

# **New York City Fire Pension Funds**



## **Comprehensive Annual Financial Report**

**A Pension Trust Fund of The City of New York**

**For The Fiscal Years Ended**

**June 30, 2017 and June 30, 2016**

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# New York City Fire 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, 2017 and June 30, 2016

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# **New York City Fire Pension Funds**

## **Comprehensive Annual Financial Report**

### **A Pension Trust Fund of The City of New York**



## **Introductory Section**

### **Part I**

**Fiscal Year Ended June 30, 2017**

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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, 2016**

Executive Director/CEO

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# FDNY

[www.nyc.gov/fdny](http://www.nyc.gov/fdny)

December 12, 2017

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

I am pleased to present the Comprehensive Annual Financial Report (“CAFR”) of the New York City Fire Pension Funds, formerly known as the New York Fire Department Pension Funds (“Fire” or the “Funds”), for the Fiscal Year ended June 30, 2017. Our CAFR, referred to as the New York City Fire Pension Funds’ CAFR, reports combined financial statements and disclosures for the New York City Fire Pension Fund qualified pension plan (“QPP”) and two additional funds administered by Fire: the New York City Firefighters’ Variable Supplements Fund (“FFVSF”) and the New York City Fire Officers’ Variable Supplements Fund (“FOVSF”). Management is responsible for the preparation, accuracy and completeness of this presentation. We believe that the data in this report is a fair representation of the financial position and results of operations of the Funds, and to the best of our knowledge the information is accurate and includes all required disclosures. Our report is organized into 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 City Fire Pension Fund, formerly known as the New York Fire Department Subchapter Two Pension Fund (formerly Article 1-B), was established pursuant to Local Law No. 53, enacted July 14, 1941. On that date, all participants covered under Article 1-A and subsequent appointees to the Fire Department were granted the option of membership in either Article 1-A or Subchapter Two, in accordance with the legislation. At that time, all members of the Article 1-A Fund became participants in the Fund established under Subchapter Two and, with one exception, all new appointees elected membership in the Subchapter Two Pension Fund.

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



## **Introductory Section**

## **New York City Fire Pension Funds**

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 costs of operation each year.

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

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

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

### **New Member Applications**

During Fiscal Year 2017, the pension managers and key personnel of the Fund successfully completed the task of processing approximately 630 new membership applications. The Fund conducted a total of two classes for probationary firefighters hired by the Fire Department during that period. These firefighters have since become members of the Fund under the new Tier 3 modified (Tier 6) legislation.

**Retirement Counseling**

The Retirement Counseling Unit consulted with numerous prospective retirees and processed retirement applications for approximately 440 members during Fiscal Year 2017. These applicants are now receiving 90% of their expected retirement benefit, pending finalization of calculations.

**Finalizations**

During the fiscal period, our Calculations and Pension Payroll Units worked diligently to finalize approximately 1,100 retirees and beneficiaries who had been receiving 90% of their benefits. These retirees and beneficiaries now receive the full amount of their benefits.

**Financial Information****Economic Conditions in Fiscal Year 2017 and Outlook for Fiscal Year 2018**

Economic conditions at both the national and local levels significantly impact financial markets and investment revenues. Our pension fund relies on employer contributions, member contributions, and investment returns to meet current obligations and future commitments. Therefore, the state of the economy and financial markets have a major impact on the performance of the Fund. During the fiscal year, increased rates in U.S economic growth and global economic improvements resulted in solid investment returns, particularly in equity markets. The Bureau of Economic Analysis (“BEA”) reported that the U.S. economy, as measured by the change in real Gross Domestic Product (“GDP”), grew overall at the rate of 2.2% during Fiscal Year 2017. The labor market continued to improve, showing solid job growth and declining unemployment levels. The current Bureau of Labor Statistics report revealed that the unemployment rate had fallen from a high of 4.9% in July 2016 to 4.4% in June 2017. Federal Reserve Bank (“FRB”) press releases during September 2017 disclosed that the Open Market Committee (“OMC”) will continue gradual adjustments in the stance on monetary policy to allow expansion in economic activity at a moderate pace and enable labor market conditions to strengthen further. It is also anticipated that this policy will promote the Committee’s statutory mandate to foster maximum employment and price stability, while keeping inflation levels at or near the current objective of 2%. October, 2017 will mark the beginning of the announced OMC program to reduce federal bond holdings in a gradual and predictable manner. The OMC will, however, continue open market operations as needed to maintain the federal funds short-term interest rate at the current target range between 1.00% and 1.25%.

The City’s economy, as measured by change in Real Gross City product (GCP), grew by 2.1% during Fiscal Year 2017; this rate was lower than the 3.1% rate achieved in Fiscal Year 2016. As reported by the Comptroller’s Office, the City’s economy continued to strengthen in fiscal year 2017, and while the City’s overall job growth slowed, New York City’s private-sector created 69,600 new jobs during the period. The City’s unemployment rate also improved, falling from 5.3% in Fiscal Year 2016 to 4.8% in Fiscal Year 2017.

The Comptroller’s Office, after assessing the effects of current international conditions and domestic fiscal policies, concluded that both the U.S economy and the City’s economy will continue to grow at a moderate pace for Fiscal Year 2018. The Comptroller’s Office believes that economic factors which will likely support moderate growth are strong consumer demand and increases in both private sector and government expenditures. They also identify the major risks that could affect economic growth as the uncertainty associated with the timing of FRB contractionary monetary policy changes, political upheavals and geopolitical risks. Additionally, the final version of the federal budget is yet to be approved, so the impact on state and local economies is yet to be determined.

Overall, the Comptroller’s Office is hopeful that the national economy will continue to experience steady growth and provide a favorable environment for reasonable growth in the City’s economy.

**Investments**

The Comptroller of the City of New York is the designated custodian of the Funds' investment portfolio, subject to the direction, control and approval of the Boards of Trustees. The investment policy adopted by the Funds' Boards of Trustees is one that promotes growth of the Fund through investment returns. 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 2017, Fire's QPP investment portfolio of approximately \$12.3 billion under management posted gains of 12.8 %, while the corresponding Policy Index posted gains of 12.2%. The FFVSF's investment portfolio of approximately \$461.0 million gained 13.5 %, while the corresponding Policy Index gained 13.2%. The FOVSF's investment portfolio of approximately \$302.0 million gained 14.5%, while the corresponding Policy Index gained 13.2%. A detailed discussion of our investment policy, activities and results is presented in the Investment Section of our report.

**Funding**

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

Fire's Fiduciary Net Position as a Percentage of Total Pension Liability formerly 'funded ratio' is calculated in accordance with newly adopted Governmental Accounting Standards Board Statements Numbers 67 and 68. This ratio stands at 60.9% for Fiscal Year 2017, an increase from 56.9% in the previous period (Net Pension Liability - Note 6 of Notes to Financial Statements). Funding is further addressed in the actuarial section of our report.

**Accounting and Reporting**

This report was prepared to conform to principles of governmental accounting and reporting as promulgated by the Governmental Accounting Standards Board ("GASB"), and according to guidelines adopted and published by the Government Finance 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 is the custodian of the Plan's assets and provides investment services through independent advisors and consultants. These advisors and consultants are disclosed in the financial section of the CAFR in the schedule of Investment Expenses on page 91. We also include a listing of brokerage firms and the amounts paid to each firm in the Investment section of the CAFR in the schedule of Broker's Commissions and Fees on page.115. Additionally, the Chief Actuary of the City's pension systems provides actuarial services to the Funds, while the Corporation Counsel provides legal services to the Funds. The City of New York defrays the expenses associated with these services.

**Independent Audit**

The 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, 2017 and 2016 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 2017, 2016 and 2015. 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, 2016. 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 2017.

**Acknowledgements**

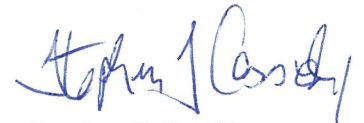
The compilation of this annual report reflects the combined efforts of the management and staff of the Pension Administration Unit, whom we thank for their hard work and dedication. Our report is intended to provide complete and reliable information to provide a basis for making management decisions,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

I wish to thank the Office of the Actuary and the Office of the Comptroller for their expertise and the wide range of valuable information they provide to our Funds. I am also very grateful to the Board of Trustees for the guidance and support they have provided during this period.

In closing, I wish additionally to thank the managers and staff of the Pension Administration Unit, whom have worked diligently to administer the Funds, to deliver member services, and to ensure our continued successful operation.

This is a very exciting time for the Fire Pension Fund as we embark on the new challenges and opportunities brought by corpus funding. I look forward to working with each of you as we move forward.

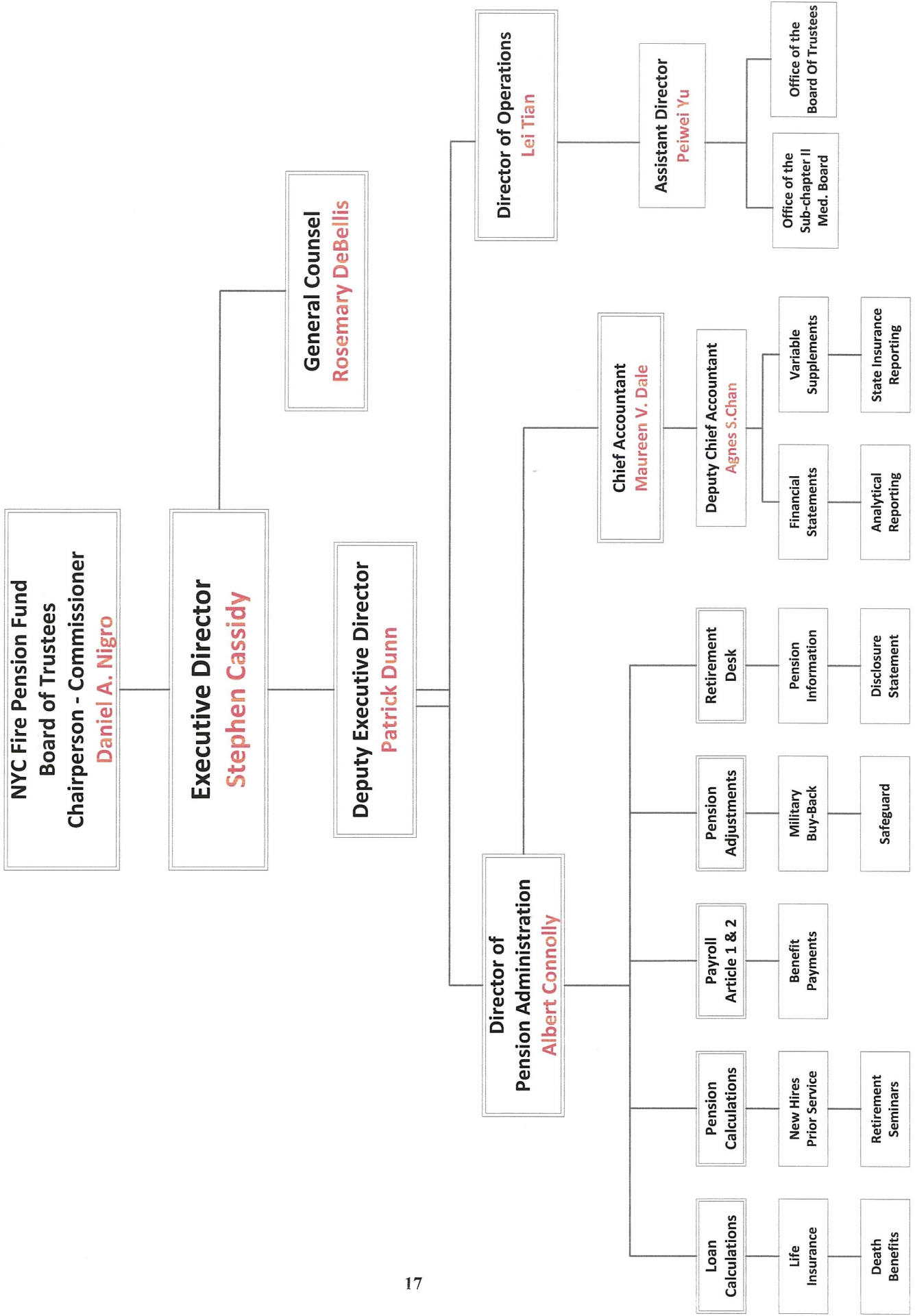
Respectfully submitted,



Stephen J. Cassidy

Executive Director





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**MEMBERS OF THE BOARD OF TRUSTEES**

*As of June 30, 2017*

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

**PENSION SYSTEM ADMINISTRATION AND REPORTING**

**Stephen J. Cassidy**  
Executive Director

**Patrick J. Dunn**  
Deputy Executive Director

**Albert Connolly**  
Director of Pension Administration

**Maureen V. Dale**  
Chief Accountant

**Agnes S. Chan**  
Deputy Chief Accountant

# **New York City Fire Pension Funds**

## **Summary of Funds Benefits**



### **Tier I - Tier II & Tier III**

**Fiscal Year Ended June 30, 2017**



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## Summary Funds and Options Benefits

### TIERS I & II

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

### MEMBERSHIP

#### **TIERS**

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

#### **ORIGINAL PLAN – PRE-JULY 1, 1981 MEMBERS**

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

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

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

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

### **SUMMARY**

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

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

### **KINGSTON LAW LIMITATIONS**

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

### **CONTRIBUTIONS**

#### **REQUIRED EMPLOYEE CONTRIBUTIONS**

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

Contributions and any interest earned are referred to as "accumulated deductions". The amount of accumulated deductions required to be in the member's account at any given time is referred to as the "minimum required contribution." The total minimum required contribution is determined on the member's 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) or Fire Alarm Dispatcher.

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

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

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

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

#### **BUYBACK CREDIT**

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

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

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

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

### **OTHER CREDITED SERVICE**

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

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

### **RETIREMENT PROCESS**

#### **SERVICE RETIREMENT**

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



**WITHDRAWAL OF SERVICE RETIREMENT APPLICATION**

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

**DISABILITY RETIREMENT**

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

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

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

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

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

***Fire Commissioner's Application for Disability Retirement:***

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

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

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

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

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

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

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

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

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

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



**STEP III: REVIEW BY THE BOARD OF TRUSTEES**

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

**WITHDRAWAL OF DISABILITY RETIREMENT APPLICATION**

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

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

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

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

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

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

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

**RETIREMENT PROCEDURES FOR ALL RETIREES**

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

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

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

**TIERS I and II: SERVICE RETIREMENT ALLOWANCE**

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

The Service retirement allowance is calculated as follows:

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

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

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

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

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

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

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

An Ordinary Disability retirement allowance is calculated as follows:

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

**ACCIDENTAL DISABILITY RETIREMENT**

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

An Accidental Disability retirement allowance is calculated as follows:

a pension equal to 75% of final salary  
plus  
 $1/60^{\text{th}}$  x total earnings after the member's 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 pension reserve. If the retiree dies before receiving payments equal to this total pension reserve (the reserve set aside to pay benefits over a retiree's lifetime), the difference between the total pension reserve and all payments received will be awarded to the beneficiary. This option may be selected for the annuity reserve, the pension reserve, or both. More than one beneficiary may be named, and the beneficiary (ies) may be changed at any time.

**OPTION 2**

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

**OPTION 3**

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

**OPTION 4**

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

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

**“POP-UP” OPTION MODIFICATION**

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

**FIVE YEAR OR TEN-YEAR CERTAIN**

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

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



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

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

**Notes:**

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

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

**TIERS I and II: SURVIVOR BENEFITS**

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

There are two types of death benefits:

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

**DEATH GAMBLE BENEFIT**

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

**ACCIDENTAL (LINE –OF-DUTY) DEATH BENEFIT**

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

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

or

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

or

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

plus

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

plus

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

plus

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

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

### **BENEFICIARY DESIGNATION**

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

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## Summary Funds Benefits

### TIER III

This Summary Plan Description (SPD) summarizes the benefits provided by the New York City Fire Department Pension Fund, Subchapter II (the “Fire Pension Fund”), for Tier 3 members. Anyone who became a member of the Fire Pension Fund between July 1, 2009 and March 31, 2012 is a Tier 3 member. Those who become members of the Fire Pension Fund on or after April 1, 2012 are “modified Tier 3” members, also known as Tier 6. The primary difference is that “Modified Tier 3” members have a 5 year Final Average Salary (FAS) calculation upon retirement. Unless otherwise noted, the information presented in this SPD is applicable to both Tier 3 and Modified Tier 3 members, and will be collectively referred to as “Tier 3.” On September 8, 2016 Governor Andrew Cuomo signed into law Chapter 298 of the Laws of 2016, granting “Enhanced Plan” benefits to current Tier 3 members of the New York City Fire Department Pension Fund (FDNY Pension) who opt into the Enhanced Plan. All Tier 3 members with the exception of two joined the enhanced Benefit plan. All new employees appointed after 09/08/2016 will become enhanced benefit members. The new law grants these members of the Fire Pension Fund  $\frac{3}{4}$  Disability Benefits, and Presumptive Benefits for certain illnesses covered under the Heart, Lung, Cancer and Infectious Diseases Bills. Enhanced members who join will be required to pay an additional 2% contribution, which could eventually rise to a maximum of 3%, after a three year look-back period, based on actuarial assumptions made by the City of New York.

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

### MEMBERSHIP

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

### CONTRIBUTIONS

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



### **MINIMUM REQUIRED AND INTEREST**

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

### **DEFICITS**

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

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

### **REFUNDS**

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

### **WITHDRAWAL OF CONTRIBUTIONS**

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

### **LOANS**

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

### **CREDITED SERVICE**

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

### **ALLOWABLE UNIFORMED SERVICE**

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

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

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

Credit for any service rendered while a member of the New York State and Local Police and Fire Retirement System as a Police 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 April 1, 2012 and who wish to purchase credit for military service under RSSL 1000, pay an amount for such credit equal to the number of years of military credit being purchased multiplied by 3% of the compensation earned by the member during the 12 months of credited service immediately preceding the member's application to purchase such credit.

### **TRANSFER TO THE FIRE PENSION FUND**

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



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



**Financial Section**

**Part II**

**Fiscal Years Ended June 30, 2017 and June 30, 2016**

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## INDEPENDENT AUDITORS' REPORT

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

### **Report on the Combining Financial Statements**

We have audited the accompanying combining statements of fiduciary net position of the New York City Fire Pension Fund, New York City Firefighters' Variable Supplements Fund, and New York City Fire Officers' Variable Supplements Fund, which collectively comprise the New York City Fire Pension Funds (the "Funds"), a fiduciary component unit of the City of New York, as of June 30, 2017 and 2016, and the related combining statements of changes in fiduciary net position for the years then ended, and the related notes to the combining financial statements, which collectively comprise the Funds' basic combining financial statements as listed in the table of contents.

### ***Management's Responsibility for the Combining Financial Statements***

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

### ***Auditors' Responsibility***

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

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

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

### ***Opinions***

In our opinion, the combining financial statements referred to above present fairly, in all material respects, the combining fiduciary net position of the Funds as of June 30, 2017 and 2016, and the changes in combining fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## **Other Matters**

### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, Schedule 1, Schedule 2, and Schedule 3, as listed in the table of contents, be presented to supplement the basic combining financial statements. Such information, although not a part of the basic combining financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of the financial reporting for placing the basic combining financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic combining financial statements, and other knowledge we obtained during our audits of the basic combining financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

### *Other Supplementary Information*

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

The Additional Supplementary information (Schedule 4) is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic combining financial statements. Such information has been subjected to the auditing procedures, applied in the audit of the basic combining financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic combining financial statements or to the basic combining financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion the Additional Supplementary Information is fairly stated, in all material respects, in relation to the basic combining financial statements taken as a whole.

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

*Marks Paneth UP*

October 27, 2017  
(except for the Other Supplementary Information,  
as to which the date is December 21, 2017)

**NEW YORK CITY FIRE PENSION FUNDS  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
JUNE 30, 2017 AND 2016**

This narrative discussion and analysis of the New York City Fire Pension Funds' ("FIRE" or the "Funds") financial performance provides an overview of the Funds' combining financial activities for the Fiscal Years ended June 30, 2017 and 2016. It is meant to assist the reader in understanding the Funds' combining financial statements by providing an overall review of the combining financial activities during the years and the effects of significant changes, as well as a comparison with the prior years' activity and results. This discussion and analysis is intended to be read in conjunction with the Funds' combining financial statements.

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

**OVERVIEW OF BASIC COMBINING FINANCIAL STATEMENTS**

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

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



**NEW YORK CITY FIRE PENSION FUNDS  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
JUNE 30, 2017 AND 2016**

**FINANCIAL HIGHLIGHTS**

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

For Fiscal Year ended June 30, 2016, the Funds' net position restricted for benefits was \$11.7 billion. This amount reflects 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.

**Changes in Fiduciary Net Position  
Years Ended June 30, 2017, 2016 and 2015  
(In thousands)**

	<b>2017</b>	<b>2016</b>	<b>2015</b>
<b>Additions:</b>			
Member contributions	\$ 108,368	\$ 116,619	\$ 108,582
Employer contributions	1,061,170	1,054,478	988,784
Net investment income	1,371,721	203,104	302,567
Other	47,284	43,673	41,201
<b>Total</b>	<u><b>2,588,543</b></u>	<u><b>1,417,874</b></u>	<u><b>1,441,134</b></u>
<b>Deductions:</b>			
Benefit payments and withdrawals	<u>1,334,807</u>	<u>1,358,431</u>	<u>1,219,890</u>
Net increase in net position	1,253,736	59,443	221,244
Net position restricted for benefits			
Beginning of year	<u>11,707,622</u>	<u>11,648,179</u>	<u>11,426,935</u>
End of year	<u><b>\$12,961,358</b></u>	<u><b>\$11,707,622</b></u>	<u><b>\$11,648,179</b></u>

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

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.

**NEW YORK CITY FIRE PENSION FUNDS  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
JUNE 30, 2017 AND 2016**

Employer contributions are made on a statutory basis determined by the actuarial valuations performed as of June 30, 2015 and 2014 under One-Year Lag Methodology ("OYLM"). Employer contributions for Fiscal Year 2017 totaled approximately \$1,061.2 million, an increase of \$6.7 million (.6%) compared to employer contributions for Fiscal Year 2016. Employer contributions for Fiscal Year 2016 totaled approximately \$1,054.5 million, an increase of \$65.7 million (6.6%) 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.

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

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.

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

For Fiscal Year 2017 there were transfers due from Fire QPP of \$14.0 million to FFVSF and \$0.0 million to FOVSF, in accordance with regulations of ACNY, related to excess earnings on equity investments, limited to the unfunded Accumulated Benefit Obligation ("ABO") of the Fund. Additionally, during fiscal year 2017, the excess earnings estimate for fiscal year 2015 were finalized and revised upwards to \$39.9 million from \$30 million for FFVSF and \$31.8 million from \$10 million for FOVSF. The additional amounts totaling \$31.7 million were recognized by Fire QPP and the VSF's, during the period.

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 of the Fund.

#### FIDUCIARY NET POSITION

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



**NEW YORK CITY FIRE PENSION FUNDS  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
JUNE 30, 2017 AND 2016**

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.

Outstanding member loans for Fiscal Year 2017 totaled \$26.9 million; this amount is essentially unchanged from member loans reported in Fiscal Year 2016. Outstanding member loans for Fiscal Year 2016 totaled \$26.9 million; this amount was a decrease from member loans reported in Fiscal Year 2015. 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, 2017, 2016 and 2015  
(In thousands)**

	<b>2017</b>	<b>2016</b>	<b>2015</b>
Cash	\$ 39,332	\$ 48,755	\$ 20,768
Receivables	247,937	226,755	237,528
Investments — at fair value	13,070,975	11,802,778	12,101,222
Collateral from securities lending	1,110,853	922,481	836,325
Other assets	2,508	6,176	5,596
Total assets	<u>14,471,605</u>	<u>13,006,945</u>	<u>13,201,439</u>
Accounts payable	148,167	92,147	74,829
Payables for investments purchased	205,595	235,314	592,027
Accrued benefits payable	45,632	49,381	50,079
Payables for securities lending transactions	<u>1,110,853</u>	<u>922,481</u>	<u>836,325</u>
Total liabilities	<u>1,510,247</u>	<u>1,299,323</u>	<u>1,553,260</u>
Net position restricted for benefits	<u>\$ 12,961,358</u>	<u>\$ 11,707,622</u>	<u>\$ 11,648,179</u>

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

**NEW YORK CITY FIRE PENSION FUNDS  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
JUNE 30, 2017 AND 2016**

**Investment Summary**

**June 30, 2017**

**(In thousands)**

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

**NEW YORK CITY FIRE PENSION FUNDS  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
JUNE 30, 2017 AND 2016**

**Investment Summary**

**June 30, 2016**

**(In thousands)**

<b>Investments - At fair value:</b>	<b>QPP</b>	<b>FFVSF</b>	<b>FOVSF</b>	<b>Combined</b>
Short term investments:				
U.S. treasury bills and agency	\$ 25,998	\$ -	\$ -	\$ 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	-	-	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
	<u>\$ 11,922,304</u>	<u>\$ 488,411</u>	<u>\$ 314,544</u>	<u>\$ 12,725,259</u>

**NEW YORK CITY FIRE PENSION FUNDS  
MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)  
JUNE 30, 2017 AND 2016**

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 18.5% in Fiscal Year 2017, compared to gains posted of 2.1% in Fiscal Year 2016. Investment results for Fiscal Year 2017 were generally consistent with related benchmarks, within asset classes. FIRE QPP's investment portfolio posted gains of 12.8% for Fiscal Year 2017 compared to the gain of 1.4% for Fiscal Year 2016. For the three-year period ended June 30, 2017, the overall rate of return on the QPP's investment portfolio was 5.7%.

The FFVSF's investment portfolio posted gains of 13.5% for Fiscal Year 2017 compared to the gain of 1.0% for Fiscal Year 2016. For the three-year period ended June 30, 2017, the overall rate of return on the Plan's investment portfolio was 6.0%.

Similarly, the FOVSF's investment portfolio posted gains of 14.5% for Fiscal Year 2017 compared to the gain of .7% for Fiscal Year 2016. For the three-year period ended June 30, 2017, the overall rate of return on the Plan's investment portfolio was 6.2%.

**OTHER MATTERS**

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

**CONTACT INFORMATION**

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

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

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

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



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

	QPP	FFVSF	FOVSF	Eliminations	Combined Funds
<b>Assets:</b>					
Cash	\$ 37,457	\$ 10,740	\$ 558	\$ -	\$ 48,755
<b>Receivables:</b>					
Investment securities sold	153,595	12,433	11,636	-	177,664
Member loans (Note 6)	26,917	-	-	-	26,917
Accrued interest and dividends	20,518	985	671	-	22,174
Transferrable earnings due from QPP to Variable Supplements Funds	-	59,739	29,134	(88,873)	-
<b>Total receivables</b>	<b>201,030</b>	<b>73,157</b>	<b>41,441</b>	<b>(88,873)</b>	<b>226,755</b>
<b>INVESTMENTS — At fair value (Notes 2 and 3):</b>					
<b>Short-term investments:</b>					
Commercial paper	52,525	6,953	3,603	-	63,081
Short-term investment fund	118,935	4,397	1,726	-	125,058
U.S. treasury bills and agencies	25,998	-	-	-	25,998
Discount notes	-	1,369	585	-	1,954
<b>Debt securities:</b>					
U.S. government and agencies	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	-	-	-	2,117,856
<b>Collective trust funds:</b>					
International equity	1,966,228	85,780	52,725	-	2,104,733
Fixed income	401,512	26,885	17,541	-	445,938
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
Collateral from securities lending (Note 2)	854,211	37,719	30,551	-	922,481
<b>Total investments</b>	<b>11,922,304</b>	<b>488,411</b>	<b>314,544</b>	<b>-</b>	<b>12,725,259</b>
<b>OTHER ASSETS</b>	<b>6,176</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6,176</b>
<b>Total assets</b>	<b>12,166,967</b>	<b>572,308</b>	<b>356,543</b>	<b>(88,873)</b>	<b>13,006,945</b>
<b>LIABILITIES:</b>					
Accounts payable	89,435	-	2,712	-	92,147
Payable for investment securities purchased	215,792	10,514	9,008	-	235,314
Accrued benefits payable (Note 1)	18,893	21,225	9,263	-	49,381
Transferrable earnings due from QPP to Variable Supplements Funds	88,873	-	-	(88,873)	-
Securities lending (Note 2)	854,211	37,719	30,551	-	922,481
<b>Total liabilities</b>	<b>1,267,204</b>	<b>69,458</b>	<b>51,534</b>	<b>(88,873)</b>	<b>1,299,323</b>
<b>NET POSITION RESTRICTED FOR BENEFITS:</b>					
Benefits to be provided by QPP	10,899,763	-	-	-	10,899,763
Benefits to be provided by VSF	-	502,850	305,009	-	807,859
<b>Total net position restricted for benefits</b>	<b>\$ 10,899,763</b>	<b>\$ 502,850</b>	<b>\$ 305,009</b>	<b>\$ -</b>	<b>\$ 11,707,622</b>

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

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

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

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

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

	QPP	FFVSF	FOVSF	Eliminations	Combined Funds
<b>ADDITIONS:</b>					
<b>Contributions:</b>					
Member contributions	\$ 116,619	\$ -	\$ -	\$ -	\$ 116,619
Employer contributions	1,054,478	-	-	-	1,054,478
Total contributions	<u>1,171,097</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1,171,097</u>
<b>Investment income (Note 3):</b>					
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	<u>237,926</u>	<u>4,325</u>	<u>758</u>	<u>-</u>	<u>243,009</u>
Less investment expenses	<u>46,321</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>46,321</u>
Net income	<u>191,605</u>	<u>4,325</u>	<u>758</u>	<u>-</u>	<u>196,688</u>
<b>Securities lending transactions:</b>					
Securities lending income	6,196	368	298	-	6,862
Securities lending fees	(403)	(24)	(19)	-	(446)
Net securities lending income	<u>5,793</u>	<u>344</u>	<u>279</u>	<u>-</u>	<u>6,416</u>
Net investment income	197,398	4,669	1,037	-	203,104
Net receipts from other retirement systems	42,786	-	-	-	42,786
Transferrable earnings from QPP to Variable Supplemental Funds	-	18,739	18,134	(36,873)	-
Litigation income	887	-	-	-	887
Total additions	<u>1,412,168</u>	<u>23,408</u>	<u>19,171</u>	<u>(36,873)</u>	<u>1,417,874</u>
<b>DEDUCTIONS:</b>					
Benefit payments and withdrawals (Note 1)	1,290,862	46,002	21,567	-	1,358,431
Transferrable earnings from QPP to Variable Supplemental Funds	36,873	-	-	(36,873)	-
Total deductions	<u>1,327,735</u>	<u>46,002</u>	<u>21,567</u>	<u>(36,873)</u>	<u>1,358,431</u>
NET INCREASE (DECREASE) IN NET POSITION	84,433	(22,594)	(2,396)	-	59,443
<b>NET POSITION RESTRICTED FOR BENEFITS</b>					
Beginning of year	<u>10,815,330</u>	<u>525,444</u>	<u>307,405</u>	<u>-</u>	<u>11,648,179</u>
End of year	<u>\$ 10,899,763</u>	<u>\$ 502,850</u>	<u>\$ 305,009</u>	<u>\$ -</u>	<u>\$ 11,707,622</u>

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

**NEW YORK CITY FIRE PENSION FUNDS  
NOTES TO THE COMBINING FINANCIAL STATEMENTS  
JUNE 30, 2017 AND 2016**

**1. PLAN DESCRIPTION**

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

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

The QPP is a single-employer pension plan. The QPP provides pension benefits for full-time uniformed employees of the New York City Fire Pension Fund (the "Employer"). All full-time uniformed employees of the New York City Fire Department become members of the QPP upon appointment. The QPP functions in accordance with existing State statutes and City laws, which are the basis by which benefit terms and Employer and member contribution requirements are established and amended. The QPP combines features of a defined benefit pension plan with those of a defined contribution pension plan, but is considered a defined benefit pension plan for financial reporting purposes.

The FFVSF and the FOVSF (collectively, the "VSFs") operate pursuant to the provisions of Title 13, Chapter 3 of the ACNY and provide supplemental benefits to retired Firefighters and Wipers, and Fire Officers, respectively. To be eligible to receive benefits from the VSFs, Firefighters and Wipers, and Fire Officers must retire, on or after October 1, 1968, with 20 or more years of uniformed services and be receiving a service retirement benefit from the QPP. Under current law, the VSFs are not to be construed as constituting a pension or retirement system. Instead, they provide defined supplemental payments, other than pension or retirement system allowances, in accordance with applicable statutory provisions. While The City guarantees these payments, the New York State Legislature has reserved to itself and the State the right and power to amend, modify, or repeal the VSFs and the payments they provide. For financial reporting purposes, however, the VSFs are considered single-employer defined benefit pension plans.

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

***Boards of Trustees***

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

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

**NEW YORK CITY FIRE PENSION FUNDS  
NOTES TO THE COMBINING FINANCIAL STATEMENTS  
JUNE 30, 2017 AND 2016**

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, 2015 and June 30, 2014, the dates of the QPP's most recent completed actuarial valuations, the QPP's membership consisted of:

	<u>2015</u>	<u>2014</u>
Retirees and beneficiaries receiving benefits	16,710	16,763
Terminated vested members not yet receiving benefits	32	40
Other inactives *	18	16
Active members receiving salary	<u>10,780</u>	<u>10,319</u>
Total	<u>27,540</u>	<u>27,138</u>

\* Represents members who are no longer on payroll but otherwise classified.

At June 30, 2016 and 2015, the dates of the VSF's most recent actuarial valuations, the FFVSF and FOVSF membership consist of:

	<u>FFVSF</u>		<u>FOVSF</u>	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Retirees currently receiving payments	3,535	3,621	1,553	1,593
Active members**	<u>8,399</u>	<u>8,081</u>	<u>2,552</u>	<u>2,699</u>
Total	<u>11,934</u>	<u>11,702</u>	<u>4,105</u>	<u>4,292</u>

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



**NEW YORK CITY FIRE PENSION FUNDS  
NOTES TO THE COMBINING FINANCIAL STATEMENTS  
JUNE 30, 2017 AND 2016**

***Summary of Benefits***

QPP

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

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

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

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

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

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

**NEW YORK CITY FIRE PENSION FUNDS  
NOTES TO THE COMBINING FINANCIAL STATEMENTS  
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- An Ordinary Disability Retirement (“ODR”) benefit generally provides a pension equal to 1/40 of “final salary” times the number of years of service but not less than one-half of “final salary” if 10 or more years of service were completed, or one-third of “final salary” if less than 10 years of service were completed. Members of the Improved Benefits Plan with years of service in excess of 20 years receive the actuarial equivalent of their Annuity Savings Fund balance.
- An Accident Disability Retirement (“ADR”) benefit provides a pension of three-fourths of “final salary” plus an increment, as described above based on years of credited service in excess of the 20- years or 25-years minimum plus: (i) under the Original Plan, accumulated employee contributions without interest as a lump sum or an actuarially equivalent annuity, (ii) under the Improved Benefits Plan, an annuity based on the member’s contributions and ITHP contributions both of which are accumulated with interest.
- Tier 1 and Tier 2 members have the right to make voluntary member contributions (“Voluntary Contributions”) in excess of their required member contributions (“Required Contributions”). Both the Voluntary Contributions and the Required Contributions are credited with interest at a statutory rate (currently 8.25% APR). At the time of retirement or refund of contributions, a member’s aggregate balance of actual Required Contributions and Voluntary Contributions, including statutory interest (“Actual Balance”), less the outstanding balance of any member loans (“Net Actual Contributions”), may exceed (“Excess of Contributions”) or fall short of (“Deficiency of Contributions”) the member’s Required Amount. The Required Amount is the sum of the Required Contributions which a member should have made during his or her first 20 years of credited service, plus statutory interest earnings thereon. The amount of the member’s retirement annuity or the refund of contributions that he or she is entitled to is increased by the actuarial value of any Excess of Contributions or reduced by any Deficiency of Contributions. The collective value of Required Amount, Actual Balance, and outstanding member loans, as of June 30, 2017, is as follows:

	Tier 1	Tier 2	Total
Required amount	\$ 95,139	\$ 480,828,529	\$ 480,923,668
Actual balance	457,208	1,690,478,451	1,690,935,659
Outstanding loans	-	26,950,723	26,950,723

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

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

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

**NEW YORK CITY FIRE PENSION FUNDS  
NOTES TO THE COMBINING FINANCIAL STATEMENTS  
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For Tier 3/Tier 3 Modified members, the QPP generally provides the following:

- A Normal Service Retirement benefit is payable after completion of 22 years of uniformed service.
- An Early Service Retirement is payable upon completion of 20 years or age 62 for Tier 3 or upon completion of 20 years for Tier 3 Modified and is payable as a pension equal to 2.1% of Final Average Salary plus 1/3% of Final Average Salary for each month in excess of 20 years of uniformed service, such benefit not to exceed 50% of Final Average Salary.
- A Vested benefit is payable to members with at least five years of uniformed service. The benefit is equal to 2.1% of final average salary for every year of uniformed service payable upon attainment of eligibility for early age, or 55.
- An ODR retirement allowance is payable to a Non-Enhanced Member who has at least 5 years of service and is in receipt of Social Security Disability Benefits. An ODR benefit is 1/3 of Final Average Salary or 2% of Final Average Salary for each year of credited service, whichever is greater and does not exceed 50% of Final Average Salary. The ODR retirement allowance for Enhanced Members is described on page 41.
- An ADR retirement allowance is payable to a Non-Enhanced Member who was disabled as the result of a line-of-duty accident not attributable to his own willful negligence. An ADR pension is 50% of a member's Final Average Salary. The ADR retirement allowance for Enhanced Members is described on page 41.

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

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

#### VSFs

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

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

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

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

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

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

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

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

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

Additionally, Chapter 216 of the Laws of 2002 ("Chapter 216/02") provides that participants of the VSFs who retire from the QPP on and after January 1, 2002 with more than 20 years of credited service are entitled to an additional one-time special lump sum payment, the Deferred Retirement Option Plan ("DROP"). The DROP also known as "Banked Variable" represents the amount the member would have received had he/she retired for Service upon reaching eligibility. The DROP payment is an eligible distribution that may be rolled over pursuant to IRS regulations. Members who retired for a disability or die in active service are not eligible for the VSF DROP. Accumulated VSF DROP balances for Fiscal Year 2017 were \$58.1 million for FFVSF and \$110.1 million for FOVSF. Similarly, for Fiscal Year 2016 the balances were \$58.3 million for FFVSF and \$103.4 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.

**NEW YORK CITY FIRE PENSION FUNDS**  
**NOTES TO THE COMBINING FINANCIAL STATEMENTS**  
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**2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Basis of Accounting** — The Funds use the accrual basis of accounting where the measurement focus is on the flow of economic resources. Revenues are recognized in the accounting period in which they are earned and expenses are recognized in the period incurred. Contributions from members are recognized by the QPP when the Employer makes payroll deductions from QPP members. Employer contributions are recognized when due and the Employer has a legal obligation to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the Funds.

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

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

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

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

**Income Taxes** — Income earned by the Funds is not subject to Federal income tax.

**Accounts Payable** — Accounts payable is principally comprised of amounts owed to the Funds’ banks for overdrawn bank balances. The Funds’ practice is to fully invest cash balances in most bank accounts 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.



**NEW YORK CITY FIRE PENSION FUNDS  
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In return, the Funds receive collateral in the form of cash, U.S. Treasury and U.S. Government agency securities at 100% to 105% of the principal plus accrued interest for reinvestment. At June 30, 2017 and 2016, 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 42.91 days. The securities lending program in which the Funds participate only allows pledging or selling securities in the case of borrower default.

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

Securities on loan are carried at fair value and the value as of June 30, 2017 and 2016 was \$1,056.9 million and \$831.9 million, respectively for the QPP, \$18.2 million and \$36.7 million, respectively for the FFVSF, and \$12.1 million and \$29.7 million, respectively for the FOVSF. Cash collateral received related to securities lending as of June 30, 2017 and 2016 was \$1,080.0 million and \$854.9 million, respectively for the QPP, \$18.5 million and \$37.7 million, respectively for the FFVSF, and \$12.3 million and \$30.5 million, respectively for the FOVSF. As of the date of the statements of fiduciary net position, the maturities of the investments made with cash collateral on average exceed the maturities of the securities loans by approximately 30 days.

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

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

The City Comptroller (the “Comptroller”) acts as an investment advisor to the Funds. In addition, the Funds employ an independent investment consultant as an investment advisor. The Funds utilize several investment managers to manage the long-term debt and equity portfolios. The managers are regularly reviewed, with regard to both their investment performance and their adherence to investment guidelines.

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

The Funds do not possess an investment risk policy statement nor does it actively manage assets to specific risk targets. Rather, investment risk management is an inherent function of our asset allocation process. Assets are diversified over a broad range of asset classes and encompass multiple investment strategies aimed at limiting concentration risk. The asset allocation targeted for the Funds in fiscal year 2017 and 2016. Includes securities in the following categories:

	<b>2017</b>	<b>2016</b>
U.S. Equity	31.0 %	29.9 %
Core U.S. Fixed	11.0	21.5
EAFE Markets	9.0	10.0
Private Equities	7.0	7.0
Emerging Markets	6.0	6.5
Enhanced Yield Bonds	7.0	3.4
Real Estate	8.0	0.0
Private Real Estate	2.0	4.5
Hedge Funds	6.0	3.3
REITS	0.0	2.8
TIPS	4.0	5.0
Opportunistic Fixed	5.0	2.7
Cash	0.0	0.0
Bank Loans	2.0	1.7
ETI	2.0	0.7
Convertible Bonds	0.0	1.0
	<hr/>	<hr/>
Total	<u>100.0 %</u>	<u>100.0 %</u>

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

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

**NEW YORK CITY FIRE PENSION FUNDS  
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**Credit Risk** — Portfolios other than U.S. Government and related portfolios have credit rating limitations. Investment Grade portfolios are limited to mostly ratings of BBB and above except that they are also permitted a 10% maximum exposure to BB & B rated securities. While non-investment grade managers are primarily invested in BB & B rated securities, they can also invest up to 7% of their portfolio in securities rated CCC. Non-rated securities are considered to be non-investment grade. The quality ratings of Funds' investments, by percentage of the rated portfolio, as described by nationally recognized statistical rating organizations, at June 30, 2017 and 2016 are as follows:

June 30, 2017 Investment Type (in percent)	<u>Moody's Quality Ratings</u>																	Below Caa &	Not Rated	Total
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1			
U.S. Government	37.54%	0.02%	0.02%	0.01%	0.00%	0.03%	0.11%	0.00%	0.15%	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	14.70%	52.71%
Corporate bonds	0.53%	0.33%	0.36%	0.58%	1.88%	1.17%	3.29%	5.19%	5.38%	5.91%	2.44%	1.12%	1.94%	1.28%	1.31%	1.80%	0.89%	4.03%	39.23%	
Commercial Paper	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.65%	5.65%
Pooled Fund	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.41%	2.41%
Discount Notes & T-Bills	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Percent of Rated Portfolio</b>	<b>38.07%</b>	<b>0.35%</b>	<b>0.38%</b>	<b>0.59%</b>	<b>1.88%</b>	<b>1.20%</b>	<b>3.40%</b>	<b>5.19%</b>	<b>5.53%</b>	<b>6.04%</b>	<b>2.44%</b>	<b>1.12%</b>	<b>1.94%</b>	<b>1.28%</b>	<b>1.31%</b>	<b>1.80%</b>	<b>0.89%</b>	<b>26.79%</b>	<b>100.00%</b>	

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

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June 30, 2016 Investment Type (in percent)	<u>Moody's Quality Ratings</u>											<u>Caa &amp; Below</u>		Not Rated	Total						
	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3			B1	B2	B3	Caa1		
U.S. Government	16.97%	0.02%	0.18%	0.01%	0.00%	0.02%	0.20%	0.00%	0.12%	0.16%	0.03%	0.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	25.19%	42.93%
Corporate bonds	1.35%	0.67%	0.74%	0.54%	2.70%	1.91%	4.38%	7.16%	8.00%	7.30%	1.73%	3.14%	1.97%	1.68%	0.80%	1.24%	1.49%	1.49%	1.49%	3.16%	49.96%
Commercial Paper	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.48%	2.48%
Pooled Fund	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.53%	3.53%
Discount Notes & T-Bills	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.10%	1.10%
<b>Percent of Rated Portfolio</b>	<b>18.32%</b>	<b>0.69%</b>	<b>0.92%</b>	<b>0.55%</b>	<b>2.70%</b>	<b>1.93%</b>	<b>4.56%</b>	<b>7.16%</b>	<b>8.12%</b>	<b>7.46%</b>	<b>3.17%</b>	<b>1.76%</b>	<b>1.97%</b>	<b>1.68%</b>	<b>0.80%</b>	<b>1.24%</b>	<b>1.49%</b>	<b>1.49%</b>	<b>1.49%</b>	<b>35.46%</b>	<b>100.00%</b>

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

**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, 2017 and 2016 are as follows:

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

<b>Investment Maturities</b>										
<b>Years to Maturity</b>	<b>Fair</b>	<b>Less Than</b>	<b>One to Five</b>	<b>Six to Ten</b>	<b>More Than</b>					
<b>June 30, 2016</b>	<b>Value</b>	<b>One Year</b>	<b>Years</b>	<b>Rated</b>	<b>Ten Years</b>					
U.S. Government	42.93 %	1.87 %	4.73 %	6.83 %	29.50 %					
Corporate bonds	49.96	1.44	16.67	16.53	15.32					
Yankee bonds	-	-	-	-	-					
Short-term:										
Commercial Paper	2.48	2.48	-	-	-					
Pooled fund	3.53	3.53	-	-	-					
U.S. Treasuries & Agencies	-	-	-	-	-					
Discount Notes	1.10	1.10	-	-	-					
Percent of rated portfolio	<u>100 %</u>	<u>10.42 %</u>	<u>21.4 %</u>	<u>23.36 %</u>	<u>44.82 %</u>					

**Foreign Currency Risk** — Foreign currency risk is the risk that changes in the exchange rates will adversely impact the fair value of an investment. Currency risk is present in underlying portfolios that invest in foreign



stocks and/or bonds. The currency markets have proven to be good diversifiers in a total portfolio context; therefore, 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, 2017 and 2016 are as follows:

**NEW YORK CITY FIRE PENSION FUNDS**  
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Trade Currency (In Thousands)	June 30, 2017 Fair Value	June 30, 2016 Fair Value
Australian Dollar	\$ 47,333	\$ 40,508
Botswana Pula	413	438
Brazilian Real	48,858	43,458
British Pound Sterling	-	214,870
Canadian Dollar	47,315	20,062
Chilean Peso	8,609	6,961
Colombian Peso	4,412	3,305
Croatian Kuna	900	881
Czech Koruna	2,178	1,755
Danish Krone	33,476	22,694
Egyptian Pound	1,840	2,234
Euro Currency	475,686	373,164
Ghana Cedi	236	190
Hong Kong Dollar	267,670	223,574
Hungarian Forint	3,037	2,185
Indian Rupee	98,060	81,819
Indonesian Rupiah	23,726	18,093
Israeli Shekel	-	1,783
Japanese Yen	282,136	239,710
Jordanian Dinar	934	718
Kenyan Shilling	1,152	722
Kuwait Dinar	2,618	1,812
Malaysian Ringgit	21,018	21,161
Mauritius Rupee	960	761
Mexican Peso(new)	28,661	24,118
Moroccan Dirham	913	881
New Israel Sheqel	4,736	-
New Taiwan Dollar	111,919	-
New Zealand Dollar	2,553	1,965
Nigerian Naira	506	494
Norwegian Krone	13,032	9,272
Omani Rial	857	803
Pakistan Rupee	2,342	1,590
Peruvian Nuevo Sol	674	544
Philippines Peso	12,042	11,148
Polish Zloty	14,505	11,344
Pound Sterling	241,249	-
Qatar Riyal	5,146	4,928
Renminbi Yuan	-	247
Romanian Leu	1,113	866
Russian Ruble	568	567
Singapore Dollar	19,853	15,400
South African Rand	55,111	48,671
South Korean Won	146,243	127,187
Swedish Krona	42,888	29,978
Swiss Franc	122,963	111,388
Taiwan New Dollar	-	88,869
Thailand Baht	26,938	20,145
Tunisian Dinar	383	307
Turkish Lira	19,131	12,812
UAE Dirham	4,864	4,268
Yuan Renminbi	36	-
<b>Tótal</b>	<b>\$ 2,251,793</b>	<b>\$ 1,850,650</b>

NEW YORK CITY FIRE PENSION FUNDS  
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**Securities Lending Transactions**

*Credit Risk* — The quality ratings of investments held as collateral for securities lending by the Funds' at June 30, 2017 and 2016 are as follows:

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

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

	S&P Quality Ratings											Total				
	AAA+ & Below	AA+ & AA	AA- AA-	A+ A+	A A	A- A-	BBB+ & Below	BB+ & Below	B+ & Below	CCC+ & Below	Not Rated					
U.S. Government	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Short Term:																
Repurchase Agreements	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Reverse Repurchase Agreements	.	.	67,799	93,640	357,512	.	80,682	.	.	.	.	.	.	157,465	757,198	
Money Market	69,861	.	.	.	.	.	.	.	.	.	.	.	.	.	69,861	
US Agency	.	.	.	.	.	.	.	.	.	.	.	.	.	2,841	2,841	
Cash or Cash Equivalent	.	.	.	.	91,248	.	.	.	.	.	.	.	.	.	91,248	
Payable/Receivable	.	.	.	.	.	.	.	.	.	.	.	.	.	705	705	
Uninvested	.	.	.	.	.	.	.	.	.	.	.	.	.	728	728	
Total	\$ 69,861	\$ -	\$ 67,799	\$ 93,640	\$ 448,760	\$ -	\$ 80,682	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 161,739	\$ 922,481		
Percent of securities lending portfolio	7.57%	0.00%	7.35%	10.15%	48.65%	0.00%	8.75%	0.00%	0.00%	0.00%	0.00%	0.00%	17.53%	100.00%		

**NEW YORK CITY FIRE PENSION FUNDS**  
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*Interest Rate Risk* — The lengths of investment maturities (in years) of the collateral for securities lending held by the Funds' are as follows:

**Years to Maturity**  
**Investment Type**  
**(In Thousands)**

	<b>Investment Maturities (in years)</b>				
	Fair Value	Less Than One Year	One To Five Years	Six to Ten Years	More Than Ten Years
<b>June 30, 2017</b>					
Government	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate	-	-	-	-	-
Yankee	-	-	-	-	-
Short Term					
Repurchase Agreements	-	-	-	-	-
Reverse Repurchase Agreements	999,279	999,279	-	-	-
Certificate of Deposits	-	-	-	-	-
Commercial Paper	-	-	-	-	-
Money Market	-	-	-	-	-
Bank Notes	-	-	-	-	-
US Treasury	-	-	-	-	-
US Agency	-	-	-	-	-
Time Deposit	-	-	-	-	-
Cash or Cash Equivalent	110,400	110,400	-	-	-
Uninvested	1,174	1,174	-	-	-
<b>Total</b>	<b>\$ 1,110,853</b>	<b>\$ 1,110,853</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Percent of Securities lending portfolio	100.00%	100%	0.00%	0.00%	0.00%

**Years to Maturity**  
**Investment Type**  
**(In Thousands)**

	<b>Investment Maturities (in years)</b>				
	Fair Value	Less Than One Year	One To Five Years	Six to Ten Years	More Than Ten Years
<b>June 30, 2016</b>					
Government	\$ -	\$ -	\$ -	\$ -	\$ -
Corporate	-	-	-	-	-
Yankee	-	-	-	-	-
Short Term					
Reverse Repurchase Agreements	757,098	757,098	-	-	-
Money Market	69,860	69,860	-	-	-
Bank Notes	2,841	2,841	-	-	-
Cash or Cash Equivalent	91,248	91,248	-	-	-
Uninvested	1,434	1,434	-	-	-
<b>Total</b>	<b>\$ 922,481</b>	<b>\$ 922,481</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Percent of Securities lending portfolio	100.00%	100%	0.00%	0.00%	0.00%



**NEW YORK CITY FIRE PENSION FUNDS  
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**Rate of return** — For the years ended June 30, 2017 and 2016, the annual money weighted rate of return on investments, net of investment expense, for the Funds was as follows:

	2017	2016
QPP	12.82%	1.37%
FFVSF	13.48%	0.88%
FOVSF	14.53%	0.24%

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 their fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs. The Funds have the following recurring fair value measurements as of June 30, 2017 and June 30, 2016:

	2017			Total
	Level One	Level Two	Level Three	
<b>GASB 72 Disclosure</b>				
<b>(in thousands)</b>				
<b>INVESTMENTS – At fair value</b>				
Short-term investments:				
Commercial paper	\$ -	\$ 136,416	\$ -	\$ 136,416
Short-term investment fund	-	101,101	-	101,101
U.S. treasury bills and agencies	-	-	-	-
Discount notes	-	-	-	-
Debt securities:				
U.S. government and agency	-	1,274,477	-	1,274,477
Corporate and other	-	941,855	4,569	946,424
Equity securities	1,878,265	347	29	1,878,641
Alternative investments	1,103	25,975	1,698,138	1,725,216
Collective trusts funds:				
International equity	2,405,030	39,804	421	2,445,255
Fixed income	2,067	663,571	187,850	853,488
Domestic equity	2,408,391	-	-	2,408,391
Mortgage debt security	-	17,393	71,836	89,229
Treasury inflation protected securities	-	544,633	1,544	546,177
Collateral from securities lending	-	1,110,853	-	1,110,853
Total investments	\$ 6,694,856	\$ 4,856,425	\$ 1,964,387	13,515,668
Alternative Investments valued at net asset value				666,160
Total				\$ 14,181,828

**NEW YORK CITY FIRE PENSION FUNDS  
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	2016			Total
	Level One	Level Two	Level Three	
<b>GASB 72 Disclosure</b>				
<b>(in thousands)</b>				
<b>INVESTMENTS – At fair value</b>				
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	-	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	-	922,481	-	922,481
Total investments	<u>\$ 5,957,236</u>	<u>\$ 4,404,019</u>	<u>\$ 1,896,502</u>	<u>12,257,757</u>
Alternative Investments valued at net asset value				<u>467,502</u>
Total				<u>\$ 12,725,259</u>

**NEW YORK CITY FIRE PENSION FUNDS  
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**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

**NEW YORK CITY FIRE PENSION FUNDS**  
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investment. Because of the subjective nature of estimated fair value of the private investments, such value may differ significantly from the values that would have been used had a ready market existed for these investments. These financial instruments have been classified as Level 3 in the fair value hierarchy.

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

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

**1. TRANSFER TO VARIABLE SUPPLEMENTS FUNDS**

The ACNY provides that the QPP transfer to the VSFs an amount equal to certain excess earnings on equity investments limited to the unfunded Accumulated Benefit Obligation ("ABO") of the VSF. Excess earnings are defined as the amount by which earnings on equity investments of the QPP exceed what the earnings would have been had such funds been invested at a yield comparable to that available from fixed-income securities ("Hypothetical Fixed Income Security Earnings"), less any cumulative deficiencies. The VSFs also receive credit for investment earnings on their respective assets.

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

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

For Fiscal Year 2016, the excess earnings of the QPP, inclusive of prior year's cumulative deficiencies, were estimated to be equal to \$0 and therefore, no transfer of assets was required from the QPP to the VSF's.

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.

**NEW YORK CITY FIRE PENSION FUNDS  
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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, 2016 and June 30, 2015, follows:

	<u>FFVSF</u>		<u>FOVSF</u>	
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
	(in millions)		(in millions)	
Accumulated benefit obligation <sup>1</sup>				
for:				
Retirees currently receiving benefits	\$ 348.9	\$ 361.5	\$ 148.9	\$ 153.6
Active employees	178.6	173.9	181.4	175.6
Total accumulated benefit obligation <sup>2,3</sup>	<u>527.5</u>	<u>535.4</u>	<u>330.3</u>	<u>329.2</u>
Plan net position held in trust for benefits <sup>4</sup>	502.9	525.4	305.0	307.4
Unfunded accumulated benefit obligation	<u>\$ 24.6</u>	<u>\$ 10.0</u>	<u>\$ 25.3</u>	<u>\$ 21.8</u>

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

<sup>2</sup> The June 30, 2016 and the June 30, 2015 ABOs for FFVSF decreased by approximately \$1.9 million and decreased by approximately \$2.1 million, respectively, and the June 30, 2016 and the June 30, 2015 ABOs for FOVSF decreased by approximately \$0.7 million and \$0.7 million, respectively, compared to those projected prior to the enactment of Chapters 119/95, 390/98 and 125/00.

<sup>3</sup> 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.

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

For purposes of the June 30, 2016 and the June 30, 2015 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.



**NEW YORK CITY FIRE PENSION FUNDS  
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The following actuarial assumptions represent the recommendations of the Actuary and were used in the actuarial calculations to determine the preceding ABOs as of June 30, 2016 and June 30, 2015, respectively:

	<u>June 30, 2016</u>	<u>June 30, 2015</u>
Investment rate of return	7.0% per annum. <sup>1,2</sup>	7.0% per annum. <sup>1,2</sup>
Post-retirement mortality	Tables adopted by the Board of Trustees during Fiscal Year 2016.	Tables adopted by the Board of Trustees during Fiscal Year 2016.
Active service: withdrawal, death, disability	Tables adopted by the Board of Trustees during Fiscal Year 2012.	Tables adopted by the Board of Trustees during Fiscal Year 2012.
Service retirement	Tables adopted by the Board of Trustees during Fiscal Year 2012.	Tables adopted by the Board of Trustees during Fiscal Year 2012.
Percentage of all active Fire members estimated to retire for service with 20 or more years of service as Firefighters	68%	68%
Percentage of all active Fire Officers estimated to retire for service with 20 or more years of service as Fire Officers	100%	100%
Cost-of-Living Adjustments <sup>1</sup>	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.

<sup>1</sup> Developed assuming a long-term Consumer Price Inflation assumption of 2.5% per year.

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

**NEW YORK CITY FIRE PENSION FUNDS  
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**2. 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, 2017, based on an actuarial valuation as of June 30, 2015 was \$1,061.2 million and 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. The Statutory Contributions for Fiscal Years 2017 and 2016 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.

**3. NET PENSION LIABILITY**

The components of net pension liability of the Employer at June 30, 2017 and 2016 for the Funds were as follows:

	(in thousands)			
	QPP	FFVSF	FOVSF	TOTAL
<b>June 30, 2017</b>				
Total Pension liability*	\$ 20,384,622	\$ 557,073	\$ 372,535	\$ 21,314,230
Fiduciary net position**	12,089,896	547,077	354,337	12,991,310
Employers' net pension liability	<u>\$ 8,294,726</u>	<u>\$ 9,996</u>	<u>\$ 18,198</u>	<u>\$ 8,322,920</u>
Fiduciary net position as a percentage of the total	<u>59.31%</u>	<u>98.21%</u>	<u>95.12%</u>	<u>60.95%</u>
	(in thousands)			
	QPP	FFVSF	FOVSF	TOTAL
<b>June 30, 2016</b>				
Total Pension liability*	\$ 19,711,495	\$ 568,213	\$ 364,099	\$ 20,643,807
Fiduciary net position**	10,899,763	524,075	314,272	11,738,110
Employers' net pension liability	<u>\$ 8,811,732</u>	<u>\$ 44,138</u>	<u>\$ 49,827</u>	<u>\$ 8,905,697</u>
Fiduciary net position as a percentage of the total	<u>55.30%</u>	<u>92.23%</u>	<u>86.31%</u>	<u>56.86%</u>

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

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

**NEW YORK CITY FIRE PENSION FUNDS  
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***Actuarial Methods and Assumptions***

The total pension liability as of June 30, 2017 and 2016 was determined by actuarial valuations as of June 30, 2015 and June 30, 2014 respectively, that were rolled forward to develop the total pension liability to the respective fiscal year end. The following actuarial assumptions were applied to all periods included in the measurement.

Projected Salary Increases	In general, merit and promotion increases plus assumed General Wage Increases of 3.0% per annum.
Investment Rate of Return	7.0% per annum, net of Investment Expenses. 1.5% per annum for Auto COLA, 2.5% per annum for escalation.

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

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

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

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

***Expected Rate of Return on Investments***

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

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<b>Asset Class</b>	<b>Target Asset Allocation</b>	<b>Long-Term Expected Real Rate of Return</b>
U.S Public Market Equities	31.00 %	5.70 %
International Public Market Equities	9.00	6.10
Emerging Public Market Equities	6.00	7.60
Private Market Equities	7.00	8.10
Fixed Income	31.00	3.00
Alternative Investments	<u>16.00</u>	4.70
Total	<u><u>100.00 %</u></u>	

***Discount Rate***

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

	<b>(in thousands)</b>		
	<b>1% Decrease (6.0%)</b>	<b>Discount Rate (7.0%)</b>	<b>1% Increase (8.0%)</b>
<b>QPP</b>	\$ 10,563,902	\$ 8,294,726	\$ 6,393,821
<b>FFVSF</b>	59,534	9,996	(32,982)
<b>FOVSF</b>	51,838	18,198	(10,195)
<b>Total</b>	<u><u>\$ 10,675,274</u></u>	<u><u>\$ 8,322,920</u></u>	<u><u>\$ 6,350,644</u></u>

**4. 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, 2017 and 2016 was \$26.9 million and \$26.9 million, respectively. Members repay their loans at the statutory rate of 4% per annum. Upon termination of employment before retirement, certain members are entitled to refunds of their own contributions including, for new program members, accumulated interest less any loans

**NEW YORK CITY FIRE PENSION FUNDS**  
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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.

**5. RELATED PARTIES**

The Comptroller of The City of New York has been appointed by law as custodian for Fixed Annuity Program assets with revocable discretionary authority. Securities are held by certain banks under custodial agreements with the Comptroller. The Comptroller also provides cash receipt and cash disbursement services to the Funds. Actuarial services are provided to the Funds by the Office of the Actuary employed by the Boards of Trustees of The City's main pension systems. The City's Corporation Counsel provides legal services to the Funds. Other administrative services are also provided by The City. The cost of providing such services amounted to \$2.1 million and \$1.5 million in Fiscal Years 2017 and 2016, respectively.

**6. 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 \$84.4 million and \$46.3 million in 2017 and 2016, respectively.

**7. 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.

**NEW YORK CITY FIRE PENSION FUNDS  
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**New York State Legislation** (only significant laws since Fiscal Year 2012 included)

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

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

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

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

Chapter 41 of the Laws of 2016 ("Chapter 427/14") removes the specified periods of time, medal requirements, and theaters of operation in which military service would had to have been rendered for a service purchase pursuant to New York State Retirement and Social Security Law ("RSSL") § 1000. Accordingly, for a member to be eligible to purchase service credit pursuant to RSSL § 1000 for pre-membership military service, the member need only have been honorably discharged from the military; all other requirements of RSSL § 1000 remain the same. This law is not retroactive and does not permit retired members to purchase service credit.

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

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

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

**1. Member Contributions**

- Tier 3 Enhanced Members contribute 3% of pensionable earnings plus an additional contribution rate to help fund the enhanced disability benefit. Currently, the additional contribution rate is 2% that can be raised to 3% based on a financial analysis by the Office of the Actuary every three years. At no time can the total contribution rate exceed 6%.
- Taxability
  - Base Member Contributions
    - Pre-tax



**NEW YORK CITY FIRE PENSION FUNDS  
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- Increased Member Contributions for Enhanced Disability Provisions
  - Pre-tax for members appointed June 15, 2016 and later (i.e., the date new members are mandated into the Plan).
  - Post-tax for those who were eligible to elect the Enhanced Disability Plan provisions and elected such provisions.

**2. Accidental Disability Retirement (ADR)**

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

**3. Ordinary Disability Retirement (ODR)**

- The ODR benefit for Tier3 Enhanced Members is the greater of:
  - 33 1/3% of FAS5 or
  - FAS5 multiplied by years of credited service (not greater than 22 years)

**4. Escalation**

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

**5. Social Security Offset**

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

**6. Final Average Salary**

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

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

**NEW YORK CITY FIRE PENSION FUNDS  
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Chapter 61 of the Laws of 2017 permits FIRE members subject to Retirement and Social Security Law (“RSSL”) Article 14 (“Eligible Members”), who would be ineligible for disability retirement benefits solely on account of being eligible for a normal service retirement benefit, to be eligible for disability benefits. It also relaxed the safeguards provisions regarding restrictions on post-retirement employment for Eligible Members who are awarded Accidental Disability Retirement (“ADR”) and modified the process for reducing or eliminating an ADR benefit based on post-retirement earnings.

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

**1. Eligibility for ADR**

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

**2. Safeguards**

- RSSL § 507(d) no longer applies to Tier 3 ADR retirees; the Tier 2 safeguard provisions contained in New York City Administrative Code § 13-254 apply. Therefore, **all** Tier 3 ADR retirees will be treated identically to Tier 2 ADR retirees for Safeguards purposes. This includes earnings limitations and re-employment.
- Safeguards remain unchanged for ODR retirees. Thus, they must continue to be in receipt of Social Security Disability benefits to maintain their receipt of pension benefits.

\* \* \* \* \*

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

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

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

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

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

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

June 30, 2016	QPP*	FFVSF	FOVSF	TOTAL
Total pension liability:				
Service cost	\$ 414,614	\$ 11,652	\$ 5,002	\$ 431,268
Interest	1,332,473	38,716	24,546	1,395,735
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	324,429	3,728	(4,548)	323,609
Changes of assumptions	386,534	12,419	6,545	405,498
Benefit payments and withdrawals	<u>(1,290,862)</u>	<u>(46,407)</u>	<u>(21,826)</u>	<u>(1,359,095)</u>
Net change in total pension liability	1,167,188	20,108	9,719	1,197,015
Total pension liability – beginning	<u>18,544,307</u>	<u>548,104</u>	<u>354,381</u>	<u>19,446,792</u>
Total pension liability – ending (a)	<u>19,711,495</u>	<u>568,212</u>	<u>364,100</u>	<u>20,643,807</u>
Plan fiduciary net position:				
Employer contributions	1,054,478	-	-	1,054,478
Member contributions	116,619	-	-	116,619
Net investment income	197,398	4,669	1,037	203,104
Benefit payments and withdrawals	<u>(1,290,862)</u>	<u>(46,407)</u>	<u>(21,826)</u>	<u>(1,359,095)</u>
Administrative expenses	-	-	-	-
Other changes	<u>43,673</u>	<u>-</u>	<u>-</u>	<u>43,673</u>
Net change in plan fiduciary net position	<u>121,306</u>	<u>(41,738)</u>	<u>(20,789)</u>	<u>58,779</u>
Accrued Transfers To/From VSF's	<u>(36,873)</u>	18,739	18,134	
Plan fiduciary net position – beginning	<u>10,815,330</u>	<u>547,074</u>	<u>316,927</u>	<u>11,679,331</u>
Plan fiduciary net position – ending (b) **	<u>10,899,763</u>	<u>524,075</u>	<u>314,272</u>	<u>11,738,110</u>
Employer's net pension liability – ending (a)-(b)	<u>\$ 8,811,732</u>	<u>\$ 44,137</u>	<u>\$ 49,828</u>	<u>\$ 8,905,697</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>55.30%</u>	<u>92.23%</u>	<u>86.31%</u>	<u>56.86%</u>
Covered-employee payroll	\$ 1,129,470	N/A	N/A	\$ 1,129,470
Employer's net pension liability as a percentage of covered-employee payroll	<u>780.2%</u>	<u>N/A</u>	<u>N/A</u>	<u>788.5%</u>

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

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

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

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

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

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

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

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

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

<b>June 30, 2014</b>	<b>QPP*</b>	<b>FFVSF</b>	<b>FOVSF</b>	<b>TOTAL</b>
Total pension liability:				
Service cost	\$ 397,037	\$ 11,403	\$ 4,471	\$ 412,911
Interest	1,153,702	37,757	23,818	1,215,277
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	-	-	-	-
Changes of assumptions	-	-	-	-
Benefit payments and withdrawals	<u>(1,099,162)</u>	<u>(50,822)</u>	<u>(22,014)</u>	<u>(1,171,998)</u>
Net change in total pension liability	451,577	(1,662)	6,275	456,190
Total pension liability – beginning	<u>16,624,736</u>	<u>552,962</u>	<u>346,604</u>	<u>17,524,302</u>
Total pension liability – ending (a)	<u>17,076,313</u>	<u>551,300</u>	<u>352,879</u>	<u>17,980,492</u>
Plan fiduciary net position:				
Employer contributions	969,946	-	-	969,946
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)	(22,014)	(1,171,988)
Administrative expenses	-	-	-	-
Other changes	39,980	-	-	39,980
Net change in plan fiduciary net position	<u>1,588,646</u>	<u>18,205</u>	<u>29,431</u>	<u>1,636,282</u>
Accrued Transfers To/From VSF's	(120,000)	110,000	10,000	-
Plan fiduciary net position – beginning	<u>9,127,192</u>	<u>417,800</u>	<u>277,364</u>	<u>9,822,356</u>
Plan fiduciary net position – ending (b) **	<u>10,595,838</u>	<u>546,005</u>	<u>316,795</u>	<u>11,458,638</u>
Employer's net pension liability – ending (a)-(b)	<u>\$ 6,480,475</u>	<u>\$ 5,295</u>	<u>\$ 36,084</u>	<u>\$ 6,521,854</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>62.05%</u>	<u>99.04%</u>	<u>89.77%</u>	<u>63.73%</u>
Covered-employee payroll	\$ 1,102,396	N/A	N/A	\$ 1,102,396
Employer's net pension liability as a percentage of covered-employee payroll	<u>587.85%</u>	<u>N/A</u>	<u>N/A</u>	<u>591.61%</u>

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

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

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



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

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially determined contribution	\$1,061,170	\$ 1,054,478	\$ 988,784	\$ 969,956	\$ 962,173	\$ 976,895	\$ 890,706	\$ 874,331	\$ 843,751	\$ 780,202
Contributions in relation to the actuarially determined contribution	1,061,170	1,054,478	988,784	969,956	962,173	976,895	890,706	874,331	843,751	780,202
Contribution deficiency (excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered-employee payroll	\$ 1,145,919	\$ 1,129,470	\$ 1,111,744	\$ 1,102,396	\$ 1,129,921	\$ 1,149,423	\$ 1,057,243	\$ 1,059,911	\$ 1,013,661	\$ 944,463
Contributions as a percentage of covered-employee payroll	92.60%	93.36%	88.94%	87.99%	85.15%	84.99%	84.25%	82.49%	83.24%	82.61%

SCHEDULE 2 (CONTINUED)

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

Note to Schedule:

The above actuarially determined contributions were developed using a One-Year Lag Methodology, under which the actuarial valuation determines the employer contribution for the second following fiscal year (e.g. Fiscal Year 2017 contributions were determined using an actuarial valuation as of June 30, 2015). The methods and assumptions used to determine the actuarially determined contributions are as follows:

Valuation Dates	June 30, 2015	June 30, 2014	June 30, 2013	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009- June 30, 2006 (ltp)
Actuarial cost method	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Entry Age	Frozen Initial Liability <sup>1</sup>
Amortization method for Unfunded Actuarial Accrued Liabilities:	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing Dollar Level Dollar	Increasing dollar <sup>2</sup>
Initial Unfunded Post-2010 Unfunded	17 years (closed) 11 years (closed) 12 years (closed) 13 years (closed) 14 years (closed) 15 years (closed)	18 years (closed) 12 years (closed) 13 years (closed) 14 years (closed) 15 years (closed) NA	19 years (closed) 13 years (closed) 14 years (closed) 15 years (closed) NA NA	20 years (closed) 14 years (closed) 15 years (closed) NA NA NA	21 years (closed) 15 years (closed) NA NA NA NA	22 years (closed) NA NA NA NA NA	NA NA NA NA NA NA
Remaining amortization period:	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance. <sup>5</sup>	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance. <sup>5</sup>	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance. <sup>5</sup>	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance. <sup>5</sup>	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance. <sup>5</sup>	Modified six-year moving average of market values with a "Market Value Restart" as of June 30, 2011. The June 30, 2010 AAV is defined to recognize Fiscal Year 2011 investment performance. <sup>5</sup>	All-Outstanding components of reestablished UAAL are being amortized over an 11-year closed period beginning in Fiscal Year 2009 <sup>2</sup>
Actuarial Asset Valuation (AAV) Method	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 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>	6.0% per annum
Actuarial assumptions:	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2016	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2006
Assumed rate of return	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2012	Tables adopted by Board of Trustees during Fiscal Year 2006
Post-retirement mortality	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year. <sup>3</sup>	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year. <sup>3</sup>	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year. <sup>3</sup>	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year. <sup>3</sup>	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year. <sup>3</sup>	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year. <sup>3</sup>	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year. <sup>3</sup>
Active service: withdrawal, death, disability, service retirement	1.5% per annum for Auto COLA, 2.5% per annum for Escalation.	1.5% per annum for Auto COLA, 2.5% per annum for Escalation.	1.5% per annum for Auto COLA, 2.5% per annum for Escalation.	1.5% per annum for Auto COLA, 2.5% per annum for Escalation.	1.5% per annum for Auto COLA, 2.5% per annum for Escalation.	1.5% per annum for Auto COLA, 2.5% per annum for Escalation.	6.33% per annum <sup>3</sup>
Salary increases							
Cost-of-Living Adjustments <sup>2</sup>							

<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>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 preceding annual payment.

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

**NEW YORK CITY FIRE PENSION FUNDS  
REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)  
SCHEDULE OF INVESTMENT RETURNS**

The following table displays annual money-weighted rate of return, net of investment expense, for the Funds for each of the past three fiscal years:

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

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

**Additional Supplementary Information  
Schedule of Investment Expenses  
For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
<b>US Equities</b>		
Brown AM - SCG	46.38	457,719
Ceredex	75.95	387,466
Dalton Greiner	58.42	344,268
Blackrock R2000 Growth	14.98	573
Blackrock R2000 Value	3.59	131
Iridian Asset MCV	109.56	599,609
Security Global Investors SCV	0.01	-
Wellington Mgmt MCC	121.79	416,953
State Street GA S&P 400	0.00	-
RAFI Enhanced Large Co.	134.18	157,786
Blackrock R1000 Growth	949.08	37,688
Blackrock R1000 Value	959.69	38,104
AF - APEX Capital Mgmt - SCG	1.89	14,296
AF - ATTUCKS-BIRD ROCK	1.90	15,512
AF - ATTUCKS-EAM	4.08	33,463
AF-Attucks-Opus Capital	4.22	34,603
AF - Attucks - Phocas Financial - SCV	4.16	33,966
AF - Attucks - REDWOOD LCG	4.16	34,033
Attucks Transition	0.00	-
CP - Bernzott Capital Advisors - SCV	3.22	25,785
CP - Channing Cap Mgmt - SCV	3.66	29,442
CP - CWC Advisors - SCC	2.55	20,467
CP - EASTERN SHORE SCC	1.08	8,684
CP - Huber Cap Mgmt - SCV	2.71	21,764
CP - Lebenthal Lisanti Capital Growth, LLC	3.23	26,012
CP - Lombardia - R-2000 Value	2.56	20,592
CP - Profit Inv Mgmt - SCC	3.09	24,812
CP - QUOTIENT INVEST LCG	3.08	24,780
CP - Stephens Inv Mgmt - SCG	2.83	22,789
CP - Summit Creek Advisors - SCG	2.84	22,836
PIM - AMI SG	8.45	59,355
PIM - Cardinal Cap Mgmt - SCV	9.68	68,233
PIM - Eastern Shore SC	14.78	103,531
PIM - Lombardia Cap Ptrns LLC -Small Value	4.50	31,690
PIM - MATARIN SC	18.65	131,021
PIM - Monarch Partners Asset Mgmt - SCV	11.80	83,211
PIM - Piermont SG	4.02	28,153
PIM - PHOCAS SCV	8.27	58,306
LEG-ALTRAVUE SCV	2.76	2,659

**Additional Supplementary Information  
Schedule of Investment Expenses  
For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
LEG-BOWLING SCV	2.88	2,796
LEG-BRIDGE CITY SCG	3.37	3,270
LEG-DEAN SCV	3.74	3,636
LEG-ESSEX SCG	3.04	2,780
LEG-PACIFIC SCG	2.59	2,522
Domestic Equity Transition	0.00	-
Fire Transition AC Equity	0.07	-
State Street	1,101.08	73,563
BlackRock (MLQA) R-3000	0.01	-
<b>Total US Equities</b>	<b>3,724.59</b>	<b>3,508,859</b>
<b>NON-US Equities</b>		
Baillie Gifford	203.16	494,494
Walter Scott EAFE Large Cap	259.65	782,892
Causeway EAFE Large Cap MTA	220.53	736,272
Sprucegrove	204.84	424,797
Acadian	0.00	-
Thornburg MTA	0.21	-
Philadelphia MTA - Closed	0.07	-
Acadian EAFE Small Cap MTA	81.98	266,094
Pyramis EAFE Small Cap MTA	74.76	464,427
REBAL-Transition	0.21	-
SSGA MSCI EAFE Small Cap	29.40	13,021
SSGA MTA	58.26	4,959
Governance of Owners	0.03	-
Acadian	117.85	402,904
Baillie Gifford	172.95	935,476
DFA	105.28	457,381
Parametric	113.95	545,113
Blackrock Account	284.61	165,672
FIS-ALGERT EAFE SC	3.33	2,292
FIS-ATIVO EAFE	9.36	6,446
FIS-AUBREY EM	5.46	3,792
FIS-CHANGE GLOBAL EM	9.44	6,480
FIS-DENALI EAFE	11.48	7,918
FIS-DUNDAS EAFE	11.54	7,970
FIS-METIS EAFE	6.65	4,580
FIS-OSMOSIS EAFE	9.25	6,390
<b>Total NON-US Equities</b>	<b>1,994.23</b>	<b>5,739,370</b>

**Additional Supplementary Information  
Schedule of Investment Expenses  
For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
<b>Fixed Income</b>		
Fischer Francis	126.57	149,666
SSgA Int Gov Bond Index	85.33	3,004
SSGA 1-3 Treasury Index	223.85	11,885
State Street	164.18	66,344
SSGA Long Duration Treasury	97.98	5,167
Blackrock	235.94	103,611
Goldman Sachs	51.42	84,879
Neuberger Berman	143.40	73,646
PIMCO - Mortgage	0.00	-
Blackrock	187.82	82,081
Prudential	148.34	109,458
Prudential Privest	43.79	-
Taplin Canida	227.99	193,249
T. Rowe Price	274.25	322,063
LM CAPITAL -MTA	22.41	33,612
GIA	21.05	51,300
Hillswick	2.93	9,936
Integrity	2.60	8,824
New Century Advisors -Core Plus	7.77	26,359
Ramirez Asset Mgmt	7.39	25,015
Pugh Capital Mgmt -Core	9.01	30,541
PIM - GIA	0.00	6
Blackrock	138.70	77,139
PIMCO TIPS MTA	0.01	-
State Street	407.81	20,139
Penn	125.79	429,207
Loomis Sayles	123.34	353,843
T. Rowe Price	237.55	600,059
High Yield Transition - closed	0.00	-
Babson BL	95.08	318,540
Guggenheim BL	97.64	384,728
Advent	56.62	278,080
Access RBC	17.25	40,371
AFL-CIO Housing Inv Trust	54.62	217,772
CPC Facility	2.13	-
BOA-PPAR 2013	2.94	-
CFSB-PPAR	0.42	-
CCD-PPAR	1.03	-
CCD-PPAR 2013	1.46	-



**Additional Supplementary Information  
Schedule of Investment Expenses  
For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
CPC-PPAR 2013	1.91	-
JPMC-PPAR	3.56	-
LIIF-PPAR	0.49	-
LIFF-PPAR 2013	1.63	-
NCBCI-PPAR	0.28	-
NCB-CI PPAR 2013	0.02	-
WELLS FARGO-PPAR MTA 2013 (FNMA)	0.00	-
SHORT TERM Accounts	161.37	-
Security lending	5.40	-
C/D - Fail Float Earnings	0.67	-
CP - Transition-Closed	0.19	-
KBC Water MTA	0.00	-
Schroder - Closed	0.00	-
<b>Total Fixed Income</b>	<b>3,621.91</b>	<b>4,110,524</b>
<b>Opportunistic Fixed Income</b>		
Ave Euro Special Situations Fd	0.04	13,305
Ave Special Situations Fd V	0.06	12,871
Ave Special Situations Fd VI	5.75	26,850
Brightwood Capital Advisors	5.55	94,467
Brightwood IV, LP	2.03	66,343
Fortress Ptnrs LP	29.12	408,718
Oaktree Opp Fd IX LP	29.07	465,765
Torchlight Debt Opportunity Fund III	2.07	396,098
Torchlight Debt Opp V	4.99	233,265
Angelo Gordon Ptnrs LP	29.54	302,269
Apollo Prtnrshp LP	35.88	256,625
Ares Center Street	30.87	368,705
Contrarian C A LLC	14.85	146,761
Goldentree OD MTA	42.62	297,263
Marathon Centre Street Partnership, L.P.	58.07	874,081
Oak Hill Ptnrs LP	35.57	271,155
<b>Total Opportunistic Fixed Income</b>	<b>326.08</b>	<b>4,234,541</b>
<b>Hedge Funds</b>		
Permal accounts w/o CITY Plan	50.83	231,358
Altimeter Capital	17.31	214,232
Blue Trend Fd	29.28	-
Brevan Howard	18.81	426,939
Brevan Howard Opp	22.89	170,475

**Additional Supplementary Information**  
**Schedule of Investment Expenses**  
**For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
Caspian Select CF	43.40	535,770
CCP Quant Fd	19.32	255,850
D.E. Shaw	64.64	1,623,233
Fir Tree Val Fd	29.54	408,650
Gotham Asset Management	11.81	134,249
GSA Capital Partners LLP	36.71	-
Key Square LP	41.21	-
Luxor Capital	44.47	458,794
Perry Capital	5.19	65,863
Pharo Gaia Fd Ltd	40.46	2,875,066
Pharo Macro Fd Ltd	48.91	2,522,942
Quest Partners	30.86	-
SRS Investment Management	35.62	479,624
Standard General	11.96	367,700
Turiya Fund LP	39.00	682,771
<b>Total Hedge Funds</b>	<b>642.24</b>	<b>11,453,516</b>
<b>Private Equity</b>		
ACON Equity Partners III LP	0.92	22,662
ACOF V	0.38	159,530
Aisling Capital II, LP	0.25	583
Aisling Capital III, L.P.	2.22	183,133
Altaris Health Partners III, L.P.	0.64	49,224
American Securities Partners VI, L.P.	23.81	116,772
American Securities Partners VII, L.P.	2.50	373,283
Ampersand 2011 L.P.	6.29	166,408
Apax Partners IX	0.03	387,856
Apollo Investment Fund V, L.P.	0.44	7,030
Apollo Investment Fund VI, L.P.	5.94	13,782
Apollo Investment Fund VII, L.P.	6.87	192,664
Apollo Investment Fund VIII	24.29	720,084
Ardian Secondary VI	20.16	324,261
Ares Corporate Opportunities Fund I, L.P.	0.46	1,504
Ares Corporate Opportunities Fund II, L.P.	0.57	67,520
Ares Corporate Opportunities Fund III, L.P.	8.58	353,457
Ares Corporate Opportunities Fund IV, L.P.	17.31	771,343
ASF VI Co-Invest	6.64	74,764
ASF VII	1.78	209,970
ASF VII Side Car	0.01	-
Arlington Capital Partners II, L.P.	0.68	678

**Additional Supplementary Information**  
**Schedule of Investment Expenses**  
**For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
Atlantic Equity Partners IV, L.P.	1.98	39,662
Arsenal Capital Partners II	1.71	420,952
Aurora Equity Partners III, L.P.	0.47	365
Avista Capital Partners, L.P.	2.15	(944)
Avista Capital Partners II, L.P.	5.91	725,787
AXA Secondary Fund V B L.P.	22.92	239,549
BC European Capital IX	17.74	147,354
BC Partners X - SC	0.58	2,932
BDCM Opportunity Fund III, L.P.	10.54	-
Blackstone Capital Partners IV, L.P.	2.89	293,172
Blackstone Capital Partners V, L.P.	2.16	407,566
Blackstone Capital Partners VI, L.P.	9.35	294,523
Blackstone Mezzanine Partners II L.P.	0.05	1,438
Blue Wolf Capital Fund II, L.P.	2.38	8,119
Bridgepoint Europe III	0.86	918
Bridgepoint Europe IV	3.29	49,943
Bridgepoint Europe V	3.86	189,590
Bridgepoint Europe V SC	0.84	4,528
Capital Partners PE Income Fund, L.P.	0.61	2,302
Capital Partners PE Income Fund II, L.P.	0.78	15,543
Capital Point Partners	1.75	59,857
Carlyle Acosta	1.12	144
Carlyle Partners III, L.P.	0.00	-
Carlyle Partners IV, L.P.	0.19	299,776
Carlyle Partners V, L.P.	3.49	352,382
Carlyle Partners VI, L.P.	11.24	283,581
Carpenter Community BancFund-A, L.P.	2.87	34,422
Catterton Partners VI, L.P.	3.51	49,072
CCMP Capital Investors II, L.P.	1.85	166,544
Celtic Pharmaceutical Holdings, L.P.	1.52	-
Centerbridge Cap III	1.26	117,512
Coller International Partners V, L.P.	1.04	34,047
ComVest Investment Partners IV, L.P.	9.59	221,690
Constellation Venture Capital III, L.P.	2.74	42,782
Crestview Partners II, L.P.	6.26	70,011
Crestview Partners III, L.P.	7.44	350,022
Crestview III SC	3.83	35,851
CS Emerging Manager Co-Inv, L.P.	0.00	7,056
CS Emerging Manager Fund, L.P.	6.54	109,845
CVC Capital Partners VI	16.69	550,639
CVC European Equity Partners III, L.P.	0.26	2,414

**Additional Supplementary Information  
Schedule of Investment Expenses  
For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
CVC European Equity Partners V, L.P.	6.53	586,756
Cypress Merchant Banking Partners II, L.P.	0.05	-
EQT VI, L.P.	17.98	272,243
EQT VII, L.P.	7.93	467,650
Erasmus New York City Growth Fund IA	0.39	-
New York Fairview Emerging Mgrs Fund (A)	4.94	20,951
Falconhead Capital Partners II, L.P.	1.30	-
FdG Capital Partners, L.P.	1.66	197,368
FdG Capital Partners II LP	0.41	-
Fenway Partners Capital Fund III, L.P.	1.87	29,510
FirstMark IV, L.P.	6.03	-
First Reserve Fund XI, L.P.	0.51	7,302
First Reserve Fund XII, L.P.	1.56	27,775
The Fourth Cinven Fund	0.25	4,373
FS Equity Partners V, L.P.	0.91	6,023
FS Equity Partners VI, L.P.	12.43	56,767
FTVentures III, L.P.	2.05	24,126
FTV IV, LP	2.78	49,970
FTV V, LP	0.16	55,125
GI Partners Fund II	0.43	5,622
GI Partners Fund III	3.32	119,558
GF Capital	2.07	15
Gleacher Mezzanine Fund II, LP	0.08	65,135
Green Equity Investors VI	26.34	659,303
Green Equity Investors VII	1.35	41,033
Grey Mountain Partners Fund III, LP	0.49	19,066
GSO Capital Opportunities Fund, L.P.	0.50	90,269
Highland Consumer Fund I	0.96	-
ICV Partners III, L.P.	1.67	64,258
Incline Equity Partners III, L.P.	0.87	236,539
Intermedia Partners VII, L.P.	2.13	39,609
JP Morgan Fleming, L.P.	1.64	40,165
Landmark Equity Partners XI, L.P.	0.31	5,139
Landmark Equity Partners XIV, L.P.	5.64	141,897
Landmark Equity Partners XV	8.01	337,999
Landmark NYC Fund I	3.94	5,905
Lee Equity Partners, L.P.	0.12	27,497
Levine Leichtman Capital Deep Value	0.38	2,115
Levine Leichtman Capital Partners IV LP	1.51	4,908
Lexington Capital Partners VII, L.P.	4.45	63,150
Lexington Capital Partners VIII, L.P.	9.82	644,603

**Additional Supplementary Information  
Schedule of Investment Expenses  
For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
Lincolnshire Equity Fund II, L.P.	0.33	-
Lincolnshire Equity Fund III, L.P.	2.14	38,797
Lincolnshire Equity Fund IV, L.P.	2.16	11,616
Euro Choice II (Delaware) L.P.	0.41	315
Euro Choice III L.P.	1.44	32,086
Euro Choice IV L.P.	4.82	49,730
Markstone Capital Partners, L.P.	0.10	-
Medica III Investments (Intl) L.P.	1.15	27,556
MidOcean Partners III, L.P.	7.26	925,477
Milestone Partners III, LP	1.09	16,937
Mill City Capital II	0.40	30,701
Montreux Equity Partners IV L.P.	4.30	107,175
NorthBound Emerging Manager Custom Fd LP	3.55	76,683
New MainStream Capital II	0.68	30,031
New Mountain Partners I, L.P.	0.07	17,988
New Mountain Partners II, L.P.	0.04	168
New Mountain Partners III, L.P.	7.98	293,764
NGN BioMed Opportunity II, L.P.	2.27	57,641
Olympus Capital Asia III	3.48	30,888
Olympus Growth Fund VI, L.P.	8.35	759,901
Onex Partners III LP	4.19	338,185
Paladin Homeland Security Fund L.P.	0.46	30,383
Paladin III, L.P.	7.68	140,567
Palladium Equity Partners III, L.P.	5.54	629,015
Palladium Equity Partners IV	5.98	401,896
Patriot Partners II	1.01	28,721
PCG Clean Energy Tech Fund East, L.P.	4.04	6,150
Pegasus Partners IV, L.P.	3.51	76,779
Pegasus Partners V, L.P.	7.55	153,173
Permira IV	1.22	574,970
Perseus Partners VII, L.P.	0.06	4,488
Pine Brook Capital Partners	4.37	100,556
Platinum Equity Capital Partners III, LP	15.73	1,296,539
Platinum IV	1.88	92,524
Post Capital II	1.41	410,282
Prism Venture Partners V, L.P.	1.05	45,800
Psilos Group Partners III, L.P.	1.91	9,385
Raine Partners II	1.24	67,694
Relativity Fund, L.P.	0.51	-
Riverstone/Carlyle Global Energy & Power Fund IV, L.P.	3.85	30,845
RRE Ventures IV, L.P.	3.17	23,324

**Additional Supplementary Information**  
**Schedule of Investment Expenses**  
**For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
Scale Venture Partners III, LP	4.84	46,324
SCP Private Equity Partners II, L.P.	2.61	47,880
SCP Vitalife Partners II, L.P.	3.07	152,764
Siris Partners III	2.17	89,102
Snow Phipps Group, L.P.	2.93	67,530
Snow Phipps II, L.P.	7.55	145,210
Stellex Capital Management LP	0.88	53,498
Summit Partners Growth Equity VIII-A	29.36	1,481,702
Terra Firma Capital Partners III, L.P.	2.01	11,630
Thomas, McNerney & Partners II, L.P.	1.04	69,976
Trident V, L.P.	15.66	179,370
Trilantic Capital Partners III, L.P.	0.11	1,999
Trilantic Capital Partners IV L.P.	1.66	20,763
Trilantic Capital Partners V L.P.	6.01	177,099
US Power Fund II, L.P.	4.35	40,038
US Power Fund III, L.P.	4.44	59,416
Valor Equity III	1.10	36,540
Vista Equity Partners Fund III, L.P.	3.36	50,423
Vista Equity Partners Fund IV, L.P.	36.09	566,755
Vista Equity Partners Fund V, L.P.	36.12	1,131,178
Vista Equity Partners Fund VI, L.P.	9.01	593,673
Vista Foundation Fund II, L.P.	2.42	76,761
VSS Communications Partners IV, L.P.	0.21	962
WCAS XII	4.30	259,510
Warburg Pincus Private Equity XI, LP	34.32	215,343
Warburg Pincus Private Equity XII, LP	5.79	507,428
Webster Capital III	1.28	48,308
Wellspring Capital Partners V, L.P.	5.48	1,157,977
Welsh, Carson, Anderson & Stowe XI, L.P.	5.00	28,974
Yucaipa American Alliance Fund I, L.P.	1.79	218
Yucaipa American Alliance Fund II, LP	15.93	114,004
Yucaipa Corporate Initiatives Fund II LP	2.76	15,479
<b>Total Private Equity</b>	<b>832.86</b>	<b>28,663,742</b>
<b>Private Real Estate</b>		
AG Realty Fd VII	1.93	148,527
Amer Value Ptnrs I	1.14	24,086
Apollo Europe III	2.61	49,357
ARA Asia Dragon Fd	0.03	-
Artemis Co-Investment	3.35	24,920

**Additional Supplementary Information  
Schedule of Investment Expenses  
For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
Avanth Aff Housing II	1.88	29,539
Blackstone Real Estate Ptnrs EU III	3.25	84,309
Blackstone Real Estate Ptnrs EU IV	21.90	447,859
Blackstone Real Estate Ptnrs IV	0.95	-
Blackstone Real Estate Ptnrs VI	4.11	573,672
Blackstone Real Estate Ptnrs VII	27.98	830,319
Blackstone Real Estate Ptnrs VIII	12.87	525,484
Brookfield Strategic RE Ptnrs	16.61	148,740
Brookfield Property Group	13.72	124,862
Canyon-Johnson Urban Fund, L.P.	0.00	-
Canyon Johnson Urban Fd II	0.10	-
Canyon Johnson Urban Fd III	0.09	19,252
Carlyle R.P. Fd V	1.64	30,260
Carlyle Realty VI	10.19	628,905
Carlyle Realty VII	8.63	177,800
Colony Investors VIII	2.97	36,100
Colony Realty Ptnrs II	1.15	228,800
DivCo West Fd III	7.46	703,147
DivCo West Fd IV	21.02	1,733,409
Divco Fund V Advisor, LLC	1.28	214,010
DRA Advisors LLC - G&I Fund IX	1.20	43,085
Emmes Asset Mgmt Co (NYC Asset Investors #1 LLC)	6.59	53,946
Exeter Fund II LP	1.53	13,834
H/2 Spec Opportunity Fd II	6.77	109,173
H/2 Spec Opportunity Fd III	13.46	142,431
H/2 SO MANAGER IV, LP	1.54	104,500
Heitman America Fd	17.19	53,504
Hudson Separate Account (NYC Asset Investor #3 LLC )	2.92	39,557
Jamestown Premier Fund	7.78	104,237
JPM Strategic Prop Fd	43.93	364,394
JPM Special Sit Fd	6.39	103,448
KTR Ind Fd III	0.02	557
Lasalle US Property Fd	41.26	202,981
Lion Industrial Trust	10.50	54,695
Lone Star RE Fd III	18.02	498,728
Met Life Core Property	17.56	97,089
Metro Workforce Housing Fd	0.94	41,316
Pramerica VI LP	2.15	119,499
PRISA	9.24	76,579
PRISA II	27.58	262,695
Prologis Targeted US Logistics Fd	6.67	36,831



**Additional Supplementary Information  
Schedule of Investment Expenses  
For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
PW Real Estate Fund III LP	2.33	121,967
RFM NYCERS Sandy LLC (NYC Asset Investors #2 LLC)	10.32	424,623
RREEF Amer. II	9.35	88,007
RREEF Amer. III	0.10	910
Silverpeak RE Ptnrs Fd III	0.58	13,531
Stockbridge Real Estate Fd	9.99	67,350
Taconic NY Inv Fd	6.93	79,462
The City Investment Fd	0.10	25,556
Thor Urban Property Fd II	3.00	41,706
Tristan European Property Inv	1.75	144,619
UBS Trumbull Property Fd	45.40	360,025
USAA Eagle Real Estate Fund	9.80	58,880
Walton St RE Fd VI	2.37	30,277
Westbrook RE Fd VIII	0.99	315,845
Westbrook RE X CO-INV	0.81	115,432
<b>Total Private Real Estate</b>	<b>513.90</b>	<b>11,194,626</b>
<b>Infrastructure</b>		
ACTIS ENERGY IV	0.28	169,313
ASF VII (Ardian Investment UK Ltd)	0.00	-
Brookfield Infr Fd II	12.62	157,289
First Reserve EIF II	2.90	222,855
Global Infrastructure MGMT LLC	3.48	382,620
IFM GL Infrastructure	10.99	108,732
Infrastructure-BIF III	3.14	207,847
KKR Gbl Infra II	3.97	108,948
EQT Infrastructure III	-	48,919
<b>Total Infrastructure</b>	<b>37.38</b>	<b>1,406,523</b>
<b>REITS</b>		
Adelante Capital Management	153.88	442,282
European REIT MTA	0.02	-
MS REIT MTA	202.04	675,340
<b>Total REITS</b>	<b>355.94</b>	<b>1,117,622</b>
<b>Total Management Expenses</b>	<b>12,049.12</b>	<b>71,429,323</b>
<b>Consultant Expenses</b>		
AKSIA LLC PARTNERS LTD Total		94,095
COURTLAND PARTNERS LTD Total		25,632
ERNEST AND YOUNG LLP Total		747

**Additional Supplementary Information  
Schedule of Investment Expenses  
For Fiscal Year Ended June 30, 2017**

**Schedule 4**

<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
NEPC LLC Total		275,625
PRICEWATERHOUSECOOPERS TAIWAN Total		1,279
STEPSTONE GROUP LLC Total		558,000
TOWNSEND HOLDINGS LLC Total		73,070
<b>Total Consultants</b>		<b>1,028,448</b>
<b>Legal Expenses</b>		
COX CASTLE NICHOLSON LLP		14,481
DAY PITNEY LLP		4,597
FOSTER PEPPER PLLC		24,205
HERRICK FEINSTEIN LLP AND RIVERA COLON LLP		209
INV# 1142704		4
MORGAN LEWIS BOCKIUS LLP		49,245
NIXON PEABODY LLP		8,275
PILLSBURY WINTHROP SHAW PITTMAN LLP		24,726
REINHART BOERNER VAN DUEREN		20,110
SADIS GOLDBERG LLP		8,866
SEWARD KISSEL LLP		8,891
<b>Total Legal Expenses</b>		<b>163,609</b>
<b>Total Management Fees</b>		<b>1,192,057</b>
<b>Other Miscellaneous Expenses</b>		
Operating expense Private eq		502,019
Invest Organization fees Alt equity		3,238,770
Organization exp. Alt fixed inc		3,317,314
Invest Organization fees hedge fund		16,067
Tax expense fixed inc		13,786
Tax expense equity		29,417
Tax expense mutual fixed		514
Tax expense mutual equity		793
Tax expense Intl -dividend inc		3,507,705
Tax expense alternative equity		135,231
Misc expense fixed income		76,908
Other Expenses Bonds		45,041
Misc expense mutual fixed income		134
Misc exp mutual equity		269
Misc exp mutual fund mortgage		3

**Additional Supplementary Information  
Schedule of Investment Expenses  
For Fiscal Year Ended June 30, 2017**

	<b>Schedule 4</b>	
<b>Investment Manager</b>	<b>Average Assets Under Management (\$MMS)</b>	<b>Total Fees</b>
Misc exp. Tips		88
Misc exp Intl		16,855
Misc Exp Alt Fixed		384,401
Securities lending 3r party fees		467,439
FX Service Fees Intl		51,400
FX Service fees Alt Equity		10,203
FX Service fees Alt Fixed		6
Hard Dollar Compensation Bank Charges IT		2,169
Hard Dollar Compensation Bank Charges Eq		287
<b>Total Other Miscellaneous Expenses</b>		<b>11,816,819</b>
<b>Total Investment Expenses</b>	<b>\$ 12,049.12</b>	<b>\$ 84,438,199</b>

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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, 2017**

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## **INVESTMENT REPORT**

This report is prepared by management on the basis of data provided by the investment managers of the New York City Fire Pension Funds and the Comptroller of the City of New York. 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 State Retirement and Social Security Laws, for the benefit of the Funds' membership.

### **Investment Policy**

The Qualified Pension Fund's primary purpose is to provide retirement benefits for members and 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.

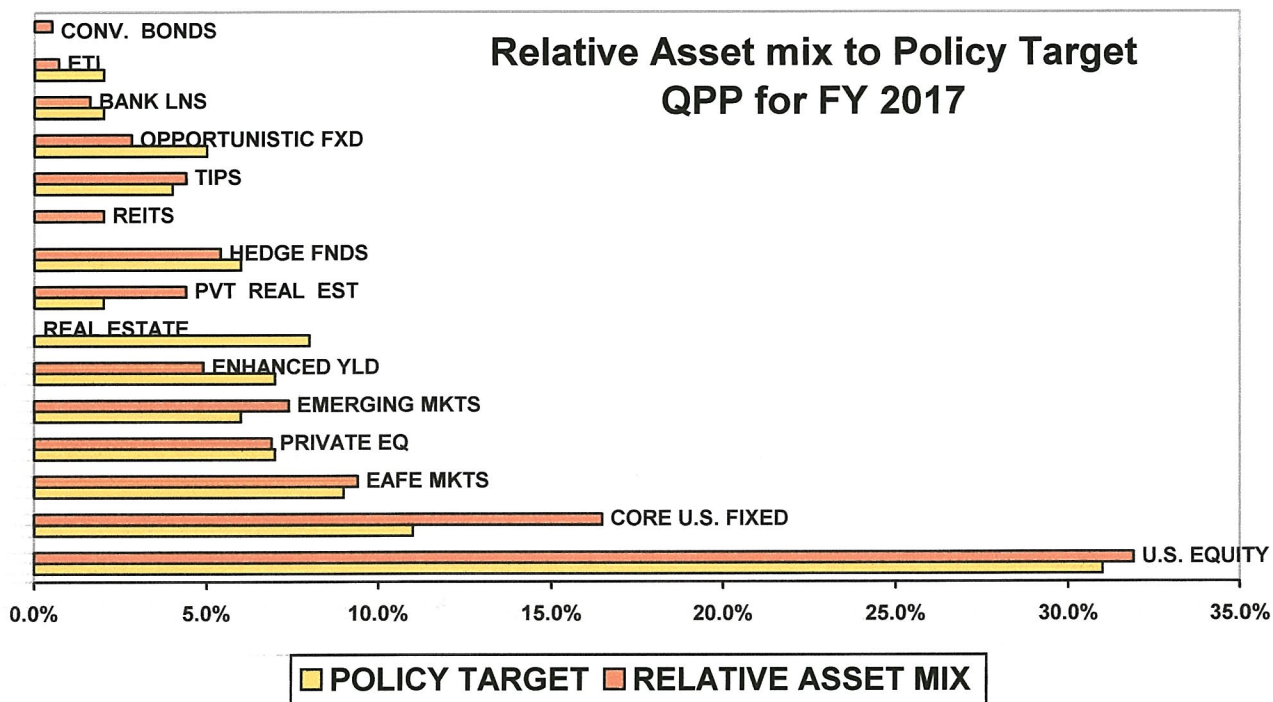
### **Investment Criteria and Asset Allocation**

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 City Fire Pension Funds

Each fund's asset allocation policy is constructed to meet both short-term funding requirements and long-term 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 and correlations for various asset allocations. These allocations are reviewed periodically to address fluctuating market events and new investment opportunities.



The current targeted policy allocations include investments in the following major categories: U.S equity, Core U.S. fixed income, International equity(EAFE Markets), Private equity, Emerging markets, Enhanced yield bonds, Real Estate investments, Private Real Estate investments, Hedge Funds, Treasury inflation protected securities(TIPS), Opportunistic Fixed, Bank loans and Economically Targeted Investments(ETI). The chart above shows a comparison of relative asset mix to policy targets for the QPP as at June 30, 2017.

The Funds' assets are periodically re-balanced to keep in line with long term asset allocation objectives, and actual allocation may vary from policy weights as market values shift and investments are added or terminated. As indicated in the chart, the Fund exceeded targeted allocations of U.S. equity, Core U.S Fixed, EAFE, Emerging Markets, Private Real Estate, REITS, TIPS and Convertible bonds. While, Enhanced Yield bonds, Real estate, Hedge Funds, Opportunistic Fixed, Bank Loans and ETI fell below the current targeted allocations. All remaining asset classes in the portfolio closely matched targeted allocations.

Actual asset allocation in effect on 6/30/2017 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 2008 through June 2017 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 2017**

The Qualified Pension Fund's portfolio of approximately \$12.3 billion returned 12.8 %<sup>1</sup> on a net basis, for the fiscal year ended June 2017. This return modestly exceeded the 12.2% gain posted by the Fund's policy benchmark and also the actuarial assumed rate of return at 7.0%, for the period. Positive investment returns improve our long term performance and enhance the real value of the Funds over time. The QPP closed fiscal year 2017 with a net position restricted for pension benefits totaling \$12.1 billion.

As expected, performance across asset classes was mixed. U.S. equities, the largest segment in the portfolio, gained overall 18.5%, equaling the gain posted by its benchmark the Russell 3000 index. For the quarter ended June 30, 2017, the equities group overall posted gains averaging 3.0%.

International equities as a group were among the best performers, all categories posted gains for the fiscal period. The group gained 24.3% overall, well ahead of its benchmark, the MSCI AC world ex Index, which gained 20.4%. The Emerging markets sector, among the top performers in the group, gained 27.1%; well ahead of its benchmark, the MSCI emerging markets index, which gained 23.7% over the same period. For the quarter ended June 30, 2017, the group gained approximately 6.3%.

The fixed income composite portfolio, although the lowest performing group of the asset classes, closed fiscal year 2017 with gains averaging 2.4%. The largest segment within this category, the structured or core investment grade fixed income group closed on a positive note at .8%, ahead of its benchmark the New York City core plus 5 indexes, which lost .2%. Treasury Inflation Protected securities, also among the lower performers in this category lost .7%, slightly below its benchmark the Barclays Global inflation linked TIPS index which lost .6% for the period. The Opportunistic Fixed Income group was among the best performers in this category, posting gains of 12.9%, although falling below its benchmark the JPM/GHYCSFB index, which gained of 13.7%. For the five-year period ended June 30, 2017, the QPP's portfolio annualized returns remained positive at 9.4 %, slightly ahead of the portfolio policy benchmark return at 9.3%.

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 \$461.0 million posted overall gains of 13.5% for the period; this gain was above the policy benchmark at 13.2%. The Fire Officers Variable Supplements Fund with assets under management of \$302.0 million posted overall returns of 14.5% for the period, well above the policy benchmark with gains of 13.2%.

For the five year period ended June 30, 2017, the FFVSF's and the FOVSF 's annualized returns stood at 9.7 % and 10.1% respectively, while the corresponding policy benchmarks returned 9.9%.

**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, 2017.

The Funds' total investments including Collateral from securities lending rose from \$12,725.3 million to \$14,181.9 million, by the end of fiscal year 2017. This change is depicted in **Exhibit 2**, a chart showing changes in total investment at market value over the ten fiscal periods between 2008 and 2017.

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<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 City Fire Pension Funds

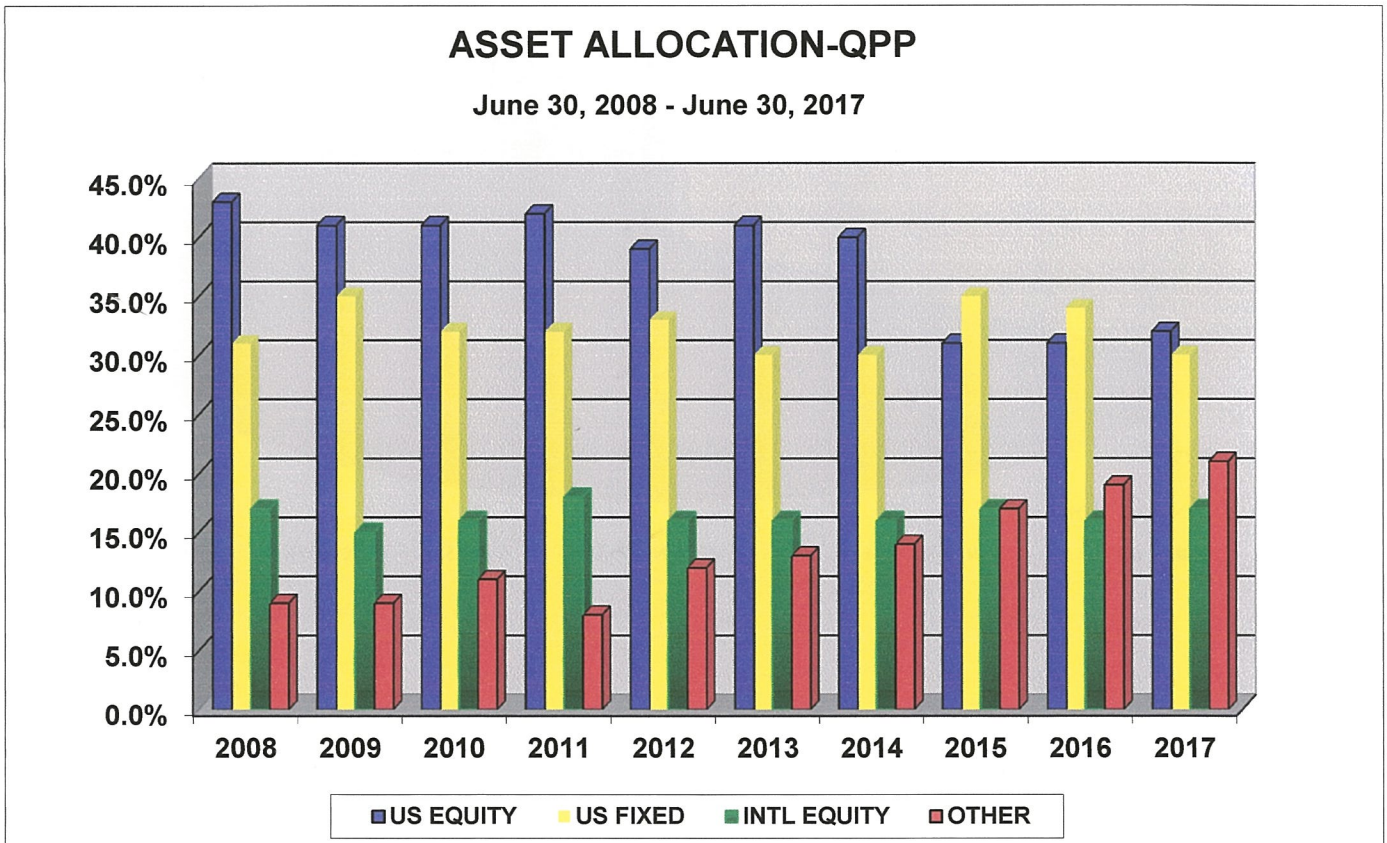
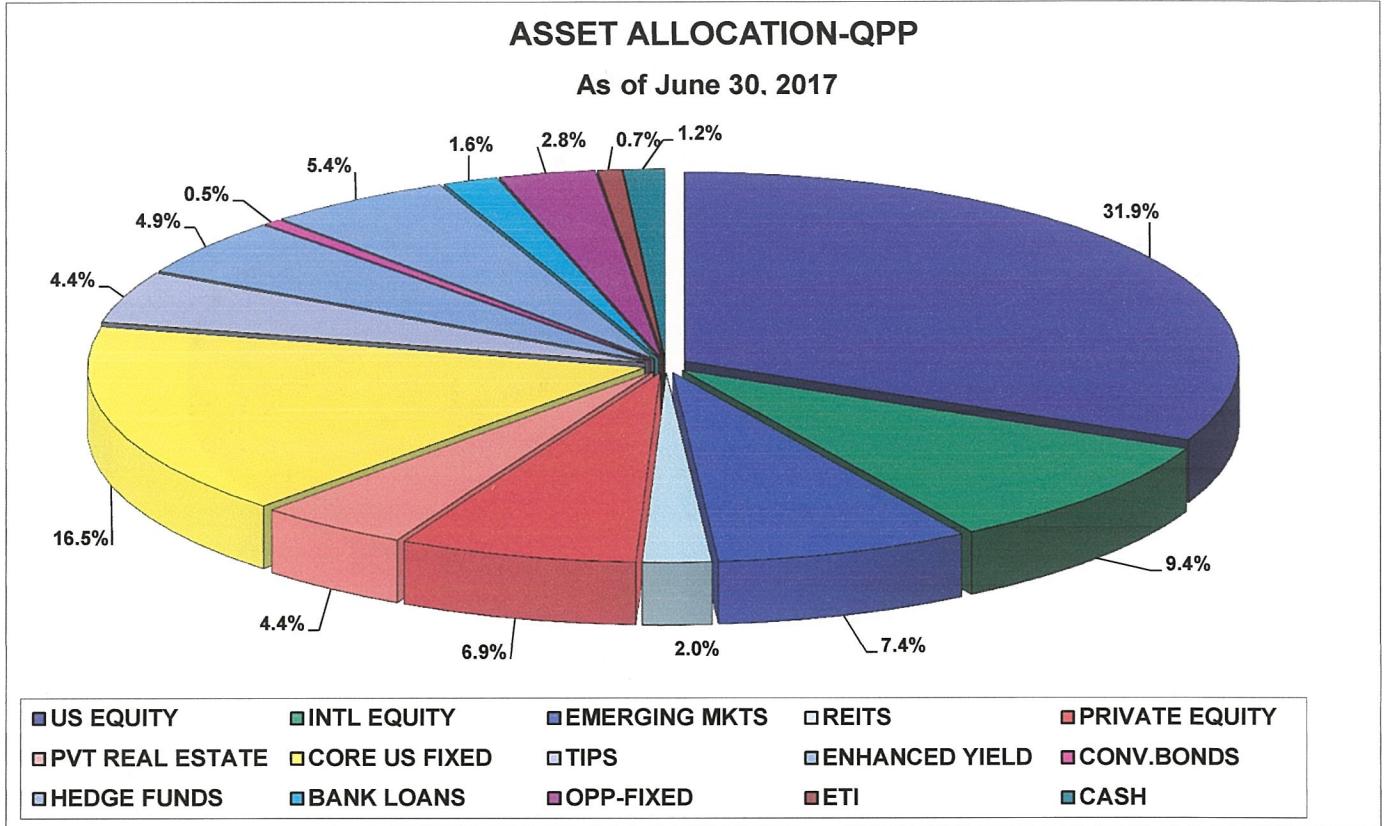
The Funds' Portfolio assets invested during fiscal year 2017 returned net gains of \$1,371.7 million. The overall gains were due mainly to solid performances in the Equity sector of the Funds' investment portfolio. Exhibit 3 shows a summary of the changes in investment income over the ten-year period 2008 through 2017.

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

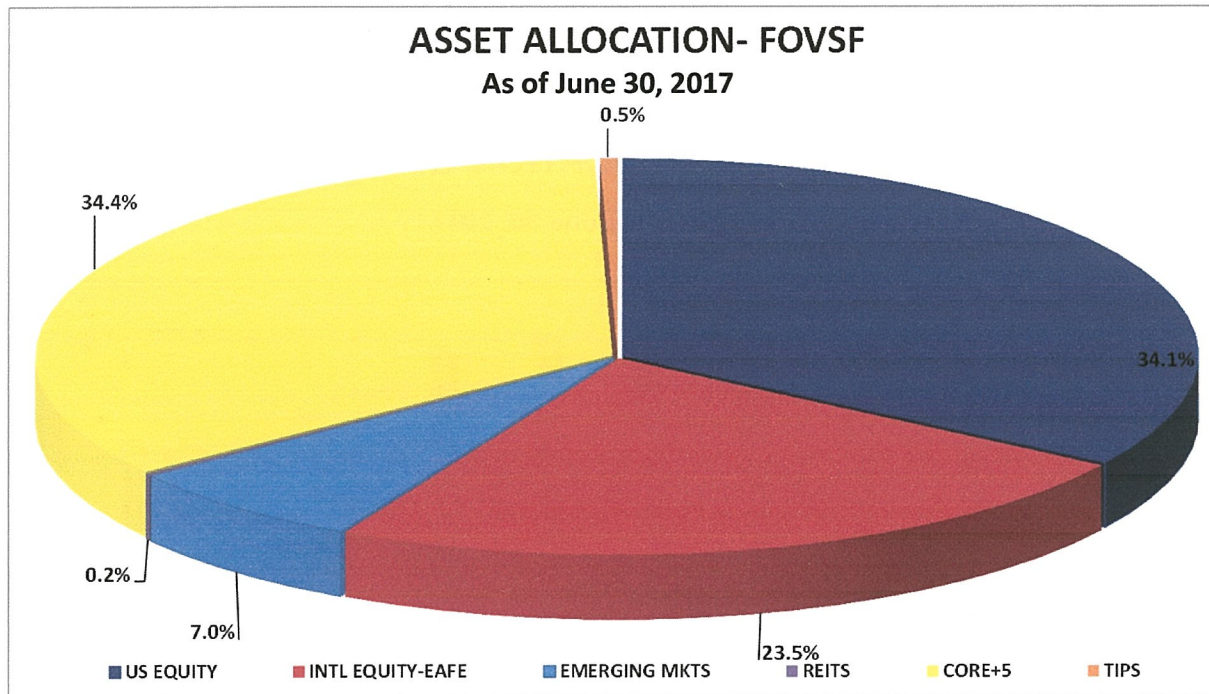
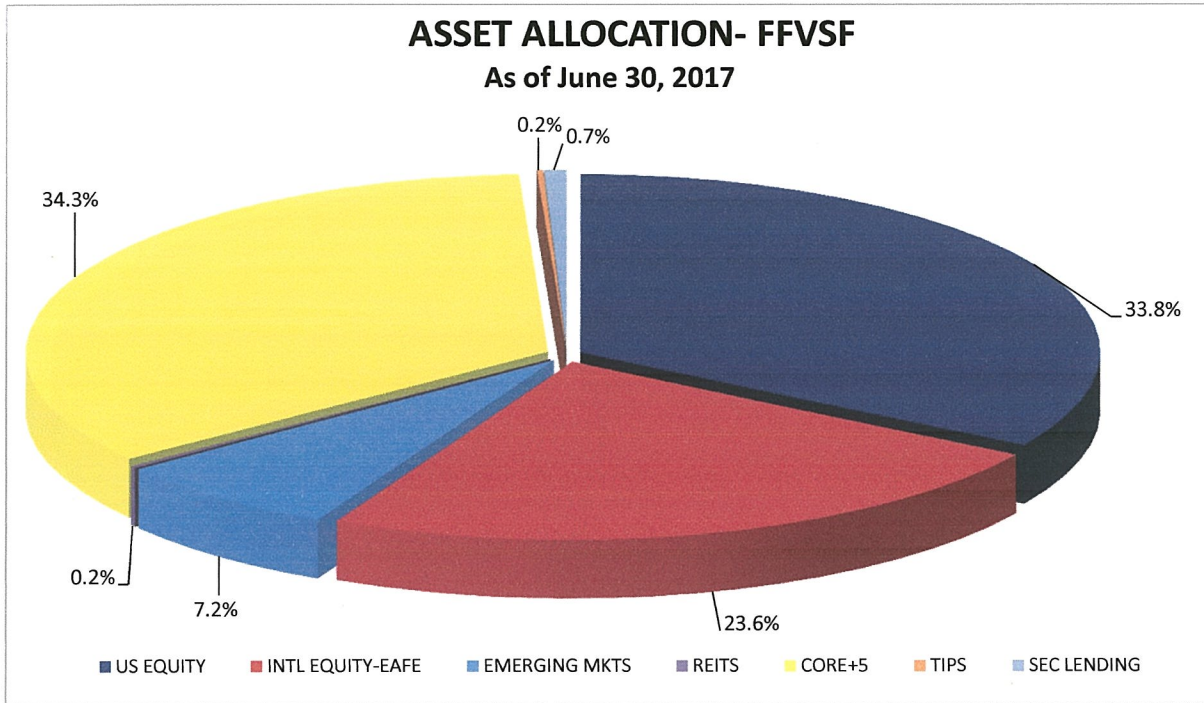
Fees and Brokers' commissions are calculated based on total assets under management for the period. Summaries of Brokers' commissions for investments traded are presented in schedule 4A.

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 2017.

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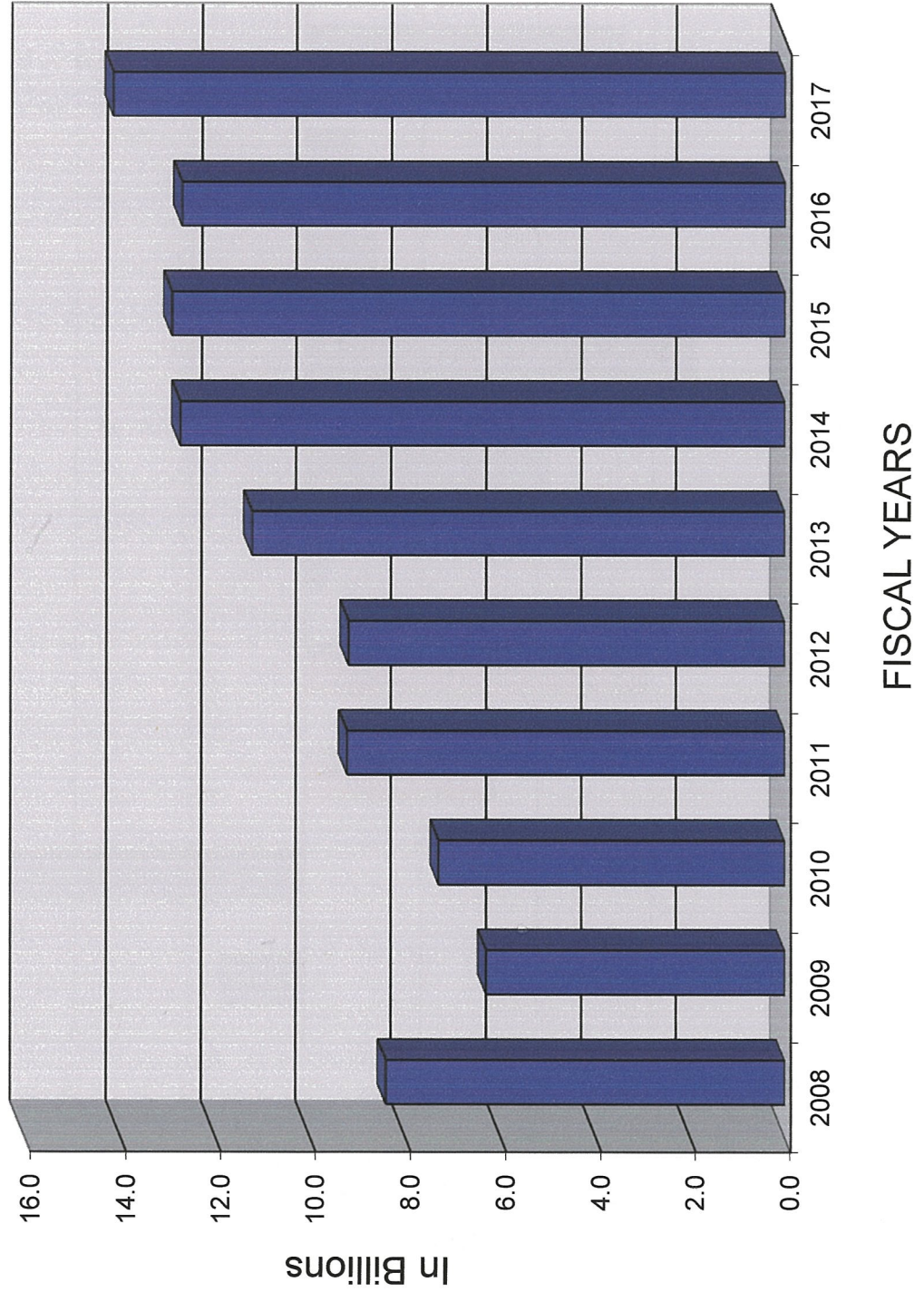


# TOTAL INVESTMENTS

Fire Funds Combined

(At Market - Value)

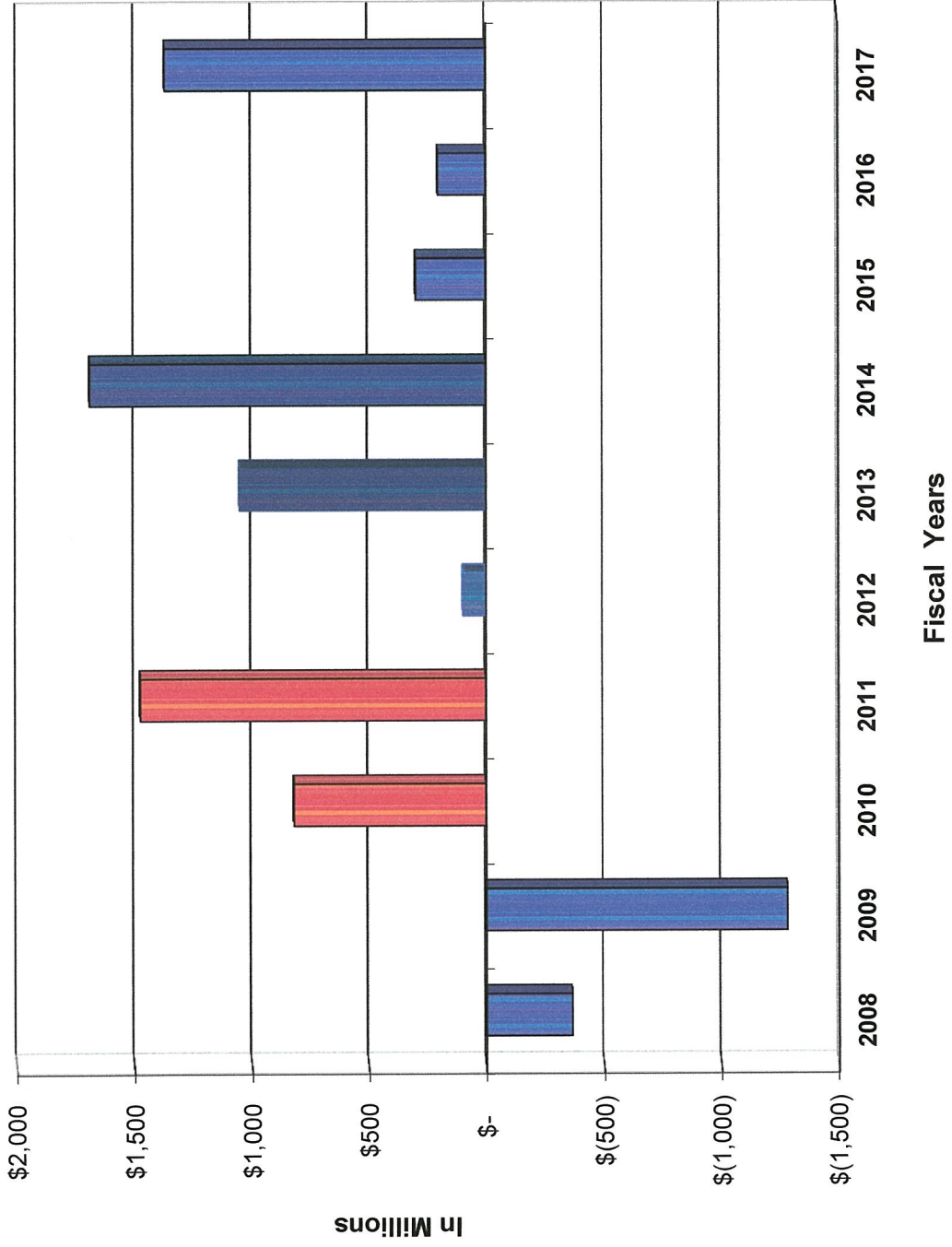
Exhibit 2



INVESTMENT INCOME

Fire Funds Combined

Exhibit 3





## Investment Section

## New York City Fire Pension Funds

Schedule of Portfolio Returns\* Fire QPP  
June 30, 2017

Schedule 1A

Assets (\$MM)	% Total	Asset Class	3 Mos Apr-17 Jun-17	YTD Jan-17 Jun-17	1 YR Jul-16 Jun-17	3 YRS Jul-14 Jun-17	5 YRS Jul-12 Jun-17	10 YRS Jul-07 Jun-17
3,937.00	31.93	<b>U.S. Equities</b>	<b>3.00</b>	<b>8.70</b>	<b>18.51</b>	<b>8.46</b>	<b>14.76</b>	<b>7.12</b>
		Russell 3000	3.02	8.93	18.51	9.10	14.58	7.26
<b>2,070.00</b>	<b>16.79</b>	<b>Total International Equity</b>	<b>6.32</b>	<b>17.50</b>	<b>24.31</b>	<b>2.42</b>	<b>7.75</b>	<b>1.70</b>
		MSCI AC WORLD EX US (Net) Benchmark	5.78	14.10	20.45	0.80	7.22	1.13
1,154.00	9.36	International Developed Environ activist	6.20	15.51	22.16	2.77	9.23	1.95
		MSCI EAFE IMI NET	6.40	14.21	20.67	1.73	9.23	1.36
916.00	7.43	International Emerging mkts	6.14	20.05	27.08	1.49	5.23	2.48
		MSCI Emerging mkts index	6.27	18.43	23.75	1.07	3.96	1.91
667.00	5.41	<b>Total Hedge Funds</b>	<b>1.28</b>	<b>4.26</b>	<b>8.25</b>	<b>2.54</b>	<b>4.53</b>	<b>n/a</b>
		HFRI Funds of funds composite index 1'	1.05	3.71	7.54	2.57	4.90	n/a
246.00	1.99	<b>Total Real Estate Equity Sec.(REITS)</b>	<b>2.35</b>	<b>3.71</b>	<b>0.68</b>	<b>6.40</b>	<b>8.69</b>	<b>5.07</b>
		DJ US Select Real Estate Securities Inde.	1.64	1.36	-2.43	8.02	8.97	5.32
850.00	6.89	<b>Private Equity</b>	<b>5.14</b>	<b>10.24</b>	<b>18.25</b>	<b>12.94</b>	<b>13.07</b>	<b>9.83</b>
		NYC R3000+3% Lagged	6.51	11.81	21.56	13.02	16.43	11.82
508.00	4.12	<b>Private Real Estate</b>	<b>2.95</b>	<b>5.44</b>	<b>11.06</b>	<b>13.41</b>	<b>13.77</b>	<b>3.81</b>
		NCREIF NFI-ODCE NET+100BP	1.72	3.55	7.96	11.42	11.86	-
39.00	0.32	<b>Infrastructure Real Estate</b>	<b>8.14</b>	<b>10.43</b>	<b>16.67</b>	<b>14.44</b>	<b>-</b>	<b>-</b>
		CPI+ 4%	1.00	2.39	5.71	4.98	-	-
-		<b>Total Fixed Income Segment</b>	<b>1.34</b>	<b>2.74</b>	<b>2.44</b>	<b>2.68</b>	<b>-</b>	<b>-</b>
1,958.00	15.88	<b>Total Structured Program</b>	<b>1.88</b>	<b>3.04</b>	<b>0.84</b>	<b>3.00</b>	<b>3.20</b>	<b>5.50</b>
		NYC Core Plus Five Index	1.82	2.82	-0.21	2.97	2.68	5.20
609.00	4.94	<b>Enhanced Yield</b>	<b>2.22</b>	<b>4.80</b>	<b>11.97</b>	<b>3.83</b>	<b>6.52</b>	<b>7.28</b>
		Citigroup BB & B	2.07	4.40	11.47	4.07	6.21	6.25
44.00	0.36	<b>Total Core Fixed income</b>	<b>1.49</b>	<b>2.64</b>	<b>1.07</b>	<b>2.99</b>	<b>3.09</b>	<b>n/a</b>
		Barclays Capital Aggregate index	1.45	2.27	-0.31	2.48	2.21	n/a
30.00	0.24	<b>Total Fixed income Funds of Funds</b>	<b>1.41</b>	<b>2.40</b>	<b>0.40</b>	<b>2.49</b>	<b>2.77</b>	<b>n/a</b>
		Barclays Capital Aggregate index	1.45	2.27	-0.31	2.48	2.21	n/a
543.00	4.40	<b>Total Tips Managers</b>	<b>-0.40</b>	<b>0.86</b>	<b>-0.66</b>	<b>0.62</b>	<b>0.36</b>	<b>4.39</b>
		Barclays Global Inflation linked US Tips	-0.40	0.85	-0.63	0.63	0.27	4.27
196.00	1.59	<b>Total Bank Loans</b>	<b>0.68</b>	<b>1.64</b>	<b>6.33</b>	<b>3.61</b>	<b>n/a</b>	<b>n/a</b>
		Credit Suisse FB Leveraged Loan index	0.75	1.96	7.49	3.49	n/a	n/a
59.00	0.48	<b>Total Convertible Bonds</b>	<b>1.44</b>	<b>5.04</b>	<b>9.48</b>	<b>3.08</b>	<b>7.48</b>	<b>n/a</b>
		BofA ML All Conv. Ex mandatory index	2.98	8.76	19.86	5.60	11.56	n/a
343.00	2.78	<b>Total Opportunistic Fixed</b>	<b>0.32</b>	<b>4.89</b>	<b>12.88</b>	<b>4.06</b>	<b>8.08</b>	<b>n/a</b>
		JPM GHY/CSFB 50/50 BLEND PLUS 300	2.16	5.00	13.71	7.15	9.11	n/a
89.00	0.72	<b>Total TeachersTargeted- ETI (w/o cash)</b>	<b>1.98</b>	<b>2.77</b>	<b>0.08</b>	<b>3.50</b>	<b>2.98</b>	<b>4.87</b>
		Fire custom Benchmark	1.27	2.00	-0.03	2.48	2.20	4.32
136.00	1.10	<b>State Street Short Term</b>	<b>0.27</b>	<b>0.47</b>	<b>0.71</b>	<b>0.60</b>	<b>0.46</b>	<b>1.13</b>
8.00	0.06	<b>Cd fail fit /Sec</b>						
12,332.00	100.00	<b>Total Portfolio</b>	<b>3.06</b>	<b>7.85</b>	<b>12.82</b>	<b>5.73</b>	<b>9.36</b>	<b>5.58</b>
		<b>Policy Benchmark</b>	<b>3.28</b>	<b>7.83</b>	<b>12.22</b>	<b>6.23</b>	<b>9.25</b>	<b>6.22</b>

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

## Investment Section

## New York City Fire Pension Funds

Schedule of Portfolio Returns FFVSF\*  
June 30, 2017

Schedule 1B

Assets (\$MM)	% Total	Asset Class	3 Mos	YTD	1 YR	3 YRS	5 YRS	10 YRS
			Apr-17 Jun-17	Jan-17 Jun-17	Jul-16 Jun-17	Jul-14 Jun-17	Jul-12 Jun-17	Jul-07 Jun-17
156.00	33.84	<b>U.S. Equities</b>	3.00	8.93	18.52	9.16	14.61	7.29
		Russell 3000 Daily	3.02	8.93	18.51	9.10	14.58	7.26
109.00	23.64	<b>Total International Developed Markets</b>	4.13	12.48	21.49	1.51	6.57	0.93
		MSCI EAFE Benchmark	6.12	13.81	20.27	1.15	8.69	1.03
33.00	7.16	<b>Total Emerging Markets</b>	6.34	18.74	23.82	-0.58	2.36	0.29
		MSCI Emerging Markets	6.27	18.43	23.75	1.07	3.96	1.91
1.00	0.22	<b>Total Real Estate Equity Sec.(REITS)</b>	2.01	3.88	1.36	5.62	8.08	5.47
		DJ US Select Real Estate Securities Index	1.64	1.36	-2.43	8.02	8.97	5.32
158.00	34.27	<b>Total structured Fixed Income</b>	1.26	2.44	0.65	2.93	3.05	5.35
		NYC Core Plus Five Index	1.82	2.82	-0.21	2.97	2.68	5.20
-	-							
1.00	0.22	<b>Total Tips Managers</b>	-0.40	0.86	-0.67	0.77	0.47	4.47
		Barclays Global Inflation linked US Tips index	-0.40	0.85	-0.63	0.63	0.27	4.27
-	-	Fire Fighters short term	0.26	0.46	0.71	n/a	n/a	n/a
3.00	0.65	<b>Securities Lending</b>	n/a	n/a	n/a	n/a	n/a	n/a
461.00	100.00	<b>Total Portfolio</b>	2.74	7.69	13.49	6.03	9.67	6.06
		<b>Policy Benchmark</b>	3.09	7.87	13.18	6.02	9.86	5.99

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

## Investment Section

Schedule of Portfolio Returns FOVSF\*  
June 30, 2017

Schedule 1C

Assets (\$MM)	% Total	Asset Class	3 Mos	YTD	1 YR	3 YRS	5 YRS	10 YRS
			Apr-17 Jun-17	Jan-17 Jun-17	Jul-16 Jun-17	Jul-14 Jun-17	Jul-12 Jun-17	Jul-07 Jun-17
103.00	34.11	<b>U.S. Equities</b>	3.02	8.91	18.63	9.23	14.70	7.34
		Russell 3000/S&P500	3.02	8.93	18.51	9.10	14.58	7.24
					n/a	n/a	n/a	n/a
71.00	23.51	<b>Total International Developed Markets</b>	9.65	23.04	29.78	3.54	9.34	0.63
		MSCI EAFE Benchmark	6.12	13.81	20.27	1.15	8.69	1.03
21.00	6.95	<b>Total Emerging Markets</b>	6.35	18.74	23.82	-0.58	2.36	0.37
		MSCI Emerging Markets	6.27	18.43	23.75	1.07	3.96	1.91
0.50	0.17	<b>Total Real Estate Equity Sec.(REITS)</b>	2.01	3.88	1.36	5.57	8.04	5.34
		DJ US SELECT REAL ESTATE SEC INDEX	1.64	1.36	-2.43	8.02	8.97	5.32
104.00	34.44	<b>Total structured Fixed Income</b>	1.05	2.09	-0.43	2.98	3.23	5.84
		NYC Core Plus Five Index	1.82	2.82	-0.21	2.97	2.68	5.20
1.50	0.50	<b>Total Tips Managers</b>	-0.40	0.86	-0.67	0.77	0.47	4.49
		Barclays Global Inflation linked US Tips index	-0.40	0.85	-0.63	0.63	0.27	4.27
-	-	Fire Officers' short term	0.26	0.46	0.72	0.40	0.31	0.88
1.00	0.33	<b>Securities Lending</b>	n/a	n/a	n/a	n/a	n/a	n/a
302.00	100.00	<b>Total Portfolio</b>	3.46	8.94	14.48	6.24	10.14	6.17
		<b>Policy Benchmark</b>	3.09	7.87	13.18	6.02	9.86	5.98

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



## Investment Section

## New York City Fire Pension Funds

List of 50 Largest Bond Holdings as of June 30, 2017

Schedule 2A

<u>CUSIP Number</u>	<u>Security Description</u>	<u>Maturity Date</u>	<u>Interest Rate</u>	<u>Par Value</u>	<u>Fair Value</u>
'912810RG5	US TREASURY N/B	5/15/2044	3.38%	26,000,000	28,722,980
'912810RD2	US TREASURY N/B	11/15/2043	3.75%	20,150,000	23,686,527
'21H030674	GNMA II TBA 30 YR 3	2/20/2047	3.00%	18,576,000	18,763,246
'912828P79	US TREASURY N/B	2/28/2023	1.50%	18,000,000	17,523,360
'36179S2P1	GNMA II POOL MA43	4/20/2047	3.50%	16,623,578	17,236,489
'912828K74	US TREASURY N/B	8/15/2025	2.00%	16,420,000	16,141,024
'912828J27	US TREASURY N/B	2/15/2025	2.00%	15,040,000	14,833,802
'912828V23	US TREASURY N/B	12/31/2023	2.25%	14,425,000	14,568,673
'36179TAL9	GNMA II POOL MA43	6/20/2047	4.00%	11,500,000	12,140,780
'02R030673	FHLMC TBA 30 YR 3	2/15/2047	3.00%	11,705,000	11,679,366
'912810RD2	US TREASURY N/B	11/15/2043	3.75%	9,800,000	11,519,998
'912828D56	US TREASURY N/B	8/15/2024	2.38%	11,250,000	11,421,338
'912810RE0	US TREASURY N/B	2/15/2044	3.63%	9,900,000	11,407,869
'912810RG5	US TREASURY N/B	5/15/2044	3.38%	9,900,000	10,936,827
'912810RH3	US TREASURY N/B	8/15/2044	3.13%	10,000,000	10,565,200
'912828B66	US TREASURY N/B	2/15/2024	2.75%	10,110,000	10,519,152
'912810R9	US TREASURY N/B	11/15/2044	3.00%	10,000,000	10,318,800
'912810RM2	US TREASURY N/B	5/15/2045	3.00%	10,000,000	10,304,300
'912810RP5	US TREASURY N/B	11/15/2045	3.00%	10,000,000	10,299,600
'01F022477	FNMA TBA 15 YR 2.5	2/25/2032	2.50%	10,144,000	10,196,749
'912810RN0	US TREASURY N/B	8/15/2045	2.88%	10,000,000	10,055,900
'3128MJZQ6	FED HM LN PC POOL	3/1/2047	3.00%	9,767,769	9,753,020
'912828V98	US TREASURY N/B	2/15/2027	2.25%	9,750,000	9,704,663
'912810RB6	US TREASURY N/B	5/15/2043	2.88%	9,600,000	9,693,024
'912810RV2	US TREASURY N/B	2/15/2047	3.00%	9,285,000	9,578,035
'912810RU4	US TREASURY N/B	11/15/2046	2.88%	9,235,000	9,285,885
'912810RK6	US TREASURY N/B	2/15/2045	2.50%	9,900,000	9,239,076
'912810RC4	US TREASURY N/B	8/15/2043	3.63%	8,000,000	9,203,120
'01F032674	FNMA TBA 30 YR 3.5	7/25/2046	3.50%	8,694,865	8,930,235
'912810RQ3	US TREASURY N/B	2/15/2046	2.50%	9,200,000	8,563,176
'912810RS9	US TREASURY N/B	5/15/2046	2.50%	9,200,000	8,559,220
'912810RN0	US TREASURY N/B	8/15/2045	2.88%	8,460,000	8,507,291
'912810RV2	US TREASURY N/B	2/15/2047	3.00%	8,195,000	8,453,634
'912828S68	US TREASURY N/B	7/31/2018	0.75%	8,500,000	8,450,190
'912810RT7	US TREASURY N/B	8/15/2046	2.25%	9,250,000	8,143,608
'912828L40	US TREASURY N/B	9/15/2018	1.00%	8,000,000	7,970,000
'912828UN8	US TREASURY N/B	2/15/2023	2.00%	7,960,000	7,963,741
'912828T42	US TREASURY N/B	9/30/2018	0.75%	8,000,000	7,943,440
'912828T83	US TREASURY N/B	10/31/2018	0.75%	8,000,000	7,938,160
'912828WJ5	US TREASURY N/B	5/15/2024	2.50%	7,715,000	7,904,558
'912810QZ4	US TREASURY N/B	2/15/2043	3.13%	7,000,000	7,395,360
'912828VS6	US TREASURY N/B	8/15/2023	2.50%	6,980,000	7,163,504
'912828S92	US TREASURY N/B	7/31/2023	1.25%	7,500,000	7,160,775
'912828WS5	US TREASURY N/B	6/30/2019	1.63%	7,000,000	7,031,150
'912828B33	US TREASURY N/B	1/31/2019	1.50%	7,000,000	7,014,210
'912828XS4	US TREASURY N/B	5/31/2019	1.25%	7,000,000	6,983,060
'912810QY7	US TREASURY N/B	11/15/2042	2.75%	6,950,000	6,867,504
'912828VB3	US TREASURY N/B	5/15/2023	1.75%	6,950,000	6,846,862
'912828WJ5	US TREASURY N/B	5/15/2024	2.50%	6,570,000	6,731,425
'912828H52	US TREASURY N/B	1/31/2020	1.25%	6,750,000	6,708,623

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

## Investment Section

## New York City Fire Pension Funds

## List of 50 Largest Stock Holdings as of June 30, 2017

Schedule 3A

<u>CUSIP Number</u>	<u>Security Name</u>	<u>Shares/Par Value</u>	<u>Fair Value</u>
'037833100	APPLE INC	245,449	35,349,565
'594918104	MICROSOFT CORP	352,045	24,266,462
'023135106	AMAZON.COM INC	18,734	18,134,512
'478160104	JOHNSON + JOHNSON	126,634	16,752,412
'30303M102	FACEBOOK INC A	109,625	16,551,183
'30231G102	EXXON MOBIL CORP	199,137	16,076,330
'084670702	BERKSHIRE HATHAWAY INC CL B	90,311	15,295,974
'46625H100	JPMORGAN CHASE + CO	166,127	15,184,008
'02079K305	ALPHABET INC CL A	13,989	13,005,294
'02079K107	ALPHABET INC CL C	14,222	12,923,958
'949746101	WELLS FARGO + CO	211,114	11,697,827
'060505104	BANK OF AMERICA CORP	468,037	11,354,578
'369604103	GENERAL ELECTRIC CO	408,354	11,029,642
'00206R102	AT+T INC	288,630	10,890,010
'742718109	PROCTER + GAMBLE CO/THE	120,164	10,472,293
'828806109	SIMON PROPERTY GROUP INC	63,468	10,266,584
'717081103	PFIZER INC	277,925	9,335,501
'166764100	CHEVRON CORP	89,110	9,296,846
'172967424	CITIGROUP INC	130,073	8,699,282
'437076102	HOME DEPOT INC	56,484	8,664,646
'20030N101	COMCAST CORP CLASS A	221,410	8,617,277
'92343V104	VERIZON COMMUNICATIONS INC	191,256	8,541,493
'718172109	PHILIP MORRIS INTERNATIONAL	72,689	8,537,323
'91324P102	UNITEDHEALTH GROUP INC	45,051	8,353,356
'58933Y105	MERCK + CO. INC.	128,717	8,249,473
'92826C839	VISA INC CLASS A SHARES	86,920	8,151,358
'191216100	COCA COLA CO/THE	180,594	8,099,641
'713448108	PEPSICO INC	67,747	7,824,101
'254687106	WALT DISNEY CO/THE	73,633	7,823,506
'458140100	INTEL CORP	221,643	7,478,235
'17275R102	CISCO SYSTEMS INC	236,613	7,405,987
'02209S103	ALTRIA GROUP INC	91,991	6,850,570
'68389X105	ORACLE CORP	135,269	6,782,388
'95040Q104	WELLTOWER INC	84,440	6,320,334
'459200101	INTL BUSINESS MACHINES CORP	40,429	6,219,193
'031162100	AMGEN INC	35,082	6,042,173
'29476L107	EQUITY RESIDENTIAL	89,820	5,912,851
'580135101	MCDONALD S CORP	38,430	5,885,939
'88579Y101	3M CO	27,515	5,728,348
'G5960L103	MEDTRONIC PLC	64,516	5,725,795
'74340W103	PROLOGIS INC	96,473	5,657,177
'00287Y109	ABBVIE INC	75,990	5,510,035
'929042109	VORNADO REALTY TRUST	57,745	5,422,256
'57636Q104	MASTERCARD INC A	44,320	5,382,664
'097023105	BOEING CO/THE	26,796	5,298,909
'758849103	REGENCY CENTERS CORP	83,010	5,199,746
'931142103	WAL MART STORES INC	68,639	5,194,600
'958102105	WESTERN DIGITAL CORP	57,535	5,097,601
'438516106	HONEYWELL INTERNATIONAL INC	35,734	4,762,985
'369550108	GENERAL DYNAMICS CORP	23,880	4,730,628

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

## Investment Section

## New York City Fire Pension Funds

## Schedule of Broker's Commissions QPP

## Schedule 4A

For Fiscal Year ended June 30, 2017

Brokerage Firm	Number of Shares		Average Cost Per Share
	Traded	Commission Paid	
ABG SECURITIES AS (STOCKHOLM)	9,715.17	230.08	0.02
ABG SECURITIES LIMITED	15,628.87	106.38	0.01
ABLE NOSER	83,389.00	3,711.00	0.04
ABN AMRO CLEARING BANK N.V.	103,525.10	870.19	0.01
ACADEMY SECURITIES INC	27,160.00	655.00	0.02
AMERICAN PORTFOLIOS FINANIAL	657.00	33.00	0.05
ANCORA SECIRITIES INC	23,070.00	1,132.00	0.05
ARCTIC SECURITIES ASA SLUTTSED	6,865.75	31.76	0.00
AS LHV PANK	2,443.25	7.82	0.00
AUTONOMOUS	908.00	31.78	0.04
AUTONOMOUS LLP	4,081.28	127.41	0.03
AUTONOMOUS RESEARCH US LP	28,506.25	638.50	0.02
AUTREPAT-DIV RE	7,430.76	400.84	0.05
AUTREPAT-DIV RE TOTAL	2,074.36	33.07	0.02
AVONDALE PARTNERS LLC	13,425.00	458.00	0.03
B.RILEY & CO., LLC	46,050.00	1,660.00	0.04
BANCO PACTUAL S.A.	195,761.55	949.45	0.00
BANCO SANTANDER CENTRAL HISPANO	446,069.01	2,133.59	0.00
BANK J.VONTOBEL UND CO. AG	6,340.23	1,085.33	0.17
BARCLAYS CAPITAL	313,315.97	5,705.98	0.02
BARCLAYS CAPITAL INC./LE	401,599.96	3,821.69	0.01
BARCLAYS CAPITAL LE	1,861,803.19	25,637.54	0.01
BARCLAYS CAPITAL SECURITES LIMITED	4,261.86	75.64	0.02
BARCLAYS CAPITAL TOTAL	80,420.09	3,272.99	0.04
BARRINGTON RESEARCH ASSOCIATES	9,765.00	442.00	0.05
BB&T SECURITIES, LLC	8,744.00	256.00	0.03
BERENBERG	425.00	14.88	0.04
BLUEFIN RESEARCH PARTNER INC.	11,300.00	565.00	0.05
BMO CAPITAL MARKETS	80,812.14	2,694.33	0.03
BNP PARIBAS SECURITIES (ASIA) LTD.	67,223.11	5,862.42	0.09
BNP PARIBAS SECURITIES SERVICE	1,224,154.57	3,104.50	0.00
BNP PARIBAS SECURITIES SERVICES	339,788.26	984.36	0.00
BNP PARIBAS SECURITIES SERVICES AUS	74,219.58	305.88	0.00
BNP PARIBAS SECURITIES SERVICES SA	10,074,225.58	5,612.64	0.00
BNY CONVERGEX EXECUTION SOLUTIONS LLC	1,006,348.09	1,798.31	0.00
BRADESCO S.A. CTVM	125,875.66	801.39	0.01
BREAN CAPITAL LLC	6,229.00	116.00	0.02
BROADCORT CAPITAL (THRU ML)	7,120.00	213.00	0.03
BROADCORT CAPITAL CORP	2,753.00	96.00	0.03
BTIG, LLC	152,415.59	5,114.55	0.03
BUCKINGHAM RESEARCH GROUP INC	72,515.00	3,626.00	0.05
BURKE ANDQUICK PARTNERS LLC	1,899.00	66.00	0.03
CABRERA CAPITAL MARKETS	17,694.00	475.00	0.03
CABRERA CAPITAL MARKETS LLC	66,287.95	1,095.88	0.02
CANACCORD GENUITY INC.	83,523.32	3,063.15	0.04
CANACCORD GENUITY LIMITED	2,627.46	11.80	0.00
CANADIAN IMPERIAL BANK OF COMMERCE	584,718.75	1,304.43	0.00
CANTOR CLEARING SERVICES	11,115.00	222.00	0.02

## Investment Section

## New York City Fire Pension Funds

## Schedule of Broker's Commissions QPP

## Schedule 4A

For Fiscal Year ended June 30, 2017

Brokerage Firm	Number of Shares		Average Cost Per Share
	Traded	Commission Paid	
CANTOR FITZGERALD & CO / CASTLEOAK SEC	326,908.00	2,945.00	0.01
CANTOR FITZGERALD + CO.	106,750.00	2,763.00	0.03
CANTOR FITZGERALD EUROPE	56,714.51	389.86	0.01
CANTOR FITZGERALD/CANTOR CLEARING SERV	89,776.73	536.34	0.01
CAPITAL INSTITUTIONAL SVCS INC EQUITIES	44,116.00	1,763.00	0.04
CAPITAL MARKETS BROKERS LIMITED	233,503.06	695.22	0.00
CARNEGIE BANK A.S.	17,871.24	66.85	0.00
CARNEGIE INVESTMENT BANK AB	2,848.83	74.94	0.03
CARNEGIE SECURITIES FINLAND	9,321.05	140.63	0.02
CASABLANCA FINANCE MARKETS	11,767.84	1,052.63	0.09
CESKA SPORITELNA	14,430.60	286.51	0.02
CHEEVERS & CO. INC.	369,817.00	11,404.00	0.03
CHINA INTERNATIONAL CAPITAL CO	1,164,535.05	4,005.08	0.00
CIMB SECURITIES (HK) LTD.	889,482.25	3.05	0.00
CITATION GROUP	28,086.00	1,404.00	0.05
CITIBANK CANADA	24,629.89	564.15	0.02
CITIBANK N.A.	25,086.63	699.85	0.03
CITIBANK OF COLOMBIA	1,802.57	22.58	0.01
CITIGROUP GLOBAL MARKETS ASIA LTD	36,189.77	326.83	0.01
CITIGROUP GLOBAL MARKETS AUSTRALIA PTY	156.96	1.45	0.01
CITIGROUP GLOBAL MARKETS INC	8,737,737.30	25,517.82	0.00
CITIGROUP GLOBAL MARKETS INDIA	160,672.83	308.53	0.00
CITIGROUP GLOBAL MARKETS LIMITED	4,838,603.51	32,922.53	0.01
CITIGROUP GLOBAL MARKETS TAIWAN	260,459.81	222.69	0.00
CJS SECURITIES INC	11,051.00	532.00	0.05
CL SECURITIES TAIWAN COMPANY LIMITED	85,781.95	600.44	0.01
CLSA AMERICAS	2,500.00	87.50	0.04
CLSA AUSTRALIA PTY LTD	555,206.74	1,031.32	0.00
CLSA SECURITIES KOREA LTD.	981.43	227.35	0.23
CLSA SECURITIES MALAYSIA SDN BHD	696,630.13	168.83	0.00
CLSA SINGAPORE PTE LTD.	3,000,113.03	13,094.76	0.00
COMPASS POINT RESEARCH + TRADING, LLC	21,148.00	740.00	0.03
CONVERGEX EXECUTION SOLUTIONS LLC	8,058,092.38	28,961.83	0.00
CONVERGEX LLC	1,262,688.00	33,683.00	0.03
CORNERSTONE MACRO LLC	3,255.00	163.00	0.05
CORREVAL S.A.	19,510.68	212.34	0.01
COWEN AND COMPANY, LLC	235,861.37	8,705.09	0.04
CRAIG - HALLUM	31,970.00	1,186.00	0.04
CREDIBOLSA SOCIEDAD AGENTE	65,040.81	1,057.30	0.02
CREDIT LYONNAIS SECURITIES (ASIA)	94,197.85	157.10	0.00
CREDIT LYONNAIS SECURITIES (USA) INC	107,992.84	434.52	0.00
CREDIT LYONNAIS SECURITIES INDIA	1,072,099.65	10,261.55	0.01
CREDIT LYONNAIS SECURITIES(ASIA)	10,679,590.68	9,207.59	0.00
CREDIT SUISSE FIRST BOSTON	5,222,078.70	4,529.65	0.00
CREDIT SUISSE FIRST BOSTON (EUROPE)	36,129.59	1,864.70	0.05
CREDIT SUISSE LONDON BRANCH (GFX)	63,412.12	247.40	0.00
CREDIT SUISSE SECS INDIA PRIVATE LTD	504,662.25	2,189.44	0.00
CREDIT SUISSE SECURITIES (EUROPE) LTD	1,738,508.70	9,542.77	0.01

## Investment Section

## New York City Fire Pension Funds

## Schedule of Broker's Commissions QPP

## Schedule 4A

For Fiscal Year ended June 30, 2017

Brokerage Firm	Number of Shares		Average Cost Per Share
	Traded	Commission Paid	
CREDIT SUISSE SECURITIES (USA) LLC	17,482,016.42	28,605.62	0.00
CS FIRST BOSTON (HONG KONG) LIMITED	508,972.47	1,761.99	0.00
CSFB AUSTRALIA EQUITIES LTD	325,964.89	1,105.58	0.00
CUTTONE & CO.	9,599.00	192.00	0.02
DAEWOO SECURITIES CO LTD	9,348.53	77.27	0.01
DAIWA SBCM EUROPE	44,264.44	1,475.41	0.03
DAIWA SECURITIES (HK) LTD.	558,902.81	462.81	0.00
DAIWA SECURITIES AMERICA INC	168,152.62	4,490.73	0.03
DAIWA SECURITIES COMPANY LTD	5,371.11	1,119.96	0.21
DAIWA SECURITIES SB CAPITAL MARKETS	12,574.86	539.20	0.04
DANSKE BANK A.S.	65,625.34	2,594.78	0.04
DAVIDSON D.A. + COMPANY INC.	32,752.00	1,275.00	0.04
DAVY STOCKBROKERS	122,856.01	970.19	0.01
DBS VICKERS (HONG KONG) LIMITED	47,374.76	643.32	0.01
DBS VICKERS SECURITIES (SINGAPORE)	153,749.17	883.07	0.01
DEN NORSKE BANK TOTAL	108,572.03	248.34	0.00
DEUTSCHE BANK AG LONDON	801,111.59	5,445.47	0.01
DEUTSCHE BANK SECURITIES INC	1,709,391.81	17,439.92	0.01
DEUTSCHE MORGAN GRENFELL SECS	98,815.14	325.95	0.00
DEUTSCHE SECURITIES ASIA LIMITED	1,261,746.49	5,362.61	0.00
DOUGHERTY & COMPANY LLC	8,085.00	249.00	0.03
DREXEL HAMILTON LLC	8,102.75	201.79	0.02
DSP MERRILL LYNCH LTD	468,788.60	3,999.29	0.01
ERSTE AND STEIERMAERKISCHE BANK	17,570.02	1,239.61	0.07
ERSTE BANK BEFECTETESI RT. TOTAL	54,254.20	527.77	0.01
EUROCLEAR BANK S.A / N.V	19,572.74	61.52	0.00
EUROMOBILIARE SIM S.P.A.	12,276.50	63.80	0.01
EXANE S.A.	349,041.51	5,814.97	0.02
FBR CAPITAL MARKETS & CO.	137,586.79	4,210.90	0.03
FEDERATED MANAGED GROWTH + INCOME 17	96,002.00	720.00	0.01
FIDELITY CAPITAL MARKETS	5,940.00	208.00	0.04
FIDELITY CLEARING CANADA ULC	51,553.07	1,031.06	0.02
FIG PARTNERS LLC	5,950.00	119.00	0.02
FINANCIAL BROKERAGE GROUP (FBG)	724,393.96	2,432.38	0.00
FIRST ANALYSIS SECURITIES CORP	6,103.00	272.00	0.04
FLOW CORRETORA DE MERCADORIAS LTDA.	86,249.91	479.06	0.01
FRANK RUSSELL SEC/BROADCORT CAP CLEARIN	71,385.00	1,785.00	0.03
GOLDMAN SACHS (ASIA) L.L.C.	649,091.70	687.35	0.00
GOLDMAN SACHS (INDIA)	686,767.81	2,290.47	0.00
GOLDMAN SACHS + CO	6,381,111.65	46,751.56	0.01
GOLDMAN SACHS INTERNATIONAL	1,219,975.51	6,057.12	0.00
GOLDMAN SACHS(ASIA)L.L.C.	588,121.21	199.90	0.00
GOODBODY STOCKBROKERS	289,389.14	978.77	0.00
GREEN STREET ADVISORS (UK) LTD	28,840.98	422.08	0.01
GREEN STREET TRADING, LLC	379,491.55	15,090.23	0.04
GREENTREE BROKERAGE SERVICES INC	26,900.00	538.00	0.02
GUGGENHEIM CAPITAL MARKETS LLC	49,522.00	1,461.00	0.03
GUZMAN AND COMPANY	37,322.00	746.00	0.02

## Schedule of Broker's Commissions QPP

## Schedule 4A

For Fiscal Year ended June 30, 2017

Brokerage Firm	Number of Shares		Average Cost Per Share
	Traded	Commission Paid	
HEIGHT SECURITIES, LLC	5,237.00	183.00	0.03
HIBERNIA SOUTHCOAST CAPITAL INC	25,696.00	1,027.00	0.04
HONGKONG AND SHANGHAI BANKING CORP	3,675,344.84	5,380.95	0.00
HSBC BANK PLC	2,663,716.42	16,880.70	0.01
HSBC BANK USA	14,309.34	95.12	0.01
HSBC MEXICO S A INSTITUCION DE BANCA MLT	142,407.53	473.11	0.00
HSBC SECURITIES (USA) INC.	3,071,028.83	4,031.04	0.00
ICAP DO BRASIL DTVM LTDA	734,365.31	3,853.90	0.01
ICBC FINCL SVCS, EQUITY CLEARANCE	463,888.78	1,393.54	0.00
ICICI BROKERAGE SERVICES	104,046.75	311.78	0.00
IM TRUST S.A. CORREDORES DE BOLSA	968,655.63	416.73	0.00
IMPERIAL CAPITAL LLC	3,497.00	174.85	0.05
INDUSTRIAL AND COMMERCIAL BANK	2,271.00	50.00	0.02
INSTINET	1,370,192.61	14,435.84	0.01
INSTINET AUSTRALIA CLEARING SRVC PTY LTD	172,842.00	220.97	0.00
INSTINET LLC	1,031,183.87	5,473.28	0.01
INSTINET PACIFIC LIMITED	23,849,834.68	10,251.55	0.00
INSTINET SINGAPORE SERVICES PT	680,115.08	1,045.37	0.00
INSTINET	23,483.75	131.47	0.01
INSTINET U.K. LTD	8,181,060.27	32,638.37	0.00
INTL FC STONE SECURITIES INC	1,897.00	94.85	0.05
INVESTEC BANK PLC	205,013.69	1,115.18	0.01
INVESTEC SECURITIES LTD	52,711.82	121.10	0.00
INVESTMENT TECHNOLOGY GROUP INC.	249,660.55	4,031.59	0.02
INVESTMENT TECHNOLOGY GROUP LTD	2,264,556.39	10,052.38	0.00
ISI GROUP INC	1,429,551.90	24,409.24	0.02
ITG AUSTRALIA LTD.	1,184,005.82	718.29	0.00
ITG CANADA	44,763.18	274.02	0.01
ITG INC.	366,106.67	2,789.85	0.01
ITG SECURITIES (HK) LTD	3,700,662.43	1,667.03	0.00
IVY SECURITIES, INC.	814,217.25	25,246.70	0.03
J P MORGAN INDIA PRIVATE LTD	294,212.20	888.04	0.00
J P MORGAN SECURITIES INC	376,783.60	2,482.02	0.01
J.P MORGAN SECURITIES	22,933.83	22.45	0.00
J.P. MORGAN CLEARING CORP.	355,562.05	4,975.31	0.01
J.P. MORGAN SECURITIES (TAIWAN) LTD	2,802,390.62	2,422.53	0.00
J.P. MORGAN SECURITIES INC.	557,349.96	9,125.67	0.02
J.P.MORGAN SECURITIES(FAR EAST)LTD SEOUL	102,397.52	3,288.42	0.03
JANNEY MONTGOMERY, SCOTT INC	35,975.00	1,100.00	0.03
JEFFERIES + COMPANY INC	1,683,614.18	40,682.07	0.02
JEFFERIES INDIA PRIVATE LIMITED	293,674.12	1,017.48	0.00
JEFFERIES INTERNATIONAL LTD	9,728,286.67	9,888.10	0.00
JM FINANCIAL INSTITUTIONAL SECURITIES PR	137,502.55	1,030.68	0.01
JMP SECURITIES	43,373.12	1,466.07	0.03
JOH BERENBERG GOSSLER AND CO	53,803.76	2,747.69	0.05
JOHNSON RICE & COMPANY LLC	77,156.00	2,224.00	0.03
JONESTRADING INSTITUTIONAL SERVICES LLC	682,499.68	22,227.59	0.03
JP MORGAN SECURITIES AUSTRALIA LTD	157,557.92	207.59	0.00

## Investment Section

## New York City Fire Pension Funds

## Schedule of Broker's Commissions QPP

## Schedule 4A

For Fiscal Year ended June 30, 2017

Brokerage Firm	Number of Shares		Average Cost Per Share
	Traded	Commission Paid	
JP MORGAN SECURITIES PLC	3,559,343.36	25,206.52	0.01
JP MORGAN SECURITIES SINGAPORE	1,662,492.77	374.66	0.00
JPMORGAN SECURITIES(ASIA PACIFIC)LTD	8,114,023.58	3,914.82	0.00
KAS-ASSOCIATIE N.V.	141,809.74	562.00	0.00
KCG AMERICAS LLC	121,477.19	894.05	0.01
KEEFE BRUYETTE + WOODS INC	224,830.00	7,647.00	0.03
KEMPEN + CO N.V.	45,892.82	1,105.67	0.02
KEPLER EQUITIES PARIS	13,811.30	561.09	0.04
KESTREL CAPITAL EAST AFRICA LTD	511,364.04	1,136.03	0.00
KEYBANC CAPITAL MARKETS INC	444,948.89	13,918.94	0.03
KING, CL,& ASSOCIATES, INC	774,858.00	31,134.00	0.04
KNIGHT EQUITY MARKETS L.P.	31,654.00	664.00	0.02
KNIGHT SECURITIES INTERNATIONAL	11,146.56	163.09	0.01
KOREA INVESTMENT AND SECURITIES CO., LTD	48,557.23	2,224.55	0.05
LADENBURG THALMAN + CO	4,585.00	92.00	0.02
LARRAIN VIAL	2,451,286.66	358.92	0.00
LEERINK PARTNERS LLC	24,032.00	800.00	0.03
LEK SECURITIES CORP	3,539.00	148.00	0.04
LIBERUM CAPITAL LIMITED	14,713.26	573.88	0.04
LIQUIDNET EUROPE LIMITED	2,615.92	302.27	0.12
LIQUIDNET INC	1,232,602.97	40,290.88	0.03
LONGBOW SECURITIES LLC	4,190.00	210.00	0.05
LOOP CAPITAL MARKETS	2,946,689.46	63,644.73	0.02
LOOP CAPITAL MARKETS LLC	203,303.50	1,208.24	0.01
LOOP CAPITAL MARKETS	98,145.79	1,693.71	0.02
LUMINEX TRADING AND ANALYTICS	14,567.48	168.05	0.01
MACQUARIE BANK LIMITED	9,400,075.22	17,213.74	0.00
MACQUARIE CAPITAL (EUROPE) LTD	76,595.89	583.39	0.01
MACQUARIE CAPITAL (USA) INC	102,080.43	1,787.86	0.02
MACQUARIE SECURITIES (INDIA) PVT LTD	31,895.16	1,662.63	0.05
MACQUARIE SECURITIES (USA) INC	17,875.77	743.49	0.04
MACQUARIE SECURITIES KOREA LIMITED	15,567.73	4,104.90	0.26
MACQUARIE SECURITIES LTD SEOUL	10,968.26	1,260.81	0.11
MAXIM GROUP	40,526.00	1,395.00	0.03
MERRILL LYNCH AND CO INC	390,928.63	9,370.62	0.02
MERRILL LYNCH INTERNATIONAL	18,720,605.21	53,830.78	0.00
MERRILL LYNCH PIERCE FENNER + SMITH INC	6,171,198.79	41,910.27	0.01
MERRILL LYNCH PIERCE FENNER AND S	1,222,689.46	2,560.92	0.00
MERRILL LYNCH PROFESSIONAL CLEARING COR	77,485.00	2,058.00	0.03
MERRILL LYNCH, PIERCE FENNER SMITH	87,320.00	4,064.00	0.05
MIRAE ASSET DAEWOO CO., LTD.	8,249.55	734.28	0.09
MISCHLER FINANCIAL GROUP, INC-EQUITIES	32,681.00	389.00	0.01
MITSUBISHI UFJ SECURITIES (USA)	3,116.93	69.25	0.02
MIZUHO INTERNATIONAL PLC	78,303.47	3,285.81	0.04
MIZUHO SECURITIES ASIA LIMITED	68.20	1.38	0.02
MIZUHO SECURITIES USA INC	106,335.87	3,198.34	0.03
MKM PARTNERS LLC	174,085.00	6,957.00	0.04
MONNESS, CRESPI, HARDT & CO. INC	58,214.00	2,911.00	0.05



## Schedule of Broker's Commissions QPP

## Schedule 4A

For Fiscal Year ended June 30, 2017

Brokerage Firm	Number of Shares		Average Cost Per Share
	Traded	Commission Paid	
MORGAN STANLEY AND CO INTERNATIONAL	3,969,516.72	10,701.04	0.00
MORGAN STANLEY CO INCORPORATED	7,805,714.01	52,318.48	0.01
MORGAN STANLEY H.K. SECURITIES LTD	640,080.02	17.73	0.00
MORGAN STANLEY INDIA COMPANY PVT LTD	38,085.96	250.71	0.01
MORGAN STANLEY TAIWAN LIMITED	1,029,759.77	2,296.46	0.00
NATIONAL FINANCIAL SERVICES CORP.	49,574.99	768.15	0.02
NATIONAL FINANCIAL SERVICES LLC	19,937.59	382.82	0.02
NATIXIS SECURITIES	2,752.98	332.95	0.12
NEEDHAM +COMPANY	55.00	2.20	0.04
NEEDHAM AND COMPANY LLC	175,011.00	5,752.00	0.03
NESBITT BURNS	59,540.93	1,427.99	0.02
NH INVESTMENT AND SECURITIES CO.,LTD.	115,526.39	915.81	0.01
NOBLE INTERNATIONAL INVESTMENTS INC.	5,555.00	157.00	0.03
NOMURA FINANCIAL ADVISORY + SEC INDIA	981,022.69	4,293.39	0.00
NOMURA FINANCIAL INVESTMENT KOREA CO L	36,266.86	125.87	0.00
NOMURA SECURITIES CO LTD	596,139.99	508.15	0.00
NORDEA BANK AB (PUBL), FINNISH BRANCH	15,591.27	73.90	0.00
NORDEA BANK FINLAND PLC	25,168.49	238.99	0.01
NORTHLAND SECURITIES INC.	35,382.00	1,011.00	0.03
NUMIS SECURITIES LIMITED	41,154.97	72.83	0.00
ODDO ET CIE	1,168.02	11.91	0.01
OPPENHEIMER + CO. INC.	85,144.87	4,022.59	0.05
ORD MINNETT LIMITED	2,174.76	16.83	0.01
OTR GLOBAL TRADING LLC	5,491.00	192.00	0.03
PAREL	25,166.32	783.86	0.03
PAVILION GLOBAL MARKETS LTD	91,096.36	2,337.45	0.03
PEEL HUNTLLP	64,495.34	264.69	0.00
PENSERRA SECURITIES	1,050,515.00	29,223.00	0.03
PENSERRA SECURITIES LLC	141,943.52	614.50	0.00
PERSHING LLC	609,404.25	4,497.83	0.01
PERSHING SECURITIES LIMITED	2,153,449.24	2,105.44	0.00
PICKERING ENERGY PARTNERS, INC	8,601.00	301.00	0.03
PIPER JAFFRAY	164,019.00	5,950.00	0.04
R.B.C. DOMINION SECURITIES CORPORATION	183.44	1.10	0.01
RAFFERTY CAPITAL MARKETS LLC	3,150.00	32.00	0.01
RAYMOND JAMES AND ASSOCIATES	428,695.21	16,184.71	0.04
RBC CAPITAL MARKETS	500,045.80	14,373.66	0.03
RBC DOMINION SECURITIES INC.	317,570.69	6,413.31	0.02
REDBURN PARTNERS LLP	531,431.73	3,751.25	0.01
RENAISSANCE CAPITAL (KENYA) LIMITED	760,603.76	712.26	0.00
RENAISSANCE MACRO SECURITIES, LLC	1,675.00	58.63	0.04
ROBERT W. BAIRD CO.INCORPORATE	301,658.35	10,606.89	0.04
ROSENBLATT SECURITIES LLC	597.00	26.87	0.05
ROTH CAPITAL PARTNERS LLC	1,610.00	64.00	0.04
ROYAL BANK OF CANADA EUROPE LTD	325,317.53	6,173.17	0.02
SAMSUNG SECURITIES CO LTD	57,713.59	3,222.21	0.06
SAMUEL A RAMIREZ & COMPANY INC	39,944.00	300.00	0.01
SANDLER ONEILL AND PARTNERS L.P.	90,313.00	3,183.00	0.04

## Investment Section

## New York City Fire Pension Funds

## Schedule of Broker's Commissions QPP

## Schedule 4A

For Fiscal Year ended June 30, 2017

Brokerage Firm	Number of Shares		Average Cost Per Share
	Traded	Commission Paid	
SANFORD C BERNSTEIN CO LLC	541,600.81	13,501.26	0.02
SANFORD C. BERNSTEIN AND CO. LLC	555,959.83	1,116.99	0.00
SANFORD C. BERNSTEIN LTD	826,988.03	11,621.98	0.01
SANTANDER SECURITIES SERVICES, S.A	6,145.60	247.25	0.04
SCOTIA CAPITAL (USA) INC	13,889.00	486.00	0.03
SCOTIA CAPITAL INC	57,248.52	329.33	0.01
SEAPORT GROUP SECURITIES, LLC	118,073.00	3,491.00	0.03
SG AMERICAS SECURITIES LLC	908,988.02	3,892.46	0.00
SG ASIA SECURITIES (INOIA) PVT LTD	428,563.13	1,453.14	0.00
SG SECURITIES (LONDON) LTD.	1,338,425.52	822.76	0.00
SG SECURITIES HK	24,290,992.83	8,409.19	0.00
SHENYIN AND WANGUO SECURITIES CO. LTD	2,841.85	3.05	0.00
SIDOTI + COMPANY LLC	43,236.00	1,751.00	0.04
SIEBERT CISNEROS SHANK & CO, LLC	867.00	26.00	0.03
SKANDINAVISKA ENSKILDA BANKEN LONDON	6,917.19	78.58	0.01
SMBC NIKKO CAPITAL MARKETS LIMITED	4,133.90	180.53	0.04
SMBC NIKKO SECURITIES (HONK KONG) LTD	1,079.50	3.58	0.00
SMBC SECURITIES INC	63.30	247.44	3.91
SOCIETE GENERALE LONDON BRANCH	2,491,265.52	15,326.61	0.01
STATE STREET BANK AND TRUST CO	135,820.60	2,090.11	0.02
STATE STREET GLOBAL MARKETS	1,674.14	33.48	0.02
STATE STREET GLOBAL MARKETS, LLC	161,663.02	3,344.46	0.02
STEPHENS, INC.	168,625.00	6,955.00	0.04
STERNE AGEE & LEACH INC.	7,840.00	392.00	0.05
STIFEL NICOLAUS + CO INC	869,453.40	31,288.70	0.04
STIFEL NICOLAUS EUROPE LIMITED	30,668.10	198.03	0.01
STOCK DISTRIBUTION	6,436.00	322.00	0.05
STUART FRANKEL + CO INC	44,109.00	1,761.00	0.04
STURDIVANT AND CO., INC.	108,250.00	5,413.00	0.05
SUNTRUST CAPITAL MARKETS INC	225,309.61	7,714.56	0.03
SVENSKA HANDELSBANKEN	1,787.54	57.31	0.03
TAIWAN DEPOSITORY CLEARING CORPORATIOI	355,995.08	2,298.88	0.01
TD INVESTMENTS LTD	6,826.45	156.17	0.02
TELSEY ADVISORY GROUP LLC	188,047.56	7,907.73	0.04
TERA MENKUL DEGERLER A.S.	251,572.27	494.15	0.00
THE HONGKONG AND SHANGHAI BANK	12,563.71	1,402.19	0.11
TORONTO DOMINION SECURITIES INC	44,984.75	258.51	0.01
TROIKA DIALOG UK LIMITED	53,051.13	417.67	0.01
TULLETT PREBON FINANCIAL SERVICES LLC	1,750.98	35.02	0.02
TUNISIE VALEURS	2,801.01	244.28	0.09
TUNISIE VALEURS	4,435.80	70.78	0.02
UBS AG	6,804,047.53	13,372.58	0.00
UBS LIMITED	70,523,175.18	33,356.10	0.00
UBS SECURITIES ASIA LTD	3,483,523.43	11,968.66	0.00
UBS SECURITIES CANADA INC	162,689.97	1,167.42	0.01
UBS SECURITIES INDIA PRIVATE LTD	68,276.57	137.19	0.00
UBS SECURITIES LLC	4,090,734.79	23,488.57	0.01
UBS SECURITIES PTE.LTD., SEOUL	10,239.12	2,434.23	0.24

## Investment Section

## New York City Fire Pension Funds

## Schedule of Broker's Commissions QPP

## Schedule 4A

For Fiscal Year ended June 30, 2017

Brokerage Firm	Number of Shares Traded	Commission Paid	Average Cost Per Share
UBS WARBURG AUSTRALIA EQUITIES	624,997.96	875.60	0.00
WALL STREET ACCESS	60,682.00	801.00	0.01
WARBURG DILLON READ SECURITIES CO	3,819.57	2.36	0.00
WEDBUSH MORGAN SECURITIES INC	77,849.00	1,898.00	0.02
WEEDEN + CO.	2,582,094.69	61,978.33	0.02
WELLS FARGO SECURITIES LLC	311,535.03	9,754.50	0.03
WILLIAM BLAIR & COMPANY L.L.C	162,328.61	6,474.52	0.04
WILLIAMS CAPITAL GROUP LP (THE)	589,938.16	15,920.99	0.03
WOLFE TRAHAN SECURITIES	32,161.00	1,418.00	0.04
WOOD AND COMPANY	20,294.65	424.00	0.02
WOORI INVESTMENT SECURITIES	5,653.79	417.01	0.07
WUNDERLICH SECURITIES INC	17,294.00	756.00	0.04
XP INVESTIMENTOS CCTVM SA	467,231.88	3,323.67	0.01
YAMNER & CO INC (CLS THRU 443)	74,960.00	750.00	0.01
GRAND TOTAL	387,056,828.43	1,638,821.05	0.00

# Investment Summary

## Fire Funds Combined

Year Ended June 30, 2017  
(Dollar amount in thousands)

	<u>Market Value</u>	<u>Percent of Total Market Value</u>
<b>Type of Investment:</b>		
<b>Short Term Investments:</b>		
Commercial paper	\$ 136,416	0.96%
Short Term Investments	101,101	0.71%
U.S. Treasury Bills	-	0.00%
Discount notes	-	0.00%
<b>Total Short-Term</b>	<b>237,517</b>	<b>1.67%</b>
<b>Debt securities:</b>		
U.S. Govt Securities and Agency	1,274,477	8.99%
Corporate and Other	946,424	6.67%
Promissory notes	-	0.00%
<b>Total debt securities</b>	<b>2,220,901</b>	<b>15.66%</b>
Equities Securities:	<b>1,878,641</b>	<b>13.25%</b>
Alternative investments	<b>2,391,376</b>	<b>16.86%</b>
Mutual funds-international equity	-	-
<b>Collective trust funds:</b>		
International Equity	2,445,255	17.25%
Fixed income	853,488	6.02%
Domestic equity	2,408,391	16.98%
Mortgage debt security	89,229	0.63%
Treasury Inflation -protected securities	546,177	3.85%
<b>Total collective trust funds:</b>	<b>6,342,540</b>	<b>44.73%</b>
<b>Collateral from Securities Lending</b>	<u>1,110,853</u>	<u>7.83%</u>
<b>Total Market Value</b>	<u><u>\$ 14,181,828</u></u>	<u><u>100.00%</u></u>

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



**Actuarial Section**

**Part IV**

**Fiscal Year Ended June 30, 2017**

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## OFFICE OF THE ACTUARY

255 GREENWICH STREET • 9TH FLOOR  
NEW YORK, NY 10007  
(212) 442-5775 • FAX: (212) 442-5777

SHERRY S. CHAN  
CHIEF ACTUARY

December 8, 2017

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

Re: Actuarial Information for the Comprehensive Annual Financial Report (CAFR) for the  
Fiscal Year Ended June 30, 2017

Dear Members of the Board of Trustees:

The financial objective of the New York City Fire Pension Fund (FIRE or the Plan) is to fund members' retirement benefits during their active service by establishing employer normal contribution rates that, expressed as a percentage of active member annualized covered payroll, would remain approximately level over the future working lifetimes of those active members and, together with member contributions and investment income, are intended to ultimately be sufficient to accumulate assets to pay benefits when due.

An actuarial valuation of the Plan is performed annually as of the second June 30 preceding each fiscal year to determine the Employer Contributions to be paid for that fiscal year (i.e. June 30, 2015 (Lag) actuarial valuation to determine Fiscal Year 2017 Employer Contributions (the Actuarial Contributions)).

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

For Fiscal Year 2017, the Actuarial Contributions to FIRE, are equal to those recommended by the Actuary of the New York City Retirement Systems and Pension Funds (the Actuary) and represent the Statutory Contributions.



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

On September 29, 2017, 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, 2017” (the Fiscal Year 2017 GASB67/68 Report). Appendix E of the Fiscal Year 2017 GASB67/68 Report contains information developed in accordance with GASB67 for FIRE.

### **Actuarial Assumptions and Methods**

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

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

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

The “Summary of Actuarial Assumptions and Methods in Effect for the June 30, 2015 (Lag) Actuarial Valuation” provided later in this Actuarial Section of the CAFR presents the 2016 A&M. There were no changes to any of the assumptions and methods since the prior year. These actuarial assumptions and methods (2016 A&M) used for funding purposes meet the parameters set forth by the Actuarial Standards of Practice (ASOPs).

### **Benefits and Census Data**

A summary of the benefits applicable to Plan members included in the June 30, 2015 (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, 2015 (Lag) actuarial valuation is included in this CAFR. A summary of the census data used in the June 30, 2014 (Lag) actuarial valuation of the Plan is available in the Fiscal Year 2016 CAFR.

### **Funded Status**

The Funded Status of the Plan is usually expressed by the relationship of Assets to Liabilities.

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

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

### **Presentation Style and Sources of Information**

The actuarial information herein is being presented in a manner believed to be consistent with the 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, 2015 (Lag) Actuarial Valuation.
- Active Member Valuation Data.
- Summary of Plan Membership.
- Retirees and Beneficiaries Added to and Removed from Rolls.
- Statutory vs. Actuarial Contributions.
- Funded Status Based on Entry Age Normal Cost Method.
- Comparative Summary of Accrued Liabilities Funded by Actuarial Value of Assets – Solvency Test.
- Contributions.

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

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

Board of Trustees  
New York City Fire Pension Fund  
December 8, 2017  
Page 5

### **Acknowledgment of Qualification**

I, Sherry S. Chan, am the Chief Actuary for, and independent of, the New York City Retirement Systems and Pension Funds. I am a Fellow of the Society of Actuaries, an Enrolled Actuary under the Employee Retirement Income and Security Act of 1974 (ERISA), a Member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of my knowledge, the results contained herein have been prepared in accordance with generally accepted actuarial principles and procedures and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Respectfully submitted,



Sherry S. Chan, FSA, EA, MAAA, FCA  
Chief Actuary

SSC:eh

Att:

cc: Mr. Stephen Cassidy - New York City Fire Pension Fund  
Mr. Albert Connolly - New York City Fire Pension Fund  
Ms. Maureen Dale - New York City Fire Pension Fund  
Mr. Edward Hue - New York City Office of the Actuary  
Ms. Marlene Markoe-Boyd - New York City Office of the Actuary  
Mr. Sam Rumley - New York City Office of the Actuary  
Mr. Michael Samet - New York City Office of the Actuary  
Keith Snow, Esq. - New York City Office of the Actuary  
Ms. Lei Tian - New York City Fire Pension Fund

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## NEW YORK CITY FIRE PENSION FUND

### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2015 (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 Actuary issued a Report entitled “Proposed Changes in Actuarial Assumptions and Methods for Determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2011 for the New York City Fire Department Pension Fund,” dated February 10, 2012. Components of the Actuary’s proposed changes required the enactment of legislation by the New York State Legislature and the Governor.

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

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

The actuarial assumptions and methods in effect for the June 30, 2015 (Lag) actuarial valuation are unchanged from those used in the June 30, 2014 (Lag) actuarial valuation.

- (2) The investment rate of return assumption is 7.0% per annum, net of investment expenses.

## NEW YORK CITY FIRE PENSION FUND

### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION (Cont'd)

- (3) The mortality tables for service and disability pensioners are based primarily on the experience of FIRE (the Base Tables) and the application of Mortality Improvement Scale MP-2015, published by the Society of Actuaries in October 2015. Sample probabilities are shown in Table 1a. Mortality tables for beneficiaries were also developed from experience review and application of Mortality Improvement Scale MP-2015. Sample probabilities are shown in Table 1b.
- (4) Active Service tables are used to estimate various withdrawals from Active Service. Sample probabilities are shown in Tables 2a, 2b, and 2c for members withdrawing from active service due to Death or Disability, in Table 3 for members withdrawing from Active Service without employer-provided benefits or with Vested Benefits, and in Table 4 for members withdrawing from Active Service for Service Retirement.
- (5) A Salary Scale is used to estimate salaries at termination, retirement, or death. Sample percentage increases are shown in Table 5. The Salary Scale includes a General Wage Increase (GWI) assumption of 3.0% per annum.
- (6) Overtime earnings are also used to estimate salaries at termination, retirement, or death. Sample percentage increases from the base salary in the Baseline Overtime assumptions and the Dual Overtime assumptions (i.e. the assumption for overtime for the years included in the calculations of Final Salary or Final Average Salary) are shown in Table 6.
- (7) The economic assumptions (i.e. the assumed investment return rate, GWI rate, and Cost-of-Living Adjustments (COLA)) were developed assuming a long-term Consumer Price Inflation (CPI) assumption of 2.5% per annum. The assumption is 1.5% per annum for Auto COLA and 2.5% per annum for escalation.
- (8) The valuation assumes a closed group of members.
- (9) Beginning with the June 30, 2010 (Lag) actuarial valuation, the Entry Age Normal (EAN) cost method of funding is utilized by the Plan's Actuary to calculate the contribution required of the employer under 2016 A&M.

## NEW YORK CITY FIRE PENSION FUND

### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION (Cont'd)

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 between the age of a member enters the plan and assumed exit age(s). The employer portion of this APVB allocated to a valuation year is the Normal Cost. The portion of this APVB 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 Value of Assets (AVA) is the Unfunded Actuarial Accrued Liability (UAAL).

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

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

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

The June 30, 2015 (Lag) actuarial valuation uses a June 30, 2015 valuation date to determine Fiscal Year 2017 Employer Contributions.

This methodology requires adjustments to determine the Fiscal Year 2017 Employer Contributions:

- a. Present Value of Future Salary (PVFS): The PVFS at June 30, 2015 is reduced by the value of salary projected to be paid during Fiscal Year 2016.
- b. Salary for Determining Employer Contributions: Salary used to determine the employer normal contribution is the salary projected to be paid during Fiscal Year 2017 to members on payroll at June 30, 2015.
- c. UAAL Payments: For determining the UAAL payments for Fiscal Year 2017, and to be consistent with the OYLM, the UAAL as of June 30, 2015 is adjusted by the discounted value of employer normal contributions paid during Fiscal Year 2016.



## NEW YORK CITY FIRE PENSION FUND

### SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION (Cont'd)

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

Beginning with the June 30, 2012 (Lag) actuarial valuation, the Actuarial Asset Valuation Method (AAVM) recognizes investment returns greater or less than expected over a period of six years.

In accordance with this AAVM, actual Unexpected Investment Returns (UIR) are phased into the AVA at rates of 15%, 15%, 15%, 15%, 20%, and 20% per year, respectively, (i.e. cumulative rates of 15%, 30%, 45%, 60%, 80%, and 100%).

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

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

Under this method, the 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 AVA of the FFVSF and FOVSF, respectively. Under the EAN, 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, 2015, used to determine the Fiscal Year 2017 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, 2014 (Lag) actuarial valuation.

**NEW YORK CITY FIRE PENSION FUND**

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS  
IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
(Cont'd)

<b>Table 1a</b>				
<b>Deaths among Service and Disability Pensioners</b>				
<b>Percentage of Pensioners Dying within Next Year</b>				
<b>Age</b>	<b>Service Pensioners</b>		<b>Disability Pensioners</b>	
	<b>Males</b>	<b>Females</b>	<b>Males</b>	<b>Females</b>
40	0.1056%	0.0611%	0.1704%	0.0684%
45	0.1506	0.0867	0.2032	0.1276
50	0.2224	0.1489	0.2786	0.2605
55	0.4717	0.2068	0.5768	0.4853
60	0.6537	0.3880	0.8385	0.6219
65	0.9652	0.5821	1.2047	0.9208
70	1.3393	0.8562	1.8182	1.5428
75	2.3286	1.3674	2.7349	2.7254
80	4.0628	2.5162	4.6181	4.6534
85	7.8661	4.3124	8.5694	7.7713
90	12.5513	7.7017	12.7036	12.7907
95	22.8589	14.5841	23.5614	18.4872
100	31.0742	21.4488	31.0742	21.6887
105	37.2467	27.4666	37.2467	27.4666
110	96.7583	96.7971	96.7583	96.7971
115	100.0000	100.0000	100.0000	100.0000

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

**NEW YORK CITY FIRE PENSION FUND**

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS  
IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
(Cont'd)

<p align="center"><b>Table 1b</b> <b>Deaths among Beneficiaries</b> <b>Percentage of Beneficiaries Dying within Next Year</b></p>		
<b>Age</b>	<b>Males</b>	<b>Females</b>
20	0.0219%	0.0126%
25	0.0294	0.0178
30	0.0400	0.0264
35	0.0708	0.0507
40	0.0925	0.0680
45	0.2600	0.1175
50	0.4086	0.2472
55	0.8133	0.4437
60	1.0773	0.7335
65	1.4468	1.0111
70	1.9534	1.3903
75	2.8711	2.1928
80	5.2649	3.7065
85	8.0972	6.1669
90	14.0544	10.5748
95	22.5336	17.8640
100	31.0742	21.4655
105	37.2467	27.4666
110	96.7583	96.7971
115	100.0000	100.0000

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

**NEW YORK CITY FIRE PENSION FUND**

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS  
IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
(Cont'd)

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

<sup>(1)</sup> Assumed to retire for service immediately at age 63.

**NEW YORK CITY FIRE PENSION FUND**

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS  
IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
(Cont'd)

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

<sup>(1)</sup> Assumed to retire for service immediately at age 63.

**NEW YORK CITY FIRE PENSION FUND**

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS  
IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
(Cont'd)

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

<sup>(1)</sup> Assumed to retire for service immediately at age 63.

**NEW YORK CITY FIRE PENSION FUND**

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS  
 IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
 (Cont'd)

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

**NEW YORK CITY FIRE PENSION FUND**

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS  
IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
(Cont'd)

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



**NEW YORK CITY FIRE PENSION FUND**

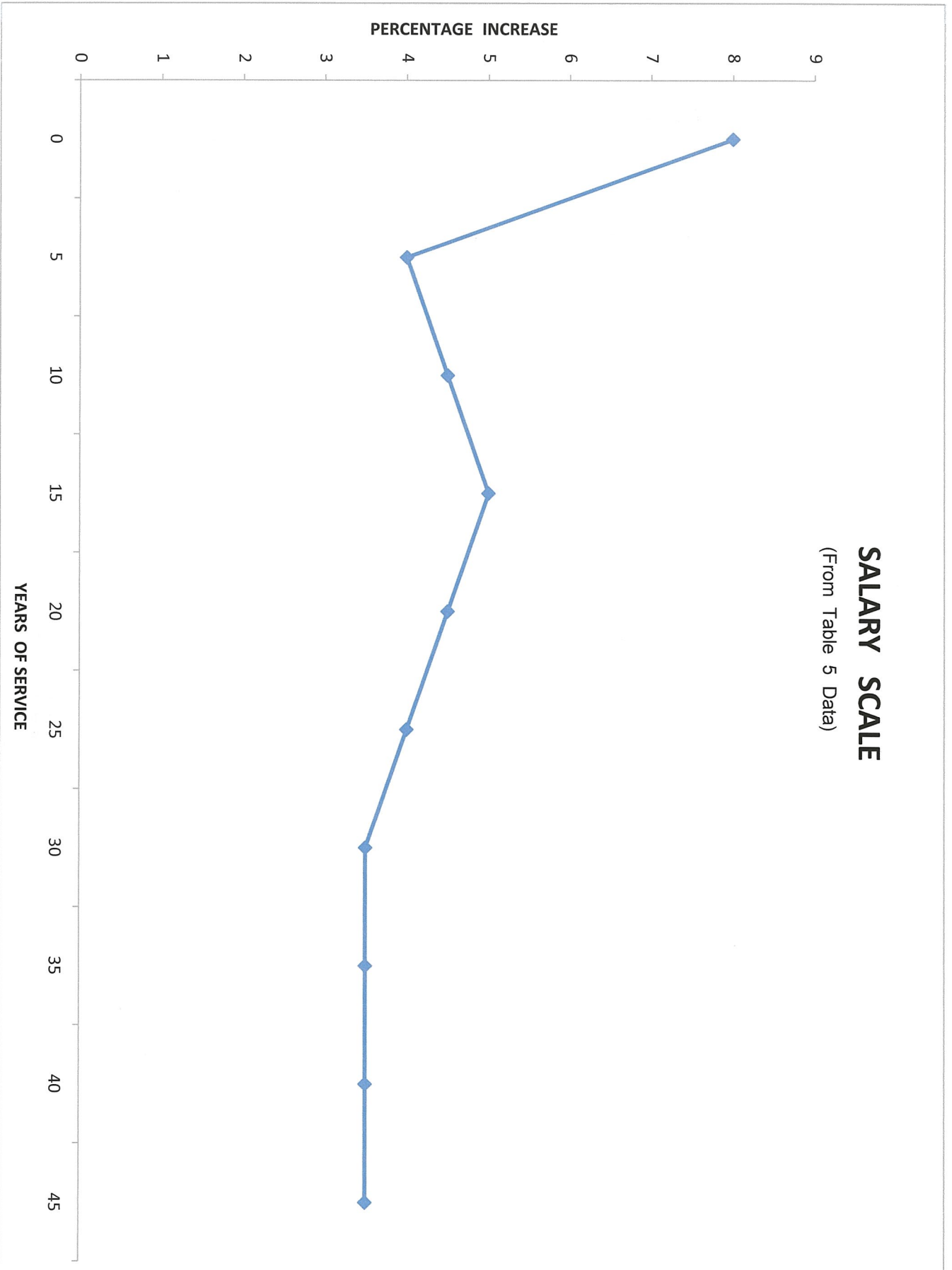
**SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS  
IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
(Cont'd)**

<b>Table 5 Salary Scale</b>	
<b>Years of Service</b>	<b>Assumed Annual Percentage Increases Within Next Year<sup>(1)</sup></b>
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>(1)</sup> Salary Scale includes a General Wage Increase assumption of 3.0% per annum.

# SALARY SCALE

(From Table 5 Data)



**NEW YORK CITY FIRE PENSION FUND**

SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS  
 IN EFFECT FOR THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
 (Cont'd)

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

**NEW YORK CITY FIRE PENSION FUND**

<b>Table 7</b>				
<b>ACTIVE MEMBER VALUATION DATA</b>				
<b>Valuation Date</b>	<b>Number</b>	<b>Annual Payroll<sup>(1)</sup></b>	<b>Annual Average Pay</b>	<b>Percentage Increase (Decrease) in Average Pay</b>
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) <sup>(2)</sup>	11,080	1,138,187,795	102,725	9.0
6/30/11 (Lag)	10,650	1,125,459,668	105,677	2.9
6/30/12 (Lag)	10,267	1,106,113,386	107,735	1.9
6/30/13 (Lag)	10,182	1,129,706,314	110,951	3.0
6/30/14 (Lag)	10,319	1,150,389,645	111,483	0.5
6/30/15 (Lag)	10,780	1,164,994,036	108,070	(3.1)

<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.

**NEW YORK CITY FIRE PENSION FUND**

As of the June 30, 2015 (Lag) and June 30, 2014 (Lag) actuarial valuations, the Plan's Membership consisted of:

<b>Table 8</b>		
<b>SUMMARY OF PLAN MEMBERSHIP</b>		
<b>Group</b>	<b>June 30, 2015 (Lag)</b>	<b>June 30, 2014 (Lag)</b>
Retirees and beneficiaries currently receiving benefits	16,710	16,763
Terminated vested members not yet receiving benefits	32	40
Other Inactives <sup>(1)</sup>	18	16
Active members	<u>10,780</u>	<u>10,319</u>
Total	27,540	27,138

<sup>(1)</sup> Represents members who are no longer on payroll but not otherwise classified.

**NEW YORK CITY FIRE PENSION FUND**

**Table 9**

<b>RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS</b>									
<b>Added to Rolls</b>			<b>Removed from Rolls</b>			<b>Rolls end of Year</b>			
<b>Year Ended</b>	<b>Number</b>	<b>Annual Allowances<sup>(1)</sup></b>	<b>Number</b>	<b>Annual Allowances</b>	<b>Number</b>	<b>Annual Allowances<sup>(2)</sup></b>	<b>% Increase In Annual Allowances</b>	<b>Average Annual Allowances</b>	
6/30/06	756	\$ 55,145,645	714	\$ 21,537,865	17,485	\$ 749,064,090	4.7%	\$ 42,840	
6/30/07	777	71,664,072	783	26,221,335	17,479	794,506,827	6.1	45,455	
6/30/08	616	62,100,681	691	23,260,349	17,404	833,347,159	4.9	47,883	
6/30/09	476	49,098,185	617	20,247,862	17,263	862,197,482	3.5	49,945	
6/30/10	556	54,883,701	679	25,161,316	17,140	891,919,867	3.4	52,037	
6/30/11	653	64,843,804	776	35,553,289	17,017	921,210,382	3.3	54,135	
6/30/12	538	58,288,645	638	26,379,782	16,917	953,119,245	3.5	56,341	
6/30/13	453	54,522,199	563	23,448,369	16,807	984,193,075	3.3	58,559	
6/30/14	490	54,258,974	534	23,299,539	16,763	1,015,150,510	3.1	60,559	
6/30/15	557	65,651,390	610	28,598,946	16,710	1,052,202,954	3.6	62,968	

<sup>(1)</sup> Balancing Item – Amounts shown include changes due to benefit finalization changes in benefit type (e.g. Service to Accidental Disability), COLA increases, and other changes.

<sup>(2)</sup> 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.

**NEW YORK CITY FIRE PENSION FUND**

<b>Table 10</b>			
<b>STATUTORY VS ACTUARIAL CONTRIBUTIONS</b>			
<b>Fiscal Year Ended</b>	<b>Statutory Contribution<sup>(1)</sup></b>	<b>Actuarial Contribution</b>	<b>Employer Rate of Contribution<sup>(2)</sup></b>
6/30/08	\$ 780,202,424	\$ 780,202,424	82.6%
6/30/09	843,750,960	843,750,960	83.2
6/30/10	874,331,450	874,331,450	82.5
6/30/11	890,706,067	890,706,067	82.2
6/30/12	976,895,415	976,895,415	85.0
6/30/13	962,173,241	962,173,241	85.2
6/30/14	969,955,923	969,955,923	88.0
6/30/15	988,783,932	988,783,932	88.9
6/30/16	1,054,477,631	1,054,477,631	93.4
6/30/17	1,061,169,993	1,061,169,993	92.6

<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.

## NEW YORK CITY FIRE PENSION FUND

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

Prior to the June 30, 2010 (Lag) Actuarial Valuation, the Frozen Initial Liability (FIL) cost method was used to develop the funding requirements for the Plan. Under this method, following establishment of any Initial Unfunded Actuarial Accrued Liabilities (UAAL), actuarial gains and losses are financed over the working lifetimes of active participants and are not identified as separate UAAL.

The funding status and funding progress information provided in this Schedule has been prepared using the Entry Age Normal (EAN) cost method where the 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 EAN cost method, equals the Actuarial Accrued Liability (AAL). Under, the EAN cost method, the UAAL equals the AAL minus the Actuarial Value of Assets.

<b>Table 11</b>						
<b>FUNDED STATUS BASED ON ENTRY AGE NORMAL COST METHOD</b>						
<b>(Dollar Amounts in Thousands)</b>						
Actuarial Valuation Date	Actuarial Value of Assets (a)	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, 2006 (Lag)	\$ 6,174,111	\$ 11,061,482	\$ 4,887,371	55.8%	\$ 932,730	524.0
June 30, 2007 (Lag)	6,459,130	11,731,140	5,272,010	55.1	1,000,383	527.0
June 30, 2008 (Lag)	6,942,992	12,313,206	5,370,214	56.4	1,051,592	510.7
June 30, 2009 (Lag)	7,304,758	12,864,974	5,560,216	56.8	1,079,682	515.0
June 30, 2010 (Lag) <sup>(2)</sup>	7,392,656	15,349,598	7,956,942	48.2	1,138,188	699.1
June 30, 2011 (Lag) <sup>(2)</sup>	7,955,668	15,808,930	7,853,262	50.3	1,125,460	697.8
June 30, 2012 (Lag) <sup>(2)</sup>	8,520,769	16,358,108	7,837,339	52.1	1,106,113	708.5
June 30, 2013 (Lag) <sup>(2)</sup>	9,144,587	17,003,722	7,859,135	53.8	1,129,706	695.7
June 30, 2014 (Lag) <sup>(2)</sup>	9,808,854	18,028,695	8,219,841	54.4	1,150,390	714.5
June 30, 2015 (Lag) <sup>(2)</sup>	\$10,504,728	18,688,642	8,183,914	56.2	1,164,994	702.5

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.

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



**NEW YORK CITY FIRE PENSION FUND**

**COMPARATIVE SUMMARY OF ACCRUED LIABILITIES  
FUNDED BY ACTUARIAL VALUE OF ASSETS**

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

See following "SOLVENCY TEST – NOTES."

## NEW YORK CITY FIRE PENSION FUND

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

#### SOLVENCY TEST - NOTES

The ultimate test of financial soundness in a pension fund is its ability to pay all of its promised benefits when due. The retirement system's progress in accumulating assets to pay all promised benefits can be measured by comparing the Actuarial Value of Assets of the retirement system with the Accrued Liabilities for:

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

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

This comparative summary allocated assets as if they were priority groups, somewhat similar to (but not identical to) the priority categories of Section 4044 of the Employee Retirement Income Security Act of 1974 (ERISA).

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

To fully evaluate trends in financial soundness, changes in assumptions need to be evaluated. Beginning with the June 30, 2010 (Lag) actuarial valuation, the Actuarial Interest Rate assumption equals 7.0% per annum, net of investment expenses, and the General Wage Increase assumption equals 3.0% per annum. Prior to the June 30, 2010 (Lag) actuarial valuation, the Actuarial Interest Rate assumption was 8% per annum, gross of expenses.

## **NEW YORK CITY FIRE PENSION FUND**

### **CONTRIBUTIONS**

#### **A. MEMBER CONTRIBUTIONS**

For Tier I and Tier II members, member contributions are made on the basis of a normal rate of contribution that is assigned by the Plan at the time of membership. The normal rate, which is dependent upon the member's age and the Plan at the time of membership, as well as the tables in effect for such purpose, is determined to provide an annuity of approximately one-fourth of the service retirement allowance at the earliest date for service retirement. Members may voluntarily increase their rates of contribution by 50% for the purpose of purchasing an additional annuity.

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

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

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

#### **B. EMPLOYER CONTRIBUTIONS**

The Entry Age Normal cost method of funding is utilized by the Plan's Actuary to calculate the contributions required of the employer.

Employer contributions are accrued by the Plan and are funded by the employer on a current basis.

**NEW YORK CITY FIRE PENSION FUND**

**Table 13**

**AVERAGE ANNUAL BENEFIT PAYMENT AMOUNTS**

Valuation Date	Service Retirement Benefits		Accidental (Line-of-Duty) Disability Benefits		Ordinary (Non-Line-of-Duty) Disability Benefits		Survivor Benefits	
	Number	Average Annual Allowance	Number	Average Annual Allowance	Number	Average Annual Allowance	Number	Average Annual Allowance
6/30/06 (Lag)	6,839	\$37,254	7,420	\$54,223	1,398	\$44,780	1,828	\$16,054
6/30/07 (Lag)	6,606	38,435	7,816	57,564	1,339	45,853	1,718	17,049
6/30/08 (Lag)	6,353	39,078	8,149	60,825	1,284	46,484	1,618	18,380
6/30/09 (Lag)	6,194	39,908	8,331	63,286	1,217	47,398	1,521	19,782
6/30/10 (Lag)	5,957	40,347	8,593	65,741	1,167	48,219	1,423	21,354
6/30/11 (Lag)	5,830	41,390	8,740	68,105	1,110	48,767	1,337	22,844
6/30/12 (Lag)	5,646	42,116	8,943	70,653	1,057	49,511	1,271	24,505
6/30/13 (Lag)	5,487	43,289	9,094	73,041	1,012	49,840	1,214	26,354
6/30/14 (Lag)	5,427	44,659	9,223	75,043	959	50,722	1,154	27,752
6/30/15 (Lag)	5,305	45,932	9,390	77,701	904	51,059	1,111	29,485

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



**Appendix A**

**Census Data for Active Members**

**As of June 30, 2017**

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**NEW YORK CITY FIRE PENSION FUND  
DATA USED IN THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
FOR DETERMINING FINAL FISCAL YEAR 2017 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	
<b>NUMBER:</b>										
UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	215	0	0	0	0	0	0	0	0	215
25 TO 29	734	108	0	0	0	0	0	0	0	842
30 TO 34	401	1,058	485	5	0	0	0	0	0	1,949
35 TO 39	49	553	1,532	218	3	0	0	0	0	2,355
40 TO 44	1	136	962	763	168	1	0	0	0	2,031
45 TO 49	0	6	122	757	525	104	2	0	0	1,516
50 TO 54	0	0	2	212	411	372	112	2	0	1,111
55 TO 59	0	0	1	2	62	165	237	69	0	536
60 TO 64	0	1	0	2	1	19	67	55	11	156
65 TO 69	0	0	0	0	1	0	1	0	0	2
70 & UP	0	0	0	0	1	0	0	0	0	1
<b>TOTAL</b>	<b>1,400</b>	<b>1,862</b>	<b>3,104</b>	<b>1,959</b>	<b>1,172</b>	<b>661</b>	<b>419</b>	<b>126</b>	<b>11</b>	<b>10,714</b>

**SALARIES (IN THOUSANDS):**

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	10,072	0	0	0	0	0	0	0	0	10,072
25 TO 29	36,232	7,957	0	0	0	0	0	0	0	44,190
30 TO 34	19,719	109,519	52,539	556	0	0	0	0	0	182,332
35 TO 39	2,485	58,473	170,513	25,134	337	0	0	0	0	256,941
40 TO 44	50	14,504	107,625	92,244	20,997	134	0	0	0	235,554
45 TO 49	0	708	13,574	91,458	69,763	13,832	217	0	0	189,554
50 TO 54	0	0	260	24,897	53,317	50,366	15,662	240	0	144,741
55 TO 59	0	0	151	239	7,948	20,567	33,223	10,833	0	72,961
60 TO 64	0	150	0	291	153	2,549	8,854	8,072	1,716	21,784
65 TO 69	0	0	0	0	153	0	126	0	0	279
70 & UP	0	0	0	0	153	0	0	0	0	153
<b>TOTAL *</b>	<b>68,558</b>	<b>191,312</b>	<b>344,662</b>	<b>234,820</b>	<b>152,821</b>	<b>87,447</b>	<b>58,082</b>	<b>19,145</b>	<b>1,716</b>	<b>1,158,562</b>

**AVERAGE SALARIES: \*\***

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	46,844	0	0	0	0	0	0	0	0	46,844
25 TO 29	49,363	73,679	0	0	0	0	0	0	0	52,482
30 TO 34	49,174	103,516	108,327	111,122	0	0	0	0	0	93,552
35 TO 39	50,712	105,737	111,301	115,294	112,243	0	0	0	0	109,105
40 TO 44	50,297	106,647	111,876	120,897	124,983	133,515	0	0	0	115,979
45 TO 49	0	118,046	111,264	120,817	132,882	133,005	108,551	0	0	125,035
50 TO 54	0	0	129,928	117,438	129,725	135,392	139,843	119,879	0	130,280
55 TO 59	0	0	151,169	119,612	128,198	124,649	140,182	156,993	0	136,122
60 TO 64	0	150,124	0	145,560	152,714	134,138	132,145	146,773	155,964	139,644
65 TO 69	0	0	0	0	153,263	0	125,803	0	0	139,533
70 & UP	0	0	0	0	152,650	0	0	0	0	152,650
<b>TOTAL</b>	<b>48,970</b>	<b>102,745</b>	<b>111,038</b>	<b>119,867</b>	<b>130,393</b>	<b>132,296</b>	<b>138,621</b>	<b>151,943</b>	<b>155,964</b>	<b>108,135</b>

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

\* Total may not add up due to rounding.

\*\* Average based on unrounded salary.



**NEW YORK CITY FIRE PENSION FUND  
DATA USED IN THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
FOR DETERMINING FINAL FISCAL YEAR 2017 EMPLOYER CONTRIBUTIONS**

**FEMALES**

AGE \ SVC	UNDER 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & UP ALL YEARS	
<b>NUMBER:</b>										
UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	2	0	0	0	0	0	0	0	0	2
25 TO 29	6	2	0	0	0	0	0	0	0	8
30 TO 34	8	4	3	0	0	0	0	0	0	15
35 TO 39	1	6	11	3	0	0	0	0	0	21
40 TO 44	1	4	6	1	0	0	0	0	0	12
45 TO 49	0	0	1	3	0	0	0	0	0	4
50 TO 54	1	0	0	0	0	0	0	0	0	1
55 TO 59	0	0	0	0	0	1	0	0	0	1
60 TO 64	0	0	0	0	0	0	0	1	0	1
65 TO 69	0	0	0	1	0	0	0	0	0	1
70 & UP	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>19</b>	<b>16</b>	<b>21</b>	<b>8</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>66</b>

**SALARIES (IN THOUSANDS):**

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	93	0	0	0	0	0	0	0	0	93
25 TO 29	289	109	0	0	0	0	0	0	0	398
30 TO 34	484	376	321	0	0	0	0	0	0	1,180
35 TO 39	47	588	1,207	323	0	0	0	0	0	2,166
40 TO 44	124	448	696	113	0	0	0	0	0	1,382
45 TO 49	0	0	139	400	0	0	0	0	0	539
50 TO 54	144	0	0	0	0	0	0	0	0	144
55 TO 59	0	0	0	0	0	174	0	0	0	174
60 TO 64	0	0	0	0	0	0	0	206	0	206
65 TO 69	0	0	0	151	0	0	0	0	0	151
70 & UP	0	0	0	0	0	0	0	0	0	0
<b>TOTAL *</b>	<b>1,180</b>	<b>1,522</b>	<b>2,363</b>	<b>987</b>	<b>0</b>	<b>174</b>	<b>0</b>	<b>206</b>	<b>0</b>	<b>6,432</b>

**AVERAGE SALARIES: \*\***

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	46,340	0	0	0	0	0	0	0	0	46,340
25 TO 29	48,159	54,745	0	0	0	0	0	0	0	49,805
30 TO 34	60,447	93,976	106,855	0	0	0	0	0	0	78,670
35 TO 39	47,404	98,049	109,738	107,581	0	0	0	0	0	103,122
40 TO 44	123,913	112,095	116,075	112,940	0	0	0	0	0	115,140
45 TO 49	0	0	138,760	133,282	0	0	0	0	0	134,652
50 TO 54	143,833	0	0	0	0	0	0	0	0	143,833
55 TO 59	0	0	0	0	0	173,925	0	0	0	173,925
60 TO 64	0	0	0	0	0	0	0	206,226	0	206,226
65 TO 69	0	0	0	151,473	0	0	0	0	0	151,473
70 & UP	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>62,124</b>	<b>95,129</b>	<b>112,519</b>	<b>123,375</b>	<b>0</b>	<b>173,925</b>	<b>0</b>	<b>206,226</b>	<b>0</b>	<b>97,462</b>

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

\* Total may not add up due to rounding.

\*\* Average based on unrounded salary.

**NEW YORK CITY FIRE PENSION FUND  
DATA USED IN THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION  
FOR DETERMINING FINAL FISCAL YEAR 2017 EMPLOYER CONTRIBUTIONS**

**MALES AND FEMALES**

AGE \ SVC	UNDER 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & UP ALL YEARS	
<b>NUMBER:</b>										
UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	217	0	0	0	0	0	0	0	0	217
25 TO 29	740	110	0	0	0	0	0	0	0	850
30 TO 34	409	1,062	488	5	0	0	0	0	0	1,964
35 TO 39	50	559	1,543	221	3	0	0	0	0	2,376
40 TO 44	2	140	968	764	168	1	0	0	0	2,043
45 TO 49	0	6	123	760	525	104	2	0	0	1,520
50 TO 54	1	0	2	212	411	372	112	2	0	1,112
55 TO 59	0	0	1	2	62	166	237	69	0	537
60 TO 64	0	1	0	2	1	19	67	56	11	157
65 TO 69	0	0	0	1	1	0	1	0	0	3
70 & UP	0	0	0	0	1	0	0	0	0	1
<b>TOTAL</b>	<b>1,419</b>	<b>1,878</b>	<b>3,125</b>	<b>1,967</b>	<b>1,172</b>	<b>662</b>	<b>419</b>	<b>127</b>	<b>11</b>	<b>10,780</b>

**SALARIES (IN THOUSANDS):**

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	10,164	0	0	0	0	0	0	0	0	10,164
25 TO 29	36,521	8,067	0	0	0	0	0	0	0	44,588
30 TO 34	20,202	109,895	52,859	556	0	0	0	0	0	183,512
35 TO 39	2,532	59,061	171,720	25,457	337	0	0	0	0	259,107
40 TO 44	174	14,952	108,321	92,357	20,997	134	0	0	0	236,935
45 TO 49	0	708	13,713	91,858	69,763	13,832	217	0	0	190,092
50 TO 54	144	0	260	24,897	53,317	50,366	15,662	240	0	144,885
55 TO 59	0	0	151	239	7,948	20,741	33,223	10,833	0	73,135
60 TO 64	0	150	0	291	153	2,549	8,854	8,279	1,716	21,991
65 TO 69	0	0	0	151	153	0	126	0	0	431
70 & UP	0	0	0	0	153	0	0	0	0	153
<b>TOTAL *</b>	<b>69,738</b>	<b>192,834</b>	<b>347,025</b>	<b>235,807</b>	<b>152,821</b>	<b>87,621</b>	<b>58,082</b>	<b>19,351</b>	<b>1,716</b>	<b>1,164,994</b>

**AVERAGE SALARIES: \*\***

UNDER 20	0	0	0	0	0	0	0	0	0	0
20 TO 24	46,840	0	0	0	0	0	0	0	0	46,840
25 TO 29	49,353	73,335	0	0	0	0	0	0	0	52,457
30 TO 34	49,394	103,480	108,318	111,122	0	0	0	0	0	93,438
35 TO 39	50,645	105,655	111,290	115,189	112,243	0	0	0	0	109,052
40 TO 44	87,105	106,803	111,902	120,886	124,983	133,515	0	0	0	115,974
45 TO 49	0	118,046	111,488	120,866	132,882	133,005	108,551	0	0	125,061
50 TO 54	143,833	0	129,928	117,438	129,725	135,392	139,843	119,879	0	130,292
55 TO 59	0	0	151,169	119,612	128,198	124,946	140,182	156,993	0	136,192
60 TO 64	0	150,124	0	145,560	152,714	134,138	132,145	147,834	155,964	140,068
65 TO 69	0	0	0	151,473	153,263	0	125,803	0	0	143,513
70 & UP	0	0	0	0	152,650	0	0	0	0	152,650
<b>TOTAL</b>	<b>49,146</b>	<b>102,680</b>	<b>111,048</b>	<b>119,881</b>	<b>130,393</b>	<b>132,359</b>	<b>138,621</b>	<b>152,370</b>	<b>155,964</b>	<b>108,070</b>

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

\* Total may not add up due to rounding.

\*\* Average based on unrounded salary.

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



**Appendix B**  
**Census Data for Pensioners**  
**As of June 30, 2017**

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**NEW YORK CITY FIRE PENSION FUND**  
**DATA USED IN THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION**  
**FOR DETERMINING FINAL FISCAL YEAR 2017 EMPLOYER CONTRIBUTIONS**  
**SUMMARY OF PENSIONERS BY CAUSE AND GENDER**

AGE	MALE			FEMALE			ALL FILES (ALL BENEFITS)		
	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE
<b>ACCIDENTAL DISABILITY:</b>									
UNDER 30	0	0	0	0	0	0	0	0	0
30 TO 34	19	1,565,317	82,385	1	70,266	70,266	20	1,635,583	81,779
35 TO 39	132	10,836,482	82,095	0	0	0	132	10,836,482	82,095
40 TO 44	360	29,901,349	83,059	1	79,069	79,069	361	29,980,418	83,048
45 TO 49	719	62,997,208	87,618	1	86,066	86,066	720	63,083,274	87,616
50 TO 54	1,308	118,699,163	90,749	1	103,572	103,572	1,309	118,802,735	90,758
55 TO 59	1,878	171,071,768	91,093	8	716,367	89,546	1,886	171,788,135	91,086
60 TO 64	1,336	117,876,370	88,231	4	315,062	78,766	1,340	118,191,432	88,203
65 TO 69	865	65,650,180	75,896	4	351,808	87,952	869	66,001,988	75,952
70 TO 74	863	55,167,470	63,925	0	0	0	863	55,167,470	63,925
75 TO 79	945	49,869,373	52,772	1	66,334	66,334	946	49,935,707	52,786
80 TO 84	598	28,405,833	47,501	0	0	0	598	28,405,833	47,501
85 TO 89	241	11,005,909	45,668	0	0	0	241	11,005,909	45,668
90 & UP	105	4,781,945	45,542	0	0	0	105	4,781,945	45,542
<b>TOTAL</b>	<b>9,369</b>	<b>727,828,367</b>	<b>77,685</b>	<b>21</b>	<b>1,788,544</b>	<b>85,169</b>	<b>9,390</b>	<b>729,616,911</b>	<b>77,701</b>
<b>ORDINARY DISABILITY:</b>									
UNDER 30	0	0	0	0	0	0	0	0	0
30 TO 34	0	0	0	0	0	0	0	0	0
35 TO 39	3	77,397	25,799	0	0	0	3	77,397	25,799
40 TO 44	3	79,401	26,467	0	0	0	3	79,401	26,467
45 TO 49	8	299,621	37,453	0	0	0	8	299,621	37,453
50 TO 54	14	419,738	29,981	0	0	0	14	419,738	29,981
55 TO 59	42	1,103,872	26,283	1	28,788	28,788	43	1,132,660	26,341
60 TO 64	47	1,278,206	27,196	0	0	0	47	1,278,206	27,196
65 TO 69	57	3,379,057	59,282	0	0	0	57	3,379,057	59,282
70 TO 74	118	7,047,723	59,726	0	0	0	118	7,047,723	59,726
75 TO 79	226	13,569,177	60,041	0	0	0	226	13,569,177	60,041
80 TO 84	211	10,986,772	52,070	0	0	0	211	10,986,772	52,070
85 TO 89	115	5,360,943	46,617	0	0	0	115	5,360,943	46,617
90 & UP	59	2,526,624	42,824	0	0	0	59	2,526,624	42,824
<b>TOTAL</b>	<b>903</b>	<b>46,128,531</b>	<b>51,084</b>	<b>1</b>	<b>28,788</b>	<b>28,788</b>	<b>904</b>	<b>46,157,319</b>	<b>51,059</b>
<b>SERVICE RETIREMENT:</b>									
UNDER 30	0	0	0	0	0	0	0	0	0
30 TO 34	0	0	0	0	0	0	0	0	0
35 TO 39	0	0	0	0	0	0	0	0	0
40 TO 44	10	585,699	58,570	1	67,118	67,118	11	652,817	59,347
45 TO 49	73	4,709,862	64,519	0	0	0	73	4,709,862	64,519
50 TO 54	193	12,358,458	64,033	0	0	0	193	12,358,458	64,033
55 TO 59	666	39,758,290	59,697	3	151,228	50,409	669	39,909,518	59,655
60 TO 64	603	33,610,840	55,739	2	65,478	32,739	605	33,676,318	55,663
65 TO 69	640	32,182,892	50,286	1	33,011	33,011	641	32,215,903	50,259
70 TO 74	828	36,938,243	44,611	0	0	0	828	36,938,243	44,611
75 TO 79	1,015	39,876,008	39,287	1	34,580	34,580	1,016	39,910,588	39,282
80 TO 84	701	24,627,947	35,133	0	0	0	701	24,627,947	35,133
85 TO 89	360	12,080,053	33,556	0	0	0	360	12,080,053	33,556
90 & UP	208	6,591,115	31,688	0	0	0	208	6,591,115	31,688
<b>TOTAL</b>	<b>5,297</b>	<b>243,319,407</b>	<b>45,935</b>	<b>8</b>	<b>351,415</b>	<b>43,927</b>	<b>5,305</b>	<b>243,670,822</b>	<b>45,932</b>

**NEW YORK CITY FIRE PENSION FUND**  
**DATA USED IN THE JUNE 30, 2015 (LAG) ACTUARIAL VALUATION**  
**FOR DETERMINING FINAL FISCAL YEAR 2017 EMPLOYER CONTRIBUTIONS**  
**SUMMARY OF PENSIONERS BY CAUSE AND GENDER**

AGE	MALE			FEMALE			ALL FILES (ALL BENEFITS) BOTH MALE & FEMALE		
	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE	NUMBER	BENEFITS	AVERAGE
<b>ACCIDENTAL DEATH:</b>									
UNDER 30	2	68,422	34,211	4	118,621	29,655	6	187,043	31,174
30 TO 34	0	0	0	0	0	0	0	0	0
35 TO 39	0	0	0	9	349,369	38,819	9	349,369	38,819
40 TO 44	0	0	0	54	2,056,801	38,089	54	2,056,801	38,089
45 TO 49	0	0	0	84	3,311,134	39,418	84	3,311,134	39,418
50 TO 54	0	0	0	106	4,274,578	40,326	106	4,274,578	40,326
55 TO 59	0	0	0	108	4,665,676	43,201	108	4,665,676	43,201
60 TO 64	3	112,054	37,351	56	2,432,028	43,429	59	2,544,082	43,120
65 TO 69	0	0	0	48	1,968,092	41,002	48	1,968,092	41,002
70 TO 74	0	0	0	48	1,635,125	34,065	48	1,635,125	34,065
75 TO 79	1	38,561	38,561	46	1,363,834	29,649	47	1,402,395	29,838
80 TO 84	0	0	0	39	1,041,257	26,699	39	1,041,257	26,699
85 TO 89	0	0	0	11	275,594	25,054	11	275,594	25,054
90 & UP	0	0	0	16	367,386	22,962	16	367,386	22,962
<b>TOTAL</b>	<b>6</b>	<b>219,037</b>	<b>36,506</b>	<b>629</b>	<b>23,859,495</b>	<b>37,932</b>	<b>635</b>	<b>24,078,532</b>	<b>37,919</b>
<b>OTHER BENEFICIARIES:</b>									
UNDER 30	0	0	0	3	183,009	61,003	3	183,009	61,003
30 TO 34	0	0	0	3	162,531	54,177	3	162,531	54,177
35 TO 39	0	0	0	0	0	0	0	0	0
40 TO 44	0	0	0	0	0	0	0	0	0
45 TO 49	0	0	0	5	319,531	63,906	5	319,531	63,906
50 TO 54	2	86,051	43,026	10	511,004	51,100	12	597,055	49,755
55 TO 59	0	0	0	17	673,853	39,638	17	673,853	39,638
60 TO 64	0	0	0	18	607,232	33,735	18	607,232	33,735
65 TO 69	0	0	0	29	1,036,297	35,734	29	1,036,297	35,734
70 TO 74	0	0	0	33	1,067,478	32,348	33	1,067,478	32,348
75 TO 79	0	0	0	48	1,290,112	26,877	48	1,290,112	26,877
80 TO 84	0	0	0	46	771,290	16,767	46	771,290	16,767
85 TO 89	0	0	0	67	808,552	12,068	67	808,552	12,068
90 & UP	0	0	0	195	1,162,430	5,961	195	1,162,430	5,961
<b>TOTAL</b>	<b>2</b>	<b>86,051</b>	<b>43,026</b>	<b>474</b>	<b>8,593,319</b>	<b>18,129</b>	<b>476</b>	<b>8,679,370</b>	<b>18,234</b>
<b>ALL PENSIONERS AND BENEFICIARIES:</b>									
UNDER 30	2	68,422	34,211	7	301,630	43,090	9	370,052	41,117
30 TO 34	19	1,565,317	82,385	4	232,797	58,199	23	1,798,114	78,179
35 TO 39	135	10,913,879	80,844	9	349,369	38,819	144	11,263,248	78,217
40 TO 44	373	30,566,449	81,948	56	2,202,988	39,339	429	32,769,437	76,386
45 TO 49	800	68,006,691	85,008	90	3,716,731	41,297	890	71,723,422	80,588
50 TO 54	1,517	131,563,410	86,726	117	4,889,154	41,788	1,634	136,452,564	83,508
55 TO 59	2,586	211,933,930	81,954	137	6,235,912	45,518	2,723	218,169,842	80,121
60 TO 64	1,989	152,877,470	76,861	80	3,419,800	42,748	2,069	156,297,270	75,542
65 TO 69	1,562	101,212,129	64,796	82	3,389,208	41,332	1,644	104,601,337	63,626
70 TO 74	1,809	99,153,436	54,811	81	2,702,603	33,365	1,890	101,856,039	53,892
75 TO 79	2,187	103,353,119	47,258	96	2,754,860	28,696	2,283	106,107,979	46,477
80 TO 84	1,510	64,020,552	42,398	85	1,812,547	21,324	1,595	65,833,099	41,275
85 TO 89	716	28,446,905	39,730	78	1,084,146	13,899	794	29,531,051	37,193
90 & UP	372	13,899,684	37,365	211	1,529,816	7,250	583	15,429,500	26,466
<b>TOTAL</b>	<b>15,577</b>	<b>1,017,581,393</b>	<b>65,326</b>	<b>1,133</b>	<b>34,621,561</b>	<b>30,557</b>	<b>16,710</b>	<b>1,052,202,954</b>	<b>62,968</b>

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



**Statistical Section**

**Part V**

**Fiscal Year Ended June 30, 2017**



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### **The Statistical Section Narrative**

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

#### **Operating information**

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

#### **Demographic and economic information**

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

#### **Financial Trends**

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

#### **Revenue Capacity**

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

**TABLE OF BENEFIT EXPENSES BY TYPE**

(In thousands)

FISCAL YEAR	Service Retirement Payments	Ordinary Disability Payments	Accidental Disability Payments	Payments for Death in Duty	Payments of Deceased Service and Disability	Death Benefits		Total
						Lump Sum Payments	Other Benefits *	
2008	248,262	59,685	495,662	21,174	8,564	2,339	79,539	915,225
2009	249,084	58,392	524,425	51,974	14,353	4,219	26,006	928,453
2010	244,502	56,905	552,814	54,069	14,426	3,454	28,603	954,773
2011	240,312	55,019	587,885	55,488	13,723	1,279	29,768	983,474
2012	239,786	53,002	621,698	57,614	13,923	1,353	50,213	1,037,589
2013	237,294	51,273	659,243	59,888	14,646	1,371	112,289	1,136,004
2014	239,234	49,456	681,196	61,951	5,592	11,354	122,546	1,171,329
2015	241,393	47,378	709,488	63,918	5,652	12,038	140,023	1,219,890
2016	244,561	44,938	764,129	66,417	5,384	14,301	218,701	1,358,431
2017	251,909	43,145	825,388	68,766	5,812	12,550	127,237	1,334,807

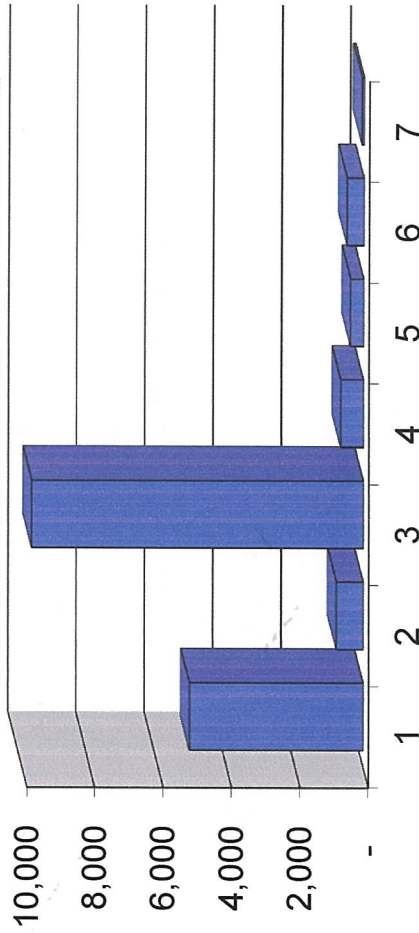
\* This represents VSF payments to firefighters, fire officers and other payments.

**TABLE OF RETIRED MEMBERS AND BENEFICIARIES BY TYPE OF BENEFIT**

FISCAL YEAR 2017

TOTAL NUMBERS RETIRES AND BENEFICIARIES	SERVICE RETIRES (1)	ORDINARY DISABILITY RETIRES (1)	ACCIDENTAL DISABILITY RETIRES (1)	LINE OF DUTY BENEFITS	SERVICE BENEFICIARIES	ACCIDENTAL BENEFICIARIES	ORDINARY BENEFICIARIES	OTHER BENEFITS {2}
17,227	5,089	792	9,723	672	388	497	66	-
<b>ANNUAL PAYROLL AMOUNT</b> (in thousands)								
1,334,807 \$	251,909 \$	43,145 \$	825,388 \$	68,766 \$	5,812 \$	11,130 \$	1,420 \$	127,237

**RETIRED MEMBERS BY TYPE OF BENEFIT**



SEE RETIREMENT BENEFIT BELOW

Type of Retirement

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

(1) Includes Maximum Allowance and Options.

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



New York Fire Department Pension Funds  
Retired Members by Type of Benefit  
As of June 30, 2017

Amount of Monthly Benefits	Number of Retired Members	Type of Retirement <sup>a</sup>						Option Selected <sup>b</sup>				POP - UPS		
		1	2	3	4	5	6	Unmodified	1	2	3		4	
\$ 30,838	9	-	-	-	-	3	9	-	-	-	-	-	-	-
149,843	23	-	-	20	-	3	23	-	-	-	-	-	-	-
938,604	144	-	3	132	9	-	(209)	-	-	-	-	353	-	-
2,730,786	429	11	3	361	54	-	203	3	76	112	30	30	5	-
5,976,952	890	73	8	720	84	5	689	-	3	37	159	2	2	-
11,371,047	2,004	193	14	1,642	143	12	1,960	7	2	30	2	2	2	-
18,180,820	2,723	669	43	1,886	108	17	2,653	-	41	17	11	1	1	-
13,024,773	2,069	605	47	1,340	605	18	1,999	-	32	25	9	4	4	-
8,716,778	1,644	641	57	869	48	29	1,404	-	4	68	168	-	-	-
8,488,003	1,674	612	118	863	48	33	1,614	-	12	32	16	-	-	-
8,842,332	2,171	1,016	114	946	47	48	2,104	-	63	1	3	-	-	-
5,486,092	1,595	701	211	598	39	46	1,570	-	25	-	-	-	-	-
2,460,921	794	360	115	241	11	67	790	-	4	-	-	-	-	-
1,285,792	1,058	208	59	105	16	670	1,057	-	1	-	-	-	-	-
Total	17,227	5,089	792	9,723	672	951	15,866	10	263	322	752	14		

Exhibit 4

<sup>a</sup> Type of retirement:

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

<sup>b</sup>

Option selected:

The following options reduce the retired member's monthly benefits

Option 1 - Provides a member with a retirement allowance payable for life which is less than the Maximum Allowance.

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

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

Option 4 - This option provides, upon the member's death, payment of a specified benefit or benefits actuarially-sound and approved by the Actuary and the Board of Trustees.

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

Statistical Section

New York Fire Department Pension Funds

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

Exhibit 5

Retirement Effective Dates	Age Credited Service										90 & Up			
	Under 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74		75-79	80-84	85-89
Period 7/1/07 to 6/30/08														
Average monthly benefit	3,843	3,606	4,527	5,144	5,257	5,232	4,987	4,633	4,005	3,500	3,179	2,786	2,166	1,276
Average final salary	46,116	43,273	54,323	61,725	63,079	62,786	59,844	55,591	48,061	42,002	38,143	33,432	25,993	15,308
Number of retired members	7	45	232	618	1,304	2,154	1,639	1,749	2,388	2,590	1,745	1,290	854	789
Period 7/1/08 to 6/30/09														
Average monthly benefit	3,881	3,642	4,572	5,195	5,309	5,284	5,037	4,679	4,045	3,535	3,210	2,814	2,188	1,288
Average final salary	46,577	43,706	54,866	62,342	63,710	63,414	60,442	56,147	48,542	42,422	38,524	33,766	26,253	15,461
Number of retired members	7	43	234	629	1,306	2,230	1,734	1,823	2,270	2,585	1,739	1,266	816	764
Period 7/1/09 to 6/30/10														
Average monthly benefit	3,843	3,606	4,527	5,144	5,257	5,231	4,985	4,633	4,005	3,500	3,179	2,786	2,166	1,272
Average final salary	46,116	43,273	54,323	61,725	63,079	62,774	59,823	55,591	48,061	42,002	38,143	33,432	25,993	15,262
Number of retired members	7	45	232	618	1,304	2,155	1,640	1,749	2,268	2,466	1,745	1,290	854	787
Period 7/1/10 to 6/30/11														
Average monthly benefit	3,570	4,613	4,923	5,415	5,764	5,663	5,576	4,958	4,355	3,754	3,316	3,003	2,562	1,424
Average final salary	42,838	55,350	59,071	64,974	69,172	67,956	66,907	59,497	52,262	45,042	39,791	36,036	30,744	17,090
Number of retired members	11	32	197	517	1,162	2,254	1,916	1,674	2,014	2,602	1,994	1,220	799	748
Period 7/1/11 to 6/30/12														
Average monthly benefit	3,570	4,613	4,923	5,415	5,764	5,663	5,576	4,958	4,355	3,754	3,316	3,003	2,562	1,424
Average final salary	42,838	55,350	59,071	64,974	69,172	67,956	66,907	59,497	52,262	45,042	39,791	36,036	30,744	17,090
Number of retired members	11	52	206	527	1,180	2,002	2,315	1,694	2,033	2,448	2,001	1,364	854	717
Period 7/1/12 to 6/30/13														
Average monthly benefit	3,880	5,217	5,070	5,597	5,949	5,922	5,798	5,120	4,547	3,868	3,393	3,136	2,677	1,554
Average final salary	46,557	62,607	60,835	67,165	71,384	71,061	69,575	61,443	54,564	46,410	40,720	37,635	32,129	18,647
Number of retired members	17	50	187	522	1,291	2,167	2,074	1,750	1,908	2,361	2,085	1,369	763	720
Period 7/1/13 to 6/30/14														
Average monthly benefit	4,339	5,345	5,390	5,891	6,164	6,247	5,985	5,389	4,707	4,047	3,477	2,504	2,848	1,665
Average final salary	52,071	64,141	64,676	70,690	73,963	74,966	71,820	64,663	56,485	48,563	41,721	30,051	34,179	19,983
Number of retired members	10	28	153	506	1,092	1,955	2,366	1,633	1,861	2,361	2,161	1,302	828	661
Period 7/1/14 to 6/30/15														
Average monthly benefit	3,784	6,265	5,642	6,154	6,412	6,483	6,250	5,630	4,934	4,160	3,647	3,319	2,909	1,796
Average final salary	45,403	75,176	67,703	73,851	76,940	77,791	75,001	67,562	59,212	49,922	43,759	39,829	34,909	21,546
Number of retired members	11	31	130	486	1,021	1,792	2,575	1,722	1,726	2,210	2,269	1,391	818	625
Period 7/1/15 to 6/30/16														
Average monthly benefit	3,697	6,148	6,172	6,280	6,525	6,707	6,446	5,919	5,120	4,306	3,764	3,386	3,022	1,958
Average final salary	44,368	73,776	74,066	75,361	78,296	80,481	77,355	71,026	61,435	51,672	45,170	40,633	36,269	23,493
Number of retired members	10	21	136	448	943	1,689	2,733	1,816	1,705	2,069	2,288	1,483	821	601
Period 7/1/16 to 6/30/17														
Average monthly benefit	3,426	6,515	6,518	6,366	6,716	6,959	6,677	6,295	5,302	4,491	3,873	3,440	3,099	2,206
Average final salary	41,117	78,179	78,217	76,386	80,568	83,508	80,121	75,542	63,626	53,892	46,477	41,275	37,193	26,466
Number of retired members	9	23	144	429	890	1,634	2,723	2,069	1,644	1,890	2,283	1,595	794	583

Source: Office of the Actuary City of New York.  
Lag 2015 for determining Final Fiscal Year 2017 Employer Contributions

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

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Type of Benefit:</b>										
Age and service benefits:										
Retirees	248,262	249,084	244,502	240,312	239,786	308,667	239,234	241,393	244,561	251,909
Survivors	4,666	10,212	10,040	5,990	5,847	5,776	5,592	5,652	5,384	5,812
Death in service benefits	21,174	51,974	54,069	55,488	57,614	59,888	61,951	63,918	66,417	68,766
Disability benefits:										
Retirees - duty	495,662	524,425	552,814	587,885	621,698	659,243	681,196	709,488	764,129	825,388
Retirees - nonduty	59,685	58,392	56,905	55,019	53,002	51,273	49,456	47,378	44,938	43,145
Survivors	3,898	4,141	4,386	1,279	1,353	1,371	1,716	1,793	1,794	1,420
<b>Total benefits</b>	<b>\$ 833,347</b>	<b>\$898,228</b>	<b>\$922,716</b>	<b>\$ 945,973</b>	<b>\$ 979,300</b>	<b>\$ 1,086,218</b>	<b>\$ 1,039,145</b>	<b>\$ 1,069,622</b>	<b>\$ 1,127,223</b>	<b>\$ 1,196,440</b>
<b>Type of Refunds</b>										
Death	2,339	4,219	3,454	7,733	8,076	8,870	9,638	10,245	12,507	11,130
Other benefits	79,539	26,006	28,603	29,768	50,213	40,916	122,546	140,023	218,701	127,237
Total refunds	\$ 81,878	\$ 30,225	\$ 32,057	\$ 37,501	\$ 58,289	\$ 49,786	\$ 132,184	\$ 150,268	\$ 231,208	\$ 138,367
<b>Total Benefits and Refunds</b>	<b>\$ 915,225</b>	<b>\$928,453</b>	<b>\$954,773</b>	<b>\$ 983,474</b>	<b>\$ 1,037,589</b>	<b>\$ 1,136,004</b>	<b>\$ 1,171,329</b>	<b>\$ 1,219,890</b>	<b>\$ 1,358,431</b>	<b>\$ 1,334,807</b>

Source Fire Pension Fund



SCHEDULE OF AVERAGE ANNUAL BENEFIT PAYMENT AMOUNTS

Fiscal Year	Service Retirement Benefits		Accidental ( Duty) Disability Benefits		Ordinary (Non Duty) Disability Benefits		Survivor's Benefits *	
	Numbers	Average Annual Allowance	Number	Average Annual Allowance	Number	Average Annual Allowance	Number	Average Annual Allowance
2008 (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
2010 (Lag)	5,957	40,447	8,593	65,741	1,167	48,219	1,423	21,354
2011	5,837	41,170	8,712	67,480	1,110	49,557	1,414	49,144
2012	5,667	41,080	8,912	69,760	1,058	50,096	1,767	41,251
2013	5,487	43,247	9,064	72,723	1,010	50,765	1,703	44,571
2014	5,433	44,033	9,194	63,215	958	51,624	1,695	46,370
2015	5,312	45,443	9,366	75,751	905	52,351	1,678	48,632
2016	5,188	44,659	9,548	75,043	853	50,722	1,641	53,748
2017	5,089	45,932	9,723	77,701	792	51,059	1,623	56,153

\* Includes World Trade Center Benefits

NEW YORK CITY FIRE PENSION FUND QPP

Schedule of Changes in Net Positions

(In thousands)

Year Ended	Additions to Funds Net Position					Deductions from Funds Net Position					Change in Net Position
	Member Contributions	Employer Contributions	Net Investment Income/(Loss)	Other Income	Total Additions	Benefit Payments	Refunds	Administrative Expenses	City Supplement and Parity	Total Deductions	
2008	75,974	780,202	(366,390)	40,103	529,889	914,569	418	200	38	915,225	(385,336)
2009	84,357	843,751	(1,282,917)	42,729	(312,080)	927,819	325	248	61	928,453	(1,240,533)
2010	89,223	874,331	818,201	34,990	1,816,745	953,990	510	237	36	954,773	861,972
2011	94,893	890,706	1,472,892	41,887	2,500,378	982,962	276	236	-	983,474	1,516,904
2012	98,494	976,895	93,548	37,661	1,206,598	1,036,806	443	340	-	1,037,589	169,009
2013	104,816	962,173	961,192	38,965	2,067,146	1,063,349	816	445	21	1,064,631	1,002,515
2014	108,859	969,956	1,569,013	39,980	2,687,808	1,218,415	184	477	86	1,219,162	1,468,646
2015	108,582	988,784	271,430	41,201	1,409,997	1,189,926	186	313	80	1,190,505	219,492
2016	116,619	1,054,478	197,398	43,673	1,412,168	1,325,938	939	786	72	1,327,735	84,433
2017	108,368	1,061,170	1,284,871	47,284	2,501,693	1,309,624	1,190	685	61	1,311,560	1,190,133

**FIRE FIGHTER'S VARIABLE SUPPLEMENTS FUND**

**Schedule of Changes in Net Positions**

(In thousands)

Year Ended	Additions to Funds Net Position					Deductions from Funds Net Position			Change in Net Position
	Net Investment Income/(Loss)	Other Income	Transfer Skim Earning	Total Additions	Benefit Payments	Total Deductions			
2008	(39,190)	844	-	(38,346)	59,691	59,691	(98,037)		
2009	(94,098)	788	-	(93,310)	51,106	51,106	(144,416)		
2010	65,678	261	-	65,939	50,507	50,507	15,432		
2011	100,709	313	-	101,022	47,793	47,793	53,229		
2012	6,965	309	-	7,274	48,613	48,613	(41,339)		
2013	46,267	290	-	46,557	48,539	48,539	(1,982)		
2014	68,971	56	110,000	179,027	50,425	50,425	128,602		
2015	18,661	227	30,000	48,888	47,415	47,415	1,473		
2016	4,325	344	18,739	23,408	46,002	46,002	(22,594)		
2017	46,467	288	23,914	70,669	47,273	47,273	23,396		

Statistical Section

New York City Fire Pension Funds

FIRE OFFICERS' VARIABLE SUPPLEMENTS FUND

Schedule of Changes in Net Positions

(In thousands)

Year Ended	Additions to Funds Net Position				Deductions from Funds Net Position			Change in Net Position
	Net Investment Income/(Loss)	Other Income	Transfer Skim Earning	Total Additions	Benefit Payments	Total Deductions		
2008	(26,584)	411		(26,173)	27,970	27,970	(54,143)	
2009	(54,973)	367		(54,606)	22,525	22,525	(77,131)	
2010	35,286	132		35,418	22,897	22,897	12,521	
2011	58,800	180		58,980	21,014	21,014	37,966	
2012	4,723	193		4,916	21,986	21,986	(17,070)	
2013	34,492	190		34,682	22,834	22,834	11,848	
2014	51,265	180	10,000	61,445	21,742	21,742	39,703	
2015	12,056	193	10,000	22,249	21,970	21,970	279	
2016	758	279	18,134	19,171	21,567	21,567	(2,396)	
2017	39,855	240	21,829	61,924	21,717	21,717	40,206	

NEW YORK CITY FIRE PENSION FUNDS  
SCHEDULE OF REVENUES BY SOURCE

(in thousands)

Fiscal Year Ended June 30	Member Contributions	Employer Contributions	Other Income/(Loss)	Interest and Dividends	Appreciation (Depreciation) In fair value of investments	Total	% of Annual Covered Payroll
2008	75,974	780,202	28,393	210,151	(564,831)	529,889	N/A
2009	84,357	843,751	30,545	187,040	(1,457,773)	(312,080)	N/A
2010	89,223	874,331	10,319	176,097	666,775	1,816,745	N/A
2011	94,893	890,706	17,668	192,667	1,304,444	2,500,378	N/A
2012	98,494	976,895	9,756	220,373	(98,920)	1,206,598	N/A
2013	104,816	962,173	6,469	255,805	819,122	2,148,385	N/A
2014	108,859	969,956	(3,557) *	277,940	1,455,082	2,808,280	N/A
2015	108,582	988,784	(21,420)	361,802	3,386	1,441,134	N/A
2016	116,619	1,054,478	3,768	302,881	(59,872)	1,417,874	N/A
2017	108,368	1,061,170	(31,590)	314,960	1,135,635	2,588,543	N/A

\* Other Income/(loss) Included.

Source: Combined Statement of Changes in Fiduciary Net Position

Statistical Section

New York City Fire Pension Funds

NEW YORK CITY FIRE PENSION FUNDS

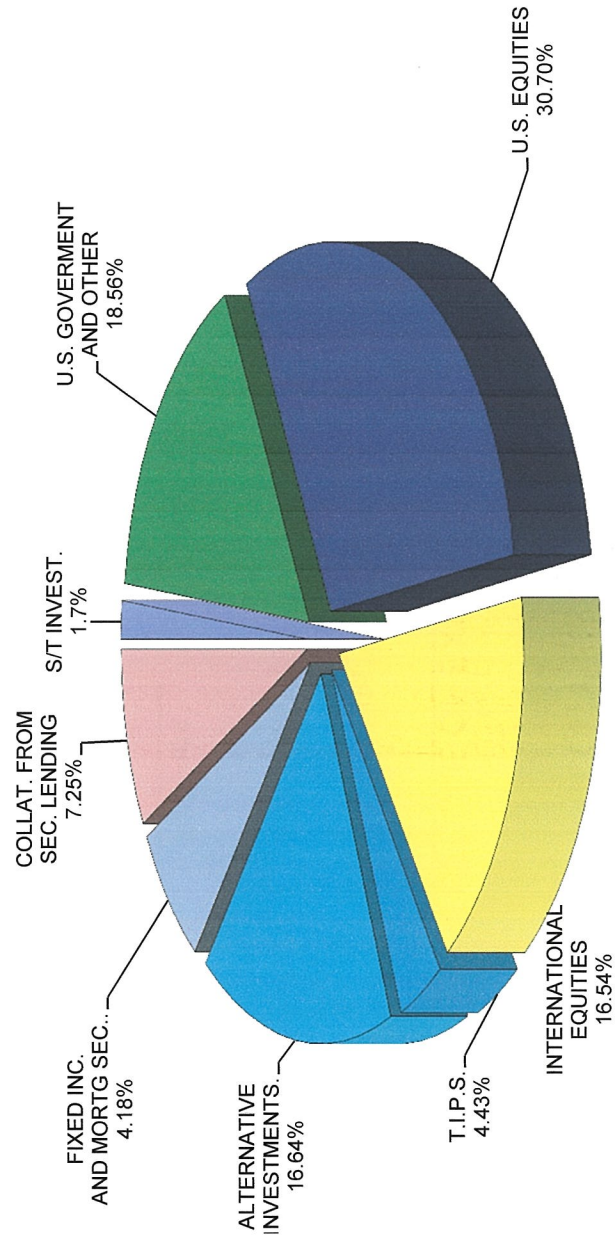
SCHEDULE OF EXPENSES BY TYPE

(in thousands)

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

# TOTAL INVESTMENTS FISCAL YEAR 2017 Fire Funds Combined

(At Market Value)



# INVESTMENT INCOME

Fire Funds Combined  
Fiscal Year 2017

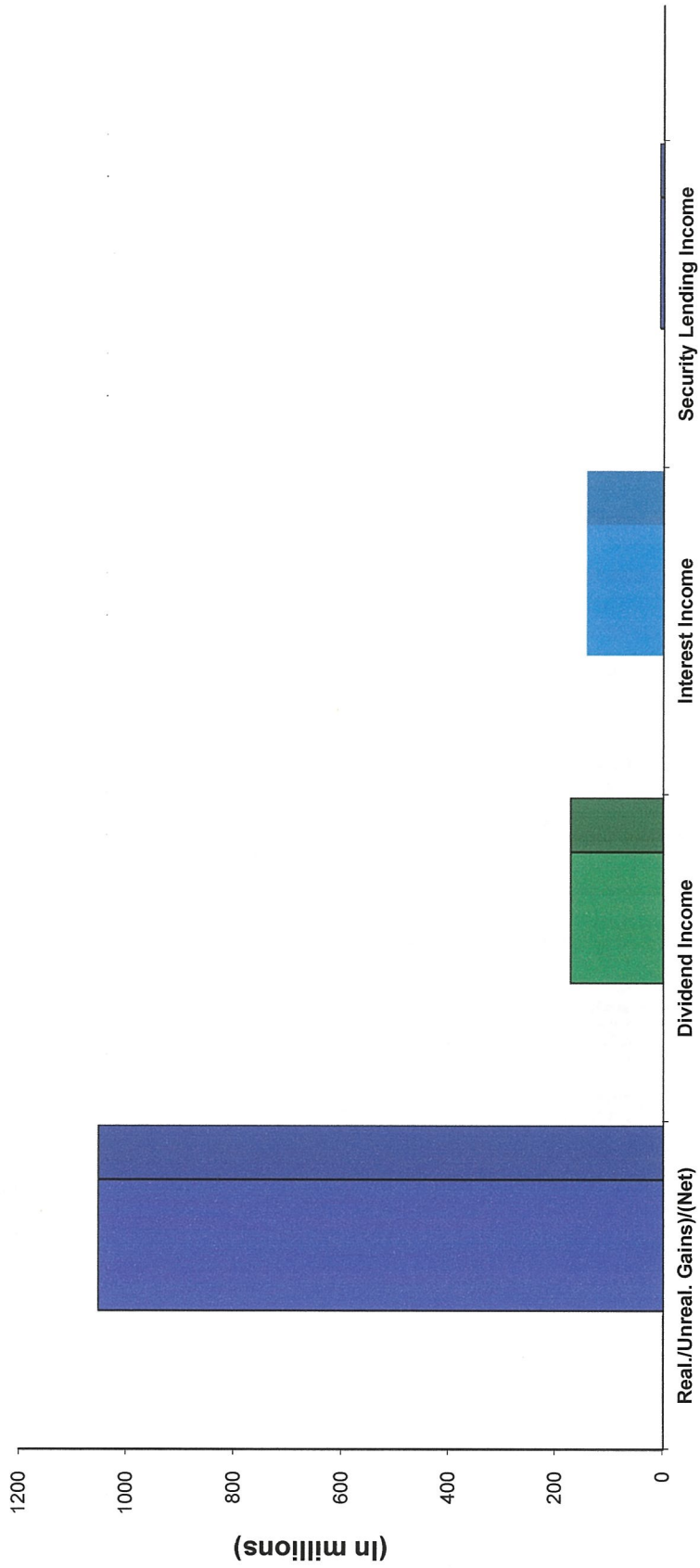




Table of Compensation to Administrative Officials & Commissions & Payments  
 To Brokers and Consultants  
 Fiscal Year ended June 30, 2017

<u>Official Plan Position</u>	<u>Salary or Allowance Paid</u>
Pension Fund Administrative Personnel	\$ 2,027,365
Comptroller's Office Executive Management Costs	15,729
First Deputy Personal Service Costs	93,882
Financial Information Service Agency (FISA)	561,898
Office of Payroll Administration (OPA)	43,436
Deputy Comptroller Asset Management (Personal Service Costs)	410,851
Deputy Comptroller Asset Management (Outside Service Costs)	757,926
Administrative Support Cost	479
Office of management and Budget	89,659
Legal Advisors	105,643
Investment Advisors	85,124,000 *
Securities Lending Fees	466,000 *
<b>Total</b>	<b>\$ 89,696,868</b>

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