Teachers' Retirement Fund
and
Police Officers and Fire Fighters' 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, 2018 and 2017

District of Columbia · DCRB · Retirement Board

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Comprehensive Annual Financial Report

For the fiscal years ended September 30, 2018 and 2017

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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ACTUARIAL SECTION

STATISTICAL SECTION

ADDITIONAL DISCLOSURES

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INTRODUCTORY SECTION

Letter of Transmittal

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March 28, 2019

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

Dear Board Members:

It is my pleasure to submit the Comprehensive Annual Financial Report (CAFR or Report) of the District of Columbia Retirement Board (DCRB or Agency) for the fiscal year (FY) ended September 30, 2018. This CAFR is a presentation of the financial results that are intended to provide useful information related to DCRB's management of the assets in the District of Columbia Police Officers and Fire Fighters' Retirement Fund and the District of Columbia Teachers' Retirement Fund (collectively referred to as the Fund) that are held in trust for our members.

The District is responsible for members covered under the District Replacement Plans for Police Officers, Firefighters, and Teachers (the District Plans), which were adopted on July 1, 1997. Fund assets, which are pooled for investment purposes, may only be used to pay benefits and expenses necessary to administer the retirement program. DCRB also serves as the third-party administrator for benefits earned through June 30, 1997, under the frozen, federally funded plans (the Frozen Plans), which are the responsibility of the U.S. Department of the Treasury (U.S. Treasury). U.S. Treasury reimburses DCRB for costs we incur for these third-party administrator services. Any reimbursement of administrative expenses from U.S. Treasury offsets the amount required from the Fund each year.

For the District Plans, the District Government, as the employer, is the Plan Sponsor, and is responsible for the design of the Plans, for certain benefits administration activities, and for paying the required employer contributions into the Fund. In addition to employer contributions, Fund income includes employee contributions, which are a fixed percentage of their pay, and investment earnings.

DCRB's mission consists of the following two overarching goals: (1) to prudently invest and manage the assets of the Fund, and (2) to administer retirement benefits by providing members with accurate and timely pension payments, as well as excellent customer service. Agency operations are managed in accordance with our fiduciary responsibilities and relevant legal authorities. The projects and initiatives in progress, and planned for the future, are undertaken to support this mission.

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Letter of Transmittal

PRUDENTLY INVEST AND MANAGE FUND ASSETS

One of DCRB's major ongoing responsibilities is to prudently invest Fund assets, with the goal of earning a return that meets or exceeds our long-term actuarial return target of 6.5 percent. This target is intended to sustain the Fund's viability over the long-term investment horizon. I am pleased to report that as of September 30, 2018, the Fund generated an annualized gross return of 8.8 percent since its inception in October 1982, surpassing the 6.5 percent long-term actuarial return target. For FY 2018, a volatile year for the market, the Fund earned a gross return of 5.4 percent.

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 in FY 2018:

- Analyzed different negative market return scenarios. DCRB's investment consultant provided Trustees with an illustration of how the performance of the Fund's current asset allocation could be impacted by a decline in the valuation of U.S. equity securities, and a reallocation of those assets to high-quality fixed-income securities to avoid extreme equity losses.
- Offered continuing education to Trustees and Staff on fiduciary responsibilities, ethics, risk management and mitigation strategies, the private markets' legal process, cybersecurity awareness, agriculture and private credit, and investment compliance.

The integration of a strong governance, risk, and compliance program is critical to sustaining longer-term investment returns. During FY 2019, DCRB will enhance our formal assessment of operational risks to identify, manage, and mitigate non-market risks. We will accomplish this by focusing on business, legal, and operational risks as core factors for committing capital to new investment managers and as part of our ongoing monitoring efforts.

We will further validate the accuracy of fees paid to our investment managers to ensure compliance with investment agreements. In addition, with the assistance of our investment consultant, the Trustees are reviewing various asset class mixes that are forecasted to exceed the long-term target return within acceptable risk parameters.

Finally, during FY 2019, DCRB will engage a consultant to conduct an operational fiduciary audit. This is a top-to-bottom analysis of the Agency's operations, processes and performance needed to ensure that DCRB is following best practices and planning for Fund sustainability as the District contribution rises, reflecting a declining membership with federal service.

Letter of Transmittal

PROVIDE MEMBERS WITH ACCURATE AND TIMELY PAYMENTS AND EXCELLENT CUSTOMER SERVICE

Another of DCRB's major responsibilities is to administer retirement benefits. Among our primary tasks is to ensure the accurate calculation and timely payment of benefits to retired Plan members and their survivors and beneficiaries, and to provide them with excellent customer service. These services also include providing members with information about the Plans, responding to their questions, and keeping them aware of changes and issues related to their benefits.

Annual Benefits Statements and Member-focused Communications
Recently, DCRB began providing annual Estimated Benefits Statements to all active members of the Plans. In addition, we completed a benchmarking project to determine how our benefits administration operations compared with best practices and to other public pension systems of our size. The results revealed that DCRB lags its peers in the adoption of member focused technology. For example, DCRB currently lacks an annuitant self-service website portal where members can update their personal information and receive timely and targeted communications. During FY 2018, we began discussions with U.S. Treasury and the District's Office of the Chief Technology Officer to explore the development of an online self-service application that will allow annuitants to access their benefit and tax-related information. Finally, in early 2018, DCRB distributed updated Summary Plan Descriptions (SPDs) for each of the Plans to all Plan members. The new SPDs clarify Plan provisions, update benefits administration policies and processes, and summarize the provisions of the Plans in a format that is easier to read and understand.

Strategic Planning and Initiatives
Last year, in my first year as Executive Director, I set the course for DCRB's continued advancement under my leadership with a re-evaluation of the Agency's current goals and objectives to ensure that they continue to align with DCRB's mission. As a part of that process, DCRB began a Strategic Planning Project in August 2018 that involves the Trustees and all DCRB employees.

In tandem with the Strategic Planning Project, and in preparation for the eventual acquisition of a pension management information system, we are refocusing our efforts on reviewing, analyzing, and documenting the major processes that are a part of our benefits administration operations. The purpose of this project is to update processes that were adopted several years ago in a paper environment, assure alignment with the processes of our partner agencies, document process steps from end-to-end, and eliminate or adjust antiquated activities prior to memorializing them in a new system.

Management Responsibility for Financial Reporting

The responsibility for both the accuracy of the data and the completeness and fairness of the presentation of financial information, 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 Fiduciary Net Position and the Changes in Fiduciary 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 U.S. Treasury. DCRB's employee payroll is processed through the District of Columbia's PeopleSoft System.

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

The independent auditor's 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. DCRB's financial statements are audited annually. I am pleased to report that DCRB received an unmodified, or "clean," opinion for FY 2018, which is reflected in the opinion letter in the Financial Section of this document. DCRB will strive to obtain clean audit opinions annually and will continue to report our financial activities according to accounting principles generally accepted in the United States of America.

Letter of Transmittal

The Agency's independent actuary, Cavanaugh Macdonald Consulting, LLC (Cavanaugh) performs an actuarial valuation each year. The actuarial certification letter expressly states that the assumptions and methods used for funding purposes meet the parameters set by the Actuarial Standards of Practice (ASOP). The certification and related schedules included in the CAFR were provided by Cavanaugh, whose selection was approved by DCRB's Board of Trustees. The valuation results are presented in the Actuarial Section of this CAFR.

The custodian as of September 30, 2018, Northern Trust, records and reports all investment and cash management transactions, and the Trustees exercise close review and controls over those records and transactions.

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 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. These controls are designed to provide reasonable assurance regarding the safekeeping of assets and the reliability of financial records. Additional disclosures that are specifically required by statute are also included in this CAFR.

We believe the internal controls in effect during the fiscal years ended September 30, 2018 and 2017, 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, 2017 and 2016. To be awarded a Certificate of Achievement, DCRB must publish an easily readable and efficiently organized CAFR. 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 2017 Award in recognition of meeting professional standards for plan design and administration. 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, benefits administration, and member communications.

Letter of Transmittal

Conclusion

In summary, I am pleased to report that the Fund is in sound financial condition and that we continue striving to pay our Plan members accurately and timely. Further, the Trustees are engaged and committed to our mission, and we have a knowledgeable and experienced senior management team leading the Agency's strategic initiatives. Together, we continue to move forward in creating a comprehensive retirement system to serve the needs of Plan participants over the long-term.

I would like to express my appreciation to the U.S. Department of Treasury's Office of D.C. Pensions, the District of Columbia City Council, 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 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, 2018 and 2017, 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 DRCB

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 September 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 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, 2018

District of Columbia Retirement Board

- Board of Trustees
  - **Executive Director** — Sheila Morgan-Johnson
    - **Chief Investment Officer** — Jeffrey Barnette
    - **Acting Chief Benefits Officer** — Daniel Hernandez
    - **General Counsel** — Erie Sampson
    - **Chief Financial Officer** — Anthony Shelborne
    - **Chief Technology Officer** — Vacant
    - **Director of Stakeholder Communication and Outreach** — Joan Passerino

Auditor	Actuary	Investment Consultants*	
CliftonLarsonAllen	Cavanaugh Macdonald CONSULTING, LLC The experience and dedication you deserve	ZENO consulting group	MEKETA INVESTMENT GROUP

*Information regarding the investment consultants who advise Management can be found on page 70 of this CAFR. Information regarding the investment consultants who provide services to the District Government in its management of the Other Postemployment Benefits (OPEB) can be found on page 127 of the District of Columbia's CAFR for FY 2018.

Board of Trustees
As of September 30, 2018

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. As of September 30, 2018, there were 11 seated Trustees on the Board.

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:
2018 - 2022

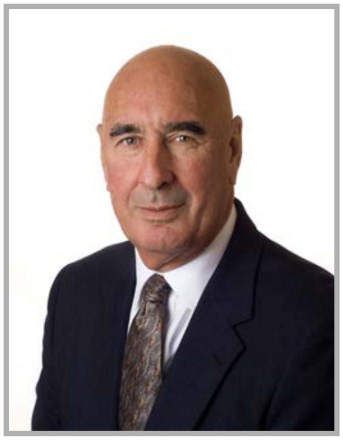
Mary A. Collins
Elected Retired Teacher
Current Term:
2018 - 2022

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

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

Board of Trustees
As of September 30, 2018

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

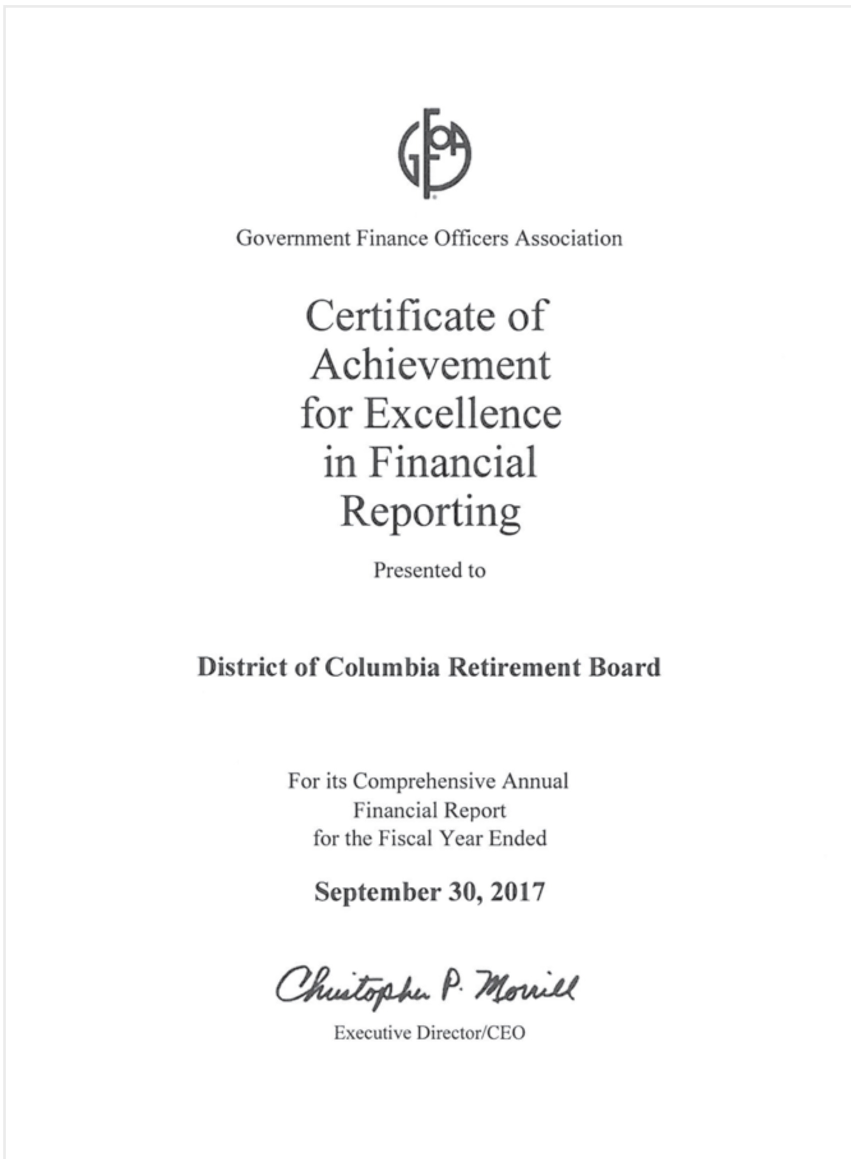
Lenda P. Washington
Mayoral Appointee
Current Term:
2014 - 2019

Bruno Fernandes
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, 2017 and 2016. 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, 2017

Christopher P. Morrill

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, 2017. 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.

PPCC

Public Pension Coordinating Council

Recognition Award for Funding
2017

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

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FINANCIAL SECTION

FINANCIAL STATEMENTS

FINANCIAL SECTION - REQUIRED SUPPLEMENTARY INFORMATION

FINANCIAL SECTION - SUPPLEMENTARY INFORMATION

Independent Auditors' Report

CliftonLarsonAllen

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, 2018 and 2017, and the related combining statements of changes in fiduciary net position for the years then ended, and the related notes to the 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.

A member of Nexia International

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, 2018 and 2017, 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, 2018 and 2017, 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 December 28, 2018 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

CliftonLarsonAllen LLP

Baltimore, Maryland
December 28 2018

Management's Discussion and Analysis

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 Fire Fighters' Retirement Fund (POFRF), for the years ended September 30, 2018, 2017, and 2016, 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 September 26, 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 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.

Management's Discussion and Analysis

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 2018 totaled $653.8 million, a decrease of $514.6 million over the fiscal year 2017 amount of $1,168.4 million. This decrease was primarily due to the lower investment returns in fiscal year 2018.

Employer contributions in fiscal year 2018 totaled $164.6 million, a decrease of $37.8 million over the fiscal year 2017 amount of $202.4 million. The fiscal year 2018 employer contribution was derived from the contribution rate calculated in the actuary's report for the period ended October 1, 2016 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 2018 totaled $74.8 million, an increase of $7.0 million over the fiscal year 2017 amount of $67.8 million. Member contributions consist of amounts paid by members for future retirement benefits.

Investment income, net of investment fees, for fiscal year 2018 totaled $411.0 million, a return of 5.4%. Net investment income for fiscal year 2017 totaled $894.9 million, a return of 13.2%. Other income in fiscal year 2018 totaled $3.4 million, which was no change from the fiscal year 2017 amount of $3.4 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 2018 totaled $209.0 million, an increase of $19.0 million or 10.0% over the fiscal year 2017 amount of $190.0 million.

Benefit payments for fiscal year 2018 totaled $185.2 million, an increase of $20.6 million or 12.5% over the fiscal year 2017 amount of $164.6 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 2018 and 2017, benefit payments made on behalf of current retirees, survivors and beneficiaries comprised approximately 88% of DCRB expenses.

Refunds in fiscal year 2018 totaled $7.7 million, a decrease of $0.1 million or -1.4% as compared to the fiscal year 2017 amount of $7.8 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 2018 totaled $16.0 million, a decrease of $1.5 million or -8.6% as compared to the fiscal year 2017 amount of $17.5 million. In fiscal years 2018 and 2017, the administrative expenses were equivalent to 20 and 23 basis points of the assets under management, respectively.

Management's Discussion and Analysis

Funding Status

As of October 1, 2018 (the date of the most recent actuarial valuation), the funding status was 106.2% 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, 2018, the actuarial value of assets set aside to pay pension benefits was about $2.2 billion for the TRF and about $5.8 billion for the POFRF for a total of $8.0 billion. The fair value of these assets at September 30, 2018, included on the financial statements of DCRB was $2.2 billion for the TRF and $6.0 billion for the POFRF for a total of $8.2 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, 2018 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 2018 and 2017, the net position of DCRB totaled $8.2 billion and $7.8 billion, respectively. Net position serves to meet DCRB's ongoing obligations to Plan participants and their survivors and beneficiaries.

Management's Discussion and Analysis

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 2018, 2017, and 2016.

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

	2018	2017	2016	2018 Percent Change	2017 Percent Change
Assets					
Cash and Short-Term Investments	$59,334	$88,216	$51,480	-32.7%	71.4%
Receivables	8,657	63,684	14,235	-86.4%	347.4%
Prepaid Expenses	-	-	10	-	-100.0%
Investments	8,144,235	7,675,417	6,728,612	6.1%	14.1%
Total Assets	**8,212,226**	**7,827,317**	**6,794,337**	4.9%	15.2%
Liabilities					
Other Payables	7,973	6,337	7,879	25.8%	-19.6%
Investment Commitments Payable	4,377	65,939	9,878	-93.4%	567.5%
Total Liabilities	**12,350**	**72,276**	**17,757**	-82.9%	307.0%
Net Position Restricted for Pensions	**$8,199,876**	**$7,755,041**	**$6,776,580**	**5.7%**	**14.4 %**

Management's Discussion and Analysis

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

	2018	2017	2016	2018 Percent Change	2017 Percent Change
Additions					
Employer Contributions	$164,642	$202,412	$180,584	-18.7%	12.1%
Plan Member Contributions	74,802	67,788	66,376	10.3%	2.1%
Net Investment Income	410,971	894,864	567,419	-54.1%	57.7%
Other Income	3,394	3,375	3,843	0.6%	-12.2%
Total Additions (Reductions)	**653,809**	**1,168,439**	**818,222**	**-44.0%**	**42.8%**
Deductions					
Benefit Payments	185,224	164,606	147,554	12.5%	11.6%
Retirement Benefits Payable to U.S. Treasury	-	-	676	-	-100.0%
Refunds	7,706	7,813	8,384	-1.4%	-6.8%
Administrative Expenses	16,044	17,559	17,664	-8.6%	-0.6%
Total Deductions	**208,974**	**189,978**	**174,278**	**10.0%**	**9.0%**
Change In Net Position	**$444,835**	**$978,461**	**$643,944**	**-54.5%**	**51.9%**

Management's Discussion and Analysis

FINANCIAL HIGHLIGHTS

The District of Columbia Retirement Board Combined Fund financial highlights are as follows:

- Net position restricted for pensions as of September 30, 2018 was $8.2 billion, an increase of $444.8 million or 5.7% over fiscal year 2017. Net position restricted for pensions as of September 30, 2017 was $7.8 billion, an increase of $978.4 million or 14.4% over fiscal year 2016.

- Investment income, net of investment expenses, for fiscal year 2018 was $410.9 million, a decrease of 54.1% as compared to fiscal year 2017. Investment income, net of investment expenses, for fiscal year 2017 was $894.9 million, an increase over fiscal year 2016 of 57.7%. Finally, investment income, net of investment expenses, for fiscal year 2016 was $567.4 million.

- Total additions for fiscal year 2018 were $653.8 million, a decrease of $514.6 million as compared to fiscal year 2017. In fiscal year 2017, total additions were $1,168.4, an increase of $350.2 million over fiscal year 2016. Employer contributions for fiscal year 2018 were $164.6 million, a decrease of $37.7 million or -18.7% as compared to fiscal year 2017. Employer contributions for fiscal year 2017 were $202.4 million, an increase of $21.8 million or 12.1% over fiscal year 2016.

- Plan member contributions for fiscal year 2018 were $74.8 million, an increase of $7.0 million or 10.3% over fiscal year 2017. Plan member contributions for fiscal year 2017 were $67.8 million, an increase of $1.4 million or 2.1% over fiscal year 2016. Other income for fiscal year 2018 was approximately $3.4 million, which increased $20 thousand over fiscal year 2017. Other income for fiscal year 2017 was also approximately $3.4 million, and that amount was a decrease of about $468 thousand as compared to fiscal year 2016.

- Total deductions for fiscal year 2018 were $208.9 million, an increase of $19.0 million or 10.0% over fiscal year 2017. Total deductions for fiscal year 2017 were $189.9 million, an increase of $15.7 million or 9.0% over fiscal year 2016. Pension benefit payments for fiscal year 2018 were $185.2 million, an increase of $20.6 million or 12.5% over fiscal year 2017. Pension benefit payments for fiscal year 2017 were $164.6 million, an increase of $17.0 million or 11.6% over fiscal year 2016. Refunds of member contributions for fiscal year 2018 were $7.7 million, a decrease of $107 thousand or -1.4% as compared to fiscal year 2017. Refunds of member contributions for fiscal year 2017 were $7.8 million, a decrease of $571 thousand or -6.8% as compared to fiscal year 2016.

Management's Discussion and Analysis

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.

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FINANCIAL STATEMENTS

Combining Statements of Fiduciary Net Position

As of September 30, 2018 and 2017
(Dollar amounts in thousands)

	2018			2017		
	Teachers Retirement Fund	Police Officers and Fire Fighters' etirement Fund	Total	Teachers' Retirement Fund	Police Officers and Fire Fighters' etirement Fund	Total
ASSETS						
Cash and Short-Term Investments	$15,735	$43,599	$59,334	$23,675	$64,541	$88,216
Receivables:						
Federal Government	568	1,054	1,622	427	1,161	1,588
Investment Sales Proceeds	272	752	1,024	13,177	36,234	49,411
Interest and Dividends	2	6	8	663	1,824	2,487
Employee Contributions	3,196	2,807	6,003	5,237	4,961	10,198
Total Receivables	4,038	4,619	8,657	19,504	44,180	63,684
Investments at Fair Value:						
Domestic Equity	585,891	1,623,381	2,209,272	559,865	1,539,494	2,099,359
International Equity	569,999	1,579,345	2,149,344	630,493	1,734,444	2,364,937
Fixed Income	676,194	1,873,591	2,549,785	566,890	1,558,813	2,125,703
Real Assets	183,811	509,300	693,111	163,980	450,906	614,886
Private Equity	143,928	398,795	542,723	125,483	345,049	470,532
Total Investments at Fair Value	2,159,823	5,984,412	8,144,235	2,046,711	5,628,706	7,675,417
Total Assets	2,179,596	6,032,630	8,212,226	2,089,890	5,737,427	7,827,317
LIABILITIES						
Retirement Benefits Payable to U.S. Treasury	-	-	-	459	217	676
Accounts Payable and Other Liabilities	2,170	5,348	7,518	866	3,379	4,245
Due to Federal Government	159	296	455	301	819	1,120
Due to District of Columbia Government	-	-	-	80	216	296
Investment Commitments Payable	1,161	3,216	4,377	17,585	48,354	65,939
Total Liabilities	3,490	8,860	12,350	19,291	52,985	72,276
Net Position Restricted for Pensions	**$2,176,106**	**$6,023,770**	**$8,199,876**	**$2,070,599**	**$5,684,442**	**$7,755,041**

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, 2018 and 2017
(Dollar amounts in thousands)

	2018			2017		
	Teachers' Retirement Fund	Police Officers and Fire Fighters' Retirement Fund	Total	Teachers' Retirement Fund	Police Officers and Fire Fighters' Retirement Fund	Total
Additions						
Contributions:						
District Government	$59,046	$105,596	$164,642	$56,781	$145,631	$202,412
Plan Members	40,324	34,478	74,802	34,364	33,424	67,788
Total Contributions	99,370	140,074	239,444	91,145	179,055	270,200
Investment Income:						
Net Appreciation in Fair Value of Investments	84,279	288,839	373,118	233,210	637,888	871,098
Interest and Dividends	13,863	38,381	52,244	10,724	29,335	40,059
Total Gross Investment Income	98,142	327,220	425,362	243,934	667,223	911,157
Less:						
Investment Expenses	4,013	10,378	14,391	4,380	11,913	16,293
Net Investment Income	94,129	316,842	410,971	239,554	655,310	894,864
Other Income	1,038	2,356	3,394	907	2,468	3,375
Total Additions	194,537	459,272	653,809	331,606	836,833	1,168,439
Deductions						
Annuitant Benefit Payments	78,430	106,794	185,224	72,069	92,537	164,606
Refunds	6,126	1,580	7,706	6,166	1,647	7,813
Administrative Expenses	4,474	11,570	16,044	4,721	12,838	17,559
Total Deductions	89,030	119,944	208,974	82,956	107,022	189,978
Change in Net Position	105,507	339,328	444,835	248,650	729,811	978,461
Net Position Restricted for Pensions:						
Beginning of Year	2,070,599	5,684,442	7,755,041	1,821,949	4,954,631	6,776,580
End of Year	**$2,176,106**	**$6,023,770**	**$8,199,876**	**$2,070,599**	**$5,684,442**	**$7,755,041**

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 (TRF) and the District of Columbia Police Officers and Firefighters' Retirement Fund (POFRF), collectively referred to as the Fund or the District Retirement Funds, are two separate single-employer defined benefit pension plans that 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 nonvoting, 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.

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.

Notes to Financial Statements

NOTE 2: FUND ADMINISTRATION AND DESCRIPTION (CONTINUED)

Teachers' Retirement Fund (Continued)

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 seq. (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.

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 seq. (2001 Ed.)).

Notes to Financial Statements

NOTE 2: FUND ADMINISTRATION AND DESCRIPTION (CONTINUED)

<u>**Police Officers and Fire Fighters' Retirement Fund (Continued)**</u>

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 66⅔% of average base pay and a maximum annual disability retirement benefit of 70% of average base pay apply.

Members with a nonservice 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.

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 nonservice 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.

Notes to Financial Statements

Participant Data

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

Teachers' Retirement Fund	2018	2017	2016
Retirees and survivors receiving benefits (post June 30, 1997)	3,990	3,899	3,882
Active plan members	5,066	5,199	5,141
Vested terminations	1,429	1,330	1,176
Total TRF participants	10,485	10,428	10,199

Police Officers and Firefighters' Retirement Fund	2018	2017	2016
Retirees and survivors receiving benefits (post June 30, 1997)	3,441	3,215	3,003
Active plan members	5,349	5,312	5,359
Vested terminations	315	340	293
Total POFRF participants	9,105	8,867	8,655

Totals	2018	2017	2016
Retirees and survivors receiving benefits (post June 30, 1997)	7,431	7,114	6,885
Active plan members	10,415	10,511	10,500
Vested terminations	1,744	1,670	1,469
Total Participants	19,590	19,295	18,854

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 2018 and 2017 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.

Notes to Financial Statements

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 $14,390,879 in 2018 and $16,292,755 in 2017. 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. 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.

Notes to Financial Statements

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)

	2018	2017
Cash and short-term investments	**$ 59,334**	**$ 88,216**
Investments:		
Domestic equity	2,209,272	2,099,359
International equity	2,149,344	2,364,937
Fixed income	2,549,785	2,125,703
Real estate	693,111	614,886
Private equity	542,723	470,532
Total investments	**8,144,235**	**7,675,417**
Total	**$ 8,203,569**	**$ 7,763,633**

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, 2018 and 2017, the money-weighted rates of return, as calculated by the custodian, were as follows:

	FY 2018	FY 2017
Total Portfolio	5.455%	12.785%

Notes to Financial Statements

NOTE 4: INVESTMENTS (continued)

Debt Instruments – As of September 30, 2018, the Investment Pool held the following debt instruments:

(Dollars in thousands)

Investment Type	Fair Value	% of Segment	Duration (Years)	Rating*
US Agency	$28,265	1.11%	3.62	AA+
Asset Backed	14,031	0.55%	2.44	AAA
Bank Loans	336,943	13.21%	0.03	B-
Cash Equivalent	52,470	2.06%	-	A-1+
CMBS	16,866	0.66%	5.09	AA+
CMO	722	0.03%	1.07	AA+
Corporate - US	307,830	12.07%	6.03	BBB
Corporate - Euro	15,918	0.62%	2.23	BBB+
Foreign	446,869	17.53%	5.71	A
Mortgage Pass-Through	251,733	9.87%	4.91	AA+
Municipal	5,592	0.22%	10.77	AA-
Options	15,949	0.63%	-	
Private Placement	108,984	4.27%	3.29	CCC+
US Treasury	944,221	37.03%	7.00	AA+
Unclassified	3,392	0.13%	-	BB-
Total Fixed Income	$2,549,785	100.00 %		

Notes to Financial Statements

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	A
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%		

* Using quality ratings provided by Standard & Poor's

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, 2018 and 2017, the Investment Pool held amounts in commingled funds which invested in foreign currencies totaling approximately $3.1 billion and $2.9 billion, respectively.

Notes to Financial Statements

NOTE 4: INVESTMENTS (continued)

As of September 30, 2018, 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	Private Equity	Total
Canadian Dollar	$ -	$ -	$ -	$ 6,036	$ 6,036
British Sterling	-	-	-	8,371	8,371
Swiss Franc	-	-	-	109	109
Euro	199	-	-	58,084	58,283
Total Foreign	199	$ -	$ -	$ 72,600	$ 72,799

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)

	Asset Class				
	Cash	Equities	Fixed Income	Private 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

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.

The Board may participate in securities lending through its custodian in the future; however, it did not do so in fiscal years 2018 and 2017.

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 2018 and 2017, 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, 2018 or as of September 30, 2017.

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.

Notes to Financial Statements

NOTE 4: INVESTMENTS (continued)

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.

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, 2018 or as of September 30, 2017.

Notes to Financial Statements

NOTE 4: INVESTMENTS (continued)

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.

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 41 and 42 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 41 and 42.

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 41, the unfunded commitments totaled $898.7 million, as of September 30, 2018. This represents global investments in 38 real asset and 32 private equity funds. The unfunded commitments totaled $850.3 million, as of September 30, 2017. This represented global investments in 35 real asset and 29 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.

Notes to Financial Statements

NOTE 4: INVESTMENTS (continued)

Investements Measured at Fair Value, as of September 30, 2018

	Investments measured at Fair Value (Dollars in thousands)			
	September 30, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by Fair Value Level				
Domestic Equity	$ 312,850	$ 297,016	$ 15,834	$ -
Fixed Income	265,651	-	265,651	-
Private Equity	49,056	49,056	-	-
Total Investments by Fair Value Level	**$ 627,557**	**$ 346,072**	**$ 281,485**	**$ -**
Investments Measured at the Net Asset Value (NAV)				
Domestic Equity	1,896,422			
International Equities	2,149,344			
Fixed Income	2,284,134			
Real Assets	693,111			
Private Equity	493,667			
Total Investments Measured at NAV	7,516,678			
Total Investments	**$8,144,235**			

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

	September 30, 2018	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Domestic Equities	$ 1,896,422	$ -	Daily	None
International Equities	2,149,344	-	3 times per month, monthly	2-5 days
Fixed Income	2,284,134	-	Daily, Monthly	3-30 days
Real Assets	693,111	389,696	None	N/A
Private Equity	493,667	508,997	None	N/A
Total Investments Measured at NAV	**$ 7,516,678**	**$ 898,693**		

Notes to Financial Statements

NOTE 4: INVESTMENTS (continued)

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

	Investments measured at Fair Value (Dollars in 000s)			
	Sept 30, 2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant other Observable Inputs (Level 2)	Significant Unobservable Inputs (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)				
Domestic equity	$ 1,820,891			
International equities	2,364,937			
Fixed income	1,821,003			
Real assets	614,886			
Private equity	470,532			
Total investments measured at NAV	$ 7,092,249			
Total investments	**$ 7,675,417**			

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

	Sept 30, 2017	Unfunded Commitments	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**		

Notes to Financial Statements

NOTE 5: NET PENSION LIABILITY/(ASSET)
The components of the net pension liability (asset) of the District Retirement Funds at September 30, 2018 and 2017 were as follows:

(Dollars in thousands)	2018		2017	
	TRF	POFRF	TRF	POFRF
Total Pension Liability	$ 2,261,867	$ 5,265,874	$ 2,160,347	$ 4,957,340
Fiduciary Net Position	2,176,106	6,023,770	2,070,599	5,684,442
Net Pension Liability (Asset)	$ 85,761	$ (757,896)	$ 89,748	$ (727,102)
Ratio of Fiduciary Net Position to Total Pension Liability (Asset)	96.21%	114.39%	98.85%	114.67%

Actuarial Assumptions - The total pension liability was determined based on an actuarial valuation as of October 1, 2017 and 2016, 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, 2018 and 2017, respectively:

Teachers' Retirement Fund	
Inflation	3.5 percent
Salary increases	5.50 percent - 8.63 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 projected generationally 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 7 years for females.

Police and Firefighters' Retirement Fund	
Inflation	3.5 percent
Salary increases	4.25 - 9.98 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 projected generationally 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 7 years for females.

Notes to Financial Statements

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

The actuarial assumptions used in the October 1, 2017 and 2016 valuations 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, 2018 and 2017 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic Equity	20.0%	5.3%
Foreign Equity (Developed)	16.0%	5.9%
Foreign Equity (Emerging)	10.0%	8.6%
Investment Grade Bonds	11.0%	0.7%
Treasury Inflation-Protected Securities (TIPS)	6.0%	0.4%
High Yield Bonds	4.0%	3.5%
Bank Loans	3.0%	2.3%
Foreign Bonds (Developed)	2.0%	-0.3%
Emerging Markets Debt (Local)	4.0%	3.5%
Real Estate	6.0%	3.9%
Natural Resources (Private)	2.0%	6.0%
Infrastructure	3.0%	3.6%
Private Equity	9.0%	7.0%
Hedge Funds	4.0%	3.1%
Total	**100.0%**	

Notes to Financial Statements

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%, as well as what the Plan's net pension liability calculated using a discount rate that is one percentage point lower (5.5%) or one percentage point higher (7.5%) than the current rate (dollar amounts in thousands):

FY 2018	1% Decrease (5.50%)	Current Discount Rate (6.50%)	1% Increase (7.50%)
Teachers' Plan's Net Pension Liability	$477,094	$85,761	$(224,803)
Police and Firefighters' Plan's Net Pension Liability (Asset)	$232,199	$(757,896)	$(1,536,649)

FY 2017	1% Decrease (5.50%)	Current Discount Rate (6.50%)	1% Increase (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)

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FINANCIAL SECTION - REQUIRED SUPPLEMENTARY INFORMATION

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

Teachers' Retirement Fund	2018	2017	2016	2015	2014
Total pension liability					
Service Cost	$ 67,877	$ 65,911	$ 61,599	$ 53,297	$ 50,409
Interest	137,704	131,657	124,370	118,378	112,204
Benefit changes	-		-	-	-
Difference between expected and actual experience	(19,505)	(37,230)	2,656	(7,246)	-
Changes of assumptions	-	14,106	-	-	-
Benefit payments	(78,430)	(72,069)	(69,093)	(64,076)	(59,832)
Refunds	(6,126)	(6,166)	(6,205)	(5,576)	(5,790)
Net change in total pension liability	101,520	96,209	113,327	94,777	96,991
Total pension liability - beginning	2,160,347	2,064,138	1,950,811	1,856,034	1,759,043
Total pension liability - ending (a)	2,261,867	2,160,347	2,064,138	1,950,811	1,856,034
Plan net position					
Contributions - District Government	59,046	56,781	44,469	39,513	31,636
Contributions - Plan member	40,324	34,364	33,591	31,621	28,751
Net investment (loss) income	94,129	239,554	152,262	(72,647)	132,086
Benefit payments	(78,430)	(72,069)	(69,093)	(64,076)	(59,832)
Administrative expense	(4,474)	(4,721)	(4,746)	(4,543)	(3,787)
Refunds	(6,126)	(6,166)	(6,205)	(5,576)	(5,790)
Other income	1,038	907	1,033	385	522
Change in net position	105,507	248,650	151,311	(75,323)	123,586
Plan net position - beginning	2,070,599	1,821,949	1,670,638	1,745,961	1,622,375
Plan net position - ending (b)	2,176,106	2,070,599	1,821,949	1,670,638	1,745,961
Net pension liability - ending (a) - (b)	$ 85,761	$ 89,748	$ 242,189	$ 280,173	$ 110,073
Ratio of plan net position to total pension liability - (b) / (a)	96.21%	95.85%	88.27%	85.64%	94.07%
Covered payroll	$ 470,749	$ 447,762	$ 438,079	$ 417,090	$ 378,926
Net pension liability (asset) as a percentage of covered payroll	18.22%	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	2018	2017	2016	2015	2014
Total pension liability					
Service Cost	$ 182,641	$ 196,629	$ 198,020	$ 192,114	$ 176,102
Interest	318,719	300,626	282,285	257,943	235,097
Benefit changes	-	-	-	-	-
Difference between expected and actual experience	(84,452)	(188,549)	(106,840)	(2,477)	-
Changes of assumptions	-	67,256	-	-	-
Benefit payments	(106,794)	(92,537)	(79,137)	(63,634)	(52,784)
Refunds	(1,580)	(1,647)	(2,179)	(1,396)	(1,637)
Net change in total pension liability	308,534	281,778	292,149	382,550	356,778
Total pension liability - beginning	4,957,340	4,675,562	4,383,413	4,000,863	3,644,085
Total pension liability - ending (a)	5,265,874	4,957,340	4,675,562	4,383,413	4,000,863
Plan net position					
Contributions - District Government	105,596	145,631	136,115	103,430	110,766
Contributions - Plan member	34,478	33,424	32,785	33,679	32,821
Net investment (loss) income	316,842	655,310	415,157	(187,283)	338,894
Benefit payments	(106,794)	(92,537)	(79,137)	(63,634)	(52,784)
Administrative expense	(11,570)	(12,838)	(12,918)	(11,939)	(9,730)
Refunds	(1,580)	(1,647)	(2,179)	(1,396)	(1,637)
Other income	2,356	2,468	2,810	1,012	1,342
Change in net position	339,328	729,811	492,633	(126,131)	419,672
Plan net position - beginning	5,684,442	4,954,631	4,461,998	4,588,129	4,168,457
Plan net position - ending (b)	6,023,770	5,684,442	4,954,631	4,461,998	4,588,129
Net pension liability (asset) - ending (a) - (b)	$ (757,896)	$ (727,102)	$ (279,069)	$ (78,585)	$ (587,266)
Ratio of plan net position to total pension liability (asset) - (b) / (a)	114.39%	114.67%	105.97%	101.79%	114.68%
Covered payroll	$454,209	$ 441,904	$ 438,114	$ 446,201	$ 426,135
Net pension liability (asset) as a percentage of covered payroll	-166.86%	-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	2018	2017	2016	2015	2014
Actuarially determined employer contribution	$ 59,046	$ 56,781	$ 44,469	$ 39,513	$ 31,636
Actual employer contributions	59,046	56,781	44,469	39,513	31,636
Annual contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -
Covered payroll	$ 470,749	$ 447,762	$ 438,079	$ 417,090	$ 378,926
Actual contributions as a percentage of covered payroll	12.54%	12.68%	10.15%	9.47%	8.35%

Teachers' Retirement Fund	2013	2012	2011	2010	2009
Actuarially determined employer contribution	$ 6,407	$ -	$ -	$ -	$ -
Actual employer contributions	6,407	-	-	-	-
Annual contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -
Covered payroll	$ 369,071	$ 381,235	$ 384,455	$ 337,516	$ 336,600
Actual contributions as a percentage of covered payroll	1.74%	0.00%	0.00%	0.00%	0.00%

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 2018 are:

Actuarial cost method	Entry age normal
Amortization method	Level dollar, closed
Remaining amortization period	16 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	2018	2017	2016	2015	2014
Actuarially determined employer contribution	$105,596	$145,631	$136,115	$103,430	$110,766
Actual employer contributions	105,596	145,631	136,115	103,430	110,766
Annual contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -
Covered payroll	$454,209	$441,904	$438,114	$446,201	$426,135
Actual contributions as a percentage of covered payroll	23.25%	32.96%	31.07%	23.18%	25.99%

Police and Firefighters' Retirement Fund	2013	2012	2011	2010	2009
Actuarially determined employer contribution	$96,314	$116,700	$127,200	$132,300	$106,000
Actual employer contributions	96,314	116,700	127,200	132,300	106,000
Annual contribution deficiency (excess)	$ -	$ -	$ -	$ -	$ -
Covered payroll	$413,380	$414,877	$421,221	$423,854	$436,100
Actual contributions as a percentage of covered payroll	23.30%	28.13%	30.20%	31.21%	24.31%

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 2018 are:

Actuarial cost method	Entry age normal
Amortization method	Level dollar, closed
Remaining amortization period	16 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 2018	FY 2017	FY 2016	FY 2015	FY 2014
Total portfolio	5.455%	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.

FINANCIAL SECTION - SUPPLEMENTARY INFORMATION

Schedules of Administrative Expenses
For the years ended September 30, 2018 and 2017

	2018	2017
Personal services		
Salaries	$ 6,419,916	$ 6,512,514
Fringe benefits	1,832,363	1,613,022
Total personal services	**8,252,279**	**8,125,536**
Non-personal services		
Office supplies	93,484	107,460
Telephone	96,286	107,181
Rent	1,823,864	1,799,965
Travel	193,704	218,006
Professional fees	3,666,166	5,262,535
Postage	65,538	60,453
Printing	78,173	15,405
Insurance	148,879	148,887
Dues & memberships	39,963	41,525
Audit costs	191,450	72,120
Actuarial fees	169,855	138,164
Legal fees	531,913	590,245
Investment fees	13,076,317	15,037,067
Contractual services (STAR)	1,808,130	1,866,066
Equipment and rental	198,734	261,269
Total non-personal services	**22,182,456**	**25,726,348**
Total administrative expenses	**30,434,735**	**33,851,884**
Investment expenses	**(14,390,879)**	**(16,292,755)**
Net administrative expenses	**$ 16,043,856**	**$ 17,559,129**

Schedules of Investment Expenses
For the years ended September 30, 2018 and 2017

	2018	2017
Investment managers*	$ 12,417,567	$ 14,360,817
Investment administrative expense	753,088	784,973
Investment consultants	882,058	909,715
Investment custodian	338,166	237,250
Total investment expenses	$ 14,390,879	$ 16,292,755

*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, 2018 and 2017

Professional/Consultant	Nature of Service	FY 2018	FY 2017
Administrative Consultants			
Software Information Resource Corp.	Information Technology Consulting	$220,383	$829,277
U.S. Treasury Office of D.C. Pensions	Benefit Payment Processing	1,792,130	689,860
Mobomo, LLC	Information Technology Consulting	386,124	528,969
Morgan, Lewis & Bockius	Legal Counsel	505,857	497,590
Ectam, LLC	Information Technology Consulting	177,120	238,680
KMC, Inc.	Information Technology Consulting	232,107	234,810
D.C. Office of the Chief Technology Officer	Information Technology Consulting	-	230,065
Networking for Future, Inc.	Information Technology Consulting	109,253	227,492
Softech & Associates, Inc.	Information Technology Consulting	190,000	214,000
Linea Solutions, Inc.	Business Process Re-Engineering	-	192,078
DLT Solutions, Inc.	Information Technology Consulting	116,462	158,777
FireEye, Inc.	Information Technology Consulting	-	146,873
Cavanaugh Macdonald Consulting	Actuarial Services	174,855	140,768
ASI Government, Inc.	Temporary Staffing Services	97,718	132,818
SHI International Corporation	Information Technology Consulting	22,995	118,795
D.C. Metropolitan Police Dept	Information Technology Consulting	-	113,832
Mark Jackson	Information Technology Consulting	99,355	111,563
Analytica LLC	Information Technology Consulting	-	98,055
Equinix, Inc.	Information Technology Consulting	132,954	87,705
Yared Desta	Information Technology Consulting	83,711	85,876
TW Telecom	Information Technology Consulting	40,976	77,832
Vonage Business formerly Icore Networks, Inc.	Information Technology Consulting	67,135	72,154
CliftonLarsonAllen LLP	Financial Audit	57,200	72,120
Groom Law Group	Legal Counsel	6,306	70,158
American Arbitration Association	Arbitration Services	36,876	59,979
RSM US LLP formerly RSM McGladrey, Inc.	Financial System Consulting	22,468	48,002
Capitol Document Solutions	Information Technology Consulting	38,961	40,486
Dakota Consulting, Inc.	Information Technology Consulting	-	40,308
Steven Van Rees	Operations Consultant	-	36,038
AON Hewitt Investment Consulting	Insurance Consulting	-	35,438
Avitecture	Information Technology Consulting	-	34,455
Midtown Personnel Inc.	Benefits Consulting	21,760	33,885
Business Development Associates, LLC	Information Technology Consulting	-	33,197
Advent Software, Inc.	Investment Consulting	42,337	33,179
DC Net	Information Technology Consulting	31,968	31,968
Diligent Corp	Information Technology Consulting	31,575	31,575
HBP, Inc.	Graphic Design for Publications	97,119	25,992

(Continued on next page)

Professional/Consultant	Nature of Service	FY 2018	FY 2017
XO Holdings	Information Technology Consulting	26,469	24,699
Harris, Mackessy & Brennan, Inc.	Information Technology Consulting	33,010	21,098
CEM Benchmarking, Inc.	Investment Consultant	30,000	20,000
Kofax, Inc.	Information Technology Consulting	-	18,752
eVestment Alliance	Online Investment Service	20,087	18,720
Clayton Gordon	Information Technology Intern	-	18,053
Project Made Easy	Information Technology Consulting	-	16,784
ZixCorp Systems, Inc.	Information Technology Consulting	-	16,575
Syed-Mohd Nasib Hafeez	Information Technology Consulting	-	14,450
The Newberry Group, Inc.	Information Technology Consulting	13,353	11,993
National Associates, Inc.	Benefits Consulting	-	9,820
Korn Ferry Hay Group, Inc.	Professional Services	7,262	7,250
Dylan Meagher	Benefits Intern	-	7,054
Intuitive Technology Group, LLC	Information Technology Consulting	-	5,608
Adil Naghmi	Benefits Intern	-	5,590
Newlin LLC	Accting and Internal Audit Consulting	-	5,537
Fahmida Chowdhury	Information Technology Consulting	-	5,382
William Harris	Information Technology Consulting	-	4,820
22nd Century Staffing, Inc.	Information Technology Consulting	-	4,648
Info-Tech Research Group, Inc.	Information Technology Consulting	-	4,225
Oquendo Computer Services	Professional Services	2,175	3,570
Corporate Investigations, Inc.	Professional Services	2,565	2,912
Neal R. Gross & Co, Inc.	Professional Services	-	916
Carlson Dettmann LLC	Professional Services	-	607
Nexia Friedman LLP	Professional Services	-	600
Armstrong Teasdale	Legal Counsel	4,223	315
Managed Frameworks, LLC	Information Technology Consulting		-
Convergence, Inc.	Investment Consulting	60,000	-
Diamond Toles dba Dime Solutions, LLC	Professional Services	45,990	-
Emergent Systems Exchange, LLC	Professional Services	3,500	-
CenturyLink Formerly Level 3 Communications	Professional Services	33,041	-
NGEN LLC	Audit Costs	134,250	-
ODGroup, Inc. dba Orion Development Group	Professional Services	53,649	-
Phoenix Graphics, Inc.	Professional Services	7,200	-
PRM Consulting, Inc.	Professional Services	40,000	-
Taborda Solutions, Inc.	Professional Services	25,976	-
Total Administrative Consultants		5,378,455	6,104,627

(Continued on next page)

Professional/Consultant	Nature of Service	FY 2018	FY 2017
Investment Consulting			
CEM Benchmarking	Investment consultant	30,000	30,000
Meketa Investment Group	Traditional investment consulting	620,000	620,000
Insightful Pension Consulting Group, LLC	Investment consultant	214,558	233,465
Zeno Consulting Group, LLC	Traditional investment consulting	17,500	26,250
Total Investment Consultants		882,058	909,715
Total Payments to Consultants		**$6,260,513**	**$7,014,342**

INVESTMENT SECTION

Report on Investment Activity

Prepared by Jeffrey Barnette, Chief Investment Officer

Introduction

The District of Columbia Retirement Board (the "Board") is charged with the responsibility to prudently manage the assets of the District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund, two defined benefit pension plans (the "Fund"). The Board works with an independent investment consultant who possesses specialized experience and resources in asset allocation, investment manager selection, and performance evaluation. 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 at a level of risk commensurate with the expected return level 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 benchmarks, which include the "Long-Term Policy Benchmark" and the "Interim Policy Benchmark."

As of September 30, 2018, the Long-Term Policy Benchmark and actual allocation weights were as follows:

Asset Class	Performance Benchmark	Target	Weight
Cash & Fixed Income	Fixed Income Benchmark[1]	30%	32%
U.S. Equities	Russell 3000 Index	20%	22%
Developed Int'l. Markets Equities	MSCI World Index ex-U.S. (net)	16%	18%
Real Assets	CPI-U + 5.5%	11%	9%
Emerging Markets Equities	MSCI Emerging Markets Index (net)	10%	11%
Private Equity	MSCI All-Country World Index + 3% (quarter lag)	9%	5%
Absolute Return	3-Month LIBOR + 5%	4%	4%

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 in the short-term than other asset classes, 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.

[1] The Fixed Income Benchmark is a composite of 36.7% Bloomberg Barclays (BB) U.S. Aggregate Index, 20.0% BB U.S. TIPS Index, 13.3% BB U.S. High-Yield Constrained Index, 10.0% Credit Suisse Levered Loan Index; 6.7% BB Global Aggregate ex U.S. Index, and 13.3% JPM GBI-EM Global Diversified Index.

Report on Investment Activity

Fiscal Year 2018 Global Market Review

U.S. equity markets, as represented by the Russell 3000 Index[2], rose 6.3% during the first quarter of the fiscal year[3] driven by strong corporate earnings and an anticipated boost from tax cuts. Developed international equity markets, as represented by the MSCI World ex U.S. Index[4], increased by 4.2% and emerging markets equities, as represented by the MSCI Emerging Markets Index[5], gained 7.4%, driven by improving global economic data and a depreciating U.S. dollar.[6]

Increased tightening by central banks around the world, coupled with the announcement of U.S. trade sanctions, fueled investor fear and led to a sharp increase in market volatility during the second quarter. U.S. equities declined by 0.8% (despite a +5.7% return in January), developed international equity markets fell by -1.5%, and emerging markets equities appreciated +1.4%. The U.S. dollar continued to depreciate, boosting returns for U.S. investors with unhedged foreign currency exposure.

In the third quarter, U.S. equities and developed international equities proved resilient considering escalating trade tensions, and generated returns of 3.4% and -1.2% (+3.5% in local currency terms), respectively. U.S. markets were led higher by large-cap growth companies, including Netflix, Facebook, and Amazon, among others. In emerging markets, the increasing trade war rhetoric led to a sell-off in bonds and equities, with equities falling -8.0%. A strengthening U.S. dollar also caused a deterioration in developed international and emerging market equity returns during the quarter.

During the final quarter of the fiscal year, U.S. consumer confidence reached its highest level since 2000, corporate earnings and economic growth remained strong, the unemployment rate declined to 3.9%, and Apple and Amazon both reached unprecedented $1 trillion valuations. U.S. stocks finished the quarter near record highs, with the Russell 3000 Index up 7.1%. Outside the U.S., developed market stocks returned 1.3%. In emerging markets, concerns about the potential impact of global trade tensions, rising Fed funds rate expectations, and a strong U.S. dollar acted as headwinds as emerging markets equities declined by -1.1%.

On a cumulative basis, during the fiscal year U.S. equities rose by 17.6%, developed international equities increased by 2.7%, and emerging markets equities declined -0.8%. The Bloomberg Barclays U.S. Aggregate Bond Index, a broad measure of U.S. fixed income markets, declined -1.2%.

Fiscal Year 2018 Investment Results

As of September 30, 2018, the Fund's total assets stood at $8.2 billion after the payment of all benefits and administrative expenses, a $400 million increase from the end of the prior fiscal year. The Fund generated a gross return of 5.4%, underperforming the Interim Policy Benchmark by 0.2%. The Interim Policy Benchmark is the best gauge for relative performance over time periods of up to ten years.

Since inception (October 1982), the Fund's 8.8% gross return has exceeded current actuarial return target of 6.5% by more than 2.0% per year but underperformed the Long-Term Policy Benchmark by 0.8% per year. The Long-Term Policy Benchmark is most appropriate for time periods exceeding ten years.

The majority of the Fund's underperformance during the fiscal year was driven by the Fund's asset allocation, especially an underweight to U.S. equities and overweight to developed international and emerging markets equities. In addition, the Fund's private equity and infrastructure managers contributed to the underperformance by lagging their benchmarks.

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, 2018. 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.

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2 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.

3 The fiscal year 2018 runs from October 1, 2017, to September 30, 2018.

4 The MSCI World ex U.S. Index is designed to measure the equity market performance of 22 developed markets outside the U.S.

5 The MSCI Emerging Markets Index is designed to measure the equity market performance of 23 emerging markets.

6 All developed international 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.

Report on Investment Activity

Exhibit 1: Investment Performance (Gross of Fees)
as of September 30, 2018

Asset Class	1-Year	3-Year	5-Year	10-Year
Total Fund	5.4%	9.3%	6.3%	6.8%
Interim Policy Benchmark[1]	5.6%	9.6%	6.5%	6.6%
Long-Term Policy Benchmark[2]	-	-	-	6.9%
Cash and Cash Equivalents	1.7%	1.1%	0.8%	0.7%
3-month U.S. Treasury Bills	1.6%	0.8%	0.5%	0.3%
Fixed Income	0.0%	3.3%	2.1%	4.3%
Fixed Income Benchmark[3]	-0.6%	3.2%	2.2%	4.0%
U.S. Equities	17.9%	17.2%	13.4%	12.2%
Russell 3000 Index	17.6%	17.1%	13.5%	12.0%
International Developed Markets Equities	3.3%	9.8%	5.1%	6.7%
MSCI World Index ex U.S.(net)	2.7%	9.3%	4.2%	5.8%
Emerging Markets Equities	-1.1%	12.2%	3.6%	-
MSCI Emerging Markets Index (net)	-0.8%	12.4%	3.6%	-
Absolute Return	4.6%	2.2%	2.6%	7.1%
HFR Fund-Weighted Composite	4.0%	5.4%	4.1%	4.6%
3-Month LIBOR+5%[4]	-	-	-	3.0%
Private Equity	12.4%	9.2%	10.7%	8.3%
Cambridge Associates Global PE & VC Index[5]	18.3%	12.1%	13.8%	9.7%
MSCI All Country World Index+3% (quarter lag)[6]	-	-	-	9.0%
Real Assets	4.9%	9.4%	9.0%	-
Real Assets Interim[7]	8.4%	9.2%	8.0%	-
CPI+5.5% (quarter lag)	-	-	-	-

[1] As of 9/30/18, the Interim Policy Benchmark is a composite of 22.1% Russell 3000 Index, 17.7% MSCI World Index ex U.S. (net), 11.0% MSCI Emerging Markets (net); 11.6% Barclays U.S. Aggregate Index, 4.2% Barclays U.S. Corporate High Yield Index, 3.1% Credit Suisse Leveraged Loan Index, 2.1% Barclays Global Aggregate ex US Index, 4.2% JPM GBI-EM Global Diversified Index, 7.3% Barclays U.S. TIPS Index, 3.7% HFR Fund-Weighted Composite, 4.5% Cambridge Associates Global Private Equity and Venture Capital Index (1Q lag), 5.4% Real Estate Interim; 1.4% Cambridge Associates Upstream Energy & Royalties and Private Equity Energy Index (1Q lag), 1.6% Cambridge Associates Infrastructure Index (1Q lag).

[2] As of 9/30/18, 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% Barclays U.S. Aggregate Index, 4% Barclays U.S. Corporate High Yield Index, 3% Credit Suisse Leveraged Loan Index, 2% Barclays Global Aggregate ex US Index, 4% JPM GBI-EM Global Diversified Index, 6% Barclays U.S. TIPS Index, 4% 3-Month LIBOR+5%, 9% MSCI ACWI + 3%, 11% CPI + 5.5%.

[3] The Fixed Income Benchmark is a composite of 36.7% Barclays U.S. Aggregate Index, 20.0% Barclays U.S. TIPS Index, 13.3% Barclays U.S. High-Yield Constrained Index, 10.0% Credit Suisse Levered Loan Index; 6.7% Barclays Global Aggregate ex U.S. Index, and 13.3% JPM GBI-EM Global Diversified Index.

[4] Prior to 9/30/13, 3-month LIBOR.

[5] Prior to 12/31/07, Cambridge Associates U.S. Private Equity & Venture Capital Index (1Q lag).

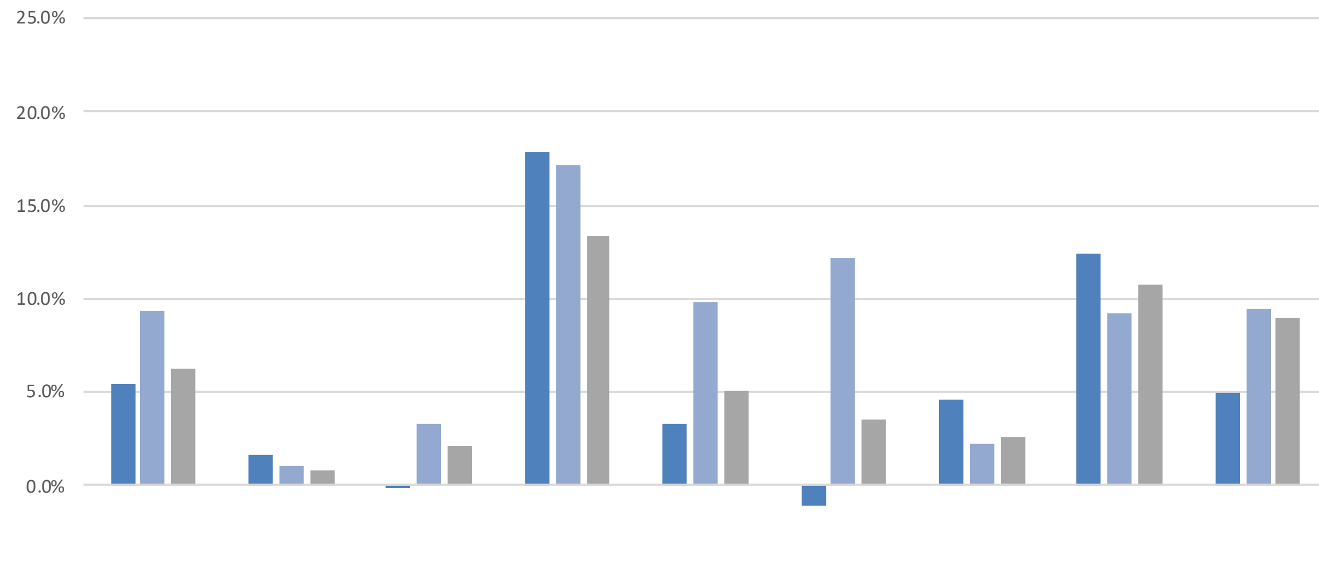
[6] Prior to 12/31/07, Russell 3000 + 3% (quarter lag).

[7] As of 9/30/18, the Real Assets Interim Benchmark is a composite of 36.5% FTSE EPRA/NAREIT Global Net, 20.6% Cambridge Associates Real Estate Index (1Q lag), 28.6% Cambridge Associates Infrastructure Index (1Q lag), and 14.3% Cambridge Associates Upstream Energy & Royalties and Private Equity Energy Index (1Q lag).

Note: All returns are time-weighted and gross of fees.

Report on Investment Activity

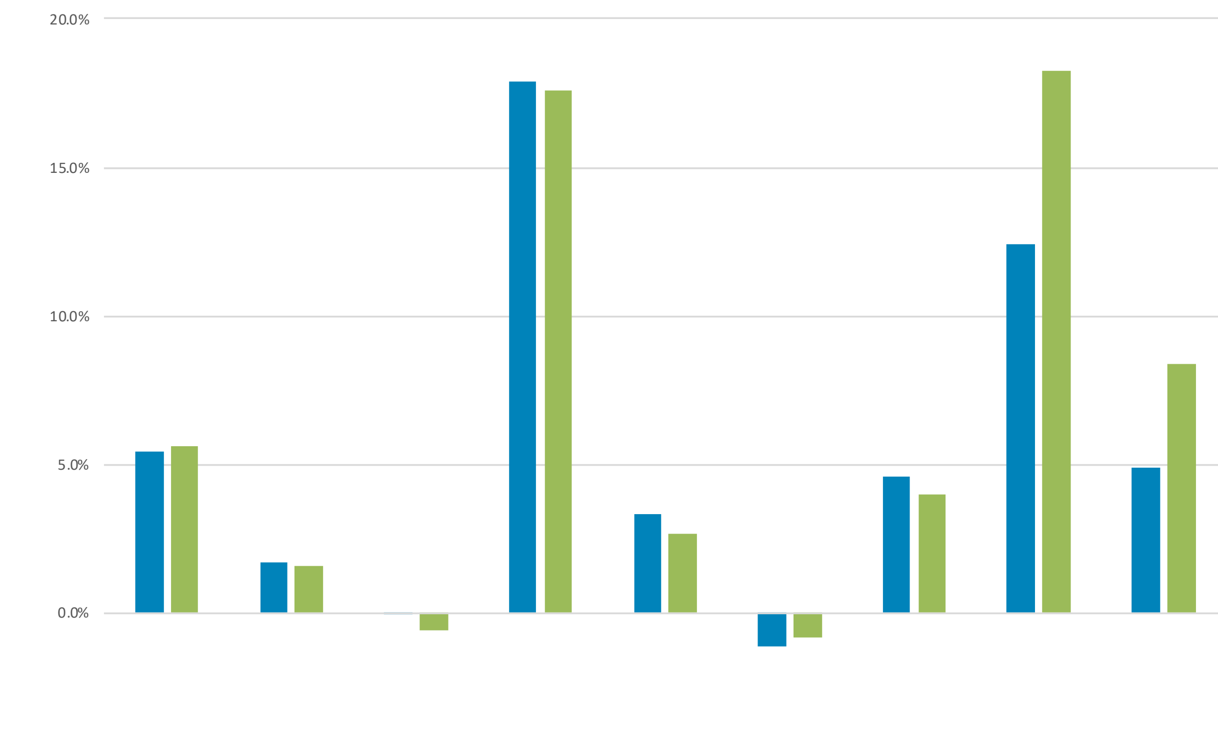
Exhibit 2: Historical Investment Performance
As of September 30, 2018



	Total Fund	Cash and Cash Equivalents	Fixed Income	U.S. Equities	International Developed Markets Equities	Emerging Markets Equities	Absolute Return	Private Equity	Real Assets
1-Year	5.4%	1.7%	0.0%	17.9%	3.3%	-1.1%	4.6%	12.4%	4.9%
3-Year	9.3%	1.1%	3.3%	17.2%	9.8%	12.2%	2.2%	9.2%	9.4%
5-Year	6.3%	0.8%	2.1%	13.4%	5.1%	3.6%	2.6%	10.7%	9.0%

Report on Investment Activity

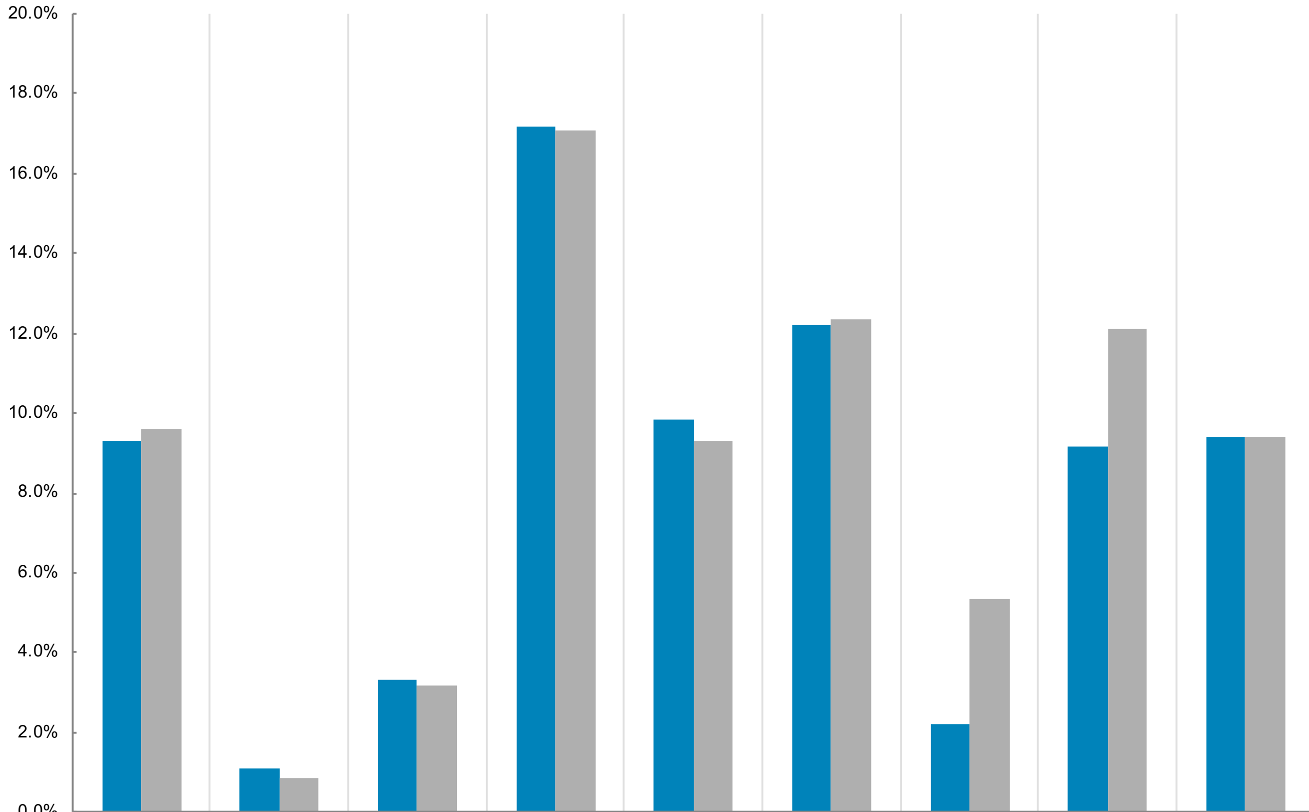
Exhibit 3: 1-Year Performance vs. Benchmark
As of September 30, 2018



	Total Fund	Cash and Cash Equivalents	Fixed Income	U.S. Equities	International Developed Markets Equities	Emerging Markets Equities	Absolute Return	Private Equity	Real Assets
1-Year	5.4%	1.7%	0.0%	17.9%	3.3%	-1.1%	4.6%	12.4%	4.9%
Benchmark	5.6%	1.6%	-0.6%	17.6%	2.7%	-0.8%	4.0%	18.3%	8.4%

Report on Investment Activity

Exhibit 4: 3-Year Performance vs. Benchmark
As of September 30, 2018

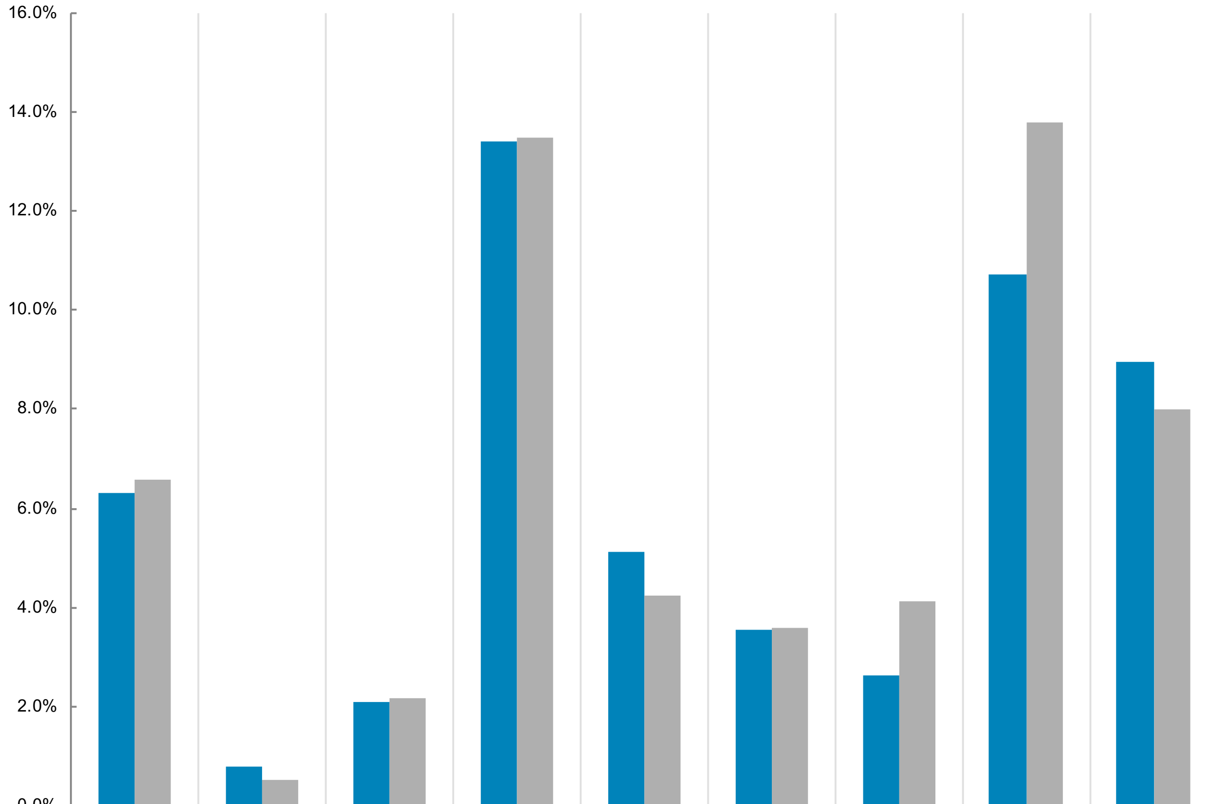


	Total Fund	Cash and Cash Equivalents	Fixed Income	U.S. Equities	International Developed Markets Equities	Emerging Markets Equities	Absolute Return	Private Equity	Real Assets
3-Year	9.3%	1.1%	3.3%	17.2%	9.8%	12.2%	2.2%	9.2%	9.4%
Benchmark	9.6%	0.8%	3.2%	17.1%	9.3%	12.4%	5.4%	12.1%	9.4%

Report on Investment Activity

Exhibit 5: 5-Year Performance vs. Benchmark

As of September 30, 2018



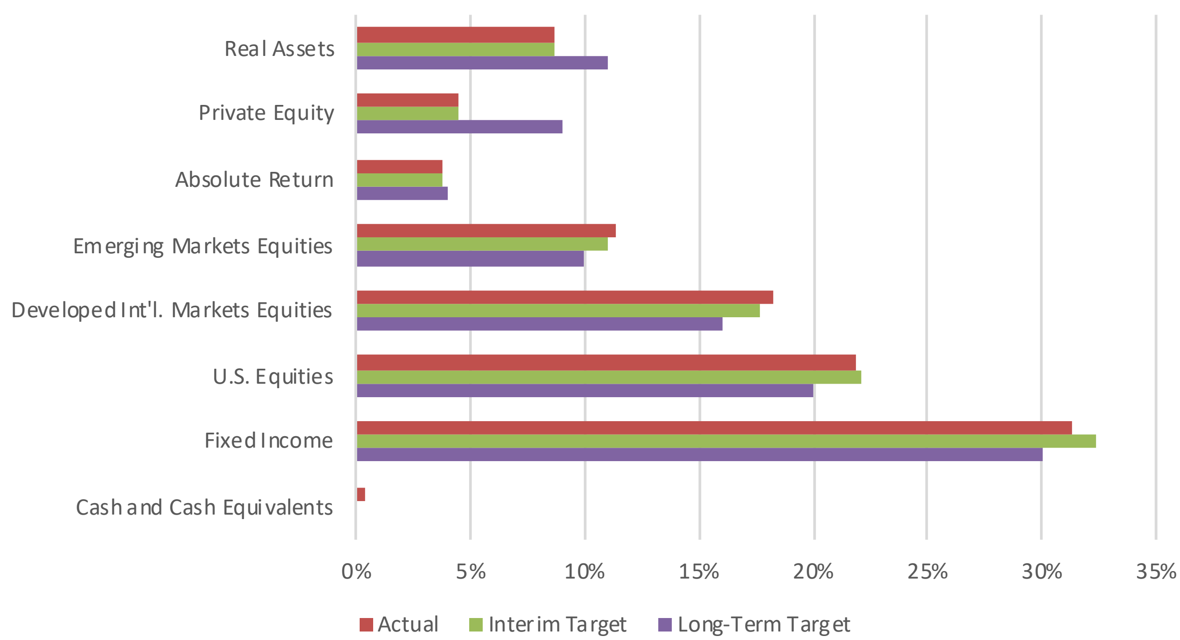
	Total Fund	Cash and Cash Equivalents	Fixed Income	U.S. Equities	International Developed Markets Equities	Emerging Markets Equities	Absolute Return	Private Equity	Real Assets
5-Year	6.3%	0.8%	2.1%	13.4%	5.1%	3.6%	2.6%	10.7%	9.0%
Benchmark	6.6%	0.5%	2.2%	13.5%	4.2%	3.6%	4.1%	13.8%	8.0%

Report on Investment Activity

Asset Allocation

As of September 30, 2018, all the Fund's asset classes were within their respective target allocation ranges. Exhibit 6 shows the Fund's Actual, Interim, and Long-Term Asset Allocation targets. The Interim Policy target distributes the underweight to alternative investments (absolute return, private equity, and real assets) across the traditional investments (fixed income and public equities) in line with the Fund's Long-Term Policy target.

Exhibit 6: Actual, Interim Target and Policy Asset Allocations as of September 30, 2018



The underweight in private equity is driven by a deliberate pace of new commitments and a high volume of realizations from more mature funds over the last few years. The current underweight should moderate by 2021-2022, as new funds draw 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.

Report on Investment Activity

Other Updates

During the fiscal year, the Board did not make any strategic asset allocation changes. In a volatile year, Staff and Meketa Investment Group ("Meketa") focused on monitoring and rebalancing the Fund's asset allocation. In addition, Staff worked with Meketa on monitoring the Board's investment managers and renegotiating fee structures to improve net investment returns.

In fiscal year 2019, the Board will focus on reviewing the long-term asset allocation and building out its investment and operational due diligence framework, among other activities.

Environmental, Social, and Governance (ESG)

The 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 $325 million to eight 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, the Board committed to an opportunistic U.S. infrastructure fund.

Investment Activity Summary

In March 2018, the Board terminated its investment in the Copper Rock International Small Cap Fund. Staff worked with Copper Rock on an orderly liquidation.

Report on Investment Activity

List of Largest Holdings

Top 10 Fixed Income Holdings
(Dollar amounts in thousands)

Rank	Security Name	Moody's Quality Rating	Par Value	Interest Rate (%)	Maturity Date	Market Value
1	UNITED STATES OF AMER TREAS NOTES 0.125%	Aaa	$ 33,195	0.13	04/15/2020	$ 32,754
2	UNITED STATES TREAS NTS DTD 04/15/2017	Aaa	$ 30,045	0.13	04/15/2022	$ 29,182
3	UNITED STATES OF AMER TREAS NOTES 0.125%	Aaa	$ 28,747	0.13	04/15/2021	$ 28,146
4	UNITED STATES TREAS INFL NTS 0.375% DTD	Aaa	$ 28,959	0.40	07/15/2025	$ 28,022
5	UNITED STATES OF AMER TREAS NOTES NTS	Aaa	$ 28,589	0.13	07/15/2026	$ 26,960
6	UNITED STATES TSY INFL IX TREAS BOND	Aaa	$ 25,556	0.68	01/15/2024	$ 25,185
7	UNITED STATES TREAS INFL INDEXED NTS .12	Aaa	$ 23,314	0.14	07/15/2022	$ 22,747
8	UNITED STATES TREAS INFL INDEXED NTS .12	Aaa	$ 23,490	0.14	01/15/2023	$ 22,737
9	UNITED STATES OF AMER INFL INDXD TREAS N	Aaa	$ 23,270	0.27	01/15/2025	$ 22,326
10	UNITED STATES OF AMER TREAS NOTES	Aaa	$ 22,980	0.13	07/15/2024	$ 22,078

Top 10 Public Equity Holdings
(Dollar amounts in thousands)

Rank	Security Name	Shares	Market Value
1	Samsung Electronics Co Ltd	920,835	$39,289,956
2	Alibaba Group Holding Limited	212,929	$35,082,175
3	Tencent Holdings Limited	802,006	$33,126,110
4	Amazon.com, Inc.	15,637	$31,321,561
5	Taiwan Semiconductor Manufacturing Co Lt	3,408,793	$29,306,261
6	Apple Inc.	118,158	$26,672,900
7	Nestle S.A.	299,049	$25,049,336
8	Alphabet Inc.	20,710	$24,886,459
9	Royal Dutch Shell PLC	687,007	$23,831,346
10	Microsoft Corporation	185,268	$21,189,145

A complete list of portfolio holdings is available upon request.

Report on Investment Activity

Schedule of Fees and Commissions

During fiscal year 2018, the Board paid the following fees and commissions:

Expense Category	Amount (Dollars in thousands)	Percent of Fund
Investment Managers*	$12,417,567	0.151%
Investment Consultants	$882,058	0.011%
Investment Administrative Expense	$753,088	0.009%
Custodian	$338,166	0.004%
Brokerage Commissions**	820,445	0.010%
Total	**$15,211,324**	**0.185%**

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

*** 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	4,163,478	-109,985	-2.6	-8	932	145
Sands Capital Management	895,859	-17,395	-1.9	-2	280	86
Altrinsic	6,411,520	-156,373	-2.4	-16	590	100
Copper Rock International	17,270,545	-162,170	-0.9	-13	1,578	127
LSV Emerging Markets	27,107,957	-21,563	-0.1	-5	1,855	42
Northern Truest Global REIT	32,273,166	-12,604	0.0	-2	2,059	69
Northern Trust R3000	60,881,027	-81,983	-0.1	0	19,558	2,302
State Street Global Advisors-CAD	923,602	-2,857	-0.3	-1	1,549	25
State Street Global Advisors-EAFE	39,658,527	-57,951	-0.2	-1	18,011	570
State Street Global Advisors-EM	229,518,407	-197,563	-0.1	-4	17,145	451
Total	**419,104,089**	**-820,445**	**-0.2**	**-2**	**63,557**	**3,918**

Report on Investment Activity

Investment Summary
(Dollar amounts in thousands)

Asset Class		Market Value $(000)	% of Fund
Cash and Cash Equivalents	$	40,617	0.8%
Fixed Income		2,570,191	30.4%
U.S. Equities		1,788,120	22.2%
International Developed Markets Equities		1,494,513	19.2%
Emerging Markets Equities		930,505	11.6%
Absolute Return		305,956	3.8%
Private Equity		365,614	4.0%
Real Assets		708,054	8.1%
Total	**$**	**8,203,569**	**100.0%**

Note: Transition Account balance of $8,769 included in Fixed Income.

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ACTUARIAL SECTION

Independent Actuary's Certification Letter

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

December 14, 2018
Board of Members
District of Columbia Retirement Board
900 7th Street, NW, Suite 200
Washington, DC 20001

RE: Actuarial Certification of October 1, 2018 Valuation for D.C. Retirement Board

Dear Board Members:

Cavanaugh Macdonald Consulting, LLC, under contract with the District of Columbia Retirement Board (DCRB), performed actuarial valuations of the District of Columbia (D.C.) Police Officers and Fire Fighters' Retirement Plan and the D.C. Teachers' Retirement Plan as of October 1, 2018. The date of the most recent valuation prior to this was October 1, 2017. Valuations are conducted annually for DCRB. In this study, we relied on participant and financial data supplied by DCRB staff, the D.C. Office of Pay and Retirement Services, and the U.S. Department of the Treasury. We examined such data for reasonableness and consistency.

Actuarial funding of the Plans is based on the Entry Age Normal Cost method. Under this method, the District must contribute the level percent of pay that – combined with the actuarial value of assets, expected investment earnings, and future employee contributions - will pay for the benefits of the current participants by the time the current workforce leaves employment as well as a payment to amortize any unfunded accrued liability.

The funding policy adopted by the Board in 2012 and revised in 2017 has two main goals:

- To maintain an increasing or stable ratio of Plan assets to 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 cost method and the current active member contribution rate.

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Independent Actuary's Certification Letter

Board Members
December 21, 2018
Page 2

The funding policy not only states the overall funding goals and benchmarks for the Plan, but sets the methods and assumptions. In 2017 the funding policy was revised to:

- Amortize the legacy Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2017 over a closed 15-year period on a level dollar basis.
- 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.

In addition, the amortization of the unfunded accrued liability uses the level dollar approach.

For actuarial valuation purposes, Plan assets are determined at Actuarial Value, recognizing 20% of the difference between the expected market value and the actual end of year market value of assets. The purpose of this is to smooth contributions, allowing investment gains and losses to offset each other over time.

We provided most of the information used in the supporting schedules in the Actuarial and Statistical Sections, as well as the Schedule of Funding Progress and the employer contributions shown in the Schedule of Employer Contributions in the Financial Section. We certify that the valuation was performed in accordance with generally accepted actuarial principles and the assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in the subject valuation report.

Respectfully submitted,

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

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

EJK/JTC:bvb

Outline of Actuarial Assumptions and Methods

(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, 2018. Demographic information was collected as of June 30, 2018.

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.

Outline of Actuarial Assumptions and Methods
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			
Years of Service	Merit & Seniority	Inflation & Productivity (Economy)	Total Increase (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					
	Withdrawal (5 years of service & up)[1]		Service Retirement		
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	-

1. Members of any age with less than 5 years of service have withdrawal rates of 18% to 26% for males, and 16% to 23% for females.

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 7 years for females is used for disabled retirees. Mortality improvement is anticipated under these assumptions.

Outline of Actuarial Assumptions and Methods

Police Officers

Salary Increases: Police Officers are assumed to receive longevity increases applied to individual base pay after 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			
Years of Service	Merit & Seniority	Inflation & Productivity (Economy)	Total Increase (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)[1]		Disability Retirement[2]			
Sample Ages	Males	Females	Males	Females	Years of Service	Service Retirement[3]
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.

Outline of Actuarial Assumptions and Methods
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 7 years for females is used for disabled retirees. Mortality improvement is anticipated under these assumptions.

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)[1]	Disability Retirement[2]	Years of Service	Service Retirement[3]
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 7 years for females is used for disabled retirees. Mortality improvement is anticipated under these assumptions.

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.

Provisions as Interpreted for Valuation Purposes

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, eligible 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.

Provisions as Interpreted for Valuation Purposes

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 through 5 years, plus
- 1.75% of Average Salary times service from 6 through 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.

All members receive a minimum benefit of 1.0% of Average Salary plus $25 for each year of service.

Provisions as Interpreted for Valuation Purposes

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.

Provisions as Interpreted for Valuation Purposes

Teachers' Retirement Plan

Survivor Benefits

Spouse or Domestic Partner Only

Eligibility

Death before retirement and married/recognized 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/recognized 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) $7,083* (if hired before 1/1/1980), $6,840* (if hired between 1/1/1980 and 10/31/1996), or $6,661* (if hired on or after 11/1/1996) per child

c) $21,419* (if hired before 1/1/1980), $20,685* (if hired between 1/1/1980 and 10/31/1996), or $20,144* (if hired on or after 11/1/1996) divided by the number of children.

*Survivor benefit amounts are as of March 2018, and are subject to annual inflation adjustments.

Provisions as Interpreted for Valuation Purposes

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 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) $8,656* (if hired before 1/1/1980), $8,336* (if hired between 1/1/1980 and 10/31/1996), or $7,253* (if hired on or after 11/1/1996) per child

c) $26,175* (if hired before 1/1/1980), $25,210* (if hired between 1/1/1980 and 10/31/1996), or $24,436* (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.

*Survivor benefit amounts are as of March 2018, and are subject to annual inflation adjustments.

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.

Provisions as Interpreted for Valuation Purposes

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 Recognized 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 Recognized 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.

Provisions as Interpreted for Valuation Purposes

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, eligible 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.

Provisions as Interpreted for Valuation Purposes

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.

Provisions as Interpreted for Valuation Purposes

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

Benefit
100% of final pay.

Provisions as Interpreted for Valuation Purposes
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) $4,163* (if hired before 11/10/1996) or $4,072* (if hired on or after 11/10/1996) per child

c) $12,488* (if hired before 11/10/1996) or $12,218* (if hired on or after 11/10/1996) divided by the number of children.

*Survivor benefit amounts are as of March 2018, and are subject to annual inflation adjustments.

Provisions as Interpreted for Valuation Purposes

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 Plan				
Valuation Date	Number	Annual Payroll	Annual Average Pay	% increase in Average Pay
September 30, 2018	5,066	$470,749	$92.9	0.08%
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' Retirement Plan				
Valuation Date	Number	Annual Payroll	Annual Average Pay	% increase in Average Pay
September 30, 2018	3,567	$297,283	$83.3	-0.002%
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

Schedule of Active Member Valuation Data
(Dollar amounts in thousands)

Firefighters' Retirement Plan				
Valuation Date	Number	Annual Payroll	Annual Average Pay	% increase in Average Pay
September 30, 2018	1,782	$156,926	$88.0	0.069%
September 30, 2017	1,729	142,370	82.3	0.60
September 30, 2016	1,708	139,672	81.8	0.60
September 30, 2015	1,708	138,828	81.3	1.04
September 30, 2014	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	New Members Added		Members Removed		Changes due to Plan Amendments	Rolls at End of Year		Percentage Increase in Annual Allowances	Average Annual Allowances
		Number	Annual Allowances	Number	Annual Allowances		Number	Annual Allowances		
9/30/2018	Teachers	160	$4,892	69	$977	$1419	3,990	$76,535	7.50%	$19
	Police/Fire	271	13,179	45	909	1,868	3,441	111,824	13.8%	33
9/30/2017	Teachers	96	2,599	79	1,211	1,023	3,899	71,201	3.00%	18
	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
	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
	Police/Fire	284	12,818	39	424	(630)	2,610	70,214	20.13%	27
9/30/2014	Teachers	218	6,079	65	955	597	3,601	58,687	10.80%	16
	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
	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
	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
	Police/Fire	326	6,847	22	238	205	1,856	35,530	23.72%	19
9/30/2010	Teachers	203	4,225	32	337	1,489	2,941	37,254	16.76%	13
	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
	Police/Fire	193	2,639	108	2,727	(563)	1,449	22,605	-2.80%	16

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 10/1/2018	Gain (or Loss) For Year Ending 10/1/2017
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	$1.5	$1.1
Disability Retirements. If disability claims are fewer than assumed, there is a gain. If more claims, a loss.	0.0	0.4
Death-in Service Benefits. If survivor claims are fewer than assumed, there is a gain. If more claims, there is a loss.	(0.6)	0.3
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	6.5	5.9
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	(16.8)	32.7
New Members. Additional unfunded accrued liability will produce a loss.	(31.6)	(32.8)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	18.3	14.2
Death After Retirement. If retirees live longer than assumed, there is a loss. If not as long, a gain.	0.0	8.3
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	6.2	15.8
Gain (or Loss) During Year From Financial Experience	(19.5)	45.9
Non-Recurring Items. Adjustments for plan amendments, assumption changes, method changes or asset transfer to U.S. Treasury.	0.0	(50.0)
Composite Gain (or Loss) During Year	($19.5)	($4.1)

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 10/1/2018	Gain (or Loss) For Year Ending 10/1/2017
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	$15.4	$(1.9)
Disability Retirements. If disability claims are fewer than assumed, there is a gain. If more claims, a loss.	3.2	5.9
Death-in Service Benefits. If survivor claims are fewer than assumed, there is a gain. If more claims, there is a loss.	1.8	1.4
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	11.9	(0.6)
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	23.9	109.1
New Members. Additional unfunded accrued liability will produce a loss.	(22.7)	(33.2)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	70.5	35.9
Death After Retirement. If retirees live longer than assumed, there is a loss. If not as long, a gain.	0.1	(0.6)
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	6.2	(7.3)
Gain (or Loss) During Year From Financial Experience	110.3	108.7
Non-Recurring Items. Adjustments for plan amendments, assumption changes, method changes or asset transfer to U.S. Treasury.	0	(118.0)
Composite Gain (or Loss) During Year	$110.3	($9.3)

Valuation Balance Sheet

Teachers' Retirement Plan
(Dollar amounts in thousands)

As of October 1, 2018

Present and Prospective Assets	
Actuarial value of present assets	$2,139,911
Present value of future members' contributions	278,863
Present value of future employer contributions:	
Normal contributions	296,006
Unfunded accrued liability contributions	161,403
Total prospective employer contributions	457,409
Total present and prospective assets	**$2,876,183**

Actuarial Liabilities	
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits	$1,054,091
Present value of prospective benefits payable on account of inactive members	180,705
Present value of prospective benefits payable on account of present active members:	
Service retirement benefits	1,325,984
Disability retirement benefits	32,268
Survivor benefits	19,499
Separation benefits	263,634
Total present value of prospective benefits payable on account of present active members	1,641,387
Total Actuarial Liabilities	**$2,876,183**

Valuation Balance Sheet

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

As of October 1, 2018

Present and Prospective Assets	
Actuarial value of present assets	$5,848,576
Present value of future members' contributions	362,333
Present value of future employer contributions:	
Normal contributions	1,666,906
Unfunded accrued liability contributions	(624,816)
Total prospective employer contributions	1,041,090
Total present and prospective assets	**$7,252,999**

Actuarial Liabilities	
Present value of benefits payable on account of retired members and survivors of deceased members now drawing retirement benefits	$2,170,287
Present value of prospective benefits on account of inactive members	88,409
Present value of prospective benefits payable on account of present active members:	
Service retirement benefits	4,469,905
Disability retirement benefits	230,591
Survivor benefits	91,144
Separation benefits	202,663
Total present value of prospective benefits payable on account of present active members	4,994,303
Total Actuarial Liabilities	**$7,252,999**

Solvency Test
(Dollar amounts in thousands)

Valuation Date	Aggregate Accrued Liabilities: (1) Active Member Contributions	(2) Retirees, Survivors and Inactive Members	(3) Active Members (Employer Financed Portion)	Reported Assets	Portion of Accrued Liabilities Covered by Actuarial Value of Assets: (1)	(2)	(3)
Teachers' Retirement Plan							
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
10/1/2018	165,629	1,234,769	900,889	2,193,598	100.0	100.0	88.0
Police Officers and Firefighters' Retirement Plan							
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
10/1/2018	267,845	2,258,695	2,697,220	6,015,953	100.0	100.0	100.0

STATISTICAL SECTION

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 Retirement Fund	2018	2017	2016	2015	2014
Additions					
Contributions:					
District Government	$ 59,046	$ 56,781	$ 44,469	$ 39,513	$ 31,636
District employees	40,324	34,364	33,591	31,621	28,751
Total contributions	99,370	91,145	78,060	71,134	60,387
Total net investment (loss) income	94,129	239,554	152,262	(72,647)	132,086
Other income	1,038	907	1,033	385	522
Total (reductions)additions	194,537	331,606	231,355	(1,128)	192,995
Deductions					
Benefit payments	78,430	72,069	68,634	64,076	59,832
Retirement benefits payable to U.S. Treasury	-	-	459	-	-
Refunds*	6,126	6,166	6,205	5,576	5,790
Administrative expenses	4,474	4,721	4,746	4,543	3,787
Total deductions	89,030	82,956	80,044	74,195	69,409
Changes in Net Position	**$ 105,507**	**$ 248,650**	**$ 151,311**	**$ (75,323)**	**$ 123,586**

Teachers Retirement Fund (Continued)	2013	2012	2011	2010	2009
Additions					
Contributions:					
District Government	$ 6,407	$ -	$ -	$ -	$ -
District employees	28,129	28,639	27,739	29,940	24,907
Total contributions	34,536	28,639	27,739	29,940	24,907
Total net investment (loss) income	168,117	190,002	44,364	125,756	(37,875)
Other income	796	672	616	695	793
Total (reductions)additions	203,449	219,313	72,719	156,391	(12,175)
Deductions					
Benefit payments	54,180	48,145	42,532	37,611	33,532
Retirement benefits payable to U.S. Treasury	21,503	-	-	-	-
Refunds*	5,250	5,514	4,060	3,374	5,316
Administrative expenses	3,627	2,880	2,885	2,327	2,340
Total deductions	84,560	56,539	49,477	43,312	41,188
Changes in Net Position	**$ 118,889**	**$ 162,774**	**$ 23,242**	**$ 113,079**	**$ (53,363)**

*Refunds included in Benefit Payments prior to 2009.

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

Police Officers and Firefighters' Retirement Fund	2018	2017	2016	2015	2014
Additions					
Contributions:					
District Government	$ 105,596	$ 145,631	$ 136,115	$ 103,430	$ 110,766
District employees	34,478	33,424	32,785	33,679	32,821
Total contributions	140,074	179,055	168,900	137,109	143,587
Total net investment (loss) income	316,842	655,310	415,157	(187,283)	338,894
Other income	2,356	2,468	2,810	1,012	1,342
Total (reductions)additions	459,272	836,833	586,867	(49,162)	483,823
Deductions					
Benefit payments	106,794	92,537	78,920	63,634	52,784
Retirement benefits payable to U.S. Treasury	-	-	217	-	-
Refunds*	1,580	1,647	2,179	1,396	1,637
Administrative expenses	11,570	12,838	12,918	11,939	9,730
Total deductions	119,944	107,022	94,234	76,969	64,151
Changes in Net Position	**$ 339,328**	**$ 729,811**	**$ 492,633**	**$ (126,131)**	**$ 419,672**

Police Officers and Firefighters' Retirement Fund	2013	2012	2011	2010	2009
Additions					
Contributions:					
District Government	$ 96,314	$ 116,700	$ 127,200	$ 132,300	$ 106,000
District employees	30,581	30,398	30,474	31,607	29,900
Total contributions	126,895	147,098	157,674	163,907	135,900
Total net investment (loss) income	423,581	452,881	81,973	270,277	(58,228)
Other income	2,047	1,584	1,435	1,555	1,680
Total (reductions)additions	552,523	601,563	241,082	435,739	79,352
Deductions					
Benefit payments	45,656	38,924	30,766	27,872	24,569
Retirement benefits payable to U.S. Treasury	9,391	-	-	-	-
Refunds*	1,960	1,534	1,913	1,974	1,611
Administrative expenses	8,913	6,718	6,678	5,145	4,904
Total deductions	65,920	47,176	39,357	34,991	31,084
Changes in Net Position	**$ 486,603**	**$ 554,387**	**$ 201,725**	**$ 400,748**	**$ 48,268**

*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	2018	2017	2016	2015	2014
Total pension liability					
Service Cost	$ 67,877	$ 65.911	$ 61,599	$ 53,297	$ 50,409
Interest	137,704	131,657	124,370	118,378	112,204
Benefit changes	-	-	-	-	-
Difference between expected and actual experience	(19,505)	(37,230)	2,656	(7,246)	-
Changes of assumptions	-	14,106	-	-	-
Benefits payments	(78,430)	(72.069)	(69,093)	(64,076)	(59,832)
Refunds of contributions	(6,126)	(6,166)	(6,205)	(5,576)	(5,790)
Net change in total pension liability	101,520	96,209	113,327	94,777	96,991
Total pension liability - beginning of year	2,160,347	2,064,138	1,950,811	1,856,034	1,759,043
Total pension liability - end of year (a)	2,261,867	2,160,347	2,064,138	1,950,811	1,856,034
Plan net position					
Contributions - employer	59,046	56,781	44,469	39,513	31,636
Contributions - member	40,324	34,364	33,591	31,621	28,751
Net investment income	94,129	239,554	152,262	(72,647)	132,086
Benefits payments	(78,430)	(72,609)	(69,093)	(64,076)	(59,832)
Administrative expense	(4,474)	(4,721)	(4,746)	(4,543)	(3,787)
Refunds of contributions	(6,126)	(6,166)	(6,205)	(5,576)	(5,790)
Other	1,038	907	1,033	385	522
Net change in plan net position	105,507	248,650	151,311	(75,323)	123,586
Plan net position - beginning of year	2,070,599	1,821,949	1,670,638	1,745,961	1,622,375
Plan net position - end of year (b)	2,176,106	2,070,599	1,821,949	1,670,638	1,745,961
Net pension liability end of year (a - b)	**$ 85,761**	**$ 89,748**	**$ 242,189**	**$ 280,173**	**$ 110,073**
Ratio of plan net position to total pension liability (b / a)	96.21%	95.85%	88.27%	85.64%	94.07%
Covered employee payroll	$ **470,749**	**$ 447,762**	**$ 438,079**	**$ 417,090**	**$ 378,926**
Net pension liability as a percentage of covered-employee payroll	18.22%	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	2018	2017	2016	2015	2014
Total pension liability					
Service Cost	$ 182,641	$ 196,629	$ 198,020	$ 192,114	$ 176,102
Interest	318,719	300,626	282,285	257,943	235,097
Benefit changes	-	-	-	-	-
Difference between expected and actual experience	(84,452)	(188,549)	(106,840)	(2,477)	-
Changes of assumptions	-	67,256	-	-	-
Benefits payments	(106,794)	(92,537)	(79,137)	(63,634)	(52,784)
Refunds of contributions	(1,580)	(1,647)	(2,179)	(1,396)	(1,637)
Net change in total pension liability	**308,534**	**281,778**	**292,149**	**382,550**	**356,778**
Total pension liability - beginning of year	**4,957,340**	**4,675,562**	**4,383,413**	**4,000,863**	**3,644,085**
Total pension liability - end of year (a)	**5,265,874**	**4,957,340**	**4,675,562**	**4,383,413**	**4,000,863**
Plan net position					
Contributions - employer	105,596	145,631	136,115	103,430	110,766
Contributions - member	34,478	33,424	32,785	33,679	32,821
Net investment income	316,842	655,310	415,157	(187,283)	338,894
Benefits payments	(106,794)	(92,537)	(79,137)	(63,634)	(52,784)
Administrative expense	(11,570)	(12,838)	(12,918)	(11,939)	(9,730)
Refunds of contributions	(1,580)	(1,647)	(2,179)	(1,396)	(1,637)
Other	2,356	2,468	2,810	1,012	1,342
Net change in plan net position	**339,328**	**729,811**	**492,633**	**(126,131)**	**419,672**
Plan net position - beginning of year	**5,684,442**	**4,954,631**	**4,461,998**	**4,588,129**	**4,168,457**
Plan net position - end of year (b)	**6,023,770**	**5,684,442**	**4,954,631**	**4,461,998**	**4,588,129**
Net pension liability end of year (a - b)	**$ (757,896)**	**$ (727,102)**	**$ (279,069)**	**$ (78,585)**	**$ (587,266)**
Ratio of plan net position to total pension liability (b / a)	**114.39%**	**114.67%**	**105.97%**	**101.79%**	**114.68%**
Covered employee payroll	$ 454,209	$ 441,904	$ 438,114	$ 446,201	$ 426,135
Net pension liability as a percentage of covered-employee payroll	**-166.86%**	**-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
2018	$12,418	$753	$882	$338	$14,391
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

*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
2018	5.455%
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)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Personal services										
Salaries	$ 6,420	$ 6,513	$ 6,181	$ 4,760	$ 4,401	$ 3,955	$ 4,114	$ 3,907	$ 3,263	$ 2,889
Fringe benefits	1,832	1,613	1,318	1,301	1,244	1,135	954	1,030	907	716
Total personal services	8,252	8,126	7,499	6,061	5,645	5,090	5,068	4,937	4,170	3,605
Non-personal services										
Office supplies	94	107	99	126	115	187	157	166	120	120
Telephone	96	107	91	71	56	50	49	14	13	17
Rent	1,824	1,800	1,754	1,634	1,554	1,513	1,465	1,444	1,419	1,379
Office support	-	-	-	-	-	-	1	68	114	60
Travel	194	218	209	206	181	177	148	38	45	67
Professional fees	3,666	5,263	6,379	6,225	4,292	3,790	3,069	2,867	2,329	2,371
Postage	66	60	27	29	25	138	29	38	10	73
Printing	78	15	53	14	15	91	33	35	35	19
Insurance	149	149	151	150	121	114	121	129	131	111
Dues and memberships	40	42	41	32	34	28	26	37	51	60
Audit costs	191	72	63	85	49	76	71	64	66	66
Actuarial fees	170	138	180	153	66	146	153	164	108	93
Legal fees	532	590	337	524	365	529	292	30	37	246
Investment fees	13,076	15,037	12,862	11,377	12,788	6,587	7,753	10,907	12,234	11,138
Contractual services (STAR)*	1,808	1,866	1,697	1,077	872	941	-	-	-	-
Equipment and rental	199	261	376	966	995	619	179	734	65	63
Depreciation	-	-	-	-	-	3	6	6	6	18
Total non-personal services	22,182	25,726	24,320	22,676	21,528	14,989	13,552	16,741	16,783	15,901
Total administrative expenses	**$30,435**	**$33,852**	**$31,819**	**$28,738**	**$27,173**	**$20,079**	**$18,620**	**$21,678**	**$20,953**	**$19,506**

*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)

	Teachers' Retirement Fund		Police Officers and Firefighters' Retirement Fund		Total Fund	
Year Ending	Annual Required Contribution	Percentage Contributed	Annual Required Contribution	Percentage Contributed	Annual Required Contribution	Percentage Contributed
September 30, 2018	$59.0	100.0%	$105.6	100.0%	$164.6	100.0%
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

Schedule of Refunds

	Teachers' Retirement Fund	Police Officers and Firefighters' Retirement Fund	Total
Backpay settlement	$ 1,617	$ -	$ 1,617
Death	100,433	363,704	464,137
Declaration of Intent to Retire	1,468,790	0	1,468,790
Impact	499,265	0	499,265
Licensure	102,903	0	102,903
Labor Management Employee Relations	13,913	0	13,913
Purchase of Service	810	9,245	10,055
Position change/Reassignment/Converted	84,236	68,459	152,695
Promotion	12,577	0	12,577
Resignation	2,838,139	957,173	3,795,312
Separated	220,371	0	220,371
Termination	782,885	181,512	964,397
Total	**$ 6,125,940**	**$ 1,580,093**	**$ 7,706,033**

Schedule of Annual Salaries and Benefits
(Dollar amounts in millions)

	Annual Salaries of Active Members			Annual Retirement Benefits for Retirees & Beneficiaries		
Fiscal Year	Teachers	Police Officers and Firefighters	Total	Teachers	Police Officers and Firefighters	Total
2018	$471	$454	$925	$77	$112	$189
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 Members, Beneficiaries, Disabled			
Fiscal Year	Teachers	Police Officers and Firefighters	Subtotal	Teachers	Police Officers and Firefighters	Subtotal	Total
2018	5,066	5,349	10,415	3,990	3,441	7,431	17,846
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

Schedule of Average Benefit by Type

Teachers' Retirement Plan							
		Years of Credited Service					
Retirement Effective Dates		5-9	10-14	15-19	20-24	25-30	30+
	Average Monthly Benefit	$ 959	$ 2,152	$ 2,727	$ 3,444	$ 4,619	$ 5,832
2018	Average Final Average Salary	$ 92,306	$ 91,506	$ 95,038	$ 97,624	$ 102,000	$ 103,292
	Number of Active Recipients	5	16	22	26	35	30
	Average Monthly Benefit	$ 938	$ 2,112	$ 2,685	$ 3,371	$ 4,520	$ 5,707
2017	Average Final Average Salary	$ 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	Average Final Average Salary	$ 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	Average Final Average Salary	$ 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	Average Final Average Salary	-	-	-	-	-	-
	Number of Active Recipients	-	-	-	-	-	-
	Average Monthly Benefit	-	-	-	-	-	-
2009	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						
Retirement Effective Dates		5-9	10-14	15-19	20-24	25-30	30+	
2018	Average Monthly Benefit	$ 3,672	$ 3,115	$ 2,605	$ 4,221	$ 5,562	$ 6,954
	Average Final Average Salary	$ 54,499	$ 69,691	$ 71,425	$ 86,720	$ 94,770	$ 100,699
	Number of Active Recipients	10	6	5	4	251	54
2017	Average Monthly Benefit	$ 3,596	$ 2,918	$ 2,469	$ 4,070	$ 5,451	$ 6,811
	Average Final Average Salary	$ 54,499	$ 69,463	$ 72,552	$ 83,882	$ 94,800	$ 100,699
	Number of Active Recipients	10	7	6	6	254	54
2016	Average Monthly Benefit	$ 3,701	$ 2,862	$ 2,707	$ 3,987	$ 5,347	$ 6,677
	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
2015	Average Monthly Benefit	$ 2,363	$ 3,407	$ 3,471	$ 3,860	$ 5,526	$ 6,922
	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
2014	Average Monthly Benefit	$ 2,343	$ 4,168	$ 1,950	$ 3,776	$ 5,241	$ 6,403
	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
2013	Average Monthly Benefit	$ 2,773	$ 2,333	-	$ 2,561	$ 5,439	$ 6,906
	Average Final Average Salary	$ 40,134	$ 64,784	-	$ 77,175	$ 94,464	$ 103,254
	Number of Active Recipients	4	4	-	4	97	48
2012	Average Monthly Benefit	$ 1,795	$ 2,686	$ 4,404	$ 3,622	$ 5,409	$ 6,504
	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
2011	Average Monthly Benefit	$ 2,195	$ 25,164	$ 3,048	$ 3,090	$ 5,600	$ 6,679
	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
2010	Average Monthly Benefit	-	-	-	-	-	-
	Average Final Average Salary	-	-	-	-	-	-
	Number of Active Recipients	-	-	-	-	-	-
2009	Average Monthly Benefit	-	-	-	-	-	-
	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 Plan												
Monthly Benefit Payment	Number of Members by Retirement Type							Number of Members by Option Selected				
	A	B	D	E	F	G	Grand Total	1	2	3	4	Grand Total
$1-250	10			23	2	2	37	17	19		1	37
$251-500	44			14	4	1	63	46	15	1	1	63
$501-750	65	2	1	21	10		99	70	25	1	3	99
$751-1,000	79	6	2	16	4	2	109	80	23	3	3	109
$1,001-1,250	62	5	2	13	13	2	97	62	29	1	5	97
$1,251-1,500	68	2	5	27	26	5	133	78	35	3	17	133
$1,501-1,750	71	12	14	30	9		136	80	49	1	6	136
$1,751-2,000	77	8	19	32	8	1	145	99	40	2	4	145
$2,001-3,000	513	50	142	113	16	2	836	599	231	4	2	836
$3,001-4,000	1232	114	74	37	3		1460	1078	371	7	4	1460
$4,001-5,000	1625	97	11	2			1735	1370	361	4		1735
$5,001-6,000	724	38	2				764	589	173	2		764
$6,001-7,000	232	15		1			248	196	52			248
$7,001-8,000	73	4		1			78	65	13			78
$8,001-9,000	37	1					38	33	5			38
$9,001-10,000	6	1					7	5	2			7
over $10,000	4						4	3	1			4
Grand Total	**4922**	**355**	**272**	**330**	**95**	**15**	**5989**	**4470**	**1444**	**29**	**46**	**5989**

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 Benefit	Number of Members by Retirement Type						
	A	C	D	E	F	G	Grand Total
$1-250					1	4	5
$251-500	1			37	25	4	67
$501-750	7			5		23	35
$751-1,000	4			3	2	30	39
$1,001-1,250	3		1	2	1	31	38
$1,251-1,500	3			2		33	38
$1,501-1,750	6	2	10	3	2	29	52
$1,751-2,000	10	32	12	27	2	27	110
$2,001-3,000	119	140	134	1234	23	69	1719
$3,001-4,000	910	256	45	281	11	18	1521
$4,001-5,000	1153	405	47	52	3		1660
$5,001-6,000	1197	95	10	18	1	3	1324
$6,001-7,000	749	35	4	4	1		793
$7,001-8,000	418	15	1	1	1		436
$8,001-9,000	199	1		1			201
$9,001-10,000	91	3			1		95
over $10,000	138	2					140
Grand Total	**5008**	**986**	**264**	**1670**	**74**	**271**	**8273**

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

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ADDITIONAL DISCLOSURES

Schedules of Transactions - Board of Trustees

	Expenditures	
Trustee Name	2018	2017
Janice Adams	$ -	$ -
Lyle Blanchard	9,966	9,989
Barbara Blum	0	3,030
Joseph Bress	5,587	4,989
Joseph Clark	9,932	9,932
Mary Collins	9,897	9,946
Gary Hankins	9,276	9,677
Darrick Ross	9,932	9,678
Nathan Saunders	9,983	9,966
Edward Smith	8,069	9,656
Thomas Tippett	6,345	6,518
Michael Warren	0	8,261
Lenda Washington	4,759	9,644
Total	$ 83,747	$ 101,286

Names and Addresses of the Board of Trustees

Schedule of Trustee Sponsored Activities

No members of the DCRB Board of Trustees attended events sponsored by outside entities, in either FY 2017 or FY 2018.

Acknowledgments and Credits

On the Cover, clockwise:
DC Public School Classroom: Photograph by John McDonnell, courtesy, The Washington Post
District of Columbia (DC) Flag, courtesy NBC4 Washington
Fire Hazmat unit, photo by DCRB staff
Police officers, courtesy Metropolitan Police Department

Page 1, Introductory Section:
Teacher and students, courtesy DC Public Schools
Metropolitan Police Department Recruit graduation – 2016, Courtesy, Metropolitan Police Department
Battalion Fire Chief Edward Smith, outside The John Wilson Building, photo by DCRB staff.

Page 15, Financial Section:
Fire engines near the U.S. Capitol: Courtesy, Fire and EMS Department
Police vehicles, photo by DCRB staff
Roosevelt High School building: Courtesy, DC Public Schools

Page 59, Investment Section:
DC Firefighter in response, courtesy Fire and EMS Department
Police officers, photo by Metropolitan Police Department
Dunbar High School student hall, courtesy DC Public Schools

Page 73, Actuarial Section:
DC Police Logo, courtesy Metropolitan Police Department
Police vehicles, photo by 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 101, Statistical Section:
Police motorcycle motorcade, courtesy Metropolitan Police Department
Student at Randle Highlands Elementary, courtesy DC Public Schools
Fire house and fire engine, photo by DCRB staff

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