37,332,953
37833100	APPLE INC COMMON STOCK USD.00001	192,545	35,642,005
594918104	MICROSOFT CORP COMMON STOCK USD.00000625	296,586	29,246,345
84670702	BERKSHIRE HATHAWAY INC CL B COMMON STOCK USD.0033	156,456	29,202,512
46625H100	JPMORGAN CHASE + CO COMMON STOCK USD1.0	273,720	28,521,624
30231G102	EXXON MOBIL CORP COMMON STOCK	342,107	28,302,512
02079K107	ALPHABET INC CL C COMMON STOCK USD.001	24,601	27,446,106
02079K305	ALPHABET INC CL A COMMON STOCK USD.001	24,112	27,227,029
23135106	AMAZON.COM INC COMMON STOCK USD.01	15,956	27,122,009
478160104	JOHNSON + JOHNSON COMMON STOCK USD1.0	216,856	26,313,307
60505104	BANK OF AMERICA CORP COMMON STOCK USD.01	763,571	21,525,066
949746101	WELLS FARGO + CO COMMON STOCK USD1.666	354,601	19,659,079
166764100	CHEVRON CORP COMMON STOCK USD.75	153,884	19,455,554
464287622	ISHARES RUSSELL 1000 ETF ISHARES RUSSELL 1000 ETF	126,562	19,234,893
92826C839	VISA INC CLASS A SHARES COMMON STOCK USD.0001	144,462	19,133,992
91324P102	UNITEDHEALTH GROUP INC COMMON STOCK USD.01	77,206	18,941,720
00206R102	AT+T INC COMMON STOCK USD1.0	586,935	18,846,483
458140100	INTEL CORP COMMON STOCK USD.001	376,603	18,720,935
437076102	HOME DEPOT INC COMMON STOCK USD.05	93,155	18,174,541
30303M102	FACEBOOK INC A COMMON STOCK USD.000006	93,021	18,075,841
717081103	PFIZER INC COMMON STOCK USD.05	468,595	17,000,627
92343V104	VERIZON COMMUNICATIONS INC COMMON STOCK USD.1	333,863	16,796,648
17275R102	CISCO SYSTEMS INC COMMON STOCK USD.001	389,265	16,750,073
742718109	PROCTER + GAMBLE CO/THE COMMON STOCK	203,131	15,856,406
97023105	BOEING CO/THE COMMON STOCK USD5.0	44,355	14,881,546
37833100	APPLE INC COMMON STOCK USD.00001	79,577	14,730,498
57636Q104	MASTERCARD INC A COMMON STOCK USD.0001	74,212	14,584,142
84670702	BERKSHIRE HATHAWAY INC CL B COMMON STOCK USD.0033	75,813	14,150,496
46625H100	JPMORGAN CHASE + CO COMMON STOCK USD1.0	132,656	13,822,755
172967424	CITIGROUP INC COMMON STOCK USD.01	205,935	13,781,170
30231G102	EXXON MOBIL CORP COMMON STOCK	165,701	13,708,444
191216100	COCA COLA CO/THE COMMON STOCK USD.25	309,044	13,554,670
02079K107	ALPHABET INC CL C COMMON STOCK USD.001	11,893	13,268,425
02079K305	ALPHABET INC CL A COMMON STOCK USD.001	11,697	13,208,135

A complete listing of our portfolio holdings is available from our office upon request

Investment Section

New York City Fire Pension Funds

Schedule of Broker's Commissions QPP
For Fiscal Year ended June 30, 2018

Schedule 4A

Broker Name	Number of Shares Traded	Commission paid	Average cost Per Share
ABEL NOSER CORP	13,635.00	681.75	0.05
ABG SECURITIES AS (STOCKHOLM)	13,056.62	128.53	0.01
ABG SECURITIES LIMITED	12,332.37	200.86	0.02
ABN AMRO CLEARING BANK N.V.	383.62	5.65	0.01
ALLEN & COMPANY LLC	4,900.00	98.00	0.02
AQEEL KARIM DHEDHI	328,166.74	1,277.22	0.00
ARQAAM CAPITAL LIMITED	246,134.25	385.49	0.00
ARQAAM CAPITAL SOUTH AFRICA (PTY)	2,504.00	65.84	0.03
ATTIJARIWafa BANK	4,438.25	597.16	0.13
AUTONOMOUS RESEARCH LLP	2,781.76	75.57	0.03
AUTREPAT-DIV RE	7,696.33	408.09	0.05
B.RILEY & CO., LLC	4,846.00	169.61	0.04
BANCO ITAU SA	57,250.00	1,073.80	0.02
BANCO SANTANDER (BRASIL) S.A.	63,000.00	1,393.27	0.02
BANCO SANTANDER CENTRAL HISPANO	227,881.23	2,003.18	0.01
BANK J.VONTOBEL UND CO. AG	15,153.06	1,172.94	0.08
BANK OF AMERICA MERRILL LYNCH SECUR INC	121,415.98	3,175.64	0.03
BANKHAUS HERMANN LAMPE	16,533.73	419.81	0.03
BARCLAYS CAPITAL	648,084.33	8,519.05	0.01
BARCLAYS CAPITAL INC	22,475.20	125.24	0.01
BARCLAYS CAPITAL INC./LE	329,146.64	3,061.58	0.01
BARCLAYS CAPITAL LE	540,584.33	9,563.62	0.02
BARRINGTON RESEARCH ASSOCIATES	3,207.00	96.21	0.03
BLOOMBERG TRADEBOOK LLC	88,177.00	1,836.08	0.02
BMO CAPITAL MARKETS	30,867.37	832.27	0.03
BNP PARIBAS SECURITIES (ASIA) LTD.	24,204.17	918.73	0.04
BNP PARIBAS SECURITIES SERVICES	66,924.08	318.61	0.00
BNP PARIBAS SECURITIES SERVICES AUSTR BR	741,372.62	602.03	0.00
BNP PARIBAS SECURITIES SERVICES SA	19,182,362.28	9,404.97	0.00
BNP PARIBAS SECURITIES SERVICES, FRANCE	1,747,967.56	4,101.53	0.00
BRADESCO S.A. CTVM	226,641.61	1,661.51	0.01
BROADCORT CAPITAL (THRU ML)	21,463.00	435.83	0.02
BTG PACTUAL CHILE S.A. CORREDORES DE BOL	1,218.33	31.30	0.03
BTIG, LLC	175,000.38	4,001.07	0.02
BUCKINGHAM RESEARCH GROUP INC	62,596.00	3,129.80	0.05
BURKE AND QUICK PARTNERS LLC	1,585.00	55.49	0.04
CABRERA CAPITAL MARKETS	19,276.16	284.13	0.01
CABRERA CAPITAL MARKETS LLC	10,023.00	131.61	0.01
CANACCORD GENUITY INC.	13,239.00	407.37	0.03
CANACCORD GENUITY LIMITED	974.73	5.97	0.01
CANADIAN IMPERIAL BANK OF COMMERCE	18,040.91	335.58	0.02
CANTOR FITZGERALD + CO.	55,619.23	949.93	0.02
CANTOR FITZGERALD EUROPE	22,494.02	71.26	0.00
CANTOR FITZGERALD/CANTOR CLEARING SERV	(64.39)	(0.19)	0.00
CAPITAL MARKETS BROKERS LIMITED	115,631.11	710.48	0.01
CARNEGIE A S	17,136.80	810.33	0.05
CARNEGIE INVESTMENT BANK AB	33,363.73	226.67	0.01

Investment Section

New York City Fire Pension Funds

**Schedule of Broker's Commissions QPP
For Fiscal Year ended June 30, 2018**

Broker Name	Number of Shares Traded	Commission paid	Schedule 4A
			Average cost Per Share
CESKA SPORITELNA	17,959.86	1,333.69	0.07
CHEEVERS & CO. INC.	193,257.00	1,932.57	0.01
CHINA INTERNATIONAL CAPITAL CO	3,329,863.48	5,135.12	0.00
CHINA INTERNATIONAL CAPITAL CORPORATION	766,187.79	2,140.99	0.00
CITIBANK MEXICO	122,059.57	220.01	0.00
CITIBANK N.A.	13,094.07	832.54	0.06
CITIBANK OF COLOMBIA	14,506.58	157.80	0.01
CITIGROUP GLBL MARKET KOERA SECS LTD	47,333.23	483.12	0.01
CITIGROUP GLOBAL MARKETS ASIA LTD	18,660.86	3.37	0.00
CITIGROUP GLOBAL MARKETS AUSTRALIA PTY	11,302.66	15.38	0.00
CITIGROUP GLOBAL MARKETS INC	9,066,032.93	32,552.86	0.00
CITIGROUP GLOBAL MARKETS INDIA	93,255.38	1,515.78	0.02
CITIGROUP GLOBAL MARKETS LIMITED	2,893,748.83	25,232.19	0.01
CITIGROUP GLOBAL MARKETS TAIWAN	1,651,205.19	1,249.25	0.00
CJS SECURITIES INC	12,050.00	582.00	0.05
CL SECURITIES TAIWAN COMPANY LIMITED	113,062.72	1,318.24	0.01
CLSA AUSTRALIA PTY LTD	219,305.16	296.13	0.00
CLSA SECURITIES KOREA LTD.	19,392.71	716.20	0.04
CLSA SECURITIES MALAYSIA SDN BHD	322,175.81	167.04	0.00
CLSA SINGAPORE PTE LTD.	662,044.68	7,770.49	0.01
COMMERZBANK CAPITAL MARKETS CORPORATIC	12,216.00	183.28	0.02
CONVENCAO S/A CORRETORA DE VALORES	590,450.73	2,976.94	0.01
CONVERGEX LLC	566,739.00	15,410.51	0.03
CORNERSTONE MACRO LLC	690.00	34.50	0.05
COWEN AND COMPANY, LLC	647,077.64	19,964.17	0.03
COWEN EXECUTION SERVICES LLC	9,021,788.72	30,782.55	0.00
CRAIG - HALLUM	26,536.00	988.56	0.04
CREDIBOLSA SOCIEDAD AGENTE	27,204.79	25.74	0.00
CREDICORP CAPITAL COLOMBIA S.A.	219,485.52	972.09	0.00
CREDIT AGRICOLE CIB	572.00	11.44	0.02
CREDIT LYONNAIS SECURITIES (USA) INC	116,207.54	637.03	0.01
CREDIT LYONNAIS SECURITIES INDIA	1,049,737.21	14,576.55	0.01
CREDIT LYONNAIS SECURITIES(ASIA)	8,101,871.29	10,088.27	0.00
CREDIT SUISSE FIRST BOSTON	4,242,557.03	3,589.70	0.00
CREDIT SUISSE FIRST BOSTON (EUROPE)	1,342.62	681.19	0.51
CREDIT SUISSE INTERNATIONAL	63,440.60	74.24	0.00
CREDIT SUISSE LONDON BRANCH (GFX)	17,243.74	52.18	0.00
CREDIT SUISSE SECS INDIA PRIVATE LTD	2,226,077.39	4,183.22	0.00
CREDIT SUISSE SECURITIES (EUROPE) LTD	4,323,121.92	15,677.92	0.00
CREDIT SUISSE SECURITIES (USA) LLC	17,144,061.16	32,456.41	0.00
CREST DEPOSITORY LIMITED	43,274.00	77.44	0.00
CS FIRST BOSTON (HONG KONG) LIMITED	181,223.12	1,002.56	0.01
CSFB AUSTRALIA EQUITIES LTD	35,555.32	78.97	0.00
CSL STOCKBROKERS LIMITED	5,924,033.50	2,597.06	0.00
DAIWA SBCM EUROPE	13,586.72	112.05	0.01
DAIWA SECURITIES (HK) LTD.	22,583.01	86.51	0.00
DAIWA SECURITIES AMERICA INC	212,627.65	4,167.14	0.02

Investment Section

New York City Fire Pension Funds

Schedule of Broker's Commissions QPP
For Fiscal Year ended June 30, 2018

Schedule 4A

Broker Name	Number of Shares Traded	Commission paid	Average cost Per Share
DAIWA SECURITIES CAPITAL MARKETS CO LTD	9,759.78	355.39	0.04
DAIWA SECURITIES COMPANY LTD	3,346.26	210.21	0.06
DAIWA SECURITIES SB CAPITAL MARKETS	2.73	22.71	8.32
DANARESKA SECURITIES, PT	7,410,421.00	882.04	0.00
DAVIDSON D.A. + COMPANY INC.	12,316.00	564.47	0.05
DAVY STOCKBROKERS	488,594.85	1,710.75	0.00
DBS VICKERS (HONG KONG) LIMITED	13,543.76	273.79	0.02
DBS VICKERS SECURITIES (SINGAPORE)	169,161.28	682.58	0.00
DEN NORSKE BANK	6,370.28	44.80	0.01
DEUTSCHE BANK AG LONDON	1,066,207.02	2,407.78	0.00
DEUTSCHE BANK SECURITIES INC	3,184,326.29	18,418.62	0.01
DEUTSCHE SECURITIES ASIA LIMITED	545,367.50	1,537.56	0.00
DNB NOR MARKETS CUSTODY DNB NORBANK AS	12,979.02	103.28	0.01
DOUGHERTY & COMPANY LLC	3,119.00	93.57	0.03
DSP MERRILL LYNCH LTD	74,696.18	412.61	0.01
EDELWEISS SECURITIES PVT. LTD	2,391,074.45	56.36	0.00
ERSTE AND STEIERMAERKISCHE BANK	16.92	48.76	2.88
EUROCLEAR BANK S.A / N.V	41,355.07	236.82	0.01
EXANE S.A.	222,452.99	5,719.40	0.03
FBR CAPITAL MARKETS & CO.	49,533.70	1,153.05	0.02
FIDELITY CAPITAL MARKETS	11,022.00	207.57	0.02
FIDELITY CLEARING CANADA ULC	107,998.57	2,159.97	0.02
FIDENTIIS	570.06	4.93	0.01
FIG PARTNERS LLC	1,921.00	76.84	0.04
FINANCIAL BROKERAGE GROUP (FBG)	2,116,576.65	5,341.90	0.00
FIRST ANALYSIS SECURITIES CORP	3,440.00	172.00	0.05
FLOW CORRETORA DE MERCADORIAS LTDA.	10,060.85	271.38	0.03
FTN FINANCIAL SECURITIES	55,250.00	508.38	0.01
GMP SECURITIES LTD.	5,399.89	21.05	0.00
GOLDMAN SACHS (ASIA) L.L.C.	2,357,959.64	1,743.81	0.00
GOLDMAN SACHS (INDIA)	113,593.58	2,242.23	0.02
GOLDMAN SACHS + CO	11,432,140.43	49,040.03	0.00
GOLDMAN SACHS + CO INTL.	22,028.48	86.41	0.00
GOLDMAN SACHS DO BRASIL CORRETORA	56,383.23	751.48	0.01
GOLDMAN SACHS INTERNATIONAL	8,304,148.68	11,757.89	0.00
GOODBODY STOCKBROKERS	36,336.00	196.44	0.01
GREEN STREET ADVISORS (UK) LTD	2,780.37	17.61	0.01
GREEN STREET TRADING, LLC	207,179.46	7,983.95	0.04
GUGGENHEIM CAPITAL MARKETS LLC	31,821.00	708.80	0.02
HEIGHT SECURITIES, LLC	7,570.00	151.40	0.02
HIBERNIA SOUTHCOAST CAPITAL INC	21,560.00	754.60	0.04
HONGKONG AND SHANGHAI BANKING CORPORAT	1,374,588.48	3,072.75	0.00
HSBC BANK PLC	21,757,622.31	20,276.64	0.00
HSBC BANK USA	2,170.69	18.87	0.01
HSBC SECURITIES (USA) INC.	3,248,239.81	4,691.89	0.00
HSBC SECURITIES INDIA HOLDINGS	612,178.20	431.14	0.00
IC SECURITIES (GH) LIMITED	10,858.04	388.17	0.04

Investment Section

New York City Fire Pension Funds

**Schedule of Broker's Commissions QPP
For Fiscal Year ended June 30, 2018**

Schedule 4A

<u>Broker Name</u>	<u>Number of Shares Traded</u>	<u>Commission paid</u>	<u>Average cost Per Share</u>
ICAP DO BRASIL DTVM LTDA	80,419.99	297.90	0.00
ICBCFS LLC	2,195,394.85	10,250.46	0.00
ICICI BROKERAGE SERVICES	845,643.32	6,714.69	0.01
IM TRUST S.A. CORREDORES DE BOLSA	1,864,767.74	1,010.52	0.00
INDUSTRIAL AND COMMERCIAL BANK	1,400.00	63.00	0.05
INDUSTRIAL&COMMERCIAL BNK OF CHNA FS LLC	7,879.00	157.58	0.02
INSTINET	296,868.73	4,344.69	0.01
INSTINET AUSTRALIA CLEARING SRVC PTY LTD	375,907.72	718.47	0.00
INSTINET LLC	4,455,909.65	13,129.72	0.00
INSTINET PACIFIC LIMITED	16,114,032.88	8,011.62	0.00
INSTINET SINGAPORE SERVICES PT	665,730.52	798.63	0.00
INSTINET U.K. LTD	5,345,397.21	30,312.77	0.01
INTERCAPITAL SECURITIES LTD.	13,489.35	1,401.75	0.10
INTERFUND TRANSFER	428.00	4.95	0.01
INVESTEC BANK PLC	128,760.29	1,202.96	0.01
INVESTEC SECURITIES LTD	125,168.42	231.09	0.00
INVESTMENT TECHNOLOGY GROUP INC.	1,292,038.43	11,875.91	0.01
INVESTMENT TECHNOLOGY GROUP LTD	1,268,657.45	11,866.62	0.01
ISI GROUP INC	1,200,215.33	23,181.41	0.02
ITG AUSTRALIA LTD.	5,179,428.45	8,318.35	0.00
ITG CANADA	96,668.94	652.93	0.01
ITG INC	130,774.23	816.29	0.01
IVY SECURITIES, INC.	362,102.31	12,762.93	0.04
J P MORGAN INDIA PRIVATE LTD	23,878.83	78.05	0.00
J P MORGAN SECURITIES INC	2,395,696.15	3,200.27	0.00
J.P MORGAN SECURITIES	22,383.99	15.06	0.00
J.P. MORGAN CLEARING CORP.	2,040,077.43	11,938.46	0.01
J.P. MORGAN SECURITIES (TAIWAN) LTD	652,596.17	486.20	0.00
J.P. MORGAN SECURITIES LIMITED	29,413.84	1,336.07	0.05
J.P. MORGAN SECURITIES LLC	297,145.55	6,904.71	0.02
J.P.MORGAN SECURITIES(FAR EAST)LTD SEOUL	45,699.79	322.36	0.01
JANNEY MONTGOMERY, SCOTT INC	4,001.00	94.80	0.02
JEFFERIES + COMPANY INC	743,868.96	13,242.21	0.02
JEFFERIES HONG KONG LIMITED	385,802.98	104.65	0.00
JEFFERIES INDIA PRIVATE LIMITED	420,410.06	1,255.83	0.00
JEFFERIES INTERNATIONAL LTD	6,058,769.42	7,531.39	0.00
JM FINANCIAL INSTITUTIONAL SECURITIES PR	37,370.45	466.22	0.01
JMP SECURITIES	6,023.00	189.34	0.03
JOH. BERENBERG, GOSSLER & CO. KG	251,267.52	3,709.58	0.01
JONESTRADING INSTITUTIONAL SERVICES LLC	135,135.82	3,663.17	0.03
JONESTRADING INSTITUTIONAL SERVICES, LLC	122,837.00	255.72	0.00
JP MORGAN	587.00	12.07	0.02
JP MORGAN SECURITIES AUSTRALIA LTD	136,798.64	270.15	0.00
JP MORGAN SECURITIES PLC	976,995.36	15,674.97	0.02
JP MORGAN SECURITIES SINGAPORE	637,502.18	196.49	0.00
JPMORGAN SECURITIES(ASIA PACIFIC)LTD	4,740,743.19	4,654.57	0.00
KAS-ASSOCIATIE N.V.	1,764.08	7.31	0.00

Investment Section

New York City Fire Pension Funds

Schedule of Broker's Commissions QPP
For Fiscal Year ended June 30, 2018

Schedule 4A

Broker Name	Number of		Average cost Per Share
	Shares Traded	Commission paid	
KCG AMERICAS LLC	100,528.48	876.51	0.01
KEEFE BRUYETTE + WOODS INC	44,001.00	1,463.71	0.03
KEMPEN + CO N.V.	67,325.10	1,114.44	0.02
KEPLER EQUITIES PARIS	6,955.90	683.20	0.10
KEYBANC CAPITAL MARKETS INC	128,215.77	3,956.47	0.03
KING, CL, & ASSOCIATES, INC	86,906.00	3,508.28	0.04
KNIGHT SECURITIES INTERNATIONAL	14,853.55	269.02	0.02
KOREA INVESTMENT AND SECURITIES CO., LTD	4,987.29	85.76	0.02
KOTAK SECURITIES LTD	86,192.87	1,438.73	0.02
LARRAIN VIAL	2,170,061.47	647.32	0.00
LEERINK PARTNERS LLC	6,811.00	277.92	0.04
LEK SECURITIES CORP	11,702.00	388.99	0.03
LIQUIDNET CANADA INC	15,134.50	303.95	0.02
LIQUIDNET INC	1,566,776.73	33,183.93	0.02
LOGBOW SECURITIES LLC	8,999.00	437.95	0.05
LOOP CAPITAL MARKETS	9,314,594.77	88,277.14	0.01
LOOP CAPITAL MARKETS LLC	170,502.92	1,627.27	0.01
LUMINEX TRADING AND ANALYTICS	1,142.40	2.86	0.00
LUMINEX TRADING AND ANALYTICS LLC	86,968.00	1,194.34	0.01
MACQUARIE BANK LIMITED	2,940,914.05	6,690.72	0.00
MACQUARIE CAPITAL (USA) INC	39,152.03	378.07	0.01
MACQUARIE SEC NZ LTD	5,690.56	7.46	0.00
MACQUARIE SECURITIES (USA) INC	12,726.00	594.10	0.05
MACQUARIE SECURITIES KOREA LIMITED	93,008.66	1,516.91	0.02
MAINFIRST BANK DE	20,447.60	470.50	0.02
MAXIM GROUP	2,200.00	99.00	0.05
MEDIOBANCA SPA	31,005.43	90.51	0.00
MERRIL LYNCH	8,990.00	409.12	0.05
MERRILL LYNCH AND CO INC	163,960.23	5,545.60	0.03
MERRILL LYNCH CANADA INC	2,500.00	23.76	0.01
MERRILL LYNCH INTERNATIONAL	12,057,130.93	36,198.97	0.00
MERRILL LYNCH JAPAN INCORPORATED	1,308.93	49.91	0.04
MERRILL LYNCH PIERCE FENNER AND S	1,099,497.11	6,304.81	0.01
MERRILL LYNCH PROFESSIONAL CLEARING CORP	6,781.00	237.34	0.04
MERRILL LYNCH, PIERCE FENNER SMITH	167.00	4.70	0.03
MERRILL LYNCH, PIERCE, FENNER & SMITH INC.	4,049,993.12	23,128.89	0.01
MIRAE ASSET DAEWOO CO., LTD.	7,336.79	480.27	0.07
MISCHLER FINANCIAL GROUP, INC-EQUITIES	161,738.00	405.04	0.00
MITSUBISHI UFJ SECURITIES (USA)	1,086.13	18.92	0.02
MITSUBISHI UFJ SECURITIES INT PLC	3,113.62	92.47	0.03
MIZUHO INTERNATIONAL PLC	9,986.56	586.07	0.06
MIZUHO SECURITIES ASIA LIMITED	1,281.08	24.15	0.02
MIZUHO SECURITIES USA INC	106,872.47	3,071.84	0.03
MKM PARTNERS LLC	135,698.83	5,301.39	0.04
MONNESS, CRESPI, HARDT & CO. INC	44,466.00	2,223.30	0.05
MORGAN STANLEY AND CO INTERNATIONAL	7,593,575.31	12,705.02	0.00
MORGAN STANLEY CO INCORPORATED	7,718,019.21	53,601.73	0.01

Investment Section

New York City Fire Pension Funds

Schedule of Broker's Commissions QPP
For Fiscal Year ended June 30, 2018

Broker Name	Number of Shares Traded	Commission paid	Schedule 4A
			Average cost Per Share
MORGAN STANLEY INDIA COMPANY PVT LTD	395,531.00	2,249.44	0.01
MORGAN STANLEY TAIWAN LIMITED	2,472,778.40	2,589.87	0.00
MOTILAL OSWAL SECURITIES LIMITED	15,023.00	556.13	0.04
NATIONAL FINANCIAL SERVICES CORPORATION	320,357.07	2,217.27	0.01
NATIONAL FINANCIAL SERVICES LLC	9,955.15	237.78	0.02
NEEDHAM AND COMPANY LLC	13,541.00	569.18	0.04
NESBITT BURNS	1,749.75	49.05	0.03
NH INVESTMENT AND SECURITIES CO.,LTD.	33,268.45	970.03	0.03
NOMURA FINANCIAL ADVISORY + SEC INDIA	651,187.93	2,377.84	0.00
NOMURA SECURITIES CO LTD	49,398.57	22.82	0.00
NORDEA BANK AB (PUBL), FINNISH BRANCH	109,100.99	928.84	0.01
NORTHCOAST RESEARCH PARTNERS LLC	18,259.00	869.73	0.05
NORTHLAND SECURITIES INC.	22,012.00	715.71	0.03
NUMIS SECURITIES LIMITED	47,180.60	48.82	0.00
OLIVETREE USA LLC	2,198.00	43.96	0.02
OPPENHEIMER + CO. INC.	48,111.22	2,001.86	0.04
PAREL	313.93	9.79	0.03
PAVILION GLOBAL MARKETS LTD	87,309.50	994.40	0.01
PEEL HUNT LLP	16,569.12	50.65	0.00
PENSERRA SECURITIES	699,158.00	20,542.45	0.03
PENSERRA SECURITIES LLC	133,615.81	1,877.90	0.01
PERSHING LLC	1,768,375.73	12,608.75	0.01
PERSHING SECURITIES LIMITED	90,262.86	1,191.28	0.01
PIPER JAFFRAY	10,467.00	316.59	0.03
PIPER JAFFRAY & CO.	104,389.00	3,424.06	0.03
PT. MANDIRI SEKURITAS	1,179,703.00	142.96	0.00
R.B.C. DOMINION SECURITIES CORPORATION	460.40	2.76	0.01
RAYMOND JAMES & ASSOCIATES	700.00	24.50	0.04
RAYMOND JAMES AND ASSOCIATES	20,010.00	1,661.97	0.08
RAYMOND JAMES AND ASSOCIATES INC	272,047.79	11,424.54	0.04
RBC CAPITAL MARKETS, LLC	513,570.33	11,430.30	0.02
RBC DOMINION SECURITIES INC.	462,538.61	4,969.42	0.01
REDBURN (EUROPE) LIMITED	112,212.55	3,565.73	0.03
RESTRUCTURE NON CASH	4,258.30	42.58	0.01
ROBERT W. BAIRD CO.INCORPORATED	210,322.89	6,317.29	0.03
ROYAL BANK OF CANADA EUROPE LTD	147,916.05	2,657.51	0.02
SAMSUNG SECURITIES CO LTD	99,024.39	682.14	0.01
SANDLER ONEILL AND PARTNERS L.P.	6,483.00	218.54	0.03
SANFORD C BERNSTEIN CO LLC	684,512.00	14,822.17	0.02
SANFORD C. BERNSTEIN AND CO. LLC	1,082,487.30	2,824.75	0.00
SANFORD C. BERNSTEIN LTD	1,165,499.79	5,818.09	0.00
SANTANDER SECURITIES SERVICES, S.A	49,108.03	317.43	0.01
SCOTIA CAPITAL (USA) INC	6,275.00	175.09	0.03
SCOTIA CAPITAL INC	46.15	0.28	0.01
SCOTIA CORREDORA DE BOLSA	96,913.42	48.34	0.00
SEAPORT GROUP SECURITIES, LLC	47,065.00	1,762.42	0.04
SG AMERICAS SECURITIES LLC	633,234.87	1,723.32	0.00

Investment Section

New York City Fire Pension Funds

Schedule of Broker's Commissions QPP
For Fiscal Year ended June 30, 2018

Schedule 4A

Broker Name	Number of Shares Traded	Commission paid	Average cost Per Share
SG ASIA SECURITIES (INOIA) PVT LTD	713,865.12	2,764.32	0.00
SG SECURITIES (LONDON) LTD.	4,731,603.23	3,545.49	0.00
SG SECURITIES HK	14,465,057.85	5,725.49	0.00
SHENYIN WANGUO SECURITIES (HK) LTD	453,645.00	644.42	0.00
SIDOTI + COMPANY LLC	6,983.00	230.84	0.03
SMBC NIKKO CAPITAL MARKETS LIMITED	450,147.81	6,178.70	0.01
SMBC NIKKO SECURITIES (HONK KONG) LTD	9,719.48	193.16	0.02
SMBC SECURITIES INC	16.03	43.35	2.70
SOCIETE GENERALE	1,086.13	1.15	0.00
SOCIETE GENERALE LONDON BRANCH	2,714,137.91	12,679.67	0.00
STATE STREET GLOBAL MARKETS	129.00	2.58	0.02
STATE STREET GLOBAL MARKETS, LLC	5,029.00	152.08	0.03
STEPHENS, INC.	44,679.00	1,709.36	0.04
STIFEL NICOLAUS + CO INC	131,174.46	4,757.79	0.04
STIFEL NICOLAUS EUROPE LIMITED	166,662.31	326.47	0.00
STRATEGAS SECURITIES LLC	3,548.00	106.44	0.03
STUART FRANKEL + CO INC	11,092.00	443.68	0.04
SUNTRUST CAPITAL MARKETS, INC.	24,173.00	1,073.83	0.04
SVENSKA HANDELSBANKEN	930.12	14.88	0.02
TAIWAN DEPOSITORY CLEARING CORPORATION	1,164,987.52	740.29	0.00
TELSEY ADVISORY GROUP LLC	176,286.00	7,321.45	0.04
THE FIG GROUP, LLC	42,900.00	392.39	0.01
THE HONGKONG AND SHANGHAI BANK	14,506.61	722.37	0.05
TOPLINE SECURITIES PVT LTD.	592,369.74	1,835.94	0.00
TORONTO DOMINION SECURITIES INC	99,971.73	653.09	0.01
TOURMALINE PARTNERS	16,301.00	244.61	0.02
TULLETT PREBON FINANCIAL SERVICES LLC	1,013.00	20.26	0.02
TUNISIE VALEURS	5,343.57	13.44	0.00
UBS AG	2,619,186.63	3,903.54	0.00
UBS LIMITED	4,486,442.53	28,181.81	0.01
UBS SECURITIES ASIA LTD	3,714,974.53	8,159.58	0.00
UBS SECURITIES CANADA INC	256,830.10	1,729.03	0.01
UBS SECURITIES INDIA PRIVATE LTD	204,968.50	1,353.31	0.01
UBS SECURITIES LLC	2,811,434.41	12,012.11	0.00
UBS SECURITIES PTE.LTD	498,364.38	346.72	0.00
UBS SECURITIES PTE.LTD., SEOUL	24,430.90	122.96	0.01
UBS WARBURG AUSTRALIA EQUITIES	61,446.24	247.16	0.00
VALORES BANCOLOMBIA	7,570,800.00	104.29	0.00
VIRTU AMERICAS LLC	121,852.86	2,941.10	0.02
WALL STREET ACCESS	22,328.00	154.81	0.01
WEDBUSH MORGAN SECURITIES INC	3,935.00	134.50	0.03
WEEDEN + CO.	1,430,864.25	25,922.58	0.02
WELLS FARGO SECURITIES LLC	143,665.78	4,143.13	0.03
WILLIAM BLAIR & COMPANY L.L.C	60,631.16	2,360.98	0.04
WILLIAMS CAPITAL GROUP LP (THE)	584,455.05	9,884.08	0.02
WOLFE TRAHAN SECURITIES	27,374.00	1,000.64	0.04
XP INVESTIMENTOS CCTVM SA	603,225.87	3,899.36	0.01
GRAND TOTAL	345,029,790.75	1,270,084.95	0.00

Investment Summary**Fire Combined Funds**

Year Ended June 30, 2018

(Dollar amount in thousands)

	<u>Market Value</u>	<u>Percent of Total Market Value</u>
Type of Investment:		
Short Term Investments:		
Commercial paper	\$ 191,606	1.23%
Short Term Investments	98,030	0.63%
U.S. Treasury Bills	53,484	0.34%
Discount notes	2,498	0.02%
Total Short-Term	345,618	2.23%
Debt securities:		
U.S. Govt Securities and Agency	1,767,633	11.38%
Corporate and Other	1,261,458	8.12%
Total debt securities	3,029,091	19.50%
Equities Securities:	3,960,222	25.50%
Alternative investments:		
Infrastructure	70,510	0.45%
Opportunistic fixed income	392,612	2.53%
Private equity	1,596,436	10.28%
Private real estate	548,159	3.53%
Total Alternative investments	2,607,717	16.79%
Collective trust funds:		
Bank Loans	200,689	1.29%
Corporate and other	363,336	2.34%
International equity	2,527,494	16.27%
Domestic equity	278,094	1.79%
Mortgage debt security	99,102	0.64%
Treasury Inflation -protected securities	714,396	4.60%
U.S. Government and agency	236,156	1.52%
Total collective trust funds:	4,419,267	28.45%
Collateral from Securities Lending	1,169,286	7.53%
Total Market Value	\$ 15,531,201	100%

New York City Fire Pension Funds
Comprehensive Annual Financial Report
A Pension Trust Fund of The City of New York



Actuarial Section

Part IV

Fiscal Year Ended June 30, 2018

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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 3, 2018

Board of Trustees
New York City Fire Pension Fund
9 Metrotech Center
Brooklyn, NY 11201-3857

Re: Actuarial Information for the Comprehensive Annual Financial Report (CAFR) for the Fiscal Year Ended June 30, 2018

Dear Members of the Board of Trustees:

The financial objective of the New York City Fire Pension Fund (FIRE 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, 2016 (Lag) actuarial valuation to determine Fiscal Year 2018 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 2018, the Actuarial Contributions to FIRE, are equal to those recommended by the Actuary of the New York City Retirement Systems and Pension Funds (the Actuary) and represent the Statutory Contributions.

During June 2012 the Governmental Accounting Standards Board (GASB) released two accounting standards for public pension plans, Statement No. 67 (GASB67) and Statement No. 68 (GASB68), collectively "GASB67/68."

On September 28, 2018, the Actuary published the, "GASB 67/68 Report for the City of New York and the New York City Retirement Systems For Fiscal Year ended June 30, 2018" (the

Fiscal Year 2018 GASB67/68 Report). Appendix E of the Fiscal Year 2018 GASB67/68 Report contains information developed in accordance with GASB67 for FIRE.

Actuarial Assumptions and Methods

The Actuary issued a Report entitled “Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2011 for the New York City Fire Department Pension Fund,” dated February 10, 2012. Components of the Actuary’s proposed changes required the enactment of legislation by the New York State Legislature and the Governor.

The Board of Trustees of FIRE adopted those changes that require Board approval during Fiscal Year 2012. The New York State Legislature and the Governor enacted Chapter 3 of the Laws of 2013 (Chapter 3/13) to provide for those changes in actuarial assumptions and methods that require legislation, including the Actuarial Interest Rate (AIR) assumption of 7.0% per annum, net of investment expenses. Together, this package of actuarial assumptions and methods is referred to as the “2012 A&M.”

In Fiscal Year 2016, the Actuary proposed and the Retirement Board adopted, revised post-retirement mortality assumptions for use in determining employer contributions beginning in Fiscal Year 2016. In addition, beginning in Fiscal Year 2016, the Actuary revised the Actuarial Asset Valuation Method by constraining the Actuarial Value of Assets to be no more than 20% from the Market Value of Assets. The 2012 A&M reflecting these revisions is referred to herein as the “2016 A&M.”

Beginning with the June 30, 2016 actuarial valuation, actuarial liabilities associated with the Special Accidental Death Benefit (SADB) payable pursuant to Section 208(f) of the General Municipal Law were reflected, including a Cost of Living Adjustment on these benefits of 3.0% per year.

The “Summary of Actuarial Assumptions and Methods in Effect for the June 30, 2016 (Lag) Actuarial Valuation” provided later in this Actuarial Section of the CAFR presents the 2016 A&M. There were no changes to any of the actuarial assumptions and methods since the prior year other than the changes related to the SADB described above and to the probabilities of Accidental Disability for Tier 3 and Tier 3 Modified members as a result of Chapter 298 of the Laws of 2016 as described below. These actuarial assumptions and methods (2016 A&M) used for funding purposes 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, 2016 (Lag) actuarial valuation is shown earlier in the Introductory Section of the CAFR.

The June 30, 2016 (Lag) actuarial valuation reflects the enactment of Chapter 298 of the Laws of 2016 (Chapter 298/16), which modifies the Disability benefit provisions for Tier 3 and Tier 3 Modified members.

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, 2016 (Lag) actuarial valuation is included in this CAFR. A summary of the census data used in the June 30, 2015 (Lag) actuarial valuation of the Plan is available in the Fiscal Year 2017 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 11).

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 12), as prescribed by the Government Finance Officers Association (GFOA). This Solvency Test represents an alternative approach to describing progress toward funding objectives.

Presentation Style and Sources of Information

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

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

- Summary of Actuarial Assumptions and Methods in Effect for the June 30, 2016 (Lag) Actuarial Valuation.
- Active Member Valuation Data.
- 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.

Some items in the Financial Section and Statistical Section of the CAFR were also prepared by the OA.

If you have any questions about any of the information in this Actuarial Section or any of the actuarial information elsewhere presented in this CAFR, please do not hesitate to contact Mr. Michael J. Samet, Mr. Edward Hue, or me.

Board of Trustees
New York City Fire Pension Fund
December 3, 2018
Page 5

Acknowledgment 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 (ERISA), 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

SSC/eh

Att.

cc: Mr. Albert Connolly - New York City Fire Pension Fund
Ms. Maureen Dale - New York City Fire Pension Fund
Mr. Patrick Dunn - New York City Fire Pension Fund
Mr. Edward Hue - New York City Office of the Actuary
Mr. Anderson Huynh - New York City Office of the Actuary
Ms. Marlene Markoe-Boyd - New York City Office of the Actuary
Mr. Sam Rumley - 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. Lei Tian - New York City Fire Pension Fund

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NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (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.

The Actuary issued a Report entitled "Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2011 for the New York City Fire Department Pension Fund," dated February 10, 2012. Components of the Actuary's proposed changes required the enactment of legislation by the New York State Legislature and the Governor.

The Board of Trustees adopted those changes that require Board approval during Fiscal Year 2012. The New York State Legislature and the Governor enacted Chapter 3 of the Laws of 2013 (Chapter 3/13) to provide for those changes in actuarial assumptions and methods that require legislation, including the Actuarial Interest Rate (AIR) assumption of 7.0% per annum, net of investment expenses. Together, this package of actuarial assumptions and methods is referred to as the "2012 A&M."

In Fiscal Year 2016, the Actuary proposed and the Board of Trustees adopted, revised post-retirement mortality assumptions for use in determining employer contributions beginning in Fiscal Year 2016. In addition, beginning in Fiscal Year 2016, the Actuary revised the Actuarial Asset Valuation Method by constraining the Actuarial Value of Assets to be no more than 20% from the Market Value of Assets. The 2012 A&M reflecting these revisions is referred to herein as the "2016 A&M."

Beginning with the June 30, 2016 actuarial valuation, actuarial liabilities associated with the Special Accidental Death Benefit (SADB) payable pursuant to Section 208(f) of the General Municipal Law were reflected, including a Cost of Living Adjustment on these benefits of 3.0% per year. The probabilities of Accidental Disability for Tier 3 and Tier 3 Modified members were also changed as a result of the change in the Disability provisions due to the enactment of Chapter 298 of the Laws of 2016.

NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

The actuarial assumptions and methods in effect for the June 30, 2016 (Lag) actuarial valuation are unchanged from those used in the June 30, 2015 (Lag) actuarial valuation other than the changes related to the SADB and the probabilities of the Accidental Disability as described above.

2. The investment rate of return assumption is 7.0% per annum, net of investment expenses.
3. The mortality tables for service and disability pensioners are based primarily on the experience of FIRE (the Base Tables) and the application of Mortality Improvement Scale MP-2015, published by the Society of Actuaries in October 2015. Sample probabilities are shown in Table 1a. Mortality tables for beneficiaries were also developed from experience review and application of Mortality Improvement Scale MP-2015. Sample probabilities are shown in Table 1b.
4. Active Service tables are used to estimate various withdrawals from Active Service. Sample probabilities are shown in Tables 2a, 2b, and 2c for members withdrawing from active service due to Death or Disability, in Table 3 for members withdrawing from Active Service without employer-provided benefits or with Vested Benefits, and in Table 4 for members withdrawing from Active Service for Service Retirement.
5. A Salary Scale is used to estimate salaries at termination, retirement, or death. Sample percentage increases are shown in Table 5. The Salary Scale includes a General Wage Increase (GWI) assumption of 3.0% per annum.
6. Overtime earnings are also used to estimate salaries at termination, retirement, or death. Sample percentage increases from the base salary in the Baseline Overtime assumptions and the Dual Overtime assumptions (i.e. the assumption for overtime for the years included in the calculations of Final Salary or Final Average Salary) are shown in Table 6.
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.

NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

9. Beginning with the June 30, 2010 (Lag) actuarial valuation, the Entry Age Normal (EAN) cost method of funding is utilized 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 Actuarial Accrued Liability (AAL).

The excess, if any, of the AAL over the Actuarial Value of Assets (AVA) is the Unfunded Actuarial Accrued Liability (UAAL).

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

10. One-Year Lag Methodology (Lag or OYLM) uses a June 30, XX-2 valuation date to determine Fiscal Year XX Employer Contributions.

The June 30, 2016 (Lag) actuarial valuation uses a June 30, 2016 valuation date to determine Fiscal Year 2018 Employer Contributions.

This methodology requires adjustments to determine the Fiscal Year 2018 Employer Contributions:

- a. Present Value of Future Salary (PVFS): The PVFS at June 30, 2016 is reduced by the value of salary projected to be paid during Fiscal Year 2017.
- b. Salary for Determining Employer Contributions: Salary used to determine the employer normal contribution is the salary projected to be paid during Fiscal Year 2018 to members on payroll at June 30, 2016.
- c. UAAL Payments: For determining the UAAL payments for Fiscal Year 2018, and to be consistent with the OYLM, the UAAL as of June 30, 2016 is adjusted

NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

by the discounted value of employer normal contributions paid during Fiscal Year 2017.

11. The Actuary reset the AVA to the Market Value of Assets (MVA) as of June 30, 2011.

Beginning with the June 30, 2012 (Lag) actuarial valuation, 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%).

Beginning with the June 30, 2014 (Lag) actuarial valuation, the AVA is constrained to be within a 20% corridor of the MVA.

12. The obligations of the Plan to the Firefighters' Variable Supplements Fund (FFVSF) and the Fire Officers' Variable Supplements Fund (FOVSF) are recognized through the Liability Valuation Method.

Under this method, the PV of Future SKIM from FIRE to the FIRE VSFs is included directly as an actuarial liability of FIRE. SKIM is either a portion of the excess earnings on equity securities of FIRE that are transferable to an individual FIRE VSF or the amount in excess of existing assets needed in any given Fiscal Year by an individual FIRE VSF to pay expected benefits. The PV of Future SKIM is computed as the excess, if any, of the PV of expected benefits of each individual FIRE VSF over the AVA of that individual FIRE VSF. 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 AAL.

13. The PVFB as of June 30, 2016, used to determine the Fiscal Year 2018 Employer Contributions, includes estimates of liabilities for World Trade Center (WTC) Post-Retirement Reclassifications.

NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

Table 1a				
Deaths among Service and Disability Pensioners Percentage of Pensioners Dying within Next Year				
Age	Service Pensioners		Disability Pensioners	
	Males	Females	Males	Females
40	0.1032%	0.0606%	0.1666%	0.0678%
45	0.1462	0.0849	0.1973	0.1249
50	0.2162	0.1465	0.2708	0.2562
55	0.4648	0.2060	0.5684	0.4834
60	0.6496	0.3859	0.8333	0.6186
65	0.9562	0.5740	1.1935	0.9079
70	1.3198	0.8412	1.7916	1.5158
75	2.2930	1.3465	2.6930	2.6837
80	4.0035	2.4835	4.5507	4.5929
85	7.7575	4.2606	8.4511	7.6781
90	12.3806	7.6039	12.5308	12.6282
95	22.5343	14.3814	23.2269	18.2303
100	30.7448	21.2257	30.7448	21.4632
105	36.9822	27.2744	36.9822	27.2744
110	96.4196	96.4583	96.4196	96.4583
115	100.0000	100.0000	100.0000	100.0000

Society of Actuaries Mortality Improvement Scale MP-2015 has been applied to these rates.

NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

Table 1b		
Deaths among Beneficiaries		
Percentage of Beneficiaries Dying within Next Year		
Age	Males	Females
20	0.0211%	0.0122%
25	0.0284	0.0174
30	0.0391	0.0263
35	0.0696	0.0507
40	0.0904	0.0674
45	0.2524	0.1151
50	0.3971	0.2431
55	0.8014	0.4420
60	1.0706	0.7296
65	1.4334	0.9970
70	1.9248	1.3660
75	2.8272	2.1592
80	5.1881	3.6583
85	7.9854	6.0929
90	13.8632	10.4405
95	22.2136	17.6157
100	30.7448	21.2423
105	36.9822	27.2744
110	96.4196	96.4583
115	100.0000	100.0000

Society of Actuaries Mortality Improvement Scale MP-2015 has been applied to these rates.

NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

Table 2a					
Withdrawals from Active Service (Due to Death or Disability) Tier I/Tier II Members Not Eligible for WTC Benefits and Tier III/Tier III Modified Enhanced ADR Plan Members Percentage of Active Members Separating within Next Year					
Age	Accidental Disability	Ordinary Disability	Ordinary Death		Accidental Death
			Males	Females	
20	0.03%	0.01%	0.04%	0.03%	0.02%
25	0.03	0.01	0.04	0.03	0.02
30	0.15	0.05	0.04	0.03	0.02
35	0.60	0.10	0.04	0.03	0.02
40	1.30	0.15	0.05	0.04	0.02
45	2.00	0.20	0.10	0.07	0.05
50	3.50	0.30	0.15	0.10	0.10
55	5.00	1.00	0.20	0.15	0.20
60	15.00	6.00	0.30	0.20	0.30
63 ¹	NA	NA	NA	NA	NA

¹ Assumed to retire for service immediately at age 63.

NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

Table 2b					
Withdrawals from Active Service (Due to Death or Disability)					
Tier I and Tier II Members Eligible for WTC Benefits					
Percentage of Active Members Separating within Next Year					
Age	Accidental Disability	Ordinary Disability	Ordinary Death		Accidental Death
			Males	Females	
20	0.05%	0.01%	0.04%	0.03%	0.02%
25	0.05	0.01	0.04	0.03	0.02
30	0.25	0.05	0.04	0.03	0.02
35	1.00	0.10	0.04	0.03	0.02
40	2.00	0.15	0.05	0.04	0.02
45	3.00	0.20	0.10	0.07	0.05
50	5.00	0.30	0.15	0.10	0.10
55	8.00	1.00	0.20	0.15	0.20
60	21.00	6.00	0.30	0.20	0.30
63 ¹	NA	NA	NA	NA	NA

¹ Assumed to retire for service immediately at age 63.

NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

Table 2c					
Withdrawals from Active Service (Due to Death or Disability) Tier III and Tier III Modified Non-Enhanced Plan Members Percentage of Active Members Separating within Next Year					
Age	Accidental Disability	Ordinary Disability	Ordinary Death		Accidental Death
			Males	Females	
20	0.03%	0.01%	0.04%	0.03%	0.02%
25	0.03	0.01	0.04	0.03	0.02
30	0.15	0.05	0.04	0.03	0.02
35	0.60	0.10	0.04	0.03	0.02
40	1.20	0.15	0.05	0.04	0.02
45	1.80	0.20	0.10	0.07	0.05
50	2.40	0.30	0.15	0.10	0.10
55	3.00	1.00	0.20	0.15	0.20
60	8.00	6.00	0.30	0.20	0.30
63 ¹	NA	NA	NA	NA	NA

¹ Assumed to retire for service immediately at age 63.

NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

Table 3			
Withdrawals from Active Service			
Percentage of Active Members Separating within Next Year			
		Tier III and Tier III Modified Early Service Retirement	
Years of Service	All Tiers Withdrawal	Reduced Retirement	Unreduced Before Full Escalation
0	2.00%	NA	NA
5	0.40	NA	NA
10	0.20	NA	NA
15	0.10	NA	NA
20	NA	5.00%	NA
21	NA	2.00	NA
22	NA	NA	5.00%
23	NA	NA	2.00
24	NA	NA	2.00

NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

Table 4			
Withdrawals from Active Service (Due to Unreduced Service Retirement)			
Percentage of Eligible Active Members Separating within Next Year			
Age	Years of Service Since First Eligible		
	0-1	1-2	2+
40	10.00%	2.00%	2.00%
45	10.00	2.00	2.00
50	15.00	2.00	2.00
55	20.00	6.00	6.00
60	20.00	12.00	12.00
63	100.00	100.00	100.00

NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

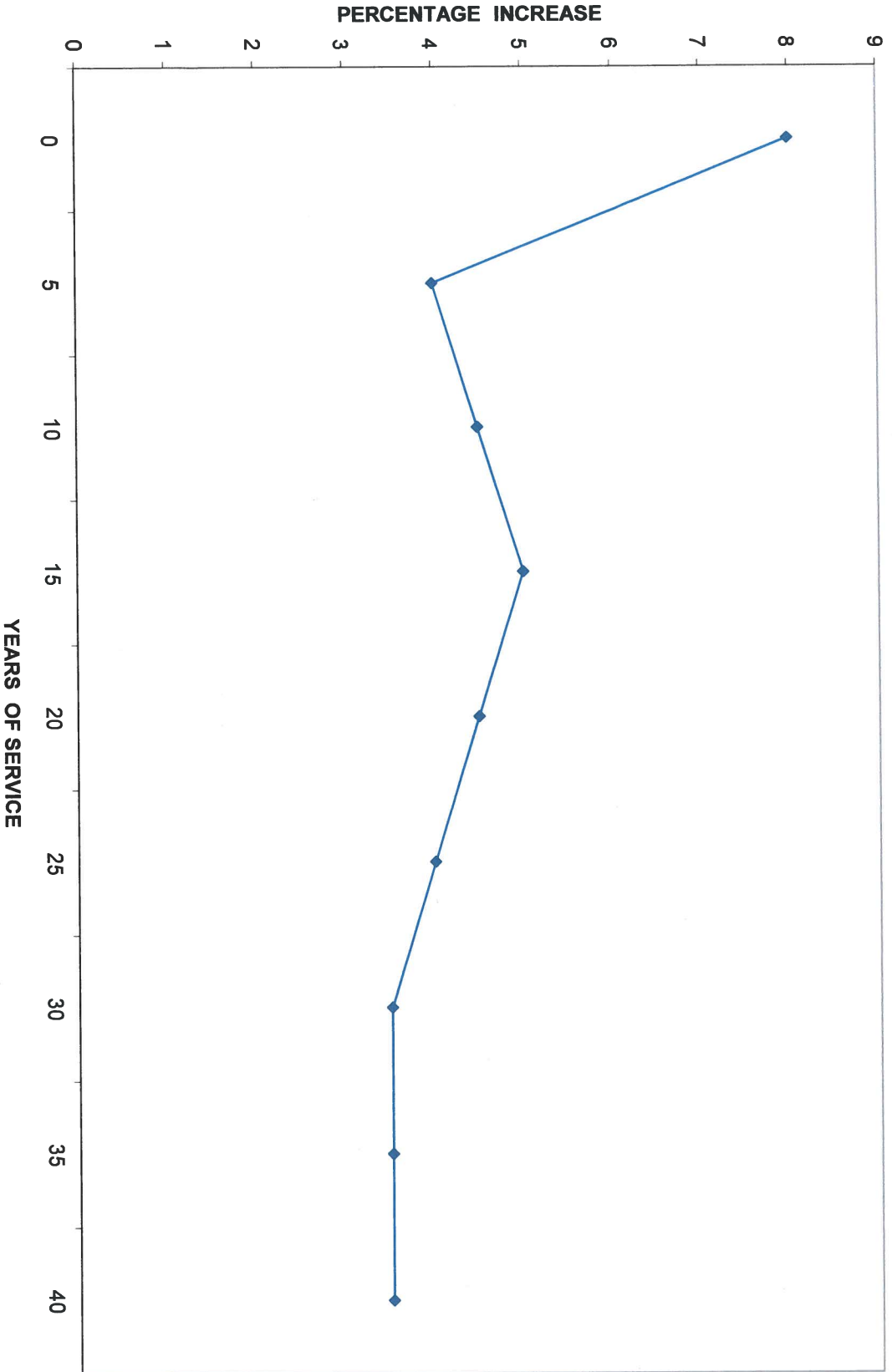
Table 5	
Salary Scale	
Years of Service	Assumed Annual Percentage Increases Within Next Year¹
0	8.00%
5	4.00
10	4.50
15	5.00
20	4.50
25	4.00
30	3.50
35	3.50
40	3.50
45	3.50

¹ Salary Scale includes a General Wage Increase assumption of 3.0% per annum.

Actuarial Section

New York City Fire Pension Fund

SALARY SCALE
(From Table 5 Data)



NEW YORK CITY FIRE PENSION FUND

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION (Cont'd)

Table 6					
Overtime					
Years of Service	All Tiers Baseline	Tier I/II Dual Service	Tier I/II Dual Disability	Tier III/Tier III Modified Dual Service	Tier III/Tier III Modified Dual Disability
0	15.00%	16.00%	15.00%	16.00%	15.00%
5	15.00	16.00	15.00	16.00	15.00
10	15.00	16.00	15.00	16.00	15.00
15	15.00	18.00	15.00	16.00	15.00
20	18.00	23.00	20.00	21.00	20.00
25	13.00	18.00	15.00	16.00	15.00
30	8.00	10.00	8.00	9.00	8.00
35	5.00	6.00	5.00	6.00	5.00
40	5.00	6.00	5.00	6.00	5.00
45	5.00	6.00	5.00	6.00	5.00

NEW YORK CITY FIRE PENSION FUND

Table 7				
Active Member Valuation Data				
Valuation Date	Number	Annual Payroll¹	Annual Average Pay	Percentage Increase (Decrease) in Average Pay
6/30/07 (Lag)	11,528	\$1,000,383,326	\$ 86,779	8.3 %
6/30/08 (Lag)	11,574	1,051,591,517	90,858	4.7
6/30/09 (Lag)	11,460	1,079,682,340	94,213	3.7
6/30/10 (Lag) ²	11,080	1,138,187,795	102,725	9.0
6/30/11 (Lag)	10,650	1,125,459,668	105,677	2.9
6/30/12 (Lag)	10,267	1,106,113,386	107,735	1.9
6/30/13 (Lag)	10,182	1,129,706,314	110,951	3.0
6/30/14 (Lag)	10,319	1,150,389,645	111,483	0.5
6/30/15 (Lag)	10,780	1,164,994,036	108,070	(3.1)
6/30/16 (Lag)	10,951	1,180,226,281	107,773	(0.3)

¹ Annual Payroll was increased by a percentage to reflect overtime earnings, and, where applicable, adjusted to be consistent with collective bargaining agreements estimated to be achieved.

² Beginning with the June 30, 2010 (Lag) actuarial valuation, the annualized covered payroll is based on revised actuarial assumptions.

NEW YORK CITY FIRE PENSION FUND

As of the June 30, 2016 (Lag) and June 30, 2015 (Lag) actuarial valuations, the Plan's Membership consisted of:

Table 8		
Summary of Plan Membership		
Group	June 30, 2016 (Lag)	June 30, 2015 (Lag)
Retirees and beneficiaries currently receiving benefits	16,647	16,710
Terminated vested members not yet receiving benefits	58	32
Other Inactives ¹	21	18
Active members	<u>10,951</u>	<u>10,780</u>
Total	27,677	27,540

¹ Represents members who are no longer on payroll but not otherwise classified.

NEW YORK CITY FIRE PENSION FUND

Table 9
Retirees and Beneficiaries Added to and Removed from Rolls

Year Ended	Added to Rolls		Removed from Rolls		Rolls end of Year		% Increase In Annual Allowances	Average Annual Allowances
	Number	Annual Allowances ¹	Number	Annual Allowances	Number	Annual Allowances ²		
6/30/07	777	\$ 71,664,072	783	\$26,221,335	17,479	\$ 794,506,827	6.1%	\$45,455
6/30/08	616	62,100,681	691	23,260,349	17,404	833,347,159	4.9	47,883
6/30/09	476	49,098,185	617	20,247,862	17,263	862,197,482	3.5	49,945
6/30/10	556	54,883,701	679	25,161,316	17,140	891,919,867	3.4	52,037
6/30/11	653	64,843,804	776	35,553,289	17,017	921,210,382	3.3	54,135
6/30/12	538	58,288,645	638	26,379,782	16,917	953,119,245	3.5	56,341
6/30/13	453	54,522,199	563	23,448,369	16,807	984,193,075	3.3	58,559
6/30/14	490	54,258,974	534	23,299,539	16,763	1,015,150,510	3.1	60,559
6/30/15	557	65,651,390	610	28,598,946	16,710	1,052,202,954	3.6	62,968
6/30/16 ³	498	110,481,515	561	22,667,718	16,647	1,140,016,751	8.3	68,482

¹ Balancing Item - Amounts shown include changes due to benefit finalization change 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 Ended date and are not adjusted for anticipated changes due to finalization of benefit calculation or contract settlements.

³ Beginning with the year ended June 30, 2016, the amounts in this Table include benefits payable pursuant to General Municipal Law Section 208-f.

NEW YORK CITY FIRE PENSION FUND

Table 10			
Statutory vs Actuarial Contributions			
Fiscal Year Ended	Statutory Contribution¹	Actuarial Contribution	Employer Rate of Contribution²
6/30/09	\$ 843,750,960	\$ 843,750,960	83.2%
6/30/10	874,331,450	874,331,450	82.5
6/30/11	890,706,067	890,706,067	82.2
6/30/12	976,895,415	976,895,415	85.0
6/30/13	962,173,241	962,173,241	85.2
6/30/14	969,955,923	969,955,923	88.0
6/30/15	988,783,932	988,783,932	88.9
6/30/16	1,054,477,631	1,054,477,631	93.4
6/30/17	1,061,169,993	1,061,169,993	92.6
6/30/18	1,200,417,052	1,200,417,052	103.1

¹ Represents total employer contributions accrued for fiscal year.

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

NEW YORK CITY FIRE PENSION FUND

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 Unfunded Actuarial Accrued Liabilities (UAAL), actuarial gains and losses are financed over the working lifetimes of active participants and are not identified as separate UAAL.

The funding status and funding progress information provided in this Schedule 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 Actuarial Accrued Liability (AAL). Under, the EAN cost method, the UAAL equals the AAL minus the Actuarial Value of Assets.

Table 11
Funded Status Based on Entry Age Normal Cost Method
(Dollar Amounts in Thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Entry Age Actuarial Accrued Liability (AAL) ¹ (b)	Entry Age Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage Of Covered Payroll ((b-a)/c)
June 30, 2007 (Lag)	\$6,459,130	\$11,731,140	\$5,272,010	55.1%	\$1,000,383	527.0%
June 30, 2008 (Lag)	6,942,992	12,313,206	5,370,214	56.4	1,051,592	510.7
June 30, 2009 (Lag)	7,304,758	12,864,974	5,560,216	56.8	1,079,682	515.0
June 30, 2010 (Lag) ²	7,392,656	15,349,598	7,956,942	48.2	1,138,188	699.1
June 30, 2011 (Lag) ²	7,955,668	15,808,930	7,853,262	50.3	1,125,460	697.8
June 30, 2012 (Lag) ²	8,520,769	16,358,108	7,837,339	52.1	1,106,113	708.5
June 30, 2013 (Lag) ²	9,144,587	17,003,722	7,859,135	53.8	1,129,706	695.7
June 30, 2014 (Lag) ²	9,808,854	18,028,695	8,219,841	54.4	1,150,390	714.5
June 30, 2015 (Lag) ²	10,504,728	18,688,642	8,183,914	56.2	1,164,994	702.5
June 30, 2016 (Lag) ²	11,082,451	20,125,429	9,042,978	55.1	1,180,226	766.2

This schedule is based on actuarial assumptions used for determining Employer Contributions.

¹ AAL includes the accrued liabilities attributable to the Variable Supplements Funds, net of their Actuarial Asset Values, if any.

² Reflects revised actuarial assumptions and methods based on experience review, including an AIR assumption of 7.0% per annum, net of investment expenses.

NEW YORK CITY FIRE PENSION FUND

COMPARATIVE SUMMARY OF ACCRUED LIABILITIES FUNDED BY ACTUARIAL VALUE OF ASSETS

Table 12							
Solvency Test							
(Dollar Amounts in Thousands)							
As of June 30	Accrued Liabilities for			Actuarial Value of Assets (D)	Percentage of Accrued Liabilities Funded by Actuarial Value of Assets		
	Accumulated Member Contribution (A)	Current Retirees and Beneficiaries (B)	Active Members' Employer Financed Portion (C)		(A)	(B)	(C)
2007 (Lag)	\$724,622	\$7,672,323	\$3,145,238	\$6,459,130	100%	75%	0%
2008 (Lag)	784,897	7,961,318	3,352,573	6,942,992	100	77	0
2009 (Lag)	864,004	8,188,720	3,525,921	7,304,758	100	79	0
2010 (Lag)	948,223	9,695,971	4,831,637	7,392,656	100	66	0
2011 (Lag)	1,037,070	9,949,809	4,872,536	7,955,668	100	70	0
2012 (Lag)	1,106,357	10,270,585	4,972,364	8,520,769	100	72	0
2013 (Lag)	1,182,541	10,535,634	5,180,594	9,144,587	100	76	0
2014 (Lag)	1,281,357	11,147,573	5,486,998	9,808,854	100	76	0
2015 (Lag)	1,555,635	11,602,492	5,385,217	10,504,728	100	77	0
2016 (Lag)	1,609,720	12,822,895	5,560,855	11,082,451	100	74	0

See following "SOLVENCY TEST - NOTES."

NEW YORK CITY FIRE PENSION FUND

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 retirement system's progress in accumulating assets to pay all promised benefits can be measured by comparing the Actuarial Value of Assets of the retirement system with the Accrued Liabilities for:

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

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 (ERISA).

The values in the table are dependent upon census data, benefit levels (which have changed on occasion over the past years), and the actuarial assumptions and methods employed at each valuation date. The two most recent changes in assumptions and methods occurred in the June 30, 2014 (Lag) valuation used to compute the Employer Contributions for Fiscal Year 2016 and in the June 30, 2010 (Lag) valuation used to compute the Employer Contributions for Fiscal Year 2012. These underlying bases can be found within the Comprehensive Annual Financial Report for each respective year.

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.

NEW YORK CITY FIRE PENSION FUND

CONTRIBUTIONS

A. MEMBER CONTRIBUTIONS

For Tier I and Tier II members, member contributions are made on the basis of a normal rate of contribution that is assigned by the Plan at the time of membership. The normal rate, which is dependent upon the member's age and the Plan at the time of membership, 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 date for service retirement. Members may voluntarily increase their rates of contribution by 50% for the purpose of purchasing an additional annuity.

Tier III members and Tier III Modified members contribute 3.0% of annual wages for a maximum of 25 years.

Contributions from members are recorded when the employer makes payroll deductions from Plan members. Tier I and Tier II members are permitted to borrow up to 90% of their own contributions including accumulated interest. These loans are accounted for as reductions in such member's contribution accounts.

Loans are not permitted for Tier III and Tier III Modified members.

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 employer on a current basis.

NEW YORK CITY FIRE PENSION FUND

**Table 13
Average Annual Benefit Payment Amounts**

Valuation Date	Service Retirement Benefits		Accidental (Line-of-Duty) Disability Benefits		Ordinary (Non-Line-of-Duty) Disability Benefits		Survivor Benefits	
	Number	Average Annual Allowance	Number	Average Annual Allowance	Number	Average Annual Allowance	Number	Average Annual Allowance
6/30/07 (Lag)	6,606	\$38,435	7,816	\$57,564	1,339	\$45,853	1,718	\$17,049
6/30/08 (Lag)	6,353	39,078	8,149	60,825	1,284	46,484	1,618	18,380
6/30/09 (Lag)	6,194	39,908	8,331	63,286	1,217	47,398	1,521	19,782
6/30/10 (Lag)	5,957	40,347	8,593	65,741	1,167	48,219	1,423	21,354
6/30/11 (Lag)	5,830	41,390	8,740	68,105	1,110	48,767	1,337	22,844
6/30/12 (Lag)	5,646	42,116	8,943	70,653	1,057	49,511	1,271	24,505
6/30/13 (Lag)	5,487	43,289	9,094	73,041	1,012	49,840	1,214	26,354
6/30/14 (Lag)	5,427	44,659	9,223	75,043	959	50,722	1,154	27,752
6/30/15 (Lag)	5,305	45,932	9,390	77,701	904	51,059	1,111	29,485
6/30/16 (Lag)	5,174	47,341	9,560	81,136	853	52,007	1,060	70,802

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New York City Fire Pension Funds
Comprehensive Annual Financial Report
A Pension Trust Fund of The City of New York



Appendix A

Census Data for Active Members

As of June 30, 2018

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NEW YORK CITY FIRE PENSION FUND
DATA USED IN THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION
FOR DETERMINING FINAL FISCAL YEAR 2018 EMPLOYER CONTRIBUTIONS

MALES

AGE \ SVC	UNDER 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & UP	ALL YEARS
NUMBER:										
UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	229	0	0	0	0	0	0	0	0	229
25 TO 29	951	71	0	0	0	0	0	0	0	1,022
30 TO 34	698	565	623	2	0	0	0	0	0	1,888
35 TO 39	89	346	1,643	271	4	0	0	0	0	2,353
40 TO 44	0	99	1,067	661	178	2	0	0	0	2,007
45 TO 49	0	4	225	654	492	168	0	0	0	1,543
50 TO 54	0	0	2	234	366	368	157	0	0	1,127
55 TO 59	0	0	0	5	75	166	208	65	0	519
60 TO 64	0	0	0	2	1	26	84	64	7	184
65 TO 69	0	0	1	0	1	0	2	0	0	4
70 & UP	0	0	0	0	1	0	0	0	0	1
TOTAL	1,967	1,085	3,561	1,829	1,118	730	451	129	7	10,877

SALARIES (IN THOUSANDS):

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	11,951	0	0	0	0	0	0	0	0	11,951
25 TO 29	51,398	5,068	0	0	0	0	0	0	0	56,466
30 TO 34	38,433	57,528	68,393	226	0	0	0	0	0	164,580
35 TO 39	4,939	37,352	185,824	31,848	468	0	0	0	0	260,431
40 TO 44	0	10,770	121,312	80,763	23,236	267	0	0	0	236,347
45 TO 49	0	503	25,712	79,488	66,659	23,590	0	0	0	195,952
50 TO 54	0	0	265	27,978	47,989	50,402	22,645	0	0	149,278
55 TO 59	0	0	0	635	9,782	21,385	29,251	10,514	0	71,567
60 TO 64	0	0	0	298	155	3,173	11,561	9,575	1,130	25,892
65 TO 69	0	0	153	0	155	0	283	0	0	591
70 & UP	0	0	0	0	155	0	0	0	0	155
TOTAL *	106,721	111,222	401,658	221,235	148,600	98,816	63,740	20,089	1,130	1,173,210

AVERAGE SALARIES: **

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	52,186	0	0	0	0	0	0	0	0	52,186
25 TO 29	54,046	71,385	0	0	0	0	0	0	0	55,250
30 TO 34	55,062	101,820	109,780	112,877	0	0	0	0	0	87,171
35 TO 39	55,498	107,954	113,100	117,519	117,052	0	0	0	0	110,681
40 TO 44	0	108,790	113,694	122,182	130,538	133,314	0	0	0	117,761
45 TO 49	0	125,712	114,275	121,541	135,486	140,419	0	0	0	126,994
50 TO 54	0	0	132,268	119,563	131,117	136,961	144,237	0	0	132,456
55 TO 59	0	0	0	127,038	130,426	128,825	140,629	161,749	0	137,893
60 TO 64	0	0	0	148,780	155,413	122,019	137,633	149,615	161,462	140,719
65 TO 69	0	0	152,985	0	155,413	0	141,476	0	0	147,838
70 & UP	0	0	0	0	155,413	0	0	0	0	155,413
TOTAL	54,255	102,509	112,794	120,959	132,916	135,365	141,331	155,729	161,462	107,862

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 FIRE PENSION FUND
DATA USED IN THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION
FOR DETERMINING FINAL FISCAL YEAR 2018 EMPLOYER CONTRIBUTIONS

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	0	0	0	0	0	0	0	0	0	0
20 TO 24	2	0	0	0	0	0	0	0	0	2
25 TO 29	8	1	0	0	0	0	0	0	0	9
30 TO 34	12	3	2	0	0	0	0	0	0	17
35 TO 39	4	5	5	4	0	0	0	0	0	18
40 TO 44	0	5	7	4	0	0	0	0	0	16
45 TO 49	1	0	2	4	0	0	0	0	0	7
50 TO 54	0	0	0	1	0	0	0	0	0	1
55 TO 59	0	1	0	0	0	1	0	0	0	2
60 TO 64	0	0	0	0	0	0	0	1	0	1
65 TO 69	0	0	0	1	0	0	0	0	0	1
70 & UP	0	0	0	0	0	0	0	0	0	0
TOTAL	27	15	16	14	0	1	0	1	0	74

SALARIES (IN THOUSANDS):

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	107	0	0	0	0	0	0	0	0	107
25 TO 29	431	59	0	0	0	0	0	0	0	489
30 TO 34	724	184	219	0	0	0	0	0	0	1,126
35 TO 39	220	500	562	441	0	0	0	0	0	1,723
40 TO 44	0	569	802	451	0	0	0	0	0	1,822
45 TO 49	130	0	220	566	0	0	0	0	0	916
50 TO 54	0	0	0	141	0	0	0	0	0	141
55 TO 59	0	148	0	0	0	178	0	0	0	326
60 TO 64	0	0	0	0	0	0	0	211	0	211
65 TO 69	0	0	0	154	0	0	0	0	0	154
70 & UP	0	0	0	0	0	0	0	0	0	0
TOTAL *	1,611	1,459	1,804	1,753	0	178	0	211	0	7,016

AVERAGE SALARIES: **

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	53,484	0	0	0	0	0	0	0	0	53,484
25 TO 29	53,848	58,506	0	0	0	0	0	0	0	54,365
30 TO 34	60,298	61,177	109,455	0	0	0	0	0	0	66,236
35 TO 39	54,976	99,944	112,489	110,222	0	0	0	0	0	95,720
40 TO 44	0	113,748	114,628	112,680	0	0	0	0	0	113,866
45 TO 49	129,674	0	110,163	141,421	0	0	0	0	0	130,812
50 TO 54	0	0	0	140,894	0	0	0	0	0	140,894
55 TO 59	0	148,175	0	0	0	178,273	0	0	0	163,224
60 TO 64	0	0	0	0	0	0	0	211,382	0	211,382
65 TO 69	0	0	0	154,368	0	0	0	0	0	154,368
70 & UP	0	0	0	0	0	0	0	0	0	0
TOTAL	59,663	97,245	112,755	125,182	0	178,273	0	211,382	0	94,809

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 FIRE PENSION FUND
DATA USED IN THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION
FOR DETERMINING FINAL FISCAL YEAR 2018 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	0	0	0	0	0	0	0	0	0	0
20 TO 24	231	0	0	0	0	0	0	0	0	231
25 TO 29	959	72	0	0	0	0	0	0	0	1,031
30 TO 34	710	568	625	2	0	0	0	0	0	1,905
35 TO 39	93	351	1,648	275	4	0	0	0	0	2,371
40 TO 44	0	104	1,074	665	178	2	0	0	0	2,023
45 TO 49	1	4	227	658	492	168	0	0	0	1,550
50 TO 54	0	0	2	235	366	368	157	0	0	1,128
55 TO 59	0	1	0	5	75	167	208	65	0	521
60 TO 64	0	0	0	2	1	26	84	65	7	185
65 TO 69	0	0	1	1	1	0	2	0	0	5
70 & UP	0	0	0	0	1	0	0	0	0	1
TOTAL	1,994	1,100	3,577	1,843	1,118	731	451	130	7	10,951

SALARIES (IN THOUSANDS):

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	12,058	0	0	0	0	0	0	0	0	12,058
25 TO 29	51,828	5,127	0	0	0	0	0	0	0	56,955
30 TO 34	39,157	57,712	68,612	226	0	0	0	0	0	165,706
35 TO 39	5,159	37,852	186,386	32,289	468	0	0	0	0	262,154
40 TO 44	0	11,339	122,114	81,213	23,236	267	0	0	0	238,169
45 TO 49	130	503	25,932	80,054	66,659	23,590	0	0	0	196,868
50 TO 54	0	0	265	28,119	47,989	50,402	22,645	0	0	149,419
55 TO 59	0	148	0	635	9,782	21,563	29,251	10,514	0	71,893
60 TO 64	0	0	0	298	155	3,173	11,561	9,787	1,130	26,104
65 TO 69	0	0	153	154	155	0	283	0	0	746
70 & UP	0	0	0	0	155	0	0	0	0	155
TOTAL *	108,331	112,680	403,462	222,987	148,600	98,995	63,740	20,300	1,130	1,180,226

AVERAGE SALARIES: **

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	52,197	0	0	0	0	0	0	0	0	52,197
25 TO 29	54,044	71,206	0	0	0	0	0	0	0	55,243
30 TO 34	55,150	101,605	109,779	112,877	0	0	0	0	0	86,985
35 TO 39	55,476	107,840	113,099	117,413	117,052	0	0	0	0	110,567
40 TO 44	0	109,029	113,700	122,125	130,538	133,314	0	0	0	117,731
45 TO 49	129,674	125,712	114,238	121,662	135,486	140,419	0	0	0	127,012
50 TO 54	0	0	132,268	119,654	131,117	136,961	144,237	0	0	132,464
55 TO 59	0	148,175	0	127,038	130,426	129,121	140,629	161,749	0	137,991
60 TO 64	0	0	0	148,780	155,413	122,019	137,633	150,565	161,462	141,101
65 TO 69	0	0	152,985	154,368	155,413	0	141,476	0	0	149,144
70 & UP	0	0	0	0	155,413	0	0	0	0	155,413
TOTAL	54,329	102,437	112,793	120,991	132,916	135,424	141,331	156,157	161,462	107,773

Note: Age is last birthday. Service is completed years.

* Total may not add up due to rounding.

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New York City Fire Pension Funds
Comprehensive Annual Financial Report
A Pension Trust Fund of The City of New York



Appendix B
Census Data for Pensioners
As of June 30, 2018

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NEW YORK CITY FIRE PENSION FUND
 DATA USED IN THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION
 FOR DETERMINING FINAL FISCAL YEAR 2018 EMPLOYER CONTRIBUTIONS
 SUMMARY OF PENSIONERS BY CAUSE AND GENDER

AGE	MALE			FEMALE			ALL FILES (ALL BENEFITS) BOTH MALE & FEMALE		
	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE
ACCIDENTAL DISABILITY:									
UNDER 30	0	0	0	0	0	0	0	0	0
30 TO 34	16	1,384,977	86,561	1	68,455	68,455	17	1,453,432	85,496
35 TO 39	134	11,522,474	85,989	1	117,838	117,838	135	11,640,312	86,225
40 TO 44	331	29,083,168	87,865	1	79,249	79,249	332	29,162,417	87,839
45 TO 49	717	64,914,315	90,536	1	86,246	86,246	718	65,000,561	90,530
50 TO 54	1,316	125,939,580	95,699	1	103,752	103,752	1,317	126,043,332	95,705
55 TO 59	1,862	177,307,867	95,224	6	535,654	89,276	1,868	177,843,521	95,205
60 TO 64	1,516	138,817,150	91,568	4	394,073	98,518	1,520	139,211,223	91,586
65 TO 69	893	71,237,894	79,774	6	479,320	79,887	899	71,717,214	79,774
70 TO 74	843	55,892,336	66,302	0	0	0	843	55,892,336	66,302
75 TO 79	894	49,431,438	55,292	0	0	0	894	49,431,438	55,292
80 TO 84	658	31,461,795	47,814	1	66,514	66,514	659	31,528,309	47,843
85 TO 89	245	11,575,101	47,245	0	0	0	245	11,575,101	47,245
90 & UP	113	5,162,815	45,689	0	0	0	113	5,162,815	45,689
TOTAL	9,538	773,730,910	81,121	22	1,931,101	87,777	9,560	775,662,011	81,136
ORDINARY DISABILITY:									
UNDER 30	0	0	0	0	0	0	0	0	0
30 TO 34	1	25,197	25,197	0	0	0	1	25,197	25,197
35 TO 39	3	77,577	25,859	0	0	0	3	77,577	25,859
40 TO 44	3	106,870	35,623	0	0	0	3	106,870	35,623
45 TO 49	8	278,677	34,835	0	0	0	8	278,677	34,835
50 TO 54	15	481,293	32,086	0	0	0	15	481,293	32,086
55 TO 59	37	1,020,321	27,576	1	28,968	28,968	38	1,049,289	27,613
60 TO 64	40	994,028	24,851	0	0	0	40	994,028	24,851
65 TO 69	57	2,804,094	49,195	0	0	0	57	2,804,094	49,195
70 TO 74	86	5,721,286	66,527	0	0	0	86	5,721,286	66,527
75 TO 79	210	12,596,174	59,982	0	0	0	210	12,596,174	59,982
80 TO 84	203	11,081,043	54,586	0	0	0	203	11,081,043	54,586
85 TO 89	135	6,772,748	50,169	0	0	0	135	6,772,748	50,169
90 & UP	54	2,373,463	43,953	0	0	0	54	2,373,463	43,953
TOTAL	852	44,332,771	52,034	1	28,968	28,968	853	44,361,739	52,007
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	8	454,019	56,752	1	67,118	67,118	9	521,137	57,904
45 TO 49	63	3,951,635	62,724	0	0	0	63	3,951,635	62,724
50 TO 54	184	12,590,752	68,428	0	0	0	184	12,590,752	68,428
55 TO 59	581	36,546,958	62,904	1	56,540	56,540	582	36,603,498	62,893
60 TO 64	652	38,120,778	58,467	3	127,514	42,505	655	38,248,292	58,394
65 TO 69	616	32,033,143	52,002	2	66,923	33,462	618	32,100,066	51,942
70 TO 74	766	35,546,109	46,405	0	0	0	766	35,546,109	46,405
75 TO 79	955	38,226,552	40,028	1	34,760	34,760	956	38,261,312	40,022
80 TO 84	762	27,644,721	36,279	0	0	0	762	27,644,721	36,279
85 TO 89	375	12,864,266	34,305	0	0	0	375	12,864,266	34,305
90 & UP	204	6,610,863	32,406	0	0	0	204	6,610,863	32,406
TOTAL	5,166	244,589,796	47,346	8	352,855	44,107	5,174	244,942,651	47,341

NEW YORK CITY FIRE PENSION FUND
 DATA USED IN THE JUNE 30, 2016 (LAG) ACTUARIAL VALUATION
 FOR DETERMINING FINAL FISCAL YEAR 2018 EMPLOYER CONTRIBUTIONS
 SUMMARY OF PENSIONERS BY CAUSE AND GENDER

AGE	MALE			FEMALE			ALL FILES (ALL BENEFITS) BOTH MALE & FEMALE		
	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE
ACCIDENTAL DEATH:									
UNDER 30	1	76,270	76,270	3	168,037	56,012	4	244,307	61,077
30 TO 34	0	0	0	0	0	0	0	0	0
35 TO 39	0	0	0	3	291,427	97,142	3	291,427	97,142
40 TO 44	0	0	0	48	4,168,538	86,845	48	4,168,538	86,845
45 TO 49	0	0	0	73	7,322,101	100,303	73	7,322,101	100,303
50 TO 54	0	0	0	107	11,683,582	109,192	107	11,683,582	109,192
55 TO 59	0	0	0	116	14,168,001	122,138	116	14,168,001	122,138
60 TO 64	1	73,264	73,264	67	8,286,695	123,682	68	8,359,959	122,941
65 TO 69	2	120,486	60,243	51	6,111,313	119,830	53	6,231,799	117,581
70 TO 74	0	0	0	49	5,268,283	107,516	49	5,268,283	107,516
75 TO 79	1	73,133	73,133	46	4,223,306	91,811	47	4,296,439	91,414
80 TO 84	0	0	0	35	2,818,170	80,519	35	2,818,170	80,519
85 TO 89	0	0	0	12	882,283	73,524	12	882,283	73,524
90 & UP	0	0	0	18	675,574	37,532	18	675,574	37,532
TOTAL	5	343,153	68,631	628	66,067,310	105,203	633	66,410,463	104,914
OTHER BENEFICIARIES:									
UNDER 30	0	0	0	3	220,896	73,632	3	220,896	73,632
30 TO 34	0	0	0	3	170,870	56,957	3	170,870	56,957
35 TO 39	0	0	0	1	65,085	65,085	1	65,085	65,085
40 TO 44	0	0	0	0	0	0	0	0	0
45 TO 49	0	0	0	3	222,028	74,009	3	222,028	74,009
50 TO 54	1	23,535	23,535	8	445,060	55,633	9	468,595	52,066
55 TO 59	0	0	0	20	807,496	40,375	20	807,496	40,375
60 TO 64	0	0	0	21	680,528	32,406	21	680,528	32,406
65 TO 69	0	0	0	22	834,508	37,932	22	834,508	37,932
70 TO 74	0	0	0	38	1,267,144	33,346	38	1,267,144	33,346
75 TO 79	0	0	0	47	1,404,076	29,874	47	1,404,076	29,874
80 TO 84	0	0	0	45	804,618	17,880	45	804,618	17,880
85 TO 89	0	0	0	53	604,222	11,400	53	604,222	11,400
90 & UP	0	0	0	162	1,089,821	6,727	162	1,089,821	6,727
TOTAL	1	23,535	23,535	426	8,616,352	20,226	427	8,639,887	20,234
ALL PENSIONERS AND BENEFICIARIES:									
UNDER 30	1	76,270	76,270	6	388,933	64,822	7	465,203	66,458
30 TO 34	17	1,410,174	82,951	4	239,325	59,831	21	1,649,499	78,548
35 TO 39	137	11,600,051	84,672	5	474,350	94,870	142	12,074,401	85,031
40 TO 44	342	29,644,057	86,679	50	4,314,905	86,298	392	33,958,962	86,630
45 TO 49	788	69,144,627	87,747	77	7,630,375	99,096	865	76,775,002	88,757
50 TO 54	1,516	139,035,160	91,712	116	12,232,394	105,452	1,632	151,267,554	92,688
55 TO 59	2,480	214,875,146	86,643	144	15,596,659	108,310	2,624	230,471,805	87,832
60 TO 64	2,209	178,005,220	80,582	95	9,488,810	99,882	2,304	187,494,030	81,378
65 TO 69	1,568	106,195,617	67,727	81	7,492,064	92,495	1,649	113,687,681	68,943
70 TO 74	1,695	97,159,731	57,321	87	6,535,427	75,120	1,782	103,695,158	58,190
75 TO 79	2,060	100,327,297	48,703	94	5,662,142	60,236	2,154	105,989,439	49,206
80 TO 84	1,623	70,187,559	43,246	81	3,689,302	45,547	1,704	73,876,861	43,355
85 TO 89	755	31,212,115	41,341	65	1,486,505	22,869	820	32,698,620	39,876
90 & UP	371	14,147,141	38,132	180	1,765,395	9,808	551	15,912,536	28,879
TOTAL	15,562	1,063,020,165	68,309	1,085	76,996,586	70,965	16,647	1,140,016,751	68,482

New York City Fire Pension Funds
Comprehensive Annual Financial Report
A Pension Trust Fund of The City of New York



Statistical Section

Part V

Fiscal Year Ended June 30, 2018

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The Statistical Section Narrative

The Statistical section of the New York City Fire Pension Fund's Comprehensive Annual Financial Report presents detailed information related to the financial statements, as well as highlights of the actuarial valuations. The data provided is a useful source in determining the fund's economic condition. The schedules are organized into four categories: Operating information, Demographic and Economic information, Financial trends and Revenue capacity.

Operating information

The operating information gives users an indication of how the information in the financial statements relate to the activities of the fund. The schedules show data on benefit ranges, years of credited service, types of retirement and options selected and the amount of monthly, annual or average benefit paid to each group of retirees and beneficiaries. The data is presented for the fiscal period or over a ten year period.

Demographic and economic information

The demographic and economic categories present data to give users an understanding of the environment in which the pension plan operates. This is done mainly through the breakdown of the population groups in the plan membership. The schedules present the number of members and beneficiaries grouped according to several indicators including average monthly or annual salaries or age participating in the pension the plan, for the fiscal period or over a ten-year period.

Financial Trends

The schedules of trend data provide financial and actuarial data for the most current ten-year period. This data shows the changes in benefit types and changes in the plan's performance over time, as relates to revenues received benefits and expenses paid and net assets.

Revenue Capacity

Revenue capacity information helps users evaluate the different sources of revenues for the plan. The schedules show the sources and the changes in the level of revenues over time. The main sources of revenues for the plan are investment income and employer contributions.

TABLE OF BENEFIT EXPENSES BY TYPE

(In thousands)

FISCAL YEAR	Service Retirement Payments	Ordinary Disability Payments	Accidental Disability Payments	Payments for Death in Duty	Payments of Deceased Service and Disability		Death Benefits Lump Sum Payments	Other Benefits *	Total
					Service and Disability	Disability			
2009	249,084	58,392	524,425	51,974	14,353	4,219	26,006	928,453	
2010	244,502	56,905	552,814	54,069	14,426	3,454	28,603	954,773	
2011	240,312	55,019	587,885	55,488	13,723	1,279	29,768	983,474	
2012	239,786	53,002	621,698	57,614	13,923	1,353	50,213	1,037,589	
2013	237,294	51,273	659,243	59,888	14,646	1,371	112,289	1,136,004	
2014	239,234	49,456	681,196	61,951	5,592	11,354	122,546	1,171,329	
2015	241,393	47,378	709,488	63,918	5,652	12,038	140,023	1,219,890	
2016	244,561	44,938	764,129	66,417	5,384	14,301	218,701	1,358,431	
2017	251,909	43,145	825,388	68,766	5,812	12,550	127,237	1,334,807	
2018	254,855	40,537	848,665	72,357	5,831	13,267	143,575	1,379,087	

* This represents VSF payments to firefighters, fire officers and other payments.

TABLE OF RETIRED MEMBERS AND BENEFICIARIES BY TYPE OF BENEFIT

FISCAL YEAR 2018

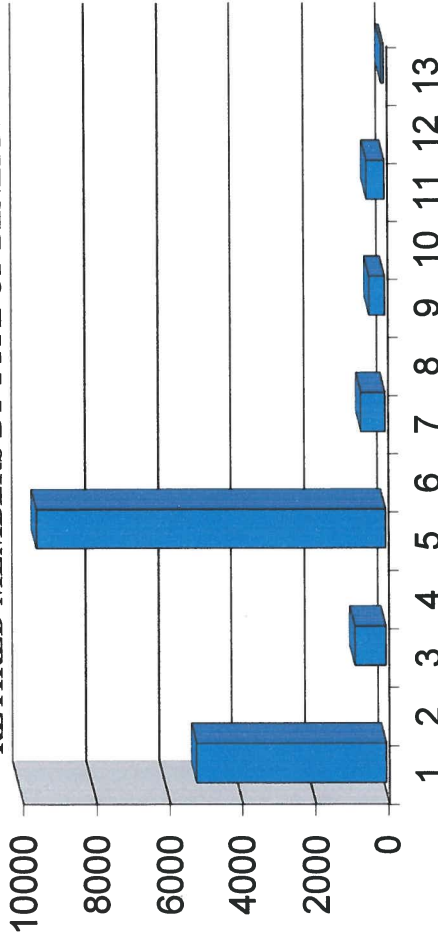
TOTAL NUMBERS RETIREES AND BENEFICIARIES	SERVICE RETIREES (1)	ORDINARY DISABILITY RETIREES (1)	ACCIDENTAL DISABILITY RETIREES (1)	LINE OF DUTY BENEFITS	SERVICE BENEFICIARIES	ACCIDENTAL BENEFICIARIES	ORDINARY BENEFICIARIES	OTHER BENEFITS {2}
17,226	5,001	735	9,860	673	361	535	61	-

ANNUAL PAYROLL AMOUNT

(in thousands)

1,379,087	\$	254,855	\$	40,537	\$	848,665	\$	72,357	\$	5,831	\$	11,936	\$	1,331	\$	143,575
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RETIRED MEMBERS BY TYPE OF BENEFIT



SEE RETIREMENT BENEFIT BELOW

Type of Retirement

- 1 - Service retirement (20 yrs or over)
- 2 - Ordinary Disability (Non - Line of Duty)
- 3 - Accidental Disability (Line of Duty)
- 4 - Line of Duty benefits for surviving spouse
- 5 - Survivors of Service Retirees
- 6 - Survivors of Accidental Disability retirees
- 7 - Survivors of Ordinary Disability retirees

(1) Includes Maximum Allowance and Options.

(2) Includes City Supplements, Return of Contributions Vouchers and payments to FF, FO Variable Supplements Funds.

TABLE OF RETIRED MEMBERS AND BENEFICIARIES BY TYPE OF OPTION SELECTED

FISCAL YEAR 2018

TOTAL NUMBER OF RETIRES AND BENEFICIARIES	MAXIMUM ALLOWANCE (1)	OPTION ONE	OPTION TWO	OPTION THREE	OPTION FOUR	POP - UP OPTION	LINE OF DUTY BENEFICIARIES (1)	BENEFICIARIES	OTHER BENEFITS (2)
17,226	14,215	9	296	346	946	18	673	723	-

ANNUAL PAYROLL AMOUNT

\$ 1,379,087	\$ 1,034,203	\$ 386	\$ 17,585	\$ 23,475	\$ 74,857	\$ 1,103	\$ 72,357	\$ 11,546	\$ 143,575
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(1) Includes Subchapter I and II.

(2) Includes City Supplements, Return of Contributions Vouchers and payments to FF, FO Variable Supplement Funds.

Note: Option figures include Retirees and Beneficiaries.

Statistical Section

New York City Fire Pension Funds

New York Fire Department Pension Funds
Retired Members by Type of Benefit
As of June 30, 2018

Amount of Monthly Benefits	Number of Retired Members	Type of Retirement							Option Selected				POP - UPS		
		1	2	3	4	5	Unmodified	7	1	2	3	4			
\$ 38,767	7	-	-	-	4	3	3	3	-	-	-	-	-	-	-
137,458	21	-	1	17	-	3	3	21	-	-	-	-	-	-	-
1,006,200	142	-	3	135	3	1	1	(264)	-	-	-	-	406	-	-
2,829,914	392	-	3	332	48	-	-	134	-	3	124	33	237	6	8
6,397,917	865	63	8	718	73	3	3	584	-	6	33	46	14	3	1
12,605,630	1,672	184	15	1,317	147	9	9	1,612	-	38	16	21	8	3	3
19,205,984	2,624	582	38	1,868	116	20	20	2,553	-	40	21	77	221	17	6
15,624,503	2,604	655	40	1,820	68	21	21	2,535	-	2	17	29	17	8	3
9,473,973	1,649	618	57	899	53	22	22	1,349	-	17	72	24	4	1	1
8,641,263	1,609	593	86	843	49	38	38	1,546	-	2	17	29	17	8	3
8,832,453	2,036	956	92	894	47	47	47	1,958	-	24	4	816	1,080	1	1
1,704	1,704	762	203	659	35	45	45	1,680	-	9	346	946	18	18	18
820	820	375	135	245	12	53	53	816	-	1	296	946	18	18	18
1,326,045	1,081	204	54	113	18	692	692	1,080	-	1	346	946	18	18	18
Total	17,226	5,001	735	9,860	673	957	957	15,611	9	296	346	946	18	18	18

a Type of retirement:

- 1 - Service retirement
- 2 - Ordinary Disability
- 3 - Accidental Disability
- 4 - Line of Duty (Accidental Death)
- 5 - Beneficiaries (All)

b Option selected:

- The following options reduce the retired member's monthly benefits
- Option 1** - Provides a member with a retirement allowance payable for life which is less than the Maximum Allowance.
 - Option 2** - Provides a member with a reduced retirement allowance with the provision that upon his or her death the same allowance will continue to be paid to his or her beneficiary for life.
 - Option 3** - Provides a member with a retirement allowance reduce from the Maximum Allowance, with the provision that one half of the allowance will continue to be paid to the member's beneficiary for life.
 - Option 4** - This option provides, upon the member's death, payment of a specified benefit or benefits actuarially sound and approved by the Actuary and the Board of Trustees.

POP - UP - (refer to Option 4-2 and Option 4-3) These are called the "POP - UPS" because they are variations of Option 2 and 3 and provide that if the beneficiary predeceases the retiree, then the retirement allowance will "Pop - Up" to the level of the Maximum Retirement Allowance.

Exhibit 4

Statistical Section

New York City Fire Pension Funds

New York Fire Department Pension Funds
Average Benefit Payments
Last Ten Years

Exhibit 5

Retirement Effective Dates	Age Credited Service										90 & Up			
	Under 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74		75-79	80-84	85-89
Period 7/1/08 to 6/30/09														
Average monthly benefit	3,881	3,642	4,572	5,195	5,309	5,284	5,037	4,679	4,045	3,535	3,210	2,814	2,188	1,288
Average final salary	46,577	43,706	54,866	62,342	63,710	63,414	60,442	56,147	48,542	42,422	38,524	33,766	26,253	15,461
Number of retired members	7	43	234	629	1,306	2,230	1,734	1,823	2,270	2,585	1,739	1,266	816	764
Period 7/1/09 to 6/30/10														
Average monthly benefit	3,843	3,606	4,527	5,144	5,257	5,231	4,985	4,633	4,005	3,500	3,179	2,786	2,166	1,272
Average final salary	46,116	43,273	54,323	61,725	63,079	62,774	59,823	55,591	48,061	42,002	38,143	33,432	25,993	15,262
Number of retired members	7	45	232	618	1,304	2,155	1,640	1,749	2,268	2,466	1,745	1,290	854	787
Period 7/1/10 to 6/30/11														
Average monthly benefit	3,570	4,613	4,923	5,415	5,764	5,663	5,576	4,958	4,355	3,754	3,316	3,003	2,562	1,424
Average final salary	42,838	55,350	59,071	64,974	69,172	67,956	66,907	59,497	52,262	45,042	39,791	36,036	30,744	17,090
Number of retired members	11	32	197	517	1,162	2,254	1,916	1,674	2,014	2,602	1,994	1,220	799	748
Period 7/1/11 to 6/30/12														
Average monthly benefit	3,570	4,613	4,923	5,415	5,764	5,663	5,576	4,958	4,355	3,754	3,316	3,003	2,562	1,424
Average final salary	42,838	55,350	59,071	64,974	69,172	67,956	66,907	59,497	52,262	45,042	39,791	36,036	30,744	17,090
Number of retired members	11	52	206	527	1,180	2,002	2,315	1,694	2,033	2,448	2,001	1,364	854	717
Period 7/1/12 to 6/30/13														
Average monthly benefit	3,880	5,217	5,070	5,597	5,949	5,922	5,798	5,120	4,547	3,868	3,393	3,136	2,677	1,554
Average final salary	46,557	62,607	60,835	67,165	71,384	71,061	69,575	61,443	54,564	46,410	40,720	37,635	32,129	18,647
Number of retired members	17	50	187	522	1,291	2,167	2,074	1,750	1,908	2,361	2,085	1,369	763	720
Period 7/1/13 to 6/30/14														
Average monthly benefit	4,339	5,345	5,390	5,891	6,164	6,247	5,985	5,389	4,707	4,047	3,477	2,504	2,848	1,665
Average final salary	52,071	64,141	64,676	70,690	73,963	74,966	71,820	64,663	56,485	48,563	41,721	30,051	34,179	19,983
Number of retired members	10	28	153	506	1,092	1,955	2,366	1,633	1,861	2,361	2,161	1,302	828	661
Period 7/1/14 to 6/30/15														
Average monthly benefit	3,784	6,265	5,642	6,154	6,412	6,483	6,250	5,630	4,934	4,160	3,647	3,319	2,909	1,796
Average final salary	45,403	75,176	67,703	73,851	76,940	77,791	75,001	67,562	59,212	49,922	43,759	39,829	34,909	21,546
Number of retired members	11	31	130	486	1,021	1,792	2,575	1,722	1,726	2,210	2,269	1,391	818	625
Period 7/1/15 to 6/30/16														
Average monthly benefit	3,697	6,148	6,172	6,280	6,525	6,707	6,446	5,919	5,120	4,306	3,764	3,386	3,022	1,958
Average final salary	44,368	73,776	74,066	75,361	78,296	80,481	77,355	71,026	61,435	51,672	45,170	40,633	36,269	23,493
Number of retired members	10	21	136	448	943	1,689	2,733	1,816	1,705	2,069	2,288	1,483	821	601
Period 7/1/16 to 6/30/17														
Average monthly benefit	3,426	6,515	6,518	6,366	6,716	6,959	6,677	6,295	5,302	4,491	3,873	3,440	3,099	2,206
Average final salary	41,117	78,179	78,217	76,386	80,588	83,508	80,121	75,542	63,626	53,892	46,477	41,275	37,193	26,466
Number of retired members	9	23	144	429	890	1,634	2,723	2,069	1,644	1,890	2,283	1,595	794	583
Period 7/1/17 to 6/30/18														
Average monthly benefit	5,538	6,546	7,086	7,219	7,396	7,724	7,319	6,782	5,745	4,849	4,101	3,613	3,323	2,407
Average final salary	66,458	78,548	85,031	86,630	88,757	92,688	87,832	81,378	68,943	58,190	49,206	43,355	39,876	28,879
Number of retired members	7	21	142	392	865	1,632	2,624	2,304	1,649	1,782	2,154	1,704	820	551

Source: Office of the Actuary City of New York.
Lag 2016 for determining Final Fiscal Year 2018 Employer Contributions

New York Fire Department Pension Funds
Benefit and Refund Deductions from Net Position by Type
Last Ten Fiscal Years
(In thousands)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Exhibit 6
Type of Benefit:											
Age and service benefits:											
Retirees	249,084	244,502	240,312	239,786	308,667	239,234	241,393	244,561	251,909	254,855	
Survivors	10,212	10,040	5,990	5,847	5,776	5,592	5,652	5,384	5,812	5,831	
Death in service benefits	51,974	54,069	55,488	57,614	59,888	61,951	63,918	66,417	68,766	72,357	
Disability benefits:											
Retirees - duty	524,425	552,814	587,885	621,698	659,243	681,196	709,488	764,129	825,388	848,665	
Retirees - nonduty	58,392	56,905	55,019	53,002	51,273	49,456	47,378	44,938	43,145	40,537	
Survivors	4,141	4,386	1,279	1,353	1,371	1,716	1,793	1,794	1,420	1,331	
Total benefits	\$ 898,228	\$ 922,716	\$ 945,973	\$ 979,300	\$ 1,086,218	\$ 1,039,145	\$ 1,069,622	\$ 1,127,223	\$ 1,196,440	\$ 1,223,576	
Type of Refunds											
Death	4,219	3,454	7,733	8,076	8,870	9,638	10,245	12,507	11,130	11,936	
Other benefits	26,006	28,603	29,768	50,213	40,916	122,546	140,023	218,701	127,237	143,575	
Total refunds	\$ 30,225	\$ 32,057	\$ 37,501	\$ 58,289	\$ 49,786	\$ 132,184	\$ 150,268	\$ 231,208	\$ 138,367	\$ 155,511	
Total Benefits and Refunds	\$ 928,453	\$ 954,773	\$ 983,474	\$ 1,037,589	\$ 1,136,004	\$ 1,171,329	\$ 1,219,890	\$ 1,358,431	\$ 1,334,807	\$ 1,379,087	

Source Fire Department New York.

Statistical Section

New York City Fire Pension Funds

SCHEDULE OF AVERAGE ANNUAL BENEFIT PAYMENT AMOUNTS

Fiscal Year	Service Retirement Benefits		Accidental (Duty) Disability Benefits		Ordinary (Non Duty) Disability Benefits		Survivor's Benefits *	
	Numbers	Average Annual Allowance	Number	Average Annual Allowance	Number	Average Annual Allowance	Number	Average Annual Allowance
2009 (Lag)	6,194	39,908	8,331	63,286	1,217	47,398	1,521	19,782
2010 (Lag)	5,957	40,447	8,593	65,741	1,167	48,219	1,423	21,354
2011	5,837	41,170	8,712	67,480	1,110	49,557	1,414	49,144
2012	5,667	41,080	8,912	69,760	1,058	50,096	1,767	41,251
2013	5,487	43,247	9,064	72,723	1,010	50,765	1,703	44,571
2014	5,433	44,033	9,194	63,215	958	51,624	1,695	46,370
2015	5,312	45,443	9,366	75,751	905	52,351	1,678	48,632
2016	5,188	44,659	9,548	75,043	853	50,722	1,641	53,748
2017	5,089	45,932	9,723	77,701	792	51,059	1,623	56,153
2018	5,001	47,341	9,860	81,136	735	52,007	1,630	125,148

* Includes World Trade Center Benefits

NEW YORK CITY FIRE PENSION FUNDS QPP

Schedule of Changes in Net Position

(In thousands)

Year Ended	Additions to Funds Net Position						Deductions from Funds Net Position						Change in Net Position
	Member Contributions	Employer Contributions	Net Investment Income/(Loss)	Other Income	Total Additions	Benefit Payments	Refunds	Administrative Expenses	City Supplement and Parity	Total Deductions			
2009	84,357	843,751	(1,282,917)	42,729	(312,080)	927,819	325	248	61	928,453	(1,240,533)		
2010	89,223	874,331	818,201	34,990	1,816,745	953,990	510	237	36	954,773	861,972		
2011	94,893	890,706	1,472,892	41,887	2,500,378	982,962	276	236	-	983,474	1,516,904		
2012	98,494	976,895	93,548	37,661	1,206,598	1,036,806	443	340	-	1,037,589	169,009		
2013	104,816	962,173	961,192	38,965	2,067,146	1,063,349	816	445	21	1,064,631	1,002,515		
2014	108,859	969,956	1,569,013	39,980	2,687,808	1,218,415	184	477	86	1,219,162	1,468,646		
2015	108,582	988,784	271,430	41,201	1,409,997	1,189,926	186	313	80	1,190,505	219,492		
2016	116,619	1,054,478	197,398	43,673	1,412,168	1,325,938	939	786	72	1,327,735	84,433		
2017	108,368	1,061,170	1,284,871	47,284	2,501,593	1,309,624	1,190	685	61	1,311,560	1,190,133		
2018	108,338	1,200,417	1,188,860	9,411	2,507,026	1,321,565	1,850	6,412	52	1,329,879	1,177,147		

FIRE FIGHTER'S VARIABLE SUPPLEMENTS FUND

Schedule of Changes in Net Position

(In thousands)

Year Ended	Additions to Funds Net Position				Deductions from Funds Net Position			Change in Net Position
	Net Investment Income/(Loss)	Other Income	Transfer Skim Earning	Total Additions	Benefit Payments	Total Deductions		
2009	(94,098)	788		(93,310)	51,106	51,106	(144,416)	
2010	65,678	261		65,939	50,507	50,507	15,432	
2011	100,709	313		101,022	47,793	47,793	53,229	
2012	6,965	309		7,274	48,613	48,613	(41,339)	
2013	46,267	290		46,557	48,539	48,539	(1,982)	
2014	68,971	56	110,000	179,027	50,425	50,425	128,602	
2015	18,661	227	30,000	48,888	47,415	47,415	1,473	
2016	4,325	344	18,739	23,408	46,002	46,002	(22,594)	
2017	46,467	288	23,914	70,669	47,273	47,273	23,396	
2018	35,168	238	15,000	50,406	46,572	46,572	3,834	

Statistical Section

New York City Fire Pension Funds

FIRE OFFICERS' VARIABLE SUPPLEMENTS FUND

Schedule of Changes in Net Position

(In thousands)

Year Ended	Additions to Funds Net Position					Deductions from Funds Net Position			Change in Net Position
	Net Investment Income/(Loss)	Other Income	Transfer Skim Earning	Total Additions	Benefit Payments	Total Deductions			
2009	(54,973)	367		(54,606)	22,525	22,525	(77,131)		
2010	35,286	132		35,418	22,897	22,897	12,521		
2011	58,800	180		58,980	21,014	21,014	37,966		
2012	4,723	193		4,916	21,986	21,986	(17,070)		
2013	34,492	190		34,682	22,834	22,834	11,848		
2014	51,265	180	10,000	61,445	21,742	21,742	39,703		
2015	12,056	193	10,000	22,249	21,970	21,970	279		
2016	758	279	18,134	19,171	21,567	21,567	(2,396)		
2017	39,855	240	21,829	61,924	21,717	21,717	40,207		
2018	25,303	162	-	25,465	24,048	24,048	1,417		

NEW YORK CITY FIRE PENSION FUNDS

SCHEDULE OF REVENUES BY SOURCE

(in thousands)

Fiscal Year Ended June 30	Member Contributions	Employer Contributions	Other Income/(Loss)	Interest and Dividends	Appreciation (Depreciation) In fair value of investments	Total	% of Annual Covered Payroll
2009	84,357	843,751	30,545	187,040	(1,457,773)	(312,080)	N/A
2010	89,223	874,331	10,319	176,097	666,775	1,816,745	N/A
2011	94,893	890,706	17,668	192,667	1,304,444	2,500,378	N/A
2012	98,494	976,895	9,756	220,373	(98,920)	1,206,598	N/A
2013	104,816	962,173	6,469	255,805	819,122	2,148,385	N/A
2014	108,859	969,956	(3,557) *	277,940	1,455,082	2,808,280	N/A
2015	108,582	988,784	(21,420)	361,802	3,386	1,441,134	N/A
2016	116,619	1,054,478	3,768	302,881	(59,872)	1,417,874	N/A
2017	108,368	1,061,170	(31,590)	314,960	1,135,635	2,588,543	N/A
2018	108,338	1,200,417	(83,037)	349,627	992,552	2,567,897	N/A

* Other Income/(loss) Included.

Source: Combined Statement of Changes in Fiduciary Net Position

NEW YORK CITY FIRE PENSION FUNDS

SCHEDULE OF EXPENSES BY TYPE

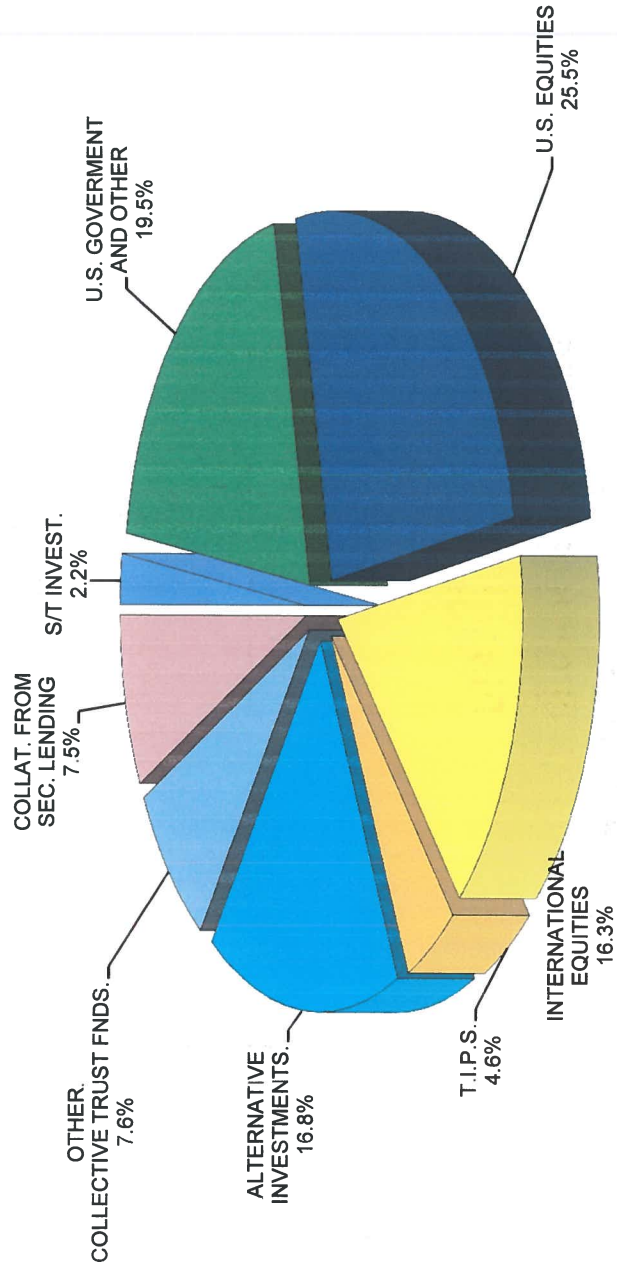
(in thousands)

Fiscal Year Ended June 30	Benefit Payments	Refunds	Administrative Expenses	Other Payments	Total
2008	914,569	418	200	38	915,225
2009	927,819	325	248	61	928,453
2010	953,990	510	237	36	954,773
2011	982,962	276	236	-	983,474
2012	1,036,806	443	340	-	1,037,589
2013	1,134,722	816	445	21	1,136,004
2014	1,170,582	184	477	86	1,171,329
2015	1,219,311	186	313	80	1,219,890
2016	1,356,634	939	786	72	1,358,431
2017	1,332,871	1,190	685	61	1,334,807
2018	1,370,773 **	1,850	6,412	52	1,379,087

** Includes additional expenses related to Corpus funding effective September 2016

TOTAL INVESTMENTS FISCAL YEAR 2018 Fire Funds Combined

(At Market Value)



INVESTMENT INCOME

Fire Funds Combined
Fiscal Year 2018

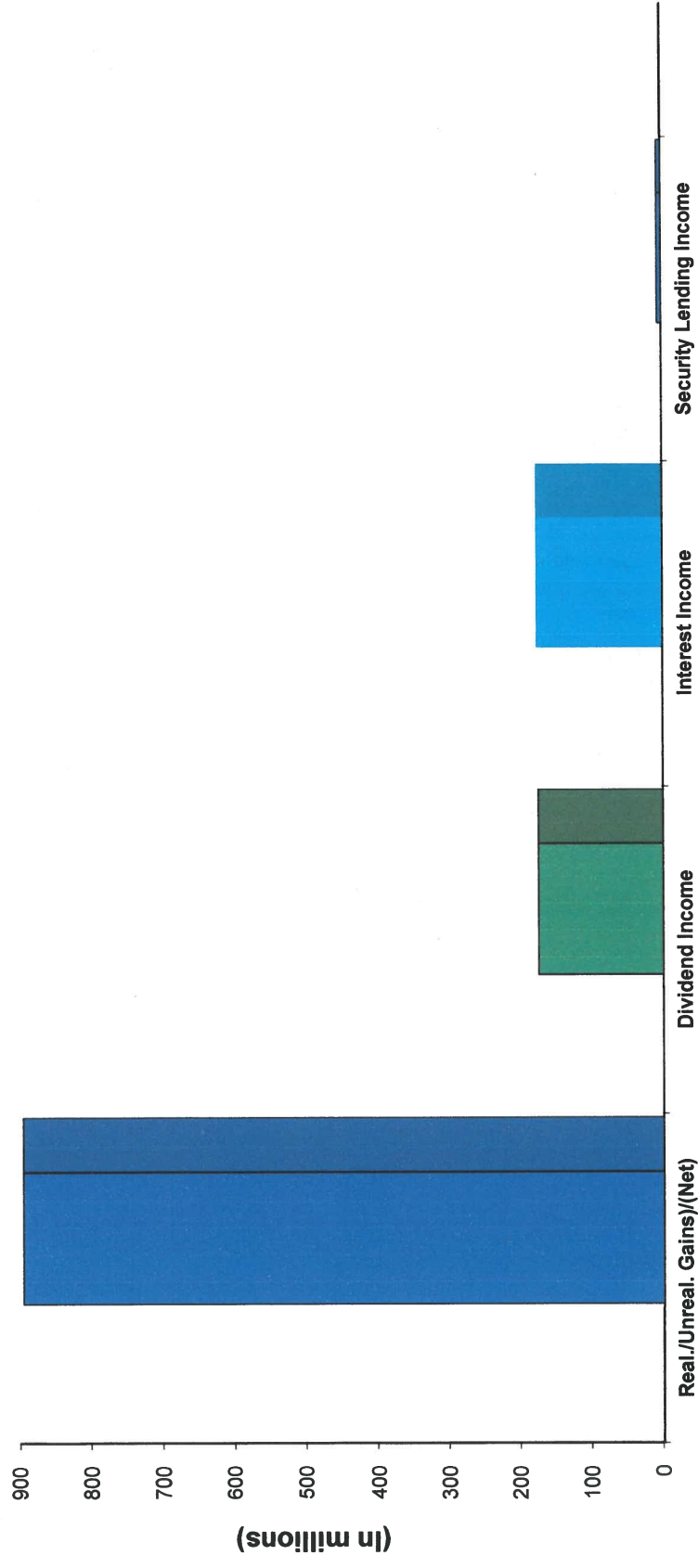


Table of Compensation to Administrative Officials & Commissions & Payments
To Brokers and Consultants
Fiscal Year ended June 30, 2018

<u>Official Plan Position</u>	<u>Salary or Allowance Paid</u>
Pension Fund Administrative Expenses	\$ 6,412,364 *
Comptroller's Office Executive Management Costs	16,465
First Deputy Personal Service Costs	102,279
Financial Information Service Agency (FISA)	560,280
Office of Payroll Administration (OPA)	43,190
Deputy Comptroller Asset Management (Personal Service Costs)	461,922
Deputy Comptroller Asset Management (Outside Service Costs)	867,053
Administrative Support Cost	1,196
Office of management and Budget	84,065
Legal Advisors	135,180
Investment Advisors	97,588,000 *
Securities Lending Fees	572,000 *
Total	\$ 106,843,994

*Except for Administrative Expenses, Investment advisors and Securities Lending fees these expenses were charged to other City Agencies on behalf of the New York City Fire Pension Funds