

District of Columbia Teachers' and Police Officers and Firefighters' Retirement Fund

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

As of and for the Years Ended September 30, 2017 and 2016



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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), as of September 30, 2017 and 2016, and the related combining statements of changes in fiduciary net position for the years then ended, and the related notes to the 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 District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund as of September 30, 2017 and 2016, 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, 2017 and

2016, 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.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 29, 2017 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 District of Columbia Teachers' Retirement Fund and the District of Columbia Police Officers and Firefighters' Retirement Fund internal control over financial reporting and compliance.



CliftonLarsonAllen LLP

Baltimore, Maryland
December 29, 2017

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

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

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

OVERVIEW OF THE FINANCIAL STATEMENTS AND SCHEDULES

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

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

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

MANAGEMENT'S DISCUSSION AND ANALYSIS

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

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

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

ANALYSIS OF FINANCIAL INFORMATION

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

Additions to Net Position (Revenues)

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

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

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

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

MANAGEMENT'S DISCUSSION AND ANALYSIS

Deductions from Net Position (Expenses)

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

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

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

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

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

Funding Status

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

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

MANAGEMENT'S DISCUSSION AND ANALYSIS

FINANCIAL ANALYSIS SUMMARY

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

SUMMARY OF FINANCIAL INFORMATION

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

Condensed and Combining Statements of Fiduciary Net Position

(Dollars in thousands)

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

MANAGEMENT'S DISCUSSION AND ANALYSIS

Condensed and Combining Statements of Changes in Fiduciary Net Position

(Dollars in thousands)

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

FINANCIAL HIGHLIGHTS

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

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

MANAGEMENT'S DISCUSSION AND ANALYSIS

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

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

ADDITIONAL INFORMATION

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

FINANCIAL STATEMENTS

DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUND
Combining Statements of Fiduciary Net Position
For the Years ended September 30, 2017 and 2016
(Dollar amounts in thousands)

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

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUND**

**Combining Statements of Changes in Fiduciary Net Position
For the Years ended September 30, 2017 and 2016
(Dollar amounts in thousands)**

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

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS
Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 1: ORGANIZATION

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

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

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

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

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS**

**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 2: FUND ADMINISTRATION AND DESCRIPTION

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

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

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.

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
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**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 2: FUND ADMINISTRATION AND DESCRIPTION (CONTINUED)

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.

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TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
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**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 2: FUND ADMINISTRATION AND DESCRIPTION (CONTINUED)

Police Officers and Fire Fighters' Retirement Fund

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

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

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

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

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS**

**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 2: FUND ADMINISTRATION AND DESCRIPTION (CONTINUED)

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

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

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

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

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

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**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 2: FUND ADMINISTRATION AND DESCRIPTION (CONTINUED)

annual benefit increases proportional to changes in the Consumer Price Index, however, the increase is capped at 3%.

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

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

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

Participant Data

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

TRF	2017	2016	2015
Retirees and survivors receiving benefits (post June 30, 1997)	3,899	3,882	3,718
Active plan members	5,199	5,141	4,866
Vested terminations	1,330	1,176	1,152
Total participants	<u>10,428</u>	<u>10,199</u>	<u>9,736</u>
POFRF	2017	2016	2015
Retirees and survivors receiving benefits (post June 30, 1997)	3,215	3,003	2,609
Active plan members	5,312	5,359	5,537
Vested terminations	340	293	319
Total participants	<u>8,867</u>	<u>8,655</u>	<u>8,465</u>

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TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
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**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

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 2017 and 2016 were equal to the amounts computed, if any, by the Board's independent actuary.

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

NOTE 3: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

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

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

Use of Estimates in Preparing Financial Statements – The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Board to make estimates and

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Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 3: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

assumptions that affect the reported amounts of assets, liabilities, additions and deductions to net position restricted for pensions and disclosure of contingent assets and liabilities at the date of the financial statements and during the reporting period. Actual results could differ from those estimates.

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

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

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

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**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

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:

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

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**Notes to the Basic Financial Statements
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NOTE 4: INVESTMENTS (CONTINUED)

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, 2017 and 2016, the money-weighted rates of return, as calculated by the custodian based on a month-end net flow weighting method, were as follows:

	<u>FY 2017</u>	<u>FY 2016</u>
Total Portfolio	12.785%	9.346%

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

(Dollars in thousands)

<u>Investment Type</u>	<u>Fair Value</u>	<u>% of Segment</u>	<u>Duration (years)</u>	<u>Rating*</u>
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

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For the years ended September 30, 2017 and 2016**

NOTE 4: INVESTMENTS (CONTINUED)

As of September 30, 2016, the Investment Pool held the following debt instruments:

(Dollars in thousands)

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

* Using quality ratings provided by Standard & Poor's

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TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
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**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 4: INVESTMENTS (CONTINUED)

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

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

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**Notes to the Basic Financial Statements
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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, 2017 and 2016, the Investment Pool held amounts in commingled funds which invested in foreign currencies totaling approximately \$2.9 billion and \$2.4 billion, respectively.

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

(Dollars in thousands)

	<u>Asset Class</u>				
	<u>Cash</u>	<u>Equities</u>	<u>Fixed Income</u>	<u>Private Equity</u>	<u>Total</u>
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>

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

(Dollars in thousands)

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS**

**Notes to the Basic Financial Statements
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NOTE 4: INVESTMENTS (CONTINUED)

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

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

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

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

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

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

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**Notes to the Basic Financial Statements
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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 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.

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.

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NOTE 4: INVESTMENTS (CONTINUED)

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

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

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

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

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RETIREMENT FUNDS**

**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

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 31 and 32 show the fair value leveling of the investments for the Investment Pool.

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

Equity and fixed income securities classified in Level 2 of the fair value hierarchy are valued at prices provided by independent pricing vendors. The vendors provide these prices after evaluating observable inputs including, but not limited to: quoted prices for similar securities, the mean between the last reported bid and ask prices (or the last bid price in the absence of an asked price), yield curves,

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS
Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 4: INVESTMENTS (CONTINUED)

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 31 and 32.

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

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

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

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS**

**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 4: INVESTMENTS (CONTINUED)

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		

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS**

**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 4: INVESTMENTS (CONTINUED)

	Investments measured at Fair Value (Dollars in 000s)			
	Sept 30, 2016	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	\$ 264,682	\$ 264,682	\$ -	\$ -
Fixed income	234,083	-	234,083	-
Private equity	896	896	-	-
Total investments by fair value level	\$ 499,661	\$ 265,578	\$ 234,083	\$ -

Investments measured at the net asset value (NAV)

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

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

	Sept 30, 2016	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Domestic equities	\$ 1,691,337	\$ -	Daily	None
International equities	2,081,748	-	Daily	None
Fixed income	1,584,014	-	Daily, Monthly	3-30 days
Real assets	479,380	204,735	None	N/A
Private equity	392,472	199,766	None	N/A
Total investments measured at NAV	\$ 6,228,951	404,501		

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS**

**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

NOTE 5: NET PENSION LIABILITY/(ASSET)

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

<i>(Dollars in thousands)</i>	2017		2016	
	TRF	POFRF	TRF	POFRF
Total Pension Liability	\$ 2,160,347	\$ 4,957,340	\$ 2,064,138	\$ 4,675,562
Fiduciary Net Position	2,070,599	5,684,442	1,821,949	4,954,631
Net Pension Liability (Asset)	\$ 89,748	\$ (727,102)	\$ 242,189	\$ (279,069)
Ratio of Fiduciary Net Position to Total Pension Liability (Asset)	95.85%	114.67%	88.27%	105.97%

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

Teachers' Retirement Fund

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS**

**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

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

Police and Firefighters' Retirement Fund

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

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

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS**

**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

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

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

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS**

**Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016**

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

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

FY 2017	1% 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)
FY 2016	1% Decrease (5.50%)	Current Discount Rate (6.50%)	1% Increase (7.50%)
Teachers' Plan's			
Net Pension Liability	\$ 571,400	\$ 242,189	\$ (36,976)
Police and Firefighters' Plan's			
Net Pension Liability/(Asset)	\$ 532,621	\$ (279,069)	\$ (943,216)

NOTE 6: CONVERSION TO NEW CUSTODIAN

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

DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUNDS
Notes to the Basic Financial Statements
For the years ended September 30, 2017 and 2016

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

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUND
Required Supplementary Information
Schedules of Changes in the Net Pension Liability and Related Ratios
(Dollar amounts in thousands)**

Teachers' Retirement Fund

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUND
Required Supplementary Information
Schedules of Changes in the Net Pension Liability and Related Ratios
(Dollar amounts in thousands)**

Police and Firefighters' Retirement Fund

	<u>Sept 30, 2017</u>	<u>Sept 30, 2016</u>	<u>Sept 30, 2015</u>	<u>Sept 30, 2014</u>
Total pension liability				
Service Cost	\$ 196,629	\$ 198,020	\$ 192,114	\$ 176,102
Interest	300,626	282,285	257,943	235,097
Benefit changes	-	-	-	-
Difference between expected and actual experience	(188,549)	(106,840)	(2,477)	-
Changes of assumptions	67,256	-	-	-
Benefit payments	(92,537)	(79,137)	(63,634)	(52,784)
Refunds	(1,647)	(2,179)	(1,396)	(1,637)
Net change in total pension liability	<u>281,778</u>	<u>292,149</u>	<u>382,550</u>	<u>356,778</u>
Total pension liability - beginning	<u>4,675,562</u>	<u>4,383,413</u>	<u>4,000,863</u>	<u>3,644,085</u>
Total pension liability - ending (a)	<u>4,957,340</u>	<u>4,675,562</u>	<u>4,383,413</u>	<u>4,000,863</u>
Plan net position				
Contributions - District Government	145,631	136,115	103,430	110,766
Contributions - Plan member	33,424	32,785	33,679	32,821
Net investment (loss) income	655,310	415,157	(187,283)	338,894
Benefit payments	(92,537)	(79,137)	(63,634)	(52,784)
Administrative expense	(12,838)	(12,918)	(11,939)	(9,730)
Refunds	(1,647)	(2,179)	(1,396)	(1,637)
Other income	2,468	2,810	1,012	1,342
Change in net position	<u>729,811</u>	<u>492,633</u>	<u>(126,131)</u>	<u>419,672</u>
Plan net position - beginning	<u>4,954,631</u>	<u>4,461,998</u>	<u>4,588,129</u>	<u>4,168,457</u>
Plan net position - ending (b)	<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>\$ (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)	114.67%	105.97%	101.79%	114.68%
Covered payroll	\$ 441,904	\$ 438,114	\$ 446,201	\$ 426,135
Net pension liability (asset) as a percentage of covered payroll	-164.54%	-63.70%	-17.61%	-137.81%

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUND
Required Supplementary Information
Schedules of Employer Contributions
(Dollar amounts in thousands)**

Teachers' Retirement Fund

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>	<u>2012</u>	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>
Actuarially determined employer contribution	\$ 56,781	\$ 44,469	\$ 39,513	\$ 31,636	\$ 6,407	\$ -	\$ -	\$ -	\$ -	\$ 6,000
Actual employer contributions	<u>56,781</u>	<u>44,469</u>	<u>39,513</u>	<u>31,636</u>	<u>6,407</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>6,000</u>
Annual contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered payroll	\$ 447,762	\$ 438,079	\$ 417,090	\$ 378,926	\$ 369,071	\$ 381,235	\$ 384,455	\$ 337,516	\$ 336,600	\$ 359,100
Actual contributions as a percentage of covered payroll	12.68%	10.15%	9.47%	8.35%	1.74%	0.00%	0.00%	0.00%	0.00%	1.67%

Notes to Schedule:

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

Actuarial cost method	Entry age normal
Amortization method	Level dollar, closed
Remaining amortization period	17 years
Asset valuation method	7-year smoothed market
Inflation	3.5%
Salary increases	4.45% to 8.25%, including wage inflation of 4.25%
Investment rate of return	6.50%, net of pension plan investment expense, and including inflation
Cost of Living Adjustments	3.50% (Limited to 3.0% for those hired after 11/1/1996)

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUND
Required Supplementary Information
Schedules of Employer Contributions
(Dollar amounts in thousands)**

Police and Firefighters' Retirement Fund

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

Notes to Schedule:

Valuation Date: Actual contributions are based on valuations as of October 1, two years prior to end of fiscal year in which contributions are reported.

Methods and Assumptions used to determine contribution rates for fiscal year 2016 are:

Actuarial cost method	Entry age normal
Amortization method	Level dollar, closed
Remaining amortization period	17 years
Asset valuation method	7-year smoothed market
Inflation	3.5%
Salary increases	4.25% to 9.25%, including wage inflation of 4.25%
Investment rate of return	6.50%, net of pension plan investment expense, and including inflation
Cost of Living Adjustments	3.50% (Limited to 3.0% for those hired after 11/10/1996)

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUND
Required Supplementary Information
Schedule of Investment Returns**

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

	<u>FY 2017</u>	<u>FY 2016</u>	<u>FY 2015</u>	<u>FY 2014</u>
Total Portfolio	12.785%	9.346%	-4.006%	8.178%

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

DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUND
Supplementary Information
Schedules of Administrative Expenses
For the years ended September 30, 2017 and 2016

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

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUND
Supplementary Information
Schedules of Investment Expenses
For the years ended September 30, 2017 and 2016**

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

DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
RETIREMENT FUND
Supplementary Information
Schedules of Payments to Consultants
For the years ended September 30, 2017 and 2016

<u>Professional/Consultant</u>	<u>Nature of Service</u>	<u>FY 2017</u>	<u>FY 2016</u>
Administrative Consultants			
Software Information Resource Corp.	Information technology consulting	\$ 829,277	\$ 1,731,030
U.S. Treasury Office of D.C. Pensions	Benefit payment processing	689,860	1,220,209
Mobomo, LLC	Information technology consulting	528,969	760,125
Morgan, Lewis & Bockius	Legal counsel	497,590	323,739
Ectam, LLC	Information technology consulting	238,680	236,880
KMC, Inc.	Information technology consulting	234,810	-
D.C. Office of the Chief Technology Officer	Information technology consulting	230,065	228,000
Networking for Future, Inc.	Information technology consulting	227,492	73,672
Softech & Associates, Inc.	Information technology consulting	214,000	248,000
Linea Solutions, Inc.	Business process re-engineering	192,078	-
DLT Solutions, Inc.	Information technology consulting	158,777	175,915
FireEye, Inc.	Information technology consulting	146,873	105,283
Cavanaugh Macdonald Consulting	Actuarial services	140,768	194,655
ASI Government, Inc.	Temporary staffing services	132,818	40,934
SHI International Corporation	Information technology consulting	118,795	-
D.C. Metropolitan Police Dept	Information technology consulting	113,832	-
Mark Jackson	Information technology consulting	111,563	106,630
Analytica LLC	Information technology consulting	98,055	128,338
Equinix, Inc.	Information technology consulting	87,705	94,393
Yared Desta	Information technology consulting	85,876	99,912
TW Telecom	Information technology consulting	77,832	97,658
Vonage Business formerly Icore Networks, Inc.	Information technology consulting	72,154	63,681
CliftonLarsonAllen LLC	Financial audit	72,120	62,500
Groom Law Group	Legal counsel	70,158	13,159
American Arbitration Association	Arbitration services	59,979	12,918
RSM US LLP formerly RSM McGladrey, Inc.	Financial system consulting	48,002	47,582
Capitol Document Solutions	Information technology consulting	40,486	40,239
Dakota Consulting, Inc.	Information technology consulting	40,308	-
Steven Van Rees	Operations consultant	36,038	43,650
AON Hewitt Investment Consulting	Insurance consulting	35,438	-
Avitecture	Information technology consulting	34,455	37,198
Midtown Personnel Inc.	Benefits consulting	33,885	168,261
Business Development Associates, LLC	Information technology consulting	33,197	157,541
Advent Software, Inc.	Investment consulting	33,179	20,538
DC Net	Information technology consulting	31,968	28,985
Diligent Corp	Information technology consulting	31,575	31,575
HBP, Inc.	Graphic design for publications	25,992	38,693
XO Holdings	Information technology consulting	24,699	-
Harris, Mackessy & Brennan, Inc.	Information technology consulting	21,098	-
CEM Benchmarking, Inc.	Investment consultant	20,000	30,000
Kofax, Inc.	Information technology consulting	18,752	16,562
eVestment Alliance	Online Investment service	18,720	22,932
Clayton Gordon	Information technology intern	18,053	3,325
Project Made Easy	Information technology consulting	16,784	17,400
ZixCorp Systems, Inc.	Information technology consulting	16,575	16,575
Syed-Mohd Nasib Hafeez	Information technology consulting	14,450	2,656
The Newberry Group, Inc.	Information technology consulting	11,993	5,451
National Associates, Inc.	Benefits consulting	9,820	61,130
Korn Ferry Hay Group, Inc.	Professional services	7,250	-
Dylan Meagher	Benefits intern	7,054	-
Intuitive Technology Group, LLC	Information technology consulting	5,608	118,724
Adil Naghmi	Benefits intern	5,590	-
Newlin LLC	Acting & internal audit consulting	5,537	39,071

**DISTRICT OF COLUMBIA
TEACHERS' AND POLICE OFFICERS AND FIREFIGHTERS'
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Supplementary Information
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For the years ended September 30, 2017 and 2016**

<u>Professional/Consultant</u>	<u>Nature of Service</u>	<u>FY 2017</u>	<u>FY 2016</u>
Administrative Consultants			
Fahmida Chowdhury	Information technology consulting	5,382	-
William Harris	Information technology consulting	4,820	2,223
22nd Century Staffing, Inc.	Information technology consulting	4,648	-
Info-Tech Research Group, Inc.	Information technology consulting	4,225	-
Oquendo Computer Services	Professional services	3,570	-
Corporate Investigations, Inc.	Professional services	2,912	8,468
Neal R. Gross & Co, Inc.	Professional services	916	-
Carlson Dettmann LLC	Professional services	607	2,450
Nexia Friedman LLP	Professional services	600	-
Armstrong Teasdale	Legal counsel	315	555
Managed Frameworks, LLC	Information technology consulting	-	179,057
D.C. Department of Human Resources	Information technology consulting	-	136,607
Gartner, Inc.	Information technology consulting	-	116,898
IT-CNP, Inc..	Information technology consulting	-	94,802
Katharine A. Schultz	Executive consultant	-	45,072
Sebastian Podesta	Professional services	-	18,893
InfoLock Technologies	Information technology consulting	-	10,090
Human Resources Technologies, Inc.	Information technology consulting	-	7,958
Tecknomic LLC	Information technology consulting	-	7,316
Exemplis LLC	Professional services	-	6,117
Shaquja Clark	Executive consultant	-	3,736
ImageTag, Inc.	Information technology consulting	-	3,000
RaeShawn White	Benefits intern	-	1,356
Brea Grisham	Benefits intern	-	1,002
John Siegmund	Investment intern	-	894
Total administrative consultants		<u>6,104,627</u>	<u>7,612,213</u>
Investment Consulting			
CEM Benchmarking	Investment consultant	\$ 30,000	\$ -
Cliffwater, LLC	Traditional investment consulting	-	525,006
Meketa Investment Group	Traditional investment consulting	620,000	403,334
Insightful Pension Consulting Group, LLC	Investment consultant	233,465	53,932
Zeno Consulting Group, LLC	Traditional investment consulting	26,250	35,000
Total investment consultants		<u>909,715</u>	<u>1,017,272</u>
Total payments to consultants		<u>\$ 7,014,342</u>	<u>\$ 8,629,485</u>