

# District of Columbia Teachers' and Police Officers and Firefighters' Retirement Funds

Financial Statements and Schedules  
(with Independent Auditors' Report thereon)

As of and for the Years Ended September 30, 2018 and 2017



**DISTRICT OF COLUMBIA  
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'  
RETIREMENT FUNDS  
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## 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) (the Funds), 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 opinions.

### ***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Funds 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 Funds 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 Funds' 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.

**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 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 solely 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 the effectiveness of the Funds' 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 Funds' internal control over financial reporting and compliance.



**CliftonLarsonAllen LLP**

Baltimore, Maryland  
December 28, 2018

**DISTRICT OF COLUMBIA  
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'  
RETIREMENT FUNDS  
MANAGEMENT'S DISCUSSION AND ANALYSIS  
SEPTEMBER 30, 2018 AND 2017**

## **INTRODUCTION**

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

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

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

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

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

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

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

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

## **ANALYSIS OF FINANCIAL INFORMATION**

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

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

Additions to net position are comprised of employer contributions, employee contributions, net investment income, and other income. These additions for fiscal year 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.

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**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.

**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.

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**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.

**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 Combining Statements of Fiduciary Net Position**

*(Dollars in thousands)*

	2018	2017	2016	2018 Percent Change	2017 Percent Change
<b>Assets</b>					
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	<u>8,212,226</u>	<u>7,827,317</u>	<u>6,794,337</u>	4.9	15.2
<b>Liabilities</b>					
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	<u>12,350</u>	<u>72,276</u>	<u>17,757</u>	(82.9)	307.0
Net Position Restricted for Pensions	<u>\$8,199,876</u>	<u>\$7,755,041</u>	<u>\$6,776,580</u>	5.7 %	14.4 %

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**Condensed and Combining Statements of Changes in Fiduciary Net Position**

*(Dollars in thousands)*

	<u>2018</u>	<u>2017</u>	<u>2016</u>	2018 Percent Change	2017 Percent Change
<b>Additions</b>					
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)	<u>653,809</u>	<u>1,168,439</u>	<u>818,222</u>	(44.0)	42.8
<b>Deductions</b>					
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	<u>208,974</u>	<u>189,978</u>	<u>174,278</u>	10.0	9.0
<b>Change In Net Position</b>	<u>\$ 444,835</u>	<u>\$ 978,461</u>	<u>\$ 643,944</u>	(54.5)%	51.9 %

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**FINANCIAL HIGHLIGHTS**

The Teachers' Retirement Fund financial highlights for fiscal year 2018 are as follows:

- Net position restricted for pensions as of September 30, 2018 was \$2.2 billion, an increase of \$105.5 million or 5.1% over fiscal year 2017.
- Investment income, net of investment expenses, for fiscal year 2018 was \$94.1 million, a time-weighted return of 5.4%. Investment income, net of investment expenses, for fiscal year 2017 was \$239.5 million, a return of 9.3%.
- Total additions for fiscal year 2018 were \$194.5 million, a decrease of \$137.1 million over fiscal year 2017. In fiscal year 2017, there was a total increase of \$100.2 million. Employer contributions for fiscal year 2018 were \$59.0 million, an increase of \$2.3 million or 4% over fiscal year 2017. Teachers' Plan member contributions for fiscal year 2018 were \$40.3 million, an increase of \$6.0 million or 17.3% over fiscal year 2017. Other income for fiscal year 2018 was \$1.0 million, which increased \$0.1 million as compared to fiscal year 2017 amount of \$0.9 million.
- Total deductions for fiscal year 2018 were \$89.0 million, an increase of \$6.0 million or 7.3% over fiscal year 2017. Pension benefit payments for fiscal year 2018 were \$78.4 million, an increase of \$6.4 million or 8.8% over fiscal year 2017. Refunds of member contributions for fiscal year 2018 were \$6.1 million, a decrease of \$40 thousand or -0.6% as compared to fiscal year 2017. Administrative expenses for fiscal year 2018 were \$4.5 million, which was a decrease of \$(247) thousand or -5.2% as compared to fiscal year 2017
- The Board's funding objective is to meet long-term pension benefit obligations. As of October 1, 2018, the date of the latest actuarial valuation, the TRF's ratio of plan net position to total pension liability (at September 30, 2018) was 96.21%. In general, this means that for each dollar's worth of future pension liability, the TRF has accumulated \$0.96 to meet that obligation. This ratio increased 0.36% over the prior year funded ratio of 95.85%.

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The Police Officers and Firefighters' Retirement Fund financial highlights for fiscal year 2018 are as follows:

- Net position restricted for pensions as of September 30, 2018 was \$6.0 billion, an increase of \$339.3 million or 6.0% over fiscal year 2017.
- Investment income, net of investment expenses, for fiscal year 2018 was \$316.8 million, a return of 5.4%. Investment income, net of investment expenses, for fiscal year 2017 was \$655.3 million, a return of 9.3%.
- Total additions for fiscal year 2018 were \$459.2 million, a decrease of \$377.6 million over fiscal year 2017. In fiscal year 2017, there was a total increase of \$250.0 million. Employer contributions for fiscal year 2018 were \$105.6 million, a decrease of \$40.0 million or -27.5% as compared to the fiscal year 2017. Police and Firefighters' Plan member contributions for fiscal year 2018 were \$34.5 million, an increase of \$1.1 million or 3.2% over fiscal year 2017. Other income for fiscal year 2018 was \$2.4 million, which decreased \$0.1 million as compared to the fiscal year 2017 amount of \$2.5 million.
- Total deductions for fiscal year 2018 were \$119.9 million, an increase \$12.9 million or 12.1% over fiscal year 2017. Pension benefit payments for fiscal year 2018 were \$106.8 million, an increase of \$14.3 million or 15.4% over fiscal year 2017. Refunds of member contributions for fiscal year 2018 were \$1.6 million, a decrease of \$67.0 thousand or -4.1% over fiscal year 2017. Administrative expenses for fiscal year 2018 were \$11.6 million, a decrease of \$1.3 million or 9.9% as compared to fiscal year 2017.
- The Board's funding objective is to meet long-term pension benefit obligations. As of October 1, 2018, the date of the latest actuarial valuation, the POFRF's ratio of plan net position to total pension liability (at September 30, 2018) was 114.39%. In general, this means that for each dollar's worth of future pension liability, the POFRF has accumulated about \$1.14 to meet that obligation. This ratio decreased 0.27% over the prior year ratio of 114.67%.

**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 7<sup>th</sup> Street, NW, 2<sup>nd</sup> Floor, Washington, D.C. 20001

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(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
	<b>ASSETS</b>					
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
<b>LIABILITIES</b>						
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
<b>Net Position Restricted for Pensions</b>	<b>\$2,176,106</b>	<b>\$6,023,770</b>	<b>\$8,199,876</b>	<b>\$2,070,599</b>	<b>\$5,684,442</b>	<b>\$7,755,041</b>

See accompanying Notes to Basic Combining Financial Statements.

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(DOLLAR AMOUNTS IN THOUSANDS)**

	2018			2017		
	Police		Total	Police		Total
	Teachers' Retirement Fund	Officers and Fire Fighters' Retirement Fund		Teachers' Retirement Fund	Officers and Fire Fighters' Retirement Fund	
<b>Additions</b>						
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	<u>99,370</u>	<u>140,074</u>	<u>239,444</u>	<u>91,145</u>	<u>179,055</u>	<u>270,200</u>
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	<u>98,142</u>	<u>327,220</u>	<u>425,362</u>	<u>243,934</u>	<u>667,223</u>	<u>911,157</u>
Less:						
Investment Expenses	4,013	10,378	14,391	4,380	11,913	16,293
Net Investment Income	<u>94,129</u>	<u>316,842</u>	<u>410,971</u>	<u>239,554</u>	<u>655,310</u>	<u>894,864</u>
Other Income	1,038	2,356	3,394	907	2,468	3,375
Total Additions	<u>194,537</u>	<u>459,272</u>	<u>653,809</u>	<u>331,606</u>	<u>836,833</u>	<u>1,168,439</u>
<b>Deductions</b>						
Annuitant Benefit Payments	78,430	106,794	185,224	72,069	92,537	164,606
Retirement Benefits Payable to U.S. Treasury	-	-	-	-	-	-
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	<u>89,030</u>	<u>119,944</u>	<u>208,974</u>	<u>82,956</u>	<u>107,022</u>	<u>189,978</u>
Change in Net Position	105,507	339,328	444,835	248,650	729,811	978,461
<b>Net Position Restricted for</b>						
	<u>2,070,599</u>	<u>5,684,442</u>	<u>7,755,041</u>	<u>1,821,949</u>	<u>4,954,631</u>	<u>6,776,580</u>
<b>End of Year</b>	<u>\$2,176,106</u>	<u>\$6,023,770</u>	<u>\$8,199,876</u>	<u>\$2,070,599</u>	<u>\$5,684,442</u>	<u>\$7,755,041</u>

See accompanying Notes to Basic Combining Financial Statements.

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**NOTE 1 ORGANIZATION**

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

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

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

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

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

**NOTE 2 FUND ADMINISTRATION AND DESCRIPTION**

**District of Columbia Retirement Board**

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

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**NOTE 2 FUND ADMINISTRATION AND DESCRIPTION (CONTINUED)**

**District of Columbia Retirement Board (Continued)**

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. 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.

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**NOTE 2 FUND ADMINISTRATION AND DESCRIPTION (CONTINUED)**

**Teachers' Retirement Fund (Continued)**

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.)).

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**NOTE 2 FUND ADMINISTRATION AND DESCRIPTION (CONTINUED)**

**Police Officers and Fire Fighters' Retirement Fund (Continued)**

***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.

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**NOTE 2 FUND ADMINISTRATION AND DESCRIPTION (CONTINUED)**

**Police Officers and Fire Fighters' Retirement Fund (Continued)**

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

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

Members with a 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.

**Participant Data**

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

TRF	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 Participants	10,485	10,428	10,199
POFRF	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 Participants	9,105	8,867	8,655

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**NOTE 2 FUND ADMINISTRATION AND DESCRIPTION (CONTINUED)**

**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.

**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.

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**NOTE 3 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)**

**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.

**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.

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**NOTE 4 INVESTMENTS (CONTINUED)**

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

	2018	2017
	(Dollars in Thousands)	
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 based on a month-end net flow weighting method, were as follows:

	FY 2018	FY 2017
Total Portfolio	5.455%	12.785%

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**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-
	<u>\$ 2,549,785</u>	<u>100.00 %</u>		
Total Fixed Income				

\* Using quality ratings provided by Standard & Poor's

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**NOTE 4 INVESTMENTS (CONTINUED)**

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	-	A-1+
CMBS	16,739	0.79	5.32	AA+
CMO	860	0.04	1.40	AA+
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+
US Treasury	817,360	38.45	7.13	AA+
	<u>\$ 2,125,703</u>	<u>100.00 %</u>		
Total Fixed Income				

\* 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.

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**NOTE 4 INVESTMENTS (CONTINUED)**

**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.

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:

	Asset Class				
	Cash	Equities	Fixed Income	Private Equity	Total
	(Dollars in Thousands)				
Canadian Dollar	\$ -	\$ -	\$ -	\$ 6,036	\$ 6,036
British Sterling	-	-	-	8,371	8,371
Swiss Franc	-	-	-	109	109
Euro	199	-	-	58,084	58,283
Total Foreign	<u>\$ 199</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 72,600</u>	<u>\$ 72,799</u>

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:

	Asset Class				
	Cash	Equities	Fixed Income	Private Equity	Total
	(Dollars in Thousands)				
Canadian Dollar	\$ -	\$ 4,479	\$ -	\$ -	\$ 4,479
Euro	1,582	-	-	35,101	36,683
Total Foreign	<u>\$ 1,582</u>	<u>\$ 4,479</u>	<u>\$ -</u>	<u>\$ 35,101</u>	<u>\$ 41,162</u>

**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.

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**NOTE 4 INVESTMENTS (CONTINUED)**

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.

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 A1 or P1 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.

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**NOTE 4 INVESTMENTS (CONTINUED)**

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

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

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

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

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

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

The District Retirement Funds may also hold derivative instruments indirectly by participating in pooled, commingled, or short-term funds that hold derivatives. Information regarding any risks associated with these holdings is not generally available. There were no derivatives as of September 30, 2018 or as of September 30, 2017.

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**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 26 and 27 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.

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**NOTE 4 INVESTMENTS (CONTINUED)**

**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 27 and 28.

**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 27, 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.

	Investments measured at Fair Value (Dollars in 000s)			
	September 30, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by Fair Value Level</b>				
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	<u>627,557</u>	<u>\$ 346,072</u>	<u>\$ 281,485</u>	<u>\$ -</u>
<b>Investments Measured at the Net Asset Value (NAV)</b>				
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	<u>7,516,678</u>			
Total Investments	<u>\$ 8,144,235</u>			

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**NOTE 4 INVESTMENTS (CONTINUED)**

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
			3 times per	
International Equities	2,149,344	-	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	<u>\$ 7,516,678</u>	<u>\$ 898,693</u>		

Investments measured at Fair Value (Dollars in 000s)

	September 30, 2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Investments by fair value level</b>				
Domestic equity	\$ 278,468	\$ 278,468	\$ -	\$ -
Fixed income	304,700	-	304,700	-
Private equity	-	-	-	-
Total investments by fair value level	<u>\$ 583,168</u>	<u>\$ 278,468</u>	<u>\$ 304,700</u>	<u>\$ -</u>

**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	<u>\$ 7,092,249</u>
<b>Total investments</b>	<u>\$ 7,675,417</u>

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**NOTE 4 INVESTMENTS (CONTINUED)**

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

	September 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	<u>\$ 7,092,249</u>	<u>\$ 850,272</u>		

**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:

	2018		2017	
	TRF	POFRF	TRF	POFRF
	<i>(Dollars in thousands)</i>			
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)	<u>\$ 85,761</u>	<u>\$ (757,896)</u>	<u>\$ 89,748</u>	<u>\$ (727,102)</u>
Ratio of Fiduciary Net Position to Total Pension Liability (Asset)	96.21%	114.39%	95.85%	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:

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**NOTE 5 NET PENSION LIABILITY (ASSET) (CONTINUED)**

**Teachers' Retirement Fund**

Inflation	3.5%
Salary increases	5.50% - 8.63%, including wage inflation of 4.25%
Investment rate of return	6.5%, 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%
Salary increases	4.25% - 9.98%, including wage inflation of 4.25%
Investment rate of return	6.5%, 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.

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**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:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
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	<u>100.0 %</u>	

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**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/(Asset)	\$ 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/(Asset)	\$ 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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SCHEDULES OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS  
YEARS ENDED SEPTEMBER 30  
(DOLLAR AMOUNT IN THOUSANDS)**

**Teachers' Retirement Fund**

	2018	2017	2016	2015	2014
<b>Total Pension Liability</b>					
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
<b>Plan Net Position</b>					
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%

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YEARS ENDED SEPTEMBER 30  
(DOLLAR AMOUNT IN THOUSANDS)**

**Police and Firefighters' Retirement Fund**

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
<b>Total Pension Liability</b>					
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	<u>308,534</u>	<u>281,778</u>	<u>292,149</u>	<u>382,550</u>	<u>356,778</u>
Total Pension Liability - Beginning	4,957,340	4,675,562	4,383,413	4,000,863	3,644,085
Total Pension Liability - Ending (a)	<u>5,265,874</u>	<u>4,957,340</u>	<u>4,675,562</u>	<u>4,383,413</u>	<u>4,000,863</u>
<b>Plan Net Position</b>					
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	<u>339,328</u>	<u>729,811</u>	<u>492,633</u>	<u>(126,131)</u>	<u>419,672</u>
Plan Net Position - Beginning	5,684,442	4,954,631	4,461,998	4,588,129	4,168,457
Plan Net Position - Ending (b)	<u>6,023,770</u>	<u>5,684,442</u>	<u>4,954,631</u>	<u>4,461,998</u>	<u>4,588,129</u>
Net Pension Liability (Asset) - Ending (a) - (b)	<u>\$ (757,896)</u>	<u>\$ (727,102)</u>	<u>\$ (279,069)</u>	<u>\$ (78,585)</u>	<u>\$ (587,266)</u>
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)%

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(DOLLAR AMOUNT IN THOUSANDS)**

**Teachers' Retirement Fund**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially Determined Employer Contribution	\$ 59,046	\$ 56,781	\$ 44,469	\$ 39,513	\$ 31,636	\$ 6,407	\$ -	\$ -	\$ -	\$ -
Actual Employer Contributions	59,046	56,781	44,469	39,513	31,636	6,407	-	-	-	-
Annual Contribution Deficiency (Excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$ 470,749	\$ 447,762	\$ 438,079	\$ 417,090	\$ 378,926	\$ 369,071	\$ 381,235	\$ 384,455	\$ 337,516	\$ 336,600
Actual Contributions as a Percentage of Covered Payroll	12.54%	12.68%	10.15%	9.47%	8.35%	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	3.50%
Salary increases	4.25% 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)

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YEARS ENDED SEPTEMBER 30  
(DOLLAR AMOUNT IN THOUSANDS)**

**Police and Firefighters' Retirement Fund**

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially Determined Employer Contribution	\$ 105,596	\$ 145,631	\$ 136,115	\$ 103,430	\$ 110,766	\$ 96,314	\$ 116,700	\$ 127,200	\$ 132,300	\$ 106,000
Actual Employer Contributions	105,596	145,631	136,115	103,430	110,766	96,314	116,700	127,200	132,300	106,000
Annual Contribution Deficiency (Excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$ 454,209	\$ 441,904	\$ 438,114	\$ 446,201	\$ 426,135	\$ 413,380	\$ 414,877	\$ 421,221	\$ 423,854	\$ 436,100
Actual Contributions as a Percentage of Covered Payroll	23.25%	32.96%	31.07%	23.18%	25.99%	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	3.50%
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)

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YEARS ENDED SEPTEMBER 30**

Annual Money-Weighted Rates of Return, based on a month-end net flow weighting method, as calculated by the custodian.

	2018	2017	2016	2015	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.

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YEARS ENDED SEPTEMBER 30, 2018 AND 2017**

	2018	2017
<b>Personal Services</b>		
Salaries	\$ 6,419,916	\$ 6,512,514
Fringe Benefits	1,832,363	1,613,022
Total Personal Services	8,252,279	8,125,536
<b>Nonpersonal Services</b>		
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 and 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 Nonpersonal 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

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	<u>2018</u>	<u>2017</u>
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	<u>\$ 14,390,879</u>	<u>\$ 16,292,755</u>

\* 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.

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SCHEDULES OF PAYMENTS TO CONSULTANTS  
YEARS ENDED SEPTEMBER 30, 2018 AND 2017**

<u>Professional/Consultant</u>	<u>Nature of Service</u>	<u>FY 2018</u>	<u>FY 2017</u>
<b><u>Administrative Consultants</u></b>			
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
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

**DISTRICT OF COLUMBIA  
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'  
RETIREMENT FUNDS  
SUPPLEMENTARY INFORMATION  
SCHEDULES OF PAYMENTS TO CONSULTANTS (CONTINUED)  
YEARS ENDED SEPTEMBER 30, 2018 AND 2017**

<u>Professional/Consultant</u>	<u>Nature of Service</u>	<u>FY 2018</u>	<u>FY 2017</u>
<b><u>Administrative Consultants (Continued)</u></b>			
The New berry 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
New lin LLC	Accting and Internal Audit Consulting	-	5,537
Fahmida Chow dhury	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 Framew orks, 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
<b><u>Investment Consulting</u></b>			
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



**INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER  
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS  
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED  
IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS***

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

We have audited, in accordance with the 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, the financial statements of the District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund (collectively, the Funds), which comprise the combining statement of fiduciary net position as of September 30, 2018, and the related combining statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated December 28, 2018.

**Internal Control Over Financial Reporting**

In planning and performing our audit of the financial statements, we considered the Funds' internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Funds' internal control. Accordingly, we do not express an opinion on the effectiveness of the Funds' internal control.

*A deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. *A material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the Funds' financial statements will not be prevented, or detected and corrected on a timely basis. *A significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

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

### **Compliance and Other Matters**

As part of obtaining reasonable assurance about whether the Funds' financial statements are free from material misstatement, we performed tests of their compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

### **Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the result of that testing, and not to provide an opinion on the effectiveness of the Funds' internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Funds' internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

A handwritten signature in black ink that reads "CliftonLarsonAllen LLP". The signature is written in a cursive, flowing style.

**CliftonLarsonAllen LLP**

Baltimore, Maryland  
December 28, 2018