# Teachers' Retirement Fund and Police Officers and Firefighters' Retirement Fund of the

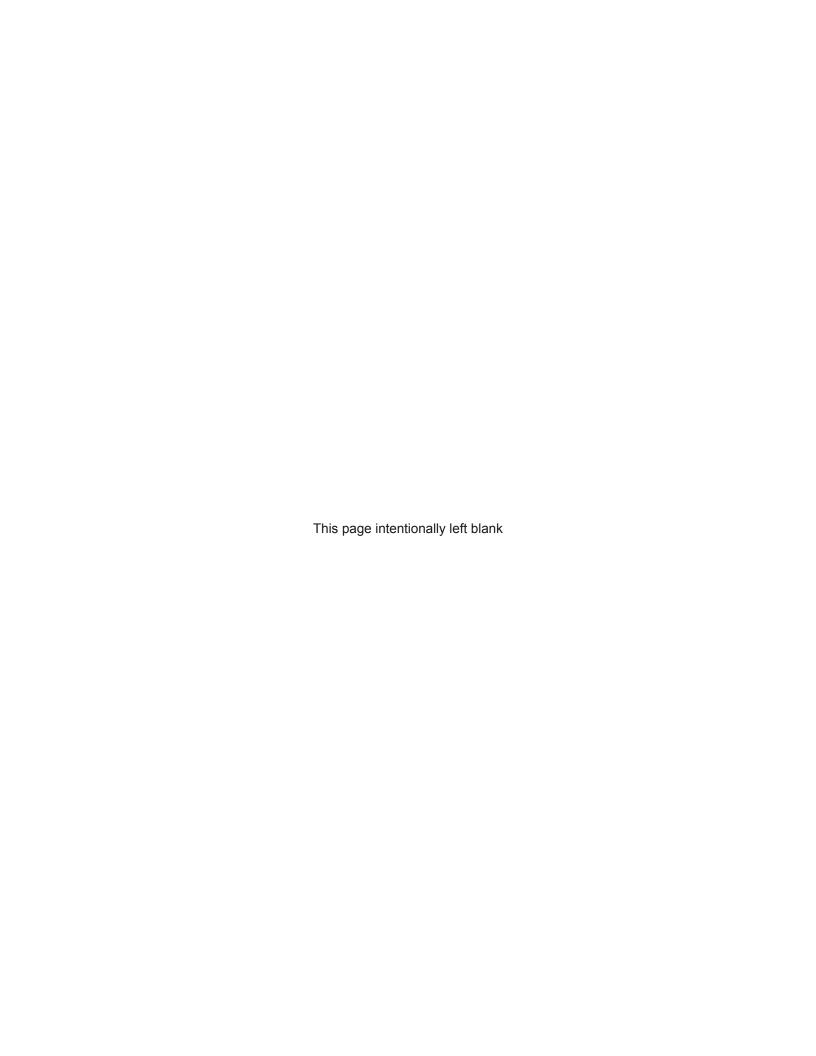
# **District of Columbia Government**



as managed by
The District of Columbia Retirement Board



Comprehensive Annual Financial Report For the fiscal years ended September 30, 2017 and 2016





# **Comprehensive Annual Financial Report**

For the fiscal years ended September 30, 2017 and 2016

## **District of Columbia Retirement Board**

a Pension Trust Fund of the District of Columbia

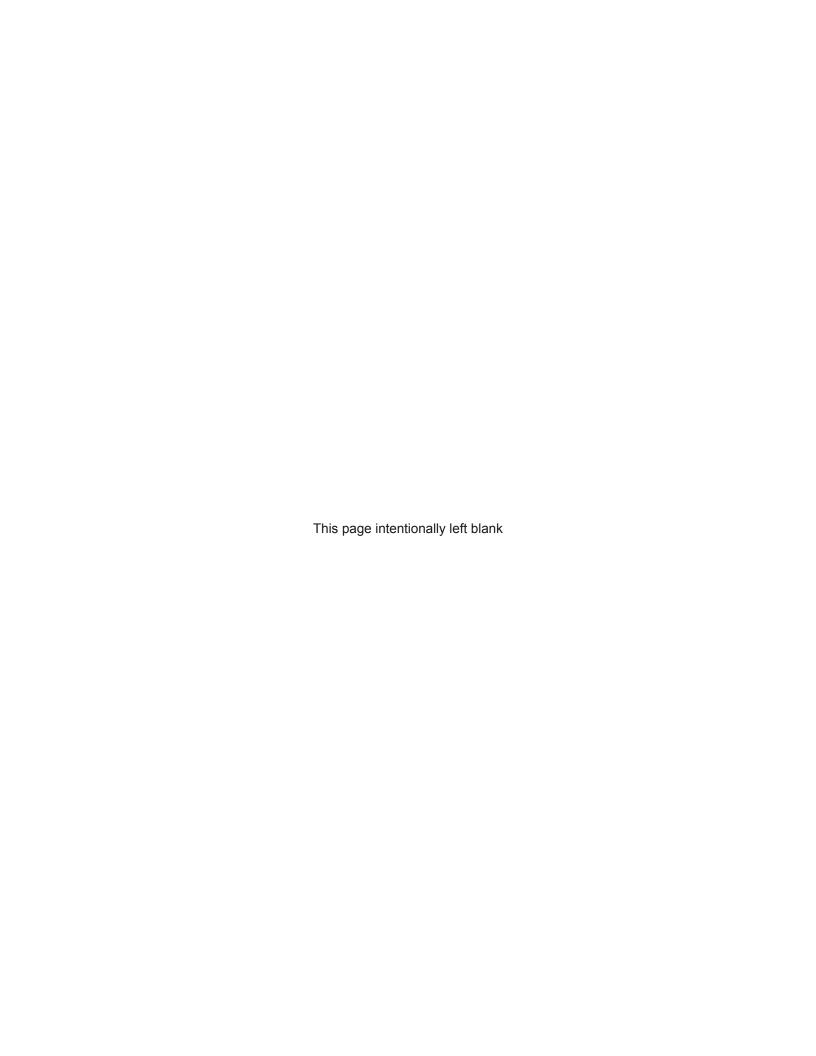
Prepared by the District of Columbia Retirement Board's Finance Department

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March 31, 2018

Board of Trustees
District of Columbia Retirement Board
900 7th Street NW
Washington, DC 20001

#### Dear Board Members:

I am happy to submit the Comprehensive Annual Financial Report (CAFR) of the District of Columbia Retirement Board (DCRB). This CAFR is a presentation of the financial results for DCRB for the fiscal years ended September 30, 2017 and 2016. These financial results provide useful information related to the assets that are held in trust for the members of the District of Columbia Police Officers and Firefighters' Retirement Plan and the District of Columbia Teachers' Retirement Plan (the Plans).

DCRB pays benefits and provides a range of retirement administration services to members from the date of their initial participation in the Plans as well as throughout their lifetimes and the lifetimes of their survivors. These Plans were adopted by the District of Columbia (DC or District) on July 1, 1997. DCRB also serves as the third-party administrator for benefits under the frozen federal plans, for which the U.S. Department of Treasury (Treasury) is financially responsible. As of September 30, 2017, the total membership of the District Replacement Plans and the federal frozen plans was 26,433. It should be noted that approximately 73 percent (19,295) are now members of the District Replacement Plans and/or jointly funded by the District and federal governments.

DCRB has exclusive authority and discretion to manage the assets of the District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Fire Fighters' Retirement Fund (collectively referred to as the Fund), that are held in trust for the sole benefit of Plan participants, and their eligible survivors and beneficiaries. The Fund assets can be used only to pay benefits to Plan members, as well as associated expenses necessary to administer the retirement program. As of September 30, 2017, the market value of the Fund was \$7.8 billion, an increase of approximately \$975 million in total asset value over the previous 12 months.

DCRB's work continues to be guided by its two-fold mission: (1) to prudently invest and manage the assets of the Fund and (2) to administer retirement benefits. Agency operations are managed in accordance with our fiduciary responsibilities and relevant legal authorities.

Janice Adams ● Jeffrey Barnette ● Lyle M. Blanchard ● Joseph W. Clark ● Mary A. Collins ● Gary W. Hankins

Darrick O. Ross ● Nathan A. Saunders ● Edward C. Smith ● Thomas N. Tippett ● Michael J. Warren ● Lenda P. Washington

Joseph W. Clark Chairman Sheila Morgan-Johnson Executive Director

#### **Invest and Manage Fund Assets**

One major ongoing responsibility is to prudently manage the Fund assets, with the goal of earning a return that meets or exceeds our actuarial investment return assumption. The Board has established an actuarial return target of 6.5 percent to sustain the Fund's viability over the long-term investment horizon. I am pleased to report that, since its inception in October 1982, the Fund has generated an annualized gross return of 8.9 percent, surpassing the actuarial return target by 2.4 percent per year. For FY 2017, the Fund earned a gross return of 13.1 percent, outperforming the actuarial target and benchmark. In building a solid foundation for achieving long-term, sustainable risk-adjusted net returns, we routinely review investment manager performance against benchmark returns, rebalance the portfolio to maintain compliance with asset allocation targets and ranges, and monitor and evaluate fees.

In addition to systematically reviewing the investment performance and operational processes of investment service providers, DCRB completed the following investment activities:

- Updated asset allocation targets to reflect the results of the 2016 asset allocation study to ensure the continued alignment
  of the Board's asset allocation policy with the long-term liability structure. An asset allocation review will be conducted
  in FY 2018 to position the Fund for unforeseen market volatility.
- Offered continuing education to Trustees and Staff on investment and regulatory matters, including fiduciary responsibilities, risk management and mitigation, and investment compliance.
- Reviewed the goals and benchmarks of our Funding Policy that were adopted in 2012 and made a revision to include
  a change in the asset smoothing period from seven years to five years, and a change to the amortization methodology.

Further, during FY 2017, Investment staff conducted extensive research on opportunities for additional exposure to emerging and diverse managers. Staff considered best practices for constructing and deploying an emerging and diverse managers program, the operational risks associated with investing with private markets' emerging and diverse managers, and the positions taken by other similarly situated retirement systems in the use of such managers.

#### **Benefits Administration**

Another major responsibility is to administer retirement benefits. Among our primary tasks is to ensure the timely and accurate payment of benefits to Plan members, their survivors and beneficiaries. We also provide members with retirement -related services, provide information about the Plans, answer their questions, and keep them aware of changes and issues related to their benefits.

#### Retirement Modernization

Through the use of technology, DCRB is automating manual processes and digitizing member records to reduce the reliance on paper documents, while increasing governance and risk management of the Plans.

#### Annual Benefits Statements

During FY 2017, DCRB successfully issued annual benefits statements to all active District firefighters. During FY 2018, DCRB will deliver annual benefits statements to all active members of the Plans.

#### Self-Service Application

Over the past year, DCRB has worked to develop a self-service application to allow annuitants to access their benefit and tax-related information. This initiative will align DCRB more closely with its peers in terms of ease of access to information for annuitants. This is anticipated to reduce the number of calls and visits to DCRB for routine questions and updates.

#### Other Retirement Modernization Efforts

During FY 2017, DCRB achieved compliance with the Federal Information Security Management Act (FISMA) for information systems operations. This effort was part of the comprehensive information security framework DCRB has implemented to reduce the risk of data loss and maintain the confidentiality of personally identifiable information from cybersecurity threats. Further, as business continuity is critical to our agency, DCRB has ongoing projects focused on updating our disaster recovery and continuity-of-operations plans.

Legislative and Compliance Initiatives - 2017 Summary Plan Descriptions

DCRB undertook a comprehensive review and update of the Summary Plan Descriptions (SPDs) for each of the Plans. The updates clarify plan provisions, as well as benefits administration policies and processes, and summarize the provisions of the Plans in a format that is easier for Plan members to read and understand. The SPDs will be distributed during FY 2018 to all Plan members.

#### Strategic Planning & Initiatives

As this is my first year as Executive Director of DCRB, I will set the course for DCRB's continued advancement under my leadership. This will require a re-evaluation of the Agency's current goals and objectives to ensure that they continue to align with DCRB's mission. This year, DCRB's leadership team will engage in a comprehensive strategic planning process to: (1) identify and prioritize initiatives; (2) assess the Agency's ability to perform in a primarily electronic or digital benefits administration environment; and (3) adjust and focus the Agency's resources around common goals with well-defined results. A comprehensive strategic plan will be especially important with the approaching acquisition of a pension information management system, the growth of the Fund, and the increased membership in the District Replacement Plans.

#### Management Responsibility for Financial Reporting

The responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with DCRB management. We believe the data, as presented, is accurate in all material respects, that it is presented in a manner designed to fairly set forth the Plan Net Position and the Changes in Net Position and that all disclosures necessary to enable the reader to gain the maximum understanding of the financial activities of the Fund have been included.

The accounting records of DCRB are maintained by DCRB staff. Pension payment information is contained within the System to Administer Retirement (STAR), which is managed by the U.S. Department of the Treasury. DCRB's employee payroll is processed through the District of Columbia's PeopleSoft System.

The independent auditors' report was issued by the public accounting firm of CliftonLarsonAllen LLP, whose selection was approved by DCRB's Board of Trustees. This report on the Plans is presented in the Financial Section of this CAFR.

The actuarial certification and related schedules included in the CAFR were provided by Cavanaugh Macdonald Consulting, LLC, whose selection was also approved by DCRB's Board of Trustees. The valuation results are presented in the Actuarial Section of this CAFR.

The Fund's custodial bank as of September 30, 2017, Northern Trust, records and reports all investment and cash management transactions, and the Board exercises close review and controls over those records and transactions.

The Management's Discussion and Analysis area of the Financial Section provides a narrative introduction and overview of DCRB's financial statements. It serves to supplement the Introductory Section of the CAFR, as well as financial statements, notes and supplementary information within the Financial Section.

Additional disclosures that are specifically required by statute are also included in the Report. DCRB management is responsible for maintaining internal accounting controls to provide reasonable assurance that transactions are properly authorized and recorded on an accrual basis in accordance with U.S. Generally Accepted Accounting Principles (GAAP) and that the financial statements conform with Governmental Accounting Standards Board (GASB) and American Institute of Certified Public Accountants (AICPA) reporting standards and Government Finance Officers Association (GFOA) guidelines. Consideration is given to the adequacy of internal accounting controls for systems under the control of DCRB and systems that are shared with other governmental offices or service providers. DCRB requires that its service providers undergo an annual service organization control report (SOC 1 report) review by independent public accountants and that government offices, whose systems are used by DCRB, are subjected to an annual audit. These controls are designed to provide reasonable assurance regarding the safekeeping of assets and the reliability of financial records.

We believe the internal controls in effect during the fiscal years ended September 30, 2017 and 2016 adequately safeguarded the Fund's assets and provided reasonable assurance regarding the proper recording of financial transactions. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived and that the valuation of costs and benefits requires estimates and judgment by management.

#### **Awards**

GFOA Awarded the Certificate of Achievement for Excellence in Financial Reporting to DCRB for its CAFR for the fiscal years ended September 30, 2016 and 2015. FY 2016 was the ninth consecutive year we received this award. In order to be awarded a Certificate of Achievement, DCRB must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both GAAP and other applicable regulatory requirements. A Certificate of Achievement is valid for a period of one year. We believe that our CAFR continues to meet the Certificate of Achievement Program's requirements and we are submitting it to GFOA to determine its eligibility for continuing certification.

We were also among the public retirement systems that received the Public Pension Coordinating Council's (PPCC) Public Pension Standards 2016 Award in recognition of meeting professional standards for funding. The PPCC is a national confederation of state retirement associations whose standards are widely recognized benchmarks for public pension systems in the areas of plan design, funding, actuarial and financial audits and member communications.

#### Conclusion

In summary, I am pleased to report that the Fund is in sound financial condition and that we pay Plan members accurately and timely. Further, I am happy that you, DCRB's trustees, are engaged and committed to our mission. DCRB has a knowledgeable and experienced senior team managing the Agency's strategic initiatives, and together, we continue to move forward in creating a comprehensive retirement administration system to serve the needs of Plan participants over the long-term.

I would like to express my appreciation to the Mayor's Office, the District of Columbia City Council, the U.S. Department of Treasury's Office of D.C. Pensions, the D.C. Office of Financial and Operations Systems, the D.C. Office of Budget and Planning, all other D.C. Government Offices that support the Board. I would also like to thank DCRB's trustees, staff, consultants and service providers for their tireless efforts to assure the financial soundness and successful operation of the District of Columbia Retirement Board.

If you have any questions regarding this CAFR of the District of Columbia Retirement Board for the fiscal years ended September 30, 2017 and 2016, please direct them to my office at any time.

Respectfully submitted,

Sheila Morgan-Johnson, Executive Director

District of Columbia Retirement Board

#### **About DCRB**

#### **History**

DCRB is an independent agency of the District of Columbia government that was created by Congress in 1979 under the Retirement Reform Act (the Reform Act). Prior to the Reform Act, eligibility and benefit rules and financing arrangements for the Plans were authorized by acts of Congress and administered by the Federal Government. Benefits were paid monthly from the general revenues of the U.S. Treasury on a "pay-as-you-go" basis when workers retired, not on a prefunded basis using actuarial assumptions and methods.

In 1997, with the passage of the National Capital Revitalization and Self-Government Improvement Act (the Revitalization Act), the Federal Government assumed responsibility for the unfunded pension liabilities for retirement benefits earned by District Teachers, Police Officers, and Firefighters as of June 30, 1997.

In 1998, the District of Columbia passed the Police Officers, Firefighters and Teachers Retirement Benefit Replacement Plan Act (the Replacement Plan Act), which established retirement plans for pension benefits accrued after June 30, 1997, and the method for calculating the employer's (District of Columbia) annual contribution to the retirement Fund. The Board's independent actuary determines the level of covered payroll and calculates the employer's annual contribution, which is expressed as a percentage of payroll (the normal contribution rate) for each participant group.

With the passage of the District's Office of Financial Operations and Systems Reorganization Act of 2004, DCRB assumed certain benefits administration responsibilities for the Plans from the District's Office of Pay and Retirement Services. Those responsibilities included recordkeeping, related administrative tasks, and the payment of benefits for participants hired on or after July 1, 1997, who earned benefits under the District Plans. Under a memorandum of understanding signed in 2005, DCRB assumed the same administrative responsibilities for participants hired prior to July 1, 1997, and whose benefit costs are the responsibility of the U.S. Treasury.

### **About DCRB**

#### Profile of the Plans

The District of Columbia Police Officers and Firefighters' Retirement Plan provides retirement, service-related disability, non-service-related disability and death benefits. All police officers and firefighters of the District of Columbia automatically become members on their date of employment. Police cadets are not eligible.

The District of Columbia Teachers' Retirement Plan provides retirement, disability and death benefits. Permanent, temporary and probationary teachers for the District of Columbia public day schools become members automatically on their date of employment. Other employees covered include school librarians, principals and counselors. Former District of Columbia teachers working at charter schools may be eligible to remain in the Plan.

In order to minimize administrative expenses while providing a broad range of investment options that are economically feasible, the assets of the Plans are comingled for investment purposes. The investment returns of the Fund are calculated based on the fair value of the assets. The Board seeks long-term investment returns in excess of the actuarial investment rate of return assumption at a level of risk commensurate with the expected levels of returns and consistent with sound and responsible investment practices. The Board, working closely with investment consultants and with input from its actuary, selects the optimal asset allocation policy which best reflects the risk tolerance and investment goals of the Fund.

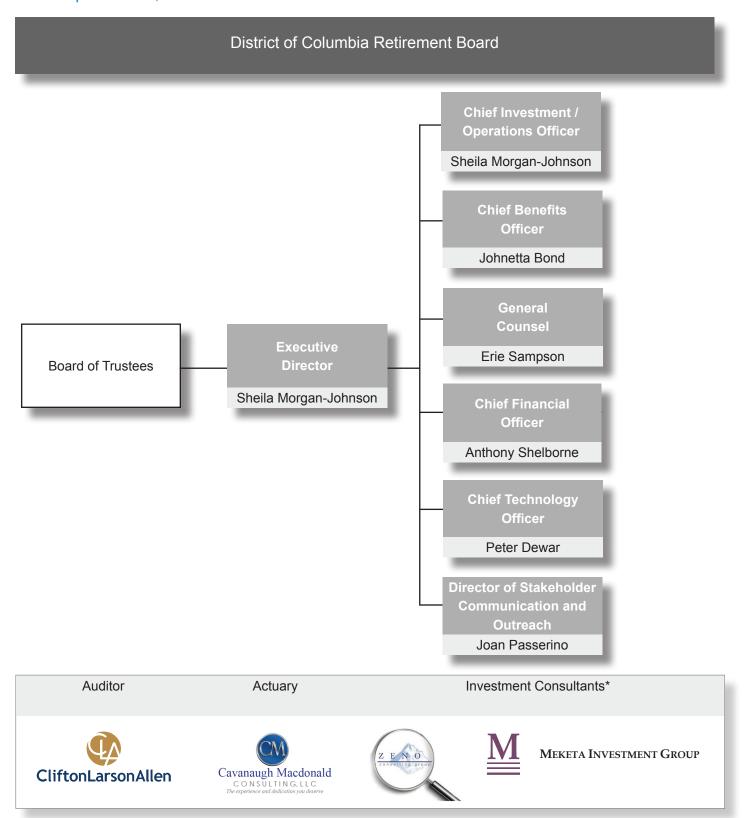
The asset allocation policy is implemented through the careful screening and selection of investment managers that have an audited, favorable, long-term track record, a disciplined investment process, and reasonable investment management fees. The Fund also seeks to outperform the Policy Benchmark, computed as the weighted average index return of the strategic asset allocation as described in the Investments Section.

Upon assuming responsibility for administering the Plans in October 2005, DCRB established a Benefits Department that is available to all active Plan members and retirees, calculates benefit payments and works closely with the U.S. Department of the Treasury's Office of D.C. Pensions (ODCP) to implement system changes resulting from software upgrades or legislation affecting plan provisions. DCRB produces plan communications that include periodic newsletters and Summary Plan Descriptions, as prescribed by statute. ODCP maintains the retirement information system that calculates benefits, issues monthly benefit payments to retirees and survivors and handles all payment-related activities, including tax withholdings and premiums for health and life insurance coverage.

By statute, the Board of Trustees is responsible for establishing DCRB's annual budget. The budget relies on monies derived from the Fund's investment earnings and employer and employee contributions. In addition, DCRB receives reimbursements as the third-party administrator for the frozen federal plans covering members whose pension benefits are financed by the U.S. Treasury. The District Council provides oversight of the budget process and, pursuant to Section 1-711 (f) of the District of Columbia Code, "may establish the amount of funds which will be allocated by the Board for administrative expenses, but may not specify the purposes for which such funds may be expended or the amounts which may be expended for the various activities."

## **Organizational Structure**

As of September 30, 2017



<sup>\*</sup>Information regarding the investment consultants can be found in the Schedule of Fees and Commissions in the Investments Section.

## **Board of Trustees** As of September 30, 2017

DCRB's Board (the Board) has 12 Trustees, six (6) of whom are elected by the participant groups, three (3) who are appointed by the Mayor, and three (3) who are appointed by the District Council. In addition, the DC Treasurer (representing the District's Chief Financial Officer), serves on the Board as an ex-officio (non-voting) member. The Trustees, who are fiduciaries, must act solely in the interest of all Plan members.



Janice Adams
Mayoral Appointee
Current Term:
2017 - 2020



Lyle M. Blanchard Treasurer Council Appointee Current Term: 2017 - 2021



Joseph M. Bress Council Appointee Current Term: 2016 - 2020



Joseph W. Clark Chairman Mayoral Appointee Current Term: 2014 - 2018



Mary A. Collins
Elected Retired Teacher
Current Term:
2014 - 2018



Gary W. Hankins
Sergeant-at-Arms
Elected Retired Police
Current Term:
2017 - 2021



**Darrick O. Ross** *Elected Active Police*Current Term:
2015 - 2019



Nathan A. Saunders
Elected Active Teacher
Term:
2017 - 2021

## **Board of Trustees** As of September 30, 2017



Edward C. Smith
Elected Active Firefighter
Current Term:
2017 - 2021



Thomas N. Tippett

Elected Retired Firefighter

Current Term:

2016 - 2020



Michael J. Warren Council Appointee Current Term: 2015 - 2019



Lenda P. Washington Mayoral Appointee Current Term: 2014 - 2019



Jeffrey A. Barnett

Designee of the D.C. CFO

D.C. Deputy CFO/Treasurer

#### **Awards**

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

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to DCRB for our Comprehensive Annual Financial Report for the Fiscal Years ended September 30, 2016 and 2015. The Certificate of Achievement is awarded to a government entity for publishing an easily readable and efficiently organized comprehensive annual financial report that satisfies both generally accepted accounting principles and applicable legal requirements. DCRB's Finance Department has won this award for the past nine years. We believe our current comprehensive annual report continues to meet the Certificate of Achievement Program's requirements.



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

# District of Columbia Retirement Board

For its Comprehensive Annual Financial Report for the Fiscal Year Ended

**September 30, 2016** 

Jeffrey R. Eng.
Executive Director/CEO

#### **Awards**

#### **Public Pension Standards Award**

The Public Pension Coordinating Council (PPCC) awarded a Public Pension Standards Award for Funding to DCRB for the Fiscal Year ended September 30, 2016. In order to be awarded a Public Pension Standards Award, a public pension program must meet professional standards for plan funding as set forth in the Public Pension Standards. A Public Pension Standards Award is valid for a period of one year.



## **Public Pension Coordinating Council**

# Recognition Award for Funding **2016**

#### Presented to

#### District of Columbia Retirement Board

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

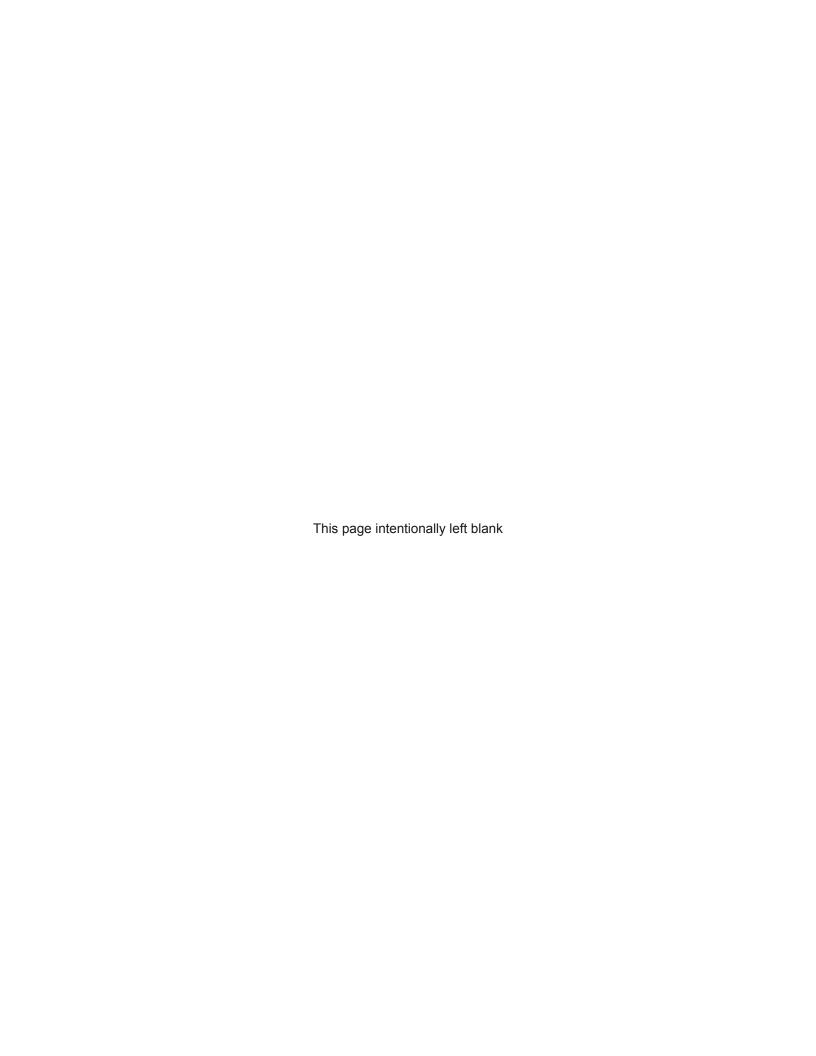
Presented by the Public Pension Coordinating Council, a confederation of

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

National Council on Teacher Retirement (NCTR)

Alan H. Winkle Program Administrator

alan Helinkle



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## **Independent Auditors' Report**



CliftonLarsonAllen LLP www.CLAconnect.com

#### INDEPENDENT AUDITORS' REPORT

Board of Trustees
District of Columbia Teachers' Retirement Fund and the
District of Columbia Police Officers and Firefighters' Retirement Fund

#### **Report on Financial Statements**

We have audited the accompanying combining statements of fiduciary net position of the District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund, Pension Trust Funds of the Government of the District of Columbia (the District), as of September 30, 2016 and 2015, and the related combining statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements, as listed in the table of contents.

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

Management is responsible for the preparation and fair presentation of these 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 financial statements that are free from material misstatement, whether due to fraud or error.

#### **Auditors' Responsibility**

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the 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 entity's 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 financial statements.

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



## **Independent Auditors' Report**

#### **Opinion**

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund as of September 30, 2016 and 2015, and the respective changes in their financial position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

#### **Emphasis of Matter**

As discussed in Note 1, these financial statements only present the District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund and do not purport to, and do not, present the financial position of the Government of the District of Columbia as of September 30, 2016 and 2015, and the changes in its financial position for the years then ended in conformity 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 and the schedules of changes in the net pension liability and related ratios, employer contributions and investment returns, as listed in the table of contents, be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 and the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the financial statements, and other knowledge we obtained during our audits of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### Other Information

Our audits were conducted for the purpose of forming an opinion on the District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund financial statements. The supplementary information, including the schedules of administrative expenses, investment expenses, and payments to consultants, as listed in the table of contents, is presented for purposes of additional analysis and is not a required part of the financial statements.

The supplementary information, as listed in the table of contents, is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audits of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information, including the schedules of administrative expenses, investment expenses, and payments to consultants, as listed in the table of contents, is fairly stated, in all material respects, in relation to the financial statements as a whole.

The introductory, investment, actuarial and statistical sections, as listed in the table of contents, have not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

## **Independent Auditors' Report**

#### Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated January 3, 2017 on our consideration of the District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund's internal control over financial reporting and on our tests of their compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund's internal control over financial reporting and compliance.

CliftonLarsonAllen LLP

Clifton Larson Allen LLP

Baltimore, Maryland January 3, 2017

#### INTRODUCTION

This discussion and analysis provides an overview of the financial activities of the District of Columbia Teachers' Retirement Fund (TRF) and Police Officers and Firefighters' Retirement Fund (POFRF), for the years ended September 30, 2017, 2016 and 2015, which collectively will be referred to as the "District Retirement Funds" or the "Fund." This discussion and analysis should be read in conjunction with the financial statements, the notes to the financial statements, the required supplementary information and the supplementary information provided in this report.

The District of Columbia Retirement Board (the Board or DCRB) is an independent agency of the District of Columbia (the District or D.C.) government. The Board is responsible for managing the assets of the District Retirement Funds. As authorized by D.C. Code, the Board pools the assets of the TRF and the POFRF into a single investment portfolio. The Board allocates the investment returns and expenses, and the administrative expenses of the Board, between the two District Retirement Funds in proportion to their respective net position. The Board maintains financial records of contributions, purchases of service, benefit payments, refunds, investment earnings, investment expenses and administrative expenses.

Effective October 1, 2005, the Board entered into a Memorandum of Understanding (MOU) with the District of Columbia and the United States Department of the Treasury (the U.S. Treasury) to administer the pension benefits under the TRF and the POFRF for all retirees, survivors and beneficiaries that are the financial responsibility of the District of Columbia (service earned on and after July 1, 1997) and the Federal Government (service through June 30, 1997). In addition to the Board's administrative duties, the U.S. Treasury also provides certain administrative services related to the administration of pension benefits under the District of Columbia Teachers' Retirement Plan and the District of Columbia Police Officers and Firefighters' Retirement Plan (the Plans). The administrative costs incurred while administering the pension benefits are shared by DCRB and the U.S. Treasury in accordance with an MOU that is agreed to annually between the two parties.

#### **OVERVIEW OF THE FINANCIAL STATEMENTS AND SCHEDULES**

The following discussion and analysis are intended to serve as an introduction to DCRB's financial statements. The basic financial statements include:

**The Combining Statements of Fiduciary Net Position** are a point-in-time snapshot of plan fund balances at fiscal yearend. It reports the assets available to pay future benefits to retirees, and any liabilities that are owed as of the statement date. The resulting Net Position (Assets – Liabilities = Net Position) represents the value of assets restricted for pensions net of liabilities owed as of the financial statement date.

**The Combining Statements of Changes in Fiduciary Net Position** display the effect of financial transactions that occurred during the fiscal year, where Additions – Deductions = Change in Net Net Position. This increase (or decrease) in Net Position reflects the change in the value of Net Position Restricted for Pensions.

**The Notes to Financial Statements** contain disclosures and discussions which support the data presented in the financial statements. The notes present information about the creation and administration of the Fund, significant accounting policies, and investments. The notes are an integral part of the financial statements and should be considered in conjunction with any review of the financial statements.

**The Required Supplementary Information** consists of schedules of changes of employers' net pension liability and related ratios, employer contributions, and the money-weighted rate of investment returns.

**The Supplementary Information** includes additional information on the District Retirement Funds including schedules of administrative expenses, investment expenses and payments to consultants. These schedules include more detailed information pertaining to the Plans.

#### **ANALYSIS OF FINANCIAL INFORMATION**

DCRB's funding objective is to meet long-term benefit obligations with net investment income and employer and member contributions. The discussion below provides an analysis of the current year's financial activities in relation to the current member population and relevant economic conditions for the combined Funds.

#### **Additions to Net Position (Revenues)**

Additions to net position are comprised of employer contributions, employee contributions, net investment income, and other income. These additions for fiscal year 2017 totaled \$1,168.4 million, an increase of \$350.2 million over the fiscal year 2016 amount of \$818.2 million. This increase was primarily due to the higher investment returns in fiscal year 2017.

Employer contributions in fiscal year 2017 totaled \$202.4 million, an increase of \$21.8 million over the fiscal year 2016 amount of \$180.6 million. The fiscal year 2017 employer contribution was derived from the contribution rate calculated in the actuary's report for the period ended October 1, 2015 multiplied by covered payroll and adjusted for timing differences caused by the contribution being calculated 2 years in arrears. This adjustment is required by the D.C. Code.

Plan member contributions in fiscal year 2017 totaled \$67.8 million, an increase of \$1.4 million over the fiscal year 2016 amount of \$66.4 million. Member contributions consist of amounts paid by members for future retirement benefits.

Investment income, net of investment fees, for fiscal year 2017 totaled \$894.9 million, a return of 13.2%. Net investment income for fiscal year 2016 totaled \$567.4 million, a return of 9.3%. Other income in fiscal year 2017 totaled \$3.4 million, a decrease of \$(0.4) million over the fiscal year 2016 amount of \$3.8 million. Other income consists mainly of reimbursements of administrative expenses from the U.S. Treasury.

#### **Deductions from Net Position (Expenses)**

The statutory mandate of DCRB is to provide retirement, survivor and disability benefits to qualified members and their survivors. The costs of such programs include recurring benefit payments, elective refunds of contributions to employees who terminate employment, and the cost of administering the District Retirement Funds.

Deductions from net position are comprised of benefit payments, retirement benefits payable to the U.S. Treasury, refunds and administrative expenses. These deductions for fiscal year 2017 totaled \$190.0 million, an increase of \$15.7 million or 9.0% over the fiscal year 2016 amount of \$174.3 million.

Benefit payments for fiscal year 2017 totaled \$164.6 million, an increase of \$17.0 million or 11.6% over the fiscal year 2016 amount of \$147.6 million. This increase reflects the combination of a net growth of 3.3% in the number of retirees and survivors receiving benefits, coupled with COLA adjustments and an overall increase in the final average salary for new retirees. In fiscal years 2017 and 2016, benefit payments made on behalf of current retirees, survivors and beneficiaries comprised approximately 87% of DCRB expenses.

Refunds in fiscal year 2017 totaled \$7.8 million, a decrease of \$(0.6) million or -6.8% over the fiscal year 2016 amount of \$8.4 million. Lump-sum distributions, or refunds, of member accounts are at the discretion of the member, and vary from year to year.

Administrative expenses in fiscal year 2017 totaled \$17.5 million, a decrease of \$(0.2) million or -1.13% over the fiscal year 2016 amount of \$17.7 million. In fiscal years 2017 and 2016, the administrative expenses were equivalent to 23 and 26 basis points of the assets under management, respectively.

#### **Funding Status**

As of October 1, 2017 (the date of the most recent actuarial valuation), the funding status was 105.2% for the combined District Retirement Funds. DCRB is a well-funded yet immature system as a result of the 1999 asset split with the U.S. Treasury in which the U.S. Treasury assumed responsibility for all benefit obligations prior to July 1, 1997. As with all immature systems, a higher percentage of benefits are funded by current contributions. As the system matures, investment income will provide a greater percentage of the funds necessary to pay retirement benefits. Therefore, the long-term rate of investment return is critical to DCRB's long-term funding status.

At October 1, 2017, the actuarial value of assets set aside to pay pension benefits was about \$2.0 billion for the TRF and about \$5.4 billion for the POFRF for a total of \$7.4 billion. The fair value of these assets at September 30, 2017, included on the financial statements of DCRB was \$2.1 billion for the TRF and \$5.6 billion for the POFRF for a total of \$7.7 billion. Therefore, when viewing the actuarial funding status in this case, the market value of assets would provide a slightly better funding position to the actuarial value of assets as of the October 1, 2016 valuation.

#### **FINANCIAL ANALYSIS SUMMARY**

Net position may serve over time as a useful indication of DCRB's financial strength. At the close of fiscal years 2017 and 2016, the net position of DCRB totaled \$7.8 and \$6.8 billion, respectively. Net position serves to meet DCRB's ongoing obligations to Plan participants and their survivors and beneficiaries.

#### **Summary of Financial Information**

The following Condensed and Combining Statements of Fiduciary Net Position and Changes in Fiduciary Net Position present financial information for the combined Funds and compares fiscal years 2017, 2016 and 2015.

# Condensed and Combined Statements of Fiduciary Net Position

(Dollars in thousands)

	2017	2016	2015	2017 Percent Change	2016 Percent Change
Assets					
Cash and short-term investments	\$88,216	\$51,480	\$75,492	71.4%	-31.8%
Receivables	63,684	14,235	14,077	347.4%	1.1%
Prepaid expenses	-	10	47	-100.0%	-78.7%
Investments	7,675,417	6,728,612	6,056,101	14.1%	11.1%
Total assets	7,827,317	6,794,337	6,145,717	15.2%	10.6%
Liabilities					
Other payables	6,337	7,879	4,214	-19.6%	87.0%
Investment commitments payable	65,939	9,878	8,867	567.5%	11.4%
Total liabilities	72,276	17,757	13,081	307.0%	35.7%
Net Position Restricted For Pensions	\$7,755,041	\$6,776,580	\$6,132,636	14.4%	10.5%

Condensed and Combined Statements of Changes in Fiduciary Net Position (Dollars in thousands)

	2017	2016	2015	2017 Percent Change	2016 Percent Change
Additions					
Employer contributions	\$202,412	\$180,584	\$142,943	12.1%	26.3%
Plan member contributions	67,788	66,376	65,300	2.1%	1.6%
Net investment income (loss)	894,864	567,419	(259,930)	57.7%	318.3%
Other income	3,375	3,843	1,397	-12.2%	175.1%
Total additions (reductions)	1,168,439	818,222	(50,290)	42.8%	1727.0%
Deductions					
Benefit payments	164,606	147,554	127,710	11.6%	15.5%
Retirement benefits payable to U.S. Treasury	-	676	-		
Refunds	7,813	8,384	6,972	-6.8%	20.3%
Administrative expenses	17,559	17,664	16,482	-0.6%	7.2%
Total deductions	189,978	174,278	151,164	9.0%	15.3%
		_			
Change In Net Position	\$978,461	\$643,944	\$(201,454)	51.9%	419.6%

#### **Financial Highlights**

The Teachers' Retirement Fund financial highlights for fiscal year 2017 are as follows:

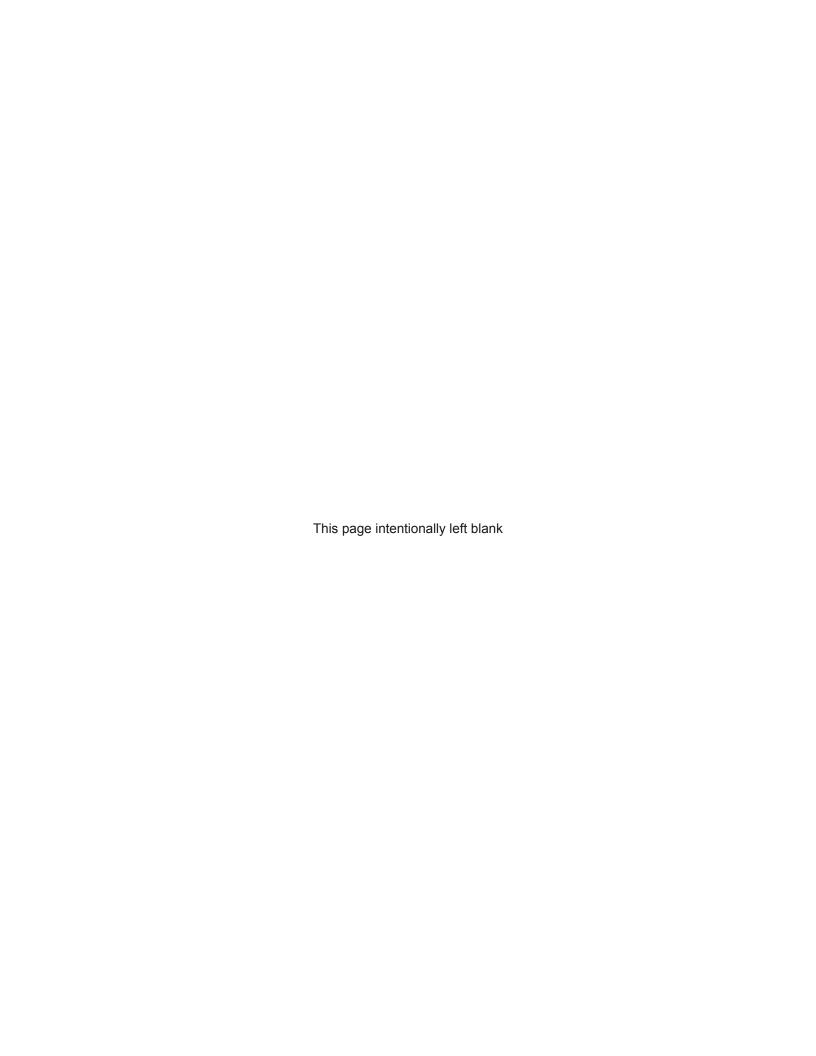
- Net position restricted for pensions as of September 30, 2017 was \$2.1 billion, an increase of \$248.7 million or 13.7% over fiscal year 2016.
- Investment income, net of investment expenses, for fiscal year 2017 was \$239.6 million, a return of 13.2%. Investment income, net of investment expenses, for fiscal year 2016 was \$152.3 million, a return of 9.3%.
- Total additions for fiscal year 2017 were \$331.6 million, an increase of \$100.2 million over fiscal year 2016. In fiscal year 2016, there was a total increase of \$231.4 million. Employer contributions for fiscal year 2017 were \$56.8 million, an increase of \$12.3 million or 27.7% over fiscal year 2016. Teachers' Plan member contributions for fiscal year 2017 were \$34.3 million, an increase of \$0.8 million or 2.3% over fiscal year 2016. Other income for fiscal year 2017 was \$907 thousand, a decrease of approximately \$(126) thousand over the fiscal year 2016 amount of \$1.0 million.
- Total deductions for fiscal year 2017 were \$82.9 million, an increase of \$2.9 million or 3.6% over fiscal year 2016.
   Pension benefit payments for fiscal year 2017 were \$72.1 million, an increase of \$3.5 million or 5.0% over fiscal year 2016.
   Refunds of member contributions for fiscal year 2017 were \$6.2 million, a decrease of \$39 thousand or -0.6% over fiscal year 2016.
   Administrative expenses for fiscal year 2017 were \$4.7 million, which was virtually unchanged as compared to fiscal year 2016.
- The Board's funding objective is to meet long-term pension benefit obligations. As of October 1, 2017, the date of
  the latest actuarial valuation, the TRF's ratio of plan net position to total pension liability (at September 30, 2017) was
  95.85%. In general, this means that for each dollar's worth of future pension liability, the TRF has accumulated \$0.95
  to meet that obligation. This ratio increased 7.6% over the prior year funded ratio of 88.27%.

The Police Officers and Firefighters' Retirement Fund financial highlights for fiscal year 2017 are as follows:

- Net position restricted for pensions as of September 30, 2017 was \$5.7 billion, an increase of \$729.8 million or 14.7% over fiscal year 2016.
- Investment income, net of investment expenses, for fiscal year 2017 was \$655.3 million, a return of 12.1%. Investment income, net of investment expenses, for fiscal year 2016 was \$415.2 million, a return of 9.3%.
- Total additions for fiscal year 2017 were \$836.8 million, an increase of \$250.0 million over fiscal year 2016. In fiscal year 2016, there was a total increase of \$636.1 million. Employer contributions for fiscal year 2017 were \$145.6 million, an increase of \$9.5 million or 7.0% over fiscal year 2016. Police and Firefighters' Plan member contributions for fiscal year 2017 were \$33.4 million, an increase of \$639.0 thousand or 1.9% over fiscal year 2016. Other income for fiscal year 2017 was \$2.5 million, a decrease of \$(342.0) thousand over the fiscal year 2016 amount of \$2.8 million.
- Total deductions for fiscal year 2017 were \$107.0 million, an increase \$12.8 million or 13.6% over fiscal year 2016. Pension benefit payments for fiscal year 2017 were \$92.5 million, an increase of \$13.6 million or 17.3% over fiscal year 2016. Refunds of member contributions for fiscal year 2017 were \$1.6 million, a decrease of \$(532.0) thousand or -24.4% over fiscal year 2016. Administrative expenses for fiscal year 2017 were \$12.8 million, a decrease of \$(80.0) thousand or -0.6% over fiscal year 2016.
- The Board's funding objective is to meet long-term pension benefit obligations. As of October 1, 2017, the date of the latest actuarial valuation, the POFRF's ratio of plan net position to total pension liability (at September 30, 2017) was 114.67%. In general, this means that for each dollar's worth of future pension liability, the POFRF has accumulated about \$1.14 to meet that obligation. This ratio increased 8.7% over the prior year ratio of 105.97%

#### **ADDITIONAL INFORMATION**

These financial statements of the District Retirement Funds are presented in accordance with accounting principles generally accepted in the United States of America. Questions about these financial statements or other inquiries should be addressed to the Executive Director, District of Columbia Retirement Board, 900 7th Street, NW, 2nd Floor, Washington, D.C. 20001.



# FINANCIAL STATEMENTS

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## **Combining Statements of Fiduciary Net Position**

As of September 30, 2017 and 2016 (Dollar amounts in thousands)

		2017			2016	
		Police			Police	
	Teachers'	Officers and Firefighters'		Teachers'	Officers and Firefighters'	
	Retirement	Retirement		Retirement	Retirement	
	Fund	Fund	Total	Fund	Fund	Total
Assets						
Cash and short-term investments	\$23,675	\$64,541	\$88,216	\$13,993	\$37,487	\$51,480
Receivables:						
Federal Government	427	1,161	1,588	777	2,107	2,884
Investment sales proceeds	13,177	36,234	49,411	1,618	4,407	6,025
Interest & dividends	663	1,824	2,487	127	344	471
Employee contributions	5,237	4,961	10,198	2,480	2,375	4,855
Total receivables	19,504	44,180	63,684	5,002	9,233	14,235
Prepaid expenses	-	-	-	3	7	10
Investments at fair value:						
Domestic equity	559,865	1,539,494	2,099,359	525,588	1,430,431	1,956,019
International equity	630,493	1,734,444	2,364,937	559,372	1,522,376	2,081,748
Fixed income	566,890	1,558,813	2,125,703	488,528	1,329,569	1,818,097
Real estate	163,980	450,906	614,886	128,811	350,569	479,380
Private equity	125,483	345,049	470,532	105,699	287,669	393,368
Total investments at fair value	2,046,711	5,628,706	7,675,417	1,807,998	4,920,614	6,728,612
Total assets	2,089,890	5,737,427	7,827,317	1,826,996	4,967,341	6,794,337
Liabilities						
Retirement benefits payable to U.S. Treasury	459	217	676	459	217	676
Accounts payable and other						
liabilities	866	3,379	4,245	1,377	3,751	5,128
Due to Federal Government	301	819	1,120	56	154	210
Due to District of Columbia						
Government	80	216	296	501	1,364	1,865
Investment commitments payable	17,585	48,354	65,939	2,654	7,224	9,878
Total liabilities	19,291	52,985	72,276	5,047	12,710	17,757
Net Position Restricted For						
Pensions	\$2,070,599	\$5,684,442	\$7,755,041	\$1,821,949	\$4,954,631	\$6,776,580

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

## **Combining Statements of Changes in Fiduciary Net Position**

For the years ended September 30, 2017 and 2016 (Dollar amounts in thousands)

		2017			2016	
		Police			Police	
	Teachers'	Officers and Firefighters'		Teachers'	Officers and Firefighters'	
	Retirement	Retirement		Retirement	Retirement	
Additions	Fund	Fund	Total	Fund	Fund	Total
Additions						
Contributions:	<b>#FC 704</b>	<b>#445.004</b>	<b>#000 440</b>	£44.400	<b>#400 445</b>	£400 504
District Government	\$56,781	\$145,631	\$202,412	\$44,469	\$136,115	\$180,584
Plan member	34,364	33,424	67,788	33,591	32,785	66,376
Total contributions	91,145	179,055	270,200	78,060	168,900	246,960
Investment (loss) income:						
Net (depreciation) appreciation in	000 040	007.000	074 000	4.47.000	074 000	540.400
fair value of investments	233,210	637,888	871,098	147,820	371,288	519,108
Interest and dividends	10,724	29,335	40,059	8,245	54,220	62,465
Total gross investment (loss) income	243,934	667,223	911,157	156,065	425,508	581,573
Less:						
Investment expenses	4,380	11,913	16,293	3,803	10,351	14,154
Net investment (loss)						
income	239,554	655,310	894,864	152,262	415,157	567,419
Other income	907	2,468	3,375	1,033	2,810	3,843
Total (reductions) additions	331,606	836,833	1,168,439	231,355	586,867	818,222
Deductions						
Benefit payments	72,069	92,537	164,606	68,634	78,920	147,554
Retirement benefits payable						
to U.S. Treasury	-	-	-	459	217	676
Refunds	6,166	1,647	7,813	6,205	2,179	8,384
Administrative expenses	4,721	12,838	17,559	4,746	12,918	17,664
Total deductions	82,956	107,022	189,978	80,044	94,234	174,278
Change in Net Position	248,650	729,811	978,461	151,311	492,633	643,944
Net Position Restricted For Pensions:						
Beginning of Year	1,821,949	4,954,631	6,776,580	1,670,638	4,461,998	6,132,636
	, ,				, ,	, , ,
End of Year	\$2,070,599	\$5,684,442	\$7,755,041	\$1,821,949	\$4,954,631	\$6,776,580

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

#### **Notes to Financial Statements**

#### NOTE 1: ORGANIZATION

The District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund were established in 1979 by the District of Columbia Retirement Reform Act (the Reform Act, Pub. L. 96-122, D. C. Code § 1-701 et seq.). The Fund holds in trust the assets available to pay pension benefits to teachers, police officers and firefighters of the District of Columbia Government. The Reform Act also established the District of Columbia Retirement Board.

The National Capital Revitalization and Self-Government Improvement Act of 1997 (the Revitalization Act, Title XI of the Balanced Budget Act of 1997, Pub. L. 105-33) transferred significant assets and liabilities of the District Retirement Funds to the Federal Government. The Revitalization Act transferred to the Federal Government the liability for retirement benefits for employee service credit earned prior to July 1, 1997, by participants of the District Retirement Funds. The assets transferred to the Federal Government were intended to partially fund this liability.

On September 18, 1998, the Council of the District of Columbia (the Council) enacted the Police Officers, Firefighters, and Teachers Retirement Benefit Replacement Plan Act of 1998 (the Replacement Act). The Replacement Act established the District Retirement Funds for employee service earned after June 30, 1997, and provided for full funding of these benefits on an actuarially sound basis.

The Board is an independent agency of the District of Columbia government that is responsible for managing the assets of the TRF and the POFRF. Although the assets of these funds are commingled for investment purposes, each fund's assets may only be used for the payment of benefits to the participants of that fund and certain administrative expenses.

The District Retirement Funds are included in the District's Comprehensive Annual Financial Report as a pension trust fund.

#### NOTE 2: FUND ADMINISTRATION AND DESCRIPTION

**District of Columbia Retirement Board** – The Board consists of 12 trustees, three appointed by the Mayor of the District, three appointed by the Council of the District, and six elected by the active and retired participants. Included are one active and one retired representative each, from the police officers, firefighters, and teachers. Each of the six representatives of the Plans' participants is elected by the respective groups of active and retired employees. In addition, the District's Chief Financial Officer or his designee serves as a non-voting, ex-officio trustee.

Since its inception, the Board has operated under a committee system which provides a two-tiered process for fiduciary review and analysis. In this manner, the Board, consistent with its fiduciary duties, reviews all issues brought before it. The Board has six standing committees: Benefits, Audit, Fiduciary, Investments, Legislative, and Operations. To implement its policies, the Board retains an executive director and other staff who are responsible for the day-to-day management of the District Retirement Funds and the administration of the benefits paid from the Funds.

#### NOTE 2: FUND ADMINISTRATION AND DESCRIPTION (continued)

#### **Teachers' Retirement Fund**

Other Entities involved in Plan Administration - The District of Columbia Public School's (the DCPS) Office of Human Resources makes decisions regarding voluntary and involuntary retirement, survivor benefits, and annual medical and income reviews.

Benefits Calculation - DCRB's Benefits Department receives the approved retirement applications for all active Plan members found eligible for retirement by the DCPS Office of Human Resources, and carries out the day-to-day processing of retirement benefits. DCRB also processes employee requests for refunds of contributions and purchases of service.

Eligibility - Permanent, temporary, part-time and probationary teachers and certain other employees of the District of Columbia public day schools are automatically enrolled in the Teachers' Retirement Fund on their date of employment. Certain D.C. Public Charter School employees are also eligible to be participants. However, substitute teachers and employees of the Department of School Attendance and Work Permits are not covered.

Title 38, Chapter 20 of the D.C. Official Code (D.C. Code § 38-2021.01 et seg. (2001 Ed.)) establishes benefit provisions which may be amended by the District City Council. For employees hired before November 1, 1996, the annual retirement benefit is the average salary, as defined, multiplied by 1.5% for each of the first five years of service, plus 1.75% for each of the second five years; plus 2% for each additional year over 10 years. For employees hired on or after November 1, 1996, the annual retirement benefit is the average salary, as defined, multiplied by 2% for each year of service. The average salary is the highest average consecutive 36 months of pay.

The annuity may be further increased by crediting unused sick leave as of the date of retirement. Participants receiving retirement benefits receive an annual benefit increase proportional to changes in the Consumer Price Index; however, the annual increase may not exceed 3% for participants hired on or after November 1, 1996. Participants may select from among several survivor options.

Participants who have 5 years of school service (by working for the District of Columbia public school system), and who become disabled and can no longer perform their jobs satisfactorily, may be eligible for disability retirement. Such disability retirement benefits are calculated in the same manner as a retirement benefit, however, a minimum disability benefit applies.

Voluntary retirement is available for teachers who have a minimum of 5 years of school service and who achieve the following age and length of service requirements:

- at age 62 with 5 years of service;
- · at age 60 with 20 years of service; and
- at age 55 with 30 years of service; if hired before November 1, 1996; or
- at any age with 30 years of service, if hired by the school system on or after November 1, 1996.

Employees who are involuntarily separated other than for cause and who have 5 years of school service, may be eligible for retirement at any age with 25 years of service or at age 50 with 20 years of service.

An involuntary retirement benefit is reduced if, at the time of its commencement, the participant is under the age of 55.

#### NOTE 2: FUND ADMINISTRATION AND DESCRIPTION (continued)

#### Police Officers and Fire Fighters' Retirement Fund

Other Entities involved in Plan Administration – The District of Columbia Police Officers and Firefighters' Retirement and Relief Board makes findings of fact, conclusions of law, and decisions regarding eligibility for retirement and survivor benefits, determines the extent of disability, and conducts annual medical reviews. The Police and Fire Clinic determines medical eligibility for disability retirement.

**Benefits Calculation** – DCRB's Benefits Department receives the retirement orders for retirement benefit calculations for all active Plan members found eligible for retirement by the District of Columbia Police Officers and Firefighters' Retirement and Relief Board, and carries out the day-to-day processing of retirement benefits. DCRB also processes employee requests for refunds of contributions and purchases of service. Effective 2013, DCRB began conducting annual disability income reviews.

**Eligibility** – A participant becomes a member when he/she begins work as a police officer or firefighter in the District. Cadets are not eligible to join the Fund.

Retirement and disability benefit provisions for District of Columbia police officers and firefighters are established by the "Policemen and Firemen's Retirement and Disability Act" (D.C. Code § 5 701 et seg. (2001 Ed.))

Members Hired Before February 15, 1980 – Members are eligible for optional retirement with full benefits at any age after 20 years of departmental service, or for deferred retirement at age 55 after five years of departmental service. The annual basic retirement benefit equals 2.5% of average base pay, which is defined as the highest average consecutive 12 months of base pay, multiplied by departmental service through 20 years; plus 3% of average base pay multiplied by average base pay times departmental service over 20 years; plus 2.5% of average base pay multiplied by years of other creditable service; however, the aggregate annual basic retirement benefit may not exceed 80% of the member's average base pay. Members terminated after five years of police or fire service are entitled to a deferred pension beginning at age 55. Benefits are also provided to certain survivors of active, retired, or terminated vested members. Retirement benefits are increased by the same percentage in base pay granted to active participants.

Members with a service-related disability receive a disability retirement benefit of 2.5% of average base pay multiplied by the number of years of creditable service. A minimum annual disability retirement benefit of 66 2/3% of average base pay and a maximum annual disability retirement benefit of 70% of average base pay apply.

Members with a non-service related disability and at least five years of departmental service receive a disability retirement benefit of 2% of average base pay multiplied by the number of years of creditable service. A minimum annual disability retirement benefit of 40% of average base pay and a maximum annual disability retirement benefit of 70% of average base pay apply

Members Hired On or After February 15, 1980 and Before November 10, 1996 – Members are eligible for optional retirement with full benefits at age 50 with at least 25 years of departmental service, or after age 55 with five years of departmental service. The annual basic retirement benefit equals 2.5% of average base pay, which is defined as the highest average consecutive 36 months of base pay, multiplied by the number of years of creditable service through 25 years; plus 3% of average base pay multiplied by the number of years of departmental service over 25 years; plus 2.5% of average base pay multiplied by the number of years of other creditable service; however, the aggregate annual basic retirement benefit may not exceed 80% of the member's average base pay. Members separated from the Police or Fire Department after five years of departmental service are entitled to a deferred pension beginning at age 55.

Benefits are also provided to certain survivors of active, retired or terminated vested members. Members who retired after February 15, 1980 receive annual benefit increases proportional to changes in the Consumer Price Index

#### NOTE 2: FUND ADMINISTRATION AND DESCRIPTION (continued)

**Members Hired on or After November 10, 1996** – Members are eligible for retirement at any age, with at least 25 years of departmental service or after age 55 with five years of departmental service. The annual basic retirement benefit equals 2.5% of average base pay, which is defined as the highest average consecutive 36 months of base pay, multiplied by creditable service; however, the aggregate annual basic retirement benefit may not exceed 80% of the average base pay. Members separated after five years of departmental service are entitled to a deferred pension beginning at age 55. Benefits are also provided to certain survivors of active, retired, or terminated vested members. Members receive annual benefit increases proportional to changes in the Consumer Price Index, however, the increase is capped at 3%.

Members with a service-related disability receive a disability retirement benefit of 70% of base pay multiplied by the percentage of disability. A minimum annual disability retirement benefit of 40% of base pay applies.

Members with a non-service related disability and at least five years of departmental service receive a disability retirement benefit of 70% of base pay multiplied by the percentage of disability. A minimum annual disability retirement benefit of 30% of base pay applies.

Prior to reaching age 50, a disability retirement benefit will be reduced or terminated if outside earnings exceed a certain limit.

#### Participant Data

The number of participants for the years ended September 30 was as follows

Teachers' Retirement Fund	2017	2016	2015
Retirees and survivors receiving			
benefits (post June 30, 1997)	3,899	3,882	3,718
Active plan members	5,199	5,141	4,866
Vested terminations	1,330	1,176	1,152
Total TRF participants	10,428	10,199	9,736

Police Officers and Firefighters' Retirement Fund	2017	2016	2015
Retirees and survivors receiving			
benefits (post June 30, 1997)	3,215	3,003	2,609
Active plan members	5,312	5,359	5,537
Vested terminations	340	293	319
Total POFRF participants	8,867	8,655	8,465

#### **Contributions**

Fund members contribute by salary deductions at rates established by D.C. Code § 5-706 (2001 Ed.). Members contribute 7% (or 8% for Teachers and Police Officers and Firefighters hired on or after November 1, 1996 and November 10, 1996, respectively) of annual gross salary, including any differential for special assignment and longevity, but excluding overtime, holiday, or military pay.

The District is required to contribute the amounts necessary to finance the Plan benefits of its members through annual contributions at actuarially determined amounts in accordance with the provisions of the Replacement Act. The amount of the District contributions for fiscal years 2017 and 2016 were equal to the amounts computed, if any, by the Board's independent actuary.

Contribution requirements of members are established by D.C. Code § 5-706 and requirements for District of Columbia government contributions to the Fund are established at D.C. Code § 1-907.02 (2001 Ed.), which may be amended by the City Council. Administrative costs are paid from investment earnings.

#### NOTE 3: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

**Basis of Accounting** – DCRB's financial statements were prepared in accordance with accounting principles generally accepted in the United States (GAAP) using the accrual basis of accounting. The Governmental Accounting Standards Board (GASB) is the accepted standard-setting body for establishing governmental accounting and reporting principles. Employee contributions are recognized at the time compensation is paid to Plan members. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the retirement Plan's commitment.

**Federal Income Tax Status** – The District Retirement Funds are qualified plans under section 401(a) of the Internal Revenue Code and are exempt from federal income taxes under section 501(a).

Use of Estimates in Preparing Financial Statements – The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Board to make estimates and assumptions that affect the reported amounts of assets, liabilities, additions and deductions to net position restricted for pensions and disclosure of contingent assets and liabilities at the date of the financial statements and during the reporting period. Actual results could differ from those estimates.

**Investment Expenses** – The District of Columbia Appropriation Act authorized Fund earnings to be used for investment expenses incurred in managing the assets and administering the Fund. The total investment expenses borne by the District Retirement Funds was \$16,292,755 in 2017 and \$14,154,932 in 2016. A significant number of the alternative investment managers provide account valuations net of management expenses. Those expenses are netted against investment income and, because they are not separable, are recorded and reported net of management expenses in the net (depreciation) appreciation in the fair value of investments.

**Accounting Pronouncement** – GASB Statement No. 72, Fair Value Measurement and Application, which was adopted during the year ended September 30, 2016, addresses accounting and reporting issues related to fair value measurements. This Statement requires disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques. Comprehensive footnote disclosure regarding this Statement is found in Note 4.

GASB Statement No. 82, An Amendment of GASB Statements No. 67, No. 68, and No. 73, was adopted for the year ended September 30, 2017. This Statement addresses issues regarding: 1) the presentation of payroll-related measures in required supplementary information; 2) the selection of assumptions and the treatment of deviations from the guidance in an actuarial standard of practice for financial reporting purposes; and 3) the classification of payments made by employers to satisfy employee (member) contribution requirements. This statement does not impact DCRB's financial statements, notes, or required supplementary information.

#### **NOTE 4: INVESTMENTS**

The Board is authorized to manage and control the investment of the District Retirement Funds' assets. The Board broadly diversifies the investments of the District Retirement Funds to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so, as required by D.C. Code § 1-741(a)(2)(C), (2001 Ed.).

**Master Trust** – The Board has pooled all of the assets under its management (the Investment Pool), as is authorized by D.C. Code § 1-903(b), (2001 Ed.), with a master custodian under a master trust arrangement (the Master Trust). Using an investment pool, each Fund owns an undivided proportionate share of the pool.

District and employee contributions are deposited in the respective Retirement Fund for which the contribution was made, and benefit payments and employee contribution refunds are withdrawn from the Fund in which the recipient participates. Investment performance and administrative expenditures are allocated between the two Funds based upon their proportionate net position in the pool.

The fair values of investments of the Investment Pool as of September 30 are as follows:

#### (Dollars in thousands)

	2017	2016
Cash and short-term investments	\$ 88,216	\$ 51,480
Investments at fair value:		
Domestic equity	2,099,359	1,956,019
International equity	2,364,937	2,081,748
Fixed income	2,125,703	1,818,097
Real estate	614,886	479,380
Private equity	470,532	393,368
Total investments at fair value	7,675,417	6,728,612
Total	\$ 7,763,633	\$6,780,092

**Annual money-weighted rate of return** – The money-weighted rate of return shows investment performance when taking into account the impact of cash infusion into and disbursements from the pension system. For the years ended September 30, 2016 and 2015, the money-weighted rates of return, as calculated by the custodian, were as follows:

	FY 2017	FY 2016
Total Portfolio	12.785%	9.346%

## **NOTE 4: INVESTMENTS (continued)**

**Debt Instruments** – As of September 30, 2017, the Investment Pool held the following debt instruments:

(Dollars in thousands)

Investment Type	Fair Value	% of Segment	Duration (years)	Rating*
US Agency	\$20,903	0.98%	3.73	AA+
Asset Backed	13,336	0.63%	3.17	AAA
Bank Loans	123,088	5.79%	0.14	CCC+
Cash Equivalent	35,355	1.66%	0.00	A-1+
CMBS	16,739	0.79%	5.32	AA+
CMO	860	0.04%	1.40	AA+
Commingled funds	-	0.00%	-	NR
Corporate - US	285,306	13.42%	6.14	BBB
Corporate - Euro	20,126	0.95%	2.62	BBB+
Foreign	451,501	21.24%	5.68	Α
Mortgage Pass-Through	218,080	10.26%	4.18	AA+
Municipal	5,084	0.24%	11.37	AA-
Options	898	0.04%		
Private Placement	117,067	5.51%	3.40	CCC+
Unclassified	-	0.00%	-	
US Treasury	817,360	38.45%	7.13	AA+
Yankee	-	0.00%	-	
Other	-	0.00%	-	
Total Fixed Income	\$2,125,703	100.00%		

<sup>\*</sup> Using quality ratings provided by Standard & Poor's

### **NOTE 4: INVESTMENTS (continued)**

**Debt Instruments** – As of September 30, 2016, the Investment Pool held the following debt instruments:

(Dollars in thousands)

,				
Investment Type	Fair Value	% of Segment	Duration (years)	Rating*
US Agency	\$29,916	1.65%	3.69	AA+
Asset Backed	11,300	0.62%	2.58	AAA
Bank Loans	83,759	4.61%	0.16	CCC+
CMBS	18,424	1.01%	5.39	AA
CMO	13,920	0.77%	1.33	AA+
Commingled funds	1,603	0.09%	-	NR
Corporate - US	323,326	17.78%	6.05	BBB+
Corporate - Euro	13,154	0.72%	1.08	CCC+
Foreign	382,125	21.02%	6.02	A-
Mortgage Pass-Through	232,759	12.80%	2.32	AA+
Municipal	7,087	0.39%	11.42	AA-
Unclassified	-	0.00%	-	
US Treasury	621,812	34.20%	7.10	AA+
Yankee	-	0.00%	-	
Other	78,912	4.34%	3.09	B-
Total Fixed Income	\$1,818,097	100.00%		

<sup>\*</sup> Using quality ratings provided by Standard & Poor's

#### **NOTE 4: INVESTMENTS (continued)**

Interest Rate Risk – Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Generally, an investment with a longer maturity will have a greater sensitivity to fair value changes that are related to market interest rates. The Board monitors the interest rate risk inherent in its portfolio by measuring the weighted average duration of its portfolio. Duration is a measure of a debt investment's exposure to fair value changes arising from changing interest rates. It uses the present value of cash flows, weighted for those cash flows as a percentage of the investment's full price. As a general rule, the risk and return of the Board's fixed income segment of the portfolio is compared to the Barclays Capital U.S. Universal Index. To mitigate interest rate risk, the fixed income segment is expected to maintain a weighted average duration (sensitivity to interest rate changes) within +/-2 years of the duration of this Index.

**Credit Risk** – Generally, credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. Unless specifically authorized otherwise in writing by the Board, fixed income managers invest in investment grade instruments rated in the top four rating categories by a recognized statistical rating service.

**Foreign Currency Risk** – Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. As a general policy, investment managers with authority to invest in issuers denominated in a foreign currency may reduce exposure to currency risk by systematically hedging foreign currency positions back to U.S. dollars through the forward currency markets. Since the forward exchange rate is seldom equal to the spot exchange rate, forward hedging gains and losses may arise. For the years ended September 30, 2017 and 2016, the Investment Pool held amounts in commingled funds which invested in foreign currencies totaling approximately \$2.9 billion and \$2.4 billion, respectively.

As of September 30, 2017, the Investment Pool held investments that were denominated in a currency other than the United States Dollar, as summarized below:

#### (Dollars in thousands)

			Ass	set Class			
	Cash	Equities	Fixe	d Income	Pri	vate Equity	Total
Canadian Dollar	\$ -	\$ 4,479	\$	-	\$	-	\$ 4,479
Euro	1,582	-		-		35,101	36,683
Total Foreign	\$ 1,582	\$ 4,479	\$	-	\$	35,101	\$ 41,162

#### **NOTE 4: INVESTMENTS (continued)**

As of September 30, 2016, the Investment Pool held investments that were denominated in a currency other than the United States Dollar, as summarized below:

#### (Dollars in thousands)

				Asset Class				
	Cash	Equities		Fixed Income		Priva	te Equity	Total
Canadian Dollar	\$ -	\$	-	\$	-	\$	1,258	\$ 1,258
Euro	76		-		-		29,203	29,279
Swiss Franc	110		-		-		-	110
Total Foreign	\$ 186	\$	-	\$	-	\$	30,461	\$ 30,647

**Securities Lending Transactions** – The Board's policies permit the District Retirement Funds to participate in securities lending transactions by relying on a Securities Lending Authorization Agreement, which authorizes the master custodian to lend the Board's securities to qualified broker-dealers and banks pursuant to a form of loan agreement.

In fiscal year 2016, the Board made the decision to transition custodial services from State Street to Northern Trust (see Note 6). As a result, the Board made the decision to discontinue the securities lending program in order to manage the operational risks associated with the planned transition. The Board may participate in securities lending through its new custodian bank in the future; however, it chose not to do so in fiscal years 2017 and 2016.

**Derivative Investments** – Derivatives are generally defined as contracts in which the value depends on, or derives from, the value of an underlying asset, reference rate, or index. Derivative investments generally contain exposure to credit risk, market risk, and/or legal risk. Credit risk is the exposure to the default of another party to the transaction (counterparty). Market risk is the exposure to changes in the market, such as a change in interest rates, currency exchange rates, or a change in the price or principal value of a security. The Board believes that all contracts entered into are legally permissible in accordance with the policy of the Board.

During 2017 and 2016, the District Retirement Funds, in accordance with the policy of the Board, and through the District Retirement Funds' investment managers who have full discretion over investment decisions, invested in various derivative instruments either to increase potential earnings or to hedge against potential losses. There were no derivatives as of September 30, 2017 or as of September 30, 2016.

TBAs (to-be-announced, sometimes referred to as dollar rolls) are used by the District Retirement Funds as an alternative to holding mortgage-backed securities outright to raise the potential yield and to reduce transaction costs. The selected TBAs are used because they are expected to behave the same in duration and convexity as mortgage-backed securities with identical credit, coupon and maturity features. Credit risk is managed by limiting these transactions to primary dealers.

Market risk for this type of security is not significantly different from the market risk for mortgage-backed securities.

Foreign currency forwards, futures contracts and foreign currency options are generally used by the District Retirement Funds for defensive purposes. These contracts hedge a portion of the District Retirement Funds' exposure to particular currencies on occasion when significant adverse short-term movement in exchange rate levels is expected.

Foreign currency forward and futures contracts can pose market risk when the maximum potential loss on a particular contract is greater than the value of the underlying investment. Market risks arise due to movements in the foreign exchange rates underlying the contracts used by the District Retirement Funds. Credit risk is managed by limiting transactions to counterparties with short-term credit ratings of Al or Pl or by trading on organized exchanges. Market risk for currency options is limited to the purchase cost. Credit risk for currency options is also managed by limiting transactions to counterparties with investment-grade ratings or by trading on organized exchanges.

#### **NOTE 4: INVESTMENTS (continued)**

Equity index futures were also used by the District Retirement Funds in order to gain exposure to equity markets in a more efficient and liquid manner than directly investing in all of the underlying equity securities. Equity index futures may pose market risk when the maximum potential loss on a particular contract is greater than the value of the underlying investment. Market risks arise due to movements in the equities markets underlying the contracts used by the District Retirement Funds. The notional amounts of the contracts are not included in the derivatives holdings disclosed. Credit risk is managed by dealing with member firms of the futures exchanges.

Exchange-traded and over-the-counter bond futures and options are used by the District Retirement Funds to gain exposure to fixed income markets in a more efficient and liquid manner than by purchasing the underlying bonds. Market risk for these futures and options is limited to purchase cost. Credit risk is managed by limiting transactions to counterparties with investment-grade ratings or by trading with member firms of organized exchanges.

Warrants are used by the District Retirement Funds to gain equity exposure and to enhance performance. Warrants are often distributed by issuers to holdings of common stock and bonds, and are held for the same fundamental reasons as the original common stock and/or bond holdings. Rights are a security that gives the holder the entitlement to purchase new shares issued by a corporation at a predetermined price in proportion to the number of shares already owned.

Market risk for warrants and rights is limited to the purchase cost. Credit risk for warrants and rights is similar to the underlying equity and/or bond holdings. Again, all such risks are monitored and managed by the District Retirement Funds' external investment managers who have full discretion over such investment decisions.

Swaps represent an agreement between two or more parties to exchange a sequence of cash flows during a predetermined timeframe. The District Retirement Funds utilize swaps for several different reasons: to manage interest rate fluctuations, to protect against a borrower default, and to gain market exposure without having to actually own the asset.

The District Retirement Funds may manage credit exposure through the use of credit default swaps. A credit default swap (CDS) is a contract whereby the credit risk associated with an investment is transferred by entering into an agreement with another party who, in exchange for periodic fees, agrees to make payments in the event of a default or other predetermined credit event. One of the main advantages of a CDS is that it allows for exposure to credit risk while limiting exposure to other risks such as interest rate and currency risk.

The District Retirement Funds may also hold derivative instruments indirectly by participating in pooled, commingled, or short-term funds that hold derivatives. Information regarding any risks associated with these holdings is not generally available. There were no derivatives as of September 30, 2017 or as of September 30, 2016.

**Fair Value Measurements** - DCRB categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and gives the highest priority to unadjusted quoted prices in active markets for identical assets (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

Level 1 - Unadjusted quoted prices for identical instruments in active markets.

Level 2 – Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.

Level 3 – Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments that are measured at fair value using the net asset value per share (or its equivalent) are not classified in the fair value hierarchy as they do not have a readily determinable fair value. Examples include member units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed

#### **NOTE 4: INVESTMENTS (continued)**

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. DCRB's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability. The tables on pages 31 and 32 show the fair value leveling of the investments for the Investment Pool.

Equity securities classified in Level 1 of the fair value hierarchy are valued at the last sale price or official close price as of the close of trading on the applicable exchange where the security principally trades.

Equity and fixed income securities classified in Level 2 of the fair value hierarchy are valued at prices provided by independent pricing vendors. The vendors provide these prices after evaluating observable inputs including, but not limited to: quoted prices for similar securities, the mean between the last reported bid and ask prices (or the last bid price in the absence of an asked price), yield curves, yield spreads, credit ratings, deal terms, tranche level attributes, default rates, cash flows, prepayment speeds, broker/dealer quotations, inflation and reported trades.

**Investments measured at the Net Asset Value (NAV)** - The unfunded commitment and redemption frequency and notice period for investments measured at the net asset value (NAV) per share (or its equivalent) is presented on the tables on pages 42 and 43.

Real Assets (Real Estate) and Private Equity - DCRB has made commitments to purchase partnership interests in private equity and real estate funds as part of its long term asset allocation plan for private markets. As shown in the table on page 31, the unfunded commitments totaled \$850.3 million, as of September 30, 2017. This represents global investments in 35 real asset (real estate) and 29 private equity funds. The unfunded commitments totaled \$404.5 million, as of September 30, 2016. This represented global investments in 28 real asset (real estate) and 18 private equity funds.

In general, investments in the private markets program are illiquid and redemptions are structurally limited over the life of the investment. The private equity program spans a range of underlying strategies including buyouts, growth equity/venture, private debt, secondaries and fund-of-funds. The real asset program includes investments in a broad range of real estate strategies (i.e., core, value-added, opportunistic), infrastructure and natural resources funds.

Domestic and International Equities – DCRB has investments in 3 funds with a domestic focus and 5 funds with an international focus, in which the equity securities maintain some level of market exposure; however, the level of market exposure may vary through time.

Fixed income - DCRB has investments in 6 funds, including corporate bonds, and U.S. Treasury obligations, with redemption notifications not greater than 30 days.

### **NOTE 4: INVESTMENTS (continued)**

Investements Measured at Fair Value, as of September 30, 2017

	Investments measured at Fair Value (Dollars in 000s)											
			N	oted Prices in Active larkets for ntical Assets		nificant other bservable Inputs		Significant observable Inputs				
	Se	ot 30, 2017	(Level 1)		(Level 2)			(Level 3)				
Investments by fair value level												
Domestic equity	\$	278,468	\$	278,468	\$	-	\$	-				
Fixed income		304,700		-		304,700		-				
Private equity		-		-		-		-				
Total investments by fair value level	\$	583,168	\$	278,468	\$	304,700	\$	-				

#### Investments measured at the net asset value (NAV)

Total investments \$	7,092,249 <b>7,675,417</b>
Total investments measured at NAV \$	770,002
Private equity	470,532
Real assets	614,886
Fixed income	182,1003
International equities	236,4937
Domestic equity \$	182,0891

# Additional information for investments measured at the net asset value (NAV) per share (or its equivalent) is presented on the table below:

	Se	pt 30, 2017	unded nitments	Redemption Frequency	Redemption Notice Period
Domestic equities	\$	1,820,891	\$ -	Daily	None
International equities		2,364,937	-	Daily	None
Fixed income		1,821,003	-	Daily, Monthly	3-30 days
Real assets		614,886	407,670	None	N/A
Private equity		470,532	442,602	None	N/A
Total investments measured at NAV	\$	7,092,249	\$ 850,272		

#### **NOTE 4: INVESTMENTS (continued)**

Investements Measured at Fair Value, as of September 30, 2016

	Investments measured at Fair Value (Dollars in 000s)											
			in A	uoted Prices ctive Markets or Identical Assets		nificant other Observable Inputs		Significant nobservable Inputs				
	Se	pt 30, 2016	(Level 1)		(Level 2)			(Level 3)				
Investments by fair value level												
Domestic equity	\$	264,682	\$	264,682	\$	-	\$	-				
Fixed income		234,083		-		234,083		-				
Private equity		896		896		-		_				
Total investments by fair value level	\$	499,661	\$	265,578	\$	234,083	\$	-				

#### Investments measured at the net asset value (NAV)

Total investments	\$ 6,728,612
Total investments measured at NAV	\$ 6,228,951
Private equity	392,472
Real assets	479,380
Fixed income	1,584,014
International equities	2,081,748
Domestic equity	\$ 1,691,337

# Additional information for investments measured at the net asset value (NAV) per share (or its equivalent) is presented on the table below:

	Se	pt 30, 2016	Unfunc Commitn		Redemption Frequency	Redemption Notice Period
Domestic equities	\$	1,691,337	\$	-	Daily	None
International equities		2,081,748		-	Daily	None
Fixed income		1,584,014		-	Daily, Monthly	3-30 days
Real assets		479,380	20	04,735	None	N/A
Private equity		392,472	19	99,766	None	N/A
Total investments measured at NAV	\$	6,228,951	\$ 4	04,501		

#### NOTE 5: NET PENSION LIABILITY/(ASSET)

The components of the net pension liability/(asset) of the District Retirement Funds at September 30, 2017 and 2016, were as follows:

(Dollars in thousands)	۱	20	017		2016				
		TRF		POFRF		TRF		POFRF	
Total Pension Liability	\$	2,160,347	\$	4,957,340	\$	2,064,138	\$	4,675,562	
Fiduciary Net Position		2,070,599		5,684,442		1,821,949		4,954,631	
Net Pension Liability (Asset)	\$	89,748	\$	(727,102)	\$	242,189	\$	(279,069)	
Ratio of Fiduciary Net Position to Total Pension Liability (Asset)		98.85%		114.67%		88.27%		105.97%	

**Actuarial Assumptions -** The total pension liability was determined based on an actuarial valuation as of October 1, 2017 and 2015, then updated using the following actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of September 30, 2017 and 2016, respectively:

Teachers' Retirement Fundament	d
Inflation	3.5 percent
Salary increases	4.45 - 8.25 percent, including wage inflation of 4.25 percent
Investment rate of return	6.5 percent, net of pension plan investment expense, and including inflation
Mortality	Pre-retirement and post-retirement mortality rates were based on the RPH 2014 Blue Collar Mortality Table generationally projected with Scale BB, set back 1 year for males. Post-disability mortality rates were based on the RPH-2014 Disabled Mortality Table set back 6 years for males and set forward 1 year for females.

Police and Firefighters' Retirement Fund										
Inflation	3.5 percent									
Salary increases	4.25 - 9.25 percent, including wage inflation of 4.25 percent									
Investment rate of return	6.5 percent, net of pension plan investment expense, and including inflation									
Mortality	Pre-retirement and post-retirement mortality rates were based on the RPH 2014 Blue Collar Mortality Table generationally projected with Scale BB, set back 1 year for males.									

#### NOTE 5: NET PENSION LIABILITY/(ASSET) (continued)

The actuarial assumptions used in the October 1, 2016 valuation were based on the results of the most recent actuarial experience investigation for the period October 1, 2011 to September 30, 2015, dated July 18, 2017.

The discount rate used to measure the total pension liability was 6.5 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that the District contributions will be made in accordance with the Board's funding policy adopted in 2012. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense 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 future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of geometric real rates of return for each major asset class included in the pension plan's target asset allocation as of September 30, 2017 and 2016 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Equity	20.0%	5.5%
Foreign Equity (Developed)	16.0%	5.3%
Foreign Equity (Emerging)	10.0%	7.8%
Investment Grade Bonds	11.0%	1.5%
Treasury Inflation-Protected Securities (TIPS)	6.0%	1.5%
High Yield Bonds	4.0%	4.0%
Bank Loans	3.0%	3.5%
Foreign Bonds (Developed)	2.0%	0.4%
Emerging Markets Debt (Local)	4.0%	3.9%
Real Estate	6.0%	4.9%
Natural Resources (Private)	2.0%	6.4%
Infrastructure	3.0%	5.4%
Private Equity	9.0%	7.2%
Hedge Funds	4.0%	3.3%
Total	100.0%	

#### NOTE 5: NET PENSION LIABILITY/(ASSET) (continued)

Disclosure of the sensitivity of the net pension liability to changes in the discount rate - The following presents the net pension liability of the Teachers' Retirement Fund and the Police Officers and Firefighters' Retirement Fund, calculated using the discount rate of 6.5 percent, as well as what the Plan's net pension liability calculated using a discount rate that is one percentage point lower (5.5 percent) or one percentage point higher (7.5 percent) than the current rate (dollar amounts in thousands):

FY 2017	1% ecrease 5.50%)	C	Current Discount te (6.50%)		1% ncrease (7.50%)
Teachers' Plan's Net Pension Liability	\$ 442,350	\$	89,748	\$	(190,869)
Police and Firefighters' Plan's Net Pension Liability (Asset)	\$ 215,463	\$	(727,102)	\$(	(1,467,631)

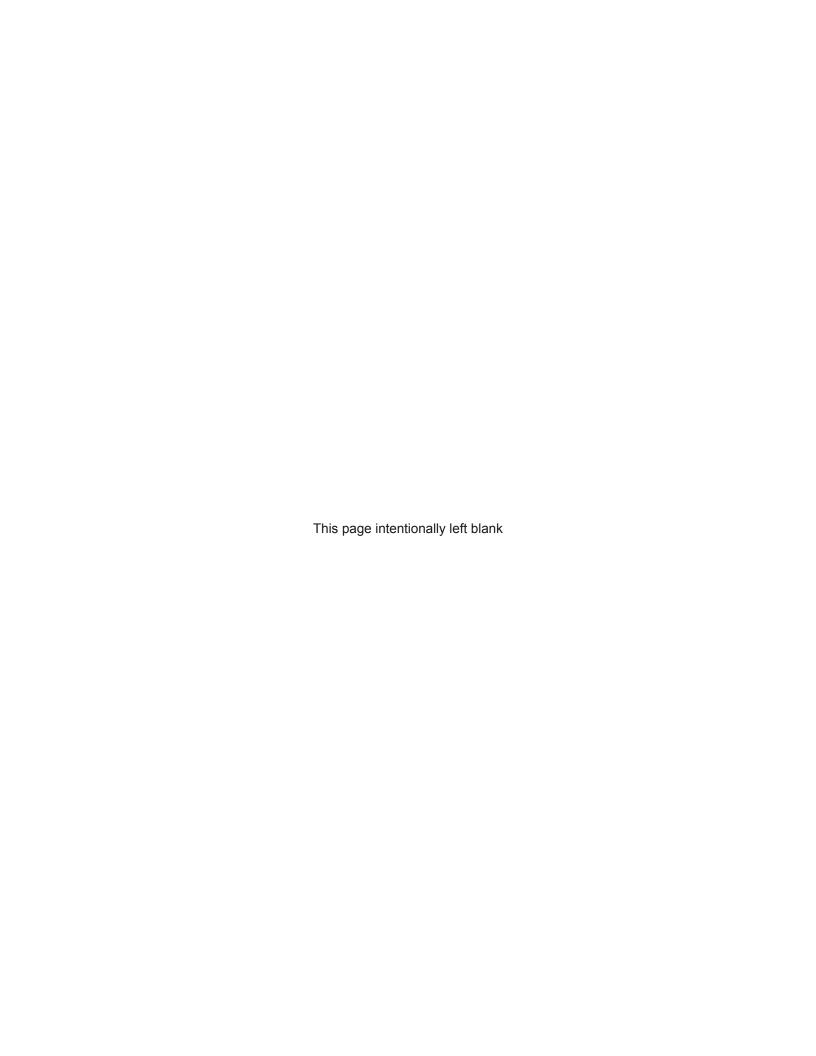
		1%	Current			1%	
	D	ecrease		Discount	ا	Increase	
FY 2016	(	5.50%)	R	ate (6.50%)	(7.50%)		
Teachers' Plan's Net Pension Liability	\$	571,400	\$	242,189	\$	(36.976)	
Police and Firefighters' Plan's Net Pension Liability (Asset)	\$	532,621	\$	(279,069)	\$	(943,216)	

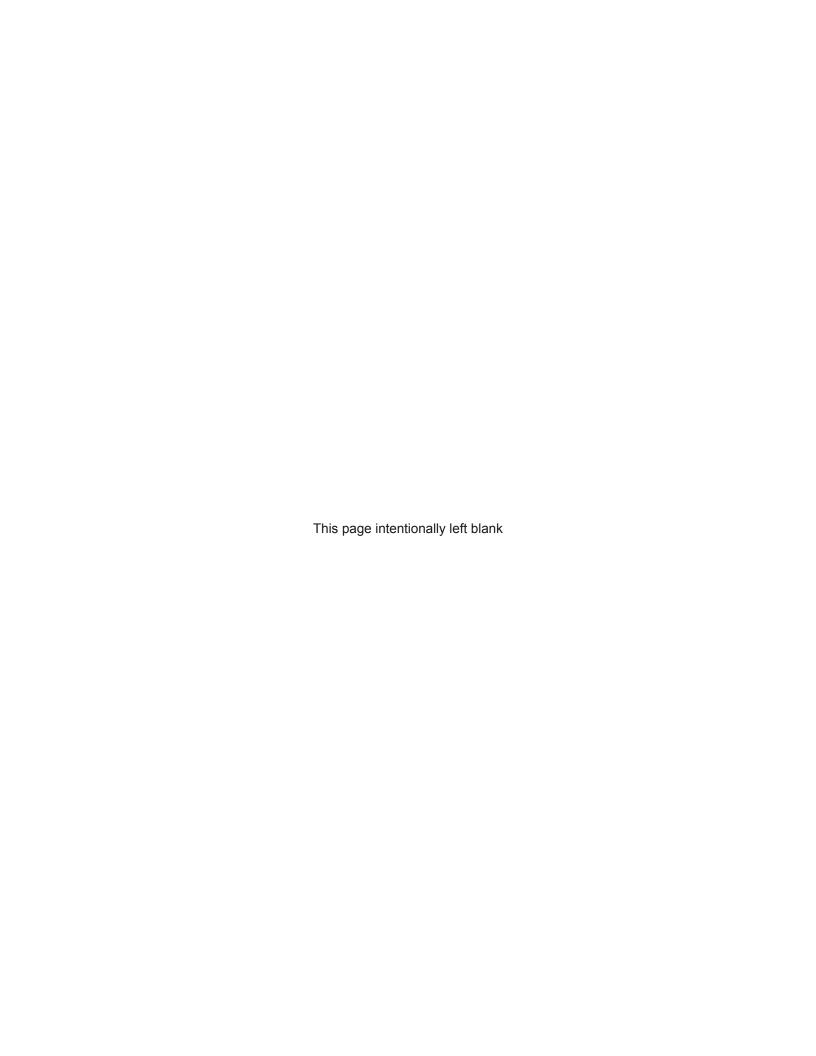
#### **NOTE 6: CONVERSION TO NEW CUSTODIAN**

DCRB elected to transition to a new custodian in fiscal year 2016, ending its relationship with State Street Corporation and transitioning to Northern Trust as of December 1, 2015.

#### NOTE 7: RETIREMENT BENEFITS PAYABLE TO U.S. TREASURY

During 2016, the U.S. Treasury completed a calculation of the share of employee contributions (refunds) processed in FY 1999 and 1998 and originally paid by U.S. Treasury. Pursuant to the February 1, 2005, Memorandum of Understanding (MOU) concerning the refunds under the District of Columbia Police Officers and Firefighters', and Teachers' Retirement Programs, the District government and Treasury agreed to begin paying refunds in accordance with its respective statutory responsibilities and that the District would also reimburse Treasury for its share of past refunds. The MOU provides direction for the calculation of the District and Treasury portions of refunds and which records to use for the calculation. The U.S. Treasury requested reimbursement of \$676,330 for the District's share of refunds issued in FY 1999 and FY 1998.







Schedules of Changes in the Net Pension Liability and Related Ratios	50
Schedules of Employer Contributions	
Schedule of Investment Returns	

# **Schedules of Changes in the Net Pension Liability and Related Ratios**

(Dollar amounts in thousands)

Teachers' Retirement Fund	S	Sept 30, 2017		Sept 30, 2016		Sept 30, 2015		Sept 30, 2014
Total pension liability		<del> </del>		- Ocpt 00, 2010		- Ocpt 00, 2010 -		- осрг оо, 2014
Service Cost	\$	65,911	\$	61,599	\$	53,297	\$	50,409
Interest	•	131,657	*	124,370	*	118,378	*	112,204
Benefit changes		,		-		-		-
Difference between expected and actual experience		(37,230)		2,656		(7,246)		-
Changes of assumptions		14,106		, -		-		-
Benefit payments		(72,069)		(69,093)		(64,076)		(59,832)
Refunds		(6,166)		(6,205)		(5,576)		(5,790)
Net change in total pension liability		96,209		113,327		94,777		96,991
Total pension liability - beginning		2,064,138		1,950,811		1,856,034		1,759,043
Total pension liability - ending (a)		2,160,347		2,064,138		1,950,811		1,856,034
Plan net position								
Contributions - District Government		56,781		44,469		39,513		31,636
Contributions - Plan member		34,364		33,591		31,621		28,751
Net investment (loss) income		239,554		152,262		(72,647)		132,086
Benefit payments		(72,069)		(69,093)		(64,076)		(59,832)
Administrative expense		(4,721)		(4,746)		(4,543)		(3,787)
Refunds		(6,166)		(6,205)		(5,576)		(5,790)
Other income		907		1,033		385		522
Change in net position		248,650		151,311		(75,323)		123,586
Plan net position - beginning		1,821,949		1,670,638		1,745,961		1,622,375
Plan net position - ending (b)		2,070,599		1,821,949		1,670,638		1,745,961
Net pension liability - ending (a) - (b)	\$	89,748	\$	242,189	\$	280,173	\$	110,073
Ratio of plan net position to total pension liability - (b) / (a)		95.85%		88.27%		85.64%		94.07%
Covered payroll	\$	447,762	\$	438,079	\$	417,090	\$	378,926
Net pension liability (asset) as a percentage of covered payroll		20.04%		55.28%		67.17%		29.05%

Note: Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

# **Schedules of Changes in the Net Pension Liability and Related Ratios** (Dollar amounts in thousands)

Police and Firefighters' Retirement Fund Sept 30, 2014 Sept 30, 2017 Sept 30, 2016 Sept 30, 2015 Total pension liability Service Cost \$ 196,629 \$ 198,020 \$ 192,114 \$ 176,102 300,626 282,285 235,097 Interest 257,943 Benefit changes (2,477)Difference between expected and actual experience (188,549)(106,840)Changes of assumptions 67,256 Benefit payments (92,537)(79, 137)(63,634)(52,784)Refunds (1,647)(2,179)(1,396)(1,637)Net change in total pension liability 281,778 292,149 382,550 356,778 4,675,562 Total pension liability - beginning 4,383,413 4,000,863 3,644,085 Total pension liability - ending (a) 4,957,340 4.675.562 4.383.413 4,000,863 Plan net position Contributions - District Government 145.631 136,115 103,430 110.766 Contributions - Plan member 33.424 32.785 33.679 32.821 Net investment (loss) income 655,310 415,157 (187, 283)338,894 Benefit payments (92,537)(79, 137)(63,634)(52,784)Administrative expense (12.838)(12.918)(11,939)(9.730)Refunds (1.647)(2,179)(1,396)(1.637)Other income 2,468 2,810 1,012 1,342 Change in net position 729,811 (126, 131)419,672 492,633 Plan net position - beginning 4,954,631 4,461,998 4,588,129 4,168,457 Plan net position - ending (b) 5,684,442 4.954.631 4.461.998 4,588,129 Net pension liability (asset) - ending (a) - (b) \$ (727,102) \$ (279,069) \$ (78,585) \$ (587, 266)Ratio of plan net position to total pension liability (asset) - (b) / (a) 114.67% 105.97% 101.79% 114.68% \$ Covered payroll 441,904 \$ 438,114 \$ 446,201 \$ 426,135 Net pension liability (asset) as a percentage of covered payroll -164.54% -63.70% -17.61% -137.81%

Note: Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

# **Schedules of Employer Contributions**

(Dollar amounts in thousands)

Teachers' Retirement Fund	2017		2016		2015	2014	2013	2012	2	2011	2010	2009		2008
Actuarially determined employer contribution	\$ 56,78	1 \$	44,469	\$	39,513	\$ 31,636	\$ 6,407	\$	-	\$ -	\$ -	\$ -	\$	6,000
Actual employer contributions	56,78	1	44,469		39,513	31,636	6,407		-	-	-	-		6,000
Annual contribution deficiency (excess)	\$	- \$	-	\$	-	\$ -	\$ -	\$	-	\$ -	\$ -	\$ -	\$	_
Covered payroll	\$ 447,76	2 \$	438,079	\$ 4	417,090	\$ 378,926	\$ 369,071	\$ 381,2	235	\$ 384,455	\$ 337,516	\$ 336,600	\$ 3	359,100
Actual contributions as a percentage of covered payroll	12.68	<b>%</b>	10.15%		9.47%	8.35%	1.74%	0.0	0%	0.00%	0.00%	0.00%		1.67%

#### **Notes to Schedule:**

Valuation Date: Actual contributions are based on valuations as of October 1, two years prior to end of fiscal year in which contributions are reported. Methods and Assumptions used to determine contribution rates for fiscal year 2017 are:

Actuarial cost method Entry age normal
Amortization method Level dollar, closed

Remaining amortization period 17 years

Asset valuation method 7-year smoothed market

Inflation 3.5%

Salary increases 4.45% to 8.25%, including wage inflation of 4.25%

Investment rate of return 6.50%, net of pension plan investment expense, and including inflation

Cost of Living Adjustments 3.50% (Limited to 3.0% for those hired after 11/1/1996)

# **Schedules of Employer Contributions**

(Dollar amounts in thousands)

Police and Firefighters' Retirement Fund	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Actuarially determined employer contribution	\$145,631	\$136,115	\$103,430	\$110,766	\$96,314	\$116,700	\$127,200	\$132,300	\$106,000	\$137,000
Actual employer contributions	145,631	136,115	103,430	110,766	96,314	116,700	127,200	132,300	106,000	137,000
Annual contribution deficiency (excess)	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-
Covered payroll	\$441,904	\$438,114	\$446,201	\$426,135	\$413,380	\$414,877	\$421,221	\$423,854	\$436,100	\$421,950
Actual contributions as a percentage of covered payroll	32.96%	31.07%	23.18%	25.99%	23.30%	28.13%	30.20%	31.21%	24.31%	32.47%

#### **Notes to Schedule:**

Valuation Date: Actual contributions are based on valuations as of October 1, two years prior to end of fiscal year in which contributions are reported. Methods and Assumptions used to determine contribution rates for fiscal year 2016 are:

Actuarial cost method Entry age normal
Amortization method Level dollar, closed

Remaining amortization period 17 years

Asset valuation method 7-year smoothed market

Inflation 3.5%

Salary increases 4.25% to 9.25%, including wage inflation of 4.25%

Investment rate of return 6.50%, net of pension plan investment expense, and including inflation

Cost of Living Adjustments 3.50% (Limited to 3.0% for those hired after 11/10/1996)

# **Schedule of Investment Returns**

### **Annual Money-Weighted Rates of Return**

	FY 2017	FY 2016	FY 2015	FY 2014
Total portfolio	12.785%	9.346%	-4.006%	8.178%

Note: This schedule is intended to show information for 10 years. Additional years will be displayed as they become available.



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**Schedules of Administrative Expenses**For the years ended September 30, 2017 and 2016

	2017		2016
Personal services			
Salaries	\$ 6,512	,514 \$	6,180,879
Fringe benefits	1,613	,022	1,318,468
Total personal services	8,125	,536	7,499,347
Non-personal services			
Office supplies	107	,460	99,222
Telephone	107	,181	91,324
Rent	1,799	,965	1,753,961
Travel	218	,006	208,681
Professional fees	5,262	,535	6,378,535
Postage	60	,453	27,327
Printing	15	,405	52,725
Insurance	148	,887	150,954
Dues & memberships	41	,525	41,177
Audit costs	72	,120	62,500
Actuarial fees	138	,164	180,000
Legal fees	590	,245	337,453
Investment fees	15,037	,067	12,862,522
Contractual services (STAR)	1,866	,066	1,697,283
Equipment and rental	261	,269	375,969
Depreciation		-	
Total non-personal services	25,726	,348	24,319,633
Total administrative expenses	33,851	,884	31,818,980
Investment expenses	(16,292,	755)	(14,154,932)
			·
Net administrative expenses	\$ 17,559	,129 \$	17,664,048

# **Schedules of Investment Expenses**

For the years ended September 30, 2017 and 2016

	2017	2016
Investment managers*	\$ 14,360,817	\$ 11,811,259
Investment administrative expense	784,973	1,051,263
Investment consultants	909,715	1,017,272
Investment custodian	237,250	275,138
Total investment expenses	\$ 16,292,755	\$ 14,154,932

<sup>\*</sup>Fees paid to traditional investment managers only; traditional investment managers are those that invest primarily in public equity and fixed income securities. A significant number of alternative investments are presented net of expenses. Management expenses are netted against investment income and because they are not readily separable from specific investment income as of the financial statement reporting date, amounts are recorded and reported net of management expenses and therefore are not included on this schedule.

**Schedules of Payments to Consultants**For the years ended September 30, 2017 and 2016

Professional/Consultant	Nature of Service	FY 2017	FY 2016
Administrative Consultants			
Software Information Resource Corp.	Information technology consulting	\$829,277	\$1,731,030
U.S. Treasury Office of D.C. Pensions	Benefit payment processing	689,860	1,220,209
Mobomo, LLC	Information technology consulting	528,969	760,125
Morgan, Lewis & Bockius	Legal counsel	497,590	323,739
Ectam, LLC	Information technology consulting	238,680	236,880
KMC, Inc.	Information technology consulting	234,810	-
D.C. Office of the Chief Technology Officer	Information technology consulting	230,065	228,000
Networking for Future, Inc.	Information technology consulting	227,492	73,672
Softech & Associates, Inc.	Information technology consulting	214,000	248,000
Linea Solutions, Inc.	Business process re-engineering	192,078	-
DLT Solutions, Inc.	Information technology consulting	158,777	175,915
FireEye, Inc.	Information technology consulting	146,873	105,283
Cavanaugh Macdonald Consulting	Actuarial services	140,768	194,655
ASI Government, Inc.	Temporary staffing services	132,818	40,934
SHI International Corporation	Information technology consulting	118,795	-
D.C. Metropolitan Police Dept	Information technology consulting	113,832	-
Mark Jackson	Information technology consulting	111,563	106,630
Analytica LLC	Information technology consulting	98,055	128,338
Equinix, Inc.	Information technology consulting	87,705	94,393
Yared Desta	Information technology consulting	85,876	99,912
TW Telecom	Information technology consulting	77,832	97,658
Vonage Business formerly Icore Networks, Inc.	Information technology consulting	72,154	63,681
CliftonLarsonAllen LLC	Financial audit	72,120	62,500
Groom Law Group	Legal counsel	70,158	13,159
American Arbitration Association	Arbitration services	59,979	12,918
RSM US LLP formerly RSM McGladrey, Inc.	Financial system consulting	48,002	47,582
Capitol Document Solutions	Information technology consulting	40,486	40,239
Dakota Consulting, Inc.	Information technology consulting	40,308	-
Steven Van Rees	Operations consultant	36,038	43,650
AON Hewitt Investment Consulting	Insurance consulting	35,438	-
Avitecture	Information technology consulting	34,455	37,198
Midtown Personnel Inc.	Benefits consulting	33,885	168,261
Business Development Associates, LLC	Information technology consulting	33,197	157,541
Advent Software, Inc.	Investment consulting	33,179	20,538
DC Net	Information technology consulting	31,968	28,985
Diligent Corp	Information technology consulting	31,575	31,575
HBP, Inc.	Graphic design for publications	25,992	38,693

(Continued on next page)

Professional/Consultant	Nature of Service	FY 2017	FY 2016
XO Holdings	Information technology consulting	24,699	-
Harris, Mackessy & Brennan, Inc.	Information technology consulting	21,098	-
CEM Benchmarking, Inc.	Investment consultant	20,000	30,000
Kofax, Inc.	Information technology consulting	18,752	16,562
eVestment Alliance	Online Investment service	18,720	22,932
Clayton Gordon	Information technology intern	18,053	3,325
Project Made Easy	Information technology consulting	16,784	17,400
ZixCorp Systems, Inc.	Information technology consulting	16,575	16,575
Syed-Mohd Nasib Hafeez	Information technology consulting	14,450	2,656
The Newberry Group, Inc.	Information technology consulting	11,993	5,451
National Associates, Inc.	Benefits consulting	9,820	61,130
Korn Ferry Hay Group, Inc.	Professional services	7,250	-
Dylan Meagher	Benefits intern	7,054	-
Intuitive Technology Group, LLC	Information technology consulting	5,608	118,724
Adil Naghmi	Benefits intern	5,590	-
Newlin LLC	Accting & internal audit consulting	5,537	39,071
Professional/Consultant	Nature of Service	FY 2017	FY 2016
Administrative Consultants			
Fahmida Chowdhury	Information technology consulting	5,382	-
William Harris	Information technology consulting	4,820	2,223
22nd Century Staffing, Inc.	Information technology consulting	4,648	-
Info-Tech Research Group, Inc.	Information technology consulting	4,225	-
Oquendo Computer Services	Professional services	3,570	-
Corporate Investigations, Inc.	Professional services	2,912	8,468
Neal R. Gross & Co, Inc.	Professional services	916	-
Carlson Dettmann LLC	Professional services	607	2,450
Nexia Friedman LLP	Professional services	600	-
Armstrong Teasdale	Legal counsel	315	555
Managed Frameworks, LLC	Information technology consulting	-	179,057
D.C. Department of Human Resources	Information technology consulting	-	136,607
Gartner, Inc.	Information technology consulting	-	116,898
IT-CNP, Inc	Information technology consulting	-	94,802
Katharine A. Schultz	Executive consultant	-	45,072
Sebastian Podesta	Professional services	-	18,893
InfoLock Technologies	Information technology consulting	-	10,090
Human Resources Technologies, Inc.	Information technology consulting	-	7,958
Tecknomic LLC	Information technology consulting	-	7,316
Exemplis LLC	Professional services	-	6,117
Shaquja Clark	Executive consultant	-	3,736
ImageTag, Inc.	Information technology consulting	-	3,000

(Continued on next page)

Professional/Consultant	Nature of Service	FY 2017	FY 2016
RaeShawn White	Benefits intern	-	1,356
Brea Grisham	Benefits intern	-	1,002
John Siegmund	Investment intern	-	894
Total administrative consultants		6,104,627	7,612,213
Investment Consulting			
CEM Benchmarking	Investment consultant	\$30,000	\$-
Cliffwater, LLC	Traditional investment consulting	-	525,006
Meketa Investment Group	Traditional investment consulting	620,000	403,334
Insightful Pension Consulting Group, LLC	Investment consultant	233,465	53,932
Zeno Consulting Group, LLC	Traditional investment consulting	26,250	35,000
Total investment consultants		909,715	1,017,272
Total payments to consultants		\$7,014,342	\$8,629,485

# INVESTMENT SECTION

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Prepared by Sheila Morgan-Johnson, Chief Investment Officer

#### Introduction

The District of Columbia Retirement Board (the "Board") is charged by law with the responsibility to prudently manage and invest the assets of the District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund, which are defined benefit pension plans (the "Fund"). The Board retains the services of an independent investment consultant who possesses specialized experience and resources in asset allocation, investment strategy, and investment manager selection. The Board's investment consultant and traditional investment managers acknowledge their fiduciary responsibility in writing. Investment managers are accorded full discretion within general and specific investment manager policy guidelines.

#### **Investment Objectives and Policies**

The Board targets investment returns that meet or exceed the actuarial investment return target at a level of risk commensurate with the target return and consistent with prudent investment practices. The current actuarial investment return target is 6.5%, net of investment management fees and administrative expenses. In addition to meeting or exceeding the actuarial return target over the long-term, a secondary return objective is to exceed the annualized total return of the Board's strategic asset allocation benchmark (the "Long-Term Policy Benchmark").

As of September 30, 2017, the Long-Term Policy Benchmark included the following components:

Asset Class	Performance Benchmark	Weight
Fixed Income	Fixed Income Benchmark <sup>1</sup>	30%
U.S. Equities	Russell 3000 Index	20%
International Developed Markets Equities	MSCI World Index ex-U.S. (net)	16%
Emerging Markets Equities	MSCI Emerging Markets Index (net)	10%
Absolute Return	3-Month LIBOR + 5%	4%
Private Equity	MSCI All-Country World Index+3% (quarter lag)	9%
Real Assets	CPI-U + 5.5%	11%
Total		100%

As a long-term investor, the Board believes it can generate the highest risk-adjusted returns through a diversified portfolio with an emphasis on equity investments. Although equities are generally more volatile than other asset classes in the short-term, if properly diversified, they are expected to yield higher total returns over the Fund's multi-decade time horizon. In addition, while the Board generally believes in the value of active management, it utilizes lower-cost passive investment strategies (e.g., index funds) in more efficient markets where active managers have a lower likelihood of generating excess returns.

<sup>&</sup>lt;sup>1</sup> The Fixed Income Benchmark is a composite of 34.9% Bloomberg Barclays (BB) U.S. Aggregate Index, 23.7% BB U.S. TIPS Index, 12.8% BB U.S. High-Yield Constrained Index, 9.5% Credit Suisse Levered Loan Index; 6.3% BB Global Aggregate ex U.S. Index, and 12.7% JPM GBI-EM Global Diversified Index.

#### Fiscal Year 2017 Global Market Review

U.S. equity markets, as represented by the Russell 3000 Index², rose 4.2% during the first quarter of the fiscal year driven by expectations for robust economic growth, tax cuts, and infrastructure spending following the election of Donald Trump. Developed non-U.S. equity markets, as represented by the MSCI World ex U.S. Index³, declined by 0.4% due to a depreciation in foreign currencies⁴. Rising interest rates in the U.S. and the strong U.S. dollar were headwinds for emerging markets during the quarter as the MSCI Emerging Markets Index⁵ was down 4.2%.

The second quarter posted strong returns as the Russell 3000 Index was up 5.7% and the MSCI World ex U.S. Index advanced 6.8%. Emerging markets had the strongest performance as the MSCI Emerging Markets Index advanced 11.4%. Reversing a trend from earlier periods, foreign currencies appreciated, boosting returns for U.S. dollar-based investors. Investors were grappling with the market implications of the changing political and economic landscape in the U.S. and abroad but maintained a risk-on position given sustained economic growth.

Global equity markets continued their upward trajectory during the third quarter of the fiscal year as the Russell 3000 Index was up 3.0%, the MSCI World ex U.S. Index advanced 5.6%, and the MSCI Emerging Markets Index gained 6.3%. Foreign currency appreciation boosted developed non-U.S. and emerging market equity returns once again. Generally, the global economic environment remained stable as growth continued at a moderate pace with continued support from central banks.

The fiscal year finished with another quarter of growth, as the Russell 3000 Index was up 4.6%, the MSCI World ex U.S. Index returned 5.6%, and the MSCI Emerging Markets Index rose 7.9%. Solid earnings and economic data underpinned market gains while trading activity remained light. It was the eighth consecutive quarter of positive returns for the Russell 3000 Index. In the Eurozone, confidence among businesses and consumers rose to its highest level since before the global financial crisis, and Germany's jobless rate reached a new 37-year low.

In terms of cumulative returns for the fiscal year ending September 30, 2017, the U.S. equity markets rose by 18.7%. International developed equity markets increased by 18.7%, while emerging markets advanced 22.5%. The Bloomberg Barclays U.S. Aggregate Bond Index, a broad measure of U.S. fixed income markets, was nearly unchanged at a positive 0.1% return.

#### **Fiscal Year 2017 Investment Results**

As of September 30, 2017, the Fund's total assets stood at \$7.8 billion after the payment of all benefits and administrative expenses, a \$1.0 billion increase from the end of the prior fiscal year. The Fund generated a net return of 13.0%, outperforming the Interim Policy Benchmark (an appropriate comparison for periods of 5 years or less) by 0.3%. Since its inception in October 1982, the Fund has underperformed the Long-Term Policy Benchmark by roughly 1.0% per year but has exceeded the actuarial return target by approximately 2.0% per year, net of fees.

The Fund's outperformance was driven by the active high-yield debt, emerging markets debt, and U.S. equity managers, which outperformed their benchmarks by a significant margin.

Exhibit 1 shows the gross returns for the Fund and each asset class over the one, three, five, and ten-year time periods ending September 30, 2017. The returns were calculated by the Board's custodial bank, The Northern Trust Company ("Northern Trust") and are time-weighted returns computed in compliance with the CFA Institute's Global Investment Performance Standards (GIPS). Benchmark returns for each asset class are presented for relative performance comparison purposes. The Interim Policy Benchmark is the best gauge for relative performance over time periods of five years or shorter, while the Long-Term Policy Benchmark is most appropriate for time periods exceeding five years.

<sup>&</sup>lt;sup>2</sup> The Russell 3000 Index is designed to measure the performance of the 3,000 largest public U.S. companies and represents ~98% of the U.S. equity market

<sup>&</sup>lt;sup>3</sup> The MSCI World ex U.S. Index is designed to measure the equity market performance of 22 developed markets outside the U.S.

<sup>&</sup>lt;sup>4</sup> All developed non-U.S. and emerging markets equity returns are in U.S. dollar terms, i.e., reflect the experience of a U.S. dollar-based investor, such as the District of Columbia Retirement Board.

<sup>&</sup>lt;sup>5</sup> The MSCI Emerging Markets Index is designed to measure the equity market performance of 23 emerging markets.

**Exhibit 1: Investment Performance (Gross of Fees)** 

as of September 30, 2017

Asset Class	1-Year	3-Year	5-Year	10-Year
Total Fund	13.1%	6.0%	7.5%	4.2%
Interim Policy Benchmark <sup>1</sup>	12.7%	5.9%	7.5%	4.4%
Long-Term Policy Benchmark <sup>2</sup>	-	-	7.5%	4.3%
Cash and Cash Equivalents	1.0%	0.5%	0.6%	0.9%
3-month U.S. Treasury Bills	0.7%	0.3%	0.2%	0.5%
Fixed Income	2.9%	2.5%	2.0%	4.2%
Fixed Income Benchmark <sup>3</sup>	2.4%	2.8%	2.0%	4.3%
U.S. Equities	19.1%	10.6%	14.2%	7.5%
Russell 3000 Index	18.7%	10.7%	14.2%	7.6%
International Developed Markets Equities	18.7%	5.7%	8.8%	2.5%
MSCI World Index ex U.S.(net)	18.7%	4.6%	7.8%	1.7%
Emerging Markets Equities	22.6%	4.7%	4.1%	-
MSCI Emerging Markets Index (net)	22.5%	4.9%	4.0%	-
Absolute Return	8.4%	1.9%	2.2%	6.7%
HFR Fund-Weighted Composite	7.2%	3.4%	4.7%	-
3-Month LIBOR+5%⁴	-	-	-	2.7%
Private Equity	15.3%	6.3%	10.9%	7.2%
Cambridge Associates Global PE & VC Index⁵	15.8%	9.2%	12.8%	-
MSCI All Country World Index+3% (quarter lag) <sup>6</sup>	-	-	-	6.6%
Real Assets	9.8%	10.2%	9.7%	-
CPI+5.5%	7.1%	6.4%	6.9%	-

<sup>&</sup>lt;sup>1</sup> As of 9/30/17, the Interim Policy Benchmark is a composite of 22.9% Russell 3000 Index, 18.3% MSCI World Index ex U.S. (net), 11.4% MSCI Emerging Markets (net); 11.0% Bloomberg Barclays (BB) U.S. Aggregate Index, 4.1% BB U.S. Corporate High Yield Index, 3.0% Credit Suisse Leveraged Loan Index, 2.0% BB Global Aggregate ex US Index, 4.0% JPM GBI-EM Global Diversified Index, 7.6% BB U.S. TIPS Index, 3.8% HFR Fund-Weighted Composite, 4.0% Cambridge Associates Global Private Equity and Venture Capital Index (quarter lag), 5.2% Real Estate Interim; 0.8% Cambridge Associates Upstream Energy & Royalties and Private Equity Energy Index (quarter lag), 2.2% Cambridge Associates Infrastructure Index (quarter lag).

<sup>&</sup>lt;sup>2</sup> As of 9/30/17, the Long-Term Policy Benchmark is a composite of 20% Russell 3000 Index, 16% MSCI World Index ex U.S. (net), 10% MSCI Emerging Markets (net); 11% BB U.S. Aggregate Index, 4% BB U.S. Corporate High Yield Index, 3% Credit Suisse Leveraged Loan Index, 2% BB Global Aggregate ex US Index, 4% JPM GBI-EM Global Diversified Index, 6% BB U.S. TIPS Index, 4% 3-Month LIBOR+5%, 9% MSCI ACWI + 3%, 11% CPI + 5.5%.

<sup>&</sup>lt;sup>3</sup> The Fixed Income Benchmark is a composite of 34.9% BB U.S. Aggregate Index, 23.7% BB U.S. TIPS Index, 12.8% BB U.S. High-Yield Constrained Index, 9.5% Credit Suisse Levered Loan Index; 6.3% BB Global Aggregate ex U.S. Index, and 12.7% JPM GBI-EM Global Diversified Index.

<sup>&</sup>lt;sup>4</sup> Prior to 9/30/13, 3-month LIBOR. Blended return stream.

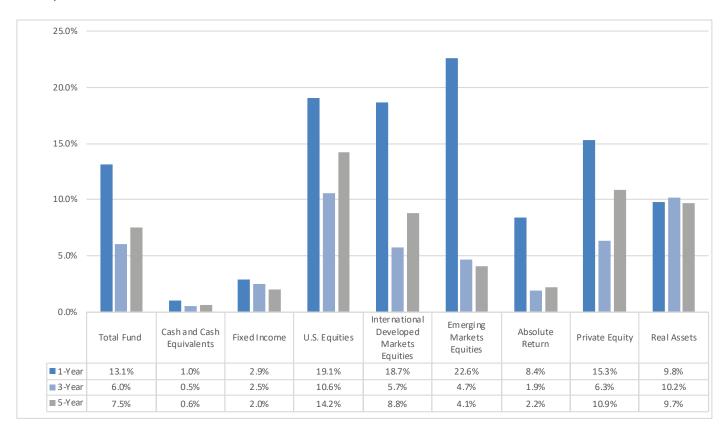
<sup>&</sup>lt;sup>5</sup> Prior to 12/31/07, Cambridge Associates U.S. Private Equity & Venture Capital Index (quarter lag).

<sup>&</sup>lt;sup>6</sup> Prior to 12/31/07, Russell 3000 + 3% (quarter lag).

<sup>&</sup>lt;sup>7</sup> As of 9/30/07, the Interim Real Assets Benchmark is a composite of 40.0% FTSE/EPRA NAREIT Global Index, 17.1% Cambridge Associates Real Estate Index (quarter lag), 28.6% Cambridge Associates Infrastructure Index (quarter lag), and 14.3% Upstream Energy & Royalties and Private Equity Energy Index (quarter lag).

#### **Exhibit 2: Historical Investment Performance**

As of September 30, 2017



# Exhibit 3: 1-Year Performance vs. Benchmark

As of September 30, 2017

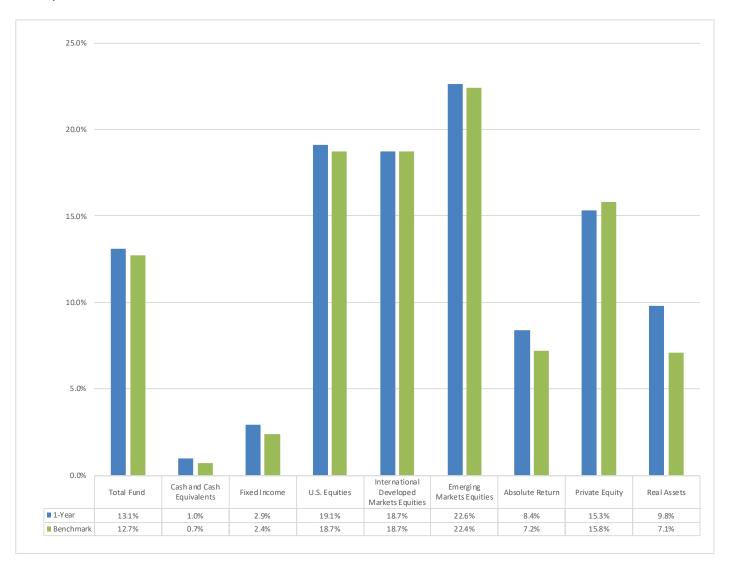
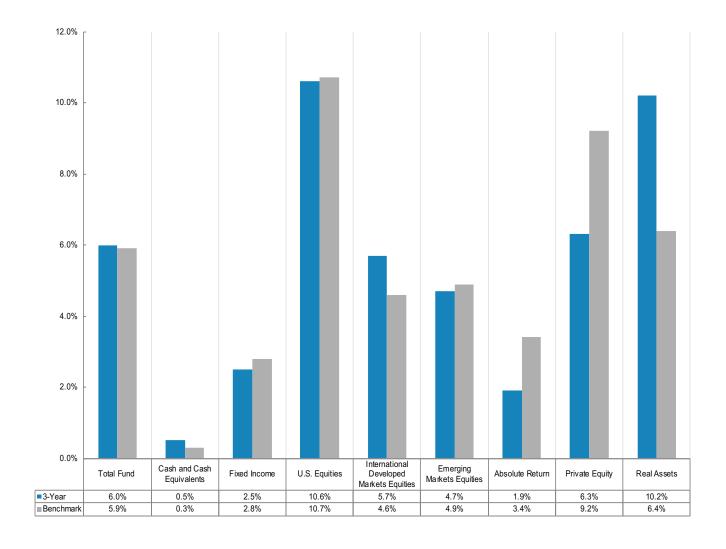
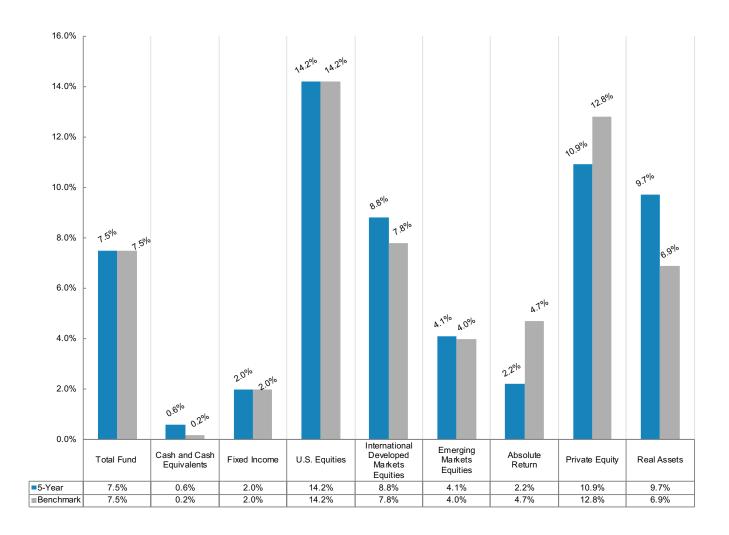


Exhibit 4: 3-Year Performance vs. Benchmark As of September 30, 2017



## Exhibit 5: 5-Year Performance vs. Benchmark

As of September 30, 2017



#### **Asset Allocation**

At the outset of Fiscal Year 2017, the Board reviewed the asset allocation structure and approved new targets, with the primary changes being an increase in real assets and private equity and decrease in absolute return targets.

The Interim Policy target distributes the underweight to alternative investments (absolute return, private equity, and real assets) across traditional investments (fixed income and public equities) in line with the Fund's Long-Term Policy target. The Actual, Interim and Long-Term Policy allocations are shown in Exhibit 6.

Exhibit 6: Actual, Interim Target and Policy Asset Allocations as of September 30, 2017



As of September 30, 2017, all the Fund's asset classes were within their respective target allocation ranges.

The underweight in private equity is driven by a deliberate, measured pace of new commitments, a high volume of realizations from more mature funds as well as substantial growth in total fund assets. The current underweight should moderate by 2020-2022, as new funds draw down capital and mature funds reduce distributions. In the meantime, the Board is focused on a consistent pace of new commitments, subject to the availability of compelling opportunities, strong fit with the existing investment program, and attractive market characteristics.

## **Other Updates**

During Fiscal Year 2017, the Board completed the implementation of the new strategic asset allocation, which was approved in November 2016.

## Environmental, Social, and Governance (ESG)

The Board's staff and consultant also continued the incorporation of the Board's ESG policy, adopted in November 2013, into the investment and operational due diligence processes. This area continues to be a focus when evaluating prospective and existing investment managers.

## Private Market Commitments

Within the alternative investments program, the Board committed a total of \$525 million to seventeen private equity and real assets limited partnerships. In private equity, this included funds focused on U.S. buyouts, Western European buyouts, and U.S. growth equity. In real assets, commitments included opportunistic real estate in the U.S. and Western Europe, as well as natural resources and infrastructure investments.

## **Investment Activity Summary**

During Fiscal Year 2017, there were no investment-related service provider changes.

# **List of Largest Holdings**

	Top 10 Fixed Income Holdings (Dollar amounts in thousands)							
Rank	Security Name	Moody's Quality Rating	Pa	ar Value	Interest Rate (%)	Maturity Date		Market Value
1	UNITED STATES TREAS INFL INDEXED NTS 0.1	Aaa	\$	36,966	0.13	04/15/2019	\$	37,094
2	UNITED STATES OF AMER TREAS NOTES 0.125%	Aaa	\$	26,144	0.13	04/15/2020	\$	26,265
3	UNITED STATES TREAS INFL INDEXED NTS 0.1	Aaa	\$	26,041	0.13	04/15/2021	\$	26,111
4	UNITED STATES TSY INFL IX TREAS BOND	Aaa	\$	24,290	0.66	01/15/2024	\$	24,784
5	UNITED STATES TREAS NTS DTD 01/15/2016	Aaa	\$	23,251	0.64	01/15/2026	\$	23,545
6	UNITED STATES OF AMER INFL INDXD TREAS N	Aaa	\$	23,018	0.26	01/15/2025	\$	22,792
7	UNITED STATES TREAS INFL INDEXED NTS .12	Aaa	\$	22,233	0.13	01/15/2023	\$	22,182
8	UNITED STATES TREAS INFL NTS 0.375% DTD	Aaa	\$	21,932	0.39	07/15/2025	\$	21,932
9	UNITED STATES TREAS INFL INDEXED NTS .12	Aaa	\$	20,686	0.13	07/15/2022	\$	20,788
10	UNITED STATES TREAS NTS 0.125% INDEX LIN	Aaa	\$	20,566	0.14	01/15/2022	\$	20,635

Top 10 Public Equity Holdings (Dollar amounts in thousands)					
Rank	Security Name	Shares	М	arket Value	
1	Apple Inc.	275,605	\$	42,476,212	
2	Samsung Electronics Co., Ltd.	18,951	\$	41,649,403	
3	Alphabet Inc.	39,294	\$	38,011,179	
4	Alibaba Group Holding Limited	216,736	\$	37,432,439	
5	Tencent Holdings Limited	810,928	\$	34,905,205	
6	Facebook, Inc.	179,586	\$	30,685,854	
7	Microsoft Corporation	396,198	\$	29,512,815	
8	Amazon.com, Inc.	28,737	\$	27,625,993	
9	Taiwan Semiconductor Manufacturing Co Lt	3,524,929	\$	25,166,440	
10	Nestle S.A.	267,758	\$	22,442,344	

A complete list of portfolio holdings is available upon request.

## **Schedule of Fees and Commissions**

During fiscal year 2017, the Board paid the following fees and commissions:

Expense Category	Amount (Dollars in thousands)	Percent of Fund
Investment Managers*	\$ 14,360,817	0.185%
Investment Consultants	909,715	0.012
Investment Administrative Expense	784,973	0.010
Custodian	237,250	0.003
Brokerage Commissions**	985,074	0.013
Total	\$ 17,277,829	0.223%

<sup>\*</sup> Includes fees paid to traditional investment managers only. Traditional investment managers are those that invest primarily in public equity and fixed income securities.

<sup>\*\*</sup> Includes separate account and commingled fund relationships.

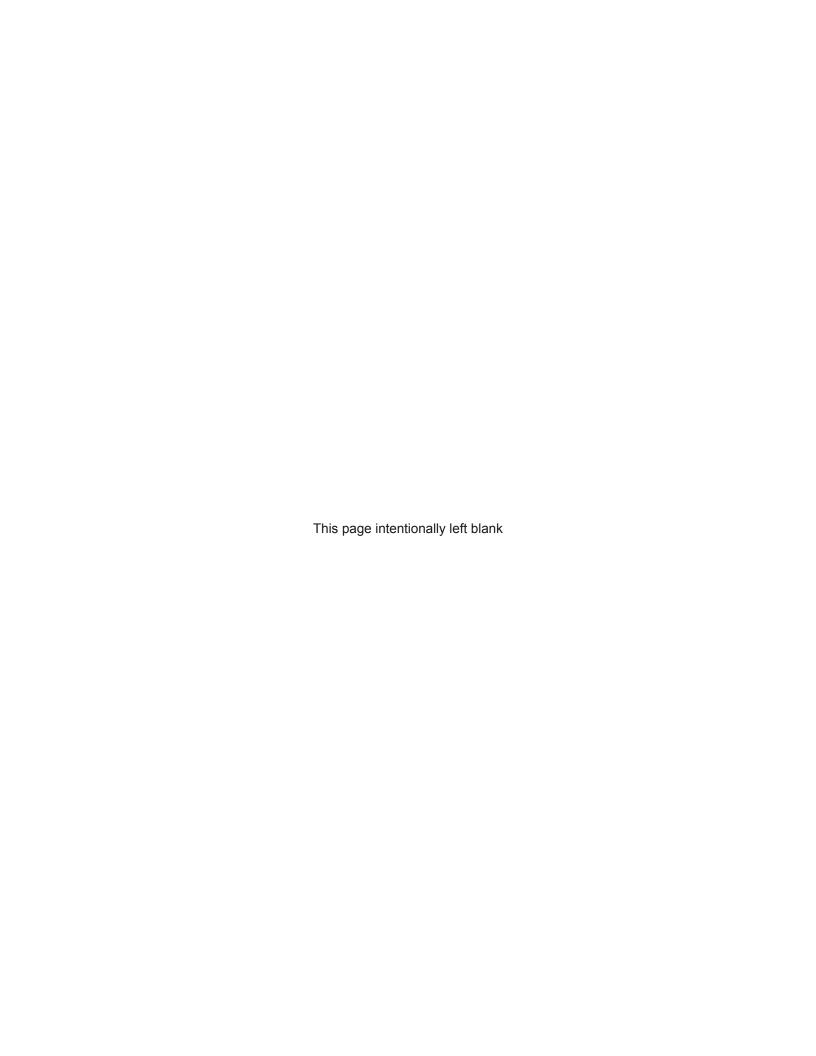
Total	Total Shares Traded	Total Commission (Dollar Value)	Commission (Cost Per Share)	Commission (Basis Points)	Number of Trades	Trade Value (Dollars in millions)
Channing Capital Management	3,757,673	-104,739	-2.8	-8	722	139
Sands Capital Management	815,122	-19532	-2.4	-3	264	76
Altrinsic	5,047,423	-116,855	-2.3	-16	318	75
Copper Rock International	26,276,018	-286,041	-1.1	-14	1,918	212
LSV Emerging Markets	90,479,899	-38,898	0	-6	3,490	64
Northern Truest Global REIT	44,338,680	-16,381	0	-2	5,771	79
Northern Trust R3000	82,353,376	-168,181	-0.2		39,004	2,669
State Street Global Advisors-CAD	624,486	-1,695	-0.3		1,235	17
State Street Global Advisors-EAFE	34,596,581	-50,408	-0.1		15,450	420
State Street Global Advisors-EM	168,473,777	-182,345	-0.1	-6	13,282	306
Total	456,763,035	-985,074	-0.2	-2	81,454	4,059

## **Investment Summary**

(Dollar amounts in thousands)

Asset Class	Market Value \$(000)	% of Fund
Cash and Cash Equivalents	\$ 63,409	0.8%
Fixed Income	2,355,985	30.4%
U.S. Equities	1,723,893	22.2%
International Developed Markets Equities	1,484,838	19.2%
Emerging Markets Equities	898,788	11.6%
Absolute Return	292,585	3.8%
Private Equity	308,138	4.0%
Real Assets	624,328	8.1%
Total	\$ 7,751,966	100.0%

Note: Transition Account balance of \$8,484 included in Fixed Income.



# **ACTUARIAL SECTION**

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# **Independent Actuary's Certification Letter**



December 14, 2017 14The Board of Trustees District of Columbia Retirement Bo 900 7th Street, NW, 2nd Floor Washington, DC 20001

Dear Trustees:

We are pleased to submit the results of the annual actuarial valuations of the District of Columbia Retirement Board Teachers' Retirement Plan and Police Officers & Firefighters' Retirement Plan, prepared as of October 1, 2017.

The purpose of this report is to provide a summary of the funded status of each Plan as of October 1, 2017, and to recommend rates of contribution to be paid by the District in the 2019 fiscal year. The information needed for this Plan under the new Governmental Accounting Standards Board Statement No. 67 was provided in a separate report. However, for informational purposes only, we have also provided accounting information under GASB 25 and 27 in Section VII of the report. While not verifying the data at source, the actuary performed tests for consistency and reasonability.

The promised benefits are included in the actuarially calculated contribution rates which are developed using the entry age normal cost method. A five-year smoothed market value of assets is used for actuarial valuation purposes. The assumptions recommended by the actuary and adopted by the Board are reasonably related to the experience under the Fund and to reasonable expectations of anticipated experience under the Fund.

Since the previous valuation, several changes were made to the actuarial assumptions and methods. The asset smoothing method period was changed from seven years to five years. In addition, many demographic assumptions were changed to better reflect recent experience. The administrative expense rate for the Police Officers and Firefighters' Retirement Plan was increased from 1.20% to 2.10% of payroll.

The funding policy adopted by the Board in 2012 includes the following funding goals:

- To maintain an increasing or stable ratio of Plan assets to actuarial accrued liabilities and reach a 100 percent minimum funded ratio;
- To develop a pattern of stable or declining contribution rates when expressed as a percentage of member payroll as
  measured by valuations prepared in accordance with the principles of practice prescribed by the Actuarial Standards
  Board, with a minimum employer contribution equal to the lesser of the normal cost determined under the Entry Age
  Normal funding method or the current active member contribution rate.

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## **Independent Actuary's Certification Letter**

December 14, 2017 The Board of Trustees Page 2

The funding policy was amended by the Board in 2017 to:

- Amortize the legacy Unfunded Actuarial Liability (UAAL) as of October 1, 2017 over a closed 15-year period on a level dollar basis.
- The assumption and method changes and experience gains for the October 1, 2017 valuation will be amortized over a closed 20-year period from the valuation date.
- In subsequent valuations, all benefit changes, assumption and method changes and experience gains and/or losses
  that have occurred since the previous valuation will be amortized over a closed 20-year period from the date it is
  established.
- Change the asset smoothing period from seven to five years.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

This is to certify that the independent consulting actuary is a member of he American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the System and on the actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

The actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Use of these computations for purposes other than meeting these requirements may not be appropriate.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,

Edward J. Koebel, EA, FCA, MAAA Principal and Consulting Actuary

Edward J. Kachel

Jonathan T. Craven, ASA, EA, FCA, MAAA Senior Actuary

EJK/JTC:kc

(Demographic assumptions adopted on June 22, 2017)

(Economic assumptions adopted on June 22, 2017)

Valuation date: All assets and liabilities are computed as of October 1, 2017. Demographic information was collected as of June 30, 2017.

Investment rate of return: 6.50% per annum, compounded annually (net of investment expenses).

**Inflation assumption**: 3.50% per annum.

Payroll growth assumption: 4.25% per annum.

**Percent married**: 64% of Teachers are assumed to be married and 80% of Police Officers and Firefighters are assumed to be married, with a wife 3 years younger than a husband. Active members are assumed to have one dependent child aged 10.

**Actuarial method**: Entry Age Normal Cost Method. The amortization of the unfunded actuarial accrued liability uses a level dollar basis.

**Assets**: The method of valuing assets is intended to recognize a "smoothed" market value of assets. Under this method, the difference between actual return on market value from investment experience and the expected return on market value is recognized over a five-year period. The actuarial value of assets is constrained to an 80% to 120% corridor around market value of assets. In addition, there is an adjustment made for the effect of the adjustment pursuant to D.C. Code §1-907.02(c).

**Withdrawal assumption**: For Teachers and Firefighters, it was assumed that 15% of the vested members who terminate elect to withdraw their contributions while the remaining 85% elect to leave their contributions in the Plan in order to be eligible for a benefit at their retirement date. For Police Officers, it was assumed that 25% of the vested members who terminate elect to withdraw their contributions while the remaining 75% elect to leave their contributions in the plan.

**Other assumptions**: To value the pre-retirement death benefit for Police Officers and Firefighters, the benefit form for all retirements (normal or disabled) is assumed to be a 67.8% Joint and Survivor Annuity for all participants (based on 40% of average pay survivor benefits). One-fourth of all Police Officer and Firefighter active deaths are assumed to occur in the line of duty.

**Cost-of-living adjustment (COLA)**: The cost of living as measured by the Consumer Price Index (CPI) will increase at the rate of 3.5% per year.

Military service: All Police and Fire members are assumed to have 0.40 years of military service at retirement.

**Administrative expenses:** For Teachers, budgeted administrative expenses of 1.2% of payroll are added to the normal cost rate. For Police Officers and Firefighters, budgeted administrative expenses of 2.1% of payroll are added to the normal cost rate.

## **Teachers**

**Salary Increases:** Representative values of the assumed annual rates of future salary increases are as follows and include inflation at 4.25% per annum:

Pay Increase Assumptions for an Individual Member					
		Inflation &	Total		
Years of	Merit &	Productivity	Increase		
Service	Seniority	(Economy)	(Next Year)		
5	4.20%	4.25%	8.63%		
10	3.20	4.25	7.59		
15	1.20	4.25	5.50		
20	1.20	4.25	5.50		
25	1.20	4.25	5.50		
30	1.20	4.25	5.50		
35	1.20	4.25	5.50		

**Separations From Active Service**: Representative values of the assumed annual rates of withdrawal, service retirement, and disability are shown in the following tables:

Percent of Members Separating Within the Next Year						
	Withdr (5 years of se		Service Re	tirement		
Sample Ages	Male	Female	Under 30 yrs service	30 & up yrs service	Disability Retirement	
25	18.00%	18.00%	-	-	0.01%	
30	16.00	16.00	-	-	0.02	
35	12.00	10.00	-	-	0.03	
40	12.00	8.00	-	-	0.07	
45	8.00	6.50	-	-	0.12	
50	8.00	6.50	5.00%	5.00%	0.20	
55	8.00	6.50	9.00	22.00	0.25	
60	-	-	27.00	28.00	0.30	
62	-	-	22.00	25.00	-	
65	-	-	25.00	35.00	-	
70	-	-	30.00	30.00	-	
71	-	-	25.00	30.00	-	
75	-	-	100.00	100.00	-	

**Mortality**: The RPH-2014 Blue Collar Mortality Table projected generationally with Scale BB, set back 1 year for males is used for healthy active members, retirees, and beneficiaries. The RPH-2014 Disabled Mortality Table set back 6 years for males and set forward 1 year for females is used for disabled retirees. Mortality improvement is anticipated under these assumptions.

## Police Officers

**Salary Increases:** Police Officers are assumed to receive a longevity increase to individual base pay after 15, 20, 25, and 30 years of service. Representative values of the assumed annual rates of future salary increases before longevity increases are as follows and include inflation at 4.25% per annum:

Pay Increase Assumptions for an Individual Member					
		Inflation &	Total		
Years of	Merit &	Productivity	Increase		
Service	Seniority	(Economy)	(Next Year)		
5	2.00%	4.25%	6.34%		
10	2.00	4.25	6.34		
15	2.00	4.25	6.34		
20	1.75	4.25	6.07		
25	0.75	4.25	5.03		
30	0.00	4.25	4.25		

**Separations from Active Service**: Representative values of the assumed annual rates of withdrawal, service retirement, and disability are shown in the following tables:

Percent of Members Separating Within the Next Year								
	Withdrawal (5 years of service & up) <sup>1</sup>		Disability Retirement <sup>2</sup>					
Sample Ages	Males	Females	Males	Females	Years of Service	Service Retirement³		
20	5.00%	5.00%	0.03%	0.02%	20	15.0%		
25	5.00	5.00	0.06	0.05	25	22.0		
30	4.25	4.50	0.11	0.10	30	38.0		
35	2.75	3.50	0.16	0.15	35	18.0		
40	1.50	1.50	0.23	0.30	40	16.0		
45	1.50	1.50	0.32	0.40	-	-		
50	1.50	1.50	0.42	0.60	-	-		
55	1.50	1.50	0.44	0.70	-	-		
60	1.50	1.50	0.51	1.00	_	-		

- 1. Members of any age with less than 5 years of service have withdrawal rates of 6% to 13% for males, and 5% to 11% for females
- 2. It is assumed that 75% of the disabilities are due to accidents in the line of duty and the "percent of disability" is assumed to be 100%.
- 3. 100% of active members are assumed to retire at age 65, regardless of service.

## Police Officers

**Mortality:** The RPH-2014 Blue Collar Mortality Table projected generationally with Scale BB, set back 1 year for males is used for healthy active members, retirees, and beneficiaries. The RPH-2014 Disabled Mortality Table set back 6 years for males and set forward 1 year for females is used for disabled retirees. Mortality improvement is anticipated under these.

Disabled Retiree Mortality					
Sample Ages	Males	Females			
20	0.80%	0.50%			
30	0.80	0.50			
40	0.80	0.50			
50	0.80	0.50			
60	1.16	0.74			
70	2.35	1.55			
80	5.78	3.76			
90	13.95	10.87			
100	51.48	49.93			

Mortality improvement is anticipated under these assumptions as recent mortality experience shows actual deaths are approximately 7% greater for healthy lives and 6% greater for disabled lives than expected under the selected tables.

# **Outline of Actuarial Assumptions and Methods** Firefighters

**Salary Increases:** Firefighters are assumed to receive a longevity increase applied to individual base pay after 15, 20, 25, and 30 years of service, respectively. Representative values of the assumed annual rates of future salary increases before longevity increases are as follows and include inflation at 4.25% per annum:

Pay Increase Assumptions for an Individual Member						
Years of Service	Merit & Seniority	Inflation & Productivity (Economy)	Total Increase (Next Year)			
5	3.00%	4.25%	7.38%			
10	3.00	4.25	7.38			
15	3.00	4.25	7.38			
20	1.25	4.25	5.55			
25	1.25	4.25	5.55			
30	1.25	4.25	5.55			
35	1.25	4.25	5.55			

**Separations from Active Service**: Representative values of the assumed annual rates of withdrawal, service retirement, and disability are shown in the following tables:

Percent of Members Separating Within the Next Year						
Sample Ages	Withdrawal (5 years of service & up) <sup>1</sup>	Disability Retirement <sup>2</sup>	Years of Service	Service Retirement³		
20	3.00%	0.01%	20	12.50%		
25	3.00	0.05	25	12.50		
30	2.60	0.18	30	22.00		
35	1.80	0.25	35	40.00		
40	1.40	0.30	40	40.00		
45	1.20	0.35	-	-		
50	1.20	0.40	-	-		
55	0.80	0.45	-	-		
60	0.60	0.50	-	-		

- 1. Members of any age with less than 5 years of service have withdrawal rates of 4.0% to 7.5%.
- 2. It is assumed that 75% of the disabilities are due to accidents in the line of duty and the "percent of disability" is assumed to be 100%.
- 3. 100% of active members are assumed to retire at age 60, regardless of service.

# **Outline of Actuarial Assumptions and Methods** Firefighters

**Mortality:** The RPH-2014 Blue Collar Mortality Table projected generationally with Scale BB, set back 1 year for males is used for healthy active members, retirees, and beneficiaries. The RPH-2014 Disabled Mortality Table set back 6 years for males and set forward 1 year for females is used for disabled retirees. Mortality improvement is anticipated under these.

Disabled Retiree Mortality				
Sample Ages	Males	Females		
20	0.59%	0.37%		
30	0.59	0.37		
40	0.59	0.37		
50	0.59	0.37		
60	0.85	0.54		
70	1.72	1.13		
80	4.22	2.75		
90	10.19	7.94		
100	37.60	36.47		

Mortality improvement is anticipated under these assumptions as recent mortality experience shows actual deaths are approximately 7% greater for male and 1% greater for female healthy lives and 8% greater for disabled lives than expected under the selected tables. Police Officers and Firefighters are combined in the valuation results and the female healthy life population is much greater for Police Officers than Firefighters, so the smaller margin under Firefighters is not an issue at this time.

Teachers' Retirement Plan

#### **Effective Date**

Established on July 1, 1997. The U.S. Treasury is responsible for paying all benefits accrued before this date.

## **Definitions**

## Affiliated Employers

District of Columbia Public Schools, Public Charter Schools

#### **Covered Members**

Permanent, temporary, and probationary teachers for the District of Columbia public day schools become members automatically on their date of employment. Other employees covered by the Retirement of Public School Teachers Act – including librarians, principals, and counselors – also become members on their date of employment. Substitute teachers and employees of the Department of School Attendance and Work Permits are not covered. Some former D.C teachers working at charter schools are eligible to remain in the Program.

#### Service Credit

One year of school service is given for each year of employment with DCPS. After five years of service are accrued, additional service may be purchased or credited for service outside of DCPS. For purposes of eligibility and benefit accrual, federal service is included in the calculation of the normal retirement benefit.

## Average Salary

Highest 36 consecutive months of pay, divided by three.

#### Vested

Members who accrue five or more years of Service Credit are vested for benefits. If these members leave service, they may leave their Member Contribution Accounts with the Plan for a future benefit when reaching eligibility (deferred vested in this report).

## **Contributions**

#### **Member Contributions**

Members hired before November 1, 1996, are required to contribute 7% of annual pay. Members hired on or after November 1, 1996, contribute 8% of annual pay. Interest is not credited to each Member's accumulated contributions.

#### **Refund of Member Contributions**

In the event a member leaves service for a reason other than death or retirement, member contribution accounts are refunded upon request.

Teachers' Retirement Plan

## **Service Retirement**

## **Eligibility**

The Age and Service Credit requirements to be eligible for a full Service Retirement are listed below:

Members Hired Before November 1, 1996:			
Age	Service Credit		
55	30 years, including 5 years school service		
60	20 years, including 5 years school service		
62	5 years school service		

Members Hired On and After November 1, 1996:				
Age	Service Credit			
Any Age	30 years, including 5 years school service			
60	20 years, including 5 years school service			
62	5 years school service			

## Benefit

For members hired before November 1, 1996:

- 1.5% of Average Salary times service up to 5 years, plus
- 1.75% of Average Salary times service between 5 and 10 years, plus
- 2.0% of Average Salary times service over 10 years.

For members hired on or after November 1, 1996:

2.0% of Average Salary times service.

Teachers' Retirement Plan

## **Involuntary Service Retirement**

## **Eligibility**

The Age and Service Credit requirements to be eligible for an Involuntary Service Retirement are listed below:

All Members, regardless of date of hire

Age	Service Credit
Any age	25 years, including 5 years school service
50	20 years, including 5 years school service

## Benefit

Service Retirement Benefit is reduced by 1/6% per month (or 2% per year) that the date of retirement precedes age 55.

## **Disability Retirement**

## **Eligibility**

Active members with five or more years of school service credit are eligible (vested) for disability retirement. To be eligible, the member must be found to be incapable of satisfactorily performing the duties of his/her position.

## Benefit

Equal to Service Retirement benefit. Minimum benefit is the lesser of a) or b):

- a) 40% of Average Salary
- b) Calculated benefit amount projecting service to age 60.

## **Survivor Benefits**

## **Lump Sum**

Eligibility

Death before completion of 18 months of school service or death without an eligible spouse, domestic partner, dependent child or parent.

## Benefit

Refund of member contributions.

Teachers' Retirement Plan

## **Survivor Benefits**

## Spouse or Domestic Partner Only

Eligibility

Death before retirement and married/registered domestic partner for at least two years, or have a child by the marriage or partnership.

#### Benefit

55% of Service Retirement benefit. Minimum benefit is the lesser of a) or b):

- a) 55% of 40% of Average Salary
- b) 55% of the calculated benefit amount projecting service to age 60.

## Spouse or Domestic Partner & Dependent Children

Eligibility

Death before retirement and married/registered domestic partnership for at least two years, or have a child by the marriage or partnership. Children must be unmarried and under age 18, or 22 if a full-time student; also, any dependent child who incurred a disability before age 18. Death does not have to occur before retirement for the children's benefit.

#### Spouse or Domestic Partner Benefit

55% of Service Retirement benefit. Minimum benefit is the lesser of a) or b):

- a) 55% of 40% of Average Salary
- b) 55% of the calculated benefit amount projecting service to age 60.

#### Child Benefit

A benefit per child is equal to the smallest of a) or b) or c):

- a) 60% of Average Salary divided by the number of eligible children
- b) \$6,931\* (if hired before 1/1/1980), \$6,693\* (if hired between 1/1/1980 and 10/31/1996), or \$6,518\* (if hired on or after 11/1/1996) per child
- c) \$20,958\* (if hired before 1/1/1980), \$20,240\* (if hired between 1/1/1980 and 10/31/1996), or \$19,710\* (if hired on or after 11/1/1996) divided by the number of children.

<sup>\*</sup>Survivor benefit amounts are as of 2017, and are subject to annual inflation adjustments.

Teachers' Retirement Plan

## **Survivor Benefits**

## Dependent Children Only

Eligibility

Children must be unmarried and under age 18, or 22 if a full-time student; also, any dependent child with of a disability incurred before age 18. Death does not have to occur before retirement for the children's benefit.

#### Benefit

A benefit per child equal to the smallest of a) or b) or c):

- a) 75% of Average Salary divided by the number of eligible children
- b) \$8,470\* (if hired before 1/1/1980), \$8,157\* (if hired between 1/1/1980 and 10/31/1996), or \$7,097\* (if hired on or after 11/1/1996) per child
- c) \$25,612\* (if hired before 1/1/1980), \$24,667\* (if hired between 1/1/1980 and 10/31/1996), or \$23,910\* (if hired on or after 11/1/1996) divided by the number of children.

#### Parents Only

Eligibility

Death before retirement and no eligible spouse or children, and parents must receive at least one-half of their total income from member.

#### Benefit

55% of Service Retirement benefit. Minimum benefit is the lesser of a) or b):

- a) 55% of 40% of Average Salary
- b) 55% of the calculated benefit amount projecting service to age 60.

## **Deferred Vested Retirement**

#### Eligibility

Active members with five or more years of school service credit.

#### Benefit

Benefit is calculated in the same manner as a Service Retirement benefit and may be collected starting at age 62.

<sup>\*</sup>Survivor benefit amounts are as of March 2017, and are subject to annual inflation adjustments.

Teachers' Retirement Plan

## **Options**

Retirement and disability benefits are payable for the life of the retired member. Optional reduced benefits may be elected at the time of retirement to provide for continuation of a reduced benefit amount to a designated beneficiary. Optional forms include:

- a) Unreduced Annuity
- Full benefit is paid to the member, with no survivor benefit.
- b) Reduced Annuity with a Maximum Survivor Annuity (to Spouse or Registered Domestic Partner)
  Reduced benefit paid to the member so that upon the member's death, the spouse or domestic partner will receive 55% of the unreduced normal life annuity. Member's benefit is reduced by 2.5% of retirement benefit, up to \$3,600, plus 10% of any retirement benefit over \$3,600.
- c) Reduced Annuity with a Partial Survivor Annuity (to Spouse or Registered Domestic Partner)
  Reduced benefit paid to member so that upon the member's death, the spouse or domestic partner will receive a partial annuity that can range from \$1 up to less than 55% of the unreduced normal life annuity amount. The member's benefit is reduced by the same amount as option b, multiplied by the ratio of the chosen benefit percent to the maximum benefit percent (of less than 55%).
- d) Reduced Annuity with a Life Insurance Benefit
  Member elects a life insurance amount, payable in a lump sum to designated beneficiary upon member's death. The
  unreduced annuity is reduced by the amount required to pay for the life insurance premium.
- e) Reduced Annuity with a Survivor Annuity to a Person with an Insurable Interest A 55% Joint and Survivor Annuity where the original benefit is reduced by 10% plus an additional 5% for each full 5 years, up to 25 years, that the designated beneficiary is younger than the member. Maximum reduction is 40% for any beneficiary who is 25 or more years younger than the member.

## **Cost-of-Living Adjustments (COLA)**

Each year on March 1st, benefits which have been paid for at least twelve months preceding March 1st may be increased. The increase is equal to the change in the CPI-W for the prior calendar year. COLA's are included in benefit payments on and after April 1st.

For members hired on or after November 1, 1996, the cost-of-living increase is limited to 3% per year.

Police Officers and Firefighters' Retirement Plan

## **Effective Date**

Established on July 1, 1997. The U.S. Department of the Treasury is responsible for paying all benefits accrued before this date.

## **Definitions**

## Affiliated Employers

The District of Columbia Metropolitan Police Department (MPD) and the District of Columbia Department of Fire and Emergency Medical Services (FEMS).

#### **Covered Members**

Sworn Police Officers and Firefighters become members on their first day of active duty (cadets are not eligible). Membership is not automatic for uniformed EMT Firefighters.

#### Service Credit

One year of service is given for each year of employment with MPD or FEMS. Additional service may be purchased or credited for lateral transfer service, EMT service, prior military service, and certain civilian service. For purposes of eligibility and benefit accrual, federal service is included in the calculation of the normal retirement benefit.

## Average Salary

For members hired before February 15, 1980, the highest 12 consecutive months of pay. For members hired on or after February 15, 1980, the highest 36 consecutive months of pay, divided by 3. Base pay does not include overtime, holiday or military pay.

#### Vested

Members who accrue five or more years of Service Credit are vested for benefits. If these members leave service, they may leave their Member Contribution Accounts with the Plan for a future benefit when reaching eligibility.

## **Contributions**

#### **Member Contributions**

Members hired before November 10, 1996, contribute 7.0% of salary. Members hired on or after November 10, 1996, contribute 8.0% of salary. Member contributions, together with any purchased service credit payments, are credited to individual Member Contribution Accounts. No interest is accrued on contributions.

## **Refund of Member Contributions**

In the event a member leaves service for a reason other than death or retirement, member contribution accounts are refunded upon request.

Police Officers and Firefighters' Retirement Plan

## **Service Retirement**

## **Eligibility**

The Age and Service Credit requirements to be eligible for a full Service Retirement are listed below:

Members hired before November 10, 1996			
Age	Service Credit		
Any age	20 (only if hired before 2/15/1980)		
50	25 years departmental service		
60	5 years departmental service		

Members hired on and after November 10, 1996			
Age	Service Credit		
Any age	25 years departmental service		
60	5 years departmental service		

#### Benefit

For members hired before November 10, 1996:

- 2.5% of Average Salary times departmental service up to 25 years (20 years if hired before 2/15/1980), plus
- 3.0% of Average Salary times departmental service over 25 years (or 20 years if hired before 2/15/1980), plus
- 2.5% of Average Salary times purchased or credited service.

For members hired on or after November 10, 1996:

2.5% of Average Salary times total service.

All members are subject to a maximum benefit of 80% of Average Salary.

## **Service-Related Disability Retirement**

## **Eligibility**

Disabled as a result of an injury or disease that permanently disables him/her for the performance of duty.

#### Benefit

For members hired before February 15, 1980:

2.5% of Average Salary times total years of service, subject to a minimum of 66-2/3% of Average Salary and a maximum of 70% of Average Salary.

For members hired on or after February 15, 1980:

70% of final pay times percentage of disability, subject to a minimum of 40% of final pay.

Police Officers and Firefighters' Retirement Plan

## **Nonservice-Related Disability Retirement**

## **Eligibility**

Active members with five or more years of departmental service are eligible (vested) for disability retirement. The member is eligible if found that the disability precludes further service with his/her department.

## Benefit

For members hired before February 15, 1980:

2.0% of Average Salary times total years of service, subject to a minimum of 40% of Average Salary and a maximum of 70% of Average Salary.

For members hired on or after February 15, 1980:

70% of final pay times percentage of disability, subject to a minimum of 30% of final pay.

## **Survivor Benefits**

## **Lump Sum**

Eligibility

Death before retirement without an eligible spouse or child.

Benefit

Refund of member contributions according to Plan's order of precedence.

## Lump Sum - Death In Line of Duty

Eligibility

Death occurring in the line of duty, not resulting from willful misconduct.

Benefit

\$50,000

## Spouse Only - Death in Line Of Duty

Fliaibility 1 4 1

Member killed in line of duty, after December 29, 1993.

#### Benefit

100% of final pay.

Police Officers and Firefighters' Retirement Plan

## **Survivor Benefits**

## Spouse Only - Death Not In Line Of Duty

Eligibility

Member death, not in line of duty, after December 29, 1993. If retired, must be married for at least one year or have a child by the marriage.

#### Benefit

40% of the greater of a) or b):

- a) Average Salary
- b) Salary for step 6 salary class 1 of the DC Police and Fireman's Salary Act in effect, adjusted for cost-of-living increases if death occurs after retirement.

Benefit cannot be higher than rate of pay at death (or retirement if death occurs after retirement).

## Spouse & Dependent Children

Eligibility

Member death, not in line of duty, after December 29, 1993. If retired, must be married for at least one year or have a child by the marriage. Children must be unmarried and under age 18, or 22 if full-time student. Also, any dependent child because of a disability incurred before age 18. Death does not have to occur before retirement for the children's benefit.

## Spouse Benefit

40% of the greater of a) or b):

- a) Average Salary
- b) Salary for step 6 salary class 1 of the DC Police and Fireman's Salary Act in effect, adjusted for cost-of-living increases if death occurs after retirement.

Benefit cannot be higher than rate of pay at death (or retirement if death occurs after retirement).

#### **Survivor Benefits**

#### Child Benefit

A benefit per child is equal to the smallest of a) or b) or c):

- a) 60% of Average Salary divided by the number of eligible children
- b) \$4,077\* (if hired before 11/10/1996) or \$3,989\* (if hired on or after 11/10/1996) per child
- c) \$12,232\* (if hired before 11/10/1996) or \$11,967\* (if hired on or after 11/10/1996) divided by the number of children.

<sup>\*</sup>Survivor benefit amounts are as of March 2017, and are subject to annual inflation adjustments.

Police Officers and Firefighters' Retirement Plan

## Dependent Children Only

Eligibility

Children must be unmarried and under age 18, or 22 if full-time student. Also, any dependent child because of a disability incurred before age 18. Death does not have to occur before retirement for the children's benefit.

#### Benefit

75% of Average Salary divided by the number of eligible children, adjusted for cost-of-living increases.

## **Deferred Vested Retirement**

## Eligibility

Active members with five or more years of departmental service.

#### Benefit

Benefit is calculated in the same manner as Service Retirement benefit and may be collected starting at age 55.

#### **Options**

Retirement and disability benefits are payable for the life of the retired member. This includes an unreduced Joint and Survivor Annuity as defined above in the "Survivor Benefits – Spouse and Dependent Children" section.

An optional reduced benefit may be elected at the time of retirement to provide for an additional survivor benefit to a designated beneficiary. Member's original annuity is reduced by 10% and an increased benefit based on the value of that amount is added to the survivor's benefit. If the designated beneficiary is more than five years younger than the member, the additional amount will be reduced by 5% for each full five years that the beneficiary is younger than the member, subject to a maximum reduction of 40%.

## **Cost-of-Living Adjustments (COLA)**

Each year on March 1st, benefits which have been paid for at least twelve months preceding March 1st may be increased. The amount is equal to the increase in the CPI-U for the prior calendar year. COLA's are included in benefit payments on and after April 1st. If a member's retirement is effective after March 1 of the preceding year, the COLA amount will be prorated.

For members hired on or after November 10, 1996, the cost of living increase is limited to 3% per year. Members hired before February 15, 1980, receive equalization pay, which is defined as the percentage increase of active employees' salary increases. Equalization increases are not paid to beneficiaries.

# **Schedule of Active Member Valuation Data**

(Dollar amounts in thousands)

Teachers' Retirement I	Plan			
		Annual	Annual	% increase
Valuation Date	Number	Payroll	Average Pay	in Average Pay
September 30, 2017	5,199	\$447,762	\$86.1	1.08%
September 30, 2016	5,141	438,079	85.2	-0.60
September 30, 2015	4,866	417,090	85.7	1.77
September 30, 2014	4,499	378,926	84.2	-0.07
September 30, 2013	4,379	369,071	84.3	-0.63
September 30, 2012	4,495	381,235	84.8	4.72
September 30, 2011	4,747	384,455	81.0	13.96
September 30, 2010	4,749	337,516	71.1	-2.85
September 30, 2009	4,601	336,600	73.2	-1.82
Police Officers' Retirer	ment Plan			
		Annual	Annual	% increase in
Valuation Date	Number	Payroll	Average Pay	Average Pay
September 30, 2017	3,583	\$299,535	\$83.5	2.4%
September 30, 2016	3,651	298,442	81.7	1.83
September 30, 2015	3,829	307,373	80.3	2.44
September 30, 2014	3,902	305,765	78.4	3.04
September 30, 2013	3,846	292,494	76.1	-0.69
September 30, 2012	3,810	291,780	76.6	-1.26
September 30, 2011	3,775	292,785	77.6	2.29
September 30, 2010	3,915	296,837	75.8	-2.05
September 30, 2009	4,014	310,700	77.4	0.72
Firefighters' Retirem	ent Plan			
Valuation Date	Number	Annual Payroll	Annual Average Pay	% increase in Average Pay
September 30, 2017	1,729	\$142,370	\$82.3	0.60%
September 30, 2017	1,729	139,672	81.8	0.60
September 30, 2015	1,708		81.3	1.04
September 30, 2015 September 30, 2014		138,828		
,	1,649	132,650	80.4	10.73
September 30, 2013	1,664	120,886	72.6	0.33
September 30, 2012	1,700	123,097	72.4	0.69
September 30, 2011	1,786	128,436	71.9	1.51
September 30, 2010	1,793	127,017	70.8	0.22
September 30, 2009	1,774	125,400	70.7	2.02

# **Schedule of Retirees Added-to and Removed-from Rolls**

(Dollar amounts in thousands)

Fiscal Year Ended	Plan	Membe	New ers Added Annual Allowances		mbers moved Annual Allowances	Changes due to Plan Amendments		olls at I of Year Annual Allowances	Percentage Increase in Annual Allowances	Average Annual Allowances
9/30/2017	Teachers	96	2,599	79	1,211	1,023	3,899	71,201	3.00%	\$18
9/30/2017	Police/Fire	252	11,287	40	678	1,339	3,215	97,686	14.00%	31
9/30/2016	Teachers	222	\$6,844	58	\$1,021	\$68	3,882	\$68,790	9.36%	\$8
9/30/2010	Police/Fire	441	18,205	47	1,022	(1,659)	3,003	85,738	18.10%	29
9/30/2015	Teachers	183	4,950	66	822	84	3,718	62,899	7.18%	17
9/30/2015	Police/Fire	284	12,818	39	424	(630)	2,610	70,214	20.13%	27
0/20/2014	Teachers	218	6,079	65	955	597	3,601	58,687	10.80%	16
9/30/2014	Police/Fire	237	9,465	55	895	350	2,365	58,450	18.01%	25
9/30/2013	Teachers	202	5,289	39	436	706	3,448	52,966	11.73%	15
9/30/2013	Police/Fire	174	6,054	30	298	344	2,183	49,530	14.05%	23
9/30/2012	Teachers	204	4,807	49	594	1,198	3,285	47,407	12.88%	14
9/30/2012	Police/Fire	234	8,034	51	557	423	2,039	43,430	22.23%	21
9/30/2011	Teachers	226	4,374	37	490	497	3,130	41,996	12.73%	13
9/30/2011	Police/Fire	326	6,847	22	238	205	1,856	35,530	23.72%	19
0/20/2040	Teachers	203	4,225	32	337	1,489	2,941	37,254	16.76%	13
9/30/2010	Police/Fire	127	3,511	24	208	3,003	1,552	28,717	27.04%	19
9/30/2009	Teachers	406	7,361	27	281	(70)	2,770	31,907	28.16%	12
9/30/2009	Police/Fire	193	2,639	108	2,727	(563)	1,449	22,605	-2.80%	16
0/20/2002	Teachers	63	939	36	193	429	2,391	24,897	4.95%	10
9/30/2008	Police/Fire	78	5,349	28	133	(1,229)	1,364	23,257	20.69%	17

# **Analysis of Financial Experience**

(Dollar amounts in millions)

## **Teachers' Retirement Plan**

# Gains & Losses in Accrued Liabilities Resulting from Difference Between Assumed Experience & Actual Experience

Type of Activity	Gain (or Loss) For Year Ending 10/1/2017	Gain (or Loss) For Year Ending 10/1/2016
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$1.1	\$ (8.5)
<b>Disability Retirements.</b> If disability claims are fewer than assumed, there is a gain. If more claims, a loss.	0.4	(2.8)
<b>Death-in Service Benefits.</b> If survivor claims are fewer than assumed, there is a gain. If more claims, there is a loss.	0.3	0.8
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	5.9	5.7
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	32.7	31.4
New Members. Additional unfunded accrued liability will produce a loss.	(32.8)	(30.8)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	14.2	3.0
<b>Death After Retirement.</b> If retirees live longer than assumed, there is a loss. If not as long, a gain.	8.3	8.6
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	15.8	8.5
Gain (or Loss) During Year From Financial Experience	45.9	15.9
Non-Recurring Items. Adjustments for plan amendments, assumption changes, method changes or asset transfer to U.S. Treasury.	(50.0)	21.9
Composite Gain (or Loss) During Year	(\$4.1)	\$37.8

# **Analysis of Financial Experience**

(Dollar amounts in millions)

## Police Officers and Firefighters' Retirement Plan

## Gains & Losses in Accrued Liabilities Resulting from Difference Between Assumed Experience & Actual Experience

Type of Activity	Gain (or Loss) For Year Ending 10/1/2017	Gain (or Loss) For Year Ending 10/1/2016
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$(1.9)	\$3.5
<b>Disability Retirements.</b> If disability claims are fewer than assumed, there is a gain. If more claims, a loss.	5.9	0.9
<b>Death-in Service Benefits.</b> If survivor claims are fewer than assumed, there is a gain. If more claims, there is a loss.	1.4	1.4
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(0.6)	(5.2)
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	109.1	110.3
		(15.3)
New Members. Additional unfunded accrued liability will produce a loss.  Investment Income. If there is a greater investment income than assumed,	(33.2)	. ,
there is a gain. If less income, a loss.  Death After Retirement. If retirees live longer than assumed, there is a loss.	35.9	1.1
If not as long, a gain.	(0.6)	7.5
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	(7.3)	(10.1)
Gain (or Loss) During Year From Financial Experience	108.7	94.1
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, method changes or asset transfer to U.S. Treasury.	(118.0)	76.5
Composite Gain (or Loss) During Year	(\$9.3)	\$170.6
Composite Gain (or E033) During real	(ψϑ.૩)	ψ170.0

# **Valuation Balance Sheet**

Teachers' Retirement Plan (Dollar amounts in thousands)

## As of October 1, 2017

Present and Prospective Assets	
Actuarial value of present assets	\$1,982,019
Present value of future members' contributions	259,876
Present value of future employer contributions:	
Normal contributions	274,278
Unfunded accrued liability contributions	160,472
Total prospective employer contributions	434,750
Total present and prospective assets	\$2,676,645

Actuarial Liabilities	
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits	\$988,610
Present value of prospective benefits payable on account of inactive members	166,086
Present value of prospective benefits payable on account of present active members:	
Service retirement benefits	1,232,085
Disability retirement benefits	29,592
Survivor benefits	18,192
Separation benefits	242,079
Total present value of prospective benefits payable on account of present active members	1,521,948
Total Actuarial Liabilities	\$2,676,645

# **Valuation Balance Sheet**

Police Officers and Firefighters' Retirement Plan (Dollar amounts in thousands)

## As of October 1, 2017

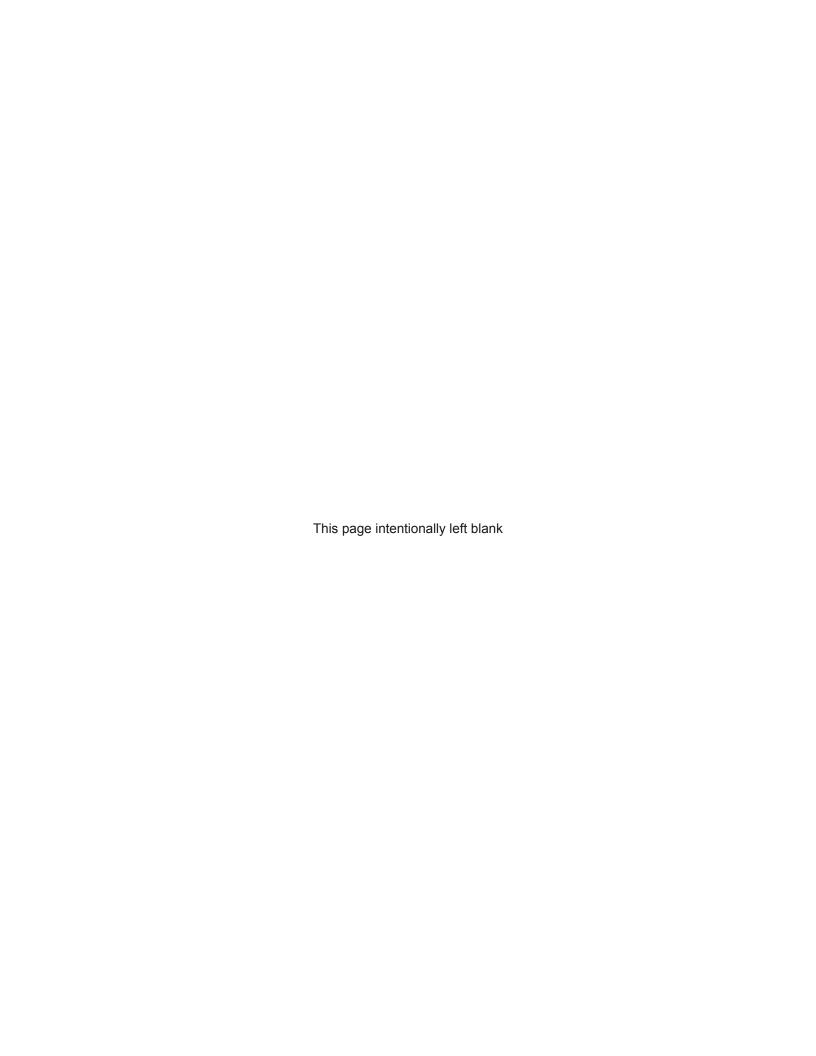
Present and Prospective Assets	
Actuarial value of present assets	\$5,406,366
Present value of future members' contributions	346,885
Present value of future employer contributions:	
Normal contributions	1,594,134
Unfunded accrued liability contributions	(528,106)
Total prospective employer contributions	1,066,028
Total present and prospective assets	\$6,819,279

Actuarial	Liabilities

Actualiai Liabilities	
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits	\$1,884,688
Present value of prospective benefits on account of inactive members	106,011
Present value of prospective benefits payable on account of present active members:	
Service retirement benefits	4,319,651
Disability retirement benefits	223,526
Survivor benefits	88,831
Separation benefits	196,573
Total present value of prospective benefits payable on account	4 000 504
of present active members	4,828,581
Total Actuarial Liabilities	\$6,819,279

**Solvency Test** (Dollar amounts in thousands)

	Aggregate Accrued Liabilities		Accrued		Portion of Accrued Liabilities Covered by Actuarial Value of Assets		
Valuation Date	(1) Active Member Contributions	(2) Retirees, Survivors and Inactive Members	(3) Active Members (Employer Financed Portion)	Reported Assets	(1)	(2)	(3)
Teachers' Re	etirement Plan						
10/1/2008	332,834	851,489	3,092,491	4,379,700	100.0	100.0	82.5
10/1/2009	335,481	995,361	3,001,587	4,493,400	100.0	100.0	80.4
10/1/2010	136,055	622,253	569,991	1,570,968	100.0	100.0	97.6
10/1/2011	138,874	718,884	687,107	1,573,654	100.0	100.0	70.3
10/1/2012	137,698	819,842	723,008	1,503,346	100.0	100.0	75.5
10/1/2013	141,792	883,495	733,756	1,622,376	100.0	100.0	81.4
10/1/2014	141,943	968,446	738,841	1,746,030	100.0	100.0	86.0
10/1/2015	144,927	1,053,078	755,300	1,670,976	100.0	100.0	62.6
10/1/2016	152,459	1,108,032	769,149	1,822,113	100.0	100.0	73.0
10/1/2017	156,263	1,154,696	831,532	2,051,006	100.0	100.0	89.0
Police Officers and Firefighters' Retirement Plan							
10/1/2008	332,834	851,489	3,092,491	4,379,700	100.0	100.0	82.5
10/1/2009	335,481	995,361	3,001,587	4,493,400	100.0	100.0	80.4
10/1/2010	211,961	583,338	2,371,531	3,418,796	100.0	100.0	89.6
10/1/2011	224,928	708,364	2,376,533	3,593,716	100.0	100.0	92.3
10/1/2012	235,924	849,982	2,371,070	3,681,526	100.0	100.0	100.0
10/1/2013	247,202	966,862	2,430,021	4,168,457	100.0	100.0	100.0
10/2/2014	255,735	1,149,515	2,593,287	4,588,319	100.0	100.0	100.0
10/1/2015	262,674	1,388,908	2,631,511	4,462,228	100.0	100.0	100.0
10/1/2016	260,786	1,650,195	2,587,532	4,454,464	100.0	100.0	100.0
10/1/2017	261,428	1,990,699	2,626,132	5,629,911	100.0	100.0	100.0



# STATISTICAL SECTION

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## **Summary**

#### Introduction

The objective of the *Statistical Section* is to provide information to assist readers in understanding and assessing DCRB's overall financial condition when viewing the Financial Statements, Notes to the Financial Statements, the Required Supplementary Information and the Supplementary Information. The data presented throughout this section incorporates information from prior CAFRs and is useful in evaluating how the financial condition of the Plans has changed over time.

## **Financial Trends**

The financial trend schedules show financial information about the growth of DCRB's assets and provide a context for how DCRB's financial position has changed over the past 10 years. The financial trend schedules presented are:

- · Changes in Net Pension
- · Changes in the Net Pension Liability and Related Ratios
- · Investment Expenses
- · Money-Weighted Investment Returns
- · Funding Progress
- · Administrative Expenses

## **Operating Information**

The following schedules provide data of the environment in which DCRB operates. The schedules presented include:

- Employer Contributions
- · Annual Salaries and Benefits
- · Participant Data
- · Average Benefit by Type
- Schedule of Retired Members by Benefit Type and Option Selected

# **Schedules of Changes in Net Position** (Dollar amounts in thousands)

Teachers Retiren	Teachers Retirement Fund												
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008			
Additions													
Contributions:													
District Government	\$56,781 \$	44,469 \$	39,513	31,636	\$ 6,407	\$ -	\$ -	\$ -	Ψ	\$ 6,000			
District employees	34,364	33,591	31,621	28,751	28,129	28,639	27,739	29,940	24,907	25,919			
Total contributions	91,145	78,060	71,134	60,387	34,536	28,639	27,739	29,940	24,907	31,919			
Total net investment (loss) income	239,554	152,262	(72,647)	132,086	168,117	190,002	44,364	125,756	(37,875)	(259,309)			
Other income	907	1,033	385	522	796	672	616	695	793	990			
Total (reductions) additions	331,606	231,355	(1,128)	192,995	203,449	219,313	72,719	156,391	(12,175)	(226,400)			
Deductions													
Benefit payments	72,069	68,634	64,076	59,832	54,180	48,145	42,532	37,611	33,532	30,692			
Retirement benefits payable to U.S. Treasury	_	459	_	_	21,503	_	_	_	-	_			
Refunds*	6,166	6,205	5,576	5,790	5,250	5,514	4,060	3,374	5,316	n/a			
Administrative expenses	4,721	4,746	4,543	3,787	3,627	2,880	2,885	2,327	2,340	2,919			
Total deductions	82,956	80,044	74,195	69,409	84,560	56,539	49,477	43,312	41,188	33,611			
Changes in Net Position	\$248,650 \$	151,311 \$	6 (75,323) \$	123,586	\$ 118,889	\$ 162,774	\$ 23,242	\$ 113,079	\$ (53,363)	\$ (260,011)			

<sup>\*</sup>Refunds included in Benefit Payments prior to 2009.

# **Schedules of Changes in Net Position** (Dollar amounts in thousands)

Police Officers ar	nd Firefighte	ers' Retiren	nent Fund							
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Additions Contributions:										
District Government	\$56.781 \$	44.469 \$	39.513 \$	31.636 \$	6.407 9	6 -	\$ -	¢	\$ -	\$ 6.000
District Government  District employees	34.364	33.591	39,513 \$ 31.621	28.751	28,129	28.639	27,739	φ - 29.940	24,907	25,919
Total contributions	91,145	78,060	71,134	60,387	34,536	28,639	27,739	29,940	24,907	31,919
Total net investment	91,143	70,000	7 1,104	00,307	34,330	20,000	21,133	23,340	24,301	31,313
(loss) income	239,554	152,262	(72,647)	132,086	168,117	190,002	44,364	125,756	(37,875)	(259,309)
Other income	907	1,033	385	522	796	672	616	695	793	990
Total (reductions) additions	331,606	231,355	(1,128)	192,995	203,449	219,313	72,719	156,391	(12,175)	(226,400)
Deductions										
Benefit payments	72,069	68,634	64,076	59,832	54,180	48,145	42,532	37,611	33,532	30,692
Retirement benefits payable to										
U.S. Treasury	-	459	-	-	21,503	-	-	-	-	-
Refunds*	6,166	6,205	5,576	5,790	5,250	5,514	4,060	3,374	5,316	n/a
Administrative expenses	4,721	4,746	4,543	3,787	3,627	2,880	2,885	2,327	2,340	2,919
Total deductions	82,956	80,044	74,195	69,409	84,560	56,539	49,477	43,312	41,188	33,611
Changes in Net Position	\$248,650 \$	151,311 \$	(75,323) \$	123,586 \$	118,889	162,774	\$ 23,242	\$ 113,079	\$ (53,363)	\$ (260,011)

<sup>\*</sup>Refunds included in Benefit Payments prior to 2009.

# **Schedule of Changes in Net Pension Liability and Related Ratios** (Dollar amounts in thousands)

Teachers Retirement Fund				
	2017	2016	2015	2014
Total pension liability				
Service Cost	\$ 65.911	\$ 61,599	\$ 53,297	\$ 50,409
Interest	131,657	124,370	118,378	112,204
Benefit changes	-	-	-	-
Difference between expected and actual experience	(37,230)	2,656	(7,246)	-
Changes of assumptions	14,106	-	-	-
Benefits payments	(72.069)	(69,093)	(64,076)	(59,832)
Refunds of contributions	(6,166)	(6,205)	(5,576)	(5,790)
Net change in total pension liability	96,209	113,327	94,777	96,991
Total pension liability - beginning of year	2,064,138	1,950,811	1,856,034	1,759,043
Total pension liability - end of year (a)	2,160,347	2,064,138	1,950,811	1,856,034
Plan net position				
Contributions - employer	56,781	44,469	39,513	31,636
Contributions - member	34,364	33,591	31,621	28,751
Net investment income	239,554	152,262	(72,647)	132,086
Benefits payments	(72,609)	(69,093)	(64,076)	, ,
Administrative expense	(4,721)	(4,746)	(4,543)	(3,787)
Refunds of contributions	(6,166)	(6,205)	(5,576)	(5,790)
Other	907	1,033	385	522
Net change in plan net position	248,650	151,311	(75,323)	123,586
Plan net position - beginning of year	1,821,949	1,670,638	1,745,961	1,622,375
Plan net position - end of year (b)	2,070,599	1,821,949	1,670,638	1,745,961
Net pension liability end of year (a - b)	\$ 89,748	\$ 242,189	\$ 280,173	\$ 110,073
Ratio of plan net position to total pension liability (b / a)	95.85%	88.27%	85.64%	94.07%
Covered employee payroll	\$ 447,762	\$ 438,079	\$ 417,090	\$ 378,926
Net pension liability as a percentage of covered-employee payroll	20.04%	55.28%	67.17%	29.05%

Note: Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

# **Schedule of Changes in Net Pension Liability and Related Ratios** (Dollar amounts in thousands)

Police Officers and Firefighters' Retirement Fund												
	2017	2016	2015	2014								
Total pension liability												
Service Cost	\$ 196,629	\$ 198,020	\$ 192,114	\$ 176,102								
Interest	300,626	282,285	257,943	235,097								
Benefit changes	-	-	-	-								
Difference between expected and actual experience	(188,549)	(106,840)	(2,477)	-								
Changes of assumptions	67,256	-	-	-								
Benefits payments	(92,537)	(79,137)	(63,634)	(52,784)								
Refunds of contributions	(1,647)	(2,179)	(1,396)	(1,637)								
Net change in total pension liability	281,778	292,149	382,550	356,778								
Total pension liability - beginning of year	4,675,562	4,383,413	4,000,863	3,644,085								
Total pension liability - end of year (a)	4,957,340	4,675,562	4,383,413	4,000,863								
Plan net position												
Contributions - employer	145,631	136,115	103,430	110,766								
Contributions - member	33,424	32,785	33,679	32,821								
Net investment income	655,310	415,157	(187,283)	338,894								
Benefits payments	(92,537)	(79,137)	(63,634)	(52,784)								
Administrative expense	(12,838)	(12,918)	(11,939)	(9,730)								
Refunds of contributions	(1,647)	(2,179)	(1,396)	(1,637)								
Other	2,468	2,810	1,012	1,342								
Net change in plan net position	729,811	492,633	(126,131)	419,672								
Plan net position - beginning of year	4,954,631	4,461,998	4,588,129	4,168,457								
Plan net position - end of year (b)	5,684,442	4,954,631	4,461,998	4,588,129								
Net pension liability end of year (a - b)	\$ (727,102)	\$ (279,069)	\$ (78,585)	\$ (587,266)								
Ratio of plan net position to total pension liability (b / a)	114.67%	105.97%	101.79%	114.68%								
Covered employee payroll	\$441,904	\$ 438,114	\$ 446,201	\$ 426,135								
Net pension liability as a percentage of covered-employee payroll	-164.54%	-63.70%	-17.61%	-137.81%								

Note: Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

# **Schedules of Investment Expenses**

(Dollar amounts in thousands)

Fiscal Year	Investment Managers*	Investment Administrative Expenses	Investment Consultants	Investment Custodian	Total Investment Expenses
2017	\$14,361	\$785	\$910	\$237	\$16,293
2016	11,811	1,051	1,017	275	14,154
2015	10,118	879	1,030	229	12,256
2014	11,400	868	1,019	369	13,656
2013	5,499	934	975	131	7,539
2012	7,116	1,011	686	210	9,023
2011	10,622	874	334	285	12,115
2010	11,980	790	455	254	13,479
2009	10,676	735	531	319	12,261
2008	14,300	650	495	485	15,930

<sup>\*</sup>Fees paid to traditional investment managers only; traditional investment managers are those that invest primarily in public equity and fixed income securities. A significant number of alternative investments are presented net of expenses. Management expenses are netted against investment income and because they are not readily separable from specific investment income as of the financial statement reporting date, amounts are recorded and reported net of management expenses and therefore are not included on this schedule.

# **Schedule of Annual Money-Weighted Rates of Return**

(Dollar amounts in thousands)

Fiscal Year	Total Portfolio
2017	12.785%
2016	9.346%
2015	-4.006%
2014	8.178%
2013	-
2012	-
2011	-
2010	-
2009	-
2008	-

Note: This is a 10-year schedule. However, the information in this schedule is not required to be presented retroactively. Years will be added in the future fiscal years until 10 years of information is available.

# **Schedules of Administrative Expenses**

(Dollar amounts in thousands)

	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Personal services										
Salaries	\$ 6,513	\$ 6,181	\$ 4,760	\$ 4,401	\$ 3,955	\$ 4,114 \$	\$ 3,907	3,263 \$	2,889 \$	2,758
Fringe benefits	1,613	1,318	1,301	1,244	1,135	954	1,030	907	716	505
Total personal services	8,126	7,499	6,061	5,645	5,090	5,068	4,937	4,170	3,605	3,263
Non-personal services										
Office supplies	107	99	126	115	187	157	166	120	120	131
Telephone	107	91	71	56	50	49	14	13	17	33
Rent	1,800	1,754	1,634	1,554	1,513	1,465	1,444	1,419	1,379	1,282
Office support	-	-	-	-	-	1	68	114	60	102
Travel	218	209	206	181	177	148	38	45	67	89
Professional fees	5,263	6,379	6,225	4,292	3,790	3,069	2,867	2,329	2,371	2,764
Postage	60	27	29	25	138	29	38	10	73	55
Printing	15	53	14	15	91	33	35	35	19	56
Insurance	149	151	150	121	114	121	129	131	111	120
Dues and memberships	42	41	32	34	28	26	37	51	60	17
Audit costs	72	63	85	49	76	71	64	66	66	98
Actuarial fees	138	180	153	66	146	153	164	108	93	100
Legal fees	590	337	524	365	529	292	30	37	246	341
Investment fees Contractual services	15,037	12,862	11,377	12,788	6,587	7,753	10,907	12,234	11,138	12,393
(STAR)*	1,866	1,697	1,077	872	941	-	-	-	-	-
Equipment and rental	261	376	966	995	619	179	734	65	63	100
Depreciation	-	-	-	-	3	6	6	6	18	_
Total non-personal										
services	25,726	24,320	22,676	21,528	14,989	13,552	16,741	16,783	15,901	17,681
Total administrative expenses	\$ 33,852	\$ 31,819 \$	\$ 28,738	\$ 27,173	\$ 20,079	\$ 18,620 \$	\$ 21,678 \$	20,953 \$	19,506 \$	20,944

<sup>\*</sup>Contractual services (STAR) were included in Professional fees prior to fiscal year 2013

Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided.

# **Schedule of Employer Contributions** (Dollar amounts in millions)

		hers' ent Fund	Police Offi Firefigl Retireme	hters'	Total Fund			
Year Ending	Annual Required Contribution	Percentage Contributed	Annual Required Contribution	Percentage Contributed	Annual Required Contribution	Percentage Contributed		
September 30, 2017	\$56.7	100.0%	\$145.6	100.0%	\$202.4	100.0%		
September 30, 2016	44.4	100.0	136.1	100.0	180.5	100.0		
September 30, 2015	39.5	100.0	103.4	100.0	142.9	100.0		
September 30, 2014	31.6	100.0	110.8	100.0	142.4	100.0		
September 30, 2013	6.4	100.0	96.3	100.0	102.7	100.0		
September 30, 2012	-	100.0	116.7	100.0	116.7	100.0		
September 30, 2011	-	100.0	127.0	100.0	127.0	100.0		
September 30, 2010	-	100.0	132.3	100.0	132.3	100.0		
September 30, 2009	-	100.0	106.0	100.0	106.0	100.0		
September 30, 2008	6.0	100.0	137.0	100.0	143.0	100.0		

# **Schedule of Annual Salaries and Benefits**

(Dollar amounts in millions)

		Annual Salaries Active Member		Annual Retirement Benefits for Retirees & Beneficiaries						
Fiscal Year	Teachers	Police Officers and Firefighters	Total	Teachers	Police Officers and Firefighters	Total				
2017	\$448	\$442	\$890	\$71	\$98	\$169				
2016	438	438	876	69	86	155				
2015	417	446	863	63	70	133				
2014	379	438	817	59	58	117				
2013	369	413	782	53	50	103				
2012	381	415	796	47	43	90				
2011	384	421	805	42	36	78				
2010	338	424	762	37	29	65				
2009	337	436	773	32	22	54				
2008	359	422	781	25	22	47				

# **Schedule of Participant Data**

		Active		Retired Mer			
Fiscal Year	Teachers	Police Officers and Firefighters	Subtotal	Teachers	Police Officers and Firefighters	Subtotal	Total
2017	5,199	5,312	10,511	3,899	3,215	7,114	17,625
2016	5,141	5,359	10,500	3,882	3,003	6,885	17,385
2015	4,866	5,537	10,403	3,718	2,609	6,327	16,730
2014	4,499	5,551	10,050	3,601	2,365	5,966	16,016
2013	4,379	5,510	9,889	3,448	2,183	5,631	15,520
2012	4,495	5,510	10,005	3,285	2,039	5,324	15,329
2011	4,747	5,561	10,308	3,130	1,856	4,986	15,294
2010	4,749	5,708	10,457	2,941	1,552	4,493	14,950
2009	4,601	5,788	10,389	2,770	1,449	4,219	14,608
2008	4,821	5,661	10,482	2,391	1,364	3,755	14,237

# **Schedule of Average Benefit by Type**

Teach	ers' Retirement Plan										
					Y	ears of Cr	edi	ted Service			
Retire	ment Effective Dates	5-9		10-14		15-19		20-24	25-30		30+
	Average Monthly Benefit	\$ 938	\$	2,112	\$	2,685	\$	3,371	\$ 4,520	\$	5,707
2017	Average Monthly Benefit	\$ 92,306	\$	91,910	\$	95,233	\$	97,440	102,000	\$	103,292
	Number of Active Recipients	5		15		22		28	35		35
	Average Monthly Benefit	\$ 920	\$	2,192	\$	2,695	\$	3.368	\$ 4,431	\$	5,595
2016	Average Final Average Salary	\$ 92,306	\$	92,608	\$	96,609	\$	97,857	\$ 102,000	\$	103,292
	Number of Active Recipients	5		12		21		23	35		35
	Average Monthly Benefit	\$ 1,050	\$	2,140	\$	2,774	\$	3,338	\$ 4,387	\$	5,805
2015	Average Final Average Salary	\$ 82,018	\$	95,786	\$	97,605	\$	97,032	\$ 100,959	\$	103,420
	Number of Active Recipients	15		20		8		26	22		43
	Average Monthly Benefit	\$ 899	\$	1,950	\$	2,375	\$	3,551	\$ 4,153	\$	5,669
2014	Average Final Average Salary	\$ 79,848	\$	89,912	\$	88,883	\$	100,082	\$ 98,560	\$	102,092
	Number of Active Recipients	16		21		18		26	47		56
	Average Monthly Benefit	\$ 1,205	\$	1,741	\$	2,499	-	3,441	\$ 4,035	\$	5,427
2013		\$ 82,567	\$	84,521	\$	90,461	\$	94,689	\$ 94,689	\$	97,032
	Number of Active Recipients	17		18		10		44	36		64
	Average Monthly Benefit	\$ 951	\$	1,637	\$	2,631	-	3,333	4,025	-	5,406
2012	0 0 ,	\$ 76,185	\$	82,578	\$	90,729	\$	93,622	\$ 94,547	\$	96,692
	Number of Active Recipients	19		17		8		47	33		62
	Average Monthly Benefit	\$ 947	-	1,628	\$	2,361		3,097	3,774	\$	5,216
2011	Average Final Average Salary	\$ 80,717	\$	82,641	\$	84,659	\$	89,318	\$ 90,961	\$	93,310
	Number of Active Recipients	11		16		17		46	39		65
	Average Monthly Benefit	-		-		-		-	-		-
2010	0 0 ,	-		-		-		-	-		-
	Number of Active Recipients	-		-		-		-	-		-
	Average Monthly Benefit	-		-		-		-	-		-
2009	Average Final Average Salary	-		-		-		-	-		-
	Number of Active Recipients	-		-		-		-	-		-
2000	Average Monthly Benefit	-		-		-		-	-		-
2008	Average Final Average Salary	-		-		-		-	-		-
	Number of Active Recipients	-		-		-		-	-		-

Information prior to fiscal year 2011 not available at the time of this report.

# **Schedule of Average Benefit by Type**

Police Officers and Firefighters' Retirement Plan													
		Years of Credited Service											
Retirer	nent Effective Dates		5-9		10-14		15-19		20-24		25-30		30+
	Average Monthly Benefit	\$	3,596	\$	2,918	\$	2,469	\$	4,070	\$	5,451	\$	6,811
2017	Average Monthly Benefit	\$	54,499	\$	69,463	\$	72,552	\$	83,882	\$	94,800	\$	100,699
	Number of Active Recipients		10		7		6		6		254		54
	Average Monthly Benefit	\$	3,701	\$	2,862	\$	2,707	\$	3,987	\$	5,347	\$	6,677
2016	Average Final Average Salary	\$	54,240	\$	69,463	\$	72,901	\$	83,882	\$	94,768	\$	100,699
	Number of Active Recipients		10		7		7		6		253		54
	Average Monthly Benefit	\$	2,363	\$	3,407	\$	3,471	\$	3,860	\$	5,526	\$	6,922
2015	Average Final Average Salary	\$	45,567	\$	66,727	\$	70,827	\$	76,421	\$	96,104	\$	104,521
	Number of Active Recipients		6		7		5		6		182		62
	Average Monthly Benefit	\$	2,343	\$	4,168	\$	1,950	\$	3,776	\$	5,241	\$	6,403
2014	Average Final Average Salary		\$54,678	;	\$65,126		\$73,476		\$80,064		\$92,091		\$95,990
	Number of Active Recipients		6		1		1		6		143		29
	Average Monthly Benefit	\$	2,773	\$	2,333		-	\$	2,561	\$	5,439	\$	6,906
2013	Average Final Average Salary	\$	40,134	\$	64,784		-	\$	77,175	\$	94,464	\$	103,254
	Number of Active Recipients		4		4		-		4		97		48
	Average Monthly Benefit	\$	1,795	\$	2,686	\$	4,404	\$	3,622	\$	5,409	\$	6,504
2012	Average Final Average Salary	\$	46,574	\$	65,588	\$	74,368	\$	78,462	\$	92,618	\$	96,968
	Number of Active Recipients		3		2		3		4		96		38
	Average Monthly Benefit	\$	2,195	\$	25,164	\$	3,048	\$	3,090	\$	5,600	\$	6,679
2011	Average Final Average Salary	\$	61,882	\$	66,531	\$	78,270	\$	82,825	\$	95,099	\$	99,070
	Number of Active Recipients		8		4		3		19		104		33
	Average Monthly Benefit		-		-		-		-		-		-
2010	Average Final Average Salary		-		-		-		-		-		-
	Number of Active Recipients		-		-		-		-		-		-
	Average Monthly Benefit		-		-		-		-		-		-
2009	Average Final Average Salary		-		-		-		-		-		-
	Number of Active Recipients		-		-		-		-		-		-
	Average Monthly Benefit		-		-		-		-		-		-
2008	Average Final Average Salary		-		-		-		-		-		-
	Number of Active Recipients		-		-		-		-		-		-

Information prior to fiscal year 2011 not available at the time of this report.

# Schedule of Retired Members by Type of Benefit and Option Selected

Teachers' Retirement P	lan												
Monthly Benefit	Number of Members by Retirement Type								Number of Members by Option Selected				
Payment							Grand					Grand	
	А	В	D	Е	F	G	Total	1	2	3	4	Total	
\$1-250	11			19	2	2	34	10				10	
\$251-500	47			13	4	1	65	40	5	1		46	
\$501-750	76	2	1	18	9	1	107	65	8			73	
\$751-1,000	85	6	2	9	4	2	108	69	16	3		88	
\$1,001-1,250	64	5	2	11	14	1	97	48	17	1		66	
\$1,251-1,500	70	3	8	26	26	4	137	62	14	1	1	78	
\$1,501-1,750	75	12	13	29	7		136	65	30	2	1	98	
\$1,751-2,000	81	8	25	25	10	1	150	93	20	1		114	
\$2,001-3,000	550	51	148	109	11	2	871	591	151	4		746	
\$3,001-4,000	1403	114	80	34	3		1634	1193	394	7	2	1596	
\$4,001-5,000	1589	89	10	2			1690	1337	347	4		1688	
\$5,001-6,000	647	36	2	1			686	528	156	1		685	
\$6,001-7,000	205	13					218	172	46			218	
\$7,001-8,000	72	2		1			75	62	12			74	
\$8,001-9,000	28						28	23	5			28	
\$9,001-10,000	4	1					5	4	1			5	
over \$10,000	3						3	2	1			3	
<b>Grand Total</b>	5010	342	291	297	90	14	6044	4364	1223	25	4	5616	

## Type of Retirement:

- A Retired From Affiliate or Resignation
- B Termination Early Involuntary
- C Partial Total Disability
- D Disabled not in the Line of Duty
- E Survivor of a Retired Teacher
- F Survivor of an Active Teacher
- G Qualified Domestic Relations Order

#### **Option Selected:**

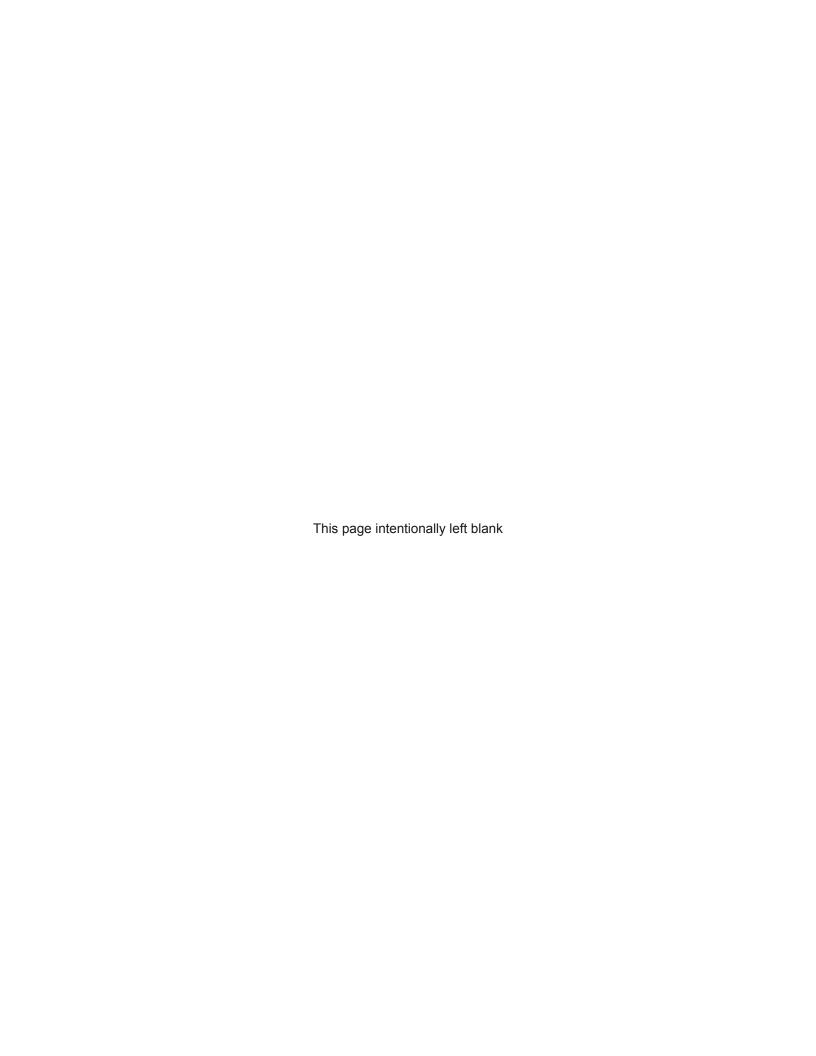
- 1 Unreduced Annuity
- 2 Reduced Annuity with Survivor Option
- 3 Reduced Annuity with Life Insurance Benefit
- 4 Reduced Annuity with Insurable Interest

# Schedule of Retired Members by Type of Benefit and Option Selected

Police and Firefighters' Retirement Plan										
Amount of Monthly		N	Number of Members by Retirement Type							
Benefit	А	С	D	Е	F	G	Grand Total			
\$1-250	0	0	0	5	6	4	15			
\$251-500	1	0	0	35	16	4	56			
\$501-750	8	0	0	5		25	38			
\$751-1,000	3	0	0	2	3	28	36			
\$1,001-1,250	4	0	1	3	1	34	43			
\$1,251-1,500	4	0	0	2	0	31	37			
\$1,501-1,750	6	3	13	1	2	31	56			
\$1,751-2,000	10	34	14	37	2	25	122			
\$2,001-3,000	160	138	139	1231	22	63	1753			
\$3,001-4,000	968	293	51	242	9	15	1578			
\$4,001-5,000	1229	400	46	50	4	2	1731			
\$5,001-6,000	1120	104	10	18	2	1	1255			
\$6,001-7,000	689	31	4	5	1	0	730			
\$7,001-8,000	375	14	1	2	1	0	393			
\$8,001-9,000	159	2	0	0	1	0	162			
\$9,001-10,000	75	2	0	0	0	0	77			
over \$10,000	121	2	0	0	0	0	123			
<b>Grand Total</b>	4932	1023	279	1638	70	263	8205			

## Type of Retirement

- A Retired From Affiliate or Resignation
- B Termination Early Involuntary
- C Partial Total Disability
- D Disabled not in the Line of Duty
- E Survivor of a Retired Police Officer or Firefighter
- F Survivor of an Active Police Officer or Firefighter
- G Qualified Domestic Relations Order



# ADDITIONAL DISCLOSURES

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# **Schedules of Transactions - Board of Trustees**

	Expenditures						
Trustee Name		2017	20	16			
Janice Adams	\$	-	\$	-			
Lyle Blanchard		9,989		7,132			
Barbara Blum		3,030		9,995			
Joseph Bress		4,989		3,248			
Joseph Clark		9,932		7,434			
Mary Collins		9,946		9,945			
Gary Hankins		9,677		7,969			
Darrick Ross		9,678		9,979			
Nathan Saunders		9,966		9,979			
Edward Smith		9,656		1,909			
Thomas Tippett		6,518		8,170			
Michael Warren		8,261		2,545			
Lenda Washington		9,644		7,166			
Total	\$	101,286	\$ 8	5,471			

## Names and Addresses of the Board of Trustees

#### Janice Adams

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

## Lyle M. Blanchard

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

## Joseph M. Bress

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

### Joseph W. Clark

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

# Mary A. Collins

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

## Gary W. Hankins

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

#### Darrick O. Ross

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

#### Nathan A. Saunders

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

#### **Edward C. Smith**

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

## Thomas N. Tippett

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

#### Michael J. Warren

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

## Lenda P. Washington

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

#### Jeffery E. Barnett

District of Columbia Retirement Board 900 7th Street, NW, Second Floor Washington, D.C. 20001

# **Schedule of Trustee Sponsored Activities**

No members of the DCRB Board of Trustees attended events sponsored by outside entities, in either FY 2016 or FY 2017.

# **Acknowledgments and Credits**

## On the Cover, clockwise:

District of Columbia (DC) Flag, courtesy NBC4 Washington

DC Firefighter in response, courtesy Fire and EMS Department

DC Police Officers, courtesy WTTG Fox News Washington May, 2016

DC Public School Classroom: Photograph by John McDonnell, courtesy, The Washington Post

## Page 1, Introductory Section:

Teacher and students, courtesy DC Public Schools

Police officers demonstrating fingerprinting techniques at a DC public school: Courtesy, Metropolitan Police Department

Fire engine #3: Photograph by Victor Dvorak, courtesy, Fire and EMS Department

## Page 15, Financial Section:

Fire engines by the U.S. Capitol: Courtesy, Fire and EMS Department

Police vehicles, courtesy DCRB staff

Roosevelt High School building: Courtesy, DC Public Schools

#### Page 61, Investment Section:

DC Firefighter in response, courtesy Fire and EMS Department Police officers, courtesy Metropolitan Police Department Dunbar High School student hall, courtesy DC Public Schools

### Page 75, Actuarial Section:

DC Police Logo, courtesy Metropolitan Police Department
Police vehicles, courtesy DCRB staff
Interior of Luke Moore High School: Photograph by Nikki Khan; courtesy, The Washington Post
Fire Hazmat unit, courtesy Fire and EMS Department

## Page 103, Statistical Section:

Police motorcycle motorcade, courtesy Metropolitan Police Department Student at Randle Highlands Elementary, courtesy DC Public Schools Fire house and fire engine, courtesy DCRB staff



District of Columbia Retirement Board 900 7th Street NW 2nd Floor Washington, D.C. 20001