Dallas Police and Fire Pension System

(An Independently Governed Component Unit of the City of Dallas, Texas)

Combining Financial Statements, Required Supplementary Information and Supplementary Schedule

December 31, 2019 and 2018

(With Independent Auditor's Reports Thereon)

Contents

Independent Auditor's Reports	3-7
Management's Discussion and Analysis (Unaudited)	8-14
Financial Statements	
Combining Statements of Fiduciary Net Position	15
Combining Statements of Changes in Fiduciary Net Position	16
Notes to Combining Financial Statements	17-51
Required Supplementary Information (Unaudited)	
Schedule of Changes in the Net Pension Liability and Related Ratios	52-57
Schedule of Employer Contributions – Combined Pension Plan	58-61
Schedule of Employer Contributions – Supplemental Plan	62-65
Schedule of Investment Returns	66
Supplementary information	
Administrative, Investment, and Professional Services Expenses	67

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Independent Auditor's Report

To the Board of Trustees
Dallas Police and Fire Pension System

Report on the Financial Statements

We have audited the accompanying financial statements of the Dallas Police and Fire Pension System (DPFP), including the Combined Pension Plan and the Supplemental Police and Fire Pension Plan of the City of Dallas (Supplemental Plan), collectively referred to as the "Plans", for the fiscal years ended December 31, 2019 and 2018, which comprise the combining statements of fiduciary net position, and the related combining statements of changes in fiduciary net position for the years then ended, and the related notes to the combining financial statements.

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.

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

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of DPFP as of December 31, 2019 and 2018, and the changes in fiduciary net position for the years then ended, in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis (MD&A) and the required supplementary information, as listed in the table of contents, be presented to supplement the basic financial statements. Such information although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the MD&A and required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic 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 basic financial statements as a whole. The accompanying supplementary schedule of Administrative, Investment and Professional Services Expenses is presented for the purpose of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of DPFP management and was derived from and related directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audits of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the basic 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 10, 2020 on our consideration of DPFP's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering DPFP's internal control over financial reporting and compliance.

BDO USA, LLP

Dallas, Texas
December 10, 2020

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Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With *Government Auditing Standards*

To the Board of Trustees
Dallas Police and Fire Pension System

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Dallas Police and Fire Pension System (DPFP), including the Combined Pension Plan and the Supplemental Police and Fire Pension Plan of the City of Dallas (Supplemental Plan), collectively referred to as the “Plans”, for the fiscal years ended December 31, 2019 and 2018, which comprise the combining statements of fiduciary net position, and the related combining statements of changes in fiduciary net position for the years then ended, and the related notes to the combining financial statements, and have issued our report thereon dated December 10, 2020.

Internal Control Over Financial Reporting

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

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

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

Compliance and Other Matters

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

Purpose of This Report

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

BDO USA, LLP

Dallas, Texas
December 10, 2020

Overview

Management's Discussion and Analysis (MD&A) provides an overall review of the financial activities of the Dallas Police and Fire Pension System (DPFP), including the Combined Pension Plan and the Supplemental Police and Fire Pension Plan of the City of Dallas (Supplemental Plan), collectively referred to as the Plans, for the fiscal years ended December 31, 2019 and 2018. This discussion and analysis is intended to serve as an introduction to the financial statements, which reflect the Plans' resources available for payment of benefits and other related expenses. MD&A should be read in conjunction with the combining financial statements, notes to the combining financial statements, required supplementary information, and additional supplementary information provided in this report.

Financial Statements

The combining financial statements consist of the following:

Combining Statements of Fiduciary Net Position which reflect a snapshot of the Plans' financial position and reflect resources available for the payment of benefits and related expenses at year end. The resulting Net Position (Assets – Liabilities = Net Position) represents the value of the assets held in trust for pension benefits net of liabilities owed as of the financial statement date.

Combining Statements of Changes in Fiduciary Net Position which reflect the results of all transactions that occurred during the fiscal year and present the additions to and deductions from the net position. Effectively, these statements present the changes in plan net position during the fiscal year. If change in net position increased, additions were more than deductions. If change in net position decreased, additions were less than deductions.

Notes to Combining Financial Statements, which are an integral part of the combining financial statements, include additional information that may be needed to obtain an adequate understanding of the overall financial status of the Plans.

Required Supplementary Information (Unaudited) and additional Supplementary Information provide historical and additional information considered useful in obtaining an overall understanding of the financial positions and activities of the Plans.

Financial Highlights

The combining financial statements are presented solely on the accounts of the Plans. The accrual basis of accounting is utilized, whereby revenues are recognized when they are earned and collection is reasonably assured, and expenses are recognized when the related liability has been incurred. Investments are reported at fair value.

A summary of the Combining Statements of Fiduciary Net Position of the Plans is as follows (in thousands):

December 31:		2019	2018	2017
Assets				
Investments, at fair value	$	1,971,352 $	2,007,036 $	1,990,602
Invested securities lending collateral		13,025	20,560	12,153
Receivables		61,308	42,634	34,629
Cash and cash equivalents		89,462	50,138	118,587
Prepaid expenses		402	365	436
Capital assets, net		12,329	12,489	12,715
Total assets		**2,147,878**	**2,133,222**	**2,169,122**
Liabilities				
Securities purchased		54,957	48,598	31,411
Securities lending obligations		13,025	20,560	12,153
Accounts payable and accrued liabilities		4,731	3,832	4,407
Total liabilities		**72,713**	**72,990**	**47,971**
Net position restricted for pension benefits	**$**	**2,075,165 $**	**2,060,232 $**	**2,121,151**

The assets of the Combined Pension Plan and the Supplemental Plan are co-invested through a Group Master Trust (Group Trust). The rate of return on Group Trust investments during 2019 was 11.51% net of fees, compared to a rate of return of -1.49% for 2018 and 5.07% for 2017. Meketa Investment Group, Inc., DPFP's investment consultant at December 31, 2019, provides the rate of return for 2019 and 2018. NEPC, LLC (NEPC), DPFP's investment consultant at December 31, 2017, provided the rate of return for 2017. The methodology used by the investment consultants to calculate the time-weighted rate of return incorporates a one-quarter lag on market value adjustments for private equity, private debt, and real assets investments. This "lagged with cash flow adjustments" methodology is consistent with standard industry practice and allows for timely reporting to the Board of Trustees (Board). Gains and losses on lagged investments, which occur in the fourth quarter of any year, are recognized in the following year's rate of return.

House Bill 3158 (HB 3158 or the bill) was passed by the Texas legislature during the 85th legislative session. Both the House of Representatives and the Senate passed HB 3158 unanimously and Governor Abbott signed it on May 31, 2017. HB 3158 was effective September 1, 2017 and made significant changes to governance, contributions and benefits, including the structure of the Deferred Retirement Option Plan (DROP). Additional information about HB 3158 is included in Notes 1, 5 and 6 and the Required Supplementary Information accompanying the financial statements.

The Plans' net position increased by $15 million in 2019 due to investment gains and contribution increases exceeding the increase in benefit payments.

The Plans' net position decreased by $61 million in 2018, primarily the result of benefit payments exceeding total contribution payments. The net benefit outflow was partially offset by investment gains.

Securities lending collateral and obligations decreased in 2019 due to a decrease in lending activity. Securities lending collateral and obligations increased in 2018 due to an increase in lending activity resulting from increased lendable assets due to the funding of equity and fixed income mandates in mid-2017 and increased demand for securities due to market volatility in 2018. Changes in receivables are primarily a result of the timing of settlement of pending investment trades, as well as the timing of the last payroll of the year for the City of Dallas as such timing impacts the collection of benefit contributions.

Cash increased significantly in 2019 as cash from the sale of some investments was received at the end of the year. In 2018, cash declined significantly, as cash held during the legislative process in 2017 was deployed during the year.

A summary of the Combining Statements of Changes in Fiduciary Net Position of the Plans is as follows (in thousands):

Years ended December 31:	2019	2018	2017
Additions:			
Contributions			
City	$ 157,251	$ 151,336	$ 128,395
Members	52,379	49,406	33,044
Total contributions	209,630	200,742	161,439
Net income from investing activities	123,955	43,452	97,456
Net income from securities lending activities	114	112	101
Other income	360	479	2,094
Total additions	**334,059**	**244,785**	**261,090**
Deductions:			
Benefits paid to members	310,008	297,155	295,245
Refunds to members	2,618	2,635	3,578
Interest expense	-	-	1,290
Professional and administrative expenses	6,500	5,914	8,158
Total deductions	**319,126**	**305,704**	**308,271**
Net increase (decrease) in net position	14,933	(60,919)	(47,181)
Net position restricted for pension benefits			
Beginning of period	**2,060,232**	**2,121,151**	**2,168,332**
End of period	**$ 2,075,165**	**$ 2,060,232**	**$ 2,121,151**

The 2019 Contribution amounts for both members and the City were statutorily defined. Contributions for all active members (including members in DROP) were 13.5% of Computation Pay. Computation Pay is defined as base pay, education incentive pay and longevity pay. City contributions for the Combined Pension Plan were 34.5% of Computation Pay, plus a floor amount to meet the minimum required contribution, plus an additional amount of $13 million in 2019. The floor has been greater than the 34.5% of Computation Pay for all pay periods in 2019. See Note 1 for additional information on City contribution rates.

City contributions to the Plans increased by $5.9 million or 3.9% in 2019 due to an increase in the bi-weekly floor amount. Member contributions of $52.4 million exceeded 2018 contributions by $3 million because of increased salaries and an increase in members.

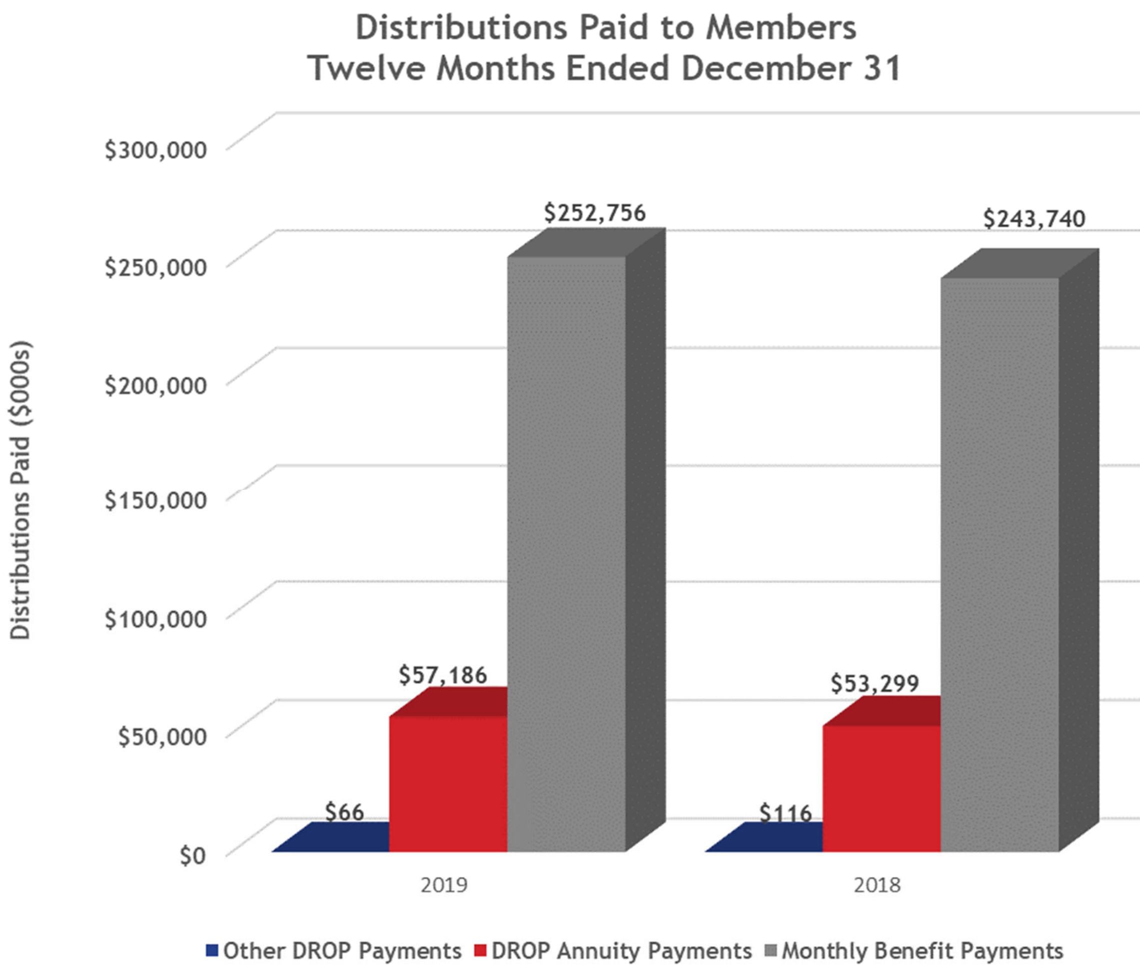
In 2018, the member and City contributions increased over 2017 due to twelve months of contributions at the legislative defined amounts. City contributions to the Plans increased by $23 million or 18% in 2018. Member contributions increased $16 million in 2018.

City Contributions to the Combined Pension Plan in 2019 increased $6.4 million or 4.3% due to the scheduled increase in the bi-weekly floor amount.

The City is required by ordinance to contribute amounts necessary to ensure the payment of benefits in the Supplemental Plan. The City's contributions shall be made in accordance with actuarial requirements established by the actuary and the board. City contributions to the Supplemental Plan in 2019 decreased by $449 thousand over 2018 contributions and City contributions to the Supplemental Plan in 2018 decreased by $98 thousand over 2017 contributions primarily due to contributions being redirected to the Excess Benefit Plan and Trust.

Net investment income during 2019 was primarily driven by the appreciation in the fair value of public equity assets. Net investment income during 2018 was primarily driven by the appreciation in the fair value of some private assets and was partially offset by public equity losses incurred especially during the fourth quarter of 2018.

Distributions to members consist of monthly payments of retirement, disability, and survivor benefits, as well as monthly DROP annuity payments and other DROP payments made in accordance with Section 6.14 of Article 6243a-1 of the Texas Statutes. The chart below compares the components of distributions paid to members for the years ended December 31, 2019 and 2018.



Total benefits paid in 2019 increased $12.9 million or 4.3% over 2018. Monthly benefit payments increased $9.0 million or 3.7% due to an additional 121 retirees and beneficiaries receiving monthly benefits in 2019. Distributions from DROP balances in 2019 totaled $57.3 million with $57.2 million paid as DROP annuity payments, up $3.9 million from 2018. See Note 6 for additional information on DROP.

No Interest expense was incurred in 2019 or 2018 as the line of credit and term loan were paid in full in 2017.

Refund expense declined $17 thousand in 2019 and declined $943 thousand in 2018 due in part to a change in the interpretation of the calculation of the liability accrual resulting in an additional expense of $460 thousand in 2017.

The cost of administering the benefit programs of the Plans, including administrative costs and professional fees, increased approximately $586 thousand in 2019. The increase in 2019 is primarily related to higher legal fees, (net of insurance reimbursement, up $220 thousand) and higher salaries and benefits, up $420 thousand. The cost of administering the benefits plans decreased approximately $2.2 million in 2018. The decrease in 2018 is primarily related to lower legal fees (net of insurance reimbursement, down $642 thousand) and salaries and benefits, down $984 thousand. Actuarial expenses were $378 thousand lower in 2018 as expenses related to the implementation of HB 3158 were largely incurred during 2017. Legislative and communications expenses decreased $193 thousand and $247 thousand, respectively, from 2017 to 2018 as the legislative process for the new bill completed in 2017. A pro rata share of the total expenses of the Plans is allocated to the Combined Pension Plan and the Supplemental Plan according to the ratio of Combined Pension Plan and Supplemental Plan investment assets to the total investment assets of the Group Trust. Any expenses specific to either the Combined Pension Plan or the Supplemental Plan are charged directly as a reduction of such plan's net position.

Funding Overview

DPFP's actuarial firm, Segal Consulting (Segal), conducts the annual actuarial valuations to determine if the assets and contributions are sufficient to provide the prescribed benefits (funding positions) of the Plans.

The January 1, 2020 actuarial valuation reported a funded ratio of 45.7%, based on the actuarial value of assets, an unfunded actuarial accrued liability of $2.6 billion and an expected fully funded date of 2075 for the Combined Pension Plan compared to a funded ratio of 48.1%, based on the actuarial value of assets, an unfunded actuarial accrued liability of $2.3 billion and an expected fully funded date of 2057 for the Combined Pension Plan as reported in the January 1, 2019 actuarial valuation. These projections may vary on an annual basis due to actual experience and demographics, which may vary from the current actuarial assumptions. Beginning in 2025, once the City is contributing based solely on Computation Pay with no floor as discussed below, differences between actual payroll and the City's current projections may have a significant impact on the projected funding period.

For the Combined Plan, the total Actuarially Determined Contribution (ADC) rate required to pay the normal cost and to amortize the unfunded actuarial accrued liability over a closed 25-year period is currently 60.2% of Computation Pay compared to 55.4% as of January 1, 2019, which was amortized over a 30-year period. The ADC rate compares to the City's actual contribution rate of 34.5% of Computation Pay, which is subject to a minimum floor for the next seven years, plus the member contribution of 13.5%, plus an additional $13 million per year from the City until December 31, 2024.

The Board's funding policy for the Combined Plan was changed from an amortization period of 30 years to a closed 25-year period. Beginning in 2021, future gains or losses each year will be amortized over separate, closed 20-year periods.

The January 1, 2020 actuarial valuation reports a funded ratio of 48.3% and an unfunded actuarial accrued liability of $18.5 million for the Supplemental Plan compared to a funded ratio of 57.6%, and an unfunded actuarial accrued liability of $13.5 million for the Supplemental Plan as reported in the January 1, 2019 actuarial valuation. These projections may vary on an annual basis due to actual experience and demographics, which may vary from the current actuarial assumptions. The City's contributions for the Supplemental Plan are based on Computation Pay.

The Board's funding policy for the Supplemental Plan was changed from an open 10-year amortization period to a closed 20-year period. Beginning in 2021, future gains or losses each year will be amortized over separate, closed 10-year periods.

Governmental Accounting Standards Board Statement No. 67, *Financial Reporting for Pension Plans –An Amendment of GASB Statement No. 25*, (GASB No. 67) requires disclosure of the Net Pension Liability (NPL). The GASB No. 67 valuation is prepared by Segal and is a calculation for accounting purposes as opposed to the actuarial valuation, which is completed to determine the funding adequacy of the Plans. The NPL is the difference between the Total Pension Liability (TPL) and the market value of assets. GASB No. 67 requires the determination of the TPL using the individual entry age method, level percent of pay actuarial cost method, and a discount rate. The GASB No. 67 for December 31, 2019 reports a NPL of $2.7 billion, which is an increase of $214 million from the NPL reported at December 31, 2018 for the Combined Pension Plan. The Fiduciary Net Position as a Percentage of Total Pension Liabilities (FNP) is 43.5% at December 31, 2019 compared to 45.4% at December 31, 2018 for the Combined Pension Plan. The Supplemental Plan had a NPL of $18.5 million and $13.5 million at December 31, 2019 and 2018, respectively. The Supplemental Plan had a FNP of 48.3% and 57.6% at December 31, 2019 and 2018, respectively. The change in the Supplemental Plan was due to a change in the funding policy.

Information about whether the Plans' net positions are increasing or decreasing over time relative to the TPL is provided in the accompanying Schedule of Changes in the Net Pension Liability and Related Ratios.

Contacting DPFP's Financial Management

This financial report is designed to provide members and other users with a general overview of DPFP's finances and present the Plans' accountability for the funding received. If you have questions about this report, you may contact the Executive Director of the Dallas Police and Fire Pension System at 4100 Harry Hines Boulevard, Suite 100, Dallas, Texas 75219, by phone at 214-638-3863, or by email at info@dpfp.org.

Dallas Police and Fire Pension System

Combining Statements of Fiduciary Net Position

December 31,	2019 Combined Pension Plan	2019 Supplemental Police and Fire Pension Plan of the City of Dallas	2019 Total	2018 Combined Pension Plan	2018 Supplemental Police and Fire Pension Plan of the City of Dallas	2018 Total
Assets						
Investments, at fair value						
Short-term investments	$ 25,099,677	$ 211,352	$ 25,311,029	$ 40,949,194	$ 367,721	$ 41,316,915
Fixed income securities	550,746,613	4,637,555	555,384,168	511,184,404	4,590,396	515,774,800
Equity securities	550,594,317	4,636,273	555,230,590	432,055,193	3,879,822	435,935,015
Real assets	562,450,805	4,736,110	567,186,915	695,162,373	6,242,503	701,404,876
Private equity	265,352,308	2,234,396	267,586,704	310,090,215	2,784,586	312,874,801
Forward currency contracts	647,050	5,448	652,498	(268,300)	(2,409)	(270,709)
Total investments	1,954,890,770	16,461,134	1,971,351,904	1,989,173,079	17,862,619	2,007,035,698
Invested securities lending collateral	12,916,355	108,762	13,025,117	20,376,453	182,979	20,559,432
Receivables						
City	3,035,500	-	3,035,500	2,504,571	-	2,504,571
Members	1,053,322	2,547	1,055,869	801,661	1,583	803,244
Interest and dividends	4,422,424	37,239	4,459,663	4,759,677	42,742	4,802,419
Investment sales proceeds	52,131,442	438,972	52,570,414	33,926,492	304,657	34,231,149
Other receivables	184,550	1,554	186,104	290,170	2,606	292,776
Total receivables	60,827,238	480,312	61,307,550	42,282,571	351,588	42,634,159
Cash and cash equivalents	88,714,699	747,021	89,461,720	49,691,701	446,228	50,137,929
Prepaid expenses	399,234	3,362	402,596	362,262	3,253	365,515
Capital assets, net	12,225,827	102,947	12,328,774	12,377,791	111,152	12,488,943
Total assets	2,129,974,123	17,903,538	2,147,877,661	2,114,263,857	18,957,819	2,133,221,676
Liabilities						
Other payables						
Securities purchased	54,498,283	458,902	54,957,185	48,165,649	432,524	48,598,173
Securities lending obligations	12,916,355	108,762	13,025,117	20,376,453	182,979	20,559,432
Accounts payable and other accrued liabilities	4,702,168	28,441	4,730,609	3,807,625	24,423	3,832,048
Total liabilities	72,116,806	596,105	72,712,911	72,349,727	639,926	72,989,653
Net position						
Net investment in capital assets	12,225,827	102,947	12,328,774	12,377,791	111,152	12,488,943
Unrestricted	2,045,631,490	17,204,486	2,062,835,976	2,029,536,339	18,206,741	2,047,743,080
Net position - restricted for pension	$ 2,057,857,317	$ 17,307,433	$ 2,075,164,750	$ 2,041,914,130	$ 18,317,893	$ 2,060,232,023

See accompanying independent auditor's report and notes to combining financial statements.

Dallas Police and Fire Pension System

Combining Statements of Changes in Fiduciary Net Position

	2019			2018		
Years ended December 31,	Combined Pension Plan	Supplemental Police and Fire Pension Plan of the City of Dallas	Total	Combined Pension Plan	Supplemental Police and Fire Pension Plan of the City of Dallas	Total
Additions (Reductions)						
Contributions						
City	$ 155,721,087	$ 1,530,262	$ 157,251,349	$ 149,356,565	$ 1,979,285	$ 151,335,850
Members	52,268,293	110,660	52,378,953	49,332,262	73,880	49,406,142
Total contributions	207,989,380	1,640,922	209,630,302	198,688,827	2,053,165	200,741,992
Investment income						
Net appreciation in fair value of investments	94,213,367	(85,530)	94,127,837	5,588,891	886,129	6,475,020
Interest and dividends	37,657,218	319,000	37,976,218	44,664,963	401,088	45,066,051
Total gross investment income	131,870,585	233,470	132,104,055	50,253,854	1,287,217	51,541,071
Less: Investment expense	(8,081,019)	(68,456)	(8,149,475)	(8,017,586)	(71,997)	(8,089,583)
Net investment income	123,789,566	165,014	123,954,580	42,236,268	1,215,220	43,451,488
Securities lending income						
Securities lending income	840,502	7,120	847,622	309,613	2,780	312,393
Securities lending expense	(727,010)	(6,159)	(733,169)	(198,695)	(1,784)	(200,479)
Net securities lending income	113,492	961	114,453	110,918	996	111,914
Other income	356,549	3,020	359,569	475,111	4,266	479,377
Total additions	332,248,987	1,809,917	334,058,904	241,511,124	3,273,647	244,784,771
Deductions						
Benefits paid to members	307,243,319	2,764,781	310,008,100	294,447,006	2,707,773	297,154,779
Refunds to members	2,617,230	998	2,618,228	2,634,049	498	2,634,547
Professional and administrative expenses	6,445,251	54,598	6,499,849	5,861,410	52,636	5,914,046
Total deductions	316,305,800	2,820,377	319,126,177	302,942,465	2,760,907	305,703,372
Net increase/(decrease) in net position	15,943,187	(1,010,460)	14,932,727	(61,431,341)	512,740	(60,918,601)
Net position - restricted for pension						
Beginning of period	2,041,914,130	18,317,893	2,060,232,023	2,103,345,471	17,805,153	2,121,150,624
End of period	$ 2,057,857,317	$ 17,307,433	$ 2,075,164,750	$ 2,041,914,130	$ 18,317,893	$ 2,060,232,023

See accompanying independent auditor's report and notes to combining financial statements.

1. Organization

General

The Dallas Police and Fire Pension System (DPFP) is an independently governed component unit of the City of Dallas (City, or Employer) and serves as a single-employer pension and retirement fund for police officers and firefighters employed by the City. The general terms “police officers” and “firefighters” also include fire and rescue operators, fire alarm operators, fire inspectors, apprentice police officers, and apprentice firefighters. DPFP is comprised of a single defined benefit pension plan (Combined Pension Plan) designed to provide retirement, death, and disability benefits for police officers and firefighters (collectively, members). DPFP was originally established under former Article 6243a of the Revised Civil Statutes of Texas and, since 1989, derives its authority to continue in operation under the provisions of Article 6243a-1 of the Revised Civil Statutes of Texas (the Governing Statute). All active police officers and firefighters employed by the City are required to participate in the Combined Pension Plan.

The Supplemental Police and Fire Pension Plan of the City of Dallas (Supplemental Plan) was created in 1973 to supplement DPFP’s Plan B Defined Benefit Pension Plan (Plan B). Former Plan B members are now denominated as Group B members of the Combined Pension Plan. The intent of the Supplemental Plan is to provide additional retirement benefits to those members of the Supplemental Plan holding a rank higher than the highest corresponding civil service rank as provided in the Combined Pension Plan. Members receive a supplemental pension based upon the difference between compensation for the civil service position held before entrance into the Supplemental Plan and compensation while in the Supplemental Plan. The Supplemental Plan was established and derives its authority from a City ordinance.

The Combined Pension Plan and Supplemental Plan are collectively referred to as the Plans.

As of December 31, 2019 and 2018, the Combined Pension Plan’s membership consisted of:

	2019	2018
Retirees and beneficiaries	4,956	4,849
Beneficiaries, DROP Only	83	70
Non-active vested members not yet receiving benefits	242	230
Non-active non-vested members not yet refunded	434	431
Total non-active members	5,715	5,580
Vested active members	3,692	3,677
Non-vested active members	1,429	1,335
Total active members	5,121	5,012

As of December 31, 2019, and 2018, the Supplemental Plan's membership consisted of:

	2019	2018
Retirees and beneficiaries	139	138
Non-active vested members not yet receiving benefits	2	2
Non-active non-vested members not yet refunded	1	1
Total non-active members	142	141
Vested active members	40	38
Non-vested active members	1	1
Total active members	41	39

No changes to benefit, contribution or administration plan provisions were made to the Combined Pension Plan or the Supplemental Plan in 2019.

The benefit, contribution and administration plan provisions discussed below are as of December 31, 2019 and 2018.

Benefits

Members hired by the City before March 1, 1973 are Group A members of the Combined Pension Plan. Members hired on or after March 1, 1973 are Group B members of the Combined Pension Plan.

Group A members of the Combined Pension Plan have elected to receive one of two benefit structures as of December 31, 2019:

- Members with 20 years or more of pension service are entitled to monthly pension benefits beginning at age 50 equal to 50% of base pay, defined as the maximum monthly civil service pay established by the City for a police officer or firefighter at the time of retirement, plus 50% of the longevity pay the member was receiving either at the time he or she left active service with the City or the effective date the member joined the Deferred Retirement Option Plan (DROP). Benefit payments are adjusted annually according to changes in active service base pay, if any. Additionally, a member is eligible to receive 50% of the difference between any annualized City service incentive pay granted to the member less annual longevity pay.

- Members with 20 years or more of pension service are entitled to monthly pension benefits beginning at age 55 equal to 3% of their base pay, computed as noted in the prior paragraph, for each year of pension service with a maximum of 32 years. In addition, a member receives 50% of the longevity pay and $^{1}/_{24}$th of any City service incentive pay the member was receiving either at the time he or she left active service with the City or the effective date the member joined DROP. Prior to September 1, 2017 pension benefit payments increased annually on October 1st by 4% of the initial benefit amount. After September 1, 2017, pension benefit payments are eligible for an ad hoc cost of living increase as approved by the Board, if certain funding requirements are met. It is not anticipated that the funding requirements necessary to grant an ad hoc cost of living increase will be met for several decades.

Group B members of the Combined Pension Plan receive one of two benefit structures as of December 31, 2019:

- Members who began membership before March 1, 2011 with 5 or more years of pension service are entitled to monthly pension benefits beginning at age 50 equal to 3% of the member's average base pay plus education and longevity pay (Computation Pay) determined over the highest 36 consecutive months of Computation Pay, multiplied by the number of years of pension service prior to September 1, 2017. The monthly pension benefit for service earned after September 1, 2017 is based on the highest 60 consecutive months of Computation Pay multiplied by a 2.5% multiplier at age 58. The multiplier is reduced to between 2.0% and 2.4% for retirement beginning at age 53 and prior to age 58. The member cannot accrue a monthly pension benefit that exceeds 90% of the member's average Computation Pay. Certain members may receive a 2.5% multiplier for pension service after September 1, 2017 prior to age 58 if the combination of their pre and post September 1, 2017 pension service calculations using the 2.5% multiplier for post September 1, 2017 meets or exceeds the 90% maximum benefit. Certain members who meet the service prerequisite or were 45 prior to September 1, 2017 may elect to take early retirement with reduced benefits starting at age 45, or earlier if the member has 20 years of pension service.
- Members who began membership after February 28, 2011 are entitled to monthly pension benefits after accruing 5 years of pension service and the attainment of age 58. Pension benefits are equal to the member's average Computation Pay determined over the highest 60 consecutive months of Computation Pay, multiplied by 2.5% for the number of years of pension service. The member cannot accrue a monthly pension benefit that exceeds 90% of the member's average Computation Pay. Certain members who meet the service prerequisite may elect to take early retirement with reduced benefits starting at age 53.
- A Group B member who has accrued 20 or more years of pension service and who has been on active service at any time on or after January 1, 1999 may take a pension benefit regardless of age except that the percent multiplier would be based on the member's age at the time of applying for the pension.
- After September 1, 2017, Group B benefits for all members are eligible for an ad hoc cost of living increase as approved by the Board, if certain funding requirements are met. It is not anticipated that the funding requirements necessary to grant an ad hoc cost of living increase will be met for several decades. Prior to September 1, 2017 Group B members hired prior to January 1, 2007 received an automatic annual increase of 4% of the initial benefit amount each October 1st. Group B members hired on or after January 1, 2007 were eligible for an ad hoc increase not to exceed 4% of the initial benefit amount.

Additional provisions under the Combined Pension Plan as of December 31, 2019 are as follows:

- Prior to September 1, 2017 members with over 20 years of pension service, upon attaining age 55, received a monthly supplement equal to the greater of $75 or 3% of their total monthly benefits (excluding the benefit supplement amount). After September 1, 2017, no additional members will receive the monthly supplement and no increases will be made to the amount of the supplement received by those members receiving the supplement prior to September 1, 2017.
- Service-connected disability benefits are available for members in active service who began service prior to March 1, 2011 and have not entered DROP who become disabled during the performance of their duties from the first day of employment. Members receiving service-connected disability benefits are given credit for the greater of actual pension service or 20 years of pension service. A benefit of 3% times the average of the highest 36 consecutive

months of Computation Pay times the number of years of pension service prior to September 1, 2017, plus a multiplier, based on their age at the time the disability is granted, for pension service after September 1, 2017, times the average of the highest 60 consecutive months of Computation Pay times the number of years of pension service. If needed, additional service time necessary to reach 20 years of service credit will be included with pension service after September 1, 2017. Members who began membership after February 28, 2011 and have not entered DROP are entitled to a disability benefit based on the average of the highest 60 consecutive months of Computation Pay times a 2.5% multiplier regardless of their age. If a member has more than 20 years of service and was hired prior to March 1, 2011, the benefit is calculated in the same manner as their service retirement pension. If the member has fewer than 36 or 60 months of service, based on hire date, the benefit is based on the average of Computation Pay during their entire pension service.

- Members who began membership before March 1, 2011, who are determined to be eligible for a non-service connected disability benefit are entitled to a benefit of 3% times the average of the highest 36 consecutive months of Computation Pay times the number of years of pension service prior to September 1, 2017, plus a multiplier based on their age at the time the disability is granted for pension service after September 1, 2017 times the average of the highest 60 consecutive months of Computation Pay. Total service is rounded to the nearest whole year. Members who began membership after February 28, 2011 are entitled to a disability benefit based on the average of the highest 60 consecutive months of Computation Pay, times a 2.5% multiplier regardless of their age. All non-service connected disability benefits are subject to a minimum benefit of $110 for every year of pension service. The minimum benefit cannot exceed $2,200 per month. If the member has fewer than 36 or 60 months of service, based on hire date, the benefit is based on the average of Computation Pay during their entire pension service.
- Members who are eligible to retire are eligible to enter the DROP program, which is an optional method of accruing monthly pension benefits prior to leaving active service. Members who are receiving disability benefits are not eligible to enter the DROP program. The amount of an active member's DROP balance is based on the accumulation of the member's monthly benefit each month while in active DROP, and interest accrued prior to September 1, 2017. DROP balances of retired members and other DROP account holders, excluding active member DROP account holders, were converted to annuities (a stream of payments) on November 30, 2017. DROP balances of active members are annuitized upon retirement. The life expectancy of a DROP account holder at the time of annuitization determines the term of the annuity. Interest is included in the annuity calculation for balances accrued prior to September 1, 2017. The interest rate is based on the provisions of HB 3158 and rules adopted by the Board. See Note 6 for information about the changes in the DROP program resulting from the passage of HB 3158. See below, under Contributions, for discussion of required DROP contributions. The total DROP account balance and the present values of the annuitized balances for the Combined Pension Plan was $1.04 billion at December 31, 2019 and $1.01 billion at December 31, 2018. The total DROP balances include amounts that may be paid out of the Excess Benefit Plan and Trust.
- A minimum benefit is paid to vested retired members of $2,200 per month subject to any restrictions contained in the Combined Pension Plan. The minimum benefit is prorated for members who retire with less than 20 years of service credit and equals $1,200 monthly for a qualified surviving spouse if there are no qualified surviving children receiving benefits. The minimum benefit is $1,100 monthly for qualified surviving children combined and qualified surviving spouses if qualified surviving children are receiving or had received benefits.

Additional provisions under the Supplemental Plan as of December 31, 2019 are as follows:

- The Supplemental Plan's benefits are designed to supplement Group B benefits for those members holding a rank higher than the highest civil service rank because their Combined Pension Plan benefits are capped by the Combined Pension Plan's definition of considered compensation. Accordingly, when Group B benefits are amended, the Supplemental Plan's benefit calculation is also affected. The basis for a member's benefits are the difference between the monthly rate of pay a member is due as the base pay for the rank the member currently holds and the monthly rate of pay the member is due for the highest civil service rank (and pay step) the member held as a result of competitive examinations. The service time used to determine the member's Group B benefit is used to determine the member's benefit under the Supplemental Plan so that the same length of time is used for both plans. Average Computation Pay is calculated for each plan separately and combined in determining the benefit. Application for benefits under the provisions of the Combined Pension Plan is deemed to be an application for benefits under the Supplemental Plan and no additional application need be filed.

- Members of the Supplemental Plan who enter the DROP program in the Combined Pension Plan also enter the DROP program in the Supplemental Plan. The total DROP account balance and the present value of the annuitized balances related to the Supplemental Plan was $7.1 million and $4.5 million at December 31, 2019 and 2018, respectively. The total DROP balances include amounts that may be paid out of the Excess Benefit Plan and Trust.

Death benefits are available to a surviving spouse, dependent children, handicapped children, or dependent parents in the event of the death of a member either after disability or service retirement, prior to leaving active service or retirement eligible deferred vested members.

Members retiring with 20 years of pension service or who were receiving a service-connected disability benefit had been eligible to receive a benefit supplement upon reaching age 55. The supplement amount was 3% of the member's monthly benefit, with a minimum of $75 per month in the Combined Pension Plan. After September 1, 2017, no additional members will receive the monthly supplement and no supplement amount will increase.

Contributions

Employee contribution rates did not change in 2019.

HB 3158 amended the employee contribution rates to 13.5% of Computation Pay for all active members.

City contribution rates did not change in 2019.

The City contributes the greater of (i) 34.5% of Computation Pay and (ii) a bi-weekly minimum (floor) amount defined in the bill, plus $13 million annually until 2024. The floor amounts were $5.571 and $5.344 million, respectively, for 2019 and 2018. After 2024, the floor amount and the additional $13 million annual amount are eliminated.

During 2024 an independent actuary selected by the Texas State Pension Review Board (PRB) must perform an analysis that includes the independent actuary's 1) conclusion regarding whether the pension system meets State Pension Review Board funding guidelines and 2) recommendations regarding changes to benefits or to member or city contribution rates. The Board must adopt a plan that complies with the funding and amortization period requirements under Subchapter C, Section 802 of the Texas Government Code.

The City is required by ordinance to contribute amounts necessary to ensure the payment of benefits in the Supplemental Plan. The City's contributions shall be made in accordance with actuarial requirements established by the actuary and the board. Member contributions in the Supplemental Plan follow the same rules as the Combined Pension Plan on Computation Pay over the compensation of the highest civil service rank held as a result of competitive examinations.

City contributions can be changed by the legislature, by a majority vote of the voters of the city or in accordance with a written agreement entered into between the city and the pension system, where at least eight trustees have approved the agreement, provided that the change does not increase the period required to amortize the unfunded accrued liability of the Combined Pension Plan. Decreases in employee contributions require the approval of the legislature. Increases in employee contributions require the approval of at least a two-thirds vote of all trustees of the Board.

The Supplemental Plan's plan document can be amended only by the City Council in accordance with City ordinance. The benefit and contribution provisions of the Supplemental Plan follow those of the Combined Pension Plan.

Members of Group B are immediately vested in their member contributions. If a member's employment is terminated and the member is not vested, or the member elects not to receive present or future pension benefits, the member's contributions are refunded, without interest, upon written application. If application for a refund is not made within three years of normal retirement age, the member forfeits the right to a refund of his or her contribution; however, a procedure exists whereby the member's right to the contributions can be reinstated and refunded by the Board after the three-year period.

Administration

Collectively, the Combined Pension Plan Board of Trustees and the Supplemental Plan Board of Trustees are referred to as the Board. The Board is responsible for the general administration of DPFP and has the full power to invest the Plans' assets.

The Plans are administered by an eleven-member Board consisting of six Trustees appointed by the mayor of the City of Dallas, in consultation with the City Council; one current or former police officer, nominated and elected by active members; one current or former firefighter, nominated and elected by active members; and three non-member Trustees (who may not be active members or retirees) elected by the active members and retirees from a slate of nominees vetted and nominated by the Nominations Committee. The Nominations Committee consists of representatives from 11 named police and fire associations and the Executive Director of DPFP. The Executive Director is a nonvoting member of the committee.

To serve as a Trustee, a person must have demonstrated financial, accounting, business, investment, budgeting, real estate or actuarial expertise and may not be an elected official or current employee of the City of Dallas, with the exception of a current police officer or firefighter.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying financial statements are presented in accordance with accounting principles generally accepted in the United States (GAAP). In doing so, DPFP adheres to guidelines established by the Governmental Accounting Standards Board (GASB). The accompanying financial statements include solely the accounts of the Plans on a combined basis, which include all programs, activities and functions relating to the accumulation and investment of the net position and related income necessary to provide the service, disability and death benefits required under the terms of the governing statutes and amendments thereto.

Basis of Accounting

The accrual basis of accounting is used for the Plans. Revenues are recognized in the period in which they are earned and collection is reasonably assured. Expenses are recognized when the liability is incurred. Member and employer contributions are recognized in the period in which the contributions are due. Accrued income, when deemed uncollectible, is charged to operations.

Contributions for the final biweekly payroll of the year for the years ended December 31, 2019 and 2018 were not received by DPFP until subsequent to year end and accordingly, uncollected contributions are recorded as receivables in the accompanying financial statements. Benefits, lump sum payments, and refunds are recognized when due and payable. Dividend income is recorded on the ex-dividend date. Other income consists primarily of rental income, which is recognized on a straight-line basis over the lease term. Realized gains and losses on sales of securities are recognized on the trade date. The cost of investments sold is determined using the average cost method.

Reporting Entity

DPFP is an independently governed component unit of the City and the basic financial statements and required supplementary information of the Plans are therefore included in the City's Comprehensive Annual Financial Report.

Administrative Costs

All costs of administering the Plans are paid from the Plans' assets pursuant to an annual fiscal budget approved by the Board.

Federal Income Tax

Favorable determinations that the Plans are qualified and exempt from Federal income taxes were received on October 20, 2014. While the Board has authorized a filing with the Internal Revenue Service under the Voluntary Correction Program, the Board believes that the Plans are designed to meet and operate in material compliance with the applicable requirements of the Internal Revenue Code.

Use of Estimates

The preparation of financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the actuarial information included in the notes to the financial statements as of the benefit information date, the reported amounts of income and expenses during the reporting period, and when applicable, disclosures of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

Cash and Cash Equivalents

DPFP considers only demand deposits as cash. Cash equivalent securities, which are composed of all highly liquid investments with a maturity of three months or less when purchased, are considered to be cash equivalents. Highly liquid securities invested by third party investment managers as part of a short-term investment fund are not considered cash equivalents and are classified as short-term investments.

Plan Interest in the Group Master Trust

Effective January 1, 2006, the Board elected to establish a Group Master Trust (Group Trust) in order to unitize the investments of the Combined Pension Plan and the Supplemental Plan. JPMorgan Chase Bank, N.A. (JPMorgan) served as custodian of the Group Trust for the years ended December 31, 2019 and 2018. The fair value of the Combined Pension Plan's interest and the Supplemental Plan's interest in the Group Trust is based on the unitized interest that each plan has in the Group Trust. The Combined Pension Plan's interest in the Group Trust's investments was approximately 99.2% at December 31, 2019 and 99.1% at December 31, 2018, while the remaining interest belongs to the Supplemental Plan. The allocation of investment income and expenses between the Combined Pension Plan and the Supplemental Plan is based on percentage interest in the Group Trust. Shared professional and administrative expenses are allocated to each plan directly in proportion to each plan's ownership interest. Benefits and contributions are attributed directly to the plan that such receipts and disbursements relate to and are not subject to a pro-rated allocation.

Investments

Investment Policy

Statutes of the State of Texas authorize DPFP to invest surplus funds in the manner provided by Government Code, Title 8, Subtitle A, Subchapter C, which provides for the investment of surplus assets in any investment that is deemed prudent by the Board. These statutes stipulate that the governing body of the Plans is responsible for the management and administration of the funds of the Plans and shall determine the procedure it finds most efficient and beneficial for the management of the funds of the Plans. The governing body may directly manage the investments of the Plans or may contract for professional investment management services. Investments are reported at fair value.

The investment policy of the Board does not restrict the types of investments authorized to be made on behalf of the Group Trust. The Governing Statute requires at least eight members of the Board to approve an investment in an alternative asset. The Board determined that alternative assets include all asset classes other than traditional assets. Traditional assets include publicly traded stocks, bonds and cash equivalents. The investment policy considers the current and expected financial condition of the Plans, the expected long-term capital market outlook and DPFP's risk tolerance. The following is the Board's adopted asset allocation contained in the Investment Policy Statement as of December 31, 2019:

Asset Class	Target Allocation
Equity	55%
Global Equity	40%
Emerging Markets Equity	10%
Private Equity	5%
Safety Reserve and Fixed Income	35%
Cash	3%
Short-term Investment Grade Bonds	12%
Investment Grade Bonds	4%
High Yield Bonds	4%
Bank Loans	4%
Global Bonds	4%
Emerging Market Debt	4%
Real Assets	10%
Private Real Estate	5%
Private Natural Resources	5%

The value and performance of DPFP's investments are subject to various risks, including, but not limited to, credit risk, interest rate risk, concentration of credit risk, custodial credit risk, and foreign currency risk, which are in turn affected by economic and market factors impacting certain industries, sectors or geographies. See Note 3 for disclosures related to these risks.

Investment Transactions

The accompanying Combining Statements of Changes in Fiduciary Net Position present the net appreciation (depreciation) in the fair value of investments, which consists of the realized gains and losses on securities sold and the changes in unrealized gains and losses on those investments still held in the portfolio at year end.

Purchases and sales of investments and forward foreign exchange contracts are recorded on the trade date. Unsettled investment trades as of fiscal year end are reported in the financial statements on the accrual basis of accounting. Realized gains or losses on forward foreign exchange contracts are recognized when the contract is settled.

Interest earned but not yet received and dividends declared but not yet received are recorded as accrued interest and dividends receivable, respectively. In addition, unsettled investment purchases and sales are accrued.

Valuation of Investments

The diversity of the investment types in which the Group Trust invests requires a wide range of techniques to determine fair value.

Short-term investments include money market funds and government bonds with a maturity of less than one year and are valued based on stated market rates.

Fixed income investments include government securities such as Treasury securities, bank loans, US corporate bonds, foreign securities such as dollar denominated and non-dollar denominated issues of non-US governments and private corporations, plus units of commingled fixed income funds of both US and foreign securities. Equity securities consist of individual shares of equity securities plus units of commingled stock funds of both US and foreign entities. The stated market value of investments in publicly traded fixed income and equity securities is based on published market prices or quotations from major investment dealers as provided by JPMorgan, utilizing vendor supplied pricing. Vendor supplied pricing data for equity securities is based upon the daily closing price from the primary exchange of each security while vendor supplied pricing data for fixed income securities is based upon a combination of market maker quotes, recent trade activity, and observed cash flows. Securities traded on an international exchange are valued at the last reported sales price as of year-end at exchange rates as of year-end. The fair value of non-publicly traded commingled fixed income funds and commingled stock funds is based on their respective net asset value (NAV) as reported by the investment manager.

Real assets consist of privately held real estate, infrastructure, timberland, and farmland investments. Real estate is held in separate accounts, limited partnerships, joint ventures, and commingled funds, and as debt investments in the form of notes receivable. Infrastructure, timberland, and farmland are held in separate accounts, limited partnerships, and joint ventures. Real estate, timberland and farmland are generally subject to independent third-party appraisals performed in accordance with the Uniform Standards of Professional Appraisal Practice on a periodic basis, every three years at minimum, as well as annual financial statement audits. Infrastructure funds are valued based on audited NAV reported by the manager, which is based on internal manager valuation or independent appraisal at the discretion of the manager. Interests in joint ventures, limited partnerships and notes receivable are valued at the dollar value reported by the general partner or investment manager, as applicable. DPFP staff manage certain real estate investments internally and the real estate holdings of such ventures are subject to independent third-party appraisals on a periodic basis, every three years at minimum. Internally managed investments are valued at their net equity on a fair value basis. Externally managed partnerships, joint venture, commingled funds, and separate accounts are valued at the NAV provided by the investment or fund manager, as applicable. The investment or fund manager on a continuous basis values the underlying investment holdings.

Private equity investments consist of various investment vehicles including limited partnerships, commingled funds, trusts and notes receivable. Private equity limited partnership investments and notes receivable are valued as reported by the investment manager. Private equity funds are valued using their respective NAV as reported by the fund's custodian, investment manager or independent valuations obtained by DPFP, as applicable.

DPFP has established a framework to consistently measure the fair value of the Plans' assets and liabilities in accordance with applicable accounting, legal, and regulatory guidance. This framework has been provided by establishing valuation policies and procedures that provide reasonable assurance that assets and liabilities are carried at fair value as described above and as further discussed in Note 4.

Foreign Currency Transactions

DPFP, through its investment managers, is party to certain financial arrangements, utilizing forward contracts, options and futures as a hedge against foreign currency fluctuations. Entering into these arrangements involves not only the risk of dealing with counterparties and their ability to meet the terms of the contracts, but also the risk associated with market fluctuations. Realized gains and losses on option and future arrangements are recorded as they are incurred. Realized gains and losses on forward contracts are recorded on the settlement date.

Gains and losses resulting from foreign exchange contracts (transactions denominated in a currency other than the Group Trust's functional currency - US dollar) are recorded based on changes in market values and are included in investment income (loss) in the accompanying financial statements. Investment managers, on behalf of the Group Trust, structure foreign exchange contracts and enter into transactions to mitigate exposure to fluctuations in foreign exchange rates.

Investments and broker accounts denominated in foreign currencies outstanding at December 31, 2019 and 2018 were converted to the US dollar at the applicable foreign exchange rates quoted as of December 31, 2019 and 2018, respectively. The resulting foreign exchange gains and losses are included in net appreciation (depreciation) in fair value of investments in the accompanying financial statements.

Recent Accounting Pronouncements Applicable to DPFP

In 2017, GASB issued Statement No. 86, Certain Debt Extinguishment Issues. The effective date of GASB Statement No. 86 was June 30, 2018 and had no impact on the financial statements.

In 2017, GASB issued Statement No. 87, Leases. This standard will require recognition of certain lease assets and liabilities for leases that are currently classified as operating leases. It is not anticipated that GASB Statement No. 87 will have a material effect on the financial statements. The statement is effective for reporting periods beginning after June 15, 2021.

In March 2018, GASB issued Statement No. 88, Certain Disclosures Related To Debt, Including Borrowings and Direct Placements. This Statement requires increased disclosure in notes to financial statements of all state and local governments. The new disclosure requirements are effective for reporting periods beginning after June 15, 2019. It is not anticipated that GASB Statement No. 88 will have an impact on the DPFP financial statements.

3. Investments

The Board has contracted with investment managers to manage the investment portfolio of the Group Trust subject to the policies and guidelines established by the Board. The Board has a custody agreement with JPMorgan under which JPMorgan assumes responsibility for the safekeeping of certain investments, handling of transactions based on the instructions of investment managers, and reporting investment transactions.

The fair value of investments at December 31, 2019 and 2018 is as follows (in thousands):

	2019	2018
Short-term investments		
Short-term investment funds	$ 25,311	$ 41,317
Fixed income securities		
US Treasury bonds	118,853	95,236
US government agencies	12,870	8,747
Corporate bonds	278,775	231,111
Foreign-denominated bonds	28,846	36,359
Commingled funds	111,385	141,465
Municipal bonds	4,655	2,857
Equity securities		
Domestic	279,709	265,626
Foreign	275,522	170,309
Real assets		
Real estate	382,374	470,026
Infrastructure	52,978	57,458
Timberland	39,600	40,699
Farmland	92,235	133,222
Private equity	267,587	312,875
Forward currency contracts	652	(271)
Total	$ 1,971,352	$ 2,007,036

Custodial Credit Risk

Deposits

Custodial credit risk is the risk that, in the event of a bank failure, the System's deposits might not be recovered. DPFP does not have a formal deposit policy for custodial credit risk of its deposits.

The Federal Depository Insurance Corporation (FDIC) insures any deposits of an employee benefit plan in an insured depository institution on a "pass- through" basis, in the amount of up to $250,000 for the non-contingent interest of each plan participant at each financial institution. The pass-through insurance applies only to vested participants. DPFP believes the custodial credit risk for deposits, if any, is not material.

Investments

Portions of DPFP's investments are classified as security investments. A security is a transferable financial instrument that evidences ownership or creditorship. Investments in companies, partnerships and real estate are investments that are evidenced by contracts rather than securities.

Custodial credit risk is the risk that, in the event of the failure of an investment counterparty, the investor will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the investor, and are held by either the counterparty or the counterparty's trust department or agent, but not in the investor's name. DPFP mitigates this risk by having investments held at a custodian bank on behalf of DPFP. At December 31, 2019 and 2018, all investment securities held by the custodian were registered in the name of DPFP and were held by JPMorgan in the name of DPFP. DPFP does not have a formal policy for custodial credit risk of its investments; however, management believes that custodial credit risk exposure is mitigated by the financial strength of the financial institutions in which the securities are held.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributable to the magnitude of the Group Trust's investment in a single issue. DPFP does not have an investment policy specifically regarding concentration of credit risk; however, the target allocations of assets among various asset classes are determined by the Board with the objective of optimizing the investment return of the Group Trust within a framework of acceptable risk and diversification. For major asset classes, the Group Trust will further diversify the portfolio by employing multiple investment managers who provide guidance for implementing the strategies selected by the Board.

As of December 31, 2019 and 2018, the Group Trust did not have any single investment in an issuer which represented greater than 5% of the Plans' net position.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Interest rate risk is the greatest risk faced by an investor in the fixed income market. The price of a fixed income security typically moves in the opposite direction of the change in interest rates. The weighted average maturity of a fixed income security expresses investment time horizons (when the investment comes due and payable) in years, weighted to reflect the dollar size of individual investments within the investment type. DPFP does not have a formal investment policy that limits investment maturities as a means of managing its exposure to potential fair value losses arising from future changes in interest rates, but rather mandates such limits within investment management services contracts. Investment managers have full discretion in adopting investment strategies to address these risks.

The Group Trust invests in fixed income securities including, but not limited to, investments representing instruments with an obligated fixed rate of interest including public and private debentures, mortgage backed securities, guaranteed investment contracts with maturities greater than one year, and options/futures. Purchases and sales, investment selection, and implementation of investment strategies are delegated to the discretion of the investment manager, subject to compliance with its management agreement and DPFP's investment policy.

At December 31, 2019, the Group Trust had the following fixed income securities and maturities (in thousands):

Investment Type	Less than 1 year	1 to 5 years	6 to 10 years	More than 10 years	Total
US Treasury bonds	$ 7,855	$ 107,044	$ -	$ 3,954	$ 118,853
US Government Agencies	-	1,021	2,541	9,308	12,870
Corporate bonds	26,848	137,524	40,570	73,833	278,775
Municipal Bonds	-	3,067	-	1,588	4,655
Foreign-denominated bonds	1,579	10,860	7,332	9,075	28,846
Total	$ 36,282	$ 259,516	$ 50,443	$ 97,758	$ 443,999

At December 31, 2018, the Group Trust had the following fixed income securities and maturities (in thousands):

Investment Type	Less than 1 year	1 to 5 years	6 to 10 years	More than 10 years	Total
US Treasury bonds	$ 896	$ 80,138	$ 7,560	$ 6,642	$ 95,236
US Government Agencies	-	-	1,138	7,609	8,747
Corporate bonds	20,786	157,009	24,035	29,281	231,111
Municipal Bonds	-	2,529	-	328	2,857
Foreign-denominated bonds	11,574	5,863	8,977	9,945	36,359
Total	$ 33,256	$ 245,539	$ 41,710	$ 53,805	$ 374,310

Commingled fixed income funds do not have specified maturity dates and are therefore excluded from the above tables.

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The books and records of the Plans are maintained in US dollars. Foreign currencies and non-US dollar denominated investments are translated into US dollars at the bid prices of such currencies against US dollars at each balance sheet date. Realized and unrealized gains and losses on investments, which result from changes in foreign currency exchange rates, have been included in net appreciation (depreciation) in fair value of investments in the accompanying financial statements. Net realized foreign currency gains and losses resulting from changes in exchange rates include foreign currency gains and losses between trade date and settlement date of investment securities transactions, foreign currency transactions, and the difference between the amounts of interest and dividends are recorded on the books of the Plans and the amount actually received. International and global managers have permission to use currency forward and futures contracts to hedge currency against the US dollar. DPFP does not have an investment policy specific to foreign currency risk, however to mitigate foreign currency risk, investment managers with international exposure are expected to maintain diversified portfolios by sector and by issuer.

The Group Trust's exposure to foreign currency risk in US dollars as of December 31, 2019 is as follows (in thousands):

Currency	Fixed Income	Equity	Real Assets	Total
Australian Dollar	$ 3,095	$ 6,263	$ 1,311	$ 10,669
Brazilian Real	2,880	942	4,689	8,511
British Pound Sterling	-	30,709	-	30,709
Canadian Dollar	-	5,001	-	5,001
Colombian Peso	3,074	-	-	3,074
Danish Krone	-	5,078	-	5,078
Euro	-	91,706	-	91,706
Hong Kong Dollar	-	8,403	-	8,403
Hungarian Forint	-	1,334	-	1,334
Indonesian Rupiah	2,611	730	-	3,341
Japanese Yen	-	44,759	-	44,759
Malaysian Ringgit	3,288	-	-	3,288
Mexican Peso	8,378	-	-	8,378
Norwegian Krone	217	138	-	355
Polish Zloty	2,525	-	-	2,525
Singaporean Dollar	-	1,159	-	1,159
South African Rand	2,778	-	25,968	28,746
South Korean Won	-	3,434	-	3,434
Swedish Krona	-	3,378	-	3,378
Swiss Franc	-	19,327	-	19,327
Total	$ 28,846	$ 222,361	$ 31,968	$ 283,175

The Group Trust's exposure to foreign currency risk in US dollars as of December 31, 2018 was as follows (in thousands):

Currency	Fixed Income	Equity	Real Assets	Total
Australian Dollar	$ 3,184	$ 6,225	$ 7,142	$ 16,551
Brazilian Real	2,732	367	7,074	10,173
British Pound Sterling	4,348	25,367	-	29,715
Canadian Dollar	-	2,149	-	2,149
Colombian Peso	1,608	-	-	1,608
Danish Krone	-	3,921	-	3,921
Euro	635	62,327	-	62,962
Hong Kong Dollar	-	11,346	-	11,346
Indonesian Rupiah	2,378	-	-	2,378
Japanese Yen	-	33,638	-	33,638
Malaysian Ringgit	4,107	-	-	4,107
Mexican Peso	9,172	-	-	9,172
Polish Zloty	4,803	-	-	4,803
Singaporean Dollar	-	148	-	148
South African Rand	3,392	-	24,366	27,758
South Korean Won	-	2,671	-	2,671
Swedish Krona	-	1,782	-	1,782
Swiss Franc	-	20,368	-	20,368
Total	$ 36,359	$ 170,309	$ 38,582	$ 245,250

In addition to the above exposures, certain fund-structure investments in the private equity, emerging markets debt, private debt and real assets asset classes with a total fair value of $137 million at both December 31, 2019 and 2018, have some level of investments in various countries with foreign currency risk at the fund level. The individual investments in these funds with such exposure are not included in the above table.

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. DPFP was party to negotiated derivative contracts in the form of forward foreign exchange contracts as of December 31, 2019 as discussed below. DPFP does not have an investment policy specific to credit risk, however to mitigate credit risk on the currency forward contracts, investment managers who manage such contracts maintain a diversified portfolio by counterparty.

The Group Trust's exposure to credit risk in fixed income securities, including short-term investment funds classified as cash equivalents, as of December 31, 2019 and 2018 using the Standard & Poor's rating scale, at fair value, is as follows (in thousands):

December 31, 2019

Rating	Corporate Bonds	Municipal Bonds	Foreign-Denominated Bonds	Commingled Funds	Short-term Investment Funds (1)	US Government Securities	Total
AAA	$ 49,269	$ -	$ 1,906	$ -	$ -	$ 1,022	$ 52,197
AA+	4,203	-	1,406	-	-	130,701	136,310
AA	3,039	1,588	-	-	-	-	4,627
AA-	4,173	-	-	-	-	-	4,173
A+	8,784	-	-	-	-	-	8,784
A	12,043	1,364	-	-	-	-	13,407
A-	22,655	-	5,813	-	-	-	28,468
BBB+	37,102	1,703	8,378	-	-	-	47,183
BBB	19,539	-	2,611	-	-	-	22,150
BBB-	8,670	-	3,074	-	-	-	11,744
BB+	6,636	-	-	-	-	-	6,636
BB	9,568	-	2,778	-	-	-	12,346
BB-	14,934	-	2,880	-	-	-	17,814
B+	7,785	-	-	-	-	-	7,785
B	7,155	-	-	-	-	-	7,155
B-	8,483	-	-	-	-	-	8,483
CCC+	3,599	-	-	-	-	-	3,599
CCC	4,130	-	-	-	-	-	4,130
CCC-	861	-	-	-	-	-	861
CC	185	-	-	-	-	-	185
C	-	-	-	-	-	-	-
D	439	-	-	-	-	-	439
NR (2)	45,523	-	-	111,385	113,393	-	270,301
Total	$ 278,775	$ 4,655	$ 28,846	$ 111,385	$ 113,393	$ 131,723	$ 668,777

(1) Includes short-term money market funds classified as cash equivalents.
(2) NR represents those securities that are not rated.

December 31, 2018

Rating		Corporate Bonds		Municipal Bonds		Foreign-Denominated Bonds		Commingled Funds		Short-term Investment Funds (1)		US Government Securities		Total
AAA	$	7,064	$	-	$	1,727	$	-	$	-	$	95,236	$	104,027
AA+		657		-		675		-		-		-		1,332
AA		1,742		-		782		-		-		-		2,524
AA-		7,583		1,400		-		-		-		-		8,983
A+		9,214		-		-		-		-		-		9,214
A		27,347		-		-		-		-		-		27,347
A-		20,914		-		17,141		-		-		-		38,055
BBB+		31,290		1,457		-		-		-		-		32,747
BBB		18,956		-		1,608		-		-		-		20,564
BBB-		3,917		-		5,770		-		-		-		9,687
BB+		2,223		-		-		-		-		-		2,223
BB		3,873		-		2,732		-		-		-		6,605
BB-		8,989		-		-		-		-		-		8,989
B+		3,628		-		-		-		-		-		3,628
B		2,629		-		-		-		-		-		2,629
B-		10,308		-		636		-		-		-		10,944
CCC+		4,504		-		-		-		-		-		4,504
CCC		2,482		-		-		-		-		-		2,482
CCC-		566		-		-		-		-		-		566
CC		3,770		-		-		-		-		-		3,770
C		3,615		-		-		-		-		-		3,615
D		771		-		-		-		-		-		771
NR (2)		55,069		-		5,288		141,465		41,317		8,747		251,886
Total	$	231,111	$	2,857	$	36,359	$	141,465	$	41,317	$	103,983	$	557,092

(1) Includes short-term money market funds classified as cash equivalents.
(2) NR represents those securities that are not rated.

Securities Lending

The Board has authorized the Group Trust to enter into an agreement with JPMorgan for the lending of certain of the Group Trust's securities including, but not limited to, stocks and bonds to counterparty brokers and banks (borrowers) for a predetermined fee and period of time. Such transactions are allowed by State statute.

JPMorgan lends, on behalf of the Group Trust, securities held by JPMorgan as the Group Trust's custodian and receives US dollar cash and US government securities as collateral. JPMorgan does not have the ability to pledge or sell collateral securities absent a borrower default. Borrowers are required to put up collateral for each loan equal to: (i) in the case of loaned securities denominated in US dollars or whose primary trading market is in the US or sovereign debt issued by foreign governments, 102% of the fair market value of the loaned securities and (ii) in the case of loaned securities not denominated in US dollars or whose primary trading market is not in the US, 105% of the fair market value of the loaned securities.

The Board did not impose any restrictions during 2019 or 2018 on the amount of the loans that JPMorgan made on its behalf. There were no failures by any borrowers to return the loaned securities or pay distributions thereon during 2019 or 2018. Moreover, there were no losses during

2019 or 2018 resulting from a default of the borrower. JPMorgan indemnifies the Group Trust with respect to any loan related to any non-cash distribution and return of securities.

During 2019 and 2018, the Board and the borrowers maintained the right to terminate all securities lending transactions on demand. The cash collateral was invested, together with the collateral of other qualified tax-exempt plan lenders, in a collective investment pool maintained by JPMorgan. The relationship between the maturities of the collateral pool and the Group Trust's securities lent has not been determined. The fair value for securities on loan for the Group Trust was $38.6 million at December 31, 2019 and 2018. Cash collateral held for the Group Trust was $13 million and $20.6 million at December 31, 2019 and 2018, respectively. Non-cash collateral held for the Group Trust was $26.6 million and $19 million at December 31, 2019 and 2018, respectively, consisting primarily of corporate bonds and equity securities. At year-end, credit risk is substantially mitigated as the amounts of collateral held by the Group Trust exceed the amounts the borrowers owe the Group Trust. Securities lending transactions resulted in income, net of expenses, of $114 thousand and $112 thousand during 2019 and 2018, respectively.

Forward Contracts

During fiscal years 2019 and 2018, certain investment managers, on behalf of the Group Trust, entered into forward foreign exchange contracts as permitted by guidelines established by the Board. DPFP's staff monitors guidelines and compliance. A currency forward is a contractual agreement between two parties to pay or receive specific amounts of foreign currency at a future date in exchange for another currency at an agreed upon exchange rate. Forward commitments are not standardized and carry credit risk due to possible nonperformance by one of the counterparties. The maximum potential loss is the aggregate face value in US dollars at the time the contract was entered into. Forwards are usually traded over-the-counter. These transactions are initiated in order to hedge risks from exposure to foreign currency rate fluctuation and to facilitate trade settlement of foreign security transactions. Forwards carry market risk resulting from adverse fluctuations in foreign exchange rates. Recognition of realized gain or loss depends on whether the currency exchange rate has moved favorably or unfavorably to the contract holder upon termination of the contract. Prior to termination of the contract, the Group Trust records the unrealized currency translation gain or loss based on the applicable forward exchange rates. Forward currency contracts are considered derivative financial instruments and are reported at fair value.

The fair value and notional amounts of derivative instruments outstanding at December 31, 2019 and 2018, classified by type, and the changes in fair value of such derivative instruments for the year then ended are as follows (in thousands):

December 31, 2019	Change in Fair Value	Fair Value	Notional Value
Currency forwards	$ 923	$ 652	$ 105,365

December 31, 2018	Change in Fair Value	Fair Value	Notional Value
Currency forwards	$ (406)	$ (271)	$ 66,729

4. Fair Value Measurement

GASB Statement No. 72 requires all investments be categorized under a fair value hierarchy. Fair value of investments is determined based on both observable and unobservable inputs. Investments are categorized within the fair value hierarchy established by GASB and the levels within the hierarchy are as follows:

- Level 1 – quoted prices (unadjusted) for identical assets or liabilities in active markets that a government can access at the measurement date

- Level 2 – inputs (other than quoted prices included within Level 1) that are observable for an asset or liability, either directly or indirectly. These inputs can include quoted prices for similar assets or liabilities in active or inactive markets, or market-corroborated inputs.

- Level 3 – significant unobservable inputs for an asset or liability

The remaining investments not categorized under the fair value hierarchy are shown at NAV. These are investments in non-governmental entities for which a readily determinable fair value is not available, such as member units or an ownership interest in partners' capital, to which a proportionate share of net assets is attributed. Investments at NAV are commonly calculated by subtracting the fair value of liabilities from the fair value of assets.

The following table presents a summary of the Group Trust's investments by type as of December 31, 2019, at fair value (in thousands):

	Fair Value December 31, 2019	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				
Short-term investment funds	$ 25,311	$ 25,311	$ -	$ -
Fixed income securities				
US Treasury bonds	118,853	-	118,853	-
US government agencies	12,870	-	12,870	-
Corporate bonds	278,775	-	278,775	-
Foreign-denominated bonds	28,846	-	28,846	-
Municipal bonds	4,655	-	4,655	-
Equity securities				
Domestic	279,709	279,709	-	-
Foreign	275,522	275,522	-	-
Real assets				
Real estate(1)	254,812	-	-	254,812
Timberland	8,771	-	-	8,771
Farmland	92,235	-	-	92,235
Private equity	92,064	-	-	92,064
Forward currency contracts	652	-	652	-
Total Investments by Fair Value Level	$ 1,473,075	$ 580,542	$ 444,651	$ 447,882
Investments Measured at NAV				
Fixed income - commingled funds	$ 111,385			
Real assets(1)	211,369			
Private equity	175,523			
Total Investments Measured at NAV	$ 498,277			
Total Investments Measured at Fair Value	$ 1,971,352			

(1) Direct holdings of real estate at Level 3 include only the assets which are wholly-owned and valued using significant unobservable inputs. Remaining real estate investments are valued at NAV.

The following table presents a summary of the Group Trust's investments by type as of December 31, 2018, at fair value (in thousands):

	Fair Value December 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by Fair Value Level				
Short-term investment funds	$ 41,317	$ 41,317	$ -	$ -
Fixed income securities				
US Treasury bonds	95,236	-	95,236	-
US government agencies	8,747	-	8,747	-
Corporate bonds	231,111	-	231,111	-
Foreign-denominated bonds	36,359	-	36,359	-
Municipal bonds	2,857	-	2,857	-
Equity securities				
Domestic	265,626	265,626	-	-
Foreign	170,309	170,309	-	-
Real assets				
Real estate(1)	293,428	-	-	293,428
Timberland	8,722	-	-	8,722
Farmland	133,222	-	-	133,222
Private equity	91,585	-	-	91,585
Forward currency contracts	(271)	-	(271)	-
Total Investments by Fair Value Level	$ 1,378,248	$ 477,252	$ 374,039	$ 526,957
Investments Measured at NAV				
Fixed income - commingled funds	$ 141,465			
Real assets(1)	266,033			
Private equity	221,290			
Total Investments Measured at NAV	$ 628,788			
Total Investments Measured at Fair Value	$ 2,007,036			

(1) Direct holdings of real estate at Level 3 include only the assets which are wholly-owned and valued using significant unobservable inputs. Remaining real estate investments are valued at NAV.

Short-term investments consist of highly liquid securities invested by third party investment managers and held directly by the Group Trust with the custodian.

Fixed income securities consist primarily of US treasury securities, US corporate securities, international debt securities and commingled funds. Fixed income securities classified in Level 2 of the fair value hierarchy are valued using matrix pricing. This method uses quoted prices for securities with the same maturities and ratings rather than a fixed price for a designated security. Many debt securities are traded on a dealer market and much less frequently, which is consistent with a Level 2 classification as these investments are valued using observable inputs. Forward currency contracts are classified as Level 2 as these securities are priced using the cost approach on a dealer market traded on lower frequencies. Commingled funds classified as Level 3 involve internal evaluation of collectability and therefore involve unobservable inputs.

Equity securities, which include both domestic and foreign securities, are classified as Level 1 as fair value is obtained using a quoted price from active markets. The security price is generated by market transactions involving identical or similar assets, which is the market approach to measuring fair value. Inputs are observable in exchange markets, dealer markets, and brokered markets for which prices are based on trades of identical securities.

Real assets classified as Level 3 are investments in which DPFP either owns 100 percent of the asset or for which the valuation is based on non-binding offers from potential buyers to purchase the investments. Real asset investments, which are wholly-owned direct holdings, are valued at the income, cost, or market approach depending on the type of holding. All direct holdings are valued using unobservable inputs and are classified in Level 3 of the fair value hierarchy. Private equity investments classified as Level 3 are investments valued by an independent appraiser. Private equity and real assets valued at NAV are based on per share (or its equivalent) of DPFP's ownership interest in the partners' capital valued by the managers and based on third party appraisals, valuations and audited financials.

The following table presents a summary of the fair value and remaining unfunded commitments of the Group Trust's investments measured at NAV at December 31, 2019 (in thousands):

Asset Category/Class	Fair Value	Unfunded Commitments
Fixed income – commingled funds	$ 111,385	$ 640
Real assets	211,369	10,020
Private equity	175,523	3,996
Total	$ 498,277	$ 14,656

The following table presents a summary of the fair value and remaining unfunded commitments of the Group Trust's investments measured at NAV at December 31, 2018 (in thousands):

Asset Category/Class	Fair Value	Unfunded Commitments
Fixed income – commingled funds	$ 141,465	$ 1,445
Real assets	266,033	10,158
Private equity	221,290	5,541
Total	$ 628,788	$ 17,144

Investments measured at NAV include commingled funds, real assets and private equity.

Fixed income commingled funds are fund-structure investments reported by the fund managers at NAV. Certain of the commingled investments have a redemption notice period of 7-30 days and others are less liquid, with estimated redemption periods ranging from 5 to 10 years as assets within the funds are liquidated.

Real asset investments (real estate, infrastructure, timberland and farmland) are held in separate accounts, as a limited partner, or in a joint venture. These investments are illiquid and resold at varying rates, with distributions received over the life of the investments. They are typically not redeemed, nor do they have set redemption schedules.

Private equity holdings include fund-structure investments with general partners. By their nature, these investments are illiquid and typically not resold or redeemed. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over a period ranging from 5 to 15 years on average.

Upon initial investment with a general partner or in certain fund-structures, DPFP commits to a certain funding level for the duration of the contract. At will, the partners or fund managers may request that DPFP fund a portion of this amount. Such amounts remaining as of December 31, 2019 and 2018 for investments measured at NAV are disclosed above as unfunded commitments.

5. Net Pension Liability

The net pension liability is measured as the total pension liability, less the amount of the plan's fiduciary net position. The components of the net pension liability at December 31, 2019 and 2018 are as follows (in thousands):

Combined Pension Plan

	2019	2018
Total pension liability	$ 4,731,960	$ 4,501,670
Less: Plan fiduciary net position	(2,057,857)	(2,041,914)
Net pension liability	$ 2,674,103	$ 2,459,756

Plan fiduciary net position as a percentage of the total pension liability at December 31, 2019 and 2018 is 43.5% and 45.4%, respectively.

Supplemental Plan

	2019	2018
Total pension liability	$ 35,839	$ 31,831
Less: Plan fiduciary net position	(17,307)	(18,318)
Net pension liability	$ 18,532	$ 13,513

Plan fiduciary net position as a percentage of the total pension liability at December 31, 2019 and 2018 is 48.3% and 57.6%, respective.

Actuarial Assumptions as of December 31, 2019

The total pension liability was determined by an actuarial valuation as of January 1, 2020, using the below significant assumptions, applied to all periods included in the measurement, except as noted below. The 2019 assumptions are based on an actuarial experience review covering the period January 1, 2015 to December 31, 2019.

Investment rate of return	7.00% per annum, compounded annually, net of investment expenses. This rate is based on an average inflation rate of 2.50% and a real rate of return of 4.50%. Market value asset returns are expected to be -6.00% in 2020, 5.25% in 2021, 5.75% in 2022, 6.25% in 2023 and 7.00% annually thereafter.
Discount rate	7.00%, used to measure the total pension liability
Administrative expenses	Explicit assumption of $8.5 million per year or 1% of Computation Pay, whichever is greater for the Combined Pension Plan and $65 thousand per year for the Supplemental Plan, increasing 2.50% annually. Includes investment-related personnel costs.
Projected salary increases	Range of 2.5% to 3.25% based on the City's pay plan, along with analysis completed in conjunction with an Experience Study Report for the five-year period ended December 31, 2019 and the 2019 Meet and Confer Agreement.
Payroll growth	2.50% per year, to match inflation assumption
Actuarial cost method	Entry age normal cost method (level percent of pay)
Post-retirement benefit increases	Ad hoc COLA after the Combined Plan is 70% funded after accounting for the impact of the COLA. 2% of original benefit, beginning October 1, 2063.
Actuarial Value of Assets	Combined Pension Plan – Reset of the actuarial value of assets to market value as of December 31, 2015, with a five-year smoothing in future periods; Supplemental Pension Plan – Market value of assets

Amortization Methodology	Combined Pension Plan – Closed 25 years. Beginning January 1, 2021, each year's gains and losses will be amortized over a closed 20-year period. Supplemental Pension Plan – Closed 20 years. Beginning January 1, 2021, each year's gains and losses will be amortized over a closed 10-year period.
DROP interest, compounded annually, net of expenses	2.75% on active balances as of September 1, 2017, payable upon retirement, 0% on balances accrued after September 1, 2017.
Retirement age	Experience-based table of rates based on age, extending to age 65, with separate tables for police officers and firefighters.
Pre-retirement mortality	Pub-2010 Public Safety Employee Amount-Weighted Mortality Tables, set forward for males; projected generationally using the Scale MP-2019.
Post-retirement mortality	Pub-2010 Public Safety Retiree Amount-Weighted Mortality Table, with a one-year setback for females; projected generationally using Scale MP-2019.
Disabled mortality	Pub-2010 Public Safety Disabled Retiree Amount-Weighted Mortality Table, with a four-year set forward for both males and females; projected generationally using Scale MP-2019.
DROP election	The DROP Utilization factor is 0% for new entrants.

Actuarial Assumptions as of December 31, 2018

The 2018 assumptions were based on an actuarial experience review covering January 1, 2010 to December 31, 2014. In addition, assumptions related to Plan changes which were effective September 1, 2017, as a result of the passage of HB 3158.

Investment rate of return	7.25% per annum, compounded annually, net of investment expenses. This rate is based on an average inflation rate of 2.75% and a real rate of return of 4.50%. Market value asset returns are expected to be 5.25% in 2019, 5.75% in 2020, 6.25% in 2021, 6.75% in 2022 and 7.25% annually thereafter.
Discount rate	7.25%, used to measure the total pension liability
Administrative expenses	Explicit assumption of $8.5 million per year or 1% of Computation Pay, whichever is greater for the Combined Pension Plan and $65 thousand per year for the Supplemental Plan, increasing 2.75% annually. Includes investment-related personnel costs.
Projected salary increases	2017: 10% if less than 10 years; 7% if 10-11 years; 2% if more than 11 years 2018: 5% if less than 10 years; 2% if more than 10 years 2019: 10% if less than 10 years; 7% if 10-11 years; 2% if more than 11 years 2020 and later: Range of 2% to 5% per year, inclusive of 2.75% inflation assumption, dependent upon years of service. 2017-2019 are based on the 2016 Meet and Confer Agreement. 2020 is based on the 2016 Meet and Confer Agreement, as amended in 2018. Remaining scale is based on the City's pay plan, along with analysis completed in conjunction with the most recent experience study.
Payroll growth	2.75% per year, to match inflation assumption
Actuarial cost method	Entry age normal cost method (level percent of pay)

Post-retirement benefit increases	Ad hoc COLA after the Combined Plan is 70% funded after accounting for the impact of the COLA. 2% of original benefit, beginning October 1, 2050.
Actuarial Value of Assets	Combined Pension Plan – Reset of the actuarial value of assets to market value as of December 31, 2015, with a five-year smoothing in future periods; Supplemental Pension Plan – Market value of assets
Amortization Methodology	Combined Pension Plan - 30 years; Supplemental Pension Plan – 10 years
DROP interest, compounded annually, net of expenses	3% on active balances as of September 1, 2017, payable upon retirement, 0% on balances accrued after September 1, 2017.
Retirement age	Experience-based table of rates based on age, extending to age 62, with separate tables for police officers and firefighters.
Pre-retirement mortality	RP-2014 sex-distinct Employee Mortality Table, with a two-year setback for males and no adjustments for females; projected generationally using the MP-2015 improvement scale.
Post-retirement mortality	RP-2014 sex-distinct Blue Collar Healthy Annuitant Mortality Table, with no adjustment for males and a two-year set forward for females; projected generationally using the MP-2015 improvement scale.
Disabled mortality	RP-2014 sex-distinct Disabled Retiree Mortality Table, with a three-year setback for both males and females; projected generationally using the MP-2015 improvement scale.
DROP election	The DROP Utilization factor is 0% for new entrants.

The long-term expected rate of return used by the external actuary to evaluate the assumed return on the Plans' investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense) 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. The actuary's best estimates of arithmetic real rates of return for each major asset class included in the Plans' target asset allocation as of December 31, 2019 are summarized as shown below. The rates of return below are net of the inflation component of 2.50%.

Asset Class	Long-Term Expected Real Rate of Return	Target Asset Allocation
Global Equity	5.29%	40%
Emerging Markets Equity	6.47%	10%
Private Equity	8.19%	5%
Cash	0.62%	3%
Short-Term Investment Grade Bonds	0.71%	12%
Investment Grade Bonds	1.00%	4%
High Yield Bonds	3.18%	4%
Bank Loans	2.85%	4%
Global Bonds	0.97%	4%
Emerging Market Debt	3.58%	4%
Real Estate	3.85%	5%
Natural Resources	5.54%	5%

Discount rate

The discount rate used to measure the Combined Pension Plan liability was 7.00%. The projection of cash flows used to determine the discount rate assumed City contributions will be made in accordance with the provisions of the Governing Statute, including statutory minimums through 2024 and 34.50% of Computation Pay thereafter. Members are expected to contribute 13.50% of Computation Pay. For cash flow purposes, projected payroll is based on 90% of the City's Hiring Plan payroll projections through 2037, increasing by 2.50% per year thereafter. This payroll projection is used for cash flow purposes only and does not impact the Total Pension Liability. The normal cost rate for future members is assumed to be 13.83% for all years. Based on these assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The discount rate used to measure the total pension liability for the Supplemental Plan was 7.00%. The projection of cash flows used to determine the discount rate assumed that City contributions will equal the employer's normal cost plus a twenty-year amortization payment on the unfunded actuarial accrued liability and member contributions will equal 13.50% of supplemental Computation Pay. Based on those assumptions, the Supplemental 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.

Sensitivity of the net pension liability to changes in the discount rate

The following tables present the net pension liability, calculated using the current discount rate, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage-point lower or one percentage-point higher than the current rate (in thousands).

December 31, 2019

Combined Pension Plan

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net pension liability	$ 3,212,526	$ 2,674,103	$ 2,224,767

Supplemental Plan

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net pension liability	$ 21,763	$ 18,532	$ 15,763

December 31, 2018

Combined Pension Plan

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Net pension liability	$ 2,953,141	$ 2,459,756	$ 2,046,452

Supplemental Plan

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Net pension liability	$ 16,363	$ 13,513	$ 11,069

6. Deferred Retirement Option Plan

Deferred Retirement Option Plan (DROP) interest for active DROP members was eliminated after September 1, 2017; only the balance as of September 1, 2017 is eligible for interest once active DROP members retire. Active DROP participation is limited to 10 years. Retirees are not allowed to defer payments into their DROP accounts. Retirees and other DROP account holders, excluding active DROP members, had their DROP balance converted to an annuity (stream of payments) on

November 30, 2017. The term of the annuity was based on the DROP account holders expected lifetime at November 30, 2017. The annuity included interest on balances accrued prior to September 1, 2017 at a rate that is correlated to the United States Treasury Note or Bond rates based on the term of the annuity and rules adopted by the Board.

DROP account balances of a member that retires after November 30, 2017 are converted to an annuity (stream of payments) at the time the member retires. The annuity is based on the member's life expectancy and interest rates at the time of retirement. Interest on retiree DROP accounts is based on the length of the retiree's expected lifetime and will be based on U.S. Treasury Bond Rates and rules adopted by the Board. Interest is only payable on the September 1, 2017 account balance.

HB 3158 allowed active members an opportunity to revoke their DROP election prior to February 28, 2018 under rules adopted by the Board. 183 members revoked their prior DROP participation election.

Prior to the passage of HB 3158, DROP accounts earned interest based on the 2014 plan amendments, which instituted a gradual step-down in the interest rate paid on DROP accounts. The interest paid on DROP accounts beginning October 1, 2016 until September 1, 2017 was 6%. See Note 9 for discussion of the status of litigation related to the 2014 plan amendments.

The following tables reflect the change in DROP balances and the change in the present value of DROP annuities and the number of participants and annuitants during the year ended December 31, 2019:

Combined Pension Plan

	DROP Balance(000's)			DROP Participants
Balance at December 31, 2018	$	193,931	Participants at December 31, 2018	483
Accumulations		21,167		
Balances Annuitized		(49,885)		
Other Distributions/Deductions		(66)		
Adjustments		(9,804)		
Balance at December 31, 2019	$	155,343	Participants at December 31, 2019	383

	Annuity Balance(000's)			Annuity Participants
Present Value of Annuities at December 31, 2018	$	828,520	Annuitants at December 31, 2018	2,186
Present Values of Annuities at December 31, 2019[1]	$	880,306	Annuitants at December 31, 2019	2,342

Supplemental Plan

		DROP Balance(000's)		DROP Participants
Balance at December 31, 2018	$	175	Participants at December 31, 2018	5
Accumulations		16		
Balances Annuitized		(54)		
Other Distributions/Deductions		-		
Adjustments		-		
Balance at December 31, 2019	$	137	Participants at December 31, 2019	3

		Annuity Balance(000's)		Annuity Participants
Present Value of Annuities at December 31, 2018	$	4,296	Annuitants at December 31, 2018	57
Present Value of Annuities at December 31, 2019[1]	$	6,988	Annuitants at December 31, 2019	66

[1] Includes annuities that may be paid out of the Excess Benefits and Trust.

7. Defined Contribution Retirement Plan

DPFP offers its employees a money purchase plan (MPP) created in accordance with Internal Revenue Code Section 401. An employee of DPFP becomes a participant in the MPP on their first day of service. Participation ceases, except for purposes of receiving distributions in accordance with the terms of the MPP, on the day employment with DPFP is terminated. Employees are required to contribute 6.5% of their regular pay. Employees are allowed to make after-tax contributions, not to exceed IRS Code limitations. In accordance with the MPP, DPFP is obligated to contribute 12% of permanent employees' regular rate of pay and 8% of part-time and temporary employees' regular rate of pay each year. During 2019 and 2018, DPFP contributed approximately $312 thousand and $275 thousand, respectively, and participants contributed approximately $169 thousand and $149 thousand, respectively, to the MPP. The MPP is administered by a third party, Voya Financial, Inc. (Voya), and the cost of administration is borne by the MPP participants. The MPP is held in trust by Voya and is not a component of the accompanying financial statements.

8. Capital Assets

The DPFP office building and land are recorded at acquisition value. Purchased capital assets which include building improvements, are recorded at historical cost. Depreciation is charged over the estimated useful lives of the assets using a straight-line method. Depreciation expense of $233 thousand and $226 thousand, respectively, is included in professional and administrative expenses in the accompanying financial statements for the years ended December 31, 2019 and 2018. All capital assets belong to DPFP. Maintenance and repairs are charged to expense as incurred.

Capitalization thresholds for all capital asset classes and useful lives for exhaustible assets are as follows (in thousands):

Asset Class		Capitalization Threshold	Depreciable Life
Building	$	50	50 years
Building improvements	$	50	15 years
Information Technology Hardware	$	50	5 years

Capital asset balances and changes for the fiscal years ending December 31, 2019 and 2018 are as follows (in thousands):

Asset Class	Balance December 31, 2017	Increases	Decreases	Balance December 31, 2018	Increases	Decreases	Balance December 31, 2019
Land	$ 3,562	$ -	$ -	$ 3,562	$ -	$ -	$ 3,562
Building	8,921	-	190	8,731	-	190	8,541
Building improvements	232	-	36	196	-	36	160
IT Hardware	-	-	-	-	73	7	66
Total	$ 12,715	$	$ 226	$ 12,489	$ 73	$ 233	$ 12,329

9. Commitments and Contingencies

Members

As described in Note 1, certain members of the Plans whose employment with the City is terminated prior to being eligible for pension benefits are entitled to refunds of their accumulated contributions without interest, if they have less than five years of pension service. As of December 31, 2019, and 2018, aggregate contributions from active non-vested members for the Combined Pension Plan were \$19.4 million and \$20.3 million, respectively. The portion of these contributions that might be refunded to members who terminate prior to pension eligibility and request a refund has not been determined. Refunds due to terminated non-vested members in the amount of \$1.3 million and \$1.0 million for December 31, 2019 and 2018, respectively, were included in accounts payable and other accrued liabilities of the Combined Pension Plan. As of December 31, 2019, and 2018, the aggregate contributions from active non-vested members of the Supplemental Plan were \$2 thousand and \$38 thousand. No members are eligible for refunds from the Supplemental Plan as of December 31, 2019.

At December 31, 2019 the total accumulated DROP balance and the present value of the DROP annuities was \$1.04 billion for the Combined Plan and \$7.1 million for the Supplemental Plan. The total accumulated DROP balance at December 31, 2018 was \$1.01 billion for the Combined Plan and \$4.5 million for the Supplemental Plan.

Investments

The following table depicts the total commitments and unfunded commitments to various limited partnerships and investment advisors at December 31, 2019, by asset class (in thousands).

Asset Class		Total Commitment		Total Unfunded Commitment
Real assets	$	117,000	$	10,020
Private equity		126,283		3,996
Fixed income – commingled funds		10,000		640
Total	$	253,283	$	14,656

Capital calls related to private equity and real assets were received after December 31, 2019, which reduced the unfunded commitments to $3.8 and $9.7 million, respectively. See Note 11.

Legal

DPFP was a defendant in litigation in which certain individual members have alleged that 2014 plan amendments to the Combined Pension Plan reducing the DROP interest rate and a related policy and procedure change to accelerate DROP distributions violated Article 16, Section 66 of the Texas Constitution. On April 14, 2015, the district court entered judgment for DPFP, holding these amendments and changes are constitutional. As a result of this court decision, the Board voted on April 16, 2015 to implement the changes approved by the members. Plaintiffs appealed and on December 13, 2016, the Fifth District Court of Appeals rendered a decision affirming the district court's ruling. On January 24, 2017, plaintiffs filed a petition for review with the Texas Supreme Court. On March 8, 2019, the Texas Supreme Court upheld the decisions by the lower courts and on June 14, 2019 denied the plaintiff's motion for rehearing thereby ending the case.

In 2017, a group of retirees filed a lawsuit in federal court which seeks to require the Board to distribute lump sum payments from DROP upon the retirees' request. On March 14, 2018, the district court granted DPFP's motion to dismiss the case. The plaintiffs appealed this decision to the Fifth Circuit and requested the Fifth Circuit certify certain issues relating to the case to the Texas Supreme Court. On March 20, 2019, the Fifth Circuit certified two questions to the Texas Supreme Court. In January 2020, the Supreme Court answered these questions and in April 2020 the Fifth Circuit subsequently upheld the decision of the district court. In August 2020, the plaintiffs filed a writ of certiorari to the United States Supreme Court which was denied thereby ending the case.

In February 2019, certain plaintiffs filed suit against the Texas Pension Review Board and its Chairman in state district court in Travis County alleging that changes to the provisions of the DPFP Plans relating to the benefit supplement and annual adjustment were violative of the Texas Constitution. The case is in its early stages. While DPFP is not a party to the lawsuit, a judgment for the plaintiffs would have a material effect upon DPFP and its financial statement and condition. The ultimate outcome of this lawsuit cannot be determined at this time and, accordingly, no amounts related to these claims have been recorded in the accompanying financial statements as of December 31, 2019.

10. Risks and Uncertainties

The Group Trust invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market, and credit risks. The effect of such risks on the Group

Trust's investment portfolio is mitigated by the diversification of its holdings. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the value of investment securities may occur over the course of different economic and market cycles and that such change could be material to the financial statements.

The Plans' actuarial estimates disclosed in Note 5 are based on certain assumptions pertaining to investment rate of return, inflation rates, and participant demographics, all of which are subject to change. Due to uncertainties inherent in the estimations and assumptions process, it is reasonably possible that changes in these estimates and assumptions in the near term could be material to the financial statements.

Several lawsuits were pending against the City by police officers and firefighters, which claim the right to significant back pay on behalf of many current and former City of Dallas police officers and firefighters. DPFP previously intervened in such lawsuits to protect DPFP's right to Member and City contributions if they were to become due upon a successful outcome of the police officers' and firefighters' claims. HB 3158, passed by the Texas Legislature in 2017, provided that any award of back pay arising out of litigation would not be included in Computation Pay, thereby eliminating any liability of DPFP for increased benefits regardless of the outcome of these suits. Additionally, a settlement agreement was signed by all parties in September 2018, which eliminates any liability for DPFP. Accordingly, no amounts related to these claims have been recorded in the accompanying financial statements as of December 31, 2019 and 2018.

11. Subsequent Events

Investment Policy Statement Amendments

In July 2020, the Board approved modifying the Investment Policy Statement (IPS) to include language referencing the objective of covering 2.5 years of expected net cash flows in the Safety Reserve.

Real Asset and Private Equity Sales

Subsequent to year end and prior to the issuance date of the financials, there were 3 sales of Real Estate properties that totaled $16.8 million in proceeds to DPFP and one Private Equity distribution of $1.2 million.

Capital Calls Resulting in the Reduction of Unfunded Commitments

Subsequent to December 31, 2019, DPFP received and paid the following material capital calls: Real Assets - $353 thousand and Private Equity - $230 thousand.

Voluntary Correction Program (VCP) Closing Agreement

In 2018, the system filed an application to participate in the Voluntary Correction Program (VCP) of the Internal Revenue Service (IRS). The issues were related to DROP distributions and the Excess Benefit Plan. In 2020, a closing agreement with the IRS was completed and no additional action is expected on this issue.

COVID-19

The recent outbreak of coronavirus ("COVID-19"), which the World Health Organization has declared to constitute a pandemic, has impacted the global commercial activity and contributed to significant volatility in certain equity and debt markets. The general uncertainty surrounding the dangers and impact of COVID-19 are having a particularly adverse impact on transportation, hospitality, tourism, entertainment, and other industries. This has led to significant volatility and it is uncertain how long this volatility will continue. The potential impacts, including a global, regional, or other economic recession, are increasingly uncertain and difficult to assess. While governments and central banks have reacted with monetary interventions designed to stabilize economic conditions, the duration and extent of the impact of the COVID-19 outbreak, as well as the effectiveness of government and central bank responses, remains unclear at this time. The resulting financial and economic market uncertainty could have a significant adverse impact on the System, including the fair value of its investments.

Securities Lending Program

In August 2020, the Board approved the suspension of the Securities Lending Program.

Legal

In January 2020, in the retiree DROP lump sum case, the Supreme Court answered the two certified questions sent to it by the Fifth Circuit and in April 2020 the Fifth Circuit subsequently upheld the decision of the district court. In August 2020, the plaintiffs filed a writ of certiorari to the United States Supreme Court which was denied thereby ending the case.

Management has evaluated subsequent events through December 10, 2020, which is the date that the financial statements were available for issuance and noted no subsequent events to be disclosed other than those which are disclosed in this Note or elsewhere in the Notes to Combining Financial Statements.

Dallas Police and Fire Pension System

Required Supplementary Information (Unaudited)

Schedule of Changes in the Net Pension Liability and Related Ratios
For Last Six Fiscal Years
(in thousands)

Combined Pension Plan

For fiscal year ending December 31,	2019	2018	2017	2016	2015	2014
Total pension liability						
Service cost	$ 49,155	$ 44,792	$ 148,552	$ 167,432	$ 125,441	$ 131,312
Interest	318,703	318,536	348,171	360,567	359,023	369,408
Changes of benefit terms	-	16,091	(1,167,597)	-	-	(329,794)
Differences between expected and actual experience	16,723	(46,555)	(134,665)	(77,463)	379,461	(4,453)
Changes of assumptions	155,569	(31,460)	(2,851,241)	(712,003)	908,988	-
Benefit payments, including refunds of employee contributions	(309,860)	(297,081)	(296,154)	(825,092)	(285,003)	(245,932)
Net change in total pension liability	230,290	4,323	(3,952,934)	(1,086,559)	1,487,910	(79,459)
Total pension liability - beginning	4,501,670	4,497,347	8,450,281	9,536,840	8,048,930	8,128,389
Total pension liability - ending (a)	$4,731,960	$ 4,501,670	$ 4,497,347	$ 8,450,281	$9,536,840	$ 8,048,930
Plan fiduciary net position						
Employer contributions	$ 155,721	$ 149,357	$ 126,318	$ 119,345	$ 114,886	$ 109,792
Employee contributions	52,268	49,332	32,977	25,518	25,676	29,333
Net investment income (loss), net of expenses	124,260	42,822	98,911	164,791	(235,207)	(138,893)
Benefits payments	(309,861)	(297,081)	(296,154)	(825,092)	(285,003)	(245,932)
Interest expense	-	-	(1,279)	(4,532)	(8,417)	(7,361)
Administrative expenses	(6,445)	(5,861)	(8,090)	(9,492)	(6,006)	(8,003)
Net change in plan fiduciary net position	15,943	(61,431)	(47,317)	(529,462)	(394,071)	(261,064)
Plan fiduciary net position – beginning	2,041,914	2,103,345	2,150,662	2,680,124	3,074,195	3,335,259
Plan fiduciary net position – ending (b)	$2,057,857	$ 2,041,914	$ 2,103,345	$ 2,150,662	$2,680,124	$ 3,074,195
Net pension liability - ending (a) – (b)	$2,674,103	$ 2,459,756	$ 2,394,002	$ 6,299,619	$6,856,716	$ 4,974,735
Plan fiduciary net position as a percentage of total pension liability	43.5%	45.4%	46.8%	25.5%	28.1%	38.2%
Covered payroll	$ 396,955	$ 363,117	$ 346,037	$ 357,414	$ 365,210	$ 383,006
Net pension liability as a percentage of covered payroll	673.7%	677.4%	691.8%	1,762.6%	1,877.5%	1,298.9%

Schedule is intended to show information for 10 years. Additional years will be presented when they become available.

See Notes below related to this schedule.

Dallas Police and Fire Pension System

Required Supplementary Information (Unaudited)

Supplemental Pension Plan

For fiscal year ending December 31,	2019	2018	2017	2016	2015	2014
Total pension liability						
Service cost	$ 212	$ 222	$ 111	$ 70	$ 36	$ 28
Interest	2,223	2,359	2,799	2,911	2,953	2,969
Changes of benefit terms	-	888	(5,305)	-	-	(526)
Differences between expected and actual experience	3,007	(2,628)	(1,435)	1,105	928	336
Changes of assumptions	1,332	28	(479)	(916)	(600)	-
Benefit payments, including refunds of employee contributions	(2,766)	(2,708)	(2,668)	(5,912)	(2,640)	(3,414)
Net change in total pension liability	4,008	(1,839)	(6,977)	(2,742)	677	(607)
Total pension liability - beginning	31,831	33,670	40,647	43,389	42,712	43,319
Total pension liability - ending (a)	$ 35,839	$ 31,831	$ 33,670	$ 40,647	$ 43,389	$ 42,712
Plan fiduciary net position						
Employer contributions	$ 1,530	$ 1,979	$ 2,077	$ 3,064	$ 2,443	$ 1,817
Employee contributions	111	74	66	35	43	49
Net investment income (loss), net of expenses	169	1,220	740	1,141	(1,689)	(517)
Benefit payments	(2,766)	(2,708)	(2,668)	(5,912)	(2,640)	(3,414)
Interest expense	-	-	(11)	(78)	(44)	(51)
Administrative expenses	(55)	(52)	(69)	(37)	(61)	(56)
Net change in plan fiduciary net position	(1,011)	513	135	(1,787)	(1,948)	(2,172)
Plan fiduciary net position - beginning	18,318	17,805	17,670	19,457	21,405	23,577
Plan fiduciary net position - ending (b)	$ 17,307	$ 18,318	$ 17,805	$ 17,670	$ 19,457	$ 21,405
Net pension liability - ending (a) - (b)	$ 18,532	$ 13,513	$ 15,865	$ 22,978	$ 23,932	$ 21,307
Plan fiduciary net position as a percentage of total pension liability	48.3%	57.6%	52.9%	43.5%	44.8%	50.1%
Covered payroll	$ 584	$ 622	$ 916	$ 525	$ 725	$ 557
Net pension liability as a percentage of covered payroll	3,172.8%	2,173.8%	1,731.6%	4,376.2%	3,303.3%	3,827.3%

Schedule is intended to show information for 10 years. Additional years will be presented when they become available.

See Notes below related to this schedule.

Notes to Schedules:

Changes of benefit terms:

As of December 31, 2019 and 2018 - None

As of December 31, 2017

HB 3158 was signed by the Governor on May 31, 2017, the significant benefit and contribution changes in the bill were effective September 1, 2017.

- Normal Retirement Age increased from either age 50 or 55 to age 58
- For members less than the age of 45 on September 1, 2017, hired prior to March 1, 2011, and less than 20 years of pension service, the Early Retirement Age increased from age 45 to age 53
- Vesting for members hired after February 28, 2011 was reduced from ten years to five years of service
- Benefit multiplier for all future service for members hired prior to March 1, 2011 was lowered from 3.00% to 2.50%
- Benefit multiplier retroactively increased to 2.50% for members hired on or after March 1, 2011
- Benefit multipliers for 20 and Out benefit lowered
- Members hired after February 28, 2011 are eligible for an early retirement benefit after 20-years of service
- Maximum benefit reduced from 96% of Computation Pay to 90% of Computation Pay for members hired prior to March 1, 2011
- Average Computation Pay period changed from 36 months to 60 months for future service for members hired prior to March 1, 2011
- Annual Adjustment (COLA) discontinued for all members. The Board may choose to provide a COLA if the funded ratio on a market value basis is at least 70% after the implementation of a COLA.
- The supplemental benefit is eliminated prospectively; only those for whom the supplement was already granted as of September 1, 2017 will maintain the supplement
- Active DROP participation is limited to 10 years
- DROP interest for active DROP members was eliminated after September 1, 2017; only the balance as of September 1, 2017 will be eligible for interest once active DROP members retire
- Retirees with DROP accounts as of September 1, 2017 will have their DROP account balances paid out over their expected lifetime based on their age as of September 1, 2017
- Future retirees with DROP accounts will have their DROP account balances paid out over their expected lifetime as of the date of their retirement
- Interest on retiree DROP accounts as of August 31, 2017 will be paid based on the length of the retiree’s expected lifetime and will be based on U.S. Treasury rates which correlate to expected lifetime, as determined by the Board of Trustees
- Member contributions for both DROP and non-DROP members increased to 13.5% effective September 1, 2017
- The City’s contribution rate will increase to 34.5% of Computation Pay. Between September 1, 2017 and December 31, 2024, the City’s contribution will be the greater of (i) 34.5% and (ii) a biweekly contribution floor amount as stated in HB 3158, plus $13 million per year.

As of December 31, 2016 and 2015 - None

As of December 31, 2014

The Board approved a plan amendment implementing changes to DROP interest rates on April 16, 2015. Such changes were reflected in the valuation of the net pension liability as of December 31, 2015 and 2014.

Changes of methods and assumptions:

The following assumption changes were adopted by the Board for use in the January 1, 2020 actuarial valuation. Some of the assumption changes were related to the actuarial experience study completed for the five-year period ending December 31, 2019. For further information regarding the changes to actuarial assumptions, refer to the January 1, 2020 Dallas Police and Fire Pension System actuarial valuation reports for the Combined Pension Plan and the Supplemental Plan.

As of December 31, 2019

- The net investment return assumption was lowered from 7.25% to 7.0%.
- The salary scale assumption was updated based on the 2019 Meet and Confer agreement, with a new ultimate rate of 2.50%.
- The payroll growth assumption was lowered from 2.75% to 2.50%.
- The mortality rates were updated to the Pub-2010 Public Safety Amount-weighted Mortality Tables, with varying adjustments by status and sex, projected generationally with Scale MP-2019.
- The withdrawal rates were updated and the ultimate 0% rate was moved up from 38 to 25 years of service.
- The DROP retirement rates were increased at most ages and the ultimate 100% retirement was updated from the earlier of 67 years or 8 years in DROP to the earlier of age 65 or 10 years in DROP.
- The non-DROP retirement rates were lowered at most ages and simplified from three sets to two sets of rates.
- The retirement assumption for inactive vested participants was updated to include an assumption that 75% of those who terminate with a vested benefit prior to age 40 will take a cash out at age 40.
- The DROP annuitization interest rate for account balances as of September 1, 2017 was lowered from 3.0% to 2.75%.
- The ad-hoc COLA assumption was updated to begin October 1, 2063. Last year, the COLA was assumed to begin October 1, 2050.
- The system's expectations for near-term market returns were lowered to -6.0% for 2020, +5.25% for 2021, +5.75% for 2022 and +6.25% for 2023. For valuation purposes, these return

assumptions are used for determining the projected full-funding date and the projected COLA start date.

As of December 31, 2018

- The salary scale assumption was updated to reflect the 2016 Meet and Confer Agreement, as amended in 2018.

- The ad-hoc COLA assumption was updated to begin October 1, 2050 based on the updated projection of the unfunded actuarial accrued liability; last year, the COLA was assumed to begin October 1, 2053.

As of December 31, 2017

The discount rate used to measure the total pension liability changed from a blended discount rate of 4.12% to the assumed rate of return of 7.25% for the Combined Pension Plan and from blended discount rate of 7.10% to the assumed rate of return of 7.25% for the Supplemental Plan.

As a result of the passage of HB 3158, the following assumptions were changed:

- The DROP utilization factor was changed from 100% to 0%
- Current DROP members with at least eight years in DROP as of January 1, 2017 are assumed to retire in 2018. Current DROP members with less than eight years in DROP as of January 1, 2017 are assumed to retire once they have been in the DROP for eight years.
- Retirement rates were changed effective January 1, 2018
- 100% retirement rate once the projected sum of age plus service equals 90
- New terminated vested members are assumed to retire at age 58
- DROP account balances annuitized as of September 1, 2017 are assumed to earn 2.75% interest; DROP account balances as of September 1, 2017 for active members are assumed to earn 3.00% interest upon retirement; DROP account balances accrued after September 1, 2017 for active members do not earn interest
- DROP payment period based on an 85%/15% male/female blend of the current healthy annuitant mortality tables
- COLA assumed to be a 2.00% COLA beginning October 1, 2053 and payable every October 1st thereafter.
- The administrative expense assumption was changed from the greater of $10 million per year or 1% of Computation Pay to the greater of $8.5 million per year or 1% of Computation Pay for the Combined Plan and changed from $60 thousand to $65 thousand for the Supplemental Plan

As of December 31, 2016

- The blended discount rate used to measure the total pension liability changed from 3.95% to 4.12% for the Combined Pension Plan and from 7.19% to 7.10% for the Supplemental Plan.

- The remaining amortization period was adjusted from 40 years to 30 years for the Combined Pension Plan based on Section 802.101(a) of the Texas Government Code.

- The salary scale was modified for valuation years 2017-2019 in accordance with the Meet and Confer Agreement. DROP interest is assumed to decline from 6.00% to 5.00% effective

October 1, 2017 and to 0.00% effective October 1, 2018, per Section 6.14(c) of the plan document as amended and restated through April 16, 2015.

As of December 31, 2015

The blended discount rate used to measure the total pension liability changed from 4.94% to 3.95% for the Combined Pension Plan and from 7.13% to 7.19% for the Supplemental Plan.

As a result of the actuarial experience study completed for the five-year period ending December 31, 2014, the following changes in assumptions were adopted by the Board. For further information regarding the changes to actuarial assumptions, refer to the January 1, 2016 Dallas Police and Fire Pension System actuarial valuation reports for the Combined Pension Plan and the Supplemental Plan.

- Salary scales were updated with separate service-based salary assumptions for police officers and firefighters, lowering the range of increase to 3.00% to 5.20% from the previous assumed range of 4.00% to 9.64%.
- The payroll growth rate assumption was lowered from 4.00% to 2.75% to equal the assumed inflation rate.
- In the prior valuation, the investment return assumption was net of both investment and administrative expenses. In the December 31, 2015 valuation, an explicit assumption for administrative expenses was added to the normal cost. Assumptions of $10 million and $60 thousand per year were utilized for the Combined Pension Plan and Supplemental Plan, respectively.
- In the prior valuation for the Combined Pension Plan, an asset valuation method using a 10-year smoothing period was applied. In the December 31, 2015 valuation, the actuarial value of assets was reset to market value as of the measurement date. A five-year smoothing period will be used in future periods.
- The remaining amortization period was adjusted from 30 years to 40 years for the Combined Pension Plan based on Section 802.101(a) of the Texas Government Code.
- Mortality tables were updated from the RP-2000 tables to the RP-2014 tables
- Assumed rates of turnover were lowered for police officers and raised for firefighters to reflect recent experience.
- Retirement rates were lowered for both police officers and firefighters, with the separation of service-based assumptions implemented based on recent experience.
- Disability rates were lowered for both police officers and firefighters and service-based assumptions were eliminated based on the similarity of recent experience between the two services.
- The assumption of the portion of active employees who are married was lowered from 80% to 75% and the age of the youngest child was raised from 1 to 10.

As of December 31, 2014

The assumption for the future interest rates credited to DROP balances was changed from 8.5% to the following rates prescribed by the 2014 plan amendment:

- At October 1, 2014 – 8.0%;
- At October 1, 2015 – 7.0%;
- At October 1, 2016 – 6.0%; and
- At October 1, 2017 and thereafter – 5.0%

Schedule of Employer Contributions – Combined Pension Plan (in thousands)

Measurement Year Ending December 31,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2019	$ 152,084	$ 155,721	$ (3,637)	$ 363,117	42.9%
2018	157,100	149,357	7,743	346,037	43.2%
2017	168,865	126,318	42,547	357,414	35.3%
2016	261,859	119,345	142,514	365,210	32.7%

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

Prior to January 1, 2016, the actuarial determined contribution for the Combined Plan was not determined by the actuary.

The City's contribution rate for the Combined Pension Plan is set by State statutes. The difference between the actuarial determined contribution and the City contribution set by State statutes results in the contribution excess or deficiency.

Notes to Schedules:

The following methods and assumptions were used to calculate the actuarial determined contribution:

As of December 31, 2019

Actuarial cost method	Entry age normal cost method
Amortization method	30-year level percent of pay, using 2.75% annual increases
Remaining amortization period	38 years as of January 1, 2019
Asset valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized over a five-year period, further adjusted, if necessary, to be within 20% of the market value.
Investment rate return	7.25% per annum, compounded annually, net of all expense, including administrative expenses. This rate is based on an average inflation rate of 2.75% and a real rate of return of 4.50%.
Inflation rate	2.75%
Projected salary increases	Inflation plus merit increases, varying by group and service,

Post-retirement benefit	COLA assumed to be a 2.00% COLA beginning October 1, 2050 and Increases payable every October 1 thereafter
Retirement age	Experienced-based table of rates, based on age
Mortality	Pre-retirement: Sex-distinct RP-2014 Employee Mortality Table, set back two years for males, projected generationally using Scale MP-2015 Post-retirement: Sex-distinct RP-2014 Healthy Annuitant Mortality Table, set forward two years for females, projected generationally using Scale MP-2015 Disabled: Sex-distinct RP-2014 Disabled Retiree Mortality Table, set back three years for males and females, projected generationally using Scale MP-2015
DROP balance returns	DROP account balances as of September 1, 2017 for active members are based on the United States Department of Commerce Daily Treasury Yield Curve Rates for durations between 5 and 30 years; interest rate is based on the expected lifetime of the members at the time they retire. Interest is only paid on DROP account balances as of September 1, 2017.
DROP election	The DROP utilization factor is 0% for new entrants.

As of December 31, 2018

Actuarial cost method	Entry age normal cost method
Amortization method	30-year level percent of pay
Remaining amortization period	45 years as of January 1, 2018
Asset valuation method	Reset of the actuarial value of assets to market value as of December 31, 2015, with a five-year smoothing in future periods
Investment rate return	7.25% per annum, compounded annually, net of all expense, including administrative expenses. This rate is based on an average inflation rate of 2.75% and a real rate of return of 4.50%.
Inflation rate	2.75%
Projected salary increases	Inflation plus merit increases, varying by group and service, ranging from 0.00% to 2.25%
Post-retirement benefit	COLA assumed to be a 2.00% COLA beginning October 1, 2053 and Increases payable every October 1 thereafter
Retirement age	Experienced-based table of rates, based on age

Mortality	Pre-retirement: Sex-distinct RP-2014 Employee Mortality Table, set back two years for males, projected generationally using Scale MP-2015 Post-retirement: Sex-distinct RP-2014 Blue Collar Healthy Annuitant Mortality Table, set forward two years for females, projected generationally using Scale MP-2015 Disabled: Sex-distinct RP-2014 Disabled Retiree Mortality Table, set back three years for males and females, projected generationally using Scale MP-2015
DROP balance returns	DROP account balances as of September 1, 2017 for active members are based on the United States Department of Commerce Daily Treasury Yield Curve Rates for durations between 5 and 30 years; interest rate is based on the expected lifetime of the members at the time they retire. Interest is only paid on DROP account balances as of September 1, 2017.
DROP election	The DROP utilization factor is 0% for new entrants.

As of December 31, 2017 that differed from above

Projected salary increases	Inflation plus merit increases, varying by group and service, ranging from 0.25% to 2.45%
Post-retirement benefit increases	COLA assumed to be a 2.00% COLA beginning October 1, 2049 and payable every October 1 thereafter
DROP balance returns	6% per year until September 1, 2017. Beginning September 1, 2017, DROP account balances for annuitants are assumed to earn 2.75% interest; DROP account balances as of September 1, 2017 for active members are assumed to earn 2.75% interest upon retirement; DROP account balances accrued after September 1, 2017 for active members do not earn interest.
DROP election	The DROP utilization factor is 0% for new entrants. Current DROP members with at least eight years in the DROP as of January 1, 2017 are assumed to retire in 2018. Current DROP members with less than eight years in DROP as of January 1, 2017 are assumed to retire once they have been in the DROP for eight years.

As of December 31, 2016 that differed from above

Post-retirement benefit increases	4.00% simple COLA, October 1st
DROP balance returns	At October 1, 2015 – 7.0% At October 1, 2016 – 6.0% At October 1, 2017 and thereafter – 5.0%

DROP election	Age 50 with 5 years of service. Any active member who satisfies these criteria and have not entered DROP are assumed never to join DROP. Active members who retire with a DROP account are assumed to receive the balance of their account over a 10-year time period.

Schedule of Employer Contributions - Supplemental Plan
(in thousands)

Measurement Year Ending December 31,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency	Covered Payroll	Actual Contribution as a % of Covered Payroll
2019	$ 1,881	$ 1,530	$ 351	$ 622	246.2%
2018	2,274	1,979	295	916	216.0%
2017	2,087	2,077	10	525	395.6%
2016	3,063	3,063	-	725	422.9%
2015	2,443	2,443	-	557	438.8%
2014	1,817	1,817	-	521	348.5%

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

The City is required by ordinance to contribute amounts necessary to ensure the payment of benefits in the Supplemental Plan. The City's contributions shall be made in accordance with actuarial requirements established by the actuary and the board. Actuarially determined contributions are calculated as of January 1 in the fiscal year in which the contribution is reported. The deficiency shown on the table is due to Supplemental Plan contributions paid directly to the Excess Benefit Plan in compliance with Internal Revenue Code Section 415.

Notes to Schedules:

The following methods and assumptions were used to calculate the actuarial determined contribution for the Supplemental Plan:

As of December 31, 2019

Actuarial cost method	Entry age normal cost method
Amortization method	10-year level percent of pay
Remaining amortization period	10 years
Asset valuation method	Market value of assets
Investment rate return	7.25% per annum, compounded annually, net of all expense, including administrative expenses. This rate is based on an average inflation rate of 2.75% and a real rate of return of 4.50%.
Inflation rate	2.75%
Projected salary increases	Inflation plus merit increases, varying by group and service

Post-retirement benefit increases	COLA assumed to be a 2.00% COLA beginning October 1, 2050 and payable every October 1 thereafter
Retirement age	Experienced-based table of rates, based on age
Mortality	Pre-retirement: Sex-distinct RP-2014 Employee Mortality Table, set back two years for males, projected generationally using Scale MP-2015 Post-retirement: Sex-distinct RP-2014 Healthy Annuitant Mortality Table, set forward two years for females, projected generationally using Scale MP-2015 Disabled: Sex-distinct RP-2014 Disabled Retiree Mortality Table, set back three years for males and females, projected generationally using Scale MP-2015
DROP balance returns	DROP account balances as of September 1, 2017 for active members are based on the United States Department of Commerce Daily Treasury Yield Curve Rates for durations between 5 and 30 years; interest rate is based on the expected lifetime of the members at the time they retire. Interest is only paid on DROP account balances as of September 1, 2017.
DROP election	The DROP utilization factor is 0% for new entrants.

As of December 31, 2018

Actuarial cost method	Entry age normal cost method
Amortization method	10-year level percent of pay
Remaining amortization period	10 years
Asset valuation method	Market value of assets
Investment rate return	7.25% per annum, compounded annually, net of all expense, including administrative expenses. This rate is based on an average inflation rate of 2.75% and a real rate of return of 4.50%.
Inflation rate	2.75%
Projected salary increases	Inflation plus merit increases, varying by group and service, ranging from 0.00% to 2.25%
Post-retirement benefit increases	COLA assumed to be a 2.00% COLA beginning October 1, 2053 and payable every October 1 thereafter
Retirement age	Experienced-based table of rates, based on age

Mortality	Pre-retirement: Sex-distinct RP-2014 Employee Mortality Table, set back two years for males, projected generationally using Scale MP-2015 Post-retirement: Sex-distinct RP-2014 Blue Collar Healthy Annuitant Mortality Table, set forward two years for females, projected generationally using Scale MP-2015 Disabled: Sex-distinct RP-2014 Disabled Retiree Mortality Table, set back three years for males and females, projected generationally using Scale MP-2015
DROP balance returns	DROP account balances as of September 1, 2017 for active members are based on the United States Department of Commerce Daily Treasury Yield Curve Rates for durations between 5 and 30 years; interest rate is based on the expected lifetime of the members at the time they retire. Interest is only paid on DROP account balances as of September 1, 2017.
DROP election	The DROP utilization factor is 0% for new entrants.

As of December 31, 2017 that differed from above

Projected salary increases	Inflation plus merit increases, varying by group and service, ranging from 0.25% to 2.45%
Post-retirement benefit increases	COLA assumed to be a 2.00% COLA beginning October 1, 2049 and payable every October 1 thereafter
DROP balance returns	6% per year until September 1, 2017. Beginning September 1, 2017, DROP account balances for annuitants are assumed to earn 2.75% interest; DROP account balances as of September 1, 2017 for active members are assumed to earn 2.75% interest upon retirement; DROP account balances accrued after September 1, 2017 for active members do not earn interest.
DROP election	The DROP utilization factor is 0% for new entrants. Current DROP members with at least eight years in the DROP as of January 1, 2017 are assumed to retire in 2018. Current DROP members with less than eight years in DROP as of January 1, 2017 are assumed to retire once they have been in the DROP for eight years.

As of December 31, 2016 that differed from above

Post-retirement benefit increases	4.00% simple COLA, October 1st
DROP balance returns	At October 1, 2015 – 7.0% At October 1, 2016 – 6.0% At October 1, 2017 and thereafter – 5.0%

DROP election	Age 50 with 5 years of service. Any active member who satisfies these criteria and have not entered DROP are assumed never to join DROP. Active members who retire with a DROP account are assumed to receive the balance of their account over a 10-year time period.

As of December 31, 2015 and 2014 that differed from above

Projected salary increases	Range of 4.00% - 9.64%
Mortality	RP-2000 Combined Healthy Mortality Table projected to 10 years beyond the valuation date using Scale AA for healthy retirees and active members

Schedule of Investment Returns

Fiscal Year Ended December 31,	Annual Money-weighted Rate of Return, net of Investment Expense
2019	11.51%
2018	(1.49%)
2017	5.07%
2016	3.09%
2015	(12.70%)
2014	3.98%

Notes to Schedule:

The annual money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense, and expresses investment performance adjusted for the changing amounts actually invested. Pension plan investment expense consists of manager fees. The return is calculated using a methodology which incorporates a one quarter lag for market value adjustments on private equity, debt, and real assets investments.

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

Dallas Police and Fire Pension System

Supplementary Information

Administrative, Investment, and Professional Services Expenses

Year Ended December 31, 2019

Administrative expenses:		
Information technology	$	369,085
Education		29,435
Insurance		515,938
Personnel		3,411,700
Office equipment		101,476
Dues and subscriptions		120,702
Board meetings		5,008
Office supplies		25,157
Utilities		65,080
Postage		19,916
Printing		2,125
Election		10,968
Facilities		634,348
Other		7,038
Total administrative expenses	$	5,317,976
Investment expenses:		
Investment management	$	6,377,841
Custodial		221,559
Investment level valuations and audits		664,880
Consulting and reporting		328,542
Legal		355,358
Tail-end advisory		190,281
Tax		6,588
Other		4,426
Total investment expenses	$	8,149,475
Professional services expenses:		
Consulting	$	23,986
Actuarial		174,920
Auditing		152,500
Accounting		61,719
Medical review		1,905
Legal		598,774
Mortality records		4,050
Legislative		157,116
Other		6,903
Total professional services expenses	$	1,181,873

Notes to Schedule:

Supplementary information on investment expenses does not include investment management fees and performance fees embedded in the structure of private equity and other limited partnership investments. Rather, these fees are a component of the net appreciation (depreciation) in fair value of investments in the accompanying Statements of Changes in Fiduciary Net Position. In addition, management fees paid directly by DPFP are included net of rebates received.

The members of the Board of Trustees serve without compensation; they are reimbursed for actual expenses incurred.

See accompanying independent auditor's report.