FIREMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO
(A FIDUCIARY FUND OF THE CITY OF CHICAGO, ILLINOIS)

FINANCIAL STATEMENTS

DECEMBER 31, 2019 AND 2018

Firemen's Annuity and Benefit Fund of Chicago

Financial Statements with Supplementary Information

December 31, 2019 and 2018

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FIREMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO

FINANCIAL STATEMENTS WITH SUPPLEMENTARY INFORMATION

DECEMBER 31, 2019 AND 2018

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LEGACY
PROFESSIONALS LLP
CERTIFIED PUBLIC ACCOUNTANTS

REPORT OF INDEPENDENT AUDITORS

To the Board of Trustees of
Firemen's Annuity and Benefit
Fund of Chicago

Report on the Financial Statements

We have audited the accompanying financial statements of Firemen's Annuity and Benefit Fund of Chicago (the Plan), a fiduciary fund of the City of Chicago, Illinois, which comprise the combining statements of pension plan fiduciary net position and health insurance supplement plan net position as of December 31, 2019 and 2018, and the related combining statements of changes in pension plan fiduciary net position and health insurance supplement plan net position for the years then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic 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.

Auditors' Responsibility

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

An audit includes 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 Plan'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 Plan's internal control. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. 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.

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Opinion
In our opinion, the financial statements referred to in the first paragraph present fairly, in all material respects, the plan net position of Firemen's Annuity and Benefit Fund of Chicago as of December 31, 2019 and 2018, and the changes in plan net position for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Emphasis of Matter
As discussed in Note 10, the retiree health insurance supplement was reestablished during the year ended December 31, 2019. As a result, the statement of health insurance supplement plan net position, statement of changes in health insurance supplement plan net position, required supplementary information, and additional disclosures related to the health insurance supplement plan were added to the financial statement presentation. Our opinion is not modified with respect to this matter.

Other Matters
Required Supplementary Information
Accounting principles generally accepted in the United States of America require that Management's Discussion and Analysis on pages 4 through 4e and the required supplementary information on pages 35 through 39 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 required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquires 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.

Supplementary Information
Our audits were conducted for the purpose of forming an opinion on the Plan's basic financial statements as a whole. The accompanying supplementary information on pages 40 through 42 is presented for purposes of additional analysis and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such 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 Matters (continued)

Previously Audited Information

We also have previously audited the basic financial statements for the years ended December 31, 2017, 2016, 2015, and 2014 (which are not presented herein), and we expressed unmodified opinions on those financial statements. In our opinion, the information on page 42 is fairly stated in all material respects in relation to the basic financial statements from which it has been derived.

Legacy Professionals LLP

Westchester, Illinois

June 22, 2020

This section presents Management's Discussion and Analysis of the financial position and performance of the Firemen's Annuity and Benefit Fund of Chicago (the Plan) as of and for the year ended December 31, 2019 and 2018. This discussion is presented as an overview of the financial activities of the Plan and should be read in conjunction with the Plan's financial statements.

Overview of the Basic Financial Statements

The following discussion and analysis is intended to serve as an introduction to the Plan's basic financial statements. The financial statements are prepared on an economic sources focus and accrual basis of accounting in accordance with Governmental Accounting Standards Board (GASB) pronouncements. The basic components of the financial package are described below:

Combining Statements of Pension Plan Fiduciary Net Position and Health Insurance Supplement Plan Net Position provide a snapshot of account balances and net position held in trust for future benefit payments and any liabilities as of the Plan's year end. Over time, increases and decreases in net position may serve as a useful indicator of whether the financial position of the Plan is improving or deteriorating.

Combining Statements of Changes in Pension Plan Fiduciary Net Position and Health Insurance Supplement Plan Net Position show the revenues (additions) and expenses (deductions) during the year, where additions less deductions equal net increase (decrease) in net position. The net increase (decrease) in net position reports the change in net position as reported in the Combining Statements of Changes in Pension Plan Fiduciary Net Position and Health Insurance Supplement Plan Net Position of the prior year and the current year.

Notes to the Financial Statements provides additional information that is essential to achieving a better understanding of the data provided in the basic financial statements.

Required Supplementary Information provides schedules and related notes concerning actuarial information, funding progress, employer contributions, and investment returns.

Supplementary Information includes schedules of administrative expenses, investment expenses, additions by source, and deductions by type.

Financial Highlights

Plan Net Position

The condensed Combining Statements of Pension Plan Fiduciary Net Position and Health Insurance Supplement Plan Net Position reflect the resources available to pay benefits to members. A summary of the Combining Statements of Pension Plan Fiduciary Net Position and Health Insurance Supplement Plan Net Position is as follows:

Plan Net Position
As of December 31,

	2019	2018	2017	Current Year Increase/(Decrease) in Dollars	Percent
Assets:					
Receivables	$ 269,377,062	$ 255,802,652	$ 232,724,014	$ 13,574,410	5.3 %
Prepaid expenses	142,054	173,473	165,861	(31,419)	-18.1 %
Investments, at fair value	887,232,066	787,924,273	901,201,369	99,307,793	12.6 %
Collateral held for securities on loan	80,087,047	91,416,894	111,709,566	(11,329,847)	-12.4 %
Total assets	1,236,838,229	1,135,317,292	1,245,800,810	101,520,937	8.9 %
Liabilities:					
Payables	6,930,367	8,110,059	7,937,930	(1,179,692)	-14.5 %
Securities lending collateral	80,087,047	91,416,894	111,709,566	(11,329,847)	-12.4 %
Total liabilities	87,017,414	99,526,953	119,647,496	(12,509,539)	-12.6 %
Plan net position	$ 1,149,820,815	$ 1,035,790,339	$ 1,126,153,314	$ 114,030,476	11.0 %

Plan net position increased by $114,030,476 or 11.0% from $1,035,790,339 at December 31, 2018 to $1,149,820,815 at December 31, 2019. Comparatively, plan net position decreased by $90,362,975 or 8.0% from $1,126,153,314 at December 31, 2017 to $1,035,790,339 at December 31, 2018.

The increase in plan net position for the year ended December 31, 2019 was primarily due to strong investment returns and an increase in employer contributions from the previous year. Comparatively, the decrease in plan net position for the year ended December 31, 2018 was primarily due to a significant decrease in investment returns from the previous year.

Changes in Plan Net Position

The Combining Statements of Changes in Pension Plan Fiduciary Net Position and Health Insurance Supplement Plan Net Position reflects the changes in the resources available to pay benefits to members. A summary of the Combining Statements of Changes in Pension Plan Fiduciary Net Position and Health Insurance Supplement Plan Net Position is as follows:

Changes in Plan Net Position
For the Years Ended December 31,

	2019	2018	2017	Current Year Increase/(Decrease) in Dollars	Percent
Additions:					
Employer contributions	$ 255,947,691	$ 249,684,038	$ 228,452,611	$ 6,263,653	2.5 %
Plan member contributions	46,622,658	45,894,781	47,364,276	727,877	1.6 %
Net investment income (loss)	160,619,148	(58,646,763)	139,910,123	219,265,911	373.9 %
Net securities lending income	413,516	598,237	597,279	(184,721)	-30.9 %
Other	556,665	54,146	85,333	502,519	928.1 %
Total additions	464,159,678	237,584,439	416,409,622	226,575,239	95.4 %
Deductions:					
Benefits	342,884,926	320,595,085	302,518,486	22,289,841	7.0 %
Administrative expenses	3,225,938	3,285,110	3,171,986	(59,172)	-1.8 %
Litigation settlement	565,425	-	-	565,425	100.0 %
Refunds of contributions	3,452,913	4,067,219	3,579,629	(614,306)	-15.1 %
Total deductions	350,129,202	327,947,414	309,270,101	22,181,788	6.8 %
Net increase (decrease) in plan net position	$ 114,030,476	$ (90,362,975)	$ 107,139,521	$ 204,393,451	226.2 %

Additions to Plan Net Position

Total additions were $464,159,678 in 2019, $237,584,439 in 2018 and $416,409,622 in 2017.

Employer contributions increased by $6,263,653 or 2.5% from $249,684,038 for the year ended December 31, 2018 to $255,947,691 for the year ended December 31, 2019. Comparatively, employer contributions increased by $21,231,427 or 9.3% from $228,452,611 for the year ended December 31, 2017 to $249,684,038 for the year ended December 31, 2018.

During both of the years ended December 31, 2019 and 2018, the Plan recognized an increase in employer contributions due to both an increase in the required funding as required by the Illinois Compiled Statutes and the intercept of state grant payments to make up for employer contribution shortfalls.

Additions to Plan Net Position (continued)

Plan member contributions increased by $727,877 or 1.6% from $45,894,781 for the year ended December 31, 2018 to $46,622,658 for the year ended December 31, 2019. Comparatively, plan member contributions decreased by $1,469,495 or 3.1% from $47,364,276 for the year ended December 31, 2017 to $45,894,781 for the year ended December 31, 2018. Plan member contributions for the year ended December 31, 2019 increased due to the Ernst settlement and the increase in prior service payments, which include the repayment of no-spouse refunds and the purchase of military/police/downstate time. Plan member contributions for the year ended December 31, 2018 decreased due to variations in the staffing levels in the Chicago Fire Department. Active participants were 4,630, 4,487 and 4,613 at the years ended December 31, 2019, 2018, and 2017 respectively.

Net investment income (loss) increased by $219,265,911 or 373.9% from net investment loss of ($58,646,763) for the year ended December 31, 2018 to net investment income of $160,619,148 for the year ended December 31, 2019. Comparatively, net investment income (loss) decreased by $198,556,886 or 141.9% from a net investment income of $139,910,123 for the year ended December 31, 2017 to a net investment loss ($58,646,763) for the year ended December 31, 2018. Investment earnings fluctuate primarily from the overall performance of the financial markets from year to year.

The Plan's realized return on investments for the year ended December 31, 2019 was 21.0% versus -6.2% for the year ended December 31, 2018 and 18.3% for the year ended December 31, 2017.

Portfolio Rate of Return
For the Years Ended December 31,

	2019	2018	2017
Domestic Equities	31.4%	-5.8%	21.5%
Benchmark	31.0%	-4.6%	21.8%
International Equities	21.3%	-15.0%	28.8%
Benchmark	21.6%	-14.6%	24.8%
Fixed income	9.7%	-0.4%	6.1%
Benchmark	8.7%	0.0%	3.5%
Total Plan	21.0%	-6.2%	18.3%

Deductions to Plan Net Position

Total deductions were $350,129,202 in 2019, $327,947,414 in 2018 and $309,270,101 in 2017.

Benefits increased by $22,289,841 or 7.0% from $320,595,085 for the year ended December 31, 2018 to $342,884,926 for the year ended December 31, 2019. Comparatively, benefits increased by $18,076,599 or 6.0% from $302,518,486 for the year ended December 31, 2017 to $320,595,085 for the year ended December 31, 2018. In recent times, benefits have increased yearly due to several factors; a contractual free healthcare incentive which has added annuitants above the expected number, cost of living increases, and new annuitants coming on the pension roll at higher rates than the annuitants that are being removed from the pension roll.

The Plan paid a litigation settlement of $565,425 to plan members for a health insurance premium subsidy for the year ended December 31, 2017 as ordered by the Circuit Court. See Footnote 10 for further information regarding the reestablishment of the health insurance supplement plan.

Administrative expenses and refunds of contributions have all remained at relatively constant amounts over the last three years.

Actuarial Information

Pension Benefits

Under GASB Statement No. 67, *Financial Reporting for Pension Plans*, the Plan's funding for pension benefits is as follows:

Funding for Pension Benefits
For the Years Ended December 31,

	2019	2018	2017
Total pension liability	$ 6,542,490,710	$ 6,252,360,385	$ 5,746,150,005
Plan fiduciary net position	1,149,820,815	1,035,790,339	1,126,153,314
City's net pension liability	$ 5,392,669,895	$ 5,216,570,046	$ 4,619,996,691
Plan fiduciary net position as a percentage of the total pension liability	17.57%	16.57%	19.60%

Actuarial Information (continued)

Postemployment Healthcare Benefits

Under GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, the Plan's funding for postemployment healthcare benefits is as follows:

Funding for Postemployment Healthcare Benefits
For the Years Ended December 31,

	2019	2018
Total health insurance supplement liability	$ 10,076,760	$ 8,710,226
Plan fiduciary net position	-	-
City's health insurance supplement	$ 10,076,760	$ 8,710,226
Plan fiduciary net position as a percentage of the total health insurance supplement	0.00%	0.00%

Contributions for postemployment healthcare benefits are made on a "pay-as-you-go" basis, resulting in a 0.00% funded ratio.

Contact Information

This financial report is designed to provide plan participants, retirees, beneficiaries, the employer and all other interested users with a complete, detailed, easy to understand financial portrait of the Plan at December 31, 2019. Comments, questions or concerns regarding this report or requests for additional information should be addressed to:

Steve Swanson, Executive Director
Firemen's Annuity and Benefit Fund of Chicago
20 S. Clark Street, Suite 1400
Chicago, IL 60603

Firemen's Annuity and Benefit Fund of Chicago

Combining Statements of Pension Plan Fiduciary Net Position and Health Insurance Supplement Plan Net Position

December 31, 2019 and 2018

	2019			2018		
	Total	Pension	Health Insurance Supplement	Total	Pension	Health Insurance Supplement
Assets						
Receivables						
Employer contributions - net	$ 260,638,868	$ 260,638,868	$ -	$ 246,564,438	$ 246,564,438	$ -
Investment income	2,454,137	2,454,137	-	2,624,486	2,624,486	-
Other	2,265,193	2,265,193	-	2,122,874	2,122,874	-
Securities lending	45,655	45,655	-	57,196	57,196	-
Unsettled trades	3,973,209	3,973,209	-	4,433,658	4,433,658	-
Total receivables	269,377,062	269,377,062	-	255,802,652	255,802,652	-
Prepaid expenses	142,054	142,054	-	173,473	173,473	-
Investments						
Cash deposits and short-term investments	19,440,370	19,440,370	-	24,454,811	24,454,811	-
Corporate bonds	97,235,548	97,235,548	-	109,211,831	109,211,831	-
Equities	544,053,807	544,053,807	-	494,106,560	494,106,560	-
Pooled funds	113,788,730	113,788,730	-	65,409,809	65,409,809	-
Private equity and venture capital	37,407,381	37,407,381	-	13,303,807	13,303,807	-
U.S. and Foreign Government obligations	75,306,230	75,306,230	-	81,437,455	81,437,455	-
Total investments	887,232,066	887,232,066	-	787,924,273	787,924,273	-
Collateral held for securities on loan	80,087,047	80,087,047	-	91,416,894	91,416,894	-
Total assets	1,236,838,229	1,236,838,229	-	1,135,317,292	1,135,317,292	-
Liabilities						
Accounts payable and accrued expenses	1,272,459	1,272,459	-	88,401	88,401	-
Participant accounts	537,142	537,142	-	580,944	580,944	-
Securities lending collateral	80,087,047	80,087,047	-	91,416,894	91,416,894	-
Securities lending	11,397	11,397	-	14,275	14,275	-
Unsettled trades	5,109,369	5,109,369	-	7,426,439	7,426,439	-
Total liabilities	87,017,414	87,017,414	-	99,526,953	99,526,953	-
Net position						
Net position restricted for pensions	1,149,820,815	1,149,820,815	-	1,035,790,339	1,035,790,339	-
Net position held in trust for health insurance supplement benefits	-	-	-	-	-	-
	$ 1,149,820,815	$ 1,149,820,815	$ -	$ 1,035,790,339	$ 1,035,790,339	$ -

See accompanying notes to financial statements.

FIREMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO

COMBINING STATEMENTS OF CHANGES IN PENSION PLAN FIDUCIARY NET POSITION AND HEALTH INSURANCE SUPPLEMENT PLAN NET POSITION

YEARS ENDED DECEMBER 31, 2019 AND 2018

	2019			2018		
	Total	Pension	Health Insurance Supplement	Total	Pension	Health Insurance Supplement
ADDITIONS						
Contributions						
Employer contributions						
Statutory	$ 254,229,344	$ 253,663,919	$ 565,425	$ 248,000,650	$248,000,650	$ -
Exempt rank funding	1,718,347	1,718,347	-	1,683,388	1,683,388	-
Total employer contributions	255,947,691	255,382,266	565,425	249,684,038	249,684,038	-
Plan member						
Annuities	46,483,226	46,483,226	-	45,756,912	45,756,912	-
Death benefits	139,432	139,432	-	137,869	137,869	-
Total plan member contributions	46,622,658	46,622,658	-	45,894,781	45,894,781	-
Investment income (loss)						
Net appreciation (depreciation) in fair value of investments	143,016,788	143,016,788	-	(75,968,716)	(75,968,716)	-
Interest	10,445,744	10,445,744	-	10,877,857	10,877,857	-
Dividends	12,813,239	12,813,239	-	12,303,951	12,303,951	-
	166,275,771	166,275,771	-	(52,786,908)	(52,786,908)	-
Less investment expenses	(5,656,623)	(5,656,623)	-	(5,859,855)	(5,859,855)	-
Net investment income (loss)	160,619,148	160,619,148	-	(58,646,763)	(58,646,763)	-
Securities lending						
Income	2,632,234	2,632,234	-	2,589,960	2,589,960	-
Borrower rebates	(2,081,250)	(2,081,250)	-	(1,792,673)	(1,792,673)	-
Management fees	(137,468)	(137,468)	-	(199,050)	(199,050)	-
Net securities lending income	413,516	413,516	-	598,237	598,237	-
Gift Fund donations	3,180	3,180	-	3,580	3,580	-
Miscellaneous income	2,957	2,957	-	2,273	2,273	-
Tax levy interest	49,713	49,713	-	48,293	48,293	-
Litigation settlement	500,815	500,815	-	-	-	-
Total additions	464,159,678	463,594,253	565,425	237,584,439	237,584,439	-

See accompanying notes to financial statements.

FIREMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO

COMBINING STATEMENTS OF CHANGES IN PENSION PLAN FIDUCIARY NET POSITION AND HEALTH INSURANCE SUPPLEMENT PLAN NET POSITION

YEARS ENDED DECEMBER 31, 2019 AND 2018

	2019			2018		
	Total	Pension	Health Insurance Supplement	Total	Pension	Health Insurance Supplement
DEDUCTIONS						
Benefits						
Age and service benefits						
Employees	$ 283,673,909	$ 283,673,909	$ -	$ 262,133,711	$ 262,133,711	$ -
Spouses	36,407,193	36,407,193	-	35,552,709	35,552,709	-
Dependents	884,153	884,153	-	961,841	961,841	-
Total age and service benefits	320,965,255	320,965,255	-	298,648,261	298,648,261	-
Disability benefits						
Duty	13,561,386	13,561,386	-	13,942,327	13,942,327	-
Occupational	6,975,822	6,975,822	-	6,628,851	6,628,851	-
Ordinary	281,263	281,263	-	303,239	303,239	-
Total disability benefits	20,818,471	20,818,471	-	20,874,417	20,874,417	-
Gift Fund payments	325,000	325,000	-	256,000	256,000	-
Death benefits	776,200	776,200	-	816,407	816,407	-
Total benefits	342,884,926	342,884,926	-	320,595,085	320,595,085	-
Administrative expenses	3,225,938	3,225,938	-	3,285,110	3,285,110	-
Litigation settlement	565,425	-	565,425	-	-	-
Refunds of contributions	3,452,913	3,452,913	-	4,067,219	4,067,219	-
Total deductions	350,129,202	349,563,777	565,425	327,947,414	327,947,414	-
NET INCREASE (DECREASE)	114,030,476	114,030,476	-	(90,362,975)	(90,362,975)	-
NET POSITION						
Beginning of year	1,035,790,339	1,035,790,339	-	1,126,153,314	1,126,153,314	-
End of year	$ 1,149,820,815	$ 1,149,820,815	$ -	$ 1,035,790,339	$ 1,035,790,339	$ -

See accompanying notes to financial statements.

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Financial Reporting Entity - Accounting principles generally accepted in the United States of America define a financial reporting entity as consisting of the primary government and its component units for which the primary government is financially accountable. Financial accountability includes appointing a voting majority of a component unit's governing board, the ability of a primary government to impose its will on the component unit, or a potential for a component unit to provide specific financial benefits to or impose specific financial burdens on the primary government. Firemen's Annuity and Benefit Fund of Chicago (the Plan) has determined that no other outside entity meets the above criteria and, therefore, no other entity has been included as a component unit in the Plan's financial statements.

Based on the above criteria, the Plan is considered to be a fiduciary fund of the City of Chicago, Illinois (the City) and is included in the City's financial statements.

Method of Accounting - The financial statements are presented using the accrual basis of accounting. Employer contributions are recognized as income pursuant to legal requirements as specified by the Illinois Compiled Statutes (the Statutes). Plan member contributions are recognized in the period in which the contributions are due. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

Investments - Investments are reported at fair value, which generally represents reported market value as of the last business day of the year. Where less than an entire investment holding is sold, average value is used to determine realized gain or loss.

Capital Assets - The Plan has set a capitalization threshold of $100,000 for all capital asset types. As of December 31, 2019 and 2018, the Plan does not have any capital assets.

Estimates - The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect certain reported amounts and disclosures in the financial statements. Actual results could differ from those estimates.

Reclassifications - Certain prior year amounts have been reclassified to conform to the current year presentation.

Subsequent Events - Subsequent events have been evaluated through June 22, 2020, which is the date the financial statements were available to be issued.

NOTE 2. PLAN DESCRIPTION

The Plan was established in 1931 and is governed by legislation contained in the Statutes, particularly 40 ILCS, Act 5, Article 6 (the Article), which specifically and exclusively refers to the Plan. The Plan can be amended only by the Illinois Legislature. The Plan is a single-employer defined benefit pension plan with a defined contribution minimum. The Plan was established for the purpose of providing retirement and disability benefits for employees of the City of Chicago employed under the provisions of the Municipal Personnel Ordinance as fire service and for the dependents of such employees.

The Statutes authorize a Board of Trustees (the Board) of eight members to carry out the provisions of the Article. According to the Article, four members of the Board are ex officio and four are elected by the employee members of the Plan. The four ex officio members are the City Treasurer, the City Clerk, the City Comptroller and the Deputy Fire Commissioner. All members of the Board of Trustees are fiduciaries with respect to the Plan and are statutorily mandated to discharge their duties, as such, solely in the interest of the Plan's participants and beneficiaries.

The Board has the powers and duties required in the Article to collect all contributions due to the Plan, to invest the Plan's reserves, to have an annual audit, to appoint employees, to authorize or suspend payment of any benefit and to have exclusive original jurisdiction in all matters relating to or affecting the Plan. The Board approves its own budget prepared by the Plan's administrative staff. The Board is required annually to submit to the City Council of the City of Chicago a detailed report of the financial affairs and status of the reserves of the Plan. Provisions in other articles of 40 ILCS require the Board to submit its annual audit and actuarial valuation reports to the State of Illinois Department of Insurance, as well as another detailed annual report, the form and content of which are specified by the Department of Insurance.

The Plan provides retirement benefits, as well as, death and disability benefits. Employees who reach compulsory retirement age of 63, except for emergency medical technicians, which is age 65, with at least 10 years of service and less than 20 years of service are entitled to receive an annuity of 30% of average salary for the first ten years of service plus an additional 2% for each year in excess of 10 years with partial City contributions to a maximum of 50%.

At age 50 or more with 10 or more but less than 20 years of service, a Tier 1 employee is entitled to an annuity of the entire sum accumulated for age and service annuity from deductions from salary, plus 1/10 of the sum accumulated from contributions by the City for each completed year of service after the first 10 years. For Tier 2 employees, the annuity is based on an accrual rate of 2.5% reduced by one half of one percent per month for retirement prior to age 55, subject to a maximum of 75%.

NOTE 2. PLAN DESCRIPTION (CONTINUED)

Employees with at least 20 years of service are entitled to receive a minimum formula annuity upon attainment of age 50 for Tier 1 employees and age 55 for Tier 2 employees, of 50% of final average salary plus an additional amount equal to 2.5% of final average salary for each year of service or fraction thereof in excess of 20 years of service. For Tier 1 employees, final average salary is based on the highest average annual salary for any four consecutive years within the last ten years of service immediately preceding the date of retirement. For Tier 2 employees, the final average salary is based on 96 consecutive months within the last 120 months, capped at $106,800 indexed annually at the lesser of 3% and 50% of the Consumer Price Index (CPI-U). This annuity shall not exceed 75% of the final average salary. The monthly annuity is increased by 3% of the original annuity at the first of the month following the later of age 55 or the first anniversary of retirement and by 3% each first day of January thereafter, if born before January 1, 1966. There is no limit on the increases. If born after January 1, 1966, the monthly annuity is increased by 1.5% of the original annuity at the first of the month following the later of age 60 or the first anniversary of retirement and 1.5% on each first day of January thereafter, but not to exceed a total increase of 30%.

Participants should refer to the applicable State Statutes for more complete information.

Any employee of the City employed under the provisions of the Municipal Personnel Ordinance as fire service is covered by the Plan. At December 31, 2019 and 2018, participation in the Plan consisted of the following:

	2019	2018
Retirees and beneficiaries currently receiving benefits	5,128	5,022
Terminated plan participants entitled to but not yet receiving benefits	95	92
Active plan participants	4,630	4,487
Total participants	9,853	9,601

NOTE 3. EMPLOYER'S PENSION LIABILITY

Net Pension Liability

The components of the City's net pension liability of the Plan for the years ended December 31, 2019 and 2018 are as follows:

	2019	2018
Total pension liability	$ 6,542,490,710	$ 6,252,360,385
Plan fiduciary net position	1,149,820,815	1,035,790,339
City's net pension liability	$ 5,392,669,895	$ 5,216,570,046
Plan fiduciary net position as a percentage of the total pension liability	17.57%	16.57%

See the schedule of changes in the City's net pension liability and related ratios in the required supplementary information for additional information related to the funded status of the Plan.

The actuarial assumptions used in the December 31, 2019 and 2018 valuations were based on the results of an actuarial experience study conducted for the period of January 1, 2012 through December 31, 2016, and were adopted and became effective December 31, 2018.

NOTE 3. EMPLOYER'S PENSION LIABILITY (CONTINUED)

Net Pension Liability (continued)

The net pension liabilities were determined by actuarial valuations performed as of December 31, 2019 and 2018 using the following actuarial methods and assumptions:

Actuarial valuation date	December 31, 2019 and 2018
Actuarial cost method	Entry-Age Normal
Asset valuation method	5 year smoothed market
Actuarial assumptions:	
Inflation	2.25% per year
Salary increases	3.5% per year, plus additional service based increases
Investment rate of return	6.75 per year, net of investment expense
Retirement age	Experience-based table of rates that are specific to the type of eligibility condition last updated pursuant to an experience study of the period January 1, 2012 through December 31, 2016.
Post-retirement mortality	RP-2014 Blue Collar Healthy Annuitant Mortality Table, with scaling factors of 106% for males and 98% for females, projected generationally using scale MP-2017.
Disabled mortality	RP-2014 Blue Collar Healthy Annuitant Mortality Table, with scaling factors of 107% for males and 99% for females, projected generationally using scale MP-2017.
Pre-retirement mortality	RP-2014 Blue Collar Healthy Employee Mortality Table, with scaling factors of 92% for males and 100% for females, projected generationally using scale MP-2017.
Postretirement annuity increases	Tier 1 participants - 1.50% simple interest for 20 years for members born after January 1, 1966, 3.00% simple interest for life for members born before January 1, 1966. Tier 2 participants - the lesser of 3.0% or one half of the increase in the Consumer Price Index.

NOTE 3. EMPLOYER'S PENSION LIABILITY (CONTINUED)

Discount Rate

A discount rate of 6.34% was used to measure the total pension liability at December 31, 2019. The discount rate was based on an expected rate of return on Plan investments of 6.75% and a municipal bond rate of 2.74%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made according to the contribution rate applicable for each member's tier and that employer contributions will be made as specified by Public Act 99-0506. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions and contributions from future plan members that are intended to fund the service costs of future plan members and their beneficiaries are not included. Based on those assumptions, the Plan's fiduciary net position was projected to be available to make projected future benefit payments of current plan members through the year 2071. Therefore, the long-term expected rate of return on Plan investments of 6.75% was applied to projected benefits for all periods through 2070 and the municipal bond index rate of 2.74% was applied thereafter to determine the total pension liability. The municipal bond rate as of December 31, 2019 was based on the Bond Buyer 20-Bond Index of general obligation municipal bonds.

A discount rate of 6.61% was used to measure the total pension liability at December 31, 2018. The discount rate was based on an expected rate of return on Plan investments of 6.75% and a municipal bond rate of 3.71%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between the statutory contribution rates and the member rate. Based on these assumptions, the Plan's fiduciary net position and future contributions were sufficient to finance the benefit payments only through the year 2072. As a result, the long-term expected rate of return on Plan investments was applied to projected benefit payments through the year 2072, and the municipal bond rate was applied to all benefit payments after that date. The municipal bond rate as of December 31, 2018 was from the Federal Reserve statistical release (H.15) and described as Bond Buyer Index, general obligation, 20 years to maturity, mixed quality.

NOTE 3. EMPLOYER'S PENSION LIABILITY (CONTINUED)

Discount Rate Sensitivity

The following is an analysis of the net pension liability's sensitivity to changes in the discount rate at December 31, 2019 and 2018. The following table presents the net pension liability of the City using the blended discount rate as well as the City's net pension liability calculated using a discount rate 1 percent lower and 1 percent higher than the current discount rate:

	1% Decrease 5.34%	Current Discount Rate 6.34%	1% Increase 7.34%
City's Net Pension Liability - December 31, 2019	$ 6,187,183,329	$ 5,392,669,895	$ 4,728,523,491

	1% Decrease 5.61%	Current Discount Rate 6.61%	1% Increase 7.61%
City's Net Pension Liability - December 31, 2018	$ 5,982,108,511	$ 5,216,570,046	$ 4,577,347,681

NOTE 4. SUMMARY OF EMPLOYER FUNDING POLICIES

Covered employees are required to contribute 9.125% of their salary to the Plan. If an employee leaves covered employment without qualifying for an annuity, accumulated contributions are refunded with statutory interest.

The City, for its employer portion, is required by the Statutes to contribute the remaining amounts necessary to finance the requirements of the Plan. Public Act 99-0506, enacted into law on May 30, 2016, specifies the amounts of contributions to be paid by the City as follows:

Plan year ending December 31,	Required Statutory Contribution
2016	$ 208,000,000
2017	$ 227,000,000
2018	$ 235,000,000
2019	$ 245,000,000

Beginning with the Plan year ending December 31, 2020, the City is required to fund the Plan on an actuarial basis sufficient to produce a funding level of 90% by the year ended December 31, 2055.

NOTE 5. RESERVES FOR ACTUARIAL LIABILITIES

The reserves for actuarial liabilities are based on an annual valuation submitted by the Plan's consulting actuary. The annual actuarial valuation establishes the reserves required for various statutory liabilities which arise from pension benefit schedules that are part of the current pension code legislation. The pension code legislation can be amended only by the Illinois Legislature.

The Prior Service Annuity Reserve is a reserve account for the accumulation of City contributions to provide for: a) employee and spouse annuities that are based on service performed before the Plan's effective date of July 1, 1931 and b) any excess in minimum annuity formula requirements over the amounts required for age and service annuities, and for spouse annuities.

The City Contribution Reserve is used to accumulate amounts contributed by the City to provide for annuities based on age and service of each employee and spouse. An individual account is maintained for each employee and spouse until the employee retires, at which time the individual account balances are transferred to the Annuity Payment Reserve.

The Annuity Payment Reserve receives the amounts transferred from the individual accounts in the City Contribution Reserve and the Salary Deduction Reserve when an employee retires and qualifies for an annuity. All age and service annuity payments are charged to this reserve.

The Salary Deduction Reserve is similarly used to accumulate deductions made from employee salaries for age and service annuities for the employee and spouse. Individual accounts are maintained until the employee retires or withdraws from service before qualifying for an annuity. At retirement, account balances are transferred to the Annuity Payment Reserve. In case an eligible employee elects to take a refund of contributions instead of an annuity, the contribution refund is charged to this reserve.

The Death Benefit Reserve accumulates contributions from employees and the City for ordinary death benefits. All ordinary death benefits paid are charged to this reserve.

The Ordinary Disability Reserve accumulates contributions from employees and the City for ordinary disability benefits. All ordinary disability benefits paid are charged to this reserve.

The Supplementary Payment Reserve accumulates amounts to provide automatic annual postretirement increases to employee annuitants who retired before September 1, 1959 and amounts in excess of the original annuity grant due to increases in the minimum annuity.

The Gift Reserve accumulates donations to be used to provide an extra benefit to widowed spouse annuitants and orphaned child annuitants.

The Reserve (deficit) represents the difference between the actuarially determined present value of all future pension payments and the value of the Plan's present assets plus the present value of future contributions. A deficit indicates that additional assets will be needed to provide for future benefits, while a surplus indicates that present assets and future contributions exceed the expected requirements for future pension payments.

NOTE 5. RESERVES FOR ACTUARIAL LIABILITIES (CONTINUED)

Net position restricted for pensions as of December 31, 2019 and 2018 were comprised of the following reserve surplus (deficit) balances:

	2019	2018
Prior Service Annuity Reserve	$ 2,856,333,907	$ 2,681,871,668
City Contribution Reserve	804,147,905	812,335,456
Annuity Payment Reserve	1,212,262,402	1,115,776,575
Salary Deduction Reserve	662,728,882	669,428,431
Death Benefit Reserve (deficit)	(21,271,900)	(20,090,677)
Ordinary Disability Reserve	590,610	618,700
Supplementary Payment Reserve (deficit)	(249,915)	(192,946)
Gift Reserve	12,662,390	12,584,506
Reserve (deficit)	(4,377,383,466)	(4,236,541,374)
Total fiduciary net position for pension benefits	$ 1,149,820,815	$ 1,035,790,339

NOTE 6. INVESTMENTS

Investment Policies

The Board of Trustees is responsible for establishing reasonable and consistent investment objectives, policies and guidelines governing the investment of Plan assets in accordance with the Statutes. The Plan is authorized to invest in bonds, notes, certificates of indebtedness, mortgage notes, real estate, stocks, shares, debentures, or other obligations or securities as set forth in the "prudent person" provisions of the Statutes. All of the Plan's financial instruments are consistent with the permissible investments outlined in the Statutes and any index-linked financial instruments are limited to those indices that replicate the permissible investments outlined in the Statutes. During the years ended December 31, 2019 and 2018, there were no significant changes to the investment policies.

NOTE 6. INVESTMENTS (CONTINUED)

Long-Term Expected Rate of Return

The Plan's investment policies in accordance with the Statutes establish the following target allocation across asset classes:

Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Equity	60.00%	7.19%
Fixed income	20.00%	3.25%
Real estate	8.00%	6.25%
Other investments	12.00%	5.36%
Total	100.00%	

The long-term expected real rate of return on the Plan's investments was determined using an asset allocation study conducted by the Plan's investment management consultant in which best estimate ranges of expected future real rates of return (net of investment expense and inflation) were developed for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates or arithmetic real rates of return for each major asset class included in the Plan's target asset allocation are listed in the preceding table.

Annual Money-Weighted Rate of Return

The annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 20.4% and (6.6%) for the years ended December 31, 2019 and 2018, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. U.S. Government obligations or obligations explicitly guaranteed by the U.S. Government are not considered to have credit risk and do not require disclosure of credit quality. The Plan establishes minimum investment rating guidelines for each investment manager based on their area of concentration and level of allowable risk. The following table presents a summarization at December 31, 2019 and 2018 of the lowest credit quality rating of investments in corporate bonds, foreign government obligations, short-term investments, and fixed income mutual funds as valued by Moody's Investors Service and/or Standard & Poor's, as applicable.

NOTE 6. INVESTMENTS (CONTINUED)

Credit Risk (continued)

Type of Investment	Rating	2019	2018
Cash deposits and short-term investments	Not Rated	$ 19,440,370	$ 24,454,811
Corporate bonds	Aaa/AAA	$ 4,923,943	$ 5,249,815
	Aa/AA	3,771,884	5,762,702
	A/A	11,580,406	16,599,598
	Baa/BBB	38,127,448	43,035,071
	Ba/BB	13,556,876	12,333,842
	B/B	2,657,751	2,886,700
	Caa/CCC	1,205,925	1,466,862
	Ca/CC	307,901	394,454
	Not Rated	13,397,145	13,260,993
	U.S. Government Guaranteed	7,706,269	8,221,794
		$ 97,235,548	$ 109,211,831
Pooled funds - fixed income	Aa/AA	$ 16,212,984	$ 18,901,115
	A/A	1,299,010	3,730
	Ba/BB	3,022,026	-
	B/B	-	3,457,754
		$ 20,534,020	$ 22,362,599
U.S. and Foreign Government obligations	Aaa/AAA	$ 3,444,813	$ 3,327,576
	Aa/AA	4,118,944	8,738,137
	A/A	3,186,510	1,894,104
	Baa/BBB	1,190,456	1,797,328
	Ba/BB	1,161,615	957,698
	B/B	-	585,749
	Caa/CCC	171,404	-
	Ca/CC	129,513	-
	Not Rated	1,487,929	292,932
	U.S. Government Guaranteed	60,415,046	63,843,931
		$ 75,306,230	$ 81,437,455

NOTE 6. INVESTMENTS (CONTINUED)

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Investments held for longer periods are subject to increased risk of adverse interest rate changes. Investments are diversified to minimize the risk of loss resulting from over-concentration of assets in a specific maturity period, a single issuer, or an individual class of securities. The Plan requires investment managers to display an overall level of interest rate risk that is consistent with the benchmark specified by the Plan. The following table presents a summarization of debt investments at December 31, 2019 and 2018 using the segmented time distribution method:

Type of Investment	Maturity	2019	2018
Cash deposits and short-term investments	Less than 1 year	$ 19,440,370	$ 24,454,811
Corporate bonds	Less than 1 year	$ 3,531,432	$ 3,516,249
	1-5 years	24,474,883	31,720,403
	5-10 years	33,007,126	39,461,995
	Over 10 years	36,222,107	34,513,184
		$ 97,235,548	$ 109,211,831
Pooled funds - fixed income	Less than 1 year	$ 3,292	$ 1,426,239
	1-5 years	3,022,026	20,936,360
	5-10 years	17,508,702	-
		$ 20,534,020	$ 22,362,599
U.S. and Foreign Government obligations	Less than 1 year	$ 5,500,182	$ 4,858,715
	1-5 years	18,097,386	29,101,391
	5-10 years	16,422,968	11,407,669
	Over 10 years	35,285,694	36,069,680
		$ 75,306,230	$ 81,437,455

NOTE 6. INVESTMENTS (CONTINUED)

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 Plan requires investment managers to invest in at least ten countries if investing in foreign obligations and/or equities. The Plan's exposure to foreign currency risk at December 31, 2019 and 2018 is as follows:

Type of Investment	Fair Value (USD) 2019	Fair Value (USD) 2018
Corporate bonds:		
Mexican peso	$ -	$ 153,037
U.S. dollar	97,235,548	109,058,794
	$ 97,235,548	$ 109,211,831
U.S. and Foreign Government obligations:		
Argentine peso	$ 180,741	$ 363,678
Brazilian real	1,049,615	861,698
Chinese yuan	147,136	141,900
Indonesian rupiah	336,680	-
Japanese yen	337,120	336,354
Malaysian ringgit	466,987	-
Mexican peso	1,330,743	1,148,598
Norwegian krone	431,497	-
Russian ruble	1,064,800	475,137
South African rand	-	716,588
U.S. dollar	69,960,911	77,393,502
	$ 75,306,230	$ 81,437,455

NOTE 6. INVESTMENTS (CONTINUED)

Foreign Currency Risk (continued)

Type of Investment	Fair Value (USD) 2019	Fair Value (USD) 2018
Equities:		
Australian dollar	$ 4,435,438	$ 4,815,436
Brazilian real	5,542,717	6,066,860
British pound	28,758,291	29,490,875
Canadian dollar	3,378,386	5,720,634
Chilean peso	606,163	485,384
Colombian peso	289,624	202,199
Czech koruna	185,464	-
Danish krone	3,078,578	1,735,313
Egyptian pound	318,812	332,158
European euro	43,344,564	42,540,920
Hong Kong dollar	24,489,065	19,074,486
Hungarian forint	578,645	545,893
Indian rupee	4,929,897	4,680,468
Indonesian rupiah	1,926,253	2,487,992
Israeli shekel	724,755	1,301,648
Japanese yen	30,091,140	29,792,577
Malaysian ringgit	664,619	648,549
Mexican peso	4,542,327	2,927,668
New Zealand dollar	74,315	-
Norwegian krone	666,465	1,615,265
Pakistan rupee	66,287	60,634
Philippines peso	649,872	728,141
Polish zloty	1,032,614	157,317
Qatari riyal	116,979	179,770
Singapore dollar	744,642	710,410
South African rand	2,537,719	2,305,830
South Korean won	10,310,328	9,723,873
Swedish krona	4,111,596	3,206,000
Swiss franc	8,225,370	7,700,110
Taiwan dollar	7,424,555	6,930,336
Thailand baht	1,519,348	1,247,059
Turkish lira	964,649	436,032
United Arab Emirates dirham	348,147	353,667
U.S. dollar	347,376,183	305,903,056
	$ 544,053,807	$ 494,106,560

NOTE 6. INVESTMENTS (CONTINUED)

Additional Investment Disclosures

During 2019 and 2018, net realized gain on investments sold, reflecting the difference between the proceeds received and cost value of securities sold, was $37,801,045 and $57,714,961 respectively. These amounts are included in the net appreciation (depreciation) in fair value of investments as reported on the statements of changes in pension plan fiduciary net position. The calculation of realized gains and losses is independent of the calculation of net appreciation (depreciation) in the fair value of plan investments. Investments purchased in a previous year and sold in the current year result in their realized gains and losses being reported in the current year and their net appreciation in plan assets being reported in both the current year and the previous year(s).

The Plan does not isolate that portion of net appreciation (depreciation) in fair value of investments resulting from changes in the foreign exchange rate on investments from fluctuations arising from changes in the market prices of the securities. Such fluctuations are included with net appreciation in fair value of investments. Net realized gains and (losses) on foreign currency transactions represent net exchange gains or losses on closed foreign currency contracts, disposition of foreign currencies, and the difference between the amount of investment income and foreign withholding taxes recorded on the Plan's books and the U.S. dollar equivalent amounts actually received or paid. Net unrealized gains and (losses) on foreign currency transactions arise from changes in the value of open foreign currency contracts and assets and liabilities other than investments at the year end, resulting from changes in the exchange rate.

NOTE 7. FAIR VALUE MEASUREMENTS

GASB Statement No. 72, *Fair Value Measurement and Application*, established a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

<u>Basis of Fair Value Measurement</u>

Level 1	Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities
Level 2	Quoted prices in markets that are not considered to be active or financial instruments for which all significant inputs are observable, either directly or indirectly
Level 3	Prices or valuations that require inputs that are both significant to the fair value measurement and unobservable

NOTE 7. FAIR VALUE MEASUREMENTS (CONTINUED)

The Plan categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The Plan has the following recurring fair value measurements as of December 31, 2019 and 2018:

		Fair Value Measurements at 12/31/2019 Using		
	Total	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				
Cash deposits and short-term investments	$ 10,657,984	$ 3,586,051	$ 7,071,933	$ -
Corporate bonds	97,235,548	-	97,235,548	-
Equities	544,053,807	544,053,807	-	-
Pooled funds	46,782,611	46,782,611	-	-
U.S. and Foreign Government obligations	75,306,230	-	75,306,230	-
	774,036,180	$ 594,422,469	$ 179,613,711	$ -
Investments measured at net asset value	113,195,886			
Total investments at fair value	$ 887,232,066			

		Fair Value Measurements at 12/31/2018 Using		
	Total	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				
Cash deposits and short-term investments	$ 11,521,302	$ 1,524,852	$ 9,996,450	$ -
Corporate bonds	109,211,831	-	109,211,831	-
Equities	494,106,560	494,106,560	-	-
Pooled funds	43,047,210	43,047,210	-	-
U.S. and Foreign Government obligations	81,437,455	-	81,437,455	-
	739,324,358	$ 538,678,622	$ 200,645,736	$ -
Investments measured at net asset value	48,599,915			
Total investments at fair value	$ 787,924,273			

NOTE 7. FAIR VALUE MEASUREMENTS (CONTINUED)

Level 1 Measurements

Cash deposits, equities, and pooled funds are traded in active markets on national and international securities exchanges and are valued at closing prices on the measurement date.

Level 2 Measurements

Short-term investments, corporate bonds, and U.S. Government and Foreign Government obligations are generally valued by benchmarking model-derived prices to quoted market prices and trade data for identical or comparable securities. To the extent that quoted prices are not available, fair value is determined based on a valuation model that include inputs such as interest rate yield curves and credit spreads. Securities traded in markets that are not considered active are valued based on quoted market prices, broker to dealer quotations, or alternative pricing sources with reasonable levels of price transparency. Securities that trade infrequently and therefore have little or no price transparency are valued using the investment manager's best estimates.

The valuation methods for investments measured at net asset value (NAV) are presented on the following table:

	Fair Value		Unfunded	Redemption Frequency	Redemption Notice
	12/31/2019	12/31/2018	Commitments	(If Eligible)	Period
Investments measured at net asset value					
Short-term investments (1)	$ 8,782,386	$ 12,933,509	$ -	Daily	N/A
Pooled funds (2)	67,006,119	22,362,599	-	Daily	N/A
Private equity and venture capital (3)	37,407,381	13,303,807	19,754,726	Closed-end	N/A
Total	$ 113,195,886	$ 48,599,915			

(1) Short-term investments - This investment's objective is to invest in short-term investments of high quality and low risk to protect capital while achieving investment returns. The fair value of the investment in the fund has been determined using the NAV per share of the investment.

(2) Pooled funds - This investment is made up of two equity funds, four fixed income funds, and a commingled real estate account all with an investment objective to maximize the total return. The fair value of the investments in this type has been determined using the NAV per share of the investments.

NOTE 7. FAIR VALUE MEASUREMENTS (CONTINUED)

(3) Private equity and venture capital - This investment consists of eleven limited partnership investments with an investment objective to achieve long-term capital appreciation, preserve capital, and achieve a consistent pattern of returns through investments in limited partnerships, privately issued securities, private equity funds, and other pooled investments with a focus on the venture sector and undervalued alternative investments. Closed-end limited partnership interests are generally illiquid and cannot be redeemed. It is expected that the liquidation of the limited partnership interests will generally coincide with the terms of the various partnership agreements. The limited partnership termination dates range from March 31, 2017 to October 12, 2029 but may be terminated earlier or extended later as set forth in the terms of the applicable partnership agreement. One of the eleven partnerships is open-ended with an infinite life, unless the general partner determines otherwise. The fair value of the investments in this type has been determined using the NAV per share (or its equivalent) of the investments.

NOTE 8. SECURITIES LENDING

The Statutes and the Board of Trustees permit the Plan to lend its securities to broker-dealers and other entities with a simultaneous agreement to return collateral for the same securities in the future. The Plan's custodian, acting as the lending agent, lends securities for collateral in the form of cash, U.S. Government obligations and irrevocable letters of credit equal to 102% of the fair value of domestic securities plus accrued interest and 105% of the fair value of foreign securities plus accrued interest. The Plan is not restricted as to the type or amount of securities it may loan. The Plan does not have the right to sell or pledge securities received as collateral unless the borrower defaults.

The average term of securities loaned was 53 days in 2019 and 51 days in 2018; however, any loan may be terminated on demand by either the Plan or the borrower. Cash collateral may be invested in a short-term investment pool, which had an average weighted maturity at December 31, 2019 and 2018 of 25 and 27 days, respectively. Cash collateral may also be invested in term loans in which the investments (term loans) match the term of the securities loaned.

As of December 31, 2019 and 2018, the fair value (carrying amount) of loaned securities was $77,932,832 and $89,631,906 respectively. As of December 31, 2019 and 2018, the fair value (carrying amount) of cash collateral received by the Plan was $80,087,047 and $91,416,894 respectively. The cash collateral is included as an asset and a corresponding liability on the statements of plan net position.

Although the Plan's securities lending activities are collateralized as described above, they involve both market and credit risk. In this context, market risk refers to the possibility that the borrower of securities will be unable to collateralize the loan upon a sudden material change in the fair value of the loaned securities. Credit risk refers to the possibility that counterparties involved in the securities lending program may fail to perform in accordance with the terms of their contracts.

NOTE 8. SECURITIES LENDING (CONTINUED)

Indemnification deals with the situation in which a client's securities are not returned due to the insolvency of a borrower. The contract with the lending agent requires it to indemnify the Plan if borrowers fail to return the securities (and if the collateral is inadequate to replace the securities lent) or fail to pay the Plan for income distributions by the issuers of securities while the securities are on loan.

There were no losses due to default of a borrower or the lending agent during the years ended December 31, 2019 and 2018.

A summary of securities loaned at fair value as of December 31:

	2019	2018
Corporate bonds	$ 10,275,452	$ 10,901,868
Equities	66,009,902	72,245,010
U.S. and Foreign Government obligations	1,647,478	6,485,028
Total	$ 77,932,832	$ 89,631,906

NOTE 9. DERIVATIVES

The Plan invests in derivative financial instruments as provided by the Plan's statement of investment policy. The Plan uses derivative financial instruments to gain exposure to an asset class or manage portfolio risk. A derivative security is a financial contract whose value is based on, or "derived" from, a traditional security, an asset, or a market index. Derivative instruments include options, forward contracts, swaps, and futures as part of the Plan's portfolio. Derivative transactions involve, to varying degrees, credit risk, interest rate risk and market risk. Credit risk is the possibility that a loss may occur because a party to a transaction fails to perform according to the previously agreed upon terms. Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Market risk is the possibility that a change in interest or currency rates will cause the value of a financial instrument to decrease or become more costly to settle.

NOTE 9. DERIVATIVES (CONTINUED)

The Plan's portfolio includes the following derivative instruments at December 31, 2019 and 2018:

	2019		2018	
Derivative	Notional Value	Fair Value	Notional Value	Fair Value
Options	$ -	$ 11,725	$ -	$ (76,017)
Futures purchase commitments	(49,142,353)	-	(34,918,624)	-
Futures sales commitments	49,142,353	-	34,918,624	-
Swap assets	55,896,000	541,126	41,001,000	319,807
Swap liabilities	(434,500)	(97,438)	(104,502,500)	(374,867)
Total	$ 55,461,500	$ 455,413	$ (63,501,500)	$ (131,077)

The Plan uses options to reduce the risk of holding an asset. An option is a contract that conveys the right, but not the obligation, to buy (call) or sell (put) an item at an agreed upon price during a certain period of time or on a specific date. For the years ended December 31, 2019 and 2018, the options expire approximately one to three months after year end.

Futures contracts are used to provide exposure to an asset class using uninvested cash. These contracts are a legally binding agreement, made on the trading floor of a futures exchange, to buy or sell a commodity or financial instrument sometime in the future. Futures contracts have little credit risk, as organized exchanges are the guarantors. For the year ended December 31, 2019, the futures contracts mature from two months to eighteen months after year end. For the year ended December 31, 2018, the futures contracts mature from one month to 3 years after year end.

Swaps are used by the Plan to hedge certain risks such as interest rate risk, or to speculate on changes in the underlying price of an asset. Traditionally, a swap is the exchange of one security for another to change the maturity, quality, structure of an issue, or because investment objectives have changed. For both of the years ended December 31, 2019 and 2018, the swaps have maturity dates ranging from February 2020 through August 2047.

The Plan's derivative instruments are reported at fair value in equity investments on the statements of pension plan fiduciary net position. The gain or loss on derivative instruments is reported as part of investment income on the statements of changes in pension plan fiduciary net position.

NOTE 10. HEALTH INSURANCE SUPPLEMENT PLAN

Plan Description

Public Act 98-0043, effective June 28, 2013, initially terminated the health insurance supplement to be paid by the Plan after December 31, 2016. During the year ended December 31, 2019, the Circuit Court ordered that all eligible City of Chicago employee annuitants of the Plan are entitled to receive a health insurance premium subsidy for each month after December 31, 2016 in which they meet the eligibility requirements.

Eligible City of Chicago employee annuitants (both current and future employee annuitants, but not spousal or child annuitants) of the Plan are entitled to receive a health insurance premium subsidy of $55 per month from the Plan if the annuitant is not qualified to receive Medicare benefits or $21 per month from the Plan if the annuitant is qualified to receive Medicare benefits, representing a partial reimbursement for healthcare costs. The remaining costs for healthcare are borne by the City and the annuitant.

To be eligible for the health insurance premium subsidy, the annuitant must have retired on or after August 23, 1989; the annuitant must have been hired prior to April 4, 2003; and the annuitant must have either, (a) participated in a group healthcare plan for which the Plan offers to deduct health insurance premiums from monthly annuities in accordance with the 1983 and 1985 amendments to the Illinois Pension Code Statutes (currently either the Blue Cross/Blue Shield plans sponsored by the City of Chicago or the Aetna plans sponsored by Local 2), or (b) for the period between January 1, 2017 and December 31, 2019, participated in any health insurance plan and paid their healthcare insurance coverage themselves, either through an account on which the annuitant is named or an account established for the benefit of the annuitant.

At December 31, 2019, participants potentially eligible for the health insurance supplement consisted of the following:

Active members	1,904
Inactive plan members or beneficiaries currently receiving benefits	3,646
Inactive plan members entitled to but not yet receiving benefit payments	23
Total participants	5,573

Benefits Provided - The Plan pays a health insurance premium subsidy of $55 per month if the annuitant is not qualified to receive Medicare benefits or $21 per month if the annuitant is qualified to receive Medicare benefits.

Contributions - The Plan pays the health insurance premium subsidies on a “pay-as-you-go” basis through an allocation of Employer contributions from the City of Chicago.

NOTE 10. HEALTH INSURANCE SUPPLEMENT PLAN (CONTINUED)

Method of Accounting - The health insurance supplement plan's financial statements have been combined with the Plan's financial statements and are presented using the accrual basis of accounting.

Net Health Insurance Supplement Liability

The components of the city's net health insurance supplement liability for the year ended December 31, 2019 are as follows:

Total health insurance supplement liability	$ 10,076,760
Plan fiduciary net position	-
City's net health insurance supplement liability	$ 10,076,760
Plan fiduciary net position as a percentage of the total health insurance supplement liability	0.00%

Contributions for health insurance premium subsidies are made on a "pay-as-you-go" basis. There are no dedicated assets for health insurance premiums subsidies resulting in a 0.00% funded ratio.

See the schedule of changes in the city's net health insurance supplement liability and related ratios in the required supplementary information for additional information related to the funded status of the health insurance supplement plan.

The net health insurance supplement liability was determined by an actuarial valuation performed as of December 31, 2019 using the following actuarial methods and assumptions:

Discount rate	2.74%
Election percentage	20% of pre-Medicare eligible retirees and 60% of post-Medicare eligible retirees are assumed to receive the supplement.
Mortality	Post-retirement mortality rates for non-disabled pensioners were based on the RP-2014 Blue Collar Healthy Annuitant Mortality Tables, scaled by 106% for males and 98% for females, and projected generationally using scale MP-2017. Post-retirement mortality rates for disabled pensioners were based on the RP-2014 Blue Collar Healthy Annuitant Mortality Tables, scaled by 107% for males and 99% for females, and projected generationally using scale MP-2017. Pre-retirement mortality rates were based on the RP-2014 Blue Collar Employee Mortality Tables, scaled by 92% for males and 100% for females, and projected generationally using scale MP-2017.

The actuarial assumptions used in the December 31, 2019 valuation was based on the results of an actuarial experience study conducted for the period of January 1, 2012 through December 31, 2016, and were adopted and became effective December 31, 2018.

NOTE 10. HEALTH INSURANCE SUPPLEMENT PLAN (CONTINUED)

Discount Rate

As there are no assets dedicated to the health insurance supplement plan, the discount rate used to measure the total health insurance supplement liability was 2.74% based on the Bond Buyer 20-Bond Index of general obligation municipal bonds as of December 31, 2019.

Sensitivity of the Net Health Insurance Supplement Liability to Changes in the Discount Rate

The following is an analysis of the net health insurance supplement liability's sensitivity to changes in the discount rate at December 31, 2019. The following table presents the net health insurance supplement liability of the employer using the current discount rate as well as the employer's net health insurance supplement liability calculated using a discount rate 1 percent lower and 1 percent higher than the current discount rate:

	1% Decrease 1.74%	Current Discount Rate 2.74%	1% Increase 3.74%
City's Net Health Insurance Supplement Liability	$ 11,311,226	$ 10,076,760	$ 9,044,735

NOTE 11. EMPLOYER CONTRIBUTIONS RECEIVABLE - NET

Employer contributions due and not paid prior to year-end are recorded as contributions receivable and are reserved for uncertain collections. The allowance for uncollectible accounts is based on the likelihood of future collections. Employer contributions receivable at December 31, 2019 and 2018 consist of the following:

	2019	2018
Employer contributions receivable for	$ 260,638,868	$ 266,297,553
Less allowance for uncollectible accounts	-	(19,733,115)
Total	$ 260,638,868	$ 246,564,438

NOTE 12. DEFERRED COMPENSATION PLAN

The Plan offers its employees a deferred compensation plan established in accordance with Internal Revenue Code Section 457. The deferred compensation plan, which is funded through employee contributions, is available to all Plan employees and permits them to defer a portion of their salary until future years. Participation in the deferred compensation plan is optional. The deferred compensation is managed by a third party administrator. The assets of the deferred compensation plan are placed in trust with the third party for the exclusive benefit of the participants and their beneficiaries and are not considered assets of the Plan.

NOTE 13. RELATED PARTY TRANSACTIONS

The Plan has allowed the Ende, Menzer, Walsh & Quinn Retirees', Widows' and Children's Assistance Fund (the Corporation) to utilize its facilities and equipment to accommodate the once a year distribution to widows and orphans in December at no additional expense to the Plan. This distribution by the Corporation, to the widows and orphans, had been handled by the Plan.

Three of the Plan's Trustees and the Executive Director are also directors of the Corporation.

During both of the years ended December 31, 2019 and 2018, the Plan contributed to the Corporation from the balances in the gift reserve account as allowed under the discretionary authority granted by 40ILCS Act 5, Article 6-202 to render financial assistance to qualified widows and children annuitants of the participants of the Plan.

NOTE 14. LEASE AGREEMENTS

The Plan leases office facilities with lease payments subject to an escalation clause for increases in real estate taxes and maintenance charges. The lease runs through May 2034. Rental expense for 2019 and 2018 was $177,181 and $269,467 respectively. Future minimum rental payments required under the noncancelable operating lease is as follows:

Year ending December 31,	
2020	$ 237,164
2021	240,808
2022	244,452
2023	248,096
2024	251,740
2025	255,384
2026	259,028
2027	262,672
2028	266,316
2029	269,960
2030	273,604
2031	277,248
2032	280,892
2033	284,535
2034	119,189
Total	$ 3,771,088

NOTE 15. PRONOUNCEMENTS ISSUED NOT YET EFFECTIVE

In May 2020, the Governmental Accounting Standards Board (GASB) issued Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance*. The primary objective is to provide temporary relief to governments and other stakeholders in light of the COVID-19 pandemic, and extends the effective dates of certain accounting and financial reporting periods beginning after June 15, 2018. The Plan's effective dates have been updated for each applicable pronouncement according to Statement No. 95.

In November 2016, GASB issued Statement No. 83, *Certain Asset Retirement Obligations*. Statement No. 83 addresses accounting and financial reporting for certain asset retirement obligations and establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for asset retirement obligations. Statement No. 83 is effective for the Plan's fiscal year ending December 31, 2020.

In January 2017, GASB issued Statement No. 84, *Fiduciary Activities*. Statement No. 84 improves guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. Statement No. 84 is effective for the Plan's fiscal year ending December 31, 2020.

NOTE 15. PRONOUNCEMENTS ISSUED NOT YET EFFECTIVE (CONTINUED)

In June 2017, GASB issued Statement No. 87, *Leases*. Statement No. 87 was issued to improve accounting and financial reporting for leases by governments. This Statement increases the usefulness of governmental financial statements by requiring recognition of certain lease assets and liabilities for leases that were previously classified as operating leases. Statement No. 87 establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Statement No. 87 is effective for the Plan's fiscal year ending December 31, 2022.

In June 2017, GASB issued Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements*. Statement No. 88 was issued to improve the information that is disclosed in notes to government financial statements related to debt. This Statement also clarifies which liabilities governments should include when disclosing information related to debt. Statement No. 88 is effective for the Plan's fiscal year ending December 31, 2020.

In June 2018, GASB issued Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period*. Statement No. 89 was issued to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and simplify accounting for interest cost incurred before the end of a construction period. Statement No. 89 is effective for the Plan's fiscal year ending December 31, 2021.

In August 2018, GASB issued Statement No. 90, *Major Equity Interests - An Amendment of GASB Statements No. 14 and No. 61*. Statement No. 90 was issued to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. Statement No. 90 is effective for the Plan's fiscal year ending December 31, 2020.

In May 2019, GASB issued Statement No. 91, *Conduit Debt Obligations.* Statement No. 91 was issued to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with commitments extended by issuers, arrangements associated with conduit debt obligations, and related note disclosures. Statement No. 91 is effective for the Plan's fiscal year ending December 31, 2022.

In January 2020, GASB issued Statement No. 92, *Omnibus 2020*. Statement No. 92 was issued to enhance comparability in accounting and financial reporting and to improve the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. Statement No. 92 is effective for the Plan's fiscal year ending December 31, 2022.

In March 2020, GASB issued Statement No. 93, *Replacement of Interbank Offered Rates*. Statement No. 93 was issued to address the result of global reference rate reform, when London Interbank Offered Rate (LIBOR) is expected to cease to exist in its current form at the end of 2021, and other accounting and financial reporting implications that result from the replacement of an interbank offered rate (IBOR). Statement No. 93 is effective for the Plan's fiscal year ending December 31, 2022.

NOTE 15. PRONOUNCEMENTS ISSUED NOT YET EFFECTIVE (CONTINUED)

In March 2020, GASB issued Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements*. Statement No. 94 was issued to improve financial reporting by addressing issues related to public-private and public-public partnership arrangements (PPPs). Statement No. 94 is effective for the Plan's fiscal year ending December 31, 2023.

The Plan is currently evaluating the impact of adopting the aforementioned GASB Statements.

NOTE 16. SUBSEQUENT EVENT

These financial statements do not include any adjustments related to the impact of COVID-19 (Coronavirus) on the Plan's net position. As a direct result of the Coronavirus pandemic, market volatility has increased and impacted returns, while global economic activity has significantly slowed down with no certainty of when conditions may return to normal. The Plan anticipates that there may be an impact on the Plan's investments, contributions, and benefit payments. The extent of the impact is currently being monitored and evaluated by the Plan.

REQUIRED SUPPLEMENTARY INFORMATION - PENSION

Firemen's Annuity and Benefit Fund of Chicago

Required Supplementary Information - Pension

Schedule of Changes in the City's Net Pension Liability and Related Ratios

	2019	2018	2017	2016	2015	2014
Total pension liability						
Service cost including pension plan administrative expense	$ 105,367,286	$ 97,143,246	$ 93,366,729	$ 94,115,473	$ 87,203,153	$ 83,095,601
Interest on the total pension liability	408,586,099	410,821,674	371,622,080	342,084,603	338,986,636	329,965,941
Benefit changes	-	-	-	227,212,695	-	-
Difference between expected and actual experience	(65,213,748)	(56,417,879)	26,954,338	24,110,158	(7,980,712)	-
Assumption changes	190,954,465	382,610,753	414,218,762	(74,372,930)	176,281,502	88,448,895
Benefit payments	(342,884,926)	(320,595,085)	(302,518,486)	(283,085,767)	(274,459,754)	(261,571,672)
Refunds	(3,452,913)	(4,067,219)	(3,579,629)	(3,673,250)	(3,557,317)	(2,321,666)
Pension plan administrative expense	(3,225,938)	(3,285,110)	(3,171,986)	(3,216,823)	(3,149,549)	(3,069,192)
Net change in total pension liability	290,130,325	506,210,380	596,891,808	323,174,159	313,323,959	234,547,907
Total pension liability						
Beginning of year	6,252,360,385	5,746,150,005	5,149,258,197	4,826,084,038	4,512,760,079	4,278,212,172
End of year	$ 6,542,490,710	$ 6,252,360,385	$ 5,746,150,005	$ 5,149,258,197	$ 4,826,084,038	$ 4,512,760,079
Plan fiduciary net position						
Contributions - employer	$ 255,382,266	$ 249,684,038	$ 228,452,611	$ 154,101,396	$ 236,104,362	$ 107,334,399
Contributions - employee	46,622,658	45,894,781	47,364,276	48,959,929	46,552,247	48,056,393
Net investment income	161,082,443	(58,000,233)	140,569,856	60,881,106	7,595,562	30,867,889
Benefit payments	(342,884,926)	(320,595,085)	(302,518,486)	(283,085,767)	(274,459,754)	(261,571,672)
Refunds	(3,452,913)	(4,067,219)	(3,579,629)	(3,673,250)	(3,557,317)	(2,321,666)
Pension plan administrative expense	(3,225,938)	(3,285,110)	(3,171,986)	(3,216,823)	(3,149,549)	(3,069,192)
Other	506,886	5,853	22,879	(53,891)	7,141	7,393
Net change in plan fiduciary net position	114,030,476	(90,362,975)	107,139,521	(26,087,300)	9,092,692	(80,696,456)
Plan fiduciary net position						
Beginning of year	1,035,790,339	1,126,153,314	1,019,013,793	1,045,101,093	1,036,008,401	1,116,704,857
End of year	$ 1,149,820,815	$ 1,035,790,339	$ 1,126,153,314	$ 1,019,013,793	$ 1,045,101,093	$ 1,036,008,401
City's net pension liability	$ 5,392,669,895	$ 5,216,570,046	$ 4,619,996,691	$ 4,130,244,404	$ 3,780,982,945	$ 3,476,751,678
Plan fiduciary net position as a percentage of the total pension liability	17.57%	16.57%	19.60%	19.79%	21.66%	22.96%
Covered-employee payroll	$ 457,082,316	$ 456,969,301	$ 469,407,281	$ 478,470,944	$ 465,231,594	$ 460,189,982
Employer's net pension liability as a percentage of covered-employee payroll	1179.80%	1141.56%	984.22%	863.22%	812.71%	755.50%

Note: This schedule is intended to show information for ten years. The additional years' information will be displayed as it becomes available.

See Report of Independent Auditors.

Firemen's Annuity and Benefit Fund of Chicago

Required Supplementary Information - Pension

Schedule of City Contributions and Related Notes

Last Ten Fiscal Years

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Actuarially determined contribution	$ 442,044,761	$ 412,220,284	$ 372,845,121	$ 333,952,291	$ 323,544,987	$ 304,265,411	$ 294,877,895	$ 271,505,718	$ 250,056,273	$ 218,388,037
Contributions in relation to the actuarially determined contribution	(255,382,266)	(249,684,038)	(228,452,611)	(154,101,396)	(236,104,362)	(107,334,399)	(103,669,015)	(81,521,883)	(82,869,839)	(80,947,311)
Contribution deficiency	$ 186,662,495	$ 162,536,246	$ 144,392,510	$ 179,850,895	$ 87,440,625	$ 196,931,012	$ 191,208,880	$ 189,983,835	$ 167,186,434	$ 137,440,726
Covered employee payroll	$ 457,082,316	$ 456,969,301	$ 469,407,281	$ 478,470,944	$ 465,231,594	$ 460,189,982	$ 416,491,784	$ 418,964,763	$ 425,385,354	$ 400,404,320
Contributions as a percentage of covered employee payroll	55.87%	54.64%	48.67%	32.21%	50.75%	23.32%	24.89%	19.46%	19.48%	20.22%

Notes to Schedule

Valuation Date:

Actuarially determined contribution amount is determined as of December 31, with appropriate interest to the end of the year.

Methods and assumptions used to establish "actuarially determined contribution" rates:

Actuarial cost method	Entry Age Actuarial cost method
Amortization method	30-year open, level dollar amortization
Asset valuation method	5-year smoothed market

Actuarial assumptions:

Investment rate of return	6.75%, net of investment expense
Projected salary increases	3.50% to 25.00%, verying by years of service
Mortality	Post-retirement mortality rates were based on the RP-2014 Blue Collar Healthy Annuitant Mortality Tables, scaled by 106% for males and 98% for females, and projected generationally using scale MP-2017. Disabled mortality rates were based on the RP-2014 Blue Collar Healthy Annuitant Mortality Tables, scaled by 107% for males and 99% for females, and projected generationally using scale MP-2017. Pre-retirement mortality rates were based on the RP-2014 Blue Collar Employee Mortality, scaled by 92% for males and 100% for females, projected generationally using scale MP-2017.
Cost of living adjustments	Tier 1: 3% compound Tier 2: The lesser of 3% or one-half of the change in CPI, simple

Other assumptions:

Same as those used in the December 31, 2019 actuarial funding valuations.

Firemen's Annuity and Benefit Fund of Chicago

Required Supplementary Information - Pension

Schedule of Investment Returns

	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	20.4%	-6.6%	17.9%	7.5%	-0.1%	3.4%

Note: This schedule is intended to show information for ten years. The additional years' information will be displayed as it becomes available.

See Report of Independent Auditors.

REQUIRED SUPPLEMENTARY INFORMATION - HEALTH INSURANCE SUPPLEMENT

Firemen's Annuity and Benefit Fund of Chicago

Required Supplementary Information - Health Insurance Supplement

Schedule of Changes in the City's Net Health Insurance Supplement Liability and Related Ratios

	2019
Total health insurance supplement liability	
Service cost	$ 129,709
Interest	350,846
Benefit changes	-
Difference between expected and actual experience	89,281
Assumption changes	1,362,123
Benefit payments	(565,425)
Net change in total health insurance supplement liability	1,366,534
Total health insurance supplement liability	
Beginning of year	8,710,226
End of year	$ 10,076,760
Plan fiduciary net position	
Contributions - employer	$ 565,425
Benefit payments	(565,425)
Net change in plan fiduciary net position	-
Plan fiduciary net position	
Beginning of year	-
End of year	$ -
City's net health insurance supplement liability	$ 10,076,760
Plan fiduciary net position as a percentage of the total health insurance supplement liability	0.00%
Covered-employee payroll	$ 220,401,135
Employer's net health insurance supplement liability as a percentage of covered-employee payroll	4.57%

Note: This schedule is intended to show information for ten years.
The additional years' information will be displayed as it becomes available.

See Report of Independent Auditors.

Firemen's Annuity and Benefit Fund of Chicago

Required Supplementary Information - Health Insurance Supplement

Schedule of City Contributions and Related Notes

Last Ten Fiscal Years

	2019
Actuarially determined contribution	$ 565,425
Contributions in relation to the actuarially determined	(565,425)
Contribution deficiency	$ -
Covered employee payroll	$ 220,401,135
Contributions as a percentage of covered employee payroll	0.26%

Notes to Schedule

Valuation Date:
December 31, 2019

Actuarial cost method	Entry Age Normal Cost
Amortization method	30-year open, level dollar amortization
Actuarial assumptions:	
Discount rate	2.74%
Election percentage	20% of pre-Medicare eligible retirees and 60% of post-Medicare eligible retirees are assumed to receive the subsidy
Mortality	Post-retirement mortality rates for non-disabled pensioners were based on the RP-2014 Blue Collar Healthy Annuitant Mortality Tables, scaled by 106% for males and 98% for females, and projected generationally using scale MP-2017. Post-retirement mortality rates for disabled pensioners were based on the RP-2014 Blue Collar Healthy Annuitant Mortality Tables, scaled by 107% for males and 99% for females, and projected gnerationally using scale MP-2017. Pre-retirement mortality rates were based on the RP-2014 Blue Collar Employee Mortality Tables, scaled by 92% for males and 100% for females, and projected generationally using scale MP-2017.

Note: This schedule is intended to show information for ten years.
The additional years' information will be displayed as it becomes available.

SUPPLEMENTARY INFORMATION

Firemen's Annuity and Benefit Fund of Chicago

Supplementary Information

Schedules of Administrative Expenses

Years Ended December 31, 2019 and 2018

	2019	2018
Administrative expenses		
Disaster recovery	$ -	$ 7,200
Employee benefits	358,164	516,606
Equipment and maintenance	102,329	39,160
General and administrative	226,783	156,474
Insurance and surety bond	152,388	159,375
Office salaries	1,440,482	1,275,029
Printing and postage	81,344	83,257
Professional and consulting fees		
Actuarial	113,906	136,850
Audit	61,000	43,665
Consulting	37,812	139,183
Legal	343,280	331,191
Medical	124,332	122,950
Payroll administration	6,937	4,703
Rent	177,181	269,467
Total administrative expenses	$ 3,225,938	$ 3,285,110

Firemen's Annuity and Benefit Fund of Chicago

Supplementary Information

Schedules of Investment Expenses

Years Ended December 31, 2019 and 2018

	2019	2018
Investment manager expenses		
Adams Street Partners, LLC	$ 328,344	$ 294,721
Apollo Global Management, LLC	23,274	29,715
BlackRock	11,660	-
Brandes Investment Partners	338,836	372,392
Brown Advisory	230,497	227,367
CBRE	35,161	-
Chicago Equity Partners, LLC	53,230	66,354
Credit Suisse	12,803	13,038
Earnest Partners, LLC	153,696	150,248
Epoch Investment Partners, Inc.	208,237	348,479
Garcia Hamilton & Associates, L.P.	18,423	5,822
GlobeFlex Capital, L.P.	413,006	447,142
Jackson Square	240,983	253,043
Keeley Asset Management Corp.	175,690	180,316
Kennedy Capital Management	183,561	185,234
Logan Capital Management, Inc.	168,284	175,232
Loomis, Sayles & Company, L.P.	255,468	274,356
LSV Asset Management	449,724	413,673
Mesirow Financial	829	1,108
Neuberger Berman	355,262	354,862
Pomona Management, LLC	224,892	246,615
Principal Real Estate Investors, LLC	139,818	-
Rhumbline Advisers	10,742	15,698
The Boston Company Asset Management, LLC	156,587	161,709
Wells Fargo	189,178	195,244
Western Asset Management Company	197,129	200,597
William Blair & Company	399,506	364,453
	4,974,820	4,977,418
Other trading expenses and investment fees		
Northern Trust	318,415	531,925
Investment consulting fees		
Callan LLC	276,088	270,012
Bloomberg	6,800	-
	282,888	270,012
Investment custodian fees		
Northern Trust	80,500	80,500
Total investment expenses	$ 5,656,623	$ 5,859,855

Firemen's Annuity and Benefit Fund of Chicago

Supplementary Information

Additions by Source

Year Ended December 31,	Employer Contributions	Plan Member Contributions	Net Investment and Net Securities Lending Income (Loss)	Other	Total Additions
2014	$ 109,805,454	$ 48,056,393	$ 30,863,888	$ 11,394	$ 188,737,129
2015	$ 238,485,820	$ 46,552,247	$ (346,886)	$ 7,949,589	$ 292,640,770
2016	$ 156,158,391	$ 48,959,929	$ 55,362,185	$ 5,525,415	$ 266,005,920
2017	$ 228,452,611	$ 47,364,276	$ 140,507,402	$ 85,333	$ 416,409,622
2018	$ 249,684,038	$ 45,894,781	$ (58,048,526)	$ 54,146	$ 237,584,439
2019	$ 255,947,691	$ 46,622,658	$ 161,032,664	$ 556,665	$ 464,159,678

Deductions by Type

Year Ended December 31,	Benefits	Administrative Expenses	Annuitant Health Care	Other	Total Deductions
2014	$ 261,571,672	$ 3,066,946	$ 2,471,055	$ 2,323,912	$ 269,433,585
2015	$ 274,459,754	$ 3,149,549	$ 2,381,458	$ 3,557,317	$ 283,548,078
2016	$ 283,085,767	$ 3,216,823	$ 2,056,995	$ 3,733,635	$ 292,093,220
2017	$ 302,518,486	$ 3,171,986	$ -	$ 3,579,629	$ 309,270,101
2018	$ 320,595,085	$ 3,285,110	$ -	$ 4,067,219	$ 327,947,414
2019	$ 342,884,926	$ 3,225,938	$ 565,425	$ 3,452,913	$ 350,129,202