# **New York Fire Department Pension Funds**



Comprehensive Annual Financial Report

A Pension Trust Fund of The City of New York

For The Fiscal Years Ended

June 30, 2016 and June 30, 2015

Daniel A. Nigro
Fire Commissioner
and Chairperson of the Board of Trustees
City of New York

# **New York Fire Department Pension Funds**

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# Comprehensive Annual Financial Report A Pension Trust Fund of The City of New York For Fiscal Years Ended

June 30, 2016 and June 30, 2015

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New York Fire Department 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, 2016

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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, 2015

Executive Director/CEO

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December 27, 2016

TO: ALL MEMBERS OF THE NEW YORK FIRE DEPARTMENT PENSION FUNDS

RE: PENSION FUNDS COMPREHENSIVE ANNUAL FINANCIAL REPORT FOR FISCAL YEAR 2016

I am pleased to present the New York Fire Department Pension Funds Comprehensive Annual Financial Report for the Fiscal Year ended June 30, 2016. This report accurately discloses the results of operations and the financial position of the Funds. I believe you will find the financial, investment, actuarial and statistical information and disclosures within this report to be both interesting and useful.

The external auditors, Marks Paneth LLP, confirm in their Independent Auditors' Report on the financial condition of the Funds for Fiscal Year 2016 that we have adhered to and presented the financial statements in conformity with accounting principles generally accepted in the United States of America.

In our ever-changing environment, growing demand for member services has been a challenge for the Pension Bureau. However, management is continuously focused on its commitment to provide members with outstanding services. The self-service portal, introduced by management, offers a wide array of services and continues to grow more popular with members, as they discover the convenience of using the system. This development, coupled with the cooperative efforts of our administrators and staff has enhanced customer service delivery and allows the Bureau to satisfy the needs of our members.

As Fire Commissioner and Chairperson of the Board of Trustees, I wish to express our sincere appreciation to all active and retired uniformed members for their valuable contributions to the Fire Department and The City of New York.

Sincerely,

Daniel A. Nigro

Chairperson of the Board of Trustees

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December 27, 2016

TO: The Board of Trustees

New York Fire Department Pension Funds

I hereby submit the Comprehensive Annual Financial Report ("CAFR") of the New York Fire Department Pension Funds ("Fire" or the "Funds"), for the Fiscal Year ended June 30, 2016. Our CAFR, referred to as the New York Fire Department Pension Funds' CAFR, reports combined financial statements and disclosures for the New York Fire Department Pension Fund qualified pension plan ("QPP") and two additional funds administered by Fire: the New York City Fire Department Firefighters' Variable Supplements Fund ("FFVSF") and the New York City Fire Department 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's Discussion and Analysis (MD&A) presented in the financial section.

### **Profile of the Funds**

The New York Fire Department Pension Fund, also 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 fund the benefits, and the Pension Fund became actuarially unsound.

### **New York Fire Department Pension Funds**

### Introductory Section

Pursuant to an Increased-Take-Home-Pay ("ITHP") provision established under Section 13-326 of the New York City Administrative Code, members' contributions were reduced by 2½ % of their earnings. The ITHP rate has since been increased from 2½ % to 5%, under the provisions of Chapter 373 of the Laws of 2000. Additional City funding made up the reduction in the amount of member contributions.

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

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

### **Current Initiatives**

Management's goal is to administer the Plan in a manner that will ensure accurate and timely payment of benefits and supplemental payments to retirees and beneficiaries and to deliver a level of service that keeps pace with the changing needs of members. The highlights of our accomplishments during the past year evidence our commitment.

### 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 from the Fire Department intranet and may be accessed from computers at the firehouses. The portal allows members to download their Annual Pension Statements, manuals and forms, view updated account details and get current estimates of their retirement benefits.

### New Member Applications

During Fiscal Year 2016, the pension managers and key personnel of our unit successfully completed the task of processing over 600 new membership applications. The Bureau conducted a total of two classes for probationary firefighters hired by the Fire Department during the period. These firefighters have since become members of the pension system under the new Tier 3 modified (Tier 6) legislation.

### Retirement Counseling

The Retirement Counseling Unit advised many prospective retirees and processed retirement applications for over 400 members during Fiscal Year 2016. These applicants are now receiving 90% of their expected retirement benefit, pending finalization.

### **Finalizations**

There was increased activity in the Calculations and Pension Payroll Units due to contract settlements by the Firefighters' union. The union settled contracts for December 2010 through December 2017. The units were able to finalize approximately 700 retirees and beneficiaries who were receiving 90% of their benefits. These retirees and beneficiaries now receive the full amount of their benefits.

### **Financial Information**

### Economic Conditions in Fiscal Year 2016 and Outlook for Fiscal Year 2017

Economic conditions significantly impact investment markets and ultimately the earnings of our Funds' portfolio, thus the state of the economy is always of interest. Low rates of economic growth and political uncertainty across the globe resulted in increased market volatility and weak investment performances. The Bureau of Economic Analysis ("BEA") reported that the U.S. economy, as measured by the change in Real (inflation adjusted) Gross Domestic Product ("GDP"), grew at an average annual rate of 1.3% during the Fiscal Year ended June 30, 2016. The labor market continued to improve, showing solid job gains and declining unemployment levels. The current Bureau of Labor Statistics report revealed that the unemployment rate had fallen from a high of 5.3% in July 2015 to 4.9% in June 2016. Federal Reserve Bank ("FRB") press releases in September 2016 indicate that the FRB Open Market Committee will maintain its current accommodative stance on monetary policy, in order to promote further improvement in labor market conditions and a gradual return to 2% inflation levels. In support of this stance, the committee will continue to maintain holdings of longer-term Treasuries and Agency mortgage-backed securities at sizeable levels and also hold the Federal Funds short-term interest rate at the target range between .25% and 0.50%.

The Comptroller's Office reported that the economy of The City of New York grew at a higher rate than the national economy during Fiscal Year 2016. The city's economy, as measured by change in real gross city product (GCP), grew by 3.1% during Fiscal Year 2016; this rate was lower than the 3.5% rate achieved in Fiscal Year 2015. Additionally, although the city's job growth slowed, New York City's private-sector created 98,100 new jobs during the period. The City's unemployment rate also improved, falling from 5.7% in Fiscal Year 2015 to 5.3% in Fiscal Year 2016.

The Comptroller's Office, in assessing the effects of international conditions and domestic fiscal policies, concluded that a severe recession in the U.S. economy for Fiscal Year 2017 is unlikely, in spite of the probable negative effects of a slowdown in growth of China's economy, Britain's exit from the European Union and other economic and political upheavals. The Comptroller's Office also expects the city to maintain a weak to moderate level of growth in Fiscal Year 2017, due to some positive trends in the economy such as; low inflation rates, tight labor markets and increased wealth from housing and stock markets activity. It is also anticipated that both the National and the City's economy will continue to create jobs at a steady pace and the unemployment rate will continue to fall.

### 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 2016, Fire's QPP investment portfolio of approximately \$ 11.0 billion under management posted gains of 1.4 %, while the corresponding Policy Index posted gains of 2.1%. The FFVSF's investment portfolio of approximately \$ 452.0 million gained 1.0 %, while the corresponding Policy Index gained 1.7%. The FOVSF's investment portfolio of approximately \$284.0 million gained .7%, while the corresponding Policy Index gained 1.7%. A detailed discussion of our investment policy, activities and results is presented in the Investment Section of our report.

### **Introductory Section**

### Funding

Adequate funding is essential to assure 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, along with member contributions and investment income, will be ultimately sufficient to pay benefits when due. A well-funded plan gives members the assurance that the pension benefits promised 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 56.9% for Fiscal Year 2016, a reduction from 60.1% 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 Officer's 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 the Fire Pension Funds is responsible for establishing and maintaining an internal control structure, designed to ensure that the assets of the system 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 provides investment services through independent advisors. The Chief Actuary of the City's pension systems provides actuarial services to the System, while the Corporation Counsel provides legal services to the System. The City of New York defrays the expenses associated with these services.

### Introductory Section

### New York Fire Department Pension Funds

### Independent Audit

The 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, 2016 and 2015, 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's Discussion and Analysis (MD&A) with comparative data for Fiscal Years 2016, 2015 and 2014. 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, 2015. 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 2016.

### Acknowledgements

The compilation of this annual report reflects the combined efforts of the management and staff of the Pension Accounting Unit, whom we thank for their hard work and dedication. Our report is intended to provide complete and reliable information to provide a basis for making management decisions, to comply with legal provisions and to assure responsible stewardship of the assets of the Funds.

I take this opportunity to express my gratitude to the Boards of Trustees for their leadership and direction during this period. I am also grateful to the Office of the Actuary and the Office of the Comptroller for the wide range of valuable information and continuous support they provide for our unit, year after year.

Finally, I wish to extend my sincere appreciation to the managers and staff of the Pension Bureau, who have worked diligently to assure the continued successful operations of the Fire Department Pension Funds.

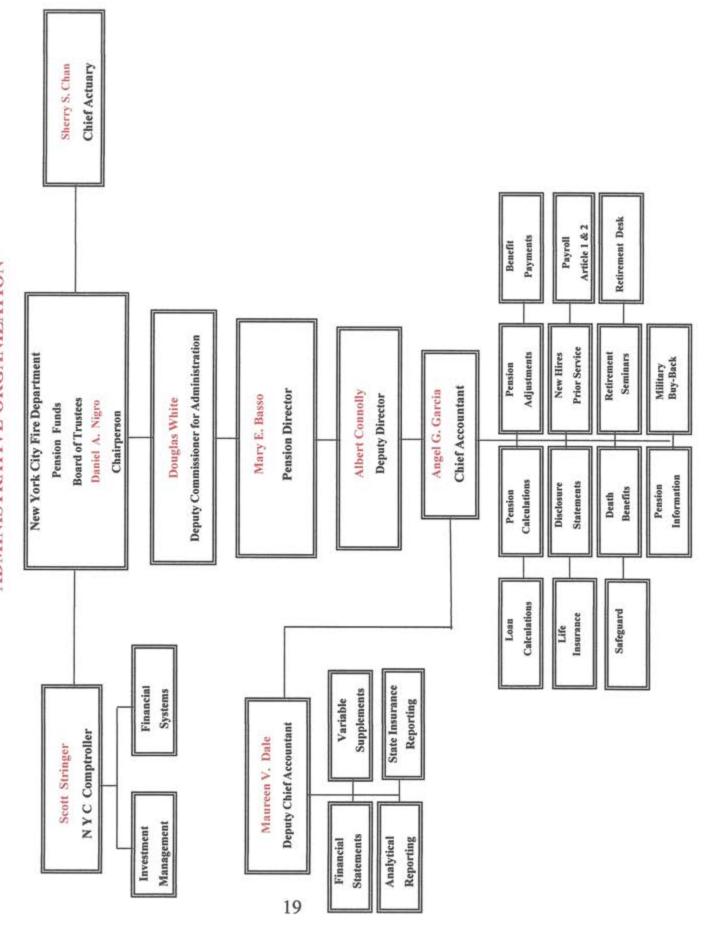
Respectfully submitted,

Albert Connolly

Acting Director of Pensions

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# ADMINISTRATIVE ORGANIZATION



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### MEMBERS OF THE BOARD OF TRUSTEES

### As of June 30, 2016

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 Ferro 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

James J. McGowan Lieutenants' Representative of the

Uniformed Fire Officers' Association of

Greater New York

Stephen J. Cassidy President of the Uniformed Firefighters'

Association of Greater New York

James M. Slevin 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

Thomas Phelan Representative of the Uniformed Pilots'

and Marine Engineers' Association of

Greater New York

### PENSION SYSTEM ADMINISTRATION AND REPORTING

Douglas White
Deputy Commissioner for Administration

Mary E. Basso Pension Director

Albert Connolly Deputy Director

Angel G. Garcia Chief Accountant

Maureen V. Dale Deputy Chief Accountant

### **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 1/4% 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 20<sup>th</sup> 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 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:

- 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;
- 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:
  - 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;
  - 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<sup>th</sup> x total earnings after your 20<sup>th</sup> anniversary

plus

1/80th 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<sup>th</sup> x total earnings after the member's 20<sup>th</sup> 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 1/60<sup>th</sup> 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 <u>pension reserve</u>. If the retirees 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**

<u>Joint and 50% Survivor</u>: 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**

<u>Lump Sum</u>: 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;

OI

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 main difference is that "Modified Tier 3" members have 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." This summary and any applicable laws, 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.

The Fire Pension Fund is a separate entity from the Fire Department of the City of New York (FDNY), your employer. All Uniformed employees of the Fire Department become members of the Fire Pension Fund upon appointment.

#### MEMBERSHIP

Uniformed members of the FDNY appointed on or after July1, 2009 are subject to Article 14 of the RSSL, also known as Tier 3.

#### CONTRIBUTIONS

Members are required to contribute 3% 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.

## 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 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 apart 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 Office 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 April1, 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 July1, 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.

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New York Fire Department 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, 2016 and June 30, 2015

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Marks Paneth LLP 685 Third Avenue New York, NY 10017 P 212.503.8800 F 212.370.3759 markspaneth.com New York New Jersey Pennsylvania Washington, DC



#### INDEPENDENT AUDITORS' REPORT

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

#### Report on the Combining Financial Statements

We have audited the accompanying combining statements of fiduciary net position of the New York Fire Department Pension Fund, New York City Fire Department Firefighters' Variable Supplements Fund, and New York City Fire Department Fire Officers' Variable Supplements Fund, which collectively comprise the New York Fire Department Pension Funds (the "Funds"), a fiduciary component unit of the City of New York, as of June 30, 2016, and the related combining statements of changes in fiduciary net position for the year 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 opinion.

#### **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, 2016, and the changes in combining fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.



#### Prior Period Financial Statements

The combining financial statements of the New York Fire Department Pension Funds as of June 30, 2015 and for the year then ended, were audited by other auditors whose report, dated October 29, 2015, expressed unmodified opinions on those financial statements.

#### 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 audit of the basic combining financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### Other Supplementary Information

Our audit was 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) 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 combing 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 2016 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.

October 31, 2016

(except for the Other Supplementary Information, as to which the date is December 22, 2016)

Marks Paneth Uf



This narrative discussion and analysis of the New York Fire Department Pension Funds' ("FIRE" or the "Funds") financial performance provides an overview of the Funds' combining financial activities for the Fiscal Years ended June 30, 2016 and 2015. 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 Fire Department, Subchapter Two 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 Fire Department Firefighters' Variable Supplements Fund ("FFVSF") and the New York City Fire Department 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.

#### FINANCIAL HIGHLIGHTS

For Fiscal Year ended June 30, 2016, the Funds' net position restricted for benefits was \$11.7 billion. This amount represents an increase of \$59.4 million (.5%) over the Funds' net position restricted for benefits in Fiscal Year 2015. The growth for Fiscal Year 2016 can be attributed to the fact that total contributions, net investment income and other receipts slightly exceeded pension benefits paid. Additionally, a net depreciation in the fair value of the Funds' investment portfolio contributed to the overall lower net investment income reported for the period.

For Fiscal Year ended June 30, 2015, the Funds' net position restricted for benefits was \$11.6 billion. This amount reflects an increase of \$221.2 million (1.9%) over the Funds' net position restricted for benefits in Fiscal Year 2014. The growth for Fiscal Year 2015 can be attributed to the fact that total contributions and net investment income exceeded total pension benefits paid. In addition, modest performance returns on the Funds' investment portfolio contributed to the overall positive net investment income reported for the period.

#### Changes in Fiduciary Net Position Years Ended June 30, 2016, 2015 and 2014 (In thousands)

(In thousands)	2016	2015	2014
Additions:			
Member contributions	\$ 116,619	\$ 108,582	\$ 108,859
Employer contributions	1,054,478	988,784	969,956
Net investment income	203,104	302,567	1,689,485
Other	43,673	41,201	39,980
Total	1,417,874	1,441,134	2,808,280
Deductions:			
Benefit payments and withdrawals	1,358,431	1,219,890	1,171,329
Net increase in net position	59,443	221,244	1,636,951
Net position restricted for benefits			
Beginning of year	11,648,179	11,426,935	9,789,984
End of year	\$ 11,707,622	\$ 11.648,179	\$ 11.426.935

For Fiscal Year ended June 30, 2016, member contributions were approximately \$116.6 million or an increase of \$8.0 million (7.4%) compared to member contributions for Fiscal Year 2015. The change was due largely to increases received by members under contract settlement by the firefighters union, during the period.

For Fiscal Year ended June 30, 2015, member contributions were approximately \$108.6 million or a slight decrease of \$0.3 million (0.3%) compared to member contributions for Fiscal Year 2014. Increases or decreases in member contributions are primarily due to changes in the number of active Plan members making voluntary contributions in addition to their required contributions and also changes in the average annual pay of Plan members.

Employer contributions are made on a statutory basis determined by the actuarial valuations performed as of June 30, 2014 and 2013 under One-Year Lag Methodology ("OYLM"). Employer contributions for Fiscal Year 2016 totaled approximately \$1,054.5 million, an increase of \$65.7 million (6.6%) compared to employer contributions for Fiscal Year 2015, primarily due to a change in the post-retirement mortality rates, an increase in the amortization payment of the 2010 initial unfunded liability and a net actuarial loss. Employer contributions for Fiscal Year 2015 totaled approximately \$988.8 million, an increase of \$18.8 million (1.9%) compared to employer contributions for Fiscal Year 2014, primarily due to the net result of an actuarial loss.

For Fiscal Year ended June 30, 2016, the Funds had a net investment gain of \$203.1 million; this amount although positive was a decrease of 32.9% compared to the net investment gain of \$302.6 million recorded for Fiscal Year 2015. The reduction in net investment gain for Fiscal year 2016 can be attributed to the decline in dividend income and a net depreciation in fair value of the combined investment portfolio of the Funds.

For Fiscal Year ended June 30, 2015, the Funds had a net investment gain of \$302.6 million; this amount although positive was a decrease of 82.1% compared to the net investment gain of \$1,689.5 million recorded for Fiscal Year 2014. The net investment gain for Fiscal year 2015 was achieved despite of a net depreciation in fair value of the QPP's investment portfolio and can be attributed to the overall positive performance return on the combined portfolio of the Funds.

Benefit payments and withdrawals recorded were \$1,358.4 million for the Fiscal Year ended June 30, 2016; this was an increase of 11.4% over benefit payments and withdrawals recorded for Fiscal Year 2015. Benefit payments and withdrawals recorded were \$1,219.9 million for the Fiscal Year ended June 30, 2015; this was an increase of 4.1% over benefit payments and withdrawals recorded for Fiscal Year 2014. 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 serves to increase benefit payments each year.

For Fiscal Year 2016 there were no transfers due from Fire QPP, to the VSF's in accordance with regulations of ACNY, related to excess earnings on equity investments, limited to the unfunded Accumulated Benefit Obligation ("ABO") of the Fund. However, during fiscal year 2016, the excess earnings estimate for fiscal year 2014 were finalized and revised upwards to \$128.7 million for FFVSF and \$28.1 million for FOVSF. The additional amounts totaling \$36.9 million were recognized by Fire QPP and the VSF's, during the period.

For Fiscal Years 2015 and 2014, the FIRE QPP, in accordance with regulations of the ACNY transferred amounts to the VSF's equal to certain excess earnings on equity investments limited to the unfunded Accumulated Benefit Obligation ("ABO") of the Fund. The amounts paid were \$30 million and \$110 million to the FFVSF Fund for Fiscal Years 2015 and 2014, respectively, and \$10 million in each year to the FOVSF Fund. Such amounts have been eliminated in the system-wide presentation above.

#### FIDUCIARY NET POSITION

For Fiscal Year 2016, the Funds' net position restricted for benefits increased by 0.5% to \$11.7 billion, compared to the net position restricted for benefits of \$11.6 billion in Fiscal Year 2015. The overall growth for Fiscal Year 2016 can be attributed to the fact that total contributions, net investment income and other receipts slightly exceeded pension benefits paid. Additionally, a net depreciation in the fair value of the Funds' investment

portfolio contributed to the overall lower net investment income reported for the period.

For Fiscal Year 2015, the Funds' net position restricted for benefits increased by 1.9% to \$11.6 billion, compared to the net position restricted for benefits of \$11.4 billion in Fiscal Year 2014. The growth for Fiscal Year 2015 can be attributed to the fact that total contributions and net investment income exceeded total pension benefits paid. In addition, modest performance returns on the Funds' investment portfolio contributed to the overall positive net investment income reported for the period.

Outstanding member loans for Fiscal Year 2016 totaled \$26.9 million; this amount was a decrease from member loans reported in Fiscal Year 2015. Outstanding member loans for Fiscal Year 2015 totaled \$29.1 million; this amount was an increase from member loans reported in Fiscal Year 2014. 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, 2016, 2015 and 2014 (In thousands)

		2016		2015		2014
Cash	\$	48,755	\$	20,768	\$	21,918
Receivables		226,755		237,528		285,111
Investments — at fair value		11,802,778		12,101,222		11,710,528
Collateral from securities lending		922,481		836,325		1,049,736
Other assets	7.0	6,176		5,596		5,246
Total assets		13,006,945	-	13,201,439	-	13,072,539
Accounts payable		92,147		74,829		45,805
Payables for investments purchased		235,314		592,027		502,688
Accrued benefits payable		49,381		50,079		46,669
Payables for securities						
lending transactions		922,481		836,325		1,050,442
Total liabilities	7	1,299,323	_	1,553,260	_	1,645,604
Net position restricted for benefits	\$	11.707.622	S	11,648,179	S	11,426,935

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

## INVESTMENT SUMMARY

Investment Summary June 30, 2016 (In thousands)

A 200 ( CONSTRUCT ) A CONSTRU									
Investments - At fair value:		QPP		F	FVSF	1	FOVSF	C	ombined
Short term investments:									
U.S. treasury bills and agency		\$ 25.	998	S		s		s	25,998
Commercial paper		52,	525		6,953		3.603		63,081
Short-term investment fund		118,	935		4,397		1,726		125,058
Discount notes					1,369		585		1,954
Debt securities:									
U.S. government and agency		999.	671		93,304		33,721		1,126,696
Corporate and other		1,212	254				22,916		1,235,170
Equity securities		1,802	947		-				1,802,947
Alternative investments		2.117	856				60		2,117,856
Collective trust funds:									
International equity		1,966	,228		85,780		52,725		2,104,733
Domestic equity		1,736	914		221,610		144,583		2,103,107
Mortgage debt security		86	,107						86,107
Treasury inflation protected securities		547	146		10,394		6,593		564,133
Fixed income		401	,512		26,885		17,541		445,938
Collateral from securities lending		854	211		37,719		30,551		922,481
		\$ 11,922	304	\$	488,411	\$	314,544	\$	12,725,259
June 30, 2015 (In thousands)									
Investments - At fair value:		QPP		FFV	SF	F	OVSF	(	Combined
Short term investments:									
U.S. treasury bills and agency	\$	182,521	5		201000	S	50000 T	\$	182,521
Commercial paper		300,618			3,602		3,151		307,371
Short-term investment fund		211,956			6,259		1,572		219,787
Discount notes					10,989		3,184		14,173
Debt securities:									
U.S. government and agencies					88,272		53,983		142,255
Corporate and other		2,463,809							2,463,809
Equity securities		1,943,618			55		20		1,943,618
Alternative investments		1,887,226			•		- 6		1,887,226
Collective trust funds:									
International equity		2,022,335			77,890		61,322		2,161,547
Domestic equity		1,516,030		2	273,828		161,871		1,951,729
Mortgage debt security		72,185			*				72,185
Treasury inflation protected securities		300,374			9,946		6,309		316,629
Fixed income		394,772			26,385		17,215		438,372
Collateral from securities lending		795,944			22,251		18,130		836,325
	S	12,091,388	\$		519,422	\$	326,737	\$	12,937,547
	_	THE RESERVE THE PARTY OF THE PA	_			_		_	

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 2.1% in Fiscal Year 2016, compared to gains posted of 7.3% in Fiscal Year 2015. The investment results for Fiscal Year 2016 were generally consistent with related benchmarks, within asset classes. Overall, the most significant gains were posted within the fixed asset classes during the fiscal year. FIRE QPP's investment portfolio posted gains of 1.4% for Fiscal Year 2016 compared to the gain of 3.5% for Fiscal Year 2015. For the three-year period ended June 30, 2016, the overall rate of return on the QPP's investment portfolio was 7.3%.

The FFVSF's investment portfolio posted gains of 1.0% for Fiscal Year 2016 compared to the gain of 4.1% for Fiscal Year 2015. For the three-year period ended June 30, 2016, the overall rate of return on the Plan's investment portfolio was 7.4%.

Similarly, the FOVSF's investment portfolio posted gains of 0.7% for Fiscal Year 2016 compared to the gain of 4.1% for Fiscal Year 2015. For the three-year period ended June 30, 2015, the overall rate of return on the Plan's investment portfolio was 7.9%.

#### CONTACTINFORMATION

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

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## NEW YORK FIRE DEPARTMENT PENSION FUNDS COMBINING STATEMENTS OF FIDUCIARY NET POSITION JUNE 30, 2016 (In thousands)

Member loans (Note 6)	Funds
Receivables:   Investmentsecurities sold   153,595   12,433   11,636   -	
Investment securities sold	\$ 48,755
Member loans (Note 6)	1011.00
Member loans (Note 6)	177,664
Transferrable earnings due from QPP to Variable Supplements Funds	26.917
Variable Supplements Funds	22,174
Total receivables	
Total receivables	
INVESTMENTS — At fair value (Notes 2 and 3):   Short-term investments:   Commercial paper   52,525   6,953   3,603     Short-term investment fund   118,935   4,397   1,726     U.S. treasury bills and agencies   25,998     Discount notes   1,369   585     Debt securities:   1,369   585     U.S. government and agencies   999,671   93,304   33,721     Equity securities   1,212,254   22,916   1,212,254     Equity securities   1,802,947   1,802,947     Alternative investments   2,117,856   2,117,856     Collective trust funds:     International equity   1,966,228   85,780   52,725     Domestic equity   1,736,914   221,610   144,583   2,117,939     Mortgage debt security   86,107   1,736,914   221,610   144,583   2,117,939     Treasury inflation protected securities   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective from equitive free (New 2)   547,146   10,394   6,593   550     Collective free (	
Short-terminvestments:   Commercial paper	250,733
Commercial paper   52,525   6,953   3,603   Short-term investment fund   118,935   4,397   1,726       U.S. treasury bills and agencies   25,998       Discount notes   1,369   585     Debt securities:   U.S. government and agencies   999,671   93,304   33,721       Corporate and other   1,212,254     22,916       Equity securities   1,802,947         Alternative investments   2,117,856         Collective trust funds:       International equity   1,966,228   85,780   52,725       Fixed income   401,512   26,885   17,541       Domestic equity   1,736,914   221,610   144,583       Treasury inflation protected securities   547,146   10,394   6,593       Solution of the control o	
Short-term investment fund	
Short-term investment fund	63.081
U.S. treasury bills and agencies 25,998 Discount notes - 1,369 585  Debt securities:  U.S. government and agencies 999,671 93,304 33,721 1, Corporate and other 1,212,254 22,916 1, Equity securities 1,802,947 1, Alternative investments 2,117,856 2,117,856 Collective trust funds: International equity 1,966,228 85,780 52,725 2,1 Fixed income 401,512 26,885 17,541 2,1 Domestic equity 1,736,914 221,610 144,583 2,1 Treasury inflation protected securities 547,146 10,394 6,593 5	125,058
Discount notes  Debt securities:  U.S. government and agencies  999,671  1,212,254  22,916  1,22,916  1,212,254  22,916  1,212,254  22,916  1,212,254  22,916  1,212,254  22,916  22,916  22,916  22,916  22,916  23,917,856  24,917,856  25,917,856  25,917,856  26,885  27,918  Domestic equity  1,968,228  2,117,856  2,117,	
Debt securities: U.S. government and agencies 999,671 93,304 33,721 1,1 212,254 22,916 1,2 Equity securities 1,802,947 Alternative investments 2,117,856 2,118,856 2,1	25,998
U.S. government and agencies 999,671 93,304 33,721 - 1,7 Corporate and other 1,212,254 - 22,916 - 1,2 Equity securities 1,802,947 - 2,916 - 1,6 Alternative investments 2,117,856 - 2,1 Collective trust funds: International equity 1,966,228 85,780 52,725 - 2,1 Fixed income 401,512 26,885 17,541 - 4 Domestic equity 1,736,914 221,610 144,583 - 2,1 Mortgage debt security 86,107 - 2,1 Treasury inflation protected securities 547,146 10,394 6,593 - 5	1,954
Corporate and other	
Equity securities 1,802,947 -	1,126,696
Alternative investments 2,117,856 2,1 Collective trust funds: 1,966,228 85,780 52,725 2,1 International equity 1,966,228 85,780 52,725 2,1 Evid income 401,512 26,885 17,541 2 Domestic equity 1,736,914 221,610 144,583 2,1 Mortgage debt security 86,107 Treasury inflation protected securities 547,146 10,394 6,593	1,235,170
Collective trust funds: International equity	1,802,947
International equity 1,966,228 85,780 52,725 - 2,1 Fixed income 401,512 26,885 17,541 - 4 Domestic equity 1,736,914 221,610 144,583 - 2,1 Mortgage debt security 86,107 Treasury inflation protected securities 547,146 10,394 6,593 - 5	2,117,856
Fixed income 401,512 26,885 17,541 200 200 200 200 200 200 200 200 200 20	
Domestic equity 1,736,914 221,610 144,583 - 2,1 Mortgage debt security 86,107 Treasury inflation protected securities 547,146 10,394 6,593	2,104,733
Mortgage debt security 86,107  Treasury inflation protected securities 547,146 10,394 6,593	445,938
Treasury inflation protected securities 547,146 10,394 6,593 - 5	2,103,107
Colleteral from requisitor leading (blass 2)	86,107
Collateral from securities lending (Note 2) 854,211 37,719 30.551	564,133
	922,481
Total investments 11,922,304 488,411 314,544 - 12,7	12,725,259
OTHERASSETS 6.176	6,176
Total assets 12 166 967 572 208 255 542 (99 972) 42 9	1.000000
Total assets 12,166,967 572,308 356,543 (88,873) 13,0	13,006,945
LIABILITIES:	
Accounts payable 89,435 - 2,712 -	92,147
Payable for importment consisting a various of	235,314
Approved hanefite equable (Note 1)	49,381
Transferrable earnings due from QPP to	49,301
Variable Supplements Funds 88,873 (88,873)	
Consider to the thirty (00,073)	
Securities lending (Note 2) 854,211 37,719 30,551 - 9	922,481
Total liabilities 1,267,204 69,458 51,534 (88,873) 1,2	1,299,323
NET POSITION RESTRICTED FOR BENEFITS:  Benefits to be provided by QPP 10,899,763 10,89	10,899,763
	807,859
Total not position materials of the same way to the same way to	\$ 11,707,622

## NEW YORK FIRE DEPARTMENT PENSION FUNDS COMBINING STATEMENTS OF FIDUCIARY NET POSITION JUNE 30, 2015 (In thousands)

	QPP	FFVSF	FOVSF	Eliminations	Combined Funds
ASSETS					
Cash	\$ 8,375	\$ 11,750	\$ 643		\$ 20,768
Receivables					10.134
Investment securities sold Member loans (Note 6)	178,385 29,124		3,867	2 2	188,635 29,124
Accrued interest and dividends Transferrable earnings due from QPP to	18,568		458	3	19,769
Vanable Supplements Funds	1	41,000	11.000	(52,000)	W 11
Due from QPP		41,000	15		
Due from Variable Supplements Fund			32		
Total receivables	226,077	48,126			
INVESTMENTS At fair value (Notes 2 and 3):					
Short-term investments:					
Commercial paper	300.618	3,602	3.151		207.274
Short-term investment fund	211,956				307,371 219,787
U.S. treasury bilts and agencies	182,521	-1	1,572		182.521
Discount notes		10,989	3.184		14,173
Debt securities:		32	-		14,113
U.S. government and agencies		88,272	53,983	3 52	142,255
Corporate and other	2,463,809		-1000		
Equity securities	1,943,618				2,463,809
Alternative investments	1,887,226		1	1	1,943,618
Collective trust funds:	1,007,220				1,887,226
International equity	2,022,335	77,890	61,322	100	2,161,547
Fixed income	394,772		17.215		438.372
Domestic equity	1,516,030		161,871		1,951,729
Mortgage debt security	72,185				72.185
Treasury inflation protected securities	300,374	9,946	6,309		316,629
Collateral from securities lending (Note 2)	795,944	22,251	18,130		836,325
Total	12,091,388	519,422	326,737		12,937,547
Investments	5,596				5,596
OTHER ASSETS	24441222		0.000	r moreone	200000000000000000000000000000000000000
	12,331,436	579,298	342,752	(52,047)	13,201,439
LIABILITIES					
Accounts payable	74,773	9.5	56	3	74.829
Payable for investment securities purchased	574,447	9,941	7.639		592.027
Accrued benefits payable (Note 1)	18,927	21,630	9.522		50,079
Payments Due to Variable Supplements' Funds Transferrable earnings due from QPP to	15	32		(47)	
Variable Supplements Funds	52,000				
Securities lending (Note 2)	795,944	22.261	10.100	(52,000)	
	730,344	22,251	18,130		836,325
Total liabilities	1,516,106	53,854	35.347	(52,047)	1,553,260
NET POSITION RESTRICTED FOR BENEFITS					
Benefits to be provided by QPP	10.815.330	752			10.015.335
Benefits to be provided by QPP  Benefits to be provided by VSF  Total net position restricted for benefits	10.815.330	525,444	307,405	*	10,815,330 832,849

# NEW YORK FIRE DEPARTMENT PENSION FUNDS COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION YEAR ENDED JUNE 30, 2016 (In thousands)

	QPP	FFVSF	FOVSF	ELIMINATIONS	Combined Funds	
ADDITIONS:						
Contributions:						
Member contributions	\$ 116,619	\$ -	\$ -	\$ -	\$ 116,619	
Employer contributions	1,054,478				1,054,478	
Total contributions	1,171,097				1,171,097	
Investment income (Note 3):						
Interest income	137,160	4,796	3,250		145,206	
Dividend income	145,276	7,957	4,442		157,675	
Net appreciation/depreciation in fair value of investments	(44,510)	(8,428)	(6,934)		(59,872)	
Total investment income	237,926	4,325	758		243,009	
Less investment expenses	46,321				46,321	
Net income	191,605	4,325	758		196,688	
Securities lending transactions:						
Securities lending income	6,196	368	298		6,862	
Securities lending fees	(403)	(24)	(19)		(446)	
Net securities lending income	5,793	344	279		6,416	
Net investment income	197,398	4,669	1,037		203,104	
Net receipts from other retirement systems	42,786		12	- 7	42,786	
Transferrable earnings from QPP to Variable						
Supplemental Funds		18,739	18,134	(36,873)	*	
Litigation income	887				887	
Total additions	1,412,168	23,408	19,171	(36,873)	1,417,874	
DEDUCTIONS:						
Benefit payments and withdrawals (Note 1) Transferrable earnings from QPP to Variable	1,290,862	46,002	21,567	5	1,358,431	
Supplemental Funds	36,873			(36,873)		
Total deductions	- Contraction Cont	46,002	21,567		4.050.404	
total deductions	1,327,735	46,002	21,567	(36,873)	1,358,431	
NET INCREASE (DECREASE) IN NET POSITION	84,433	(22,594)	(2,396)		59,443	
NET POSITION RESTRICTED FOR BENEFITS						
Beginning of year	10,815,330	525,444	307,405		11,648,179	
End of year	\$ 10,899,763	\$ 502,850	\$ 305,009	\$ -	\$ 11,707,622	

# NEW YORK FIRE DEPARTMENT PENSION FUNDS COMBINING STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION YEAR ENDED JUNE 30, 2015 (In thousands)

		QPP		FFVSF	[3]	FOVSF	ELIMI	NATIONS	Com	bined Funds
ADDITIONS:										
Contributions:										
Member contributions	\$	108,582	\$		\$		S	+	\$	108,582
Employer contributions		988,784	_	-			_		_	988,784
Total contributions		1,097,366	1			*			_	1,097,366
Investment income (Note 3):										
Interest income		115,571		4,297		2,906				122,774
Dividend income		227,390		7,138		4,500				239,028
Net appreciation/depreciation in fair value of investments		(8,490)	-	7,226		4,650	-	-	_	3,386
Total investment income		334,471		18,661		12,056				365,188
Less investment expenses	2	68,027	_		_		_		_	68,027
Net income		266,444	_	18,661	_	12,056	_		_	297,161
Securities lending transactions:										
Securities lending income		5,332		243		206				5,781
Securities lending fees		(346)		(16)		(13)	123		27.1	(375)
, No. 2010 10 20 20 20 20 20 20 20 20 20 20 20 20 20		4,986		227		193				5,406
Net securities lending income			_		_		_		_	
Net investment income		271,430		18,888		12,249				302,567
Net receipts from other retirement systems		40,737				373				40,737
Transferrable earnings from QPP to Variable										
Supplemental Funds				30,000		10,000		(40,000)		-
Litigation income		464						-	_	464
Total additions		1,409,997	_	48,888	_	22,249	-	(40,000)	_	1,441,134
DEDUCTIONS:										
Benefit payments and withdrawals (Note 1) Transferrable earnings from QPP to Variable		1,150,505		47,415		21,970				1,219,890
Supplemental Funds		40,000		(+)				(40,000)		
Total deductions		1,190,505	_	47,415		21,970	_	(40,000)	_	1,219,890
NET INCREASE (DECREASE) IN NET POSITION		219,492		1,473		279				221,244
NET POSITION RESTRICTED FOR BENEFITS										
Beginning of year		10,595,838	_	523,971	_	307,126	-		_	11,426,935

#### 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 Fire Department 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 Fire Department, Subchapter Two Pension Fund, which is generally referred to as the New York Fire Department 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 Fire Department Firefighters' Variable Supplements Fund ("FFVSF") and the New York City Fire Department 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 Department (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.

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, 2014 and June 30, 2013, the dates of the QPP's most recent completed actuarial valuations, the QPP's membership consisted of:

	2014	2013
Retirees and beneficiaries receiving benefits	16,763	16,807
Terminated vested members not yet receiving benefits	40	33
Other inactives *	16	17
Active members receiving salary	10,319	10,182
Total	27,138	27,039

<sup>\*</sup> Represents members who are no longer on payroll but otherwise classified.

At June 30, 2015 and 2014, the dates of the VSF's most recent actuarial valuations, the FFVSF and FOVSF membership consist of:

22	FFV	SF	FOVSF		
	2015	2014	2015	2014	
Retirees currently receiving payments	3,621	3,691	1,593	1,629	
Active members	8,081	7,623	2,699	2,696	
Total	11,702	11,314	4,292	4,325	

<sup>\*\*</sup> Represents the number of actively employed firefighters and fire officers, respectively, as of the June 30 valuation dates.

## 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.

- 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, 2016, is as follows:

	Tier 1	Tier 2	Total
Required amount	\$ 192,458	\$ 476,612,679	\$ 476,805,137
Actual balance	726,370	1,570,084,538	1,570,810,908
Outstanding loans	*	26,916,546	26,916,546

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.

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 benefit is payable upon completion of 20 years of uniformed service 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 allowance is payable to a 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.
- An ADR allowance is payable to a 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.

All of the above 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, except for ODR retirees, in which case the Social Security Offset occurs immediately.

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 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 less than 3%. 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.

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 2016 were \$58.3 million for FFVSF and \$103.4 million for FOVSF. Similarly, for Fiscal Year 2015 the balances were \$61.8 million for FFVSF and \$106.5 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 19<sup>th</sup> anniversary of such retiree's date of retirement and (2) January 1, 2008.

#### 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 on a daily basis. Overdrawn balances result primarily from outstanding benefit checks that are presented to the banks for payment on a daily basis, and these balances are routinely settled each day.

Accrued Benefits Payable — Accrued benefits payable represent 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.

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, 2016 and 2015, 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 51.75 days. The securities lending program in which the Funds participate only allows pledging or selling securities in the case of borrower default.

During Fiscal Year 2003, the value of certain underlying securities became impaired because of the credit failure of the issuer. Accordingly, the carrying amount of the collateral reported in the QPP's statements of fiduciary net position for Fiscal Year 2003 was reduced by \$10 million to reflect this impairment and reflect the net realizable value of the securities purchased with collateral from securities lending transactions. In Fiscal Years 2004 through 2007, the QPP received \$2.6 million from distribution in bankruptcy proceedings from the defaulted issuers. During the same period, the QPP also received \$3.9 million from litigation settlements. For Fiscal Years 2008 and 2009, the QPP received securities totaling \$102.4 thousand from distributions in bankruptcy proceedings. There were no recoveries for the defaulted security in Fiscal Years 2013 and 2012. In Fiscal Year 2014 the QPP received \$2.7 million from litigation settlements. For Fiscal year 2015, the QPP received a distribution in bankruptcy proceedings of \$1.6 thousand dollars, the remaining loss of \$703.9 thousand dollars was written off during the period

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, 2016 and 2015 was \$831.9 million and \$776.3 million, respectively for the QPP, \$36.7 million and \$21.8 million, respectively for the FFVSF, and \$29.7 million and \$17.7 million, respectively for the FOVSF. Cash collateral received related to securities lending as of June 30, 2016 and 2015 was \$854.2 million and \$795.9 million, respectively for the QPP, \$37.7 million and \$22.2 million, respectively for the FFVSF, and \$30.5 million and \$18.1 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.

New Accounting Standards Adopted — In Fiscal Year 2015, FIRE adopted Government Accounting Standards Board ("GASB") Statement No. 72, Fair Value Measurement and Application. GASB 72 requires the Funds to use valuation techniques which are appropriate under the circumstances and are either a market approach, a cost approach or income approach. GASB 72 establishes a hierarchy of inputs used to measure fair value consisting of three levels. Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs, and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability. GASB 72 also contains note disclosure requirements regarding the hierarchy of valuation inputs and valuation techniques that was used for the fair value measurements. There was no material impact on the Funds' financial statements as a result of the implementation of GASB 72.

## 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 2016 and 2015. Includes securities in the following categories:

	2016	2015
U.S. Equity	29.9 %	30.3 %
Core U.S. Fixed	21.5	21.9
EAFE Markets	10.0	10.0
Private Equities	7.0	6.0
Emerging Markets	6.5	6.5
Enhanced Yield Bonds	3.4	3.7
Private Real Estate	4.5	4.1
Hedge Funds	3.3	3.6
REITS	2.8	3.0
TIPS	5.0	5.0
Opportunistic Fixed	2.7	2.5
Cash	0.0	0.0
Bank Loans	1.7	1.7
ETI	0.7	0.7
Convertible Bonds	1.0	1.0
Total	100.0 %	100.0 %

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.

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, 2016 and 2015 are as follows:

#### Investment Type\*

#### Moody's Quality Ratings

June 30, 2016	monumen.	202000000					CCC &	Short	Not	
U.S. Government	AAA -%	AA - %	- %	BBB - %	BB -%	B - %	Below -%	term	Rated - %	Total - %
Corporate bonds Short-term:	2.36	3.41	15.76	39.35	12.01	6.52	2.61	020	5.53	87.55
Commercial Paper	(*)	*		0.00		-	*	4.35	94	4.35
Pooled fund	-	8	70	(2)	5.75 S	7.1	-	6.18	200	6.18
U.S. Treasuries & Agencies		_	23	-		-	-	1.92		1.92
Discount Notes										
Percent of rated portfolio	2.36%	3.41%	15.76%	39.35%	12.01%	6.52%	2.61%	12.45%	5.53%	100.00%

#### Investment Type\*

#### Moody's Quality Ratings

June 30, 2015							CCC &	Short	Not	
U.S. Government	AAA -%	AA - %	- %	BBB - %	BB -%	B - %	Below -%	term	Rated - %	Total - %
Corporate bonds Short-term:	1.29	2.17	12.44	27.38	7.70	6.46	1.83		4.58	63.85
Commercial Paper	32	2				1.00		16.52	2	16.52
Pooled fund	96	**		*	-			9.06		9.06
U.S. Treasuries & Agencies	17				*		100	10.57	*	10.57
Discount Notes	· · · · · · · · · · · · · · · · · · ·			-	-					
Percent of rated portfolio	1.29%	2.17%	12.44%	27.38%	7.70%	6.46%	1.83%	36.15%	4.58%	100.00%

<sup>\*</sup> U.S. Treasury Bonds, Notes and Treasury-inflation protected securities are obligations of the U.S. government or explicitly guaranteed by the U.S. government and therefore not considered to have credit risk and are not included above.

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, 2016 and 2015 are as follows:

	Investment Maturities										
Years to Maturity June 30, 2016 U.S. Government Corporate bonds	Fair Value 42.93% 49.96	Less Than One Year 1.87%	One to Five Years 4.73% 16.67	Six to Ten Rated 6.83% 16.53	More Than Ten Years 29.50% 15.32						
Yankee bonds	49.90	1.44	10.07	10.55	15.32						
Short-term:											
Commercial Paper	2.48	2.48		2	27						
Pooled fund	3.53	3.53			2						
U.S. Treasuries & Agencies	-	-		-	-						
Discount Notes	1.10	1.10									
Percent of rated portfolio	100.00%	10.42%	21.40%	23.36%	44.82%						
		Inve	estment Maturitie	es							
Years to Maturity	Fair	Less Than	One to Five	Six to Ten	More Than						
June 30, 2015	Value	One Year	Years	Rated	Ten Years						
U.S. Government	43.25%	0.15%	6.74%	5.22%	31.14%						
Corporate bonds	36.24	1.34	10.08	13.71	11.11						
Yankee bonds	-	-	-	-	-						
Short-term:											
Commercial Paper	9.37	9.37			-						
Pooled fund	5.14	5.14	27.0		50						
U.S. Treasuries & Agencies		2	-	-	-						
Discount Notes	6.00	6.00									

Foreign Currency Risk — Foreign currency risk is the risk that changes in the exchange rates will adversely impact the fair value of an investment. Currency risk is present in underlying portfolios that invest in foreign stocks and/or bonds. The currency markets have proven to be 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 have no formal risk policy. In addition, the Funds have investments in foreign stocks and/or bonds and the Funds invest in foreign currencies. The Funds' combined foreign currency holdings as of June 30, 2016 and 2015 are as follows:

22.00%

16.82%

18.93%

42.25%

100.00%

Percent of rated portfolio

Trade Currency	June 30, 2016	June 30, 2015
(in thousands)	Fair Value	Fair Value
Australian Dollar	\$ 40,508	\$ 31,782
Botswana Pula	438	425
Brazilian Real	43,458	43,599
British Pound Sterling	214,870	232,258
Canadian Dollar	20,062	22,024
Chilean Peso	6,961	6,253
Colombian Peso	3,305	3,017
Croatian Kuna	881	928
Czech Koruna	1,755	2,000
Danish Krone	22,694	18,371
Egyptian Pound	2,234	4,963
Euro Currency	373,164	386,398
Ghana Cedi	190	192
Hong Kong Dollar	223,574	227,865
Hungarian Forint	2,185	2,943
Indian Rupee	81,819	72,592
Indonesian Rupiah	18,093	14,335
Israeli Shekel	1,783	1,542
Japanese Yen	239,710	220,024
Jordanian Dinar	718	992
Kenyan Shilling	722	931
Kuwait Dinar	1,812	2,058
Malaysian Ringgit	21,161	19,736
Mauritius Rupee	761	922
Mexican Peso	24,118	24,369
Moroccan Dirham	881	907
New Zealand Dollar	1,965	1,474
Nigerian Naira	494	856
Norwegian Krone	9,272	9,760
Omani Rial	803	940
Pakistan Rupee	1,590	904
Peruvian Nuevo Sol	544	512
Philippines Peso	11,148	8,312
Polish Zloty	11,344	12,650
Qatar Riyal	4,928	5,483
Renminbi Yuan	247	(1)
Romanian Leu	866	930
Russian Ruble	567	292
Singapore Dollar	15,400	19,366
South African Rand	48,671	50,371
South Korean Won	127,187	117,230
Swedish Krona	29,978	31,452
Swiss Franc	111,388	118,799
Taiwan New Dollar	88,869	97,237
Thai Baht	20,145	18,141
Tunisian Dinar	307	329
Turkish Lira	12,812	9,420
UAE Dirham	4,268	3,181
Total	\$ 1.850.650	\$ 1.849.064

## Securities Lending Transactions

Credit Risk — The quality ratings of investments held as collateral for securities lending by the Funds' at June 30, 2016 and 2015 are as follows:

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

. O. 1771 (1954)	S&P Quality Ratings																			
June 30, 2016	AA	AA		AA		Α	E	ввв		вв		В		C & low		term		Not Rated	т	otal
U.S. Government	\$	-	\$	-	\$	-	\$	-	\$	-	\$		\$ .		\$	-	\$	-	\$	-
Corporate bonds		20		2)										_				-		-
Yankee bonds		*		-				-				-		*						-
Short-term:																				
Reverse repurchase agreement		70		53		7		171				-		7.			17	757,098	7	57,098
Money market	69	,860		-		-		-		-		-		-				-		69,860
Bank notes		*								-				-				2,841		2,841
Cash		-		*								-						91,248		91,248
Uninvested		-	_	-	-		_					-			-			1,434	-	1,434
Total	\$ 69	.860	S	-	\$	-	\$_	-	\$	-	\$_	-	\$	-	\$_		\$ 8	852,621	\$9	22,48
Percent of securities lending port		7.57%		%		%	_	%	_	%	_	%	_	_%	_	%	_	92.43%		100.00

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

June 30, 2015	AA	۱۸		AA		Α	BBB		вв		В	CCC & Below	Short		Not Rated	т.	otal
	~~	171		AA		^	000		ВВ		ь	Delow	term		Nateu	11	Jai
U.S. Government	\$	**	\$	*	\$	*	\$	\$		\$	-	\$ -	\$ *	\$	-	\$	*
Corporate bonds				70		0.70	0701				1570	0.70	-				-
Yankee bonds		4		2		-	-		-		-	-	-		2		-
Short-term:																	
Reverse repurchase agreement		-		20					-					6	636,155	63	36,15
Money market	58	,537		-		-			-						-		58,53
Bank notes		*		60		(-)			-		$(-,\cdot)$		201		58,563		58,56
Cash		7.5		-	8	2,365	200		77.		7.0		-		-	1	82,36
Uninvested	-20	2			-	-	 -		_			720	-		705		70
Total	\$ 58	.537	S	2	\$8	32,365	\$	S	ু	S	-	S -	\$ -	\$ 6	695,423	\$ 83	36,32

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)									
June 30, 2016		Fair Value	-	s Than	One	to Five Years	Six	to Ten Rated	2007	re Than
U.S. Government	S	value	\$	ie reai	\$	Tears	S	Nateu	5	leais
Corporate bonds	*		4	40	•	-		-	~	-
Short-term:										
Reverse repurchase agreements	7	57,098	75	57,098		70				0.70
Money market	- 3	69,860	(	39,860		20		2		-
Bank notes		2,841		2,841		200		-		
Cash	- 9	91,248	9	1,248		*		-		-
Uninvested		1,434		1,434	7			-		
Total	\$9	22,481	\$ 92	22,481	\$		\$	-	\$	-
Percent of securities lending portfolio	. 9	100.00%	_1	00.00%		%		%		- %

Years to Maturity Investment Type (In Thousands)

	Investment Maturities (In years)									
June 30, 2015		Fair Value	70.247	s Than e Year	One	to Five Years	Six	to Ten Rated	2.55.5	re Than
U.S. Government	S		\$	**	\$	**	\$		\$	( <del>*</del> ) )
Corporate bonds				-				-		
Short-term:										
Reverse repurchase agreements	6	36,155	63	86,155		*		-		
Money market		58,537	5	8,537						-
Bank notes		58,563	5	8,563		100				3.50
Cash		82,365	8	32,365						
Uninvested		705		705						
Total	\$8	36,325	\$ 83	6,325	\$		\$	-	\$	-
Percent of securities lending portfolio	2	100.00%	_1	00.00%		%		%		%

Rate of return — For the years ended June 30, 2016 and 2015, the annual money weighted rate of return on investments, net of investment expense, for the Funds was as follows:

	2016	2015
QPP	1.37%	3.28%
FFVSF	0.88%	4.13%
FOVSF	0.24%	4.02%

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

In Fiscal Year 2015, the 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 its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. The Funds have the following recurring fair value measurements as of June 30, 2016 and June 30, 2015:

				2016			
	55	Level One		Level Two	Level Three	-	Total
GASB 72 Disclosure							7.0101
(in thousands)							
INVESTMENTS – At fair value							
Short-term investments:							
Commercial Paper	\$	-	\$	63,081	\$ -	\$	63,081
Short-term investment fund				125,058	-		125,058
U.S. treasury bills and agencies				25,998			25,998
Discount notes				1,954	0.00		1,954
Debt securities:							
U.S. government and agency		-		1,126,696	-		1,126,696
Corporate and other		-		1,235,170			1,235,170
Equity securities		1,802,947					1,802,947
Alternative investments		-		-	1,650,354		1,650,354
Collective trusts funds:							
International equity		2,048,729		56,004	-		2,104,733
Fixed income		2,822		265,327	177,789		445,938
Domestic equity		2,102,738		369			2,103,107
Mortgage debt security		-		17,748	68,359		86,107
Treasury inflation protected securities		-		564,133	-		564,133
Collateral from securities lending	1		7.5	922,481	-		922,481
Total investments	\$	5,957,236	\$_	4,404,019	\$ 1,896,502	\$	12,257,757
Alternative Investments valued						. 1000	2750700500
at net asset value							467,502
Total						\$	12,725,259

				2015				
		Level One		Level Two		Level Three		Total
GASB 72 Disclosure								
(in thousands)								
INVESTMENTS – At fair value								
Short-term investments:								
Commercial Paper	\$	2	\$	307,371	\$	-	\$	307,371
Short-term investment fund		_		219,787		-		219,787
U.S. treasury bills and agencies		*		182,521		-		182,521
Discount notes				14,173				14,173
Debt securities:								
U.S. government and agency		-		141,083		1,172		142,255
Corporate and other		-		2,463,809		-		2,463,809
Equity securities	\$	1,942,802		816		*		1,943,618
Alternative investments		-		-		1,887,226		1,887,226
Collective trusts funds:								
International equity		2,158,075		358		3,114		2,161,547
Fixed income				243,154		195,218		438,372
Domestic equity		1,951,729		-		_		1,951,729
Mortgage debt security		*		72,185		-		72,185
Treasury inflation protected securities				316,629		*		316,629
Collateral from securities lending	1			836,325	-	-	_	836,325
Total investments	\$	6,052,606	\$_	4,798,211	\$	2,086,730	\$_	12,937,547

#### **Equity and Fixed Income Securities**

Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets issued by pricing vendors for these securities. Debt and equity securities classified in Level 2 of the fair value hierarchy are valued using prices determined by the use of matrix pricing techniques maintained by the various pricing vendors for these securities. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Debt and equity securities classified in Level 3 are securities whose stated market price is unobservable by the 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. Debt and equity securities held in Collective Trust Funds are held in those funds on behalf of the pension system and there is no restriction on the use and or liquidation of those assets for the exclusive benefit of the funds participants.

#### Alternative Investments

Alternative investments include private equity, real estate, and 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 are valued by the GP using one or more valuation methodologies outlined in ASC 820, depending upon the availability of data required by each methodology. In some cases, the GP may use multiple approaches to estimate a valuation range. For the immediate time period following a transaction, the determination of fair value for equity securities, in which no liquid trading market exists, can generally be approximated based on the transaction price (absent any significant developments). Thereafter, or in the interim, if significant developments relating to such portfolio company or industry occur which may suggest a material change in value, the GP should value each investment by applying generally accepted valuation methods including: (1) the market approach (such as market transaction and comparable public company multiples, which are based on a measurement of the company's historical and projected financial performance with typical metrics including enterprise value/latest 12 months EBITDA or projected fiscal year EBITDA) or (2) the income or discounted cash flow approach.

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

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

#### 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 receives 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 2016, the excess earnings of the QPP, inclusive of prior year's cumulative deficiencies, are estimated to be equal to \$0 and therefore, no transfer of assets is required from the QPP to the VSF's.

For Fiscal Year 2015, the excess earnings of the QPP, inclusive of prior year's cumulative deficiencies, are estimated to be equal to \$40 million and, therefore, a liability and transfer of \$30 million to FFVSF and a liability and transfer of \$10 million to FOVSF has been reported by the QPP as of and for the year ended June 30, 2015, respectively. However, during fiscal year 2016, the excess earnings estimate for fiscal year 2014 were finalized and revised upwards to \$128.7 million for FFVSF and \$28.1 million for FOVSF. Additional liability and transfer totaling \$36.9 million were recognized by Fire QPP that resulted in transferring \$18.7 million to FFVSF and \$18.1 million to FOVSF.

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.

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 of the Office of the Actuary (the "Actuary") with the net position restricted for benefits for the FFVSF and the FOVSF as of June 30, 2015 and June 30, 2014, follows:

		/	FF\	/SF		FOV	/SF
		2015		2014	2015		2014
		(in m	illions	)	(in m	illions)	
Accumulated benefit obligation <sup>1</sup>		2000		50	1000000		
for:							
Retirees currently receiving benefits	\$	361.5	\$	372.5	\$ 153.6	\$	158.3
Active employees		173.9	- 9-	170.2	175.6	-	167.0
Total accumulated benefit obligation <sup>2,3</sup>		535.4		542.7	329.2		325.3
Plan net position held in trust for benefits4	100	525.4	0.7	524.0	307.4	70	307.1
Unfunded accumulated benefit obligation	S	10.0	S	18.7	\$ 21.8	\$	18.2

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

For purposes of the June 30, 2015 and the June 30, 2014 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.

The June 30, 2015 and the June 30, 2014 ABOs for FFVSF decreased by approximately \$2.1 million and decreased by approximately \$2.3 million, respectively, and the June 30, 2015 and the June 30, 2014 ABOs for FOVSF increased by approximately \$0.7 million and \$0.8 million, respectively, compared to those projected prior to the enactment of Chapters 119/95, 390/98 and 125/00.

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.

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

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, 2015 and June 30, 2014, respectively:

	June 30, 2015	June 30, 2014
Investment rate of return	7.0% per annum. 1, 2	7.0% per annum.1, 2
Post-retirement mortality	Tables adopted by the	Tables adopted by the
	Board of Trustees	Board of Trustees
	during Fiscal Year 2016.	during Fiscal Year 2016.
Active service: withdrawal, death,	Tables adopted by the	Tables adopted by the
disability	Board of Trustees	Board of Trustees
	during Fiscal Year 2012.	during Fiscal Year 2012.
Service retirement	Tables adopted by the	Tables adopted by the
	Board of Trustees during	Board of Trustees
	Fiscal Year 2012.	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 <sup>1</sup> Tier	1.5% per annum for Tier	1.5% per annum for
22.2	I and Tier II, 2.5% per 2.5% per annum for Tier III.	I and Tier II, annum for Tier

<sup>&</sup>lt;sup>1</sup> Developed assuming a long-term consumer Price inflation assumption of 2.5% per year.

<sup>2</sup> Net of Investment Expenses.

#### 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, 2016, based on an actuarial valuation as of June 30, 2014 was \$1,054.5 million and the Statutory Contribution for the year ended June 30, 2015, based on an actuarial valuation as of June 30, 2013 was \$988.8 million. The Statutory Contributions for Fiscal Years 2016 and 2015 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, 2016 and 2015 for the Funds were as follows:

				(in th	ousands)	
June 30, 2016	QPP	2	FFVSF	2020 N	FOVSF	TOTAL
Total Pension liability*	\$19,711,495	\$	568,213	\$	364,099	\$ 20,643,807
Fiduciary net position**	10,899,763		524,075	56	314,272	11,738,110
Employers' net pension liability	\$ 8,811,732	\$_	44,138	S	49,827	\$ 8,905,697
Fiduciary net position as a percentage of the total	55,30%		92.23%		86.31%	56.86%
				(in th	ousands)	
June 30, 2015	QPP	72	FFVSF	(in th	ousands) FOVSF	TOTAL
June 30, 2015 Total Pension liability*	QPP \$18,544,307	\$	FFVSF 548,104	(in th		TOTAL \$ 19,446,792
	The state of the s	\$	The second section is a second	-	FOVSF	THE RESERVE AND ADDRESS OF THE PARTY OF THE
Total Pension liability*	\$18,544,307	\$	548,104	-	<b>FOVSF</b> 354,381	\$ 19,446,792

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

<sup>\*\*</sup>Such amounts represent the preliminary Funds' fiduciary net position and may differ from the final Funds' fiduciary net position.

Fiscal 2015 disclosures pertaining to the Fund's total and net pension obligations and pension expenses have been restated to reflect the full actuarially determined obligation for Special Accidental Death Benefits ("SADB") in the opening balances. Previously reported amounts excluded that obligation, based on the New York State ("State") law General Municipal Law Section 208-f (e) requiring the State to reimburse the City for those benefits. Beginning with Fiscal 2009 and for every year since, the State has adopted budgets that override this law, and reimbursed the City for less than the cost of SADB. Moreover, in accordance with new GASB standards adopted by the City in 2014, the liability should have been reported regardless of the State's reimbursement obligation. The net effects of changes to the 2015 disclosures is an additional \$845.0 million for total pension liability (approximately 6.8) and net pension liabilities (approximately 1.8%) and \$62.0 million additional pension expense. Management believes the effects of the adjustment are not material in relation to the financial statements.

#### Actuarial Methods and Assumptions

The total pension liability as of June 30, 2016 and 2015 was determined by actuarial valuations as of June 30, 2014 and June 30, 2013 respectively, that were rolled forwarded 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

COLA's 1.5% per annum for Auto COLA,

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 most recently completed study was published by Gabriel Roeder Smith & Company ("GRS") dated October 2015 and analyzed experience for Fiscal Years 2010 through 2013. GRS made recommendations with respect to the actuarial assumptions and methods based on their analysis.

In October 2015 the independent actuarial auditor, Gabriel, Roeder, Smith & Company (GRS), issued a report on their NYC Charter-mandated actuarial experience studies for the four-year and ten-year periods ended June 30, 2013 (the GRS Report).

Based, in part, on the GRS Report, on published studies of mortality improvement, and on input from the City's outside consultants and auditors, the Actuary proposed, and the Boards of Trustees of the NYCRS adopted, new post-retirement mortality tables for use in determining employer contributions beginning in Fiscal Year 2016. The new tables of post-retirement mortality are based primarily on the experience of the NYCRS (the Base Tables) and the application of Mortality Improvement Scale MP-2015, published by the Society of Actuaries in October 2015 (the Valuation Tables). Scale MP-2015 replaced Mortality Improvement Scale AA.

In addition, beginning in Fiscal Year 2016, the Actuary revised the Actuarial Asset Valuation Method

to constrain the Actuarial Asset Value to be within a 20% corridor of the Market Value of Assets

The previously completed studies were published by The Hay Group ("Hay") dated December 2011 and The Segal Company ("Segal"), dated November 2006. Hay analyzed experience for Fiscal Years 2006 through 2009 and made recommendations with respect to the actuarial assumptions and methods based on their analysis. Segal analyzed experience for Fiscal Years 2002 through 2005 and made recommendations with respect to the actuarial assumptions and methods based on their analysis.

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 buildingblock 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	32.00%	6.60%
International Public Market Equities	10.00	7.00
Emerging Public Market Equities	6.50	7.90
Private Market Equities	7.00	9.90
Fixed Income	34.50	2.70
Alternative Investments	10.00	4.00
Total	100.00%	

#### 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 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, 2016, 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%		Current	1%
	1	Decrease (6.0%)	Disc	ount rate (7.0%)	Increase (8.0%)
QPP	\$	11,025,669	\$	8,811,732	\$ 6,959,119
FFVSF		95,190		44,138	(270)
FOVSF	-	82,100		49,827	22,445
Total	5	11,202,959	5	8,905,697	\$ 6,981,294

#### 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, 2016 and 2015 was \$26.9 million and \$29.1 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 \$1.5 million and \$2.6 million in Fiscal Years 2016 and 2015, respectively.

#### 9. ADMINISTRATIVE AND INVESTMENT EXPENSES

There are no administrative expenses paid out of the Funds. Services, as set out in the note on "Related Parties" are provided by various City Agencies. The City of New York defrays the cost associated with these services. Investment expenses charged to the investment earnings of the QPP, exclusive of expenses relating to securities-lending transactions amounted to approximately \$46.3 million and \$68.0 million in 2016 and 2015, respectively.

#### 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.

Based, in part, upon a review of the Segal and Hay studies, the Actuary issued a February 10, 2012 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" ("February 2012 Report").

In October 2015 the independent actuarial auditor, Gabriel, Roeder, Smith & Company (GRS), issued a report on their NYC Charter-mandated actuarial experience studies for the four-year and ten-year periods ended June 30, 2013 (the GRS Report).

Based, in part, on the GRS Report, on published studies of mortality improvement, and on input from the City's outside consultants and auditors, the Actuary proposed, and the Boards of Trustees of the NYCRS adopted, new post-retirement mortality tables for use in determining employer contributions beginning in Fiscal Year 2016. The new tables of post-retirement mortality are based primarily on the experience of the NYCRS (the Base Tables) and the application of Mortality Improvement Scale MP-2015, published by the Society of Actuaries in October 2015 (the Valuation Tables). Scale MP-2015 replaced Mortality Improvement Scale AA.

In addition, beginning in Fiscal Year 2016, the Actuary revised the Actuarial Asset Valuation Method to constrain the Actuarial Asset Value to be within a 20% corridor of the Market Value of Assets

The Board of Trustees of the Funds adopted those changes to actuarial assumptions that require Board approval. The State Legislature and the Governor enacted Chapter 3/13 to provide for those changes to the actuarial assumptions and methods that require legislation, including the AIR assumption of 7.0% per annum, net of investment expenses.

Additionally, based, in part, on the GRS Report, on published studies of mortality improvement, and on input from the City's outside consultants and auditors, the Actuary proposed and the Board of Trustees adopted, new post-retirement mortality tables for use in determining employer contributions beginning in Fiscal Year 2016. The new tables of post-retirement mortality 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 (the Valuation Tables). Scale MP-2015 replaced Mortality Improvement Scale AA.

New York State Legislation (only significant laws included) — Chapter 104 of the Laws of 2005, as amended by Chapter 93 of the Laws of 2005, created a presumptive eligibility for accidental disability in connection with the World Trade Center attack on September 11, 2001.

Chapter 105 of the Laws of 2005 states that a member killed in the US Armed Forces on and after June 14, 2005 is deemed a Line-of-Duty death while on active payroll.

Chapter 152/06 provided for the changes in actuarial assumptions and methods that require legislation, including the continuation of the AIR assumption of 8.0% per annum and continuation of the current Frozen Initial Liability ("FIL") Actuarial Cost Method and the existing Unfunded Actuarial ("Accrued") Liability ("UAL"). In addition, Chapter 152/06 provides for elimination of the use of the ten-year phase- in of Chapter 278/02 for funding the additional actuarial liabilities created by the benefits provided by Chapter 125/00.

Chapter 445 of the Laws of 2006 ("Chapter 445/06") created a presumptive eligibility for accidental death benefits in connection with the World Trade Center attack on September 11, 2001.

Chapter 654 of the Laws of 2006 expanded presumptive eligibility for Line-of-Duty accidental disability and accidental death benefits to include strokes effective from January 1, 2002.

Chapter 713 of the Laws of 2006 provides that FIRE members retired from the Fire Marshall title who are appointed to the Office of NYC Marshall will have no reduction or suspension of retirement allowance.

Chapter 5 of the Laws of 2007 amended Chapter 445/06 to clarify the World Trade Center accidental disability benefits payable to retirees who die in the first 25 years of retirement. It also amended Chapter 445/06 to include World Trade Center deaths as presumptive accidental death benefits in the Line-of-Duty.

Chapter 637 of the Laws of 2007 deems prior EMT service and service in certain other job titles as qualifying time for all pension purposes.

Chapter 489 of the Laws of 2008 expanded and redefined the eligibility provisions of the accidental disability and accidental death benefits that arise in connection with the World Trade Center attack on September 11, 2001.

Chapter 211 of the Laws of 2009 continued the valuation and other interest rates for one year to June 30, 2010 from June 30, 2009.

Chapter 265 of the Laws of 2010 continued the valuation and other interest rates for one year to June 30, 2011 from June 30, 2010.

Chapter 180 of the Laws of 2011 continued the valuation and other interest rates for one year to June 30, 2012 from June 30, 2011.

Tier 3 – During June 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, FIRE members hired on and after July 1, 2009 are covered under Tier 3.

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. In particular, Chapter 3/13 continued the 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 extended the WTC Disability Laws to vested members.

\* \* \* \* \*

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

June 30, 2016	QP	P*		FOVSF		FFVSF		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				0.00		ren Albania		
Differences between expected and actual experience		324,429		3,728		(4,548)		323,609
Changes of assumptions		386,534		12,419		6,545		405,498
Benefit payments and withdrawals	77	(1,290,862)	100	(46,407)		(21,826)	1	(1,359,095)
Net change in total pension liability		1,167,188		20,108		9,719		1,197,015
Total pension liability – beginning	-	18,544,307		548,104	-	354,381	-	19,446,792
Total pension liability – ending (a)	22	19,711,495	_	568,212		364,100	_	20,643,807
Plan fiduciary net position:								
Employer contributions		1,054,478		200				1,054,478
Member contributions		116,619		100				116,619
Net investment income		197,398		4,669		1,037		203,104
Benefit payments and withdrawals		(1,290,862)		(46,407)		(21,826)		(1,359,095)
Administrative expenses		(1,200,002)		(10,101)		(21,020)		(1,000,000)
Other changes		43,673	9.5			***	_	43,673
Net change in plan fiduciary net position	-	121,306		(41,738)	_	(20,789)		58,779
Accrued Transfers To/From VSF's		(36,873)		18,739		18,134		2
Plan fiduciary net position – beginning	-	10,815,330	_	547,074	-	316,927	_	11,679,331
Plan fiduciary net position – ending (b) **		10,899,763	_	524,075	_	314,272	-	11,738,110
Employer's net pension liability – ending (a)-(b)	\$	8,811,732	\$	44,137	\$	49,828	\$	8,905,697
Plan fiduciary net position as a percentage of								
the total pension liability	<u></u>	55,309	6 _	92.23%		86.31%	2	56.86%
Covered-employee payroll	\$	1,129,470		n/a		n/a	\$	1,129,470
Employer's net pension liability as a percentage		20,000		02		25		9240320
of covered-employee payroll	_	780.2%		n/a	_	n/a	-	788.5%

Additionally, in accordance with GASB No. 67 paragraph 50, such information was not readily available for periods prior to 2013.

<sup>\*</sup> Such amounts represents the preliminary Fund's fiduciary net position and may differ from the final Fund's fiduciary net position.

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

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

June 30, 2015	QPP*	FOVSF	FFVSF	TOTAL
Total pension liability:	9 357223	21 5050200	Er magesta	27 93204223
Service cost	\$ 396,765	\$ 11,500	\$ 4,561 \$	412,826
Interest	1,196,164	37,448	23,919	1,257,531
Changes of benefit terms				20200
Differences between expected and actual experience	180,533	(4,324)	(4,862)	171,347
Changes of assumptions Benefit payments and withdrawals	(1,150,505)	(47,819)	(22,117)	(1,220,441)
Net change in total pension liability	622,957	(3,195)	1,501	621,263
Total pension liability – beginning	17,076,314	551,300	352,879	17,980,493
Total pension liability – ending (a)	17,699,271	548,105	354,380	18,601,756
Plan fiduciary net position:				
Employer contributions	988,784		51	988,784
Member contributions	108,582	9		108,582
Net investment income	271,430	18,888	12,249	302,567
Benefit payments and withdrawals Administrative expenses	(1,150,505)	(47,819)	(22,117)	(1,220,441)
Other	41,201		-	41,201
Net change in plan fiduciary net position	259,492	(28.931)	(9,868)	220,693
Accrued Transfers To/From VSF's	(40,000)	30,000	10,000	
Plan fiduciary net position – beginning	10,595,838	546,005	316,795	11,458,638
Plan fiduciary net position – ending (b) **	10.815,330	547,074	316,927	11,679,331
Employer's net pension liability – ending (a)-(b)	\$ 6,883,941	\$ 1,031	\$ 37,453	\$ 6,922,425
Plan fiduciary net position as a percentage of				
the total pension liability	61.11 %	99.81 %	89,43 %	62.79 %
Covered-employee payroll	\$ 1,111,744	n/a	n/a	\$ 1,111,744
Employer's net pension liability as a percentage				200000000000000000000000000000000000000
of covered-employee payroll	619.20 %	n/a	n/a	622.66 %

Additionally, in accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2013.

<sup>&</sup>quot;Such amounts represent the preliminary Funds" fiduciary net position and may differ from the final Funds" fiduciary net position.

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

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

June 30, 2014	QPP*	FOVSF	FFVSF	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		3.5		
Changes of assumptions Benefit payments and withdrawals	// 200 / 200	(50,000)	(00.044)	(4.474.000)
benefit payments and withdrawars	(1,099,162)	(50,822)	(22,014)	(1,171,998)
Net change in total pension liability	451,577	(1,662)	6,275	456,190
Total pension liability – beginning	16,624,736	552,962	346,604	17,524,302
Total pension liability – ending (a)	17,076,313	551,300	352,879	17,980,492
Plan fiduciary net position:				
Employer contributions	969.956	50.00		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	(1,099,152)	(50,822)		(1,171,998)
Administrative expenses	***************************************		,	
Other	39,980		•	39,980
Net change in plan fiduciary net position	1,588,646	18,205	29,431	1,636,282
Accrued Transfers To/From VSF's	(120,000)	110,000	10,000	-
Plan fiduciary net position – beginning	9,127,192	417,800	277,364	9,822,356
Plan fiduciary net position – ending (b) **	10,595,838	546,005	316,795	11,458,639
Employer's net pension liability – ending (a)-(b)	\$ 6,480,475	\$ 5,295	\$ 36,084	\$ 6,521,854
Plan fiduciary net position as a percentage of				
the total pension liability	62.05 %	99.04 %	89.77 %	63.73 %
Covered-employee payroll	\$ 1,102,396	n/a	n/a	\$ 1,102,396
Employer's net pension liability as a percentage				
of covered-employee payroll	587.85 %	n/a	n/a	591.61 %

Additionally, in accordance with GASB No. 67 paragraph 50, such information was not readily available for periods prior to 2013.

<sup>\*</sup> Such amounts represents the preliminary Fund's fiduciary net position and may differ from the final Fund's fiduciary net position.

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

	2016		2015		2014		2013	000	2012		2011	***	2010	24	5002	2008		2007	
Actuarially determined contribution	\$ 1,054,478	69	988,784	49	969,956	49	962,173	w	976,895	40	890,706	49	874,331	40	843,75	\$ 780,202	102	\$ 683,193	93
determined contribution	1,054,478		988,784		969,956		962,173		976,895		890,706		874,331		843,751	780,202	202	683,193	83
Contribution deficiency (excess)		49	2	49		w	20	49	10	69	6	65		49		80	63	20	
Covered-employee payroll	\$ 1,129,470		,111,744	w	\$ 1,102,396	69	\$ 1,129,921		\$ 1,149,423		\$ 1,057,243	· ·	\$ 1,059,911	**	\$ 1,013,681	\$ 944,463	163	\$ 916,582	2
Contributions as a percentage of covered-employee payroll	93.360 %		88.940 %		87.986 %		85.154 %		84.990 %	4,237	84.248 %	1075	82.491 %	86	83,238 %	82.608 %	%	74.537 %	*

#### NEW YORK FIRE DEPARTMENT PENSION FUNDS REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED) NOTES TO SCHEDULE OF EMPLOYER CONTRIBUTIONS

#### Note to Schedule:

With the exception of fiscal year 2005, 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 2014 contributions were determined using an actuarial valuation as of June 30, 2012). The Fiscal Year 2005 employer contribution was determined using an actuarial valuation as of the immediate prior fiscal year (June 30, 2004). This change in methodology caused two actuarial valuations to be performed as of June 30, 2004. The methods and assumptions used to determine the actuarially determined contributions are as follows:

Valuation Dates	June 30, 2014	June 30, 2013	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009- June 30, 2004 (lag)
Actuarial cost method	Entry Age	EntryAge	Entry Age	Entry Age	Entry Age	Frozen Initial Lieblilly <sup>1</sup>
Amortzation method for Unfunded Actuarial Accrued Liabilities:						
Initial Unfunded	Increasing Dollar	Increasing Dollar	Increasing Dollar	Increasing Dollar	Increasing Dollar	Increasing dollar <sup>3</sup>
Post-2010 Unfundeds	Level Dollar	Level Dollar	Level Dollar	Level Dollar	Level Dollar	NA
Remaining amortization period:						Al-Outstanding components of reestablished UAAL are being amortized over an 11- year closed period beginning
Initial Unfunded	18 years (closed)	19 years (closed)	20 years (closed)	21 years (closed)	22 years (closed)	in Fiscal Year 2000 <sup>2</sup>
2011 Actuarial Gain/Loss	12 years (closed)	13 years (closed)	14 years (closed)	15 years (closed)	NA NA	NA NA
2012 Actuarial Gain/Loss	13 years (closed)	14 years (closed)	15 years (closed)	NA NA	NA NA	THE .
2013 Actuarial Gaint.oss 2014 Actuarial Gaint.oss Actuarial Asset Veluation (AAV) Method	14 years (closed) 15 years (closed)	15 years (closed) NA	NA NA	NA NA	NA.	
	Modified slayear moving average of market values with a "Market Value Resiter" 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 APAII defined to recognize Fiscal Year 2011 investment performance.	Modified sloyear moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AWIS 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 AAVis defined to recognize Fiscel Year 2011 investment performance.	Modified six-year moving average of market values with "Market Value Restart" as of June 30, 1999.
Actuarial assumptions: Assumed rate of return					122210000000000	
	7.0% per annum, net of investment expenses <sup>3</sup>	7,0% per annum, net of investment expenses <sup>3</sup>	7.0% per annum, net of investment expenses <sup>3</sup>	7.0% per annum, net of lovestment expenses?	7.0% per annum, net of investment expenses <sup>3</sup>	6.0% per annum
Post-refirement mortality	Tables adopted by Board of Trustees during Fiscal Year	Tables adopted by Board of Trustees during Fiscal Year	Tables adopted by Board of Trustees during Fle cal Year	Tables adopted by Board of Trustees during Fiscal Year	Tables adopted by Board of Trustees during Fiscal Year	Tables adopted by Board of Trustees during Fiscal Year
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 edopted 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
Salaryingreases	in general, merit and promotion increases plus assumed General Wage	in general, merit and promotion increases plus assumed General Wage	In general, merit and promotion increases plus assumed General Wage	in general, merit and promotion increases plus assumed General Wage	In general, merit and promotion increases plus assumed General Wage	in general, merit and promotion increases plus assumed General Wage
	Increases of 3.0% per year.3	Increases of 3.0% per year.3	Increases of 3.0% per year.3	Increases of 3.0% per year.3	increases of 3.0% per year."	Increases of 3.0% per year.3
Cost-of-Living Adjustments <sup>2</sup>	1.5% per annum for Auto COLA 2.5% per annum for Es calation.	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 Es calation.	6.33% per annum³

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> 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 ("FPF") 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

<sup>&</sup>lt;sup>3</sup> Developed using a long-term Consumer Price Inflation assumption of 2.5% per year.

#### NEW YORK FIRE DEPARTMENT 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 three fiscal years:

Fiscal year ended	QPP	FFVSF	FOVSF
June 30, 2016	1.37 %	0.88%	0.24%
June 30, 2015	3.28	4.13	4.02
June 30, 2014	17.511	18.027	19.565

Note: In accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2013.

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#### Schedule of Investment Expenses

#### For Fiscal Year Ended June 30, 2016

Average Assets Under			
Investment Manager	Management (\$MMS)	Total Fees	
US Equities			
Brown AM - SCG	41.17	324,854	
Ceredex	68.76	286,774	
Dalton Greiner Sm Cap-Value	50.49	258,950	
Blackrock R2000 Growth	13.03	683	
Blackrock R2000 Value	3.02	147	
Iridian Asset Mgmt. MCV	98.07	396,471	
Wellington Mgmt. MCC	109.49	535,878	
State St GA S&P 400	0.00	1,492	
Blackrock R1000 Growth	851.09	32,520	
Blackrock R1000 Value	869.78	32,382	
State Street Global Advisors R3000	998.65	65,586	
Attucks	24.29	203,189	
Capital Prospects	36.84	288,907	
PIM	96.93	671,178	
Domestic Equity Transition	123.52	-	
Total US Equities	3,385.12	3,099,012	
NON-US Equities			
Baillie Gifford	177.17	464,562	
Walter Scott	252.99	503,997	
Causeway	199.19	520,952	
Sprucegrove	178.94	379,068	
Acadian	73.74	239,729	
Pyramis	69.14	429,193	
REBAL-Transition	0.11		
SSGA MSCI EAFE Small Cap Index	26.41	13,213	
SSGA	50.78	9,262	
ACADIAN	100.91	348,302	
Baillie Gifford	149.62	561,421	
DFA	91.48	387,995	
Parametric EM	103.16	487,399	
CONY GT FIRE Blackrock-MSCI EM MK	253.97	-	
NYC-FIRE-PERMAL ASSET Mgmt	47.63		
Total NON-US Equities	1,775.24	4,345,094	
Hedge Funds			
Altimeter Partners	10.88		
BLUE TREND FD	34.66	420,755	
BREVAN HOWARD LP	19.85	406,162	
BREVAN HOWARD OPP	20.80	105,540	
CASPIAN SELECT CF	20.22	208,582	
CCP QUANT FD	22.52	221,818	
D.E. SHAW COMPOSITE FD	46.86	785,562	
FIR TREE VAL FD	17.45	400,318	
Gotham Asset Management	11.49	105,318	
LUXOR CAPITAL	36.73	329,486	
PERMAL		272,427	

#### Schedule of Investment Expenses

#### For Fiscal Year Ended June 30, 2016

Average Assets Under		
Investment Manager	Management (\$MMS)	Total Fees
PERRY CAPITAL LP	14.18	228,873
Pharo Gaia Fund Ltd	13.71	-
PHARO MACRO FD	20.61	
SRS Investment Management	26.03	243,357
Standard General	6.46	75,946
Turiya Capital Management	24.28	211,975
TOTAL Hedge Funds	346.74	4,016,119
REITS		
Morgan Stanley - Reits	215.99	760,275
Adelante (Lend Lease Rosen) (REIT)	168.25	437,320
Total REITS	384.24	1,197,595
Private Equity	0.00	16 020
ACON Equity Partners III LP	0.86	16,828
Aisling Capital II, LP	0.32	5,287
Aisling Capital III, L.P.	2.44	63,787
Altaris Health Partners III, L.P.	0.55	31,082
American Securities Partners VI, L.P.	23.23	281,408
Ampersand 2011 L.P.	6.52	55,163
Apollo Investment Fund V, L.P.	0.53	-
Apollo Investment Fund VI, L.P.	6.65	47.00
Apollo Investment Fund VII, L.P.	7.16	17,007
Apollo Investment Fund VIII	17.50	452,104
Ardian Secondary VI	22.96	147,632
Ares Corp. Opportunities Fund I, L.P.	0.50	(2,686
Ares Corp. Opportunities Fund II, L.P.	0.92	4,274
Ares Corp. Opportunities Fund III, L.P.	9.47	254,936
Ares Corp. Opportunities Fund IV, L.P.	16.05	321,947
ARLINGTON CAPITAL II	0.73	182,934
ARSENAL CAPITAL II	3.29	35,344
ASF VII	1.31	2,763
ASF VII Side Car	0.00	-
ATLANTIC EQUITY IV	2.20	6,759
Aurora Equity Partners III, L.P.	0.59	326
Avista Capital Partners, L.P.	2.40	(1,225
Avista Capital Partners II, L.P	8.01	148,502
AXA Secondary Fund V B L.P.	26.27	(111,884
BC European Capital IX	15.56	319,803
BDCM Opportunity Fund III, L.P.	10.26	94,608
Blackstone Capital Partners IV, L.P.	3.44	71,918
Blackstone Capital Partners V, L.P.	3.29	251,026
Blackstone Capital Partners VI, L.P.	9.42	118,568
Blackstone Mezzanine Partners II L.P.	0.07	1,660
BLUE WOLF CAPITAL II	2.69	
	2.52	11.50
Bridgepoint Europe III	4.01	-
Bridgepoint Europe IV	2.17	257,153

#### Schedule of Investment Expenses

#### For Fiscal Year Ended June 30, 2016

Average Assets Under Investment Manager Management (\$MMS) Total Fees		
CAPITAL PARTNERS I	0.59	3,092
Capital Partners PE Income Fund II, L.P.	0.68	16,228
Capital Point Partner, L.P.	1.91	158,368
Carlyle Partners IV, L.P.	0.42	18,013
Carlyle Partners V, L.P.	4.64	241,079
Carlyle Partners VI, L.P.	10.68	361,474
Carpenter Community BancFund-A, L.P.	2.77	249,108
Catterton Partners VI, L.P.	3.70	43,913
CCMP Capital Investors II, L.P.	2.52	101,890
Celtic Pharmaceutical Holdings, L.P.	1.52	-
Centerbridge Cap III	1.15	87,747
Coller International Partners V, L.P.	1.39	36,995
ComVest Investment Partners IV, L.P.	9.60	94,993
Constellation Venture Capital III, L.P.	3.11	59,753
CS NYCERS Emerging Manager Co-Inv, L	-	57,076
CS NYCERS Emerging Manager Fund, L.F	6.78	122,280
Crestview Partners II, L.P.	5.64	90,571
Crestview Prinr III	7.90	179,207
CVC Capital Partners VI	11.24	946,437
	0.26	340,437
CVC European Equity Partners III, L.P.	5.92	747,944
CVC European Equity Partners V, L.P.	0.04	50,000
Cypress Merchant Banking Ptnrs II, L.P.	16.49	378,901
EQT VI, L.P.	4.83	568,324
EQT VII ERASMUS	0.39	300,324
	0.66	
Euro Choice II (Delaware) L.P.	1.95	32,067
Euro Choice III L.P.	4.95	
Euro Choice IV L.P.		41,916
Falconhead Capital II	1.37	13,553
FdG Capital Partners, L.P.	6.37	22.200
FdG Capital Partners II LP	0.33	32,206
Fenway Partners Capital Fund III, L.P.	1.95	22,041
FirstMark IV, L.P.	6.37	(30,793
First Reserve Fund XI, L.P.	0.42	04.400
First Reserve Fund XII, L.P.	1.66	31,482
The Fourth Cinven Fund	0.25	22,461
FS Equity Partners V, L.P.	0.98	5,857
FS Equity Partners VI, L.P.	12.16	51,723
TV IV, LP	2.51	
TVentures III, L.P.	2.40	
GF CAPITAL	1.93	194,314
GI Partners Fund II	0.81	5,393
GI Partners Fund III	3.49	56,040
GLEACHER MEZZANINE II	0.11	134,241
Green Equity Investors VI	20.47	171,556
Grey Mountain Partners Fund III, LP	0.45	18,910

### Additional Supplementary Information Schedule of Investment Expenses

#### For Fiscal Year Ended June 30, 2016

Average Assets Under Investment Manager Management (\$MMS) Total Fees		
		Total Fees
GSO Capital Opportunities Fund, L.P.	0.98	86,501
Highland Consumer Fund I	0.91	22.754
ICV Partners III, L.P.	1.40	22,754
Incline Equity Partners III, L.P.	0.84	10,447
Intermedia Partners VII, L.P.	2.48	29,840
JP Morgan Fleming, L.P.	1.82	32,593
Landmark Equity Partners XI, L.P.	0.38	-
Landmark Equity Partners XIV, L.P.	6.57 10.70	-
Landmark Equity Partners XV		26 055
Lee Equity Partners, L.P.	0.67 0.79	36,955
Levine Leichtman Capital Deep Value		22.004
Levine Leichtman Capital Partners IV LP	2.44	32,001
Lexington Capital Partners VII, L.P.	5.24	100,573
LEXINGTON CAP VIII	9.97	-
Lincolnshire Equity Fund II, L.P.	0.39	38,419
Lincolnshire Equity Fund III, L.P.	2.42	
Lincolnshire Equity Fund IV, L.P.	2.25	16,637
Markstone Capital Partners, L.P.	0.24 1.23	
Medica III Investments (Intl) L.P.	8.20	115 220
MidOcean Partners III, L.P.	1.45	115,328
Milestone Partners III, LP	0.34	(18,750)
Mill City Capital II	4.26	19,213
Montreux Equity Partners IV L.P.	3.61	17,066
NorthBound Emerging Manager Custom Fc	0.43	33,058
New Mainstream Capital II	0.43	33,030
New Mountain Partners I, L.P.	0.04	37,459
New Mountain Partners II, L.P.	10.52	602,164
New Mountain Partners III, L.P. New York Fairview Emerging Mgrs Fund (#	5.28	12,293
NGN BioMed Opportunity II, L.P.	2.50	60,174
Olympus Capital Asia III	4.41	93,484
Olympus Growth Fund VI, L.P.	7.43	229,560
Onex Partners III LP	4.19	47,498
Paladin Homeland Security Fund L.P.	1.15	55,556
Paladin III, L.P.	7.69	165,463
Palladium Equity Partners III, L.P.	5.36	92,460
Palladium Equity Partners IV	4.44	66,792
Patriot Partners II	0.80	34,400
PCG Clean Energy Tech Fund East, L.P.	4.47	34,400
Pegasus Partners IV, L.P.	4.26	178,524
Pegasus Partners V, L.P.	5.72	93,493
Permira IV	1.71	25,435
Perseus Partners VII, L.P.	0.08	17,370
Pine Brook Capital Partners	4.13	34,729
Platinum Equity Capital Partners III, LP	14.67	388,488
- B		15,707
POST CAPITAL II	1.83	15,707

#### Schedule of Investment Expenses

#### For Fiscal Year Ended June 30, 2016

Average Assets Under			
Investment Manager	Management (\$MMS)		Total Fees
Prism Venture Partners V, L.P.		1.56	
Psilos Group Partners III, L.P.		2.05	-
Raine Partners II		1.08	159,236
Relativity Fund, L.P.		0.54	-
RiverstoneCarlyle Glbl Engy-Pwr Fd IV LP		3.68	33,016
RRE Ventures IV, L.P.		3.33	34,84
Scale Venture Partners III, LP		4.96	
SCP Private Equity Partners II, L.P.		3.14	-
SCP Vitalife Partners II, L.P.		3.11	41,02
Siris Partners III		0.75	72,49
Snow Phipps Group, L.P.		2.96	40,80
Snow Phipps II, L.P.		7.30	172,189
Stellex Capital Management LP		0.69	78,34
Summit Partners Growth Equity VIII-A		27.01	547,72
Terra Firma Capital Partners III, L.P.		2.22	176,916
TM&P II		1.57	4,000
Γrident V, L.P.		15.37	193,82
Frilantic Capital Partners V L.P.		4.75	198,174
Frilantic Capital Partners III, L.P.		0.11	6,548
Frilantic Capital Partners IV L.P.		2.31	235,81
JS Power Fund II		4.56	_
United States Power Fund III, L.P.		4.71	_
Valor Equity III		0.95	60,474
Vista Equity Partners Fund III, L.P.		3.39	6,65
Vista Equity Partners Fund IV, L.P.		37.31	452,914
VISTA EQUITY V		30.94	1,190,70
Vista VI		3.32	35,346
/ista Foundation Fund II, L.P.		2.11	55,51
VSS Communications Partners IV, L.P.		0.32	22,34
Warburg Pincus Private Equity XI, LP		34.01	177,34
Narburg Pincus XII		2.19	398,942
WCAS XII		3.37	-
Webster Capital III		1.25	25,50
Wellspring Capital Partners V, L.P.		8.09	94,93
Welsh, Carson, Anderson & Stowe XI, L.P		4.84	04,00
Yucaipa American Alliance Fund I, L.P.		1.83	338
Yucaipa American Alliance Fund II, LP		16.14	62,69
/ucaipa Corporate Initiatives Fund II LP		2.66	20,39
OTAL Private Equity		801.06	15,840,35
Private Real Estate		001.00	15,640,55
AG Realty Fund VII (Global)		2 72	201 920
[[[기가 : 1] [기가 : 1] [[[기가 : 1] [기가 : 1]		2.73	201,829
Amer Value Ptnrs I LP		1.34	-
ARA Asia Dragon Fd (Global)		0.01	
Ares European RE Fund III		2.81	(*)
Artemis Co-Investment		1.65	
Avanath Aff Housing II		1.83	76,36

#### Schedule of Investment Expenses

#### For Fiscal Year Ended June 30, 2016

Average Assets Under		
Investment Manager	Management (\$MMS)	Total Fees
Blackstone Europe IV	20.34	363,506
Blackstone REP EUR III	3.65	43,888
Blackstone REP IV	1.44	
Blackstone REP VI	5.80	51,433
Blackstone REP VII	30.59	342,373
Blackstone Real Estate VIII	12.33	325,406
Brookfield Strat RE Partners	16.78	149,706
Canyon-Jonhson Urban Fund II	0.50	(13,347)
Canyon-Jonhson Urban Fund III	0.04	403,636
Carlyle Realty V	1.69	23,935
Carlyle Realty VI	11.89	582,159
Carlyle Realty Fund VII	5.72	203,396
City Investment Fund	0.10	-
Colony Investors VIII	3.99	1.60
Colony Realty Partners II	1.38	( <b>-</b>
Divco West FD III	8.09	
Divco West FD IV	30.89	420,543
EMMES	6.65	56,459
Exeter Fund II LP	1.23	
Heitman America RE Trust	16.28	_
Hudson SEP AC	2.09	22,966
H/2 Special Opp Fund III	8.71	-
H/2 Special Opportunities Fund II	7.58	-
Jamestown Premier Fund	2.16	3,274
JPMC Strategic Property Fund	42.06	199,018
JPMC Special Situations Fund	6.28	47,616
KTR Industrial Fd III	0.02	,
LaSalle US Property Fund	40.25	(18,336)
Lone Star RE FD III	21.38	,,,
Metlife Core Property	17.08	2
Metro Wkforce Housing FD	2.62	2
PRISA	9.11	44,182
PRISA II	26.82	143,860
Prologis Inc	6.13	-
Related Sep Acct	8.54	34,732
RREEF America II Inc	9.08	01,702
RREEF America III Inc	0.23	
Silverpeak Legacy Partners III (Global)	0.72	16,213
Stockbridge Real Estate Fund III	17.79	10,210
Taconic NYC Investmt Fd	9.06	5
Thor Urban Property Fd II	3.56	
Tristan Euro Property	1.34	
50000000000000000000000000000000000000	43.56	188,800
UBS Trumbull Property Fd	7.76	100,000
USAA Eagle RE Fund	2.70	5
Walton ST REF VI (Global)		40.070
Westbrook Fund VIII	0.98	18,878

#### Schedule of Investment Expenses

#### For Fiscal Year Ended June 30, 2016

Average Assets Under Investment Manager Management (\$MMS) Total Fees		
TOTAL Private Real Estate	487.36	3,932,486
TOTAL TITULO NOUI LOUICO	407.00	0,002,10
Infrastructure	52501	# 111.550V
Brookfield Infr Fd II	9.92	156,813
FIRST RESERVE EIF II	1.77	103,069
FM GL INFRASTRUCTURE	10.68	56
nfrastructure-BIF III	1.45	48,94
KKR Global Infrastructure II	2.68	126,04
TOTAL Infrastructure	26.51	435,42
Fixed Income		
Fischer Francis - Govt	127.34	140,132
State Street - Gov't	127.79	52,90
Blackrock - Mortgage	272.25	144,206
Goldman Sachs - Mortgage	112.50	170,146
Neuberger Berman - Mortgage	233.21	119,168
Blackrock - Credit	200.39	81,284
Prudential - Credit	201.54	137,75
Prudential-Privest - Credit	46.03	-
Γaplin Canida Habacht - Credit	290.98	217,850
Γ Rowe Price - Credit	299.02	320,93
GIA	21.03	54,12
_M Capital	22.42	21,19
PIM - Hillswick	2.96	12,246
PIM - Integrity	2.62	
PIM - NEW CENTURY	7.80	39,40
PIM - PUGH CAP	9.04	29,91
PIM - Ramirez Asset	7.39	24,340
Blackrock TIPS	138.84	70,97
State Street TIPS Passive	408.29	11,96
Loomis Sayles - High Yield	110.07	341,264
Penn Capital Mgt	114.11	383,416
T ROWE EH	187.00	552,769
Babson BL	90.82	304,39
Guggenheim BL	93.88	369,76
Advent Conv Bonds	53.48	270,478
ACCESS RBC	17.79	44,40
AFL-CIO HOUSING INV TRUST	55.11	216,983
CPC CONST FACILITY	2.65	_
CFSB-PPAR (GNMA)	0.44	-
CCD-PPAR (GNMA)	1.10	
CPC-PPAR (FNMA)	1.92	1.To
IPMC-PPAR (FNMA)	2.63	
JIF-PPAR (GNMA)	0.52	
NCBCI-PPAR (GNMA)	0.29	-
BOA-PPAR (FNMA)	3.43	121
CCD-PPAR (FNMA)	1.46	128

#### Schedule of Investment Expenses

#### For Fiscal Year Ended June 30, 2016

Average Assets Under			
Investment Manager Management	(\$MMS)	Total Fees	
LIIF-PPAR (FNMA)	1.38		
NCBCI-PPAR (FNMA)	0.02	•	
Security Lending	3.82	156,563	
C/D - Fail Float Earnings	0.72		
TOTAL Fixed Income	3,274.09	4,288,584	
Opportunistic Fixed Income			
Avenue Europe Special Sit. Fund, L.P.	0.08		
Avenue Special Situations Fund V, L.P.	0.06		
Avenue Special Situations Fund VI L.P.	7.43	(28,067)	
Brightwood Capital Advisors III, LP	5.53	67,500	
Fortress Ctr St Ptnrs	26.85	•	
Oaktree Opp Fd IX	28.69	357,243	
Torchlight Debt Oppy Fund III, LLC	1.99	21,112	
Torchlight Debt Opp V	2.98	185,525	
Angelo Gordon Ct St Ptnrs	27.50	-	
Apollo Centre Street Partnership, L.P	31.88	-	
Ares Centre Street	28.54	133,426	
Contrarian Partnership, L.P	10.38	(47,206)	
Golden Tree OD	40.40		
Marathon Centre Street Partnership, L.P.	54.92	249,118	
Oak Hill Ctr St Ptnrs	35.26	183,456	
TOTAL Opportunistic Fixed Income	302.48	1,122,106	
Total Management Expenses	10,782.84	38,276,775	
Consultant Expenses		444.240	
AKSIA LLC Total		111,340	
COURTLAND PARTNERS LTD Total		51,530	
NEPC LLC Total		355,000	
STEPSTONE GROUP LP Total		564,250	
THE TOWNSEND GROUP Total		67,658	
Total Consultants		1,149,778	
Legal Expenses		2 626	
Blackstone Real Estate Partners V111 legal Fees		2,625	
Bryan Cave LLP		1,538	
Cox Castle and Nicholson LLP Legal Fees		5,833 5,294	
Day Pitney LLp			
Foster Pepper PLLC Legal Fees Morgan Lewis and Brockius Legal FEEs		11,477 20,077	
Nixon Peabody Legal Fees		8,149	
[2] 전 전 전 전 (2) (2) (2) (2) (2) (2) (2) (2) (2) (2)		299	
Orrick Herrington & Sutcliffe LLP Pillsbury Winthrop Shaw Pittman Ilp			
Reinhart Boerner Van euren Eqty V11 Legal fees		15,550 9,856	
Sadis & Goldberg LLP		12,500	
Seward & Kissel LLp		46 93 245	
Total Legal Expenses		93,245	

#### Schedule of Investment Expenses

#### For Fiscal Year Ended June 30, 2016

Average Assets Under				
Investment Manager	Management (\$MMS)		Total	Fees
Total Management Fees				39,519,798
Other Miscellaneous expenses				
Fx Service Fees - Alt Equity				6,554
Fx Service Fees - Alt Fixed Income				24
Fx Service Fees - International				104,517
Operating Expenses - Equity				417
Operating Expenses - Alt Equity				2,351,569
Operating Expenses - Fixed Income				3,131
Org Expenses - Alt Fixed Income				1,023,514
Misc Expenses - Equity				30
Misc Expenses - Alt Equity				220,372
Misc Expenses - International				30,118
Misc Expenses - Fixed Income				15,208
Misc Expenses - Mutual Fund Mortgag	ges			10
Misc Expenses - Mutual Fund Equity				63
Misc Expenses - Mutual Fund Fixed Ir	ncome			147
Misc Expenses - Alt Fixed Income				274,567
Shareholder Research Services				4,532
Evaluation Services				321
Audit Fees				2,979
Administrative Fees				34,984
Tax Expense - International				2,291,939
Tax Expense - Mutual Fund Fixed Inc	ome			114
Tax Expense - Mutual Fund Equity				1,170
Sec Lending Fee (3rd party)				418,831
Subscription Fee				15,590
Total Other Miscellaneous expense	S			6,800,701
Total Investment Expenses	\$	10,783	\$	46,320,499

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# New York Fire Department 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, 2016

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#### Investment Section

#### **New York Fire Department Pension Funds**

#### INVESTMENT REPORT

This report is prepared by management on the basis of information provided by the investment managers of the New York Fire Department Pension Funds and the Comptroller of the City of New York. The Comptroller administers the Funds' investment portfolio subject to the direction and control of the Boards of Trustees of the respective fund. The Boards of Trustees 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 New York State Retirement and Social Security Laws ('RSSL''), for the benefit of the Funds' membership.

#### **Investment Policy**

The Qualified Pension Fund's primary purpose is to provide retirement benefits for members and their beneficiaries, while the Variable Supplements' Funds provide supplemental payments other than pension benefits for eligible members. These benefits and payments are financed through the accumulation of employer and 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 the 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 investment advisors. The Funds' managers are periodically reviewed for ongoing performance and adherence to investment guidelines.

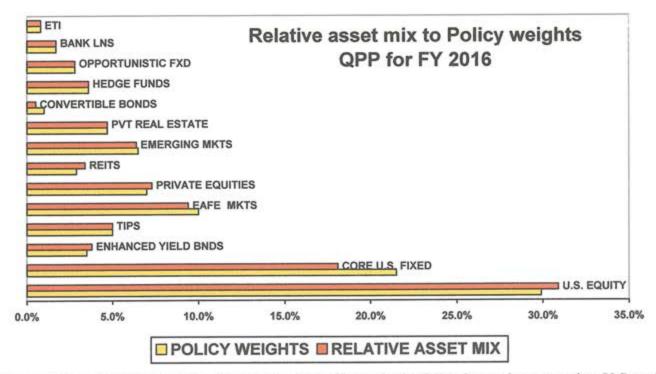
#### Investment Criteria and Asset Allocation

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 as 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 Fire Department Pension Funds**

Each fund's asset allocation policy is constructed to meet both short-term funding requirements and longterm benefit obligations. Investments are therefore made in a broad array of financial instruments including domestic stocks, bonds and international securities through a collective fund investment vehicle. The percentages assigned each category of assets held in the Funds are determined based in part on the results of an analytical study, which indicates the expected rates of return and levels of risk for various asset allocations. These allocations are reviewed periodically to address fluctuating market events and new investment opportunities.



The current policy mix implemented is comprised of items in the following major categories: U.S equity, Core U.S. fixed income, Enhanced yield bonds, Treasury inflation protected securities ("TIPS"), International equity("EAFE Markets"), Private equities, Real estate investments trusts ("REITS"), Emerging markets, Private Real Estate investments, Convertible Bonds, Hedge Funds, Opportunistic Fixed, Bank loans and Economically Targeted Investments("ETI"). The chart above shows a comparison of relative asset mix to policy weights for the QPP as at June 30, 2016.

Although the Funds' assets are periodically re-balanced to keep in line with long term asset allocation objectives, 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 U.S. equity, Enhanced Yield bonds, Private Equities and REITS by 1.0, .3, .3 and .5 percentage points respectively. Core U.S Fixed, EAFE, Emerging Markets and Convertible bonds fell below the current targeted allocations by approximately 3.4, .6, .1 and .5 percentage points respectively. All remaining asset classes in the portfolio closely matched targeted allocations.

Actual asset allocation in effect on 6/30/2016 for QPP and the VSF's is presented in the chart titled "Asset Allocation" (Exhibit 1a -1b). Changes in actual asset allocation for QPP over a period of ten years covering June 2007 through June 2016 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 2016

The Qualified Pension Fund's portfolio of approximately \$11.0 billion returned 1.4 % on a net basis, for the fiscal year ended June 2016. This performance reflects the challenging return environment for world equity markets, during the period. The portfolio's return fell short of the 2.6% gain posted by the Fund's policy benchmark and also well below the actuarial assumed rate of return at 7.0%, for the period. The QPP closed fiscal year 2016 with a net position restricted for pension benefits totaling \$10.9 billion.

The portfolio's return for fiscal year ended June 30, 2016 included a modest overall gain of 4.1% in the Fixed income sectors during the period. However, U.S. Equities, the largest segment in the portfolio, were among the weaker performers, netting overall gains of 1.2%, well below the 2.1% gain posted by its benchmark the Russell 3000 index. For the quarter ended June 30, 2016, the Equities group overall posted gains averaging 2.5%, slightly less than the return of 2.6% posted by the Russell 3000 index.

International Equities as a group were among the worst performers, most categories posted losses for the fiscal period. The group lost 9.5% overall, although ahead of its benchmark, the MSCI AC world ex Index, which lost 10.2%. The Emerging markets sector, among the lower performers in the group, lost 12.4%; underperforming its benchmark, the MSCI emerging markets index, which lost 12.1% over the same period. For the quarter ended June 30, 2016, the overall group lost approximately .2%.

The Fixed income composite portfolio was among the best performers of the asset classes, closing fiscal year 2016 with gains averaging 4.1%. The largest segment within this category, the structured or core investment grade Fixed income group, although posting gains of 6.5%, underperformed its benchmark the New York City core plus 5 index, which posted gains of 7.2%. Treasury Inflation Protected securities, also among the better performers in this category gained 4.3%, slightly below its benchmark the Barclays Capital Global inflation linked TIPS index which gained 4.4% for the period. The Opportunistic Fixed Income group was among the worst performers in this category, posting losses of 2.4%, underperforming its benchmark the New York City 10% Annual return index, which gained 10%. For the five-year period ended June 30, 2016, the QPP's annualized returns stood at 6.9 %, compared to the portfolio policy benchmark return at 7.5%.

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 \$452.0 million posted overall gains of 1.0% for the period; this gain was well below the policy benchmark at 1.7%. The Fire Officers Variable Supplements Fund with assets under management of \$285.0 million also posted overall returns of .7% for the period, also below the policy benchmark with gains of 1.7%.

For the five year period ended June 30, 2016, the FFVSF's and the FOVSF 's annualized returns stood at 7.4% and 7.6% respectively, while the corresponding policy benchmarks returned 7.8%.

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<sup>&</sup>lt;sup>1</sup> 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 Fire Department Pension Funds**

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 through June 30, 2016.

The Funds' total investments including Collateral from securities lending fell from \$12,937.5 million to \$12,725.3 million, by the end of fiscal year 2016. This change is depicted in **Exhibit 2**, a chart showing changes in total investment at market value over the ten fiscal periods between 2007 and 2016.

The Funds' Portfolio assets invested during fiscal year 2016 returned net gains of \$203.1 million. The overall gains were due mainly to modest performances by U.S. fixed income in the Funds' investment portfolio. Exhibit 3 shows a summary of the changes in investment income over the ten-year period 2007 through 2016.

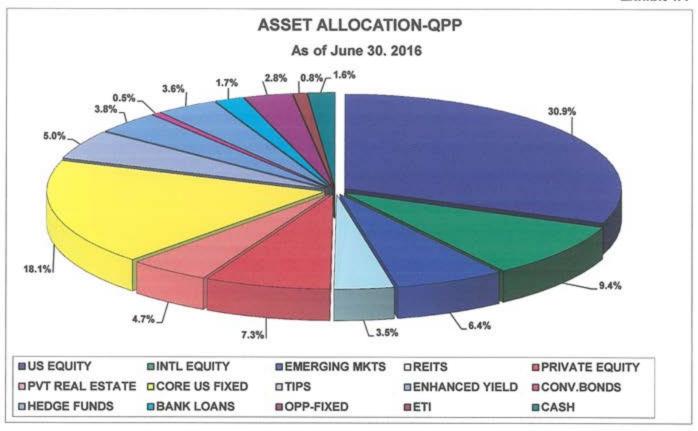
Listings of the Fund's largest bonds and stocks holdings are presented in Schedule 2A & 3A respectively.

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 2016.

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Exhibit 1A



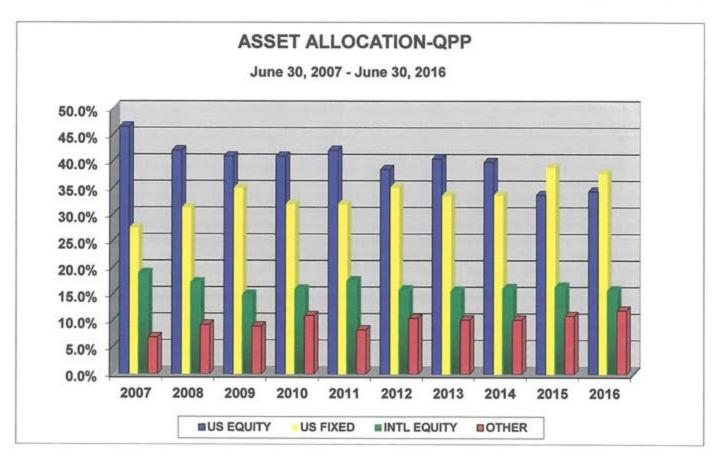
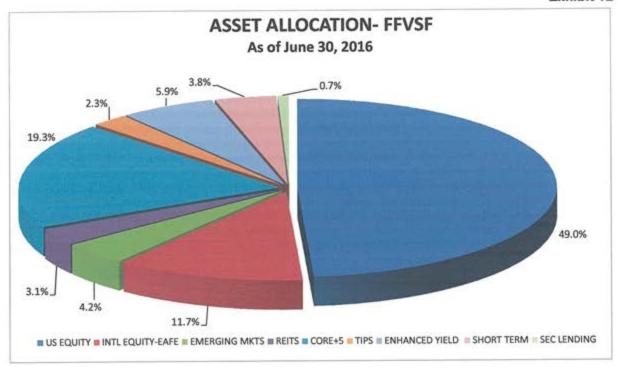
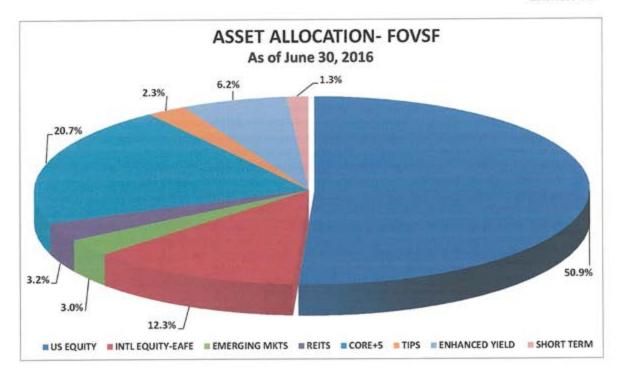


Exhibit 1B

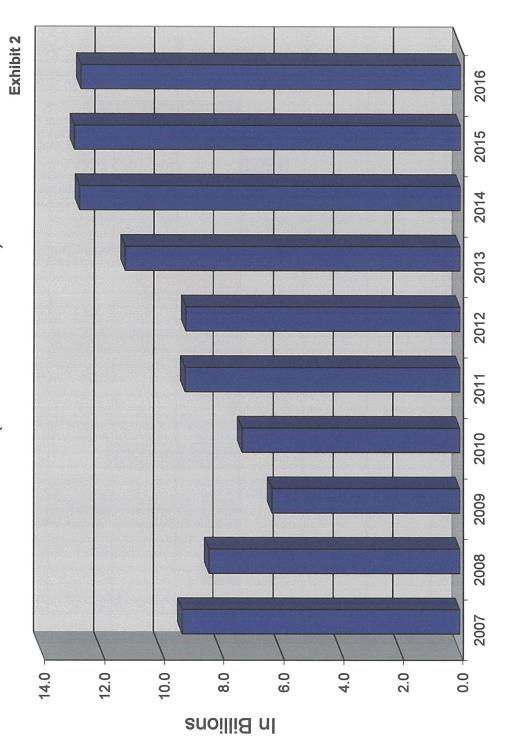


#### Exhibit 1C



# TOTAL INVESTMENTS Fire Funds Combined

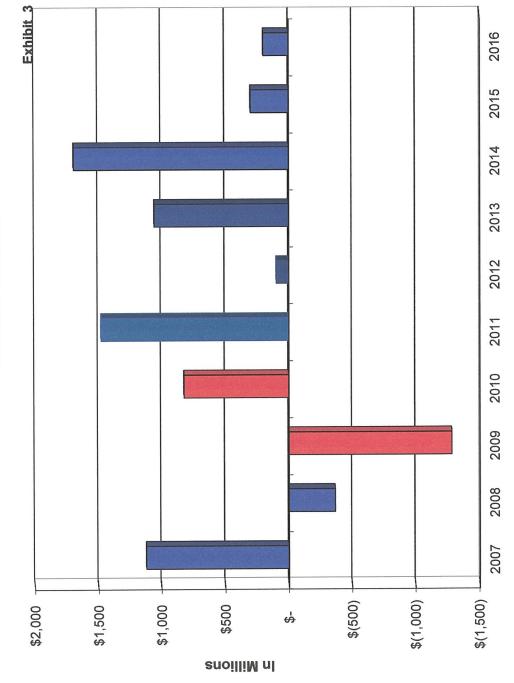
(At Market - Value)



**FISCAL YEARS** 

INVESTMENT INCOME

**Fire Funds Combined** 



#### New York City Fire Department, Subchapter Two Pension Fund

#### Schedule of Portfolio Returns\* Fire QPP June 30, 2016

Schedule 1A

Assets (\$MM)	% Total	Asset Class	3 Mos Apr-16 Jun-16	YTD Jan-16 Jun-16	1 YR Jul-15 Jun-16	3 YRS Jul-13 Jun-16	5 YRS Jul-11 Jun-16	10 YRS Jul-06 Jun-16
3,385.00	30.86	U.S. Equities Russell 3000	2.50 2.63	3.50 3.62	1.17 2.14	10.86 11.13	11.20 11.60	7.21 7.40
1,728.00	15.78	Total International Equity MSCI AC WORLD EX US (Net) Benchmark	-0.15 -0.64	0.63 -1.02	-9.51 -10.24	1.64 1.16	0.01 0.10	2.27 1.87
1,029.00	9.42	International Developed Environ activist MSCI EAFE	-0.33 -1.46	-1.82 -4.26	-7.88 -10.16	3.15 2.06	2.00 1.68	2.26 1.58
699.00	6.40	International Emerging mkts MSCI Emerging mkts index	0.13 0.66	4.46 6.41	-12.40 -12.05	-0.84 -1.56	-3.03 -3.78	3.83 3.54
394.00	3.60	Total Hedge Funds HFRI Funds of funds composite index 1	0.65 0.81	-0.60 -2.09	-3.83 -4.45	2.06 2.93	2.38 2.65	n/a n/a
384.00	3.51	Total Real Estate Equity Sec.(REITS) DJ US Select Real Estate Securities Inde.	2.56 5.42	6.79 10.79	13.04 22.72	11.37 13.52	10.92 12.18	6.46 6.76
801.00	7.31		1.00	3.33	7.11	12.72	10.95	10.92
	100	NYC R3000+3% Lagged	1.72	8.88	2.65	24.53	14.57	11.33
487.00	4.45	Private Real Estate NCREIF NFI-ODCE NET+100BP	2.76	5.82 4.41	12.92 11.90	12.58	13.72 12.77	4.18
27.00	0.25							*
27.00 0.25	Infrastructure Real Estate CPI+ 4%	1.84	4.79 2.79	10.67 5.10		-	-	
		Total Fixed Income Segment	2.83	5.2	4.10		_	2
1,911.00	17.45	Total Structured Program NYC Core Plus Five Index	2.89 2.71	6.17 6.33	6.45 7.16	4.96 4.91	4.86 4.57	6.07 5.87
411.00	3.75	Enhanced Yield Citigroup BB & B	4.46 4.97	6.78 8.15	0.35 0.83	4.09	5.46 5.63	7.14 6.18
43.00	0.39	Total Core Fixed income Barclays Capital Aggregate index	2.10 2.21	5.29 5.31	5.85 6.00	4.57 4.06	4.36 3.76	n/a n/a
30.00	0.27	Total Fixed income Funds of Funds Barclays Capital Aggregate index	2.35 2.21	5.02 5.31	5.86 6.00	4.41 4.06	n/a n/a	n/a n/a
547.00	4.99	Total Tips Managers Barclays Global Inflation linked US Tips	1.70 1.71	6.23 6.24	4.29 4.35	2.40 2.31	2.80 2.63	4.88 4.75
185.00	1.69	Total Bank Loans Credit Suisse FB Leveraged Loan index	2.39 2.86	3.38 4.23	1.25 0.93	4.02 3.04	n/a n/a	n/a n/a
54.00	0.49	Total Convertible Bonds BofA ML All Conv. Ex mandatory index	2.82 4.03	2.85 1.36	-0.82 -5.10	4.77 7.01	4.87 7.19	n/a n/a
302.00	2.76	Total Opportunistic Fixed NYC 10% Annual return	4.86 2.41	1.77 4.88	-2.35 10.00	4.26 10.00	4.94 10.00	n/a n/a
89.00	0.81	Total TeachersTargeted- ETI (w/o cash) Fire custom Benchmark	1.90 1.83	5.12 4.54	7.72 5.45	5.15 3.91	4.39 3.54	5.50 4.96
170.00	1.55	State Street Short Term	0.29	0.64	0.70	0.24	0.40	1.59
5.00	0.05	Cd fail fit /Sec	0.20	0.07	0	0.24	0.40	1.00
10,953.00	100.00	Total Portfolio Policy Benchmark	1.97 2.16	3.65 4.65	1.41 2.57	7.32 7.45	6.93 7.46	6.06 6.73

<sup>\*</sup>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).

#### Schedule of Portfolio Returns FFVSF\* June 30, 2016

Schedule 1B

Assets (\$MM)	% Total	Asset Class	3 Mos Apr-16 Jun-16	YTD Jan-16 Jun-16	1 YR Jul-15 Jun-16	3 YRS Jul-13 Jun-16	5 YRS Jul-11 Jun-16	10 YRS Jul-06 Jun-16
222.00	49.12	U.S. Equities Russell 3000 Daily	2.68 2.63	3.70 3.62	2.37 2.14	11.18 11.13	<b>11.62</b> 11.60	7.42 7.40
53.00	11.73	Total International Developed Markets MSCI EAFE Benchmark	<b>-1.91</b> -1.46	-6.33 -4.42	<b>-12.97</b> -10.16	<b>-0.34</b> 2.06	<b>-0.50</b> 1.68	<b>1.31</b> 1.58
19.00	4.20	Total Emerging Markets MSCI Emerging Markets	<b>0.71</b> 0.66	6.63 6.41	<b>-12.06</b> <b>-12.05</b>	-3.67 -1.56	<b>-5.25</b> -3.78	2.00 3.54
14.00	3.10	Total Real Estate Equity Sec.(REITS)  DJ US Select Real Estate Securities Index	<b>1.60</b> 5.42	<b>6.26</b> 10.79	9.95 22.72	<b>10.36</b> 13.52	<b>10.08</b> 12.18	<b>6.90</b> 6.76
87.00	19.25	Total structured Fixed Income NYC Core Plus Five Index	3.00 2.71	<b>6.58</b> 6.33	<b>6.22</b> 7.16	<b>4.90</b> <b>4.91</b>	4.64 4.57	<b>5.93</b> 5.87
27.00	5.97	Total Enhanced yield Citigroup BB&B	<b>3.39</b> 4.97	<b>6.24</b> 8.15	<b>1.62</b> 0.83	<b>4.81</b> 3.90	<b>5.66</b> 5.63	<b>6.87</b> 6.18
10.00	2.21	Total Tips Managers Barclays Global Inflation linked US Tips inde	1.90 1.71	<b>6.46</b> 6.24	<b>4.50</b> <b>4.35</b>	2.50 2.31	2.98 2.63	4.95 4.75
17.00	3.76	Fire Fighters short term	0.22	0.53	0.54	n/a	n/a	n/a
3.00	0.66	Securities Lending	n/a	n/a	n/a	n/a	n/a	n/a
452.00	100.00	Total Portfolio Policy Benchmark	1.97 2.26	3.20 3.90	<b>1.01</b> 1.69	<b>7.37</b> 7.65	<b>7.43</b> 7.79	6.47 6.40

<sup>\*</sup>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).

#### Schedule of Portfolio Returns FOVSF\* June 30, 2016

Schedule 1C

Assets (\$MM)	% Total	Asset Class	3 Mos Apr-16 Jun-16	YTD Jan-16 Jun-16	1 YR Jul-15 Jun-16	3 YRS Jul-13 Jun-16	5 YRS Jul-11 Jun-16	10 YRS Jul-06 Jun-16
145.00	50.88	U.S. Equities Russell 3000/S&P500	2.70 2.63	3.70 3.62	2.34 2.14	<b>11.27</b> 11.13	<b>11.69</b> 11.60	7.51 7.43
35.00	12.28	Total International Developed Markets MSCI EAFE Benchmark	<b>-0.42</b> -1.46	-4.14 -4.42	<b>-13.34</b> -10.16	2.80 2.06	<b>-0.29</b> 1.68	<b>0.34</b> 1.58
9.00	3.16	Total Emerging Markets MSCI Emerging Markets	<b>0.71</b> 0.66	<b>6.63</b> 6.41	<b>-12.06</b> <b>-12.05</b>	<b>-3.67</b> -1.56	<b>-5.25</b> -3.78	2.08 3.54
9.00	3.16	Total Real Estate Equity Sec.(REITS) Morgan Stanley custom RESI index	1.60 5.42	6.10 10.79	9.78 22.72	10.31 13.52	10.01 12.18	6.81 6.76
59.00	20.70	Total structured Fixed Income NYC Core Plus Five Index	2.72 2.71	<b>6.05</b> 6.33	<b>6.93</b> 7.16	<b>5.40</b> 4.91	<b>5.23</b> 4.57	<b>6.5</b> 4 5.87
17.00	5.96	Total Enhanced yield Citigroup BB&B	3.39 4.97	<b>6.24</b> 8.15	<b>1.62</b> 0.83	<b>4.81</b> 3.90	<b>5.70</b> 5.63	<b>6.9</b> 0
7.00	2.46	Total Tips Managers Barclays Global Inflation linked US Tips inde	1.90 1.71	<b>6.46</b> 6.24	<b>4.50</b> 4.35	2.50 2.31	<b>2.97</b> 2.63	4.97 4.75
4.00	1.40	Fire Officers' short term	0.11	0.22	0.31	n/a	n/a	n/a
		Securities Lending	n/a	n/a	n/a	n/a	n/a	n/a
285.00	100.00	Total Portfolio Policy Benchmark	2.19 2.26	3.30 3.90	<b>0.70</b> 1.69	<b>7.86</b> 7.65	<b>7.58</b> 7.79	6.51 6.41

<sup>\*</sup>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).

# List of 50 Largest Bond Holdings as of June 30, 2016

Schedule 2A

Number	Security Description	Maturity Date	Interest Rate	Par Value	Fair Value
'922URLII6	NYC CUSTOM STIF	12/31/2030	0.40%	31,166,855	31,166,855
'21H032688	GNMA II TBA 30 YR 3.5	8/23/2046	3.50%	23,817,000	25,245,067
'01F040685	FNMA TBA 30 YR 4	8/16/2046	4%	22,900,000	24,530,938
21H040681	GNMA II TBA 30 YR 4	8/23/2046	4%	20,046,000	21,420,955
912828TY6	US TREASURY N/B	11/15/2022	1.63%	17,150,000	17,554,569
'3138WHBP6	FNMA POOL AS7245	5/1/2046	3.50%	13,700,000	14,468,296
'922URLII6	NYC CUSTOM STIF	12/31/2030	0.40%	14,131,715	14,131,715
'01F040677	FNMA TBA 30 YR 4	7/14/2046	4%	13,000,000	13,938,080
'912810RD2	US TREASURY N/B	11/15/2043	3.75%	9,770,000	12,890,343
'922URLII6	NYC CUSTOM STIF	12/31/2030	0.40%	12,871,121	12,871,121
'912828K74	US TREASURY N/B	8/15/2025	2%	10,880,000	11,374,278
'21H030674	GNMA II TBA 30 YR 3	7/20/2046	3%	10,873,000	11,368,483
'3138EQLB6	FNMA POOL AL7521	6/1/2039	5%	9,089,066	10,118,039
'912810RG5	US TREASURY N/B	5/15/2044	3%	7,575,000	9,335,885
'313384ZY8	FED HOME LN DISCOUNT NT	7/28/2016	0.01%	9,000,000	8,998,830
'313384M48	FED HOME LN DISCOUNT NT	10/28/2016	0.01%	9,000,000	8,989,290
'36179NQ50	GNMA II POOL MA1376	10/20/2043	4%	8,030,685	8,579,823
'922URLII6	NYC CUSTOM STIF	12/31/2030	0.40%	7,576,443	7,576,443
3138WGUE2	FNMA POOL AS6880	3/1/2046	3.50%	7,054,401	7,448,459
'912828N30	US TREASURY N/B	12/31/2022	2.10%	6,620,000	6,979,731
'912810QZ4	US TREASURY N/B	2/15/2043	3.10%	5,770,000	6,801,618
'912828M49	US TREASURY N/B	10/31/2022	1.90%	6,400,000	6,650,240
'912810RNO	US TREASURY N/B	8/15/2045	2.90%	5,830,000	6,546,449
912810RQ3	US TREASURY N/B	2/15/2046	2.50%	6,285,000	6,544,508
'912828XD7	US TREASURY N/B	5/31/2022	1.90%	6,150,000	6,396,492
'912828G87	US TREASURY N/B	12/31/2021	2.10%	5,925,000	6,246,491
21H032670	GNMA II TBA 30 YR 3.5	7/20/2046	3.50%	5,855,000	6,214,321
'912828VS6	US TREASURY N/B	8/15/2023	2.50%	5,708,300	6,183,916
'922URLII6	NYC CUSTOM STIF	12/31/2030	0.40%	6,134,961	6,134,961
'912828P79	US TREASURY N/B	2/28/2023	1.50%	6,000,000	6,087,180
'313384G29	FED HOME LN DISCOUNT NT	9/16/2016		6,000,000	5,996,400
'912810QN1	US TREASURY N/B	2/15/2041	4.80%	3,950,000	5,926,699
'01F042673	FNMA TBA 30 YR 4.5	7/14/2046	4.50%	5,159,000	5,631,358
'922URLII6	NYC CUSTOM STIF	12/31/2030	0.40%	5,428,721	5,428,721
'01F030678	FNMA TBA 30 YR 3	7/14/2046	3%	5,070,000	5,261,494
'92343VBS2	VERIZON COMMUNICATIONS	9/15/2033	6.40%	4,110,000	5,246,004
'01F032674	FNMA TBA 30 YR 3.5	7/14/2046	3.50%	4,945,000	5,217,766
'01F030686	FNMA TBA 30 YR 3	8/16/2046	3%	5,000,000	5,179,500
912810RH3	US TREASURY N/B	8/15/2044	3.10%	4,380,000	5,155,742
'922URLII6	NYC CUSTOM STIF	12/31/2030	0.40%	5,153,319	5,153,319
'01F040677	FNMA TBA 30 YR 4	7/14/2046	4%	4,775,000	5,119,564
'01F050676	FNMA TBA 30 YR 5	7/14/2046	5%	4,400,000	4,888,664
'912810RG5	US TREASURY N/B	5/15/2044	3.80%	3,960,000	4,880,542
'02R040680	FHLMC TBA 30 YR 4	8/16/2046	4%	4,500,000	4,812,210
'02R030673	FHLMC TBA 30 YR 3	7/14/2046	3%	4,480,000	4,644,192
'3138ENS91	FNMA POOL AL5943	6/1/2042	4.50%	4,149,447	4,546,632
'01F062671	FNMA TBA 30 YR 6.5	7/14/2046	6.50%	3,900,000	4,495,296
'912828SV3	US TREASURY N/B	5/15/2022	1.80%	4,213,000	4,353,377
'3138ENGV5	FNMA POOL AL5611	8/1/2044	1%	3,936,901	4,323,229
'21H040673	GNMA 11 TBA 30 YR 4	7/20/2046	4%	4,000,000	4,275,640

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

#### Investment Section

# List of 50 Largest Stock Holdings as of June 30, 2016

Schedule 3A

Cucin			Schedule SA
Cusip Number	Security Description	Number of Shares	Fair Value
'037833100	APPLE INC	249,149	23,818,644
'30231G102	EXXON MOBIL CORP	188,537	17,673,458
'594918104	MICROSOFT CORP	344,445	17,625,251
'478160104	JOHNSON + JOHNSON	124,934	15,154,494
'369604103	GENERAL ELECTRIC CO W/D	418,154	13,163,488
'023135106	AMAZON.COM INC	17,634	12,619,243
'084670702	BERKSHIRE HATHAWAY INC CL B	85,911	12,439,054
'00206R102	AT+T INC	280,330	12,113,059
'30303M102	FACEBOOK INC A	102,125	11,670,845
'92343V104	VERIZON COMMUNICATIONS INC	185,656	10,367,031
'46625H100	JPMORGAN CHASE + CO	165,327	10,273,420
'742718109	PROCTER + GAMBLE CO/THE	120,940	10,239,990
'949746101	WELLS FARGO + CO	207,614	9,826,371
'717081103	PFIZER INC	272,325	9,588,563
'02079K305	ALPHABET INC CL A	13,389	9,419,563
'02079K107	ALPHABET INC CL C	13,522	9,358,576
166764100	CHEVRON CORP	85,510	8,964,013
'191216100	COCA COLA CO/THE	177,294	8,036,737
'58933Y105	MERCK + CO. INC.	126,217	7,271,361
'437076102	HOME DEPOT INC	56,584	7,225,211
'254687106	WALT DISNEY CO/THE	73,833	7,222,344
'718172109	PHILIP MORRIS INTERNATIONAL	70,489	7,170,141
'20030N101	COMCAST CORP CLASS A	109,605	7,145,150
'458140100	INTEL CORP	215,043	7,053,410
'713448108	PEPSICO INC	65,447	6,933,455
'17275R102	CISCO SYSTEMS INC	229,013	6,570,383
'92826C839	VISA INC CLASS A SHARES	86,720	6,432,022
'060505104	BANK OF AMERICA CORP	469,337	6,228,102
'022095103	ALTRIA GROUP INC	88,991	6,136,819
'459200101	INTL BUSINESS MACHINES CORP	40,029	6,075,602
'91324P102	UNITEDHEALTH GROUP INC	42,509	6,002,271
172967424	CITIGROUP INC	133,573	5,662,159
'110122108	BRISTOL MYERS SQUIBB CO	75,986	5,588,770
'G5960L103	MEDTRONIC PLC	63,716	5,528,637
'68389X105	ORACLE CORP	134,569	5,507,909
'031162100	AMGEN INC	34,182	5,200,791
'375558103	GILEAD SCIENCES INC	60,262	5,027,056
931142103	WAL MART STORES INC	68,839	5,026,624
'806857108	SCHLUMBERGER LTD	63,277	5,003,945
'580135101	MCDONALD S CORP	39,930	4,805,176
'88579Y101	3M CO	26,715	4,678,331
126650100	CVS HEALTH CORP	48,800	4,672,112
'00287Y109	ABBVIE INC	73,890	4,574,530
'81211K100	SEALED AIR CORP	94,240	4,332,213
902494103	TYSON FOODS INC CL A	63,640	4,250,516
'G0177J108	ALLERGAN PLC	17,982	4,155,460
'42824C109	HEWLETT PACKARD ENTERPRIS	223,830	4,089,374
42824C109	HONEYWELL INTERNATIONAL INC	34,434	4,005,363
		41,920	3,929,581
'30231G102	EXXON MOBIL CORP	54,545	3,885,240
'98310W108	WYNDHAM WORLDWIDE CORP	54,545	3,003,240

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

# New York Fire Department Pension Funds

#### Schedule of Broker's Commissions QPP

Schedule 4A

Brokerage Firm	Number of Shares Traded	Commissions Paid	Average Cost Per Share
ABG SECURITIES AS (STOCKHOLM)	16,917	394	0.02
ABG SECURITIES LIMITED	45,554	278	0.01
ABLE NOSER	114,193	5,099	0.04
ABN AMRO CLEARING BANK N.V.	48,871	1,590	0.03
AGORA CORDE TITUL E VAL MOB	121,510	846	0.01
ALBERT FRIED & COMPANY LLC	37,400	1,122	0.03
ALLEN & COMPANY LLC	2,567	103	0.04
AMERICAN PORTFOLIOS FINANIAL	314	16	0.05
ANCORA SECIRITIES INC	25,160	1,258	0.05
ANTIQUE STOCK BROKING LTD	12,948	60	0.00
AQEEL KARIM DHEDHI	4,049	56	0.01
AS LHV PANK	114,139	364	0.00
ASSET TRANSFER NON CASH	-	-	-
ATTIJARIWAFA BANK	2,493	252	0.10
AUERBACH GRAYSON AND CO. INC.	-		-
AUTONOMOUS	5,368	161	0.03
AUTREPAT-DIV RE	3,475	314	0.09
AVONDALE PARTNERS LLC	19,267	628	0.03
B.RILEY &CO., LLC	23,496	693	0.03
BAADER BANK AG	421	121	0.29
BANCO ITAU SA	54,459	504	0.01
BANCO PACTUAL S.A.	26,398	174	0.01
BANCO SANTANDER CENTRAL HISPANO	55,665	805	0.01
BANK AM BELLEVUE			* .
BANK J. VONTOBEL UND CO. AG	4,375	1,533	0.35
BANQUE COMMERCIALE DU MAROC	~	1	
BARCLAYS BANK OF BOTSWANA LTD	52,608	198	0.00
BARCLAYS BANK PLC	2,547	17	0.01
BARCLAYS CAPITAL	976,956	18,972	0.02
BARCLAYS CAPITAL INC./LE	3,106,630	11,194	0.00
BARCLAYS CAPITAL LE	591,465	21,828	0.04
BARRINGTON RESEARCH ASSOCIATES	270	9	0.04
BARRINGTON RESEARCH ASSOCIATES INC.	4,823	235	0.05
BB&T SECURITIES, LLC	189,447	5,497	0.03
BEAR STEARNS SECURITIES CORP			
BLAYLOCK ROBERT VAN LLC	12,389	248	0.02
BLUEFIN RESEARCH PARTNER INC.	13,880	694	0.05
BMO CAPITAL MARKETS	68,340	2,820	0.04
BNP PARIBAS PEREGRINE SECURITIES	770	888	1.15
BNP PARIBAS SECURITIES (ASIA) LTD.	566,018	2,834	
BNP PARIBAS SECURITIES INDIA PRIVATE LIM			0.01
THE PROPERTY OF THE PROPERTY OF THE LINE	70,961	635	0.01

Schedule 4A

	Number of	Commissions	Average Cost
Brokerage Firm	Shares Traded	Paid	Per Share
BNP PARIBAS SECURITIES SERVICE	1,004,625	1,671	0.00
BNP PARIBAS SECURITIES SERVICES	266,017	1,383	0.01
BNP PARIBAS SECURITIES SERVICES AUSTR BR	16,586	30	0.00
BNP PARIBAS SECURITIES SERVICES SA	1,187,761	1,367	0.00
BNP PARIBAS SECURITIES SERVICES, FR	79	35	0.45
BNY BROKERAGE	3,589	126	0.03
BNY CONVERGEX EXECUTION SOLUTIONS LLC	20,448,943	22,848	0.00
BNY CONVERGEX LIR	109,083	1,899	0.02
BREAN CAPITAL LLC	67,187	808	0.01
BROADCORT CAPITAL (THRU ML)	30,710	1,005	0.03
BROWN BROTHERS HARRIMAN + CO			
BTIG, LLC	436,836	18,637	0.04
BUCKINGHAM RESEARCH GROUP INC	52,865	2,643	0.05
BURKE ANDQUICK PARTNERS LLC	142	5	0.04
CABRERA CAPITAL MARKETS	111,782	3,080	0.03
CACEIS BANK DEUTSCHLAND GMBH	3,456	1,117	0.32
CANACCORD GENUITY INC.	38,077	1,584	0.04
CANACCORD GENUITY LIMITED	•		
CANADIAN IMPERIAL BANK OF COMMERCE	34,486	658	0.02
CANTOR CLEARING SERVICES	12,650	253	0.02
CANTOR FITZGERALD + CO.	121,355	3,272	0.03
CANTOR FITZGERALD EUROPE	61,963	672	0.01
CANTOR FITZGERALD/CANTOR CLEARING SERV	531,079	1,649	0.00
CAPITAL INSTITUTIONAL SVCS INC EQUITIES	195,431	8,747	0.04
CARNEGIE SECURITIES FINLAND	7,559	32	0.00
CELFIN CAPITAL SA CORREDORES DE BOLSA	3,564,208	409	0.00
CHEEVERS & CO. INC.	313,809	9,329	0.03
CHINA FORTUNE SECURITIES.,LTD	112,492	344	0.00
CHINA INTERNATIONAL CAPITAL CO	6,171,152	6,001	0.00
CHINA INTERNATIONAL CAPITAL CORPORA	12,546	14	0.00
CIBC WORLD MKTS INC	4,752	147	0.03
CIMB SECURITIES (HK) LTD.	9,854	21	0.00
CIMB SECURITIES USA INC.	•)		
CIMB-GK SECURITIES PTE.LTD.	5,896	47	0.01
CITATION GROUP	25,927	1,295	0.05
CITIBANK N.A.	13,353	517	0.04
CITIBANK OF COLOMBIA	221,014	530	0.00
CITICORP SECURITIES THAILAND LTD	8,375	21	0.00
CITIGROUP GLBL MARKTET KOERA SECS LTD	2,020	357	0.18
CITIGROUP GLOBAL MARKETS ASIA LTD	15,222	51	0.00
CITIGROUP GLOBAL MARKETS AUSTRALIA PTY	9,538	19	0.00
CITIGROUP GLOBAL MARKETS INC.	11,406,900	32,752	0.00

#### New York Fire Department Pension Funds

#### Schedule of Broker's Commissions QPP

Schedule 4A

Brokerage Firm	Shares Traded	Paid	Average Cost Per Share
CITIGROUP GLOBAL MARKETS INDIA	240,746	328	0.00
CITIGROUP GLOBAL MARKETS LIMITED	2,923,668	24,359	0.01
CJS SECURITIES INC	3,690	185	0.05
CLSA AUSTRALIA PTY LTD	401,789	1,808	0.00
CLSA SECURITIES KOREA LTD.	14,432	1,963	0.14
CLSA SINGAPORE PTE LTD.	2,539,465	7,694	0.00
COMPASS POINT RESEARCH + TRADING, LLC	36,858	1,309	0.04
CONCEPT CAPITAL MARKETS,LLC	5,028	151	0.03
CONVERGEX EXECUTION SOLUTIONS LLC	220,244	7,695	0.03
CONVERGEX LLC	522,038	15,448	0.03
CORNERSTONE MACRO LLC	4,220	211	0.05
CORREVAL S.A.	21,433	183	0.01
COWEN AND COMPANY, LLC	253,761	11,136	0.04
CRAIG - HALLUM	109,834	3,949	0.04
CREDIBOLSA SOCIEDAD AGENTE	24,677	329	0.01
CREDIT LYONNAIS SECURITIES (ASIA)	2,853,319	1,540	0.00
CREDIT LYONNAIS SECURITIES (USA) INC	13,147	594	0.05
CREDIT LYONNAIS SECURITIES INDIA	922,444	10,968	0.01
CREDIT LYONNAIS SECURITIES(ASIA)	10,550,788	7,807	0.00
CREDIT RESEARCH + TRADING LLC	58,698	2,147	0.04
CREDIT SUISSE FIRST BOSTON	3,716,843	2,127	0.00
CREDIT SUISSE FIRST BOSTON (EUROPE)	9,653	1,722	0.18
CREDIT SUISSE SECURITIES (EUROPE) LTD	1,688,948	12,262	0.01
CREDIT SUISSE SECURITIES (USA) LLC	176,266,661	44,973	0.00
CS FIRST BOSTON (HONG KONG) LIMITED	3,241,052	12,121	0.00
CSFB AUSTRALIA EQUITIES LTD	1,474,261	2,093	0.00
CSI US INSTITUTIONAL DESK	8,371	264	0.03
CUTTONE &CO.	10,171	269	0.03
D CARNEGIE AG	10,148	175	0.02
DAEWOO SECURITIES CO LTD	1,144	56	0.05
DAIWA SBCM EUROPE	23,337	827	0.04
DAIWA SECURITIES (HK) LTD.	181,115	290	0.00
DAIWA SECURITIES COMPANY LTD	240,908	4,930	0.02
DANSKE BANK A.S.	240,310	2,587	0.01
DAVIDSON D.A. + COMPANY INC.	61,927	2,513	
DAVY STOCKBROKERS	285,021	1,249	
DBS VICKERS SECURITIES (SINGAPORE)	11,923	196	0.02
DEN NORSKE BANK	27,350	185	
DEUTSCHE BANK ALEX BROWN	939,109	7,418	
DEUTSCHE BANK SECURITIES INC	8,250,486	40,475	
DEUTSCHE EQ IN PRVT LIM DB	1,048,782	7,882	
DEUTSCHE MORGAN GRENFELL SECS	136,619	893	

# New York Fire Department Pension Funds

#### Schedule of Broker's Commissions QPP

Schedule 4A

	Number of	Commissions	Average Cost
Brokerage Firm	Shares Traded	Paid	Per Share
DEUTSCHE SECURITIES ASIA LIMITED	1,016,878	4,044	0.00
DNB NOR MARKETS CUSTODY DNB NORBANK ASA	1,420	35	0.02
DOUGHERTY & COMPANY LLC	5,867	219	0.04
DOUGHERTY COMPANY	5,167	177	0.03
DOWLING &PARTNERS	3,300	165	0.05
DREXEL HAMILTON LLC	75,697	1,969	0.03
DSP MERRILL LYNCH LTD	478,141	6,849	0.01
DZ BANK AG DEUTSCHE ZENTRAL GENOSSE PLAT	5	(1-)	-
ECOBANK GHANA	*		0.00
ERSTE BANK BEFEKTETESI RT.	77,446	2,068	0.03
EUROCLEAR BANK SA NV	59,183	243	0.00
EXANE S.A.	294,965	5,426	0.02
FBN SECURITIES INC	22,298	999	0.04
FBR CAPITAL MARKETS & CO.	137,631	5,144	0.04
FEDERATED MANAGED GROWTH + INCOME 17 A7	19,715	148	0.01
FERRETTI GROUP INC	3,800	114	0.03
FIDELITY CAPITAL MARKETS	389	5	0.01
FIDELITY CLEARING CANADA	10,819	268	0.02
FIDELITY CLEARING CANADA ULC	46,166	923	0.02
FIG PARTNERS LLC	23,109	462	0.02
FINANCIAL BROKERAGE GROUP (FBG)	776,040	2,697	0.00
FIRST ANALYSIS SECURITIES CORP	3,457	94	0.03
FIRST NATIONAL BANK OF BOTSWANA	101,041	905	0.01
FLOW CORRETORA DE MERCADORIAS LTDA.	56,584	570	0.01
FOKUS BANK ASA	3,104	40	0.01
GOLDMAN SACHS (ASIA) LLC	-		
GOLDMAN SACHS (INDIA)	354,526	2,150	0.01
GOLDMAN SACHS + CO	19,324,002	52,139	0.00
GOLDMAN SACHS + CO INTL.	95	7	0.07
GOLDMAN SACHS DO BRASIL CORRETORA	2,647	13	0.01
GOLDMAN SACHS INTERNATIONAL	939,686	8,620	0.01
GOODBODY STOCKBROKERS	412,312	1,054	0.00
GREEN STREET ADVISORS	195,586	7,781	0.04
GREEN STREET ADVISORS (UK) LTD	42,008	581	0.01
GREEN STREET TRADING, LLC	293,668	11,005	0.04
GREENTREE BROKERAGE SERVICES INC	35,900	718	0.02
GUGGENHEIM CAPITAL MARKETS LLC	64,776	2,448	0.04
GUZMAN AND COMPANY	15,210	304	0.02
HEIGHT SECURITIES, LLC	8,122	284	0.03
HIBERNIA SOUTHCOAST CAPITAL INC	21,000	630	0.03
HONGKONG AND SHANGHAI BANKING CORP	1,969,778	7,084	0.00
HSBC BANK BRASIL SA BANCO MULTIPLO	10,127	3	0.00

Schedule 4A

	Number of	Commissions	Average Cost
Brokerage Firm	Shares Traded	Paid	Per Share
JOHNSON RICE & COMPANY LLC	15,524	656	0.04
JOHNSON RICE + CO	2,452	72	0.03
JONESTRADING INSTITUTIONAL SERVICES LLC	368,479	8,185	0.02
JP MORGAN SECURITIES AUSTRALIA LTD	19,378	21	0.00
JP MORGAN SECURITIES PLC	2,418,590	13,815	0.01
JP MORGAN SECURITIES SINGAPORE	258,618	26	0.00
JPMORGAN CHASE BANK NA LONDON	14,784	71	0.00
JPMORGAN SECURITIES (ASIA PACIFIC) LTD	3,367,487	4,123	0.00
KAS-ASSOCIATIE N.V.	104,330	388	0.00
KB SECURITIES N V	51,299	713	0.01
KCG AMERICAS LLC	59,251	363	0.01
KEEFE BRUYETTE + WOODS INC	192,432	6,373	0.03
KEMPEN + CO N.V.	34,734	1,004	0.03
KEPLER EQUITIES PARIS	11,243	595	0.05
KEYBANC CAPITAL MARKETS INC	435,327	17,644	0.04
KING, CL,& ASSOCIATES, INC	612,937	22,611	0.04
KINGSWAY FINANCIAL SVCS GROUP LTD	120,866	248	0.00
KNIGHT EQUITY MARKETS L.P.	280,035	9,737	0.03
KNIGHT SECURITIES INTERNATIONAL	135,845	326	0.00
KOREA INVESTMENT AND SECURITIES CO., LTD	4,017	1,996	0.50
KOTAK SECURITIES LTD	344,321	3,783	0.01
LADENBURG THALMAN + CO	4,387	88	0.02
LARRAIN VIAL	844,464	259	0.00
LEERINK PARTNERS LLC	15,070	494	0.03
LEK SECURITIES CORP	4,800	240	0.05
LIBERUM CAPITAL LIMITED	11,718	237	0.02
LIQUIDNET EUROPE LIMITED	_		-
LIQUIDNET INC	1,049,607	35,986	0.03
LONGBOW SECURITIES LLC	651	23	0.04
LOOP CAPITAL MARKETS	3,578,480	58,093	0.02
LOOP CAPITAL MARKETS LLC	41,770	418	0.01
LUMINEX TRADING AND ANALYTICS LLC	3,300	9	0.00
M RAMSEY KING SECURITIES INC	24,480	731	0.03
M RAMSEY KING SECURITIES, INC.	403,432	5,713	0.01
MACQUARIE BANK LIMITED	4,540,752	8,906	0.00
MACQUARIE CAPITAL (USA) INC.	17,538	519	
MACQUARIE SEC NZ LTD	14,148	22	0.00
MACQUARIE SECURITIES (INDIA) PVT LTD	97,702	1,749	
MACQUARIE SECURITIES (USA) INC	48,010	1,381	0.03
MACQUARIE SECURITIES LTD SEOUL	107,375	5,409	
MAINFIRST BANK DE	39,227	1,084	
MAXIM GROUP	16,567	675	0.04

Schedule 4A

	Number of	Commissions	Average Cost
Brokerage Firm	Shares Traded	Paid	Per Share
HSBC BANK PLC	1,117,949	8,823	0.01
HSBC MEXICO S A INSTITUCION DE BANCA MLT	•		
HSBC SECURITIES	1,099,614	1,067	0.00
HSBC SECURITIES (USA) INC.	1,097,254	1,318	0.00
HSBC SECURITIES INDIA HOLDINGS	233,595	884	0.00
IC SECURITIES (GH) LIMITED	153,812	517	0.00
ICAP DO BRASIL DTVM LTDA	725,180	2,217	0.00
ICBC FINCL SVCS, EQUITY CLEARANCE	137,559	5,344	0.04
ICHIYOSHI SECURITIES CO.,LTD.	13,856	39	0.00
ICICI BROKERAGE SERVICES	125,789	251	0.00
IM TRUST S.A. CORREDORES DE BOLSA	26,602	116	0.00
INDUSTRIAL AND COMMERCIAL BANK	9,051	264	0.03
INSTINET	549,392	8,578	0.02
INSTINET AUSTRALIA CLEARING SRVC PTY LTD	275,775	486	0.00
INSTINET LLC	825,913	2,504	0.00
INSTINET PACIFIC LIMITED	12,784,846	7,495	0.00
INSTINET SINGAPORE SERVICES PT	1,668,563	2,613	0.00
INSTINET U.K. LTD	6,746,687	29,558	0.00
INTL FC STONE SECURITIES INC	10,563	576	0.05
INVESTEC BANK PLC	5,311,216	2,749	0.00
INVESTEC SECURITIES LTD	96,130	299	0.00
INVESTMENT TECHNOLOGY GROUP LTD	3,683,038	35,215	0.01
ISI GROUP INC	1,914,901	33,379	0.02
ITG AUSTRALIA LTD.	410,423	259	0.00
ITG CANADA	10,400	64	0.01
ITG INC.	152,705	1,177	0.01
ITG SECURITIES (HK) LTD	4,043,894	1,451	0.00
IVY SECURITIES, INC.	1,458,262	43,099	0.03
J P MORGAN INDIA PRIVATE LTD	44,159	33	0.00
J P MORGAN SECURITIES INC	450,879	1,038	0.00
J.P. MORGAN CLEARING CORP.	994,496	11,240	0.01
J.P. MORGAN SECURITIES (TAIWAN) LTD	1,156,367	463	0.00
J.P. MORGAN SECURITIES INC.	543,760	16,870	0.03
J.P. MORGAN SECURITIES LIMITED	3,638	47	0.01
J.P.MORGAN SECURITIES(FAR EAST)LTD SEOUL	21,887	1,621	0.07
JANNEY MONTGOMERY, SCOTT INC	61,988	1,648	0.03
JEFFERIES + COMPANY INC	1,729,075	43,465	0.03
JEFFERIES HONG KONG LIMITED	14,524	4	0.00
JEFFERIES INDIA PRIVATE LIMITED	269,113	874	0.00
JEFFERIES INTERNATIONAL LTD	8,596,335	6,016	0.00
JMP SECURITIES	121,521	4,457	0.04
JOH BERENBERG GOSSLER AND CO	81,206	2,345	0.03

Schedule 4A

	Number of	Commissions	Average Cost
Brokerage Firm	Shares Traded	Paid	Per Share
MERRILL LYNCH	55,369	2,768	0.05
MERRILL LYNCH AND CO INC	1,180,937	2,310	0.00
MERRILL LYNCH CORREDORES DE BOLSA S.A.	156,394	2	0.00
MERRILL LYNCH INTERNATIONAL	18,957,872	58,226	0.00
MERRILL LYNCH PIERCE FENNER + SMITH INC	4,876,663	72,940	0.01
MERRILL LYNCH PIERCE FENNER AND S	3,043,436	3,196	0.00
MERRILL LYNCH PROFESSIONAL CLEARING CORP	15,979	779	0.05
MERRILL LYNCH, PIERCE FENNER AND SMITH	-		
MERRILL LYNCH, PIERCE FENNER SMITH	1,885	94	0.05
MISCHLER FINANCIAL GROUP, INC-EQUITIES	69,684	935	0.01
MITSUBISHI UFJ SECURITIES (USA)	2,521	93	0.04
MITSUBISHI UFJ SECURITIES INT PLC	4,811	710	0.15
MIZUHO CORPORATE BANK LTD HONG KONG BCH	1,590	14	0.01
MIZUHO INTERNATIONAL PLC	1,450	43	0.03
MIZUHO SECURITIES ASIA LIMITED	45,686	787	0.02
MIZUHO SECURITIES USA INC.	58,183	1,635	0.03
MKM PARTNERS LLC	40,395	1,529	0.04
MONNESS, CRESPI, HARDT & CO. INC	44,065	2,203	0.05
MONTROSE SECURITIES EQUITIES	168,200	6,531	0.04
MORGAN STANLEY AND CO INTERNATIONAL	43,844	4,387	0.10
MORGAN STANLEY AND CO INTL TAIPEI METRO	3,222,815	4,132	0.00
MORGAN STANLEY AND CO. INTERNATIONAL	1,729,615	8,609	0.00
MORGAN STANLEY ASIA LTD	181,343	569	0.00
MORGAN STANLEY H.K. SECURITIES LTD	9,327,445	60,634	0.01
MORGAN STANLEY INDIA COMPANY PVT LTD	513,858	2,051	0.00
NATIONAL FINANCIAL SERVICES CORP.	96,876	2,192	0.02
NATIXIS SECURITIES	46,290	1,195	0.03
NEEDHAM +COMPANY	20,830	737	0.04
NEEDHAM AND COMPANY LLC	75,621	2,759	0.04
NESBITT BURNS	61,037	1,485	0.02
NIGERIAN STOCK EXCHANGE, THE	27,324	136	0.00
NOBLE INTERNATIONAL INVESTMENTS INC.	8,903	250	0.03
NOMURA FINANCIAL ADVISORY + SEC INDIA	497,479	3,987	0.01
NOMURA FINANCIAL AND INVESTMENT	24,029	241	0.01
NOMURA INTERNATIONAL PLC		-	
NOMURA SECURITIES CO LTD	222,803	109	0.00
NORDEA BANK FINLAND PLC	223,728	1,334	0.01
NORTHLAND SECURITIES INC.	43,182	1,655	0.04
NUMIS SECURITIES LIMITED	242,257	530	0.00
ODDO ET CIE	1,340	110	
OLIVETREE USA LLC			0.08
OPPENHEIMER + CO. INC.	2,080	104	0.05
OFF ENTINEER T CO. INC.	180,115	7,969	0.04

#### Investment Section

#### Schedule of Broker's Commissions QPP

Schedule 4A

	Number of	Commissions	Average Cost
Brokerage Firm	Shares Traded	Paid	Per Share
ORD MINNETT LIMITED	4,819	10	0.00
PAREL	18,011	1,820	0.10
PAVILION GLOBAL MARKETS LTD	651,385	2,365	0.00
PEEL HUNTLLP	108,692	1,276	0.01
PENSERRA SECURITIES	1,925,461	33,454	0.02
PENSERRA SECURITIES LLC	90,679	468	0.01
PEP SERV NOMS	1,422	71	0.05
PERSHING LLC	2,964,341	15,649	0.01
PERSHING SECURITIES LIMITED	600,817	3,263	0.01
PICKERING ENERGY PARTNERS, INC	9,739	341	0.04
PIPER JAFFRAY LTD	181,497	6,952	0.04
PRIVREDNABANKA ZAGREB		_	
RABOBANK NETHERLAND	773	95	0.12
RAYMOND JAMES AND ASSOCIATES INC	342,340	13,939	0.04
RBC CAPITAL MARKETS	567,945	18,146	0.03
RBC DOMINION SECURITIES	89,024	2,371	0.03
RBC DOMINION SECURITIES INC.	88,956	1,856	0.02
REDBURN PARTNERS LLP	927,164	5,588	0.01
ROTH CAPITAL PARTNERS LLC	483,133	18,742	0.04
ROYAL BANK OF CANADA EUROPE LTD	333,748	1,539	0.00
SAMSUNG SECURITIES CO LTD	124,267	4,134	0.03
SAMUEL A RAMIREZ & COMPANY INC	4,271	32	0.01
SANDLER ONEILL + PART LP	8,886	284	0.03
SANDLER ONEILL AND PARTNERS L.P.	11,884	493	0.04
SANFORD C. BERNSTEIN AND CO. LLC	1,905,798	4,179	0.00
SANFORD C. BERNSTEIN LTD	852,651	9,374	0.01
SANFORD CBERNSTEIN CO LLC	786,613	17,025	0.02
SANTANDER CENTRAL HISPANO BOLSA	319,925	1,031	0.00
SCOTIA CAPITAL (USA) INC	31,265	980	0.03
SEAPORT GROUP SECURITIES, LLC	69,053	1,094	0.02
SELECT NATURAL RESOURCES	-	2,034	
SG AMERICAS SECURITIES LLC	384,901	1,599	0.00
SG ASIA SECURITIES (INOIA) PVT LTD	524,975	1,600	0.00
SG SECURITIES (LONDON) LTD.	1,203,417	432	0.00
맛이 가장 하다 가는 것이 하면 하면 하면 하면 하다 하면 하면 하는데	16,568,826	6,579	0.00
SG SECURITIES HK		207	0.00
SHENYIN AND WANGUO SECURITIES CO. LTD	219,979		0.03
SIDOTI + COMPANY LLC	82,579	2,786	0.03
SKANDINAVISKA ENSKILDA BANKEN	816	20	
SKANDINAVISKA ENSKILDA BANKEN LONDON	-	2 502	- 0.05
SMBC NIKKO CAPITAL MARKETS LIMITED	53,987	2,503	0.05
SMBC NIKKO SECURITIES (HONK KONG) LTD	55,238	231	0.00
SOCIETE GENERALE LONDON BRANCH	1,969,304	7,778	0.00

Schedule 4A

	Number of	Commissions	Average Cost
Brokerage Firm	Shares Traded	Paid	Per Share
SPARK CAPITAL ADVISORS (INDIA) PRIV LTD	11,331	52	0.00
SPEAR, LEEDS AND KELLOGG	1,249	6	0.00
STATE STREET BANK AND TRUST CO	1,905	16	0.01
STATE STREET BANK AND TRUST COMPANY	305,670	2,986	0.01
STATE STREET GLOBAL MARKETS	1,480	15	0.01
STATE STREET GLOBAL MARKETS, LLC	124,160	2,527	0.02
STEPHENS,INC.	176,459	7,662	0.04
STERNE AGEE & LEACH INC.	39,261	1,963	0.05
STIFEL NICOLAUS + CO INC	417,742	16,149	0.04
STIFEL, NICOLAUS AND COMPANY, INCORPORAT	-	-	
STRATEGAS SECURITIES LLC	10,790	401	0.04
STUART FRANKEL + CO INC	9,155	364	0.04
STURDIVANT AND CO., INC.	252,515	12,626	0.05
SUNTRUST CAPITAL MARKETS, INC.	176,677	6,613	0.04
SVENSKA HANDELSBANKEN	21,993	484	0.02
TAIWAN DEPOSITORY CLEARING CORPORATION	918,371	1,556	0.00
TD SECURITIES (USA) LLC	2,600	26	0.01
TD WATERHOUSE CDA	2,333	61	0.03
TELSEY ADVISORY GROUP LLC	164,075	6,688	0.04
TERA MENKUL DEGERLER A.S.	88,294	76	0.00
THE HONGKONG AND SHANGHAI BANK	22,686	497	0.02
TOPEKA CAPITAL MARKETS INC	2,369,915	23,855	0.01
TOPLINE SECURITIES PVT LTD.	1,240,168	2,657	0.00
TUNISIE VALEURS	9,133	191	0.02
UBS AG	10,450,067	14,716	0.00
UBS LIMITED	6,860,034	29,924	0.00
UBS SECURITIES ASIA LTD	9,815,552	24,524	0.00
UBS SECURITIES CANADA INC	84,092	401	0.00
UBS SECURITIES INDIA PRIVATE LTD	21,902	1,038	0.05
UBS SECURITIES LLC	1,532,463	17,303	0.01
UBS SECURITIES PTE.LTD	1,431,157	819	0.00
UBS SECURITIES PTE.LTD., SEOUL	20,512	5,201	0.25
UBS WARBURG AUSTRALIA EQUITIES	47,172	136	0.00
VANDHAM SECURITIES CORP	47,272	130	0.00
WARBURG DILLON READ SECURITIES CO		8	
WEDBUSH MORGAN SECURITIES INC	127,768	2.425	-
WEEDEN + CO.	1,525,932	3,435	0.03
WELLS FARGO SECURITIES, LLC	소작한 장치를 제공하게 되었다.	34,912	0.02
WILLIAM BLAIR & COMPANY L.L.C	501,219	15,396	0.03
	227,136	8,782	0.04
WILLIAMS CAPITAL GROUP LP (THE)	1,415,367	40,465	0.03
WOORI INVESTMENT SECURITIES	12,202	440	0.04
WUNDERLICH SECURITIES INC.	86,298	3,572	0.04

#### Investment Section

# New York Fire Department Pension Funds

Schedule of Broker's Commissions QPP

Schedule 4A

Brokerage	Firm
XP INVESTIMENTOS O	CTVM SA
YAMNER & CO INC (C	LS THRU 443)
Grand Totoal	

Number of Shares Traded	Commissions Paid	Average Cost Per Share	
102,998	611	0.01	
46,459	465	0.01	
498,791,691	1,816,650	0.00	

Schedule 5A

# **Investment Summary**

**Fire Funds Combined** 

Year Ended June 30, 2016 (Dollar amount in thousands)

	Fair Value	Percent of Total Fair Value
Type of Investment:		
Short Term Investments:		
Commercial paper	\$ 63,081	0.50%
Short Term Investments	125,058	0.98%
U.S. Treasury Bills	25,998	0.20%
Discount notes	1,954	0.02%
Total Short-Term	216,091	1.70%
Debt securities:		
U.S. Govt Securities and Agency	149,941	1.18%
Corporate and Other	2,211,925	17.38%
Promissory notes		0.00%
Total debt securities	2,361,866	18.56%
Equities Securities:	1,802,947	14.17%
Alternative investments	2,117,856	16.64%
Mutual funds-internatonal equity	27	-
Collective trust funds:		
International Equity	2,104,733	16.54%
Fixed income	445,938	3.50%
Domestic equity	2,103,107	16.53%
Mortgage debt security	86,107	0.68%
Treasury Inflation -protected securities	564,133	4.43%
Total collective trust funds:	5,304,018	41.68%
Collateral from Securities Lending	922,481	7.25%
Total Market Value	\$ 12,725,259	100.00%

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# **New York Fire Department 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, 2016

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# The City Of New York

#### 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 20, 2016

Board of Trustees New York Fire Department 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, 2016

Dear Members of the Board of Trustees:

The financial objective of the New York Fire Department 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, 2014 (Lag) actuarial valuation to determine Fiscal Year 2016 Employer Contributions) (the Actuarial Contributions).

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

For Fiscal Year 2016, the Actuarial Contributions to FIRE, are equal to those recommended by the Actuary of the New York City Pension Funds and Retirement Systems (the Actuary) and represent the Statutory Contributions.

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."

GASB67, Financial Reporting for Pension Plans, amends GASB Statement No. 25 (GASB25) and is effective for financial statements for fiscal years beginning after June 15, 2013 (i.e., Fiscal Year 2014 for FIRE).

GASB68, Accounting and Financial Reporting for Pensions, amends GASB Statement No. 27 (GASB27) and is effective for financial statements for fiscal years beginning after June 15, 2014 (i.e., Fiscal Year 2015 for the City).

On October 11, 2016, 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, 2016" (the Fiscal Year 2016 GASB67/68 Report). Appendix E of the Fiscal Year 2016 GASB67/68 Report contains information developed in accordance with GASB67 for FIRE.

#### **Actuarial Assumptions and Methods**

Provided in this Actuarial Section of the CAFR is a "Summary of Actuarial Assumptions and Methods in Effect for the June 30, 2014 (Lag) Actuarial Valuation." These actuarial assumptions and methods (the 2012 A&M) were first employed in the June 30, 2010 (Lag) actuarial valuation that was used to determine Fiscal Year 2012 Employer Contributions to the Plan.

Those 2012 A&M were developed after reviewing the results of independent actuarial studies dated December 2011 by The Hay Group (Hay) and November 2006 by The Segal Company (Segal) in accordance with Section 96 of the New York City Charter, after which the Actuary issued a February 10, 2012 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" (February 2012 Report).

The Board of Trustees of the Plan adopted those changes in actuarial assumptions that required Board approval. The State Legislature and the Governor enacted Chapter 3 of the Laws of 2013 (Chapter 3/13) to provide for those changes to the actuarial assumptions and methods that require legislation, including the Actuarial Interest Rate (AIR) assumption of 7.0% per annum, net of investment expenses.

In October 2015 the independent actuarial auditor, Gabriel, Roeder, Smith & Company (GRS), issued a report on their NYC Charter-mandated actuarial experience studies for the four-year and ten-year periods ended June 30, 2013 (the GRS Report).

Based, in part, on the GRS Report, on published studies of mortality improvement, and on input from the City's outside consultants and auditors, the Actuary proposed, and the Board of Trustees of FIRE adopted, new post-retirement mortality tables for use in determining employer contributions beginning in Fiscal Year 2016. The new tables of post-retirement mortality 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 (the Valuation Tables). Scale MP-2015 replaced Mortality Improvement Scale AA.

In addition, beginning in Fiscal Year 2016, the Actuary revised the Actuarial Asset Valuation Method to constrain the Actuarial Asset Value to be within a 20% corridor of the Market Value of Assets.

The 2012 A&M reflecting the above revisions is referred to as the "2016 A&M."

Tier III assumptions are applied to members hired on and after July 1, 2009 (i.e., Tier III and Tier III Modified (where Tier III Modified is also known as Tier 6 members)).

These actuarial assumptions and methods (2016 A&M) used for funding purposes meet the parameters set 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, 2014 (Lag) actuarial valuation is shown earlier in the Introductory Section of the CAFR.

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, 2014 (Lag) actuarial valuation is included in this CAFR. A summary of the census data used in the June 30, 2013 (Lag) actuarial valuation of the Plan is available in the June 30, 2015 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 Actuarial Cost Method (Table 11).

Also included in the Actuarial Section of the CAFR is a Solvency Test (i.e., Comparative Summary of Actuarial Values and Percentages Covered 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 requirement 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, 2014 (Lag) Actuarial Valuation.
- Active Member Valuation Data.
- Summary of Plan Membership.
- Retirants and Beneficiaries Added to and Removed from Rolls.
- Statutory vs Annual Required Contributions.
- Funded Status Based on Entry Age Actuarial Cost Method.
- Comparative Summary of Aggregate Accrued Liabilities Funded by Actuarial Value of Assets – Solvency Test.

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

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

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

#### Acknowledgement of Qualification

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

Respectfully submitted,

Greeky Chan

Sherry S. Chan, FSA, FCA, MAAA

Chief Actuary

SSC:mm

Att:

cc: Mr. Steven Cassidy - New York Fire Department Pension Fund

Mr. Albert Connelly - New York Fire Department Pension Fund

Ms. Maureen Dale - New York Fire Department Pension Fund

Mr. Edward Hue - 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

Ms. Lei Tian - New York Fire Department Pension Fund

079L&R:mm

#### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2014 (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 (ACNY), 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 most recently completed study was published by Gabriel Roeder Smith & Company (GRS) dated October 2015 and analyzed experience for Fiscal Years 2010 through 2013. GRS made recommendations with respect to the actuarial assumptions and methods based on their analysis.

Based, in part, on the GRS Report, on published studies of mortality improvement, and on input from the City's outside consultants and auditors, the Actuary proposed, and the Board of Trustees of FIRE adopted, new post-retirement mortality tables for use in determining employer contributions beginning in Fiscal Year 2016. The new tables of post-retirement mortality 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 (the Valuation Tables). Scale MP-2015 replaced Mortality Improvement Scale AA.

In addition, beginning in Fiscal Year 2016, the Actuary revised the Actuarial Asset Valuation Method to constrain the Actuarial Asset Value to be within a 20% corridor of the Market Value of Assets.

The previously completed studies were published by The Hay Group (Hay) dated December 2011 and by The Segal Company (Segal), dated November 2006. Hay analyzed experience for Fiscal Years 2006 through 2009 and made recommendations with respect to the actuarial assumptions and methods based on their analysis. Segal analyzed experience for Fiscal Years 2002 through 2005 and made recommendations with respect to the actuarial assumptions and methods based on their analysis.

#### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION (Cont'd)

Based, in part, upon a review of the Segal and Hay studies, the Actuary issued a February 10, 2012 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" (February 2012 Report).

The Board of Trustees of the Plan adopted those changes to actuarial assumptions that required Board approval. The State Legislature and the Governor enacted Chapter 3 of the Laws of 2013 (Chapter 3/13) to provide for those changes to the actuarial assumptions and methods that require legislation, including the Actuarial Interest Rate (AIR) assumption of 7.0% per annum, net of investment expenses, the Entry Age Actuarial Cost Method and the amortization of Unfunded Actuarial Accrued Liabilities.

- (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 were developed from an experience study of the Plan's and the predecessor Plan's pensioners. Sample probabilities are shown in Table 1a. The mortality tables for beneficiaries were developed from experience review. 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 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) effective beginning with the June 30, 2010 (Lag) actuarial valuation are shown in Table 6.

#### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION (Cont'd)

- (7) The economic assumptions (i.e., the assumed investment return rate, GWI rate and Cost-of-Living Adjustments (COLA)) were developed assuming a long-term Consumer Price Inflation (CPI) assumption of 2.5% per annum. The assumption is 1.5% per annum for Auto COLA and 2.5% per annum for escalation.
- (8) The valuation assumes a closed group of members.
- (9) Beginning with the June 30, 2010 (Lag) actuarial valuation, the Entry Age Actuarial Cost Method (EAACM) of funding is utilized by the Plan's Actuary to calculate the contribution required of the Employer.

Under this method, the Actuarial Present Value (APV) of Benefits (APVB) of each individual included in the actuarial valuation is allocated on a level basis over the earnings (or service) of the individual between entry age and assumed exit age(s). The employer portion of this APV allocated to a valuation year is the Employer Normal Cost. The portion of this APV not provided for at a valuation date by the APV 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 Asset Value (AAV) is the Unfunded Actuarial Accrued Liability (UAAL).

Under this method, actuarial gains (losses), as they occur, reduce (increase) the UAAL and are explicitly identified and amortized.

Increases (decreases) in obligations due to benefit changes, actuarial assumption changes and/or actuarial method changes are also explicitly identified and amortized.

#### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION (Cont'd)

(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, 2014 (Lag) actuarial valuation uses a June 30, 2014 valuation date to determine Fiscal Year 2016 Employer Contributions.

This methodology requires technical adjustments to certain components used to determine Fiscal Year 2016 Employer Contributions as follows:

Present Value of Future Salary (PVFS)

The PVFS at June 30, 2014 is reduced by the value of salary projected to be paid during Fiscal Year 2015.

Salary for Determining Employer Contributions

Salary used to determine the employer normal contribution is the salary projected to be paid during Fiscal Year 2016 to members on payroll at June 30, 2014.

UAAL Payments

For determining the UAAL payments for Fiscal Year 2016, and to be consistent with the OYLM, the UAAL as of June 30, 2014 is adjusted by the discounted value of employer normal contributions paid during Fiscal Year 2015.

(11) The Actuary reset the AAV to the Market Value of Assets (MVA) as of June 30, 2011 (i.e., Market Value Restart).

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 AAV 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 AAV is constrained to be within a 20% corridor of the Market Value.

#### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION (Cont'd)

- (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 APV of Future SKIM from the Plan to the FFVSF and FOVSF is included directly as an actuarial liability to the Plan. SKIM is all or a portion of the excess earnings on equity securities of the Plan 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. Under the EAACM, a portion of the APV of Future SKIM is reflected in the APV of Future Normal Costs and a portion is reflected in the AAL.
- (13) The APVB as of June 30, 2014, used to determine the Fiscal Year 2016 Employer Contributions, includes estimates of liabilities for World Trade Center (WTC) Post-Retirement Reclassifications.
- (14) As discussed herein, the actuarial assumptions and methods are unchanged from those of the June 30, 2013 (Lag) actuarial valuation except for the adoption of revised Post-Retirement Mortality Tables and a 20% corridor constraining the Actuarial Asset Value as described in sections (1) and (11) above, respectively.

#### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION (Cont'd)

Table 1a  Deaths among Service and Disability Pensioners  Percentage of Pensioners Dying within Next Year					
	Service Pe	Service Pensioners		Disability Pensioners	
Age	Males	Females	Males	Females	
40	0.1082%	0.0617%	0.1745%	0.0691%	
45	0.1555	0.0887	0.2098	0.1305	
50	0.2288	0.1513	0.2866	0.2646	
55	0.4782	0.2073	0.5848	0.4865	
60	0.6569	0.3902	0.8427	0.6255	
65	0.9753	0.5915	1.2172	0.9356	
70	1.3606	0.8721	1.8470	1.5714	
75	2.3667	1.3893	2.7796	2.7691	
80	4.1260	2.5502	4.6898	4.7161	
85	7.9810	4.3661	8.6946	7.8681	
90	12.7321	7.8055	12.8865	12.9631	
95	23.2022	14.8002	23.9154	18.7612	
100	31.4230	21.6851	31.4230	21.9277	
105	37.5244	27.6686	37.5244	27.6686	
110	100.0000	100.0000	100.0000	100.0000	

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

#### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION (Cont'd)

	Deaths among Beneficiarie	s
Percentag	ge of Beneficiaries Dying with	in Next Year
Age	Males	Females
20	0.0229%	0.01319
25	0.0305	0.0183
30	0.0410	0.0265
35	0.0721	0.0505
40	0.0947	0.0687
45	0.2684	0.1202
50	0.4203	0.2512
55	0.8245	0.4448
60	1.0827	0.7377
65	1.4619	1.0274
70	1.9843	1.4161
75	2.9181	2.2280
80	5.3467	3.7564
85	8.2155	6.2437
90	14.2568	10.7174
95	22.8721	18.1287
100	31.4230	21.7021
105	37.5244	27.6686
110	100.0000	100.0000

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

#### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION (Cont'd)

Table 2a  Withdrawals from Active Service (Due to Death or Disability)  Tier I and Tier II Members Not Eligible for WTC Benefits  Percentage of Active Members Separating within Next Year					
			Ordinary Death		
Age	Accidental Disability	Ordinary Disability	Males	Females	Accidental Death
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	NA	NA	NA	NA	NA

	Tier I and	rom Active Serv Tier II Members	s Eligible for W	ath or Disability TC Benefits within Next Year	10
			Ordinar	y Death	
Age	Accidental Disability	Ordinary Disability	Males	Females	Accidenta Death
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	NA	NA	NA	NA NA	NA

	т	Tabl from Active Servi er III and Tier III I of Active Member	ce (Due to Dea	pers	
			Ordinary	Death	
Age	Accidental Disability	Ordinary Disability	Males	Females	Accidenta Death
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	NA	NA	NA	NA	NA

Percer		Table 3 from Active Service ers Withdrawing with	in 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 NA	5.00%	NA	
21	NA NA	2.00	NA	
22	NA NA	NA	5.00%	
23	NA NA	NA	2.00	
24	NA	NA	2.00	

ercentage of	Eligible Active Membe	ble 4 ers Retiring for Service thin Next Year	with Unreduce
	Years	of Service Since First	Eligible
Age	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

5.2	Table 5 Salary Scale						
Years of Service	Assumed Annual Percentage Increases Within Next Year*						
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						

<sup>\*</sup> Salary Scale includes a General Wage Increase assumption of 3.0% per annum.

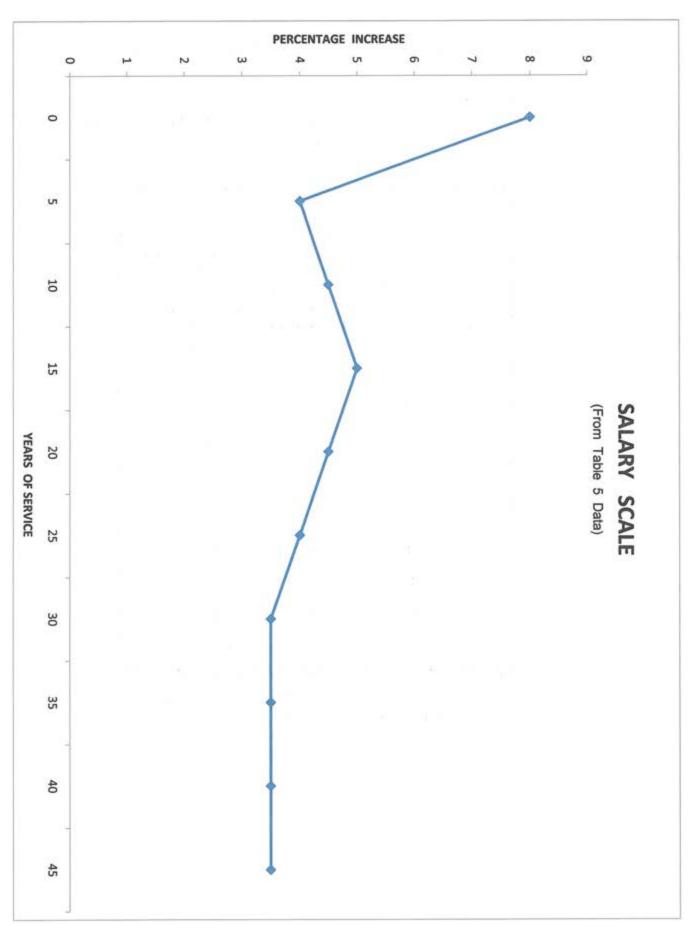


Table 6 Overtime								
Years of Service	All Tiers Baseline	Tier I/II Dual Service	Tier I/II Dual Disability	Tier III/Tier III Modified Dual Service	Tier III/Tier III Modified Dual Disability			
0	15.00%	16.00%	15.00%	16.00%	15.00%			
5	15.00	16.00	15.00	16.00	15.00			
10	15.00	16.00	15.00	16.00	15.00			
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			

		Table 7							
ACTIVE MEMBER VALUATION DATA									
Valuation Date	Number	Annual Payroll(1)	Annual Average Pay	Percentage Increase (Decrease) in Average Pay					
6/30/05 (Lag)	11,470	\$ 908,261,197	\$ 79,186	2.9%					
6/30/06 (Lag)	11,641	932,730,174	80,125	1.2					
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					

<sup>(1)</sup> 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.

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

As of the June 30, 2014 (Lag) and June 30, 2013 (Lag) actuarial valuations, the Plan's Membership consisted of:

Table 8 SUMMARY OF PLAN MEMBERSHIP							
Group	June 30, 2014 (Lag)	June 30, 2013 (Lag)					
Retirees and beneficiaries currently receiving benefits	16,763	16,807					
Terminated vested members not yet receiving benefits	40	33					
Other Inactives*	16	17					
Active members	10,319	10,182					
Total	27,138	27,039					

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

	S		% Increase In Average Annual Annual Allowances	4.1% \$ 41,017	4.7 42,840	6.1 45,455	4.9 47,883	3.5 49,945	3.4 52,037	3.3 54,135	3.5 56,341	3.3 58,559	3.1 60,559		
	RETIRANTS AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS  d to Rolls Removed from Rolls Rolls end of Year	id of Year	Annual Allowances <sup>(23,(3)</sup> Allo	\$ 715,456	749,064	794,507	833,347	862,197	891,920	921,210	953,119	984,193	1,015,151		
		Rolls er	Number	17,443	17,485	17,479	17,404	17,263	17,140	17,017	16,917	16,807	16,763		
	RIES ADDED T	Removed from Rolls	from Rolls	from Rolls	Annual Allowances <sup>(3)</sup>	\$23,571	21,538	26,221	23,260	20,248	25,161	35,553	26,380	23,448	23,300
	D BENEFICIA		Number	741	714	783	691	617	629	776	638	563	534		
	RETIRANTS AN	Added to Rolls	Annual Aliowances <sup>(X)(3)</sup>	\$51,588	55,146	71,664	62,100	49,098	54,884	64,844	58,289	54,522	54,258		
		Adde	Number	725	992	777	919	476	929	653	538	453	490		
			Year	90/08/9	90/06/9	6/30/07	80/06/9	60/06/9	6/30/10	6/30/11	6/30/12	6/30/13	6/30/14		

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. 8

Allowances shown in table 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. 8

<sup>(3)</sup> In thousands.

### Table 10 STATUTORY VS ACTUARIAL CONTRIBUTIONS

(Dollar Amounts in Thousands)

Fiscal Year Ended	Statutory Contribution <sup>(1)</sup>	Actuarial Contribution	Employer Rate of Contribution <sup>(2)</sup>	
6/30/07	\$ 683,193	\$ 683,193	74.537%	
6/30/08	780,202	780,202	82.608	
6/30/09	843,751	843,751	83.238	
6/30/10	874,331	874,331	82.491	
6/30/11	890,706	890,706	82.248	
6/30/12	976,895	976,895	84.990	
6/30/13	962,173	962,173	85.154	
6/30/14	969,956	969,956	87.986	
6/30/15	988,784	988,784	88.940	
6/30/16	1,054,478	1,054,478	93.360	

<sup>(1)</sup> Represents total employer contributions accrued for fiscal year.

Beginning Fiscal Year 2006, the Statutory Contributions were computed using a One-Year Lag Methodology in accordance with Chapter 152/06 which also eliminated the use of ten-year phase-in of Chapter 278/02 for funding the additional actuarial liabilities attributed to Chapter 125/00.

<sup>(2)</sup> 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.

### FUNDED STATUS BASED ON ENTRY AGE ACTUARIAL COST METHOD

This Schedule is being provided by the Actuary for the Plan to improve the transparency and decision usefulness of this financial report.

Prior to the June 30, 2010 (Lag) Actuarial Valuation, the Actuarial Cost Method (ACM) used to develop the funding requirements for the Plan was the Frozen Initial Liability (FIL) ACM. Under this ACM, 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 ACM where the Actuarial Present Value (APV) of any obligations of the Plan not provided by the APV of Future Contributions (Employer and Employee), as determined under the Entry Age ACM, equals the Actuarial Accrued Liability (AAL). Under the Entry Age ACM, the UAAL equals the AAL minus the Actuarial Value of Assets.

		Table	e 11			
FL	INDED STATUS	BASED ON ENTR			METHOD	
Actuarial Valuation Date		Actuarial Accrued Liability (AAL) <sup>(1)</sup> - Entry Age (b)	Unfunded AAL (UAAL) - Entry Age (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage Of Covered Payroll ((b-a)/c)
June 30, 2014 (Lag)(2)	\$ 9,808,854	\$ 18,028,695	\$ 8,219,841	54.4%	\$ 1,150,390	714.5%
June 30, 2013 (Lag)(2)	9,144,587	17,003,722	7,859,135	53.8	1,129,706	695.7
June 30, 2012 (Lag)(2)	8,520,769	16,358,108	7,837,339	52.1	1,106,113	708.5
June 30, 2011 (Lag)(2)	7,955,668	15,808,930	7,853,262	50.3	1,125,460	697.8
June 30, 2010 (Lag)(2)	7,392,656	15,349,598	7,956,942	48.2	1,138,188	699.1
June 30, 2009 (Lag)	7,304,758	12,864,974	5,560,216	56.8	1,079,682	515.0
June 30, 2008 (Lag)	6,942,992	12,313,206	5,370,214	56.4	1,051,592	510.7

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

<sup>(1)</sup> AAL includes the accrued liabilities attributable to the Variable Supplements Funds, net of their Actuarial Asset Values, if any.

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

### COMPARATIVE SUMMARY OF AGGREGATE ACCRUED LIABILITIES FUNDED BY ACTUARIAL VALUE OF ASSETS

व सुख्य महत्र	tosan guntalun	ogress in ассти	Table 12 SOLVENCY TEST ar Amounts in Thou	realizated in the	di nadavet	itanori ba	
	Aga	gregate Accrued Liabi	lities for	RRET DESCRIPTION	NEWSTREET	201.010	mone (
As of June 30	Accumulated Member Contribution (A)	Current Retirants and Beneficiaries (B)	Active Members' Employer Financed Portion (C)	Actuarial Value of Assets (D)	Accrued L	age of Aggre labilities Fur al Value of A (B)	nded by
2005 (Lag)	\$ 582,259	\$ 6,740,143	\$ 2,832,468	\$ 6,169,209	100%	83%	0%
2006 (Lag)	661,712	7,319,033	2,915,997	6,174,111	100	75	0
2007 (Lag)	724,622	7,672,323	3,145,238	6,459,130	100	75	
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

Also, see following "SOLVENCY TEST - NOTES."

(a) (ally evaluate triands in financial soundaires, changes in assumptions need to be evaluated. Beginning with the June 30, 20 (c) (ag) astronal valuation, the Actuarial anterest tense assumption equals 7.0% per amount not of investment expenses and the trenderal Wage because a compilion equals 7.0% per amount. Prior to the June 30, 2010 (Lag) actuarial hardware the Actuarial Interest Rate assumption was 8% per amount, give of expenses.

New 2012. These underlying bases can be torned within the Comprehensive Annual Unancial

### COMPARATIVE SUMMARY OF AGGREGATE 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 Aggregate Accrued Liabilities for:

- (A) Accumulated Member Contributions;
- (B) Current Retirants and Beneficiaries; and
- (C) Active Members' Employer Financed Portion.

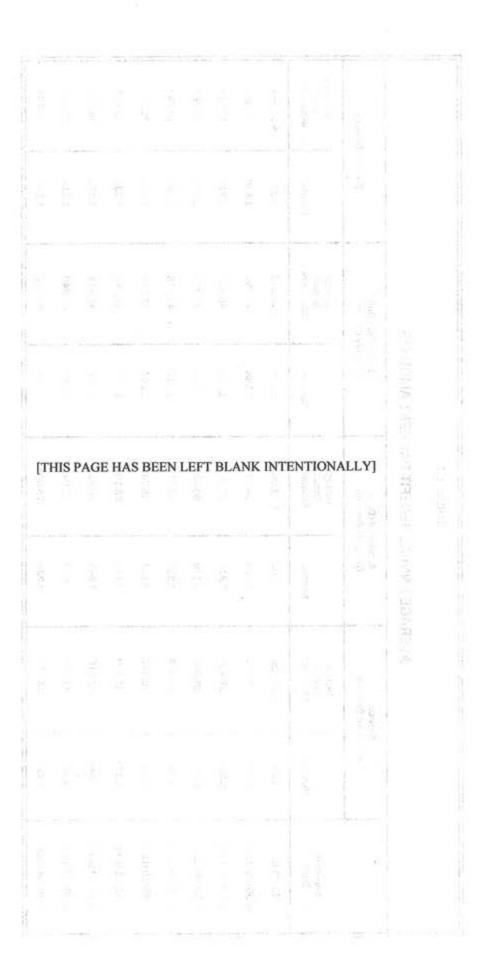
The Aggregate Accrued Liabilities are the APV of projected benefits produced by the projected benefit attribution approach prorated on service. The Aggregate Accrued Liabilities were calculated in accordance with Governmental Accounting Standards Board Statement No. 5 (GASB 5).

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% per annum, gross of expenses.

			Table 13				31
AVERAGI	ш	ANNUAL	AVERAGE ANNUAL BENEFIT PAYMENT AMOUNTS	TENT AMOUNT	S		
Service Retirement Benefits		Accident	Accidental (Duty) Disability Benefits	Ordinary ( Disability	Ordinary (Non-Duty) Disability Benefits	Survivor	Survivor Benefits
Average Annual Allowance	Z	Number	Average Annual Allowance	Number	Average Annual Allowance	Number	Average Annual Allowance
\$ 36,426		7,103	\$ 51,968	1,448	\$ 43,933	1,927	\$ 15,054
37,254		7,420	54,223	1,398	44,780	1,828	16,054
38,435		7,816	57,564	1,339	45,853	1,718	17,049
39,078		8,149	60,825	1,284	46,484	1,618	18,380
39,908		8,331	63,286	1,217	47,398	1,521	19,782
40,347		8,593	65,741	1,167	48,219	1,423	21,354
41,390		8,740	68,105	1,110	48,767	1,337	22,844
42,116		8,943	70,653	1,057	49,511	1,271	24,505
43,289		9,094	73,041	1,012	49,840	1,214	26,354
44,659	-57	9,223	75.043	959	50 722	1 154	27.752



### New York City Fire Pension Fund 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, 2016

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### NEW YORK FIRE DEPARTMENT PENSION FUND DATA USED IN THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION FOR DETERMINING FINAL FISCAL YEAR 2016 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	(
20 TO 24	81	0	0	0	0	0	0	0	0	81
25 TO 29	367	263	3	0	0	0	0	0	0	633
30 TO 34	123	1,382	412	1	0	0	0	0	0	1,918
35 TO 39	15	739	1,409	181	0	0	0	0	0	2,344
40 TO 44	3	135	962	736	202	2	0	0	0	2,040
45 TO 49	0	3	153	665	554	103	3	0	0	1,481
50 TO 54	0	0	23	187	417	363	90	0	0	1,080
55 TO 59	0	0	1	9	62	143	269	61	0	545
60 TO 64	0	1	0	2	3	12	54	52	15	139
65 TO 69	0	0	0	0	0	0	1	0	0	1
70 & UP	0	0	0	1	0	0	0	0	0	1
TOTAL	589	2,523	2,963	1,782	1,238	623	417	113	15	10,263
SALARIES (IN										
UNDER 20	0	0	0	0	0	0	0	0	0	(
20 TO 24	3,878	0	0	0	0	0	0	0	0	3,878
25 TO 29	18,014	23,948	318	0	0	0	0	0	0	42,280
30 TO 34	5,939	143,438	44,654	106	0	0	0	0	0	194,138
35 TO 39	765	77,558	154,459	20,682	0	0	0	.0	0	253,464
40 TO 44	276	14,193	105,742	88,743	25,394	208	0	0	0	234,556
45 TO 49	0	359	17,204	79,104	72,676	13,784	317	0	0	183,444
50 TO 54	0	0	2,584	21,879	53,753	48,722	12,730	0	0	139,670
55 TO 59	0	0	150	1,105	7,615	17,634	37,354	9,254	0	73,113
60 TO 64	0	149	0	301	371	1,689	7,104	7,859	2,359	19,831
65 TO 69	0	0	0	0	0	0	126	0	0	126
70 & UP	0	0	0	151	0	0	0	0	0	151
TOTAL*	28,872	259,645	325,112	212,072	159,810	82,037	57,632	17,113	2,359	1,144,651
AVERAGE SAI										
UNDER 20	47.001	0	0	0	0	0	0	0	0	
20 TO 24	47,881	01.058	0	0	0	0	0	0	0	47,881
25 TO 29	49,084	91,058	105,960	0	0	0	0	0	0	66,793
30 TO 34	48,282	103,790	108,384	106,476	0	0	0	0	0	101,219
35 TO 39	51,023	104,950	109,623	114,264	0	0	0	0	0	108,133
40 TO 44	92,150	105,133	109,919	120,575	125,714	103,766	0	0	0	114,979
45 TO 49	0	119,503	112,447	118,953	131,184	133,826	105,633	0	0	123,865
50 TO 54	0	0	112,368	117,002	128,905	134,221	141,449	0	0	129,324
55 TO 59	0	0	149,940	122,825	122,827	123,317	138,863	151,707	0	134,153
60 TO 64	0	148,862	0	150,479	123,572	140,739	131,557	151,140	157,245	142,672
65 TO 69	0	0	0	0	0	0	126,111	0	0	126,111
70 & UP	0	0	0	151,018	0	0	0	0	0	151,018
TOTAL	49,019	102,911	109,724	119,008	129,087	131,680	138,206	151,446	157,245	111,53

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

Total may not add up due to rounding.

### NEW YORK FIRE DEPARTMENT PENSION FUND DATA USED IN THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION FOR DETERMINING FINAL FISCAL YEAR 2016 EMPLOYER CONTRIBUTIONS

### FEMALES

AGE \ SVC	UNDER 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & UP AI	L YEARS
NUMBER:										
UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	1	0	0	0	0	0	0	0	0	1
25 TO 29	3	2	0	0	0	0	0	0	0	5
30 TO 34	4	7	1	0	0	0	0	0	0	12
35 TO 39	0	8	9	3	0	0	0	0	0	20
40 TO 44	2	2	5	3	0	0	0	0	0	12
45 TO 49	0	0	0	2	0	0	0	0	0	2
50 TO 54	1	0	0	0	0	θ	0	0	0	1
55 TO 59	0	0	0	0	0	1	0	θ	0	
60 TO 64	0	0	0	0	0	0	0	1	0	1
65 TO 69	0	0	1	0	0	0	0	0	0	1
70 & UP	0	0	0	0	0	0	0	0	0	0
TOTAL	11	19	16	8	0	1	0	1	0	56
SALARIES (IN						10	10	12		9
UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	46	0	0	0	θ	0	0	0	0	46
25 TO 29	142	104	0	0	0	0	0	0	0	246
30 TO 34	198	683	118	0	0	0	0	0	0	999
35 TO 39	0	844	950	316	0	0	0	0	0	2,110
40 TO 44	242	206	606	348	0	0	0	0	0	1,402
45 TO 49	0	0	0	286	0	0	0	0	0	286
50 TO 54	125	0	0	0	0	0	0	0	0	125
55 TO 59	0	0	0	0	0	171	0	0	0	171
60 TO 64	0	0	0	0	0	0	0	203	0	203
65 TO 69	0	0	150	0	0	0	0	0	0	150
70 & UP	0	0	0	0	0	0	0	0	0	0
TOTAL *	752	1,837	1,824	951	0	171	0	203	0	5,739
AVERAGE SA		77.27	12	100	- 2					
UNDER 20	0	0	0	0	0	0	0	0	0	46.026
20 TO 24	46,029	0	0	0	0	0	0	0	0	46,025
25 TO 29	47,276	52,119	0	0	0	0	0	0	0	49,213
30 TO 34	49,497	97,586	117,770	0	0	0	0	0	0	83,238
35 TO 39	0	105,457	105,570	105,345	0	0	0	0	0	105,491
40 TO 44	120,893	102,810	121,281	116,155	0	0	0	0	0	116,850
45 TO 49	0	0	0	143,197	0	0	0	0	0	143,197
50 TO 54	124,641	0	0	0	0	0	0	0	0	124,641
55 TO 59	0	0	0	0	0	171,356	0	0	0	171,350
60 TO 64	0	0	0	0	0	0	0	203,180	0	203,180
65 TO 69	0	0	149,940	0	0	0	0	0	0	149,940
70 & UP	0	0	0	0	0	0	0	0	0	
TOTAL	68,388	96,664	114,016	118,862	0	171,356	0	203,180	0	102,474

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

Total may not add up due to rounding.

<sup>\*\*</sup> Average based on unrounded salary.

### NEW YORK FIRE DEPARTMENT PENSION FUND DATA USED IN THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION FOR DETERMINING FINAL FISCAL YEAR 2016 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 A	LL YEARS
NUMBER:										
UNDER 20	0	0	0	0	0	0	0	0	0	
20 TO 24	82	0	0	0	0	0	0	0	0	82
25 TO 29	370	265	3	0	0	0	0	0	0	638
30 TO 34	127	1,389	413	1	0	0	0	0	0	1,930
35 TO 39	15	747	1,418	184	0	0	0	0	0	2,364
40 TO 44	5	137	967	739	202	2	0	0	0	2,052
45 TO 49	0	3	153	667	554	103	3	0	0	1,483
50 TO 54	1	0	23	187	417	363	90	0	0	1,081
55 TO 59	0	0	1	9	62	144	269	61	0	546
60 TO 64	0	1	o	2	3	12	54	53	15	140
65 TO 69	0	0		0	0	0		0	0	
	0	0	0		0	0	0	0	0	2
70 & UP TOTAL	600	2,542	2,979	1,790	1,238	624	417	114	15	10,319
TOTAL	000	2,542	24717	1,770	1,230	024	41/	114	15	10,317
SALARIES (IN	THOUSANDS	S):								
UNDER 20	0	0	0	0	0	0	0	0	0	6
20 TO 24	3,924	0	0	0	0	0	0	0	0	3,924
25 TO 29	18,155	24,052	318	0	0	0	0	0	0	42,526
30 TO 34	6,137	144,122	44,772	106	0	0	0	0	0	195,137
35 TO 39	765	78,402	155,409	20,998	0	0	0	0	0	255,574
40 TO 44	518	14,399	106,348	89,092	25,394	208	0	0	0	235,958
45 TO 49	0	359	17,204	79,390	72,676	13,784	317	0	0	183,730
50 TO 54	125	0	2,584	21,879	53,753	48,722	12,730	0	0	139,794
55 TO 59	0	0	150	1,105	7,615	17,806		9,254	0	
					307.533.53		37,354			73,285
60 TO 64	0	149	0	301	371	1,689	7,104	8,062	2,359	20,035
65 TO 69	0	0	150	0	0	0	126	0	0	276
70 & UP	0	0	0	151	0	0	0	0	0	151
TOTAL *	29,625	261,482	326,936	213,023	159,810	82,208	57,632	17,317	2,359	1,150,390
AVERAGE SA	I ADIES. **									
UNDER 20	0	0	0	0	0	0	0		0	
20 TO 24	47,858	0	0	0		0	8	0	1	47.056
25 TO 29				9,29	0	970		0	0	47,858
	49,069	90,764	105,960	106 476	0	0	0	0	0	66,655
30 TO 34	48,320	103,759	108,407	106,476	0	0	0	0	0	101,107
35 TO 39	51,023	104,956	109,597	114,119	0	0	0	0	0	108,111
40 TO 44	103,647	105,099	109,978	120,557	125,714	103,766	0	0	0	114,990
45 TO 49	0	119,503	112,447	119,025	131,184	133,826	105,633	0	0	123,891
50 TO 54	124,641	0	112,368	117,002	128,905	134,221	141,449	0	0	129,320
55 TO 59	0	0	149,940	122,825	122,827	123,650	138,863	151,707	0	134,221
60 TO 64	0	148,862	0	150,479	123,572	140,739	131,557	152,122	157,245	143,105
65 TO 69	0	0	149,940	0	0	0	126,111	0	0	138,026
70 & UP	0	0	0	151,018	0	0	0	0	0	151,018
	49,375	102,865	109,747	119,007	129,087	131,744	138,206	151,900	157,245	111,483

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 Fund Comprehensive Annual Financial Report A Pension Trust Fund of the City of New York



Appendix B

**Census Data for Pensioners** 

As of June 30, 2016

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### NEW YORK FIRE DEPARTMENT PENSION FUND DATA USED IN THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION FOR DETERMINING FINAL FISCAL YEAR 2016 EMPLOYER CONTRIBUTIONS SUMMARY OF PENSIONERS BY CAUSE AND GENDER

ALL FILES (ALL BENEFITS) MALE FEMALE BOTH MALE & FEMALE NUMBER BENEFITS AVERAGE NUMBER BENEFITS AVERAGE NUMBER BENEFITS AVERAGE ACCIDENTAL DISABILITY: UNDER 30 0 0 0 0 0 0 0 1,388,520 30 TO 34 18 77,140 1 70,266 70,266 19 1,458,786 76,778 35 TO 39 118 9,439,981 80,000 0 0 118 9,439,981 80,000 0 40 TO 44 380 31,030,626 81,660 2 164,775 82,388 382 31,195,401 81,663 45 TO 49 775 65,848,779 84,966 0 0 775 65,848,779 0 84,966 50 TO 54 1,312 115,711,083 88,194 2 176,869 88,435 1,314 115,887,952 88,195 55 TO 59 1,876 165,223,270 88,072 7 86,502 605.517 1.883 165,828,787 88,066 60 TO 64 1,119 93,579,729 83,628 6 453,514 75,586 94,033,243 83,585 1,125 63,477,754 47,125 65 TO 69 863 73,555 1 47,125 864 63,524,879 73,524 70 TO 74 904 55,559,857 61,460 0 0 904 55,559,857 61,460 964 75 TO 79 49,384,768 51,229 1 965 49,450,922 66,154 66,154 51,244 80 TO 84 540 25,111,152 46,502 0 0 540 25,111,152 46,502 44,205 0 85 TO 89 244 10,786,016 0 0 244 10,786,016 44,205 90 & UP 90 3,994,843 44,387 0 0 90 3,994,843 44,387 TOTAL 9,203 690,536,378 75,034 1,584,220 79,211 9,223 20 692,120,598 75,043 ORDINARY DISABILITY: UNDER 30 0 0 0 0 0 0 0 Θ 0 30 TO 34 0 0 0 0 0 0 0 8 0 35 TO 39 2 51,201 25,601 0 0 0 2 51,201 25,601 40 TO 44 2 34,853 17,427 0 0 0 2 34,853 17,427 45 TO 49 12 407,275 33,940 0 0 0 12 407,275 33,940 50 TO 54 405,184 28,942 0 0 14 0 14 405,184 28,942 55 TO 59 49 1.252.537 25,562 1 28,608 28,608 50 1,281,145 25,623 1,368,968 60 TO 64 45 30,422 θ 45 1,368,968 0 0 30,422 65 TO 69 63 3,873,668 61,487 0 0 0 63 3,873,668 61,487 70 TO 74 150 8,630,492 57,537 0 0 0 150 8,630,492 57,537 75 TO 79 233 13,933,431 59,800 0 0 0 233 13,933,431 59,800 80 TO 84 213 10,619,332 49,856 0 0 0 213 10,619,332 49,856 85 TO 89 116 5,652,123 48,725 0 0 0 116 5,652,123 48,725 90 & UP 59 2,384,741 40,419 θ 0 n 2,384,741 50 40,419 TOTAL 958 48,613,805 50,745 28,608 28,608 959 48,642,413 50,722 SERVICE RETIREMENT: 0 UNDER 30 0 0 0 0 0 0 0 30 TO 34 0 0 0 0 0 0 ò 0 0 35 TO 39 0 0 0 0 0 0 0 0 40 TO 44 8 447.692 55.962 0 0 0 8 447,692 55,962 45 TO 49 61 3,712,514 60,861 0 0 0 61 3,712,514 60,861 50 TO 54 242 14,722,709 60,838 0 0 0 242 14,722,709 60,838 55 TO 59 697 39,919,070 57,273 4 197,109 49,277 701 40,116,179 57,227 60 TO 64 563 30,150,558 53,553 3 197,208 65,736 566 30,347,766 53,618 65 TO 69 699 34,290,710 49,057 1 32,831 32,831 700 34,323,541 49.034 70 TO 74 929 40,077,958 43,141 0 0 0 929 40,077,958 43,141 993 34,400 34,400 75 TO 79 37,293,732 37,557 1 994 37,328,132 37,553 80 TO 84 657 23,106,992 35,170 0 0 0 657 23,106,992 35,170 85 TO 89 372 12,095,546 32,515 0 372 12,095,546 32,515 0 0 90 & UP 197 6,082,723 30,877 0 197 6,082,723 30,877 TOTAL 5,418 241,900,204 44,648 9 461,548 51,283 5,427 242,361,752 44,659

### NEW YORK FIRE DEPARTMENT PENSION FUND DATA USED IN THE JUNE 30, 2014 (LAG) ACTUARIAL VALUATION FOR DETERMINING FINAL FISCAL YEAR 2016 EMPLOYER CONTRIBUTIONS SUMMARY OF PENSIONERS BY CAUSE AND GENDER

ALL FILES (ALL BENEFITS) BOTH MALE & FEMALE MALE FEMALE NUMBER BENEFITS AVERAGE NUMBER BENEFITS AVERAGE NUMBER BENEFITS AVERAGE ACCIDENTAL DEATH: 188,645 UNDER 30 2 68,062 34,031 4 120,583 30,146 6 31,441 0 0 0 0 0 0 0 30 TO 34 0 36,360 581.753 36,360 35 TO 39 0 0 0 16 581,753 16 2,083,971 37,214 40 TO 44 0 0 0 56 2,083,971 37,214 56 91 39,965 0 0 0 91 3,636,791 39,965 3,636,791 45 TO 49 105 40,173 105 4,218,113 40,173 4.218.113 50 TO 54 0 0 0 55 TO 59 0 0 0 88 3,771,712 42,860 88 3,771,712 42,860 37,171 41,746 60 2,491,056 41,518 111,514 57 2 379 542 60 TO 64 3 0 0 45 1,764,779 39,217 45 1,764,779 39,217 65 TO 69 0 1,654,857 1.654.857 33.097 50 33,097 50 70 TO 74 0 0 O 1,382,925 28,223 50 1,421,306 28,426 38,381 38,381 49 75 TO 79 1 28 25,911 25,911 725 495 28 80 TO 84 0 0 0 725,495 0 0 0 12 306,105 25,509 12 306,105 25,509 85 TO 89 23,814 19 452,475 452,475 23.814 90 & UP 0 0 0 19 37,216 TOTAL 217,957 36,326 620 23,079,101 37,224 626 23,297,058 OTHER BENEFICIARIES: 0 255,032 63,758 4 255,032 63,758 UNDER 30 0 0 4 45,254 2 90,508 45,254 2 90,508 30 TO 34 0 0 0 0 0 0 0 0 0 0 0 0 35 TO 39 0 0 0 0 0 40 TO 44 0 0 0 0 4 227,320 56,830 0 0 0 4 227,320 56,830 45 TO 49 699.072 49,934 2 86,051 43,026 12 613,021 51.085 14 50 TO 54 414,623 37,693 11 414,623 37,693 55 TO 59 0 0 0 11 37,082 37,082 0 0 0 20 741,630 20 741,630 60 TO 64 33 38,186 33 1,260,152 38,186 0 0 0 1.260.152 65 TO 69 0 0 0 36 986,842 27,412 36 986.842 27,412 70 TO 74 1,215,205 26,418 46 1,215,205 26,418 46 75 TO 79 0 0 0 0 0 45 696,375 15,475 45 696,375 15,475 80 TO 84 0 937,304 12,173 77 937,304 12,173 0 o! 77 85 TO 89 0 5,104 236 ,204,626 5,104 0 236 1,204,626 90 & UP 528 8,728,689 16,532 526 8,642,638 16,431 86.051 43.026 TOTAL ALL PENSIONERS AND BENEFICIARIES: 46,952 10 443,677 44,368 68,062 34,031 8 375,615 UNDER 30 2 18 3 160,774 53,591 21 1,549,294 73,776 30 TO 34 1,388,520 77,140 581,753 36,360 136 10.072.935 74,066 79.093 35 TO 39 120 9,491,182 16 38,771 448 33,761,917 75,361 40 TO 44 390 31,513,171 80,803 58 2,248,746 943 78 296 95 40,675 73,832,679 45 TO 49 848 69,968,568 82,510 3,864,111 42,084 1,689 135,933,030 80,481 1,570 130,925,027 83,392 119 5,008,003 50 TO 54 55 TO 59 2,622 206,394,877 78,717 111 5.017.569 45.203 2.733 211,412,446 77,355 1,730 71,026 125,210,769 72,376 86 3,771,894 43,859 1,816 128,982,663 60 TO 64 104,747,019 61,435 65 TO 69 1,625 101,642,132 62,549 80 3,104,887 38,811 1,705 1,983 104 268 307 52,581 86 2,641,699 30,717 2,069 106,910,006 51,672 70 TO 74 2,191 100,650,312 45,938 97 2,698,684 27,821 2,288 103,348,996 45,170 75 TO 79 73 19,478 1,483 60,259,346 40,633 41,729 1,421,870 80 TO 84 1,410 58,837,476 732 28,533,685 38,980 89 1,243,409 13,971 821 29,777,094 36,269 85 TO 89 12,462,307 6,498 601 14,119,408 23,493 90 & UP 346 36,018 255 1,657,101 1,015,150,510 60,559

1,176

33,796,115

28,738

16,763

TOTAL

15,587

981,354,395

62,960

### **New York Fire Department 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, 2016

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### The Statistical Section Narrative

The Statistical section of the New York Fire Pension Funds' 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

Total	871,477	915,225	928,453	954,773	983,474	1,037,589	1,136,004	1,171,329	1,219,890	1,358,431
Other Benefits *	73,431	79,539	26,006	28,603	29,768	50,213	112,289	122,546	140,023	218,701
Death Benefits Lump Sum Payments	3,539	2,339	4,219	3,454	1,279	1,353	1,371	11,354	12,038	14,301
Payments of Deceased Service and Disability	8,563	8,564	14,353	14,426	13,723	13,923	14,646	5,592	5,652	5,384
Payments for Death in Duty	20,727	21,174	51,974	54,069	55,488	57,614	59,888	61,951	63,918	66,417
Accidental Disability Payments	449,918	495,662	524,425	552,814	587,885	621,698	659,243	681,196	709,488	764,129
Ordinary Disability Payments	61,397	59,685	58,392	56,905	55,019	53,002	51,273	49,456	47,378	44,938
Service Retirement Payments	253,902	248,262	249,084	244,502	240,312	239,786	237,294	239,234	241,393	244,561
FISCAL	2007	2008	2009	2010	17077	2012	2013	2014	2015	2016

<sup>\*</sup> This represents VSF payments to firefighters, fire officers and other payments.

# TABLE OF RETIRED MEMBERS AND BENEFICIARIES BY TYPE OF BENEFIT

### FISCAL YEAR 2016

5,188 863 9,548 660 423 485 73  ANNUAL PAYROLL AMOUNT (in thousands)  244,561 \$ 44,938 \$ 764,129 \$ 66,417 \$ 5,384 \$ 12,507 \$ 1,794 \$ 218,704  10,000  8,000 6,000 4,000 2,000 1 2 3 4 5 6 7	5,188 863 9,548 660 423 485 73  ANNUAL PAYROLL AMOUNT (in thousands)  244,661 \$ 44,938 \$ 764,129 \$ 66,417 \$ 5,384 \$ 12,507 \$ 1,794 \$  10,000 6,000 4,000 2,000 1 2 3 4 5 6 7  SEE RETIREMENT BENEFIT BELOW	2 2	SERVICE RETIREES (1)	ORDINARY DISABILITY RETIREES (1)		ACCIL	ACCIDENTAL DISABILITY RETIREES (1)	LINE OF DUTY BENEFITS	TI STI	SERVICE BENEFICIARIES	IARIES	ACCIDENTAL BENEFICIARIES	TAL	ORDINARY BENEFICIARIES	ES	OTHER BENEFITS (2)	(3)
ANNUAL PAYROLL AMOUNT (in thousands) 244,661 \$ 44,938 \$ 764,129 \$ 66,417 \$ 5,384 \$ 12,507 \$ 1,794 \$ 10,000 8,000 6,000 4,000 7	ANNUAL PAYROLL AMOUNT (in thousands)  244,661 \$ 44,938 \$ 764,129 \$ 66,417 \$ 5,384 \$ 12,507 \$ 1,794 \$  10,000 8,000 6,000 4,000 2,000 1 2 3 4 5 6 7  SEE RETIREMENT BENEFIT BELOW		5,188		853		9,548		099		423		485		73		•
244,661 \$ 44,938 \$ 764,129 \$ 66,417 \$ 5,384 \$ 12,507 \$ 1,794 \$ 10,000  8,000 6,000 4,000 2,000 7 1 2 3 4 5 6 7	24,561 \$ 44,938 \$ 764,129 \$ 66,417 \$ 5,384 \$ 12,507 \$ 1,794 \$  10,000 8,000 6,000 4,000 2,000 1 2 3 4 5 6 7  SEE RETIREMENT BENEFIT BELOW				<b>∢</b> I	NN	AL PAY (in th	ROLL /	AMO	TNO							
	E RETR	1,358,431 \$		\$	938	49	764,129	\$	,417	49	5,384	40	12,507	49	94		18,701
-	E RETIR				RE	TIR	ED ME	MBER	SBY	TYPE	OF BE	NEFIT					
1 2 3 4 5	1 2 3 4 5 EE RETIREMENT BENEFIT BELOW		10,00	0									1				
1 2 3 4 5	1 2 3 4 5 EE RETIREMENT BENEFIT BELOW		8,00	0	10	77.							ľ				
1 2 3 4 5	1 2 3 4 5 EE RETIREMENT BENEFIT BELOW		00'9	0	1	22							1				
1 2 3 4 5	1 2 3 4 5 EE RETIREMENT BENEFIT BELOW		4,00	0									1				
1 2 3 4 5	1 2 3 4 5 SEE RETIREMENT BENEFIT BELOW		2,00	0				The F					1				
,	IREMENT BENEFIT BELOW		,	-	4	0		4	-	-	· c	1	l				
	SEE RETIREMENT BENEFIT BELOW			*		1	)				)						

### 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 2016

OTHER BENEFITS (2)	
BENEFICIARIES	829
LINE OF DUTY BENEFICIARIES (1)	573
POP - UP OPTION	14
OPTION	752
OPTION	322
OPTION	263
OPTION	10
MAXIMUM ALLOWANGE (1)	14,467
TOTAL NUMBER OF RETIREES AND BENEFICIARIES	17,230

### ANNUAL PAYROLL AMOUNT

218,701
\$
12,236
49
66,417
69
\$ 1,107
1,178
25
19,245 \$
69
14,306
49
\$ 421
971,820
4
1,358,431
s

(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.

New York Fire Department Pension Funds Retired Members by Type of Benefit As of June 30, 2016

Amount of Monthly	Retired			Type of Retirement	rement "			Option Selected b	elected b			EXHIBIT 4
Benefits	Members	-	2	3	4	20	Unmodified	-	2	es	4	POP - UPS
36,973	10		,		9	4	10					
129,108	21	e	×	19	÷	2	21	×			٠	٠
839,411	136		2	118	16	ı	106	,		1	30	7
2,813,493	448	60	2	382	56	ų	93	63	76	112	159	40
6,152,723	943	61	12	775	91	4	888		n	37	6	8
11,327,753	2,048	242	14	1,639	139	4	1,996	7	8	30	1	2
17,617,704	2,733	701	20	1,883	88	11	2,665		41	17	6	
10,748,555	1,816	566	45	1,125	90	20	1,587		32	25	168	4
8,728,918	1,705	700	63	864	45	33	1,617		4	89	16	
8,909,167	1,830	069	150	904	20	36	1,783		12	32	8	ř
8,612,416	2,182	984	127	965	20	46	1,765	e	63	-	353	
5,021,612	1,483	657	213	540	28	45	1,458		25	9	į.	-
2,481,425	821	372	116	244	12	77	817	×	4	œ	٠	1
1,176,617	1,054	197	29	06	19	689	1,053	×	-	٠		i
Total	17.230	5.188	853	9.548	099	981	15.889	10	263	322	752	14

### Type of retirement:

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

### Option selected: q

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.

his or her death the same allowance will continue to be paid to his or her beneficiary for life. Option 2 - Provides a member with a reduced retirement allowance with the provision that upon-

the provision that one half of the allowance will continue to be paid to the member's beneficiary for life. Option 3 - Provides a member with a retirement allowance reduce from the Maximum Allowance, with-

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.

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. POP - UP (refer to Option 4-2 and Option 4-3) These are called the "POP - UPS" because they are-OPTIONS

### Statistical Section

### New York Fire Department Pension Funds

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

Exhibit 5

						Age Cre	Age Credited Service	ice						e moinxa
Retirement Effective Dates	Under 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	62-69	70-74	75-79	80-84	85-89	90 & Up
Period 7/1/06 to 6/30/07	3.375	3611	4 284	4716	4 862	4 895	4715	4 424	3.879	3.341	3 117	2 689	1.971	1210
Average final salary Number of retired members	40,499	43,327	51,409	56,588	1,420	1,981	1,570	53,083	46,553	40,093	37,402	32,267	23,651	14,524
Period 7/1/07 to 6/30/08	3 843	3.606	4 527	5 144	5.257	6 232	4 987	4 633	4 005	3 500	3 170	2.786	2 166	1 276
Average final salary Number of retired members	46,116	43,273	54,323	61,725	1,304	62,786	59,844	1,749	48,061	42,002	38,143	33,432	25,993	15,308
Period 7/1/08 to 6/30/09 Average monthly benefit Average final salary	3,881	3,642	4,572	5,195	5,309	5,284	5,037	4,679	4,045	3,535	3,210	2,814	26,253	1,288
Number of retired members	1	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 Average final salary Number of retired members	3,843 46,116	3,606 43,273 45	4,527 54,323 232	5,144 61,725 618	5,257 63,079 1,304	5,231 62,774 2,155	4,985 59,823 1,640	4,633 55,591 1,749	4,005 48,061 2,268	3,500 42,002 2,466	3,179 38,143 1,745	2,786 33,432 1,290	2,166 25,993 854	1,272 15,262 787
Period 7/1/10 to 6/30/11 Average monthly benefit Average final salary Number of retired members	3,570 42,838 11	4,613 55,350 32	4,923 59,071 197	5,415 64,974 517	5,764 69,172 1,162	5,663 67,956 2,254	5,576 66,907 1,916	4,958 59,497 1,674	4,355 52,262 2,014	3,754 45,042 2,602	3,316 39,791 1,994	3,003 36,036 1,220	2,562 30,744 799	1,424 17,090 748
Period 7/1/11 to 6/30/12 Average monthly benefit Average final salary Number of retired members	3,570 42,838	4,613 55,350 52	4,923 59,071 206	5,415 64,974 527	5,764 69,172 1,180	5,663 67,956 2,002	5,576 86,907 2,315	4,958 59,497 1,694	4,355 52,262 2,033	3,754 45,042 2,448	3,316 39,791 2,001	3,003 36,036 1,364	2,562 30,744 854	1,424 17,090 717
Period 7/1/12 to 6/30/13 Average monthly benefit Average final salary Number of retired members	3,880 46,557	5,217 62,607 50	5,070 60,835 187	5,597 67,165 522	5,949 71,384 1,291	5,922 71,061 2,167	5,798 69,575 2,074	5,120 61,443 1,750	4,547 54,564 1,908	3,868 46,410 2,361	3,393 40,720 2,085	3,136 37,635 1,369	2,677 32,129 763	1,554 18,647 720
Period 7/1/13 to 6/30/14 Average monthly benefit Average final salary Number of retired members	4,339 52,071	5,345 64,141 28	5,390 64,676 153	5,891 70,690 506	6,164 73,963 1,092	6,247 74,966 1,955	5,985 71,820 2,366	5,389 64,663 1,633	4,707 56,485 1,861	4,047 48,563 2,361	3,477 41,721 2,161	2,504 30,051 1,302	2,848 34,179 828	1,665 19,983 661
Period 7/1/14 to 6/30/15 Average monthly benefit Average final salary Number of retired members	3,784 45,403	6,265 75,176 31	5,642 67,703 130	8,154 73,851 486	6,412 76,940 1,021	6,483 77,791 1,792	6,250 75,001 2,575	5,630 67,562 1,722	4,934 59,212 1,726	4,160 49,922 2,210	3,647 43,759 2,269	3,319 39,829 1,391	2,909 34,909 818	1,796 21,546 625
Period 7/1/15 to 6/30/16 Average monthly benefit Average final salary Number of retired members	3,697 44,368	6,148 73,776 21	6,172 74,066 136	6,280 75,361 448	6,525 78,296 943	6,707 80,481 1,689	6,446 77,355 2,733	5,919 71,026 1,816	5,120 61,435 1,705	4,306 51,672 2,069	3,764 45,170 2,286	3,386 40,633 1,483	3,022 36,269 821	1,958 23,493 601

Source: Office of the Actuary City of New York. Lag 2014 for determining Final Fiscal Year 2016 Employer Contributions

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## New York Fire Department Pension Funds

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

									7.0		
	2007	2008	2009	2010	2011	2012	2013	2014	2	2015	2016
Type of Benefit: Age and service benefits:											
Retirees	253,902	248,262	249,084	244,502	240,312	239,786	308,667	239,234	24	241,393	244,561
Survivors	4,926	4,666	10,212	10,040	2,990	5,847	5,776	5,592		5,652	5,384
Death in service benefits	20,727	21,174	51,974	54,069	55,488	57,614	59,888	61,951		63,918	66,417
Disability benefits: Retirees - duty	449,918	495,662	524,425	552,814	587,885	621,698	659,243	681,196	7	709,488	764,129
Retirees - nonduty Survivors	3,637	3,898	58,392	4,386	1,279	53,002	1,371	49,456		1,793	1,794
Total benefits	\$ 794,507	\$ 794,507 \$ 833,347	\$ 898,228	\$ 922,716	\$ 945,973	\$ 979,300	\$1,086,218	\$1,039,145	\$ 1,0	\$ 1,069,622 \$	1,127,223
Type of Refunds Death Other benefits	3,539	2,339	4,219	3,454	7,733	8,076	8,870	9,638		10,245	12,507
Total refunds	\$ 76,970	\$ 81,878	\$ 30,225	\$ 32,057	\$ 37,501	\$ 58,289	\$ 49,786	\$ 132,184	S	150,268 \$	231,208
Total Benefits and Refunds	\$ 871,477	\$ 915,225	\$ 928,453	\$ 954,773	\$ 983,474	\$ 1,037,589	\$1,136,004	\$1,171,329	\$ 1.2	\$ 1,219,890 \$	1,358,431

Source Fire Department New York.

k

SCHEDULE OF AVERAGE ANNUAL BENEFIT PAYMENT AMOUNTS

	Service K	Service Retirement Benefits	Accide	Accidental ( Duty) Disability Benefits	Ordinary (Non Duty) Disability Benefits	Von Duty) Senefits	Survivor	Survivor's Benefits
Fiscal Year	Numbers	Average Annual Allowance	Number	Average Annual Allowance	Number	Average Annual Allowance	Number	Average Annual Allowance
006 (Lag)	6,839	\$ 37,254	7,420	\$ 54,223	\$ 1,398.0	\$ 44,780	1,828	\$ 19,767
2007 (Lag)	909'9	38,435	7,816	57,564	1,339	45,853	1,718	17,208
008 (Lag)	6,353	39,078	8,149	60,825	1,284	46,484	1,618	20,942
2009 (Lag)	6,194	39,908	8,331	63,286	1,217	47,398	1,521	19,782
010 (Lag)	5,957	40,447	8,593	65,741	1,167	48,219	1,423	21,354
011	5,837	41,170	8,712	67,480	1,110	49,557	1,414	49,144
012	2,667	41,080	8,912	69,760	1,058	960'09	1,767	41,251
013	5,487	43,247	9,064	72,723	1,010	50,765	1,703	44,571
014	5,433	44,033	9,194	63,215	928	51,624	1,695	46,370
015	5,312	45,443	9,366	75,751	908	52,351	1,678	48,632
016	5 188	AA GEG	9 548	75 043	252	50 722	1 641	52 748

\* Includes World Trade Center Benefits

### **NEW YOK CITY FIRE PENSION FUNDS**

### Schedule of Changes in Net Position

	ge in sition	1,037,327	(385,336)	1,240,533)	861,972	1,516,904	169,009	1,012,381	1,636,951	221,244	59.443
	Change in Net Position	1,037	(386	(1,240	86.	1,516	169	1,01	1,636	22	25
	Total Change in Deductions Net Position	871,477	915,225	928,453	954,773	983,474	1,037,589	1,136,004	1,171,329	1,219,890	1.358.431
Deductions from Funds Net Position	Administrative City Supplement Expenses and Parity	20	38	61	36			21	98	80	72
ctions from Fu	Administrative Expenses	172	200	248	237	236	340	445	477	313	1.766
Deduc	Refunds	44	418	325	510	276	443	816	184	186	939
	Benefit Payments	870,841	914,569	927,819	953,990	982,962	1,036,806	1,134,722	1,170,582	1,219,311	1.355.654
	Total Additions	1,908,804	529,889	(312,080)	1,816,745	2,500,378	1,206,598	2,148,385	2,808,280	1,441,134	1.417.874
osition	Other	36,770	40,103	42,729	34,990	41,887	37,661	38,965	39,980	41,201	43.673
Additions to Funds Net Position	Employer Net Investment ontributions Income/(Loss)	1,117,227	(366,390)	(1,282,917)	818,201	1,472,892	93,548	1,042,431	1,689,485	302,567	203.104
Addition	Employer	683,193	780,202	843,751	874,331	890,706	976,895	962,173	969,956	988,784	1.054.478
8	Year Member Employer Net Investment Ended Contributions Contributions Income/(Loss)	71,614	75,974	84,357	89,223	94,893	98,494	104,816	108,859	108,582	116,619
	Year Ended C	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
						17	19				

# FIRE FIGHTER'S VARIABLE SUPPLEMENTS FUND

## Schedule of Changes in Net Position

		Additions	Additions to Funds Net Position	osition	Deducti	Deductions from Funds Net Position	s Net Position
Year Ended	Year Net Investment Ended Income/(Loss)	Other	Transfer Skim Earning	Total Additions	Benefit Payments	Total Deductions	Change in Net Position
2007	99,459	310	•	99,769	35,729	35,729	64,040
2008	(39,190)	844	*	(38,346)	59,691	59,691	(98,037)
2009	(94,098)	788	8	(93,310)	51,106	51,106	(144,416)
2010	65,678	26.	_	62,939	50,507	50,507	15,432
2011	100,709	313		101,022	47,793	47,793	53,229
2012	6,965		6	7,274	48,613	48,613	(41,339)
2013	46,267	147-127	0	46,557	48,539	48,539	(1,982)
2014	68,971	26	110,000	179,027	50,425	50,425	128,602
2015	18,661	22.	30,000	48,888	47,415	47,415	1,473
2016	4,325	344	4 18,739	23,408	46,002	46,002	(22,594)

# FIRE OFFICERS' VARIABLE SUPPLEMENTS FUND

## Schedule of Changes in Net Position

Year         Net Investment Income/(Loss)         Other Income/(Loss)         Transfer Income/(Loss)         Total Income/(Loss)         Additions Income Income/(Loss)         Total Income Income/(Loss)         Total Income Income/(Loss)         Change in Income Income/(Loss)         Total Income/(Loss)         Change in Income/(Loss)         Total Income/(Loss)         Change in Income/(Loss)         Total Income/(Loss)         Additions         Additi			Additions	Additions to Funds Net Position	sition	Deductions	Deductions from Funds Net Position	Position
58,107     162     58,269     15,350     15,350       (26,584)     411     (26,173)     27,970     27,970       (54,973)     367     (54,606)     22,525     22,525       35,286     132     35,418     22,897     22,897       58,800     180     58,980     21,014     21,014       4,723     193     4,916     21,986     21,986       34,492     190     34,682     22,834     22,834       51,265     180     10,000     61,445     21,742     21,742       12,056     193     10,000     22,249     21,970     21,970       758     279     18,134     19,171     21,567     21,567	Year Ended	Net Investment Income/(Loss)	Other	Transfer Skim Earning	Total Additions	Benefit Payments	Total Deductions	Change in Net Position
(26,584)     411     (26,173)     27,970     27,970       (54,973)     367     (54,606)     22,525     22,525       35,286     132     35,418     22,897     22,897       58,800     180     58,980     21,014     21,014       4,723     193     4,916     21,986     21,986       34,492     190     34,682     22,834     22,834       51,265     180     10,000     61,445     21,742     21,742       12,056     193     10,000     22,249     21,970     21,970       758     279     18,134     19,171     21,567     21,567	2007	58,107	162		58,269	15,350	15,350	42,919
(54,973)     367     (54,606)     22,525     22,525       35,286     132     35,418     22,897     22,897       58,800     180     58,980     21,014     21,014       4,723     193     4,916     21,986     21,986       34,492     190     34,682     22,834     22,834       51,265     180     10,000     61,445     21,742     21,742       12,056     193     10,000     22,249     21,970     21,970       758     279     18,134     19,171     21,567     21,567	2008	(26,584)	411		(26,173)	27,970	27,970	(54,143)
35,286     132     35,418     22,897     22,897       58,800     180     58,980     21,014     21,014       4,723     193     4,916     21,986     21,986       34,492     190     34,682     22,834     22,834       51,265     180     10,000     61,445     21,742     21,742       12,056     193     10,000     22,249     21,970     21,970       758     279     18,134     19,171     21,567     21,567	2009	(54,973)	367		(54,606)	22,525	22,525	(77,131)
58,800     180     58,980     21,014     21,014       4,723     193     4,916     21,986     21,986       34,492     190     34,682     22,834     22,834       51,265     180     10,000     61,445     21,742     21,742       12,056     193     10,000     22,249     21,970     21,970       758     279     18,134     19,171     21,567     21,567	2010	35,286	132		35,418	22,897	22,897	
4,723     193     4,916     21,986     21,986       34,492     190     34,682     22,834     22,834       51,265     180     10,000     61,445     21,742     21,742       12,056     193     10,000     22,249     21,970     21,970       758     279     18,134     19,171     21,567     21,567	2011	58,800	180		58,980	21,014	21,014	
34,492     190     34,682     22,834     22,834       51,265     180     10,000     61,445     21,742     21,742       12,056     193     10,000     22,249     21,970     21,970       758     279     18,134     19,171     21,567     21,567	2012	4,723	193		4,916	21,986	21,986	(17,070)
51,265     180     10,000     61,445     21,742     21,742       12,056     193     10,000     22,249     21,970     21,970       758     279     18,134     19,171     21,567     21,567	2013	34,492	190		34,682	22,834	22,834	11,848
12,056 193 10,000 22,249 21,970 21,970 758 279 18,134 19,171 21,567 21,567	2014	51,265	180	10,000	61,445	21,742	21,742	39,703
758 279 18,134 19,171 21,567 21,567	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)

### SCHEDULE OF REVENUES BY SOURCE

(in thousands)

% of Annual Covered Payroll	N/A	N/A	N/A	N/A	MIA	V 1	NA	NA	N/A	N/A	MA	
Total	1,908,804	529,889	(312,080)	1.816.745	0 500 000	2,000,570	1,206,598	2,148,385	2,808,280	1.441.134	4 447 074	4/0,/14,1
Appreciation (Depreciation) In fair value of investments	946.293	(564.831)	(1.457,773)	666 775	27,000	1,304,444	(98,920)	819,122	1.455,082	3.386	00000	(28,872)
Interest and Dividends	185.836	210 151	187 040	476,045	100,011	192,667	220,373	255,805	277.940	361 802	100,100	302,881
Other Income/(Loss)	21 868	28 303	20,233	20,040	10,319	17,668	9,756	6.469	(3 557) *	(24 420)	(074,17)	3,768
Employer Contributions	682 403	100,000	700,202	843,751	874,331	890,706	976,895	962 173	060 056	909,900	966,764	1,054,478
Member	74.044	410,17	478,67	84,357	89,223	94,893	98,494	104 846	400,000	600,001	108,582	116,619
Fiscal Year Ended June 30		7007	2008	2009	2010	2011	2012	1000	2013	2014	2015	2016

<sup>\*</sup> Other Income/(loss) Included.

Source: Combined Statement of Changes in Fiduciary Net Position

## SCHEDULE OF EXPENSES BY TYPE

Ended	Benefit		Administrative	Other	
June 30	Payments	Refunds	Expenses	Payments	Total
2007	870,841	444	172	20	871,477
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	98	1,171,329
2015	1,219,311	186	313	80	1,219,890
2016	1,355,654	939	1,766	72	1,358,431

Exhibit 7

# TOTAL INVESTMENTS FISCAL YEAR 2016 Fire Funds Combined



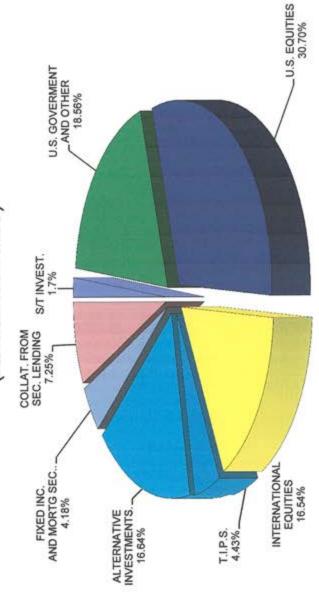
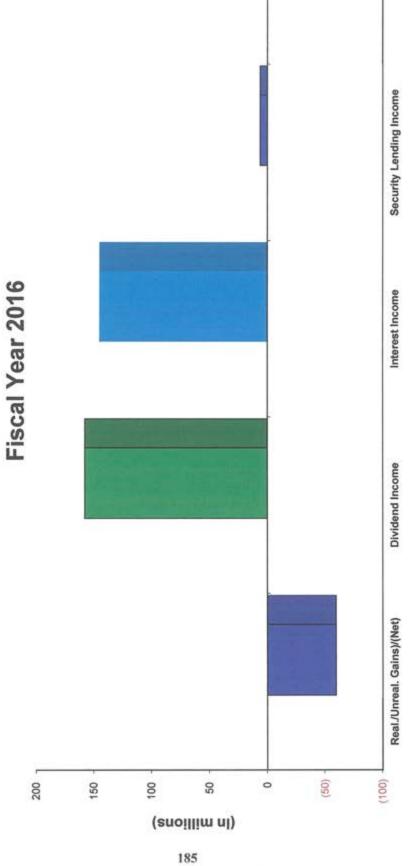


Exhibit 8

## INVESTMENT INCOME Fire Funds Combined



### Table of Compensation to Administrative Officials & Commissions & Payments To Brokers and Consultants Fiscal Year ended June 30, 2016

Official Plan Position	Salary	or Allowance Paid
Pension Fund Administrative Personnel	\$	1,890,529
Comptroller's Office Executive Management Costs		18,426
First Deputy Personal Service Costs		96,837
Financial Information Service Agency (FISA)		406,860
Office of Payroll Administration (OPA)		137,815
Deputy Comptroller Asset Management (Personal Service Costs)		366,968
Deputy Comptroller Asset Management (Outside Service Costs)		356,754
Administrative Support Cost		2,899
Office of management and Budget		66,695
Legal Advisors		95,607
Investment Advisors		46,320,499 *
Securities Lending Fees		446,067
Total	\$	50,205,956

<sup>\*</sup>Except for Investment advisor and Securities Lending fees these expenses were charged to other City Agencies on behalf of the New York Fire Department Pension Funds