Annual Comprehensive Financial Report

A Component Unit
of the City of Chicago
for the years ended
December 31, 2020
and 2019

Prepared by
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Policemen's Annuity and Benefit Fund of Chicago

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO
Annual Comprehensive Financial Report For the Years Ended December 31, 2020 and 2019

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Introductory Section

The Retirement Board of the
Policemen's Annuity and Benefit Fund of Chicago
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Retirement Board of the Policemen's Annuity and Benefit Fund of Chicago, Illinois

The Policemen's Annuity and Benefit Fund of Chicago (the Fund) hereby submits its annual comprehensive financial report (ACFR) for the years ended December 31, 2020, and 2019. The Fund is responsible for the accuracy of the data and the completeness and fairness of presentation, including disclosures. To the best of our knowledge and belief, the enclosed information is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of operations of the Fund. All disclosures necessary to enable the reader to understand the Fund's financial activities have been included.

Any employee of the City of Chicago employed under the provisions of the municipal personnel ordinance as police service, sworn or designated by law as a peace officer, is generally included in the Policemen's Annuity and Benefit Fund of Chicago. The Fund is governed under Illinois State Statutes (Chapter 40, Pension, Article 5, Illinois Compiled Statutes) and may be amended only by the Illinois Legislature.

The Fund was established January 1, 1922, with the mission of providing retirement benefits to the sworn police members of the Chicago Police Department, their spouses and children. To properly execute this mission, the Fund is administered by an eight (8) member Board of Trustees. The Board is composed of four (4) elected members, with one elected from each rank of police officer, sergeant, lieutenant and above, and one from the retired members and their widows. The Mayor of Chicago appoints four members. The Retirement Board then elects a Board President, a Vice-President and a Recording Secretary from its own membership.

Among its many duties, the Retirement Board is charged with: approval of all applications for benefits and annuities, investment of Fund monies in a manner prescribed by the state statutes and Fund policy, adoption of rules and regulations for the proper conduct of the affairs of the Fund, engaging a certified independent public accountant to conduct an annual audit on the financial results each year and engaging an actuary to perform an annual actuarial valuation of the Fund. Annually, the Fund files financial statements and an actuarial valuation with the State of Illinois Department of Insurance and the City of Chicago, along with other governmental entities as requested. A summary of plan provisions overseen by the Retirement Board, as prescribed in the state statutes, are presented as part of this ACFR.

This report presents the financial activities of the Fund and is composed of five (5) sections:

1. The introductory section contains the table of contents, this transmittal letter, a listing of the Retirement Board members and office staff members, a listing of professional consultants, a listing of investment managers, and a summary Fund organizational chart;

2. The financial section contains the report of the independent auditors, management discussion and analysis, the financial statements and accompanying notes, required supplementary information and accompanying notes and supporting schedules of the Fund;

3. The investment section reports on activity, policy, results, allocation, commissions paid to managers and brokers and includes an investment summary;

4. The actuarial section contains the report of the Fund's actuary with supporting actuarial assumptions, schedules and tables;

5. The statistical section provides membership data for both active members and annuitants of the Fund.

Financial Information

Management of the Fund is responsible for establishing and maintaining an internal control structure designed to maintain reasonable assurance regarding the safekeeping of the Fund's assets from loss, theft or misuse and to ensure that adequate accounting data are compiled to allow for the preparation of financial statements that conform to generally accepted accounting principles. The concept of reasonable assurance recognizes that: (1) the cost of a control should not exceed the benefits likely to be derived; and (2) the valuation of costs and benefits requires estimates and judgments by management. Because the cost of internal control should not exceed the anticipated benefits, the objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of material misstatements. Consideration of the internal controls over financial reporting is included in the auditor's review. The Fund does engage an independent certified public accountant to audit the Fund's financial statements, and the auditor's unqualified audit opinion on the financial statements as of and for the years ended December 31, 2020, and 2019, is included in the financial section.

Users of this report are strongly encouraged to review the **Management's Discussion and Analysis** portion of the financial section in order to obtain a more complete understanding of the Fund's financial condition and activity.

Investment Performance and Policy

The Fund depends upon the performance of its assets to fund benefits (supplemented by both employer and employee contributions). The Fund's net position held in trust increased by approximately $279.5 million from December 31, 2019 to December 31, 2020. The Fund experienced a gain on investments in calendar year 2020 of $271.5 million, or 12.29% which compares to a gain on investments of $370 million, or 16.31% in 2019. Global equities ended 2020 with a bang, adding to already sizable gains from earlier months, as positive news around COVID-19 vaccines and a fiscal stimulus plan bolstered sentiment. In the U.S., the S&P 500 Index increased 3.8% in December; small-cap equities outperformed with the Russell 2000 Index, gaining 8.7% in December. Non-U.S. equities outperformed their domestic counterparts as U.S. dollar weakness strengthened local-currency returns. Within fixed income, Treasury rates moved modestly higher with 10- and 30-year yields increasing eight and seven basis points, respectively. The movement in nominal yields reflected rising inflation expectations with additional fiscal stimulus. As such, the 10-year Treasury breakeven rate increased 21 basis points to 1.98% in December – supporting a 1.1% monthly return for the Barclays Treasury Inflation Protected Securities Index. In credit, spreads continued to tighten, reflecting broad risk-on market sentiment. Lower-quality credit saw the greatest movement, as the option-adjusted spread on the Barclays U.S. Corporate High Yield Index fell 52 basis points in December, fueling returns of 1.9% for the index. In real assets, commodity indexes rallied given spot-price appreciation in energy and metals; spot WTI crude oil was up 7.3% during December. The Fund's portfolio return of 12.29% for the year is primarily attributed to the total equity portfolio, which returned 16.5% (net of fees) and made up 55% of the Fund's investments as of December 31,2020.

During 2020, the Fund awarded 3 new mandates totaling $130 million, of which $80 million (or 62%) were awarded to minority or women owned firms and $80 million (or 62%) of the new allocation was made to firms with a Chicago presence.

Overall, the Fund's assets are diversified in several ways, which minimizes the potential for overexposure to individual investments and provides a broad opportunity set for the portfolio, while trying to minimize risk. The Fund has over 41 professional investment management firms investing on behalf of the Fund. These firms make investment decisions for the Fund under the Prudent Person Rule authorized by state statutes and the Investment Policy guidelines adopted by the Board of Trustees.

Generally, investment decisions and strategies attempt to balance optimal performance and risk management, given the Fund's ongoing liquidity needs and constraints. That said, a sustained economic recovery and substantial growth in asset prices remain critical factors in the Fund's ability to meet its future obligations. On the other hand, it is expected that a significant correction in the capital markets would negatively impact the Fund's assets in a very meaningful way.

Current and Future Developments

The Fund had a positive return on its Investments for the year of 12.29%, which translate to an increase of $279.5 million in its Fiduciary Net Position for the year end December 31, 2020. This compares with a net increase in Fiduciary Net Position of $257.3 at December 31, 2019. At December 31, 2020, the Actuarial Funding status increased slightly to 23.1% in comparison to the 22.3% level at December 31, 2019.

As members and other users may be aware, the Policemen's Annuity and Benefit Fund of Chicago is created and governed by Illinois state statues. Since the 2016 reporting year, the Fund has relied upon fixed dollar amounts of Employer Contributions as were set out in Public Act 096-0506 (PA 96-0506). This language, enacted on May 30, 2016 effectively repealed language that would have required the City of Chicago to provide funding based on an Actuarial Required Contribution (ARC) methodology that was to insure the Fund would achieve a 90% funded status by 2045.

PA 96-0506 established that the Fund is to receive the following fixed amounts of Employer Funding; $420 million in 2016, $464 million in 2017; $500 million in 2018; $557 million in 2019; and $579 million in 2020 which will be mathematically higher funding amounts than the "Property Tax Multiplier" method. Due to the increase in total payouts each year, the fixed amount of the increased contributions only serves to hold the funded status constant. Beginning in tax payment year 2021, the "second phase" of the funding mechanism in Public Act 096-0506 is scheduled to begin. This "second phase" requires the City to provide funding on an Actuarial methodology, to achieve 90% funding by 2055.

The Board will continue to communicate its annual Funding requirements resolution to the City this summer (and every summer) based on Actuarial projections developed by the Fund's Independent Consulting Actuary, Gabriel Roeder Smith (GRS). These Funding projections indicate that based on the existing underlying Actuarial Assumptions and current valuation of the Fund, required Funding for the first few years of this ARC methodology will increase to $738 million for 2021, $787 million for 2022, $799 million 2023, $825 million for 2024 and $845 million for 2025.

An abbreviated schedule of future anticipated Actuarial Funding amounts can be found in the actuarial section of this report. It is also important to note that these future funding amounts are currently based on existing actuarial Assumptions. Two of these assumptions, the investment earnings assumption and the annualized rate of salary increase assumption have the biggest impact upon the valuation of the Fund, (and future actuarial funding). The Chicago Police Department and the Fund both anxiously await the negotiations of a new Contract between the FOP and the City of Chicago. The Fund has engaged GRS to review these underlying assumptions for the period January 1, 2014 through December 31, 2018. The Board adopted the new demographic and economic actuarial assumptions at their August 29, 2019 meeting to first be used in the December 31, 2019 actuarial valuation. These future funding projections will change with any change to the underlying Actuarial assumptions. They will also change each year based on the actual results of Fund and whether any benefit changes are enacted. The ARC funding methodology is embodied in the statutory language to insure that the Fund will achieve 90% funded status by 2055.

In 2020, the Fund welcomed approximately 150 new members to active status, including approximately 14 members returning from inactive or disability status. In 2020 and recent years, the Fund has been working closely with the Human Resources Department of the Chicago Police Department, the Board's consulting physician, the Fund's medical consulting firm, and the Fund's members on disability to place certain members, previously on disability, back to service with the Chicago Police Department, as positions become available for such members and based upon medical eligibility. Based upon these efforts, the quantity of members with a duty, occupational or ordinary disability has declined in each of the last six years, from 343 at December 31, 2014, to 213 at December 31, 2020

With the addition of new members, the Fund has approximately 4,928 and 4,950 Tier 2 members at December 31, 2020, and 2019, respectively. Tier 1 members continue to decline with retirements, as such members were 7,787 and 8,403, at December 31, 2020, and 2019, respectively.

The Fund continues to strive for customer service excellence by improving the operational efficiencies and service delivery to the membership. Enhancements to the Fund's pension administration system continue. The Fund also continues to develop and enhance its website, located at www.chipabf.org. The website includes the online estimate program for active members, electronic copies of the Fund's newsletter, information on scheduled meetings of the Board of Trustees, and other important updates.

Funding Status

For purposes of funding, the actuarial value of assets and liabilities was $3,400.0 million, and $14,703.1 million, respectively at December 31, 2020. The funded ratio, for purposes of calculating the statutory contribution, increased from 22.28% to 23 .12%. On a fair value basis, for purposes of statutory funding, the funded ratio experienced an increase from 22.16% at December 31, 2019, to 23.14% at December 31, 2020.

As mentioned previously, PA-96-0506 changed the City's funding policy to fixed contributions through the year 2020, and an Actuarial Required Funding methodology that will achieve a 90% funding status by 2055. This legislation also changed the required actuarial cost method from projected unit credit to entry age normal.

The Fund manages its Investment portfolio in line with its statement of Investment Policy which has been developed by the Board and its overall Investment Consulting firm of NEPC taking into consideration the Fund's unique Risk, Return and Liquidity profile. The Retirement Board makes all investment decisions based on the parameters of this policy.

As previously stated, the Fund is extremely dependent on the successful performance of the Investment portfolio and is required to fund a portion of the total annual benefit payments through available liquidity in the portfolio. Although the Fund's Investment portfolio remains fully invested, The Retirement Board has diversified the risks within portfolio to the extent possible to mitigate the impact of any meaningful market corrections.

Professional Services

The Fund's actuarial valuation, along with other actuarial services, are provided by its Independent Consulting Actuaries, Gabriel, Roeder, Smith & Company. The annual audit of the financial statements is performed by Mitchell & Titus, LLP, Certified Public Accountants. The Fund's investment consultant is NEPC, LLC. A complete listing of all investment managers is detailed in the ACFR's introductory section.

Acknowledgments

I wish to thank the members of the Retirement Board for their thankless service to the Fund and its members. I would also like to express my appreciation to the Fund's accounting and finance staff that worked on the compilation of this report and to the entire Fund's staff and professional consultants who work both professionally and effectively to ensure the continued successful operation of the Fund, and to the Fund's members for their interest and involvement in all plan activities.

This report is intended to provide complete and reliable information to the members of the Fund, the City of Chicago as Plan Sponsor, and other important users of the Fund's financial and demographic information.

We are always striving for cost effective ways to better serve the Fund's members and, as always, welcome your comments or suggestions.

Respectfully submitted,

Erin Keane

Erin Keane
Executive Director

RETIREMENT BOARD OF TRUSTEES AND OFFICE STAFF

December 31, 2020

PROFESSIONAL CONSULTANTS

MEDICAL ADVISOR
Peter Orris, M.D.

INVESTMENT CONSULTANTS
NEPC, LLC

CONSULTING ACTUARY
Gabriel, Roeder, Smith & Company

INDEPENDENT AUDITORS
Mitchell & Titus, LLP

MASTER CUSTODIAN
The Northern Trust Company

COMMERCIAL BANK
JPMorgan Chase Bank, N.A.

INVESTMENT MANAGERS

Alcentra Investment Managment
Alex Brown Realty, Inc.
Acadian Asset Management, LLC
Adams Street Partners, LLC
Angelo Gordon & Co., LP
Apollo Real Estate Investors
Artisan Partners, LP
Beach Point Select Fund, LP
Blackrock Institutional Trust Co.
Blackstone Property Partners, LP
Blueprint Capital Advisors, LLC
BMO Asset Management Corp
Brookfield Asset Management
CBRE Clarion Securities, LLC
Chicago Equity Partners, LLC
Crestline Investors Inc.
Dorchester Capital Advisors, LLC
DRA Advisors
Eagle Point Credit Management
Earnest Partners, LLC
EntrustPermal PABF Fund, LLC
Garcia Hamilton & Associates
Global Infrastructure Management, LLC
Great Lakes Advisors, LLC
HGK Asset Management, Inc.
Invesco Private Capital, Inc.
Lazard Asset Management, LLC
Lone Star Funds
Manulife Asset Management LLC
Mesirow Financial
Monroe Capital LLC
Morgan Stanley Real Estate Investing
National Investment Services
Northern Trust Investments Inc.
PIMCO Investments LLC
Pluscios Management LLC
Sound Mark Partners LLC
TerraCap Management LLC
UBS Asset Management Inc.
Ullico Investment Advisors Inc
Voya Investment Management Co. LLC
Wellington Management Company LLP
William Blair Investment Management, LLC

ORGANIZATION CHART

RETIREMENT
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EXECUTIVE DIRECTOR
Erin Keane

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Consulting Actuary
Auditors
Master Custodian
Investment Managers

COMPTROLLER
Kevin Reichart

ASSISTANT COMPTROLLER
August A. Madonia

BENEFIT CALCULATIONS	BENEFIT CLAIMS	BENEFIT COUNSELING	BENEFIT DISBURSEMENTS	DISABILITY MATTERS
Gladys Bernal	Kay Hylton	Jacqueline Robinson	Kris Matalik	Robert Crawford

Information regarding investment professionals that provide services to the Policemen's Annuity and Benefit Fund of Chicago can be found in the Other Supplementary Information to the Financial Statements (see Schedule of Investment Fees on page 74) and the Investment Section (pages 76 to 87).

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Financial Section

MITCHELL TITUS

INDEPENDENT AUDITOR'S REPORT

Board of Trustees
Policemen's Annuity and Benefit Fund of Chicago

Report on the Financial Statements

We have audited the accompanying financial statements of the Policemen's Annuity and Benefit Fund of Chicago (the Fund), a component unit of the City of Chicago (City), as of and for the years ended December 31, 2020 and 2019, and the related notes to the financial statements, which collectively comprise the Fund's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

The Fund's 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. Those standards require that we plan and perform the audit 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.

MITCHELL TITUS

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 the Fund as of December 31, 2020 and 2019, and the changes in its 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 and 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 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 audits 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 financial statements that collectively comprise the Fund's basic financial statements. The schedule of administrative expenses, schedule of consulting costs and schedule of investment fees are presented for purposes of additional analysis and are not a required part of the basic financial statements.

MITCHELL TITUS

The supplementary 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 supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Mitchell & Titus, LLP

June 29, 2021

MANAGEMENT'S DISCUSSION AND ANALYSIS (Unaudited)

The Management's Discussion and Analysis section of this report is intended to serve as an introduction to the financial statements of the Policemen's Annuity and Benefit Fund of Chicago (the Fund) and to supplement the information contained therein.

Overview of Financial Statements and Accompanying Information

The basic financial statements are prepared in accordance with accounting principles generally accepted in the United States of America as established by the Governmental Accounting Standards Board (GASB) and are described below:

- **Statements of Fiduciary Net Position** report the Fund's assets, liabilities, deferred inflows of resources and the resultant net position where assets minus liabilities and deferred inflows equal net position held in trust for pension benefits at the end of the year.

- **Statements of Changes in Fiduciary Net Position** show the sources and uses of funds during the calendar year, where additions minus deductions equal the net increase or decrease in net position held in trust for pension benefits for the year.

- **Notes to the Financial Statements** are an integral part of the financial statements and include important information and schedules to provide a more comprehensive understanding of the data provided in the financial statements. Information contained in the note disclosures includes the Fund's accounting policies, descriptions of pension and health benefits and related liabilities, detail of investments and related risks, fund reserves, and various other relevant topics.

- **Required Supplementary Information** presents detailed required historical information and is presented after the Notes to the Financial Statements. This required supplementary information includes data on the employer's net pension liability and changes thereof, employer's contribution and money-weighted rate of return for the pension plan; and information on total OPEB liability for the Staff Retiree Health Plan; along with the other information useful in evaluating the fiduciary net position of the Fund.

- **Supplementary Information** presents the details on administrative costs of maintaining a defined benefit pension plan.

Financial Highlights

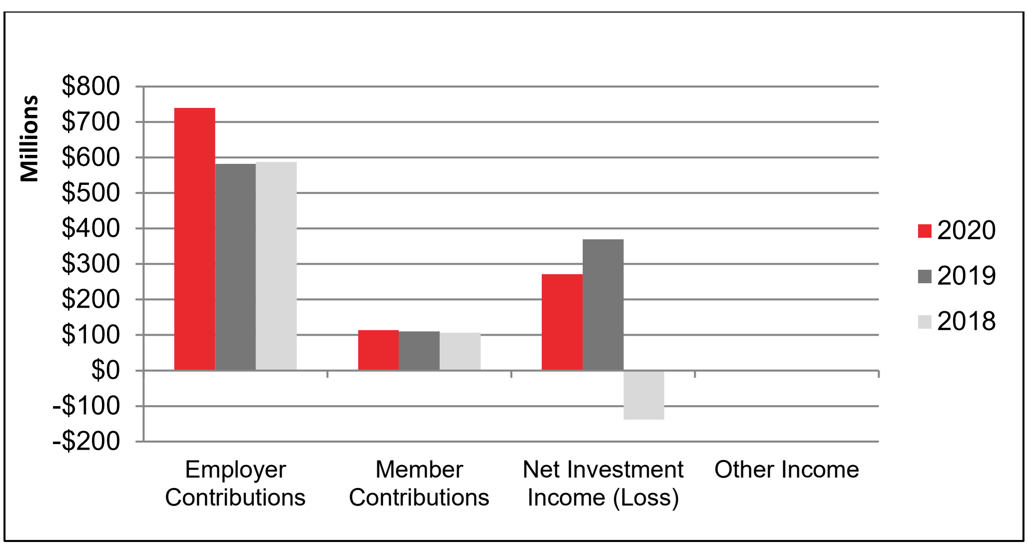
- The fiduciary net position of the Fund increased by $279.5 million, or 8.8%, to $3,441.9 million at December 31, 2020. At December 31, 2019, the fiduciary net position of the Fund increased by $257.3 million, or 8.9%, to $3,162.4 million.

Financial Highlights *(continued)*

- Additions to the Fund are received from investment income and contributions from the employer and plan members. These are the primary funding sources for benefit payments. In 2020, these additions totaled $1,125.4 million versus $1,062.7 million in 2019, which is a 5.9% increase. The Fund experienced a net gain on investment activity in calendar year 2020 of $271.5 million, or 12.29%, which compares to the net gain on investment of $370 million, or 16.31% in 2019. Global equities ended 2020 with a bang, adding to already sizable gains from earlier months, as positive news around COVID-19 vaccines and a fiscal stimulus plan bolstered sentiment. In the U.S., the S&P 500 Index increased 3.8% in December; small-cap equities outperformed with the Russell 2000 Index, gaining 8.7% in December. Non-U.S. equities outperformed their domestic counterparts as U.S. dollar weakness strengthened local-currency returns. Within fixed income, Treasury rates moved modestly higher with 10- and 30-year yields increasing eight and seven basis points, respectively. The movement in nominal yields reflected rising inflation expectations with additional fiscal stimulus. As such, the 10-year Treasury breakeven rate increased 21 basis points to 1.98% in December – supporting a 1.1% monthly return for the Barclays Treasury Inflation Protected Securities Index. In credit, spreads continued to tighten, reflecting broad risk-on market sentiment. Lower-quality credit saw the greatest movement, as the option-adjusted spread on the Barclays U.S. Corporate High Yield Index fell 52 basis points in December, fueling returns of 1.9% for the index. In real assets, commodity indexes rallied given spot-price appreciation in energy and metals; spot WTI crude oil was up 7.3% during December. The Fund's portfolio return of 12.29% for the year is primarily attributed to the total equity portfolio, which returned 16.5% (net of fees) and made up 55% of the Fund's investments as of December 31, 2020.

- An increase in employer contributions was a major factor in the additions to the Fund. Effective May 30, 2016, with the passing of Public Act 099-0506 (PA 99-0506), the reserve was adjusted in accordance with the Illinois Pension Statutes. For financial reporting purposes, the 2020 employer contributions significantly increased by $157.4 million. In 2019, the employer contributions decreased by $6.0 million.

ADDITIONS 2018 - 2020

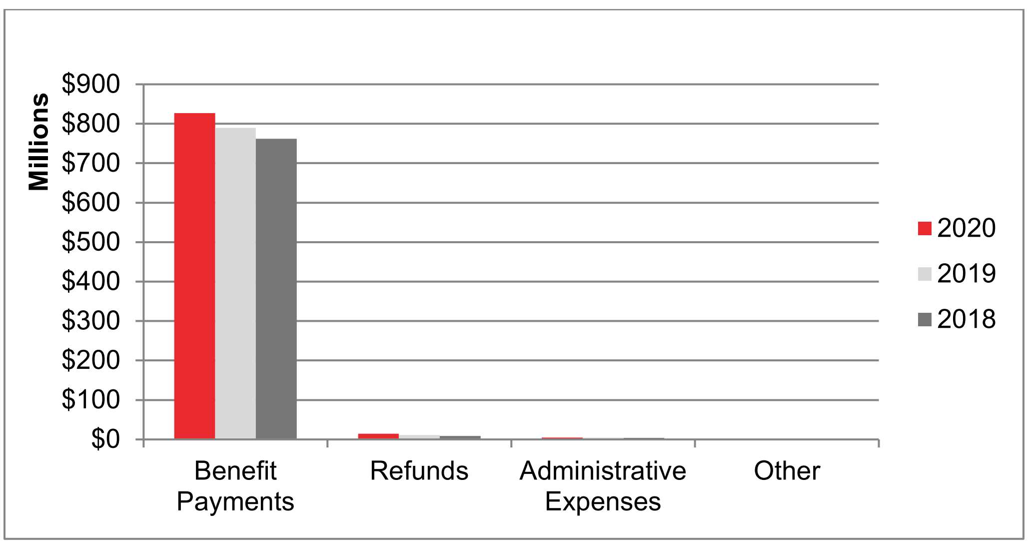


Financial Highlights *(continued)*

- Deductions to the Fund are incurred primarily for the purpose for which the Policemen's Annuity and Benefit Fund of Chicago was created, to provide benefits to the police officers of the City and their surviving spouses and children. Deductions consist primarily of pension and disability benefits, death benefits, refunds of employee deductions, and administrative expenses. In 2020, these deductions totaled $845.9 million and were $805.4 million in 2019, which is a 5% increase. This increase is attributable primarily to the number of retirees and beneficiaries receiving higher benefit payments. The net number of benefit recipients increased in 2020 by 129 members to 13,900, the highest beneficiary count in Fund history.

- Also contributing to the increase in deductions and benefit payments is the enactment of Public Act 99-0905 (PA 99-0905) on November 29, 2016, which provided the statutory 3% automatic increase annually to members born between January 1, 1955, and January 1, 1966. The legislature also provided increased benefits to qualifying annuitants such that the minimum annuity paid cannot be less than 125% of the Federal poverty level.

DEDUCTIONS 2018 - 2020



- Benefit payments, excluding death benefits and refunds, increased by approximately $37.0 million in 2020 to $826.8 million from $789.8 million in 2019. Death benefits and refunds of employee deductions increased 36.1% from 2019 to 2020 by approximately $3.9 million, from $10.9 million to $14.8 million, respectively.

- Administrative expenses decreased by approximately $0.4 million, or 8.5%, from $4.7 million in 2019 to $4.3 million in 2020.

Financial Highlights *(continued)*

- The primary objective of the Fund is to meet its long-term defined pension benefit obligations. The funding ratio of the Fund on a fair value basis, for purposes of statutory funding, was 23.41% at December 31, 2020 and 22.20% at December 31, 2019. The increase reflects higher-than-expected investment return. In addition, the Fund experienced a favorable actuarial gain due to the absence of a contract settlement maintaining current salary levels. The absence of a contract settlement left salary levels unchanged and resulted in a favorable actuarial gain. For the year ended December 31, 2020, the Fund’s 12.29% investment return was significantly higher than the Fund’s underlying investment return assumption of 6.75%.

- For accounting and financial reporting pursuant to GASB No. 67 and 68, which uses a Single Discount Rate that reflects: (1) a long-term expected rate of return on pension plan investments (to the extent that the Fund’s fiduciary net position is projected to be sufficient to pay benefits) and (2) a tax-exempt municipal bond rate as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met), the Fund’s net pension liability increased by $425,717,344 from $11,627,173,487 as of December 31, 2019, to $12,052,890,831 at December 31, 2020. Changes in the actuarial assumptions and methods led to the change in the Single Discount Rate from 6.43% to 6.28% (based on the long-term expected rate of return on investments of 6.75% used in the December 31, 2019, and 6.75% used in the December 31, 2020, actuarial valuations and the long-term municipal bond rate of 2.75% as of December 31, 2019, and 2.00% as of December 31, 2020, respectively.

- In compliance with GASB No. 75, the Fund is required to recognize a liability for other postemployment benefits (OPEB), which represents health insurance coverage for active and retired Fund employees. Expenses of $0.2 million and $0.4 million were recognized in 2020 and 2019, respectively, resulting in a total accrued liability of $2.3 million and $2.6 million as of December 31, 2020 and 2019, respectively.

Fiduciary Net Position

A summary of fiduciary net position is presented below:

Fiduciary Net Position
(In millions)
As of December 31, 2020, 2019 and 2018

	2020	2019	2018	2020–2019 Change $	2020–2019 Change %
Receivables	$ 765.2	$ 605.5	$ 593.3	$ 159.7	26.4 %
Brokers–unsettled trades	76.0	104.2	135.1	(28.2)	(27.1)
Investments, at fair value	2,707.5	2,596.5	2,391.4	111.0	4.3
Invested securities lending cash collateral	109.2	76.8	112.8	32.4	42.2
Total assets	3,657.9	3,383.0	3,232.6	274.9	8.1
Brokers–unsettled trades	97.8	134.3	204.5	(36.5)	(27.2)
Securities lending payable	109.2	76.8	112.8	32.4	42.2
OPEB liability	2.3	2.6	2.2	(0.3)	(11.5)
Refunds and accounts payable	6.6	6.8	7.9	(0.2)	(2.9)
Total liabilities	215.9	220.5	327.4	(4.6)	(2.1)
Deferred inflow of resources	0.1	0.1	0.1	-	-
Net position	$ 3,441.9	$ 3,162.4	$ 2,905.1	$ 279.5	8.8 %

Overall, the fiduciary net position increased by $279.5 million in 2020, primarily due to the positive investment performance of the Fund's portfolio. The Fund's investment portfolio increased by 12.29% in 2020.

As of December 31, 2020 and 2019, the amount recorded as receivables includes the employer contributions receivable under the provisions of PA 99-0506. The funding provisions of PA 99-0506 are significantly different than PA-1495, which was in effect at December 31, 2015. Pursuant to PA 99-0506, the funding policy requires City contributions to be equal to $579 million in payment year 2020. Required funding in the 2021 payment year is $737.5 million. For the payment years 2021 through 2055, the employer is required to make percent of pay contributions that, along with member contributions and investment earnings, are expected to generate a projected funded ratio of 90% by plan year-end 2055.

Changes in Fiduciary Net Position

The following table reflects a comparative summary of various changes in fiduciary net position:

Changes in Fiduciary Net Position
(In millions)
Years Ended December 31, 2020, 2019 and 2018

	2020	2019	2018	2020–2019 Change $	2020–2019 Change %
ADDITIONS					
Member contributions	$ 113.6	$ 110.8	$ 107.2	$ 2.8	2.5 %
Employer contributions	739.4	582.0	588.0	157.4	27.0
Net investment gain (loss) and investment income	271.5	369.3	(138.7)	(97.8)	26.5
Securities lending income	0.4	0.6	0.7	(0.2)	(33.3)
Miscellaneous income	0.5	-	1.6	0.5	-
Total additions	1,125.4	1,062.7	558.8	62.7	5.9
DEDUCTIONS					
Annuity, disability, and death benefits	828.9	791.9	764.3	37.0	4.7
Refunds of contributions	12.7	8.8	6.7	3.9	44.3
Administrative expenses	4.3	4.7	4.1	(0.4)	(8.5)
Total deductions	845.9	805.4	775.1	40.5	5.0
Net increase/(decrease)	279.5	257.3	(216.3)	22.2	8.6
Net position restricted for pension benefits					
Beginning of year, as restated	3,162.4	2,905.1	3,121.4	257.3	8.9
Ending of year	$ 3,441.9	$ 3,162.4	$ 2,905.1	$ 279.5	8.8 %

The Fund experienced an increase in fiduciary net position of $279.5 million in 2020. While an overall increase in the net fiduciary position was experienced, benefit payments continue to increase each year. The Fund experienced an increase in retirements of active members in 2020.

Contractual terms between the employer and the Fraternal Order of Police, Chicago Lodge No. 7, provided that police officers of at least 60 years of age, with over 20 years of service, receive free healthcare in the City-sponsored healthcare program until the age of Medicare eligibility. Police officers of at least 55 years of age, indicating their intent to retire prior to October 1, 2020, with over 20 years of service, can participate in the City-sponsored healthcare program at a cost of 2% of their retirement annuity until the age of Medicare eligibility.

MANAGEMENT'S DISCUSSION AND ANALYSIS (Unaudited)

Investment Activities

The Fund continues to prudently implement the strategic allocation approved by the Board of Trustees. In 2020, the Board voted to hire two new fixed-income investment managers.

Investment Returns
Years Ended December 31, 2020, 2019 and 2018

	2020	2019	2018
Total fund	12.29%	16.31%	(5.36)%
Equities	16.50	25.79	(11.54)
Fixed income	6.60	7.12	(0.38)
Real estate	(0.21)	7.43	1.51
Infrastructre	(7.28)	10.21	14.20
Private equity	16.69	3.20	12.42
Private debt	(1.82)	9.38	10.52
Opportunistic debt	15.30	4.21	2.64
Hedge fund	0.05	0.35	4.59
Global asset allocation	8.32	11.91	(5.31)
Cash and cash equivalents	1.67	2.26	1.98

Plan Membership

The following table reflects the Plan membership as of December 31, 2020, 2019 and 2018.

Plan Membership
As of December 31, 2020, 2019 and 2018

				2020–2019	
	2020	2019	2018	Change	%
Retirees and beneficiaries receiving benefits	13,900	13,771	13,631	129	0.94 %
Active employees	12,715	13,353	13,438	(638)	(4.78)
Terminated (inactive members) employees entitled to benefits or refunds of contributions	801	707	721	95	13.44
Total	27,416	27,831	27,790	(414)	(1.49)%

Funding Status

The funding ratio of the Fund on a fair value basis, for purposes of market value funding, experienced an increase to 23.41% at December 31, 2020 from 22.20% at December 31, 2019. During 2014, the Fund adopted GASB No. 67, which requires that projected benefit payments are required to be discounted to their actuarial present values using a single discount rate that reflects (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits) and (2) a tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average 'AA' credit rating. Using this methodology, the funding ratios of the Fund at December 31, 2020 and 2019, were 22.2% and 21.4%, respectively. Discount rates used in the GASB No. 67 valuation were 6.28% and 6.43% as of December 31, 2020 and 2019, respectively.

In 2016, certain assumptions were changed, which included the investment return assumption and the inflation rate assumption. Actuarial information presented as of December 31, 2020 and 2019 reflects these assumption changes.

Effective May 30, 2016, the Illinois Pension Statutes regarding employer contributions to the Fund were changed by Public Act 099-0506. In accordance with Public Act 099-0506, the funding policy requires that contributions from the City, as employer, be equal to $420 million in payment year 2016, $464 million in payment year 2017, $500 million in payment year 2018, $557 million in payment year 2019, and $579 million in payment year 2020. For payment years after 2020, the City is required to make level percent of pay contributions for plan years 2020 through 2055 that, along with member contributions and investment earnings, are expected to generate a projected funded ratio of 90% by plan year-end 2055.

As currently provided in the applicable provisions of Public Act 099-0506, the funded ratio of the Fund is projected to increase slowly in future years, with required increases from the employer in years into the future in accordance with current legislation. The Fund continues to be heavily dependent upon employer contributions to fund benefit payments to members now and in future years.

Contact Information

This financial report is designed to provide the employer, plan participants, and others with a general overview of the Fund's finances and to show accountability for the monies received. Questions concerning any data provided in this report can be submitted to:

Ms. Erin Keane
Executive Director
Policemen's Annuity and Benefit Fund of Chicago
221 North LaSalle Street
Suite 1626
Chicago, Illinois 60601

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO
(A Component Unit of the City of Chicago)
Statements of Fiduciary Net Position
As of December 31, 2020 and 2019

	2020	2019
ASSETS		
Cash	$ 250	$ 250
Receivables		
Employer-Tax levies, net of allowance for loss of $0 in 2020, $0 in 2019	755,544,781	596,940,465
Member contributions - December 31, 2020 payroll due in January 2021	5,200,155	5,278,385
Interest and dividends	4,453,353	3,282,673
Accounts receivable - due from Brokers	75,964,597	104,154,584
	841,162,886	709,656,107
Investments at fair value		
U.S. common stock and other equity	279,217,903	284,914,799
Collective investment funds, stock	531,043,166	413,185,452
Collective investment funds, international equities	39,167,299	28,955,841
Collective investment funds, fixed income	205,813,955	177,740,014
Collective investment funds, international fixed income	52,592,273	47,156,836
International equity	604,256,498	608,703,255
U.S. bond and notes	331,058,816	330,349,784
International bonds and notes	9,084,901	10,334,473
Short-term instruments	107,381,026	169,263,557
Infrastructure	67,867,535	74,947,075
Forward contracts and swaps	218,487	221,945
Hedge fund-of-funds	223,802,930	226,685,082
Real estate	143,394,621	124,951,531
Venture capital and private equity	112,601,991	99,078,783
	2,707,501,401	2,596,488,427
Invested securities lending cash collateral	109,234,378	76,812,922
Total assets	3,657,898,915	3,382,957,706
LIABILITIES		
Refunds and accounts payable	6,616,796	6,776,923
trade accounts payable - due to Brokers	97,765,151	134,304,522
Security lending cash collateral	109,234,378	76,812,922
OPEB Obligation	2,265,881	2,553,621
Total liabilities	215,882,206	220,447,988
Deferred inflow of resources	118,830	80,855
Total liabilities and deferred inflow of resources	216,001,036	220,528,843
Net position held in trust for pension benefits	$ 3,441,897,879	$ 3,162,428,863

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

POLICEMEN’S ANNUITY AND BENEFIT FUND OF CHICAGO
(A Component Unit of the City of Chicago)
Statements of Changes in Fiduciary Net Position
For the Years Ended December 31, 2020 and 2019

	2020	2019
ADDITIONS		
Contributions		
Employer	$ 739,440,979	$ 581,936,012
Plan member salary deductions	113,621,747	110,791,663
Total contributions	853,062,726	692,727,675
Investment income		
Net appreciation in fair value of investments	244,576,579	326,767,920
Interest	10,440,563	18,569,323
Dividends	20,398,839	28,297,308
Real estate income	4,238,061	4,945,426
	279,654,042	378,579,977
Investment activity expenses		
Investment management fees	(7,425,643)	(8,433,812)
Custodial fees	(302,722)	(362,158)
Investment consulting fees	(420,410)	(415,958)
Total investment activity expenses	(8,148,775)	(9,211,928)
Net income from investing activities	271,505,267	369,368,049
From securities lending activities		
Securities lending income	725,738	2,313,459
Borrower rebates	(287,556)	(1,615,043)
Bank fees	(52,582)	(83,810)
Net income from securities lending activities	385,600	614,606
Total net investment income	271,890,867	369,982,655
Miscellaneous income	472,449	32,359
Total additions	1,125,426,042	1,062,742,689
DEDUCTIONS		
Pension and disability benefits	826,827,086	789,816,240
Death benefits	2,074,568	2,022,800
Refunds of employee deductions	12,696,058	8,828,904
	841,597,712	800,667,944
Administrative expenses	4,359,314	4,734,467
Total deductions	845,957,026	805,402,411
Net increase in fiduciary net position	279,469,016	257,340,278
Net position held in trust for pension benefits		
Beginning of year	3,162,428,863	2,905,088,585
End of year	$ 3,441,897,879	$ 3,162,428,863

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

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

Accounting principles generally accepted in the United States (U.S. GAAP), as established by the Governmental Accounting Standards Board (GASB), 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 the primary government to impose its will on the component unit, or a potential for the component unit to provide specific financial benefits to or impose specific financial burdens on the primary government. A primary government may also be financially accountable for its component units.

Based on the above criteria, the Policemen's Annuity and Benefit Fund of Chicago (the Fund, or PABF) is considered to be a component unit of the City of Chicago (the City). The Fund is part of the City's financial reporting entity and is included in the City's fiduciary statement of net assets as a pension trust fund.

Basis of Accounting

The Fund's financial statements are prepared on the accrual basis of accounting. Employee and employer contributions are recognized as additions in the period in which employee services are performed. Benefits and refunds are recognized as deductions when payable. Expenses are recorded when the corresponding liabilities are incurred, regardless of when payment is made.

Use of Estimates

The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results may differ from those estimates.

Investments

The Fund is authorized to invest in bonds, notes, and other direct obligations of the U.S. Government and U.S. Government agencies; corporate bonds, debentures, and notes; certain notes secured by mortgages, including pass-through securities; common and preferred stocks; certain pooled funds; limited partnerships; real estate; derivatives; currencies and other types of investment vehicles as set forth in the Fund's Statement of Investment Policy and in compliance with the Illinois Compiled Statutes.

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Method Used to Value Investments

Investments are reported at fair value. Short-term investments are reported at fair value, which approximates costs. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Fixed-income securities are valued principally using quoted market prices provided by independent pricing services. For collective investments, net asset value (NAV) is determined and certified by the investment managers as of the reporting date. Real estate investments are valued at estimated fair value as determined by the general partner, based upon appraisals provided by the investment manager. Hedge funds, venture capital, private equity, infrastructure, and certain opportunistic investments are reported at estimated fair value as determined by the general partner of the investment vehicle.

Furniture and Office Equipment

Furniture and office equipment are not capitalized as they are immaterial and charged to expenses in the year of purchase.

Administrative Expenses

Administrative expenses are recorded as incurred and budgeted and approved by the Fund's Board of Trustees. Administrative expenses are funded by employer contributions.

Income Taxes

The Fund is a tax-exempt retirement plan as determined by the Internal Revenue Service. As such, income earned by the Fund is not subject to Federal income taxes.

Securities Lending Transactions

Cash received as collateral on securities lending transactions and investments made with that cash are reported as assets in the statements of fiduciary net position at fair value. Securities received as collateral are reported as assets only if the Fund is able to pledge or sell them without a borrower default. Liabilities resulting from these transactions are reported in the statements of fiduciary net position.

NOTE 1 SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Recent Accounting Pronouncements

The following standards were adopted by the Fund during 2020:

GASB Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance,* was issued in May 2020. The primary objective of this Statement is to provide temporary relief to governments and other stakeholders in light of the COVID-19 pandemic. That objective is accomplished by postponing the effective dates of certain provisions in Statements and Implementation Guides that first became effective or are scheduled to become effective for periods beginning after June 15, 2018, and later. The requirements of this Statement are effective immediately.

Other accounting standards that the Fund is currently reviewing for applicability and potential impact on the financial statements include:

GASB Statement No. 87, *Leases,* was issued in June 2017. The primary objective of this Statement is to improve accounting and financial reporting for leases by government entities. This Statement will require recognition of certain leases that were previously categorized as operating leases. The Fund will adopt GASB No. 87 for its December 31, 2022, financial statements.

NOTE 2 PENSION PLAN

Plan Description and Contribution Information

PABF is the administrator of a defined benefit, single-employer pension plan with a defined contribution minimum for the purpose of providing benefits to the police officers of the City and their widows and children. Any City employee employed under the provisions of the municipal personnel ordinance as police service is covered by the Fund. The defined benefits, as well as the employer and employee contribution levels, are mandated in Illinois Compiled Statutes (40 ILCS Act 5, Article 5) and may be amended only by the Illinois State Legislature. The Fund is governed by an eight-member Board of Trustees (four appointed by the City, three elected by the police officers, and one elected by the annuitants) whose duties are to administer the Fund under the Illinois Pension Code. The City's payrolls for employees covered by the Fund for the years ended December 31, 2020 and 2019 were $1,195,980,486 and $1,228,986,864, respectively. At December 31, 2020 and 2019, the Fund's membership consisted of the following:

	2020	2019
Active employees	12,715	13,353
Retirees and beneficiaries currently receiving benefits	13,900	13,771
Terminated employees entitled to benefits or a refund of contributions, but not yet receiving them	801	707
	27,416	27,831

The Fund provides retirement benefits as well as death and disability benefits. Employees age 50 or older with at least 10 years of service are entitled to receive a money purchase annuity and partial City contributions if they have completed less than 20 years of service. The mandatory retirement age for a participant is 63. Employees age 50 or older with at least 20 years of service are entitled to receive a minimum formula annuity of 2.5% per year for the first 20 years of service, plus 2.5% per year for each following year or fraction thereof times the final average salary (highest average annual salary for any four consecutive years within the last 10 years of service immediately preceding the date of retirement). The annuity will not exceed 75% of the highest average annual salary.

For members with at least 20 years of service, the monthly annuity increases by 3% of the original annuity at the first of the month following the later of the attainment of age 55 or the first anniversary of retirement, and by 3% on each January 1 thereafter, if the recipient was born before January 1, 1966.

NOTE 2 PENSION PLAN *(continued)*

Plan Description and Contribution Information *(continued)*

Effective November 29, 2016, Public Act 99-0905 (PA 99-0905) became law. This Act extended the 3% annual automatic increase to participants born after December 31, 1954, but before January 1, 1966, first payable at the later of age 55 or one year from retirement date. In addition, under PA 99-0905, the minimum benefit for annuitants and widows cannot be less than 125% of the Federal poverty level.

If the recipient was born after January 1, 1966, the monthly annuity increases by 1.5% of the original annuity at the first of the month following the later of the attainment of age 60 or the first anniversary of retirement, and 1.5% on each January 1 thereafter, but will not exceed a total of 30%. Members first hired after January 1, 2011, are subject to different provisions within their defined benefit pension plan. The new provisions include a minimum retirement age of 55, a final average salary calculation based upon 96 consecutive months within the last 120 months of employment, an annual salary cap for purposes of calculating a pension benefit, and cost-of-living increases for a pension benefit that include considerations related to the Consumer Price Index for urban consumers.

Covered employees are required to contribute 9.0% of their salary to the Fund. If an employee leaves covered employment without qualifying for an annuity, accumulated contributions are refunded with interest.

Commencing with the City tax levy year beginning in 2016, legislation in place at December 31, 2016, provides for fixed dollar City contributions for payment years 2016 to 2020, and level percent of pay contributions for years 2021 to 2055. Beginning with payment year 2021, the funding policy requires that future employer contributions, employee contributions and other Fund income are sufficient to produce a funding goal of 90% by the fiscal year end 2055, based upon the actuarial value of Fund assets and application of certain required actuarial assumptions and methodologies.

The actuarial calculation utilized and reported to the City for its tax levy in 2015 requires that assets are marked-to-market at March 30, 2011, and the actuarial value of assets be based upon a five-year smoothing of investment gains and losses incurred in fiscal years ending after March 30, 2011. The actuarial value of assets at December 31, 2016, reflects that assets were marked to the fair market value of assets at January 1, 2012, and all related investment gains and losses through January 1, 2012, were recognized. Investment gains and losses for the years ended December 31, 2012, 2013, 2014, 2015 and 2016, are recognized at a rate of 20% per year over a five-year period. For purposes of the actuarial asset valuation, resetting the actuarial value of assets to the fair market value of assets at January 1, 2012, instead of March 30, 2011, did not impact the statutory contribution requirement for 2019 and 2020.

NOTE 2 PENSION PLAN *(continued)*

Plan Description and Contribution Information *(continued)*

The total pension liability at December 31, 2020 and 2019, was $15,494,740,334 and $14,789,602,350, respectively. The plan fiduciary net position at December 31, 2020 and 2019 was $3,441,897,879 and $3,162,428,863, respectively. The net pension liability at December 31, 2020 and 2019 was $12,052,842,455 and $11,627,173,487, respectively. The Single Discount Rate of 6.28% required by GASB Statement No. 67 as of December 31, 2020, was based on a long-term expected rate of return on pension plan investments of 6.75% and a long-term municipal bond rate of 2.00%. The Single Discount Rate of 6.43% required by GASB Statement No. 67 as of December 31, 2019, was based on a long-term expected rate of return on pension plan investments of 6.75% and a long-term municipal bond rate of 2.75%.

NOTE 3 HEALTH INSURANCE SUPPLEMENT

Plan Description and Contribution Information

The City offered group health benefits, as was provided, to annuitants and their eligible dependents, which expired on December 31, 2016.

Effective January 1, 2017 and thereafter, certain eligible annuitants in the Appellate Court expanded class, as defined in its June 29, 2017 order, and as further defined after remand in the Circuit Court's February 28, 2019 order, are entitled to continue to receive the 1983 statutory provided subsidies (related to the police and fire funds) of $55 per month if non-Medicare-eligible and $21 per month if Medicare-eligible. Therefore, this obligation is reflected as an actuarial accrued liability as of December 31, 2019.

NOTE 4 CASH AND INVESTMENT RISK

Cash

The bank balance and carrying amount of the Fund's deposits at December 31, 2020, were $5,166,581 and $4,893,355, respectively, and $4,486,272 and $4,110,208 at December 31, 2019, respectively. These balances excluded $250 of petty cash. The bank balance at December 31, 2020 and 2019 is on deposit with the City Treasurer and insured or collateralized by securities held by the City Treasurer in the Fund's name.

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Investment Policy

The Trustees assume the responsibility for establishing the Fund's investment policy. The Fund's overall investment policy is based on the following principles established by the Trustees:

- Maintain a long-term investment horizon for the Fund
- Diversify investments across several asset classes

The Trustees have indicated interest in developing a risk policy statement in parallel to the Fund's investment policy. The policy would highlight those risks managed at the Fund level and those managed by external managers. The risk policy would also state the types of risks that are monitored and how they are measured. Until such policy is developed by PABF staff and adopted by the Board, there is no formal policy relating to specific investment-related risks.

Money-Weighted Rate of Return

For the years ended December 31, 2020 and 2019, the annual money-weighted rate of return on the plan's investments, net of investment expense, was 12.29% and 16.31%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Investment Summary

The following table presents a summary of the Fund's investments by type at December 31, 2020 and 2019:

	2020	2019
Government and agency fixed income	$ 160,661,357	$ 153,268,795
Corporate fixed income	179,482,360	187,415,462
U.S. common collective fixed-income funds	205,813,955	177,740,014
Global common collective fixed-income funds	52,592,273	47,156,836
U.S. equities	279,217,903	284,914,799
U.S. common collective stock funds	531,043,166	413,185,452
International equity common collective funds	39,167,299	28,955,841
Foreign equities	604,256,498	608,703,255
Pooled short-term investment funds	89,489,163	137,215,111
Infrastructure	67,867,535	74,947,075
Real estate	143,394,621	124,951,531
Venture capital	112,601,991	99,078,783
Forward contracts and swaps	218,487	221,945
Hedge fund-of-funds	223,802,930	226,685,082
Cash and cash equivalents	17,891,863	32,048,446
Total investments at fair value	$ 2,707,501,401	$ 2,596,488,427

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Investment Summary *(continued)*

The Fund's individual investment Northern Trust Collective Russell 1000 Index Fund – Non-Lending, which amounted to $406,818,834 and $298,507,827 as of December 31, 2020 and 2019, respectively, represented 5% or more of net position held in trust for pension benefits. There are no insurance contracts excluded from plan assets.

The Fund's investments were managed by approximately 52 external investment managers during 2020, with additional services provided by an external investment consultant. The Fund does not employ any internal investment managers; therefore, its investments are not managed internally. The Fund does not have a formal policy regarding the credit risk of its external managers or investment consultant.

Fair Value Measurements

The Fund categorizes the fair value measurements of its investments based on the hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure an asset's fair value. Fair value is the amount that would be received to sell the investment in an orderly transaction between market participants at the measurement date (*i.e.*, exit price). The fair value measurements are determined within a framework that utilizes a three-tier hierarchy, which maximizes the use of observable inputs and minimizes the use of unobservable inputs. Investments measured and reported at fair value are classified and disclosed in one of the following categories:

Level 1: Unadjusted quoted prices in active markets for identical assets.

Level 2: Inputs other than quoted prices that are observable for the asset, either directly or indirectly. These inputs include:

a. quoted prices for similar assets in active markets;
b. quoted prices for identical or similar assets in markets that are not active;
c. inputs other than quoted prices that are observable for the asset;
d. inputs that are derived principally from or corroborated by observable market data.

Level 3: Inputs that are unobservable for the asset. The valuation of these investments requires significant judgment due to the absence of quoted market values, inherent lack of liquidity, and changes in market conditions.

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Fair Value Measurements *(continued)*

The Fund's investments that are valued using the NAV per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy. These investments do not have a readily determinable fair value.

The recurring fair value measurements for the year ended December 31, 2020, are as follows:

		Fair Value Measurements Using		
Investments by fair value level	**Totals**	**Level 1**	**Level 2**	**Level 3**
Equities				
U.S. common stock and other equity	$ 279,217,903	$ 279,174,814	$ 29,967	$ 13,122
Collective investment funds, stock	406,818,834	-	406,818,834	-
International equity	604,222,350	604,145,908	-	76,442
Fixed income				
U.S. bonds and notes	330,820,610	-	330,820,610	-
International bonds and notes	9,084,901	-	9,084,901	-
Cash equivalents and short-term instruments	107,381,026	17,406,834	89,974,192	-
Forward contracts and swaps	218,487	-	218,487	-
Venture capital and private equity	6,433,762	-	-	6,433,762
Subtotal	1,744,197,873	$ 900,727,556	$ 836,946,991	$ 6,523,326
Investments measured at net asset value				
Collective investment funds, stock	124,224,332			
Collective investment funds, international equities	39,201,448			
Collective investment funds, fixed	206,052,160			
Collective investment funds, international fixed	52,592,273			
Infrastructure	67,867,535			
Hedge fund-of-funds	223,802,930			
Real estate	106,168,229			
Venture capital and private equity	143,394,621			
Subtotal	963,303,528			
Total	$ 2,707,501,401			

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Fair Value Measurements (*continued)*

The recurring fair value measurements for the year ended December 31, 2019, are as follows:

		Fair Value Measurements Using		
Investments by fair value level	**Totals**	**Level 1**	**Level 2**	**Level 3**
Equities				
U.S. common stock and other equity	$ 284,914,799	$ 284,901,677	$ -	$ 13,122
Collective investment funds, stock	298,507,827	-	298,507,827	-
International equity	608,703,255	608,685,180	-	18,075
Fixed income				
U.S. bonds and notes	330,349,780	-	330,349,780	-
International bonds and notes	10,334,473	-	10,334,473	-
Cash equivalents and short-term instruments	169,263,557	23,244,782	146,018,775	-
Forward contracts and swaps	221,945	-	221,945	-
Subtotal	1,702,295,636	$ 916,831,639	$ 785,432,800	$ 31,197
Investments measured at net asset value				
Collective investment funds, stock	114,677,625			
Collective investment funds, international equities	28,955,841			
Collective investment funds, fixed	177,740,014			
Collective investment funds, international fixed	47,156,836			
Infrastructure	74,947,075			
Hedge fund-of-funds	226,685,081			
Real estate	124,951,531			
Venture capital and private equity	99,078,783			
Subtotal	894,192,786			
Total	$ 2,596,488,422			

Equity investments classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets issued by pricing vendors.

Equity, fixed-income securities, and investment derivative instruments classified in Level 2 of the fair market hierarchy are valued using either a bid evaluation or a matrix pricing technique maintained by various pricing vendors. Bid evaluations may include market quotations, yields, maturities, call features and ratings. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices.

Equity classified in Level 3 of the fair value hierarchy is securities whose stated market price is unobservable by the market place. Many of these securities are priced by the issuers of industry groups. These prices are obtained from various pricing sources by the Fund's custodian bank.

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Fair Value Measurements (*continued)*

Investments measured at net asset value (NAV) for fair value are not subject to level classification. The following tables summarize the Fund's investments in certain entities that measure NAV per share as fair value measurement as of December 31, 2020 and 2019:

2020	Fair Value	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Collective investment funds, stock	$ 124,224,332	$ -	Daily	5 days
Collective investment funds, international equities	39,201,448	-	Daily	5 days
Collective investment funds, fixed	206,052,160	15,811,350	Daily	5 days
Collective investment funds, international fixed	52,592,273	4,261,320	Daily	5 days
Infrastructure	67,867,535	27,260,011	Illiquid	N/A
Hedge fund-of-funds	223,802,930	-	Quarterly	90 days
Venture capital and private equity	106,168,229	60,553,102	Illiquid	N/A
Real estate	143,394,621	48,658,710	Illiquid	N/A
	$ 963,303,528			

2019	Fair Value	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Collective investment funds, stock	$ 114,677,625	$ -	Daily	5 days
Collective investment funds, international equities	28,955,841	-	Daily	5 days
Collective investment funds, fixed	177,740,014	7,559,597	Daily	5 days
Collective investment funds, international fixed	47,156,836	9,755,333	Daily	5 days
Infrastructure	74,947,075	28,992,159	Illiquid	N/A
Hedge fund-of-funds	226,685,081	-	Quarterly	90 days
Real estate	124,951,531	35,935,495	Illiquid	N/A
Venture capital and private equity	99,078,783	25,472,406	Illiquid	N/A
	$ 894,192,786			

Collective investment funds, stock and international equities: There are six funds at December 31, 2020 and 2019, which invest in equities diversified across all sectors.

Collective investment funds, fixed and international fixed: There are three funds at December 31, 2020, and 11 funds at December 31, 2019, which invest in a variety of fixed-income markets through various investments.

Infrastructure: There are five funds at December 31, 2020 and four funds at December 31, 2019, which invest in a variety of infrastructure assets through various investments. These funds are not eligible for redemption.

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Fair Value Measurements (*continued)*

Hedge fund-of-funds: There are four funds at December 31, 2020, and five funds at December 31, 2019, which invest in a select group of underlying managers that implement a number of different alternative investment strategies and invest in a variety of markets through limited partnerships, limited liability companies and other investment entities. Four of the funds are available for redemption as of December 31, 2020 and two of these funds were not available for redemption as of December 31,2019.

Real estate, venture capital and private equity: The real estate investments consist of 25 and 23 real estate funds as of December 31, 2020 and 2019, respectively. As of December 31, 2020, the Fund held investments in five core funds, two core plus funds, four debt funds, 10 opportunistic funds, and four value-add funds. As of December 31, 2019 the Fund held investments in four core funds, one core plus fund, four debt funds, 12 opportunistic funds, one REIT fund and four value-add funds. The private equity partnerships consists of two and one limited partnership interests as of December 31, 2020 and 2019, respectively. The private debt partnerships consists of eight limited partnership interests as of December 31, 2020 and 2019, respectively. These funds invest in equity or debt securities of privately held companies. Private equity and debt closed-end funds are not eligible for redemption.

Investment Risks

The Fund's investments are subject to certain types of risks, including interest rate risk, credit risk, custodial credit risk and foreign currency risk. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the value of investment securities will occur in the near term. The changes could materially affect the amounts reported in the statements of fiduciary net position.

Interest rate risk—Interest rate risk is the risk that the fair value of debt securities decreases due to increases in the prevailing market interest rate. Generally, the longer the maturity of an investment, the greater the sensitivity of its fair value to changes in market interest rates. The Fund does not have a formal policy regarding interest rate risk. The Fund attempts to mitigate its exposure to fair value loss arising from increasing interest rates by diversifying its fixed-income investment strategy and by allocation to several investment managers. The Fund engaged six such managers in 2020 and 2019. Each investment manager is required to determine the maturities of all fixed-income securities in their portfolio. Additionally, guidelines are provided to the external investment managers, including a target duration range that is consistent with each investment manager's respective strategy.

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Investment Risks *(continued)*

The following tables show the segmented time distribution of the Fund's investments into time periods of maturities based on the investments' cash flows.

At December 31, 2020, the Fund had the following investments and maturities related to certain fixed-income securities (bonds and notes):

		Investment Maturities			
Investment Type	**Fair Value**	**Less than 1 Year**	**1 to 6 Years**	**7 to 10 Years**	**More than 10 Years**
Asset-backed securities	$ 21,540,704	$ 58,216	$ 3,164,500	$ 4,026,661	$ 14,291,327
Commercial mortgage-backed securities	22,194,976	-	1,675,997	3,551,723	16,967,256
Corporate bonds	131,180,213	1,619,994	40,276,657	66,969,112	22,314,450
Corporate convertible bonds	334,549	-	187,733	-	146,816
Government agency securities	45,945,763	22,040,140	9,044,713	2,126,512	12,734,398
Government bonds	50,749,028	831,024	7,056,484	28,061,206	14,800,314
Government mortgage-backed securities	54,728,629	1,714	5,470,045	3,691,317	45,565,553
Index Linked Bonds	918,356	-	-	118,528	799,828
Municipal/provincial bonds	7,798,134	115,873	820,106	675,210	6,186,945
Non-government-backed collateralized mortgage obligations	4,753,365	16,390	954,963	981,711	2,800,301
	$ 340,143,717	$ 24,683,351	$ 68,651,198	$ 110,201,980	$ 136,607,188

At December 31, 2019, the Fund had the following investments and maturities related to certain fixed-income securities (bonds and notes):

		Investment Maturities			
Investment Type	**Fair Value**	**Less than 1 Year**	**1 to 6 Years**	**7 to 10 Years**	**More than 10 Years**
Asset-backed securities	$ 30,015,147	$ 1,031,249	$ 4,346,676	$ 4,817,402	$ 19,819,820
Commercial mortgage-backed securities	21,236,946	-	1,671,998	1,976,346	17,588,602
Corporate bonds	130,023,372	10,726,834	70,541,597	27,984,233	20,770,708
Corporate convertible bonds	137,410	-	-	28,857	108,553
Government agency securities	28,641,268	13,137,729	3,736,422	2,062,527	9,704,590
Government bonds	48,766,932	468,246	4,543,240	15,259,024	28,496,422
Government mortgage-backed securities	67,679,213	-	4,777,504	4,232,090	58,669,619
Municipal/provincial bonds	6,551,547	46,464	754,485	380,968	5,369,630
Non-government-backed collateralized mortgage obligations	7,632,422	7,050	1,433,606	2,476,343	3,715,423
	$ 340,684,257	$ 25,417,572	$ 91,805,528	$ 59,217,790	$ 164,243,367

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Investment Risks *(continued)*

Credit risk—Credit risk is the risk that the issuer or other counterparty to an investment will not fulfill its obligations. One measure of credit risk is the quality ratings issued by national ratings agencies, such as Moody's Investors Services (Moody's) and Standard & Poor's Financial Services. The Fund does not have a formal policy in regard to aggregate credit quality of fixed-income holdings. The Fund utilizes external investment management firms to invest in fixed-income securities and credit quality is addressed within the guidelines of the mandate for each of the managers. If a holding falls below specific guideline requirements, the manager will either sell the security or will inform the Fund of the lower rating and why the manager believes that it is prudent to continue to hold the security as they believe that the security will return to minimum constraints.

The following table provides information on the credit ratings associated with the Fund's investments in debt securities. Ratings were obtained from Moody's:

	Fair Value	
	2020	**2019**
Quality Rating		
Aaa	$ 81,399,594	$ 74,758,580
Aa	6,219,662	9,384,025
A	77,784,950	83,245,954
Baa	35,392,226	33,289,954
Ba	11,465,160	6,189,000
B	3,015,698	2,200,729
Not rated	29,187,302	32,820,303
Caa through C	1,338,104	1,465,562
Total credit risk of U.S. corporate fixed income	245,802,696	243,354,107
U.S. Govt. fixed-income securities - explicitly guaranteed	90,938,134	97,330,150
U.S. Govt. agency securities-not rated	3,402,887	-
	$ 340,143,717	$ 340,684,257

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Investment Risks *(continued)*

Custodial credit risk—Custodial credit risk applies to investments, cash, and certificates of deposit. For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, the Fund will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. For cash and certificates of deposit, custodial credit risk is the risk that in the event of a bank failure, the Fund's deposits may not be returned. As of December 31, 2020 and 2019, cash deposits of $668,447 and $1,820,410, respectively, were exposed to custodial credit risk as uninsured and uncollateralized. The Fund does not have a formal policy regarding custodial credit risk.

Foreign currency risk—Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment.

The Fund does not have a formal investment policy governing foreign currency risk, but does manage its exposure to loss in the fair value of investments by requiring managers of foreign investments to maintain diversified portfolios. The Fund's equity and fixed-income portfolios include investments that are subject to foreign currency risk. Such investments include non-U.S. equities, non-U.S. government bonds, corporate bonds, and derivative instruments. Additionally, some of the Fund's investment managers at least partially hedge foreign currency exchange risk. The Fund's exposure to foreign currency risk is as follows:

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Investment Risks *(continued)*

	Fair Value	
	2020	**2019**
Currency		
Argentine Peso	$ 31,332	$ 30,796
Australian Dollar	12,119,291	12,667,235
Brazilian Real	12,228,985	17,380,555
British Pound Sterling	39,280,493	51,802,019
Canadian Dollar	13,539,744	15,949,695
Chilean Peso	1,361,292	-
Chinese Yuan Renminbi	1,621,662	1,980,536
Colombian Peso	4,110,910	2,103,856
Czech Koruna	2,029,433	1,465,597
Danish Krone	15,078,677	11,594,551
Egyptian Pound	24,845	170,722
Euro Currency Unit	106,242,007	123,368,107
Hong Kong Dollar	61,111,384	56,188,894
Hungarian Forint	141	1,130,401
Indian Rupee	9,326,564	8,544,748
Indonesian Rupiah	8,734,337	6,878,827
Japanese Yen	67,407,569	82,889,900
Malaysian Ringgit	1,560,120	2,427,244
Mexican Peso	6,059,229	5,496,794
New Israeli Shekel	628,888	4,809,095
New Taiwan Dollar	41,332,390	27,942,056
New Zealand Dollar	430,530	507,599
Norwegian Krone	6,824,781	4,817,543
Philippine Peso	1,779,149	2,329,321
Polish Zloty	72,376	21,359
Qatari Riyal	-	36,873
Russian Ruble	1,905,048	122,861
Singapore Dollar	1,202,641	1,304,352
South African Rand	13,079,791	8,755,746
South Korean Won	32,853,628	22,868,076
Swedish Krona	19,437,226	12,402,169
Swiss Franc	27,354,457	21,995,785
Thai Baht	3,811,543	2,238,152
Turkish Lira	143,871	549,251
United Arab Emirates dirham	-	18,733
Total investments in foreign currency	$ 512,724,334	$ 512,789,448

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Derivatives

The Fund's investment managers may enter into derivative transactions as permitted by their guidelines. A derivative financial instrument is an investment whose payoff depends on the value of an underlying instrument such as bond or stock prices, a market index, or commodity prices. Derivative financial instruments involve, to varying degrees, credit 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 terms. Market risk is the possibility that a change in the underlying element of the derivative will cause the value of a financial instrument to decrease or become more costly to settle. Most of the derivative transactions executed by the Fund's investment managers are related to currency through foreign exchange contracts, the vast majority of which is for hedging purposes, and interest rates through interest rate futures and forward contracts, the purpose of which is mostly duration management. In addition to derivative transactions executed directly by the Fund's investment managers, the Fund also holds interests in collective funds, hedge funds, and private equity funds, which may engage in derivative transactions. The Fund does not directly purchase derivatives with borrowed funds.

Futures contracts—The Fund's external investment managers enter into futures contracts in the normal course of investing activities to manage market risk associated with the Fund's fixed-income investments and to achieve overall investment portfolio objectives. These contracts involve elements of market risk in excess of amounts recognized in the statements of fiduciary net position. The credit risk associated with these contracts is minimal, as they are traded on organized exchanges and settled daily.

At December 31, 2020, the Fund had interest rate futures contracts to purchase U.S. Treasury bonds and notes and an Australian Treasury bond with notional costs of $4,701,750, $12,870,361 and $331,309, respectively. At December 31, 2020, the Fund also had interest rate futures contracts to (sell) U.S. Treasury bonds and notes and a U.K. bond with notional amounts of $(3,514,413), $(7,709,695) and $(724,551), respectively. At December 31, 2019, the Fund had interest rate futures contracts to purchase U.S. Treasury bonds and notes with notional costs of $4,867,863 and $13,654,688, respectively. At December 31, 2019, the Fund also had interest rate futures contracts to (sell) a German bond with a notional amount of $(224,159).

The fair value of futures contracts in the statements of fiduciary net position was zero at December 31, 2020 and 2019, as settlements are by cash daily.

The Fund had net investment earnings of $841,274 and $466,667 on futures contracts in 2020 and 2019, respectively. These earnings are accounted for as net appreciation in fair value of investments.

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

<u>Derivatives</u> *(continued)*

Interest rate and credit default swaps—The Fund's external investment managers utilize interest rate and credit default swaps in the management of the Fund's fixed-income portfolio. Swap agreements are contractual agreements between two or more parties in which each party agrees to exchange sets of cash flows based on certain agreed-upon parameters. The holder is exposed to credit risk for nonperformance and market risk for changes in interest rates. Gains and losses on swaps are determined based on fair values and are recorded in the statements of changes in fiduciary net position. The notional value of credit default swaps was $7,413,001 and $16,919,495 as of December 31, 2020 and 2019, respectively. The notional value of inflation and interest rate swaps was $1,994,333 and $10,215,000 as of December 31, 2020 and 2019, respectively. The fair value of swaps outstanding at December 31, 2020 and 2019 was a net liability of $379,505 and $375,636, respectively. Investment gain (loss) from holdings and sales of interest rate and credit default swaps was $(1,562,219) and $(216,491) in 2020 and 2019, respectively. These gains and losses are included in net appreciation (depreciation) in the fair value of investments in the statements of changes in fiduciary net position.

Foreign exchange contracts—The Fund's external investment managers utilize foreign currency forward contracts, primarily for hedging purposes. Foreign currency forward contracts are contractual agreements to buy or sell a specific amount of a foreign currency at a certain date for an agreed price. As the fair value of the underlying foreign currency varies from the contractual agreed price, the Fund records an unrealized gain or loss. The holder is exposed to credit risk for nonperformance and to market risk for changes in exchange rates. The Fund had pending foreign currency purchases and sales that included positions with various currencies primarily including Argentine peso, Australian dollar, Brazilian real, British pound sterling, Canadian dollar, Chinese yuan renminbi, Colombian peso, Czech koruna, Danish krone, Egyptian pound, Euro currency unit, Hong Kong dollar, Hungarian forint, Indian rupee, Indonesian rupiah, Japanese yen, Malaysian ringgit, Mexican peso, New Israeli shekel, New Taiwan dollar, New Zealand dollar, Norwegian krone, Philippine peso, Polish zloty, Qatari riyal, Russian ruble, Singapore dollar, South African rand, South Korean won, Swedish krona, Swiss franc, Thai baht, Turkish lira, United Arab Emirates dirham, and United States dollar at December 31, 2020 and 2019. Total pending foreign currency forward purchases and (sales) had notional values of $65,213,164 and $(65,068,510), respectively, at December 31, 2020, and $81,513,590 and $(81,532,647), respectively, at December 31, 2019.

The Fund had a net unrealized gain (loss) on pending foreign currency forward contracts of $144,655 and $(19,056) at December 31, 2020 and 2019, respectively, which is reflected in the fair value of the investments on the statements of fiduciary net position. Investment gain (loss) from holdings and sales of foreign currency forward contracts was $(563,020) and $125,937 in 2020 and 2019, respectively.

NOTE 4 CASH AND INVESTMENT RISK *(continued)*

Derivatives *(continued)*

Forward interest rate contracts—The Fund's external investment managers entered into forward contracts to purchase or sell bond securities during 2020 and 2019. Forward contracts are contracts for delayed delivery of securities in which the seller agrees to make delivery at a specified future date of a specified instrument, at a specified price or yield. The holder is exposed to credit risk for nonperformance and to market risk for changes in interest rates.

These instruments involve, to varying degrees, elements of credit risk in excess of the amount recognized in the statements of fiduciary net position. The Fund's external investment managers attempt to mitigate this credit risk through structured trading with reputable parties.

At December 31, 2020 and 2019, the Fund did not hold forward interest rate contracts.

Investment Management Fees

Investment management fees from equity and fixed-income managers, including one of the collective funds, one of the private equity managers, and the cash manager, are included in investment management fees on the statements of changes in fiduciary net position. Investment management fees from all other collective funds, short-term investments, infrastructure, hedge, real estate, venture capital and private equity are reflected in the net investment income from such investment products. Such investment management fees are not significant to the financial statements.

NOTE 5 SECURITIES LENDING PROGRAM

State statutes and the Fund's Statement of Investment Policy permit the Fund to lend certain of its liquid securities to broker/dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. The Fund's securities lending agent, Deutsche Bank AG, New York Branch (Deutsche Bank), lends securities of the type on loan at year end for collateral in the form of U.S. dollars cash, securities issued by or guaranteed as to principal and interest by the U.S. Government, its agencies, instrumentalities and establishment, and non-U.S. sovereign debt securities representing obligations of an Organization for Economic Cooperation and Development (OECD) country having a fair value equal to or exceeding 102% of the value of the loaned securities and 105% for non-U.S. securities. The contract with Deutsche Bank provides for indemnification for the Fund with respect to any shortfall between liquidation proceeds and the fair market value of: (1) in respect to lending transactions, the securities subject to such transaction, or (2) in the case of reverse transactions, the amount of cash deposited with a counterparty with respect to such transaction. The terms of liquidation proceeds, fair market value and reverse transactions are more specifically defined in the agency securities lending agreement.

Any of the loans of the Fund's securities can be terminated on demand by either the Fund or the borrower. The average terms of the Fund's loans were approximately 2.2 days and one day as of December 31, 2020 and 2019, respectively. At December 31, 2020 and 2019, cash collateral was reinvested in indemnified repurchase agreements which had an interest sensitivity of one day. The Fund cannot pledge or sell collateral securities received unless the borrower defaults.

Loans outstanding as of December 31, 2020 and 2019, were as follows:

	2020	2019
Fair value of securities loaned	$ 106,966,413	$ 80,932,827
Fair value reinvested of cash collateral from borrowers	109,234,378	76,812,922
Fair value of non-cash collateral from borrowers	192,463	6,287,969

As of December 31, 2020 and 2019, the Fund had limited credit risk exposure to borrowers because the amounts owed to the borrowers exceeded the amounts owed to the Fund.

NOTE 6 UNFUNDED INVESTMENT COMMITMENTS

The Fund had unfunded commitments of approximately $157 million and $108 million at December 31, 2020 and 2019, respectively, in connection with real estate, infrastructure, private equity and collective commingled fund investments.

NOTE 7 POSTEMPLOYMENT BENEFITS OF THE FUND—STAFF RETIREE HEALTHCARE PLAN

Plan Description

PABF, as an employer, administers a single-employer defined benefit postemployment healthcare plan (Staff Retiree Healthcare Plan). The Staff Retiree Health Plan provides health and dental insurance for eligible retirees and their spouses through PABF's group health insurance plan, which covers both active and retired members. As of December 31, 2020, 10 retirees were in the Staff Retiree Healthcare Plan and 21 active employees could be eligible at retirement. As of December 31, 2019, 10 retirees were in the Staff Retiree Healthcare Plan and 20 active employees could be eligible at retirement. Benefit subsidy provisions have been established by PABF's Board of Trustees. The amount of the subsidy varies according to a retiree's years of service with PABF and the coverages elected. These benefit subsidy provisions can be modified or terminated at the sole discretion of the PABF Board.

Funding Policy

The required contribution is based on projected pay-as-you-go financing requirements. Accordingly, the Plan does not accumulate assets in a trust for OPEB. For 2020 and 2019, PABF contributed approximately $157,756 and $187,119, respectively, to the Staff Retiree Healthcare Plan for current premiums, inclusive of an implicit subsidy of $19,135 and $28,172, for 2020 and 2019, respectively. For 2020 and 2019, members receiving benefits contributed approximately $88,309 and $89,977, respectively, to the Staff Retiree Healthcare Plan for current premiums.

GASB Statement No. 75 Valuation

As of December 31, 2020 and 2019, the Fund's total OPEB liability was $2,265,881 and $2,553,621, respectively. Total OPEB liability as of December 31, 2020, was based on the requirements of GASB Statement No. 75, using census, plan provisions, methods and assumptions as of December 31, 2019.

The following methods and assumptions were used in the OPEB valuation:

Actuarial valuation date	December 31, 2019
Measurement date	December 31, 2020
Fiscal year end date	December 31, 2020

NOTE 7 POSTEMPLOYMENT BENEFITS OF THE FUND—STAFF RETIREE HEALTHCARE PLAN *(continued)*

GASB Statement No. 75 Valuation *(continued)*

Methods and actuarial assumptions used to measure total OPEB liability:

Actuarial cost method	Entry age normal
GASB Statement No. 75 discount rate, beginning of year	2.75% per year
GASB Statement No.75 discount rate, end of year	2.00% per year
Wage inflation	3.00% per year
Retirement age	Experience-based table of rates that are specific to the type of eligibility condition
Post-retirement mortality	The mortality rates are from the PUB-2010 Amount-weighted Below-median income Healthy Retiree Mortality Table with two-dimensional, fully generational improvements using the MP-2020 Mortality Improvement Scale
Healthcare trend rates	Pre-Medicare trend rate of 0.93%, and post-Medicare trend rate of 2.43% for plan year beginning on January 1, 2021. Trend rates for plan years beginning on and after January 1, 2022, based on 7.00% for pre-Medicare and 7.50% for post-Medicare per year graded down in 0.25% increments to an ultimate trend rate of 4.25% per year. Dental and vision trend rate of (0.63%) for plan year beginning on January 1, 2021, and 4.25% thereafter.

NOTE 7 POSTEMPLOYMENT BENEFITS OF THE FUND—STAFF RETIREE HEALTHCARE PLAN *(continued)*

Total OPEB Liability and Sensitivity to Changes in the Discount and Healthcare Cost Trend Rates

	2020	2019
Total OPEB liability		
1. Service cost	$ 101,259	$ 83,294
2. Interest on the total OPEB liability	70,229	82,713
3. Difference between expected and actual experience of the total OPEB liability	(304,583)	(11,367)
4. Changes of assumptions	(53,712)	266,289
5. Benefit payments	(100,933)	(109,992)
6. Net change in total OPEB liability	(287,740)	310,937
7. Total OPEB liability – beginning of year	2,553,621	2,242,684
8. Total OPEB liability – end of year	$ 2,265,881	$ 2,553,621
Covered-employee payroll	$ 1,639,092	$ 1,492,077
Total OPEB liability as a percentage of Covered-employee payroll	138.24%	171.15%

Discount Rate

The following presents the Fund's total OPEB liability, calculated using a discount rate of 2.00% and 2.75% as of December 31, 2020 and 2019, respectively, as well as what the Fund's total OPEB liability would be if it were calculated using a discount rate that is 1% lower or 1% higher:

Net OPEB Liability for Year Ended	1% Decrease	Current Assumption	1% Increase
December 31, 2020	$ 2,533,772	$ 2,265,881	$ 2,039,874
December 31, 2019	2,888,710	2,553,621	2,277,319

NOTE 7 POSTEMPLOYMENT BENEFITS OF THE FUND—STAFF RETIREE HEALTHCARE PLAN *(continued)*

Healthcare Cost Trend Rate

The following presents the Funds' OPEB liability, calculated using the assumed trend rates as well as what the Fund's total OPEB liability would be if it were calculated using a trend rate that is 1% lower or 1% higher:

Net OPEB Liability for Year Ended	1% Decrease	Current Healthcare Cost Trend Rate Assumption	1% Increase
December 31, 2020	$ 2,189,408	$ 2,265,881	$ 2,361,868
December 31, 2019	2,396,483	2,553,621	2,760,828

Statement of OPEB Expense

	2020	2019
Expense		
1. Service cost	$ 101,259	$ 83,294
2. Interest on the total OPEB liability	70,229	82,713
3. OPEB plan administrative expense	5,500	4,750
4. Recognition of outflow (inflow) of resources due to non-investment experience	(31,451)	(1,193)
5. Recognition of outflow (inflow) of resources due to assumption changes	12,219	17,555
6. Total OPEB expense	$ 157,756	$ 187,119
Reconciliation of total OPEB liability		
1. Net OPEB liability, beginning of year	$ 2,553,621	$ 2,242,684
2. OPEB expense	157,756	187,119
3. Employer contributions	(106,433)	(114,742)
4. Change in deferred outflow/(inflow) due to non-investment experience	(273,132)	(10,174)
5. Change in deferred outflow/(inflow) due to assumption changes	(65,931)	248,734
6. Net OPEB liability, end of year	$ 2,265,881	$ 2,553,621

NOTE 7 POSTEMPLOYMENT BENEFITS OF THE FUND—STAFF RETIREE HEALTHCARE PLAN *(continued)*

The following table presents the component of total deferred inflow of resources related to OPEB at December 31:

Deferred Inflows of Resources	2020	2019
Assumption changes	$ 118,830	$ 80,855
Total deferred inflows of resources	$ 118,830	$ 80,855

Amounts reported as deferred inflows of resources related to OPEB will be recognized as a reduction of OPEB expense over 10.0663 years in the administrative expenses line item on the statement of changes in fiduciary net position as follows:

Year Ending December 31	
2021	$ (15,737)
2022	(15,737)
2023	(15,737)
2024	(15,737)
2025	(15,737)
Thereafter	(40,145)
Total	$ (118,830)

NOTE 8 RESERVES

The Fund maintains several reserves, as required by the Illinois Pension Code and Board policy. The following are brief descriptions of the reserves:

City Contribution Reserve

	2020	2019
Balances, at December 31	$ 2,311,279,968	$ 2,122,608,277

The City Contribution Reserve is maintained for the payment of the City's portion of future retirement benefits for active and inactive participants. Interest at 3% is credited to this reserve annually. When the amount of annuity for a policeman or widow is fixed, the City Contribution Reserve is charged with the amount of the present value of retirement benefit and the Annuity Payment Reserve is credited with such amount.

NOTE 8 RESERVES *(continued)*

City Contribution Reserve *(continued)*

The City Contribution Reserve does not equal the present value of expected retirement benefits. The reserve is maintained on a cost basis, in accordance with the Illinois Pension Code.

Salary Deduction Reserve

	2020	2019
Balances, at December 31	$ 1,637,462,981	$ 1,624,523,588

The Illinois Pension Code requires the Fund to maintain separate accounts for each policeman for the amounts of salary deductions with interest at 3% per year. When a policeman retires, the amount of his annuity is charged to the Salary Deduction Reserve and credited to the Annuity Payment Reserve. If a policeman takes a separation refund, his salary deductions are refunded to him and charged to the Salary Deduction Reserve. This reserve is fully funded.

Annuity Payment Reserve

	2020	2019
Balances, at December 31	$ 2,962,163,182	$ 2,786,500,726

When the amount of annuity has been fixed, the present value of expected benefit is transferred from the City Contribution Reserve and the Salary Deduction Reserve to the Annuity Payment Reserve for the payment of annuity. All age and service annuities, widow's annuities, and refunds are charged to this reserve.

Annually, the actuary calculates the present value of all annuities. The Investment and Interest Reserve will transfer amounts to the Annuity Payment Reserve to ensure that the balance in the Annuity Payment Reserve equals the present value of annuities. This reserve is fully funded.

Prior Service Annuity Reserve

	2020	2019
Balances, at December 31	$ (1,079,492,916)	$ (1,209,125,120)

The Prior Service Annuity Reserve is increased by the City's contributions for policemen and widows' prior service annuities and all prior service annuities payable to policemen and widows are charged to this reserve. This reserve included an unfunded liability of $11,303,130,514 and $11,065,083,193 as of December 31, 2020 and 2019, respectively.

NOTE 8 RESERVES *(continued)*

Gift Reserve

	2020	2019
Balances, at December 31	$ 13,619,153	$ 13,659,885

The Gift Reserve is maintained for gifts, grants, bequests, or other amounts received by the Fund. The Board of Trustees determines the use of these funds. Interest is credited to the Gift Reserve annually.

Investment and Interest Reserve

All gains and losses from investments and investment earnings are recorded in the investment and interest reserve. Interest due to the City Contribution Reserve, Salary Deduction Reserve, Prior Service Annuity Reserve, Gift Reserve, and Supplementary Payment Reserve is transferred from the Investment and Interest Reserve to those reserves.

Ordinary Death Benefit Reserve

	2020	2019
Balances, at December 31	$ (47,729,855)	$ (43,648,780)

Amounts contributed by policemen and the City for death benefits are credited to the Ordinary Death Benefit Reserve. Death benefit payments are charged to this reserve. At December 31, 2020 and 2019, the Ordinary Death Benefit Reserve had a deficit.

Automatic Increase Reserve

	2020	2019
Balances, at December 31	$ (2,356,124,198)	$ (2,132,537,115)

The Automatic Increase Reserve is credited with amounts deducted from the salaries of police officers and matching contributions by the City for automatic increase in annuity. Payments of increased annuities and salary deduction refunds, for increase in annuity, are charged to this reserve. At December 31, 2020 and 2019, the Automatic Increase Reserve had a deficit.

Supplementary Payment Reserve

	2020	2019
Balances, at December 31	$ 447,402	$ 447,402

NOTE 8 RESERVES *(continued)*

Supplementary Payment Reserve *(continued)*

The Supplementary Payment Reserve receives amounts transferred from the Investment and Interest Reserve for supplemental increases in annuity for certain eligible retirees. This reserve is fully funded.

Additional Reserves

The following reserves-Child's Annuity Reserve, Duty Disability Reserve, Ordinary Disability Reserve and Expense Reserve-have a $0 balance at December 31, 2020 and 2019. City contributions are allocated to these reserve accounts in amounts equal to payments made on an annual basis.

Child's Annuity Reserve

Amounts contributed by the City for child's annuity are credited to the Child's Annuity Reserve, and payments of child's annuity are charged to this reserve.

Duty Disability Reserve

The Duty Disability Reserve is increased by the City's contributions for duty disability benefits, child's disability benefits, and compensation annuities and is decreased by the payments of these benefits.

Ordinary Disability Reserve

Amounts contributed by the City for ordinary disability benefits are credited to the Ordinary Disability Reserve. Payments of ordinary disability benefits are charged to this reserve.

Expense Reserve

Amounts contributed toward the cost of administration are credited to the Expense Reserve. Expenses of administration are also charged to this reserve.

NOTE 9 NET PENSION LIABILITY OF THE FUND

The components of the net pension liability at December 31, 2020 and 2019, were as follows:

	2020	2019
Total pension liability	$ 15,494,740,334	$ 14,789,602,350
Less: Plan fiduciary net position	3,441,897,879	3,162,428,863
Fund's net pension liability	$ 12,052,842,455	$ 11,627,173,487
Plan fiduciary net position as a percentage of total pension liability	22.21%	21.38%

NOTE 9 NET PENSION LIABILITY OF THE FUND *(continued)*

Actuarial Assumptions

In 2019, the actuarial assumptions were changed from the prior actuarial valuation to reflect the results of an experience study performed for the period January 1, 2014 through December 31, 2018. The total pension liability was determined by an actuarial valuation as of December 31, 2020 and 2019, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.25%
Salary increases	3.50% per year, plus additional percentage related to service
Investment rate of return	6.75%
Cost-of-living adjustments	For members hired before January 1, 2011: 3.0% (1.5% for retirees born on or after January 1, 1966, to a maximum of 30%)
	For members hired on or after January 1, 2011: 1/2 of CPI-U, maximum 3.0%, to begin no earlier than age 60.

Mortality rates were based on the Sex Distinct Pub-2010 amount weighted safety healthy retiree mortality tables weighted 119% for post-retirement males and 102% for females, respectively, and 100% for pre-retirement males and females, respectively, and 129% for disabled males and 112% for females, respectively.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate arithmetic expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These assumptions are converted into nominal assumptions by adding inflation, then combined by weighing them by the target asset allocation percentages. Finally, the arithmetic portfolio expected return is converted into a geometric expected return using assumed asset class standard deviations and correlations. The pension plan's target allocation as of December 31, 2020 and 2019, are summarized in the following tables:

NOTE 9 NET PENSION LIABILITY OF THE FUND *(continued)*

Actuarial Assumptions *(continued)*

December 31, 2020

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
U.S. equity	21%	5.68%
Non-U.S. equity	21	6.85
Fixed income	22	1.11
Global asset allocation	5	3.89
Private markets	17	7.41
Hedge funds	7	3.30
Real estate	7	5.42
Total	100%	

December 31, 2019

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
U.S. equity	21%	5.8%
Non-U.S. equity	21	7.1
Fixed income	26	1.7
Global asset allocation	5	3.8
Private markets	13	8.1
Hedge funds	7	3.6
Real estate	7	5.2
Total	100%	

Single Discount Rate

A Single Discount Rate of 6.28% and 6.43% as of December 31, 2020 and 2019, respectively, was used to measure the total pension liability. These Single Discount Rates were based on an expected rate of return on pension plan investments of 6.75% for 2020 and 2019, and a municipal bond rate of 2.00% and 2.75%, respectively. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made under the statutory funding policy. Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the benefit payments only through the year 2076. As a result, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the year 2076, and the municipal bond rate was applied to all benefit payments after that date.

NOTE 9 NET PENSION LIABILITY OF THE FUND *(continued)*

Single Discount Rate *(continued)*

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of 6.28% and 6.43% as of December 31, 2020 and 2019, respectively, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is 1-percentage-point lower or 1-percentage-point higher:

Sensitivity of net pension liability to the Single Discount Rate assumption as of December 31, 2020:

1% Decrease 5.28%	Single Discount Rate Assumption 6.28%	1% Increase 7.28%
$13,984,309,803	$ 12,052,842,455	$ 10,444,664,466

Sensitivity of net pension liability to the single discount rate assumption as of December 31, 2019:

1% Decrease 5.43%	Single Discount Rate Assumption 6.43%	1% Increase 7.43%
$ 13,463,655,386	$ 11,627,173,487	$ 10,096,272,975

NOTE 10 DEFERRED COMPENSATION PLAN

The Fund offers its employees a deferred compensation plan created in accordance with Internal Revenue Code Section 457. The plan, available to all employees of the Fund, permits them to defer a portion of their salary until future years. Participation in the plan is optional. Accumulated balances within deferred compensation accounts are not available to employees until termination, retirement, death, or unforeseeable emergency. The plan is managed by a third-party administrator.

The assets of the plan are deposited in trust accounts with the plan administrator for the exclusive benefit of participants and their beneficiaries and are not considered assets of the Fund.

NOTE 11 LEASE AGREEMENT

The Fund leases its office facilities under a non-cancelable agreement. The current lease commenced on July 1, 2016, and was renewed for 16 years through 2032. The new lease agreement includes an abatement clause during the term of the new lease.

Office rental expense amounted to $355,856 and $367,223 for the years ended December 31, 2020 and 2019, respectively.

Future minimum rental payments, net of abatement provisions under the office lease at December 31, 2020, are as follows:

Year	Amount
2021	$ 354,510
2022	361,600
2023	368,832
2024	376,209
2025	383,733
2026 and thereafter	2,687,261

NOTE 12 RISK MANAGEMENT

The Fund is exposed to various risks of loss related to tort, theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The Fund carries commercial insurance to reduce its exposure to risk of loss. There is no significant change in insurance coverage from year to year. Settled claims resulting from these risks have not exceeded commercial insurance coverage in any of the past three fiscal years.

NOTE 13 CONTINGENCIES

In July 2013, a group of plaintiffs purporting to represent annuitants in four Chicago public pension funds filed a civil action, *Underwood v. City of Chicago et. al.* (13-CH-17450; 1-17-162356), seeking class certification and an order requiring the City and the defendant pension funds to continue subsidizing annuitant healthcare insurance premiums past the June 30, 2013, statutory expiration date. Following years of litigation, on June 29, 2017 the Illinois Appellate Court issued an order which in part affirmed the Circuit Court's dismissal order and held: (i) annuitants did not have a right to lifetime healthcare coverage; and (ii) the subsidies pursuant to the 1983 and 1985 amendments is the sole benefit protected under the pension protection clause of the Illinois Constitution. Accordingly, those eligible annuitants in the Appellate Court expanded class, and as further defined after remand in the Circuit Court's February 28, 2019 order, are entitled to continue to receive the 1983 provided subsidies (related to the police and fire funds) of $55 per month if non-Medicare-eligible and $21 per month if Medicare-eligible. While the plaintiffs continue to raise certain objections, the pension funds nevertheless, in accordance with the rulings made, have commenced payment of the subsidies to those defined eligible annuitants as of January 1, 2017 and thereafter.

On May 23, 2018, three plaintiffs filed litigation, *De Jesus et. al., v. Policemen's Annuity & Benefit Fund of the City of Chicago* (18 CH 06195), seeking class action status, in substance alleging the fund did not properly calculate their duty disability benefits by not including duty availability allowance in their computation of salary in calculating their benefit amount. On November 14, 2018, the Circuit Court granted defendant's motion to dismiss. On appeal, the Illinois Appellate Court affirmed the Circuit Court's dismissal order and the Illinois Supreme Court thereafter denied plaintiff's petition for leave to appeal.

NOTE 14 ACTUARIAL EXPERIENCE STUDY

At its regularly scheduled meeting on May 31, 2019, the Retirement Board of the Policemen's Annuity and Benefit Fund of Chicago, authorized its independent consulting actuarial firm, Gabriel Roeder Smith, to perform an experience study of the actuarial assumptions for the five-year period January 1, 2014 through December 31, 2018. The primary purpose of the study was to determine the continued appropriateness of the current actuarial assumptions by comparing actual experience to expected experience. The study was completed in the Summer of 2019 and based on the results, the Board reduced the Fund's long-term expected rate of return on pension plan investments to 6.75% from 7.25%.

REQUIRED SUPPLEMENTARY INFORMATION

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO
(A Component Unit of the City of Chicago)
Required Supplementary Information
Schedule of Changes in Net Pension Liability
As of December 31 - Last 7 Years
(Unaudited)

	2020	2019	2018	2017	2016	2015	2014
Total pension liability							
Service cost, including pension plan administrative expense	$ 286,536,580	$ 240,383,419	$ 242,998,341	$ 237,333,255	$ 220,569,553	$ 213,584,647	$ 199,435,084
Interest on the total pension liability	942,623,431	944,738,703	931,731,201	917,720,267	851,098,457	832,972,131	791,693,017
Benefit changes	-	24,216,420	-	-	606,249,791	-	-
Difference between expected and actual experience	61,913,883	(68,010,227)	(281,150,986)	(299,923,560)	1,801,353	(105,968,891)	-
Assumption changes	260,021,116	1,140,418,080	(259,051,713)	238,975,508	112,585,241	-	845,070,287
Benefit payments	(828,901,654)	(791,839,040)	(764,367,368)	(737,873,928)	(696,491,103)	(668,950,080)	(645,688,934)
Refunds	(12,696,058)	(8,828,904)	(6,737,073)	(10,017,655)	(10,704,842)	(7,826,847)	(8,991,636)
Pension plan administrative expense	(4,359,314)	(4,734,467)	(4,626,599)	(4,843,012)	(4,749,762)	(4,508,519)	(4,240,625)
Net change in total pension liability	705,137,984	1,476,343,984	(141,204,197)	341,370,875	1,080,358,688	259,302,441	1,177,277,193
Total pension liability – beginning	14,789,602,350	13,313,258,366	13,454,462,563	13,113,091,688	12,032,733,000	11,773,430,559	10,596,153,366
Total pension liability – ending (a)	15,494,740,334	14,789,602,350	13,313,258,366	13,454,462,563	13,113,091,688	12,032,733,000	11,773,430,559
Plan fiduciary net position							
Employer contributions	739,440,979	581,936,012	588,034,930	494,483,191	272,427,716	572,836,100	177,417,827
Employee contributions	113,621,747	110,791,663	107,186,492	103,011,250	101,475,864	107,626,311	95,675,538
Pension plan net investment (loss) income	271,890,867	369,982,655	(137,977,182)	412,190,404	142,699,124	(5,333,795)	181,901,293
Benefit payments	(828,901,654)	(791,839,040)	(764,367,368)	(737,873,928)	(696,491,103)	(668,950,080)	(645,688,934)
Refunds	(12,696,058)	(8,828,904)	(6,737,073)	(10,017,655)	(10,704,842)	(7,826,847)	(8,991,636)
Pension plan administrative expense	(4,359,314)	(4,734,467)	(4,626,599)	(4,843,012)	(4,749,762)	(4,508,519)	(4,240,625)
Other	472,449	32,359	1,600,348	97,239	1,412,770	3,091,545	740,305
Net change in plan fiduciary net position	279,469,016	257,340,278	(216,886,452)	257,047,489	(193,930,233)	(3,065,285)	(203,186,232)
Plan fiduciary net position – beginning	3,162,428,863	2,905,179,841	3,122,066,293	2,865,018,804	3,058,949,037	3,062,014,322	3,265,200,554
Adjustment as of January 1, 2019	-	(91,256)	-	-	-	-	-
Plan fiduciary net position – ending (b)	3,441,897,879	3,162,428,863	2,905,179,841	3,122,066,293	2,865,018,804	3,058,949,037	3,062,014,322
Net pension liability – ending (a)-(b)	$ 12,052,842,455	$ 11,627,173,487	$ 10,408,078,525	$ 10,332,396,270	$ 10,248,072,884	$ 8,973,783,963	$ 8,711,416,237

The above information was required beginning in 2014. Information for the next three years will be presented in future years.

Beginning of year total pension liability for 2020 used a Single Discount Rate of 6.43% and the benefit provisions, actuarial assumptions and funding policy in effect as of the December 31, 2019 funding actuarial valuation. The Single Discount Rate of 6.43% was based on a long-term expected rate of return on pension plan investments of 6.75% used in the December 31, 2019, funding actuarial valuation for the years 2019 through 2075 and a long-term municipal bond rate as of December 31, 2019, of 2.75% for subsequent years.

End of year total pension liability for 2020 uses a Single Discount Rate of 6.28% and the benefit provisions, actuarial assumptions and funding policy in effect as of the December 31, 2020, funding actuarial valuation. The Single Discount Rate of 6.28% was based on a long-term expected rate of return on pension plan investments of 6.75% used in the December 31, 2020, funding actuarial valuation for the years 2020 through 2076 and a long-term municipal bond rate as of December 31, 2020, of 2.00% for subsequent years.

The increase in total pension liability for 2019 due to benefit changes is a result of the change in plan provisions pursuant to P.A. 99-0905.

The increase in the total pension liability for 2020 due to assumption changes and methods includes the impact of the change in the municipal bond rate from December 31, 2019, to December 31, 2020. Changes in actuarial assumptions and methods led to the change in the Single Discount Rate to 6.28% from 6.43% (based on the long-term expected rate of return on pension plan investments of 6.75% used in the December 31, 2020 and 2019 funding valuations and the long-term municipal bond rate of 2.00% as of December 31, 2020 and 2.75% as of December 31, 2019, respectively.) This change was measured at the end of the year using the benefit provisions in effect as of December 31, 2020.

The increase in the total pension liability for 2019 due to assumption changes and methods includes the impact of changing the actuarial assumptions used in the actuarial valuation, to reflect the results of the experience study performed for the period January 1, 2014 through December 31, 2018 that became effective December 31, 2019, and the change in the municipal bond rate from December 28, 2018, to December 31, 2019. Changes in actuarial assumptions and methods led to the change in the Single Discount Rate to 6.43% from 7.18% (based on the long-term expected rate of return on pension plan investments of 7.25% used in the December 31, 2018 and 6.75% used in the December 31, 2019, funding valuations and the long-term municipal bond rate of 3.71% as of December 28, 2018 and 2.75% as of December 31, 2019, respectively.) This change was measured at the end of the year using the benefit provisions in effect as of December 31, 2019.

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO
(A Component Unit of the City of Chicago)
Required Supplementary Information
Schedule of Net Pension Liability
As of December 31 - Last 7 Years
(Unaudited)

	2020	2019	2018	2017	2016	2015	2014
Total pension liability	$ 15,494,740,334	$ 14,789,602,350	$ 13,313,258,366	$ 13,454,462,563	$ 13,113,091,688	$ 12,032,733,000	$ 11,773,430,559
Plan fiduciary net position	3,441,897,879	3,162,428,863	2,905,179,841	3,122,066,293	2,865,018,804	3,058,949,037	3,062,014,322
Net pension liability	$ 12,052,842,455	$ 11,627,173,487	$ 10,408,078,525	$ 10,332,396,270	$ 10,248,072,884	$ 8,973,783,963	$ 8,711,416,237
Plan fiduciary net position as a percentage of total pension liability	22.21%	21.38%	21.82%	23.20%	21.85%	25.42%	26.01%
Covered employee payroll	$ 1,195,980,486	$ 1,228,986,864	$ 1,205,324,445	$ 1,150,406,094	$ 1,119,526,987	$ 1,086,607,979	$ 1,074,333,319
Net pension liability as a percentage of covered employee payroll	1007.78%	946.08%	863.51%	898.15%	915.39%	825.85%	810.87%

The above information is required beginning in 2014. Information for the next three years will be presented in future years.

POLICEMEN’S ANNUITY AND BENEFIT FUND OF CHICAGO
(A Component Unit of the City of Chicago)
Required Supplementary Information
Schedule of Contributions—Pension
Last 10 Years
(Unaudited)

Year Ended	Actuarially Determined Contribution (a)*	Actual Contribution (b)	Contribution Deficiency (Excess) (c) = (b)-(a)	Covered Payroll (d)**	Actual Contribution as a % of Covered Payroll (e) = (b)/(d)	Statutory Contribution (f)	Statutory Contribution Deficiency/ (Excess) (g) = (f)-(b)*
12/31/2011	$ 402,751,961	$ 174,034,600	$ 228,717,361	$ 1,034,403,526	16.82%	$ 176,068,606	$ 2,034,006
12/31/2012	431,010,173	197,885,552	233,124,621	1,015,170,686	19.49%	204,329,314	6,443,762
12/31/2013	474,177,604	179,521,259	294,656,345	1,015,426,128	17.68%	182,716,690	3,195,431
12/31/2014	491,651,208	178,158,132	313,493,076	1,074,333,318	16.58%	178,773,877	615,745
12/31/2015	785,500,836	575,927,645	209,573,191	1,086,607,979	53.00%	410,558,466	(165,369,179)
12/31/2016	785,695,084	273,840,486	511,854,598	1,119,526,987	24.46%	454,844,486	181,004,000
12/31/2017	910,938,497	494,580,430	416,358,067	1,150,406,094	42.99%	500,000,000	5,419,570
12/31/2018	924,653,899	589,635,278	335,018,621	1,205,324,445	48.92%	557,000,000	(32,635,278)
12/31/2019	933,769,914	581,968,371	351,801,543	1,228,986,864	47.35%	579,000,000	(2,968,371)
12/31/2020	1,037,582,236	739,913,428	297,668,808	1,195,980,486	61.87%	737,527,285	(2,386,143)

* The Fund’s Statutory Funding does not conform to Actuarial Standards of Practice; therefore, for 2015 and after, the actuarially determined contribution is equal to the normal cost plus a 30-year level dollar amortization of the unfunded actuarial liability. Prior to 2015, the actuarially determined contribution was equal to the “ARC”, which was equal to the normal cost plus a 30-year open level percent amortization of the unfunded actuarial liability.

** Covered payroll shown is the amount in force as of the actuarial valuation date and likely differs from actual payroll paid during the fiscal year.

Valuation Date:	December 31, 2020

Methods and Assumptions Used to Determine Contribution Rates as of the Valuation Date:

Actuarial Cost Method:	Entry-Age Normal
Amortization Method:	Prior to 2015, the total City contribution was generated by a tax equal to 2.00 times the contributions by the policemen to the Fund two years prior to the year of the tax levy. For tax levy years 2015-2020, the statutory contributions are equal to $420 million, $464 million, $500 million, $557 million, $579 million and $738 million, respectively. For tax levy years on and after 2020, the statutory contributions are equal to a level percentage of pay contribution determined so that the Plan attains a 90% funded ratio by the end of 2055 on an open group basis.
Remaining Amortization Period:	Not applicable. An amortization payment is not directly calculated. The amortization payment is the difference between the total statutory contribution and the employer normal cost contribution.
Asset Valuation Method:	Five-year smoothed market
Inflation:	2.25% as of the December 31, 2020 and 2019 actuarial valuations
Salary Increases:	Salary increase rates based on wage inflation rate of 3.50% plus service based increases consistent with bargaining contracts
Postretirement Benefit Increases:	A retiree born before January 1, 1966, with at least 20 years of service or receiving a mandatory retirement minimum annuity, receives an increase of 3% of the original annuity, starting on the first of the month following the first anniversary of his retirement or the first of the month following attainment of age 55, whichever is later, and shall not be subject to a 30% maximum increase. For retirees born on or after January 1, 1966, automatic increases are 1.5% of the original annuity, commencing at age 60, or the first anniversary of retirement, if later, to a maximum of 30%. For participants that first became members on or after January 1, 2011, increases are equal to the lesser of 3% and 50% of CPI-U of the original benefit, commencing at age 60.
Investment Rate of Return:	6.75% as of the December 31, 2020 and 2019 actuarial valuations

Methods and Assumptions Used to Determine Contribution Rates as of the Valuation Date *(continued)***:**

Retirement Age:	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the December 31, 2019, actuarial valuation pursuant to an experience study for the period January 1, 2014 through December 31, 2018.
Mortality:	Post-Retirement Healthy mortality rates: Sex Distinct Pub-2010 Amount-weighted Safety Healthy Retiree Mortality Tables weighted 119% for males and 102% for females.
	Pre-Retirement mortality rates: Sex Distinct Pub-2010 Amount-weighted Safety Healthy Retiree Mortality Tables weighted 100% for males and 100% for females.
	Disabled Mortality: Sex Distinct Pub-2010 Amount-weighted Safety Healthy Retiree Mortality Tables weighted 129% for males and 112% for females.
	Future mortality improvements are reflected by projecting the base mortality tables forward using the MP-2018 projection scale.
Other:	The actuarial valuation is based on the statutes in effect as of December 31, 2020.

Methods and Assumptions Used for Accounting Purposes as of the Valuation Date:

Actuarial Cost Method:	Entry Age Normal
Asset Method:	Market value
Discount Rate:	6.28% as of the December 31, 2020 actuarial valuation 6.43% as of the December 31, 2019 actuarial valuation

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO
(A Component Unit of the City of Chicago)
Required Supplementary Information
Schedule of Money-Weighted Rate of Return—Pension
(Unaudited)

Year Ended	Annual Money-Weighted Rate of Return, Net of Investment Expense
12/31/14	6.24 %
12/31/15	(0.41)
12/31/16	6.6
12/31/17	16.7
12/31/18	(5.7)
12/31/19	16.31
12/31/20	12.29

The above information is required beginning in 2014. Information for the next three years will be presented in future years.

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO
(A Component Unit of the City of Chicago)
Required Supplementary Information
Schedule of Changes in Total OPEB Liability – Staff Retiree Healthcare Plan
As of December 31 – Last 3 Years
(Unaudited)

	2020	2019	2018
Total OPEB liability			
Service cost	$ 101,259	$ 83,294	$ 93,951
Interest on the total pension liability	70,229	82,713	75,485
Difference between expected and actual experience of the total OPEB liability	(304,583)	(11,367)	-
Changes of Assumption	(53,712)	266,289	(101,657)
Benefit payments	(100,933)	(109,992)	(117,063)
Net change in total OPEB liability	$ (287,740)	$ 310,937	$ (49,284)
Total plan assets	$ -	$ -	$ -
Total OPEB liability – beginning	$ 2,553,621	$ 2,242,684	$ 2,291,968
Total OPEB liability – ending	$ 2,265,881	$ 2,553,621	$ 2,242,684
Covered-employee payroll	$ 1,639,092	$ 1,492,077	$ 1,630,338
Total OPEB liability as a percentage of covered-employee payroll	138.24%	171.15%	137.56%

The above information is required beginning in 2018. Information for the next seven years will be presented in future years.

SUPPLEMENTARY INFORMATION

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO
(A Component Unit of the City of Chicago)
Schedule of Administrative Expenses
For the Years Ended December 31, 2020 and 2019

	2020	2019
Administrative expenses		
Actuary services	$ 76,050	$ 114,030
Benefits disbursement	402,858	156,471
Equipment service and rent	55,722	166,985
External auditors	40,696	61,227
Fiduciary insurance	195,849	157,759
Legal services	176,192	320,289
Medical consultants	302,457	318,447
Miscellaneous	118,001	199,668
Pension administration	134,160	52,910
Occupancy and utilities	361,405	373,862
Personnel salaries and benefits	2,458,784	2,795,335
Postage	10,000	5,008
Supplies	6,533	12,476
Trustee election	20,607	-
Total administrative expenses	$ 4,359,314	$ 4,734,467

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO
(A Component Unit of the City of Chicago)
Schedule of Consulting Costs
For the Years Ended December 31, 2020 and 2019

	2020	2019
Payments to consultants		
External auditors	$ 40,696	$ 61,227
Medical consultants	302,457	318,447
Legal services	176,192	320,289
Actuary service	76,050	114,030
Investment management fees	7,425,643	8,433,812
Custodial fees	302,722	362,158
Investment consulting and other fees	420,410	415,958
Total consulting costs	$ 8,744,170	$ 10,025,921

POLICEMEN’S ANNUITY AND BENEFIT FUND OF CHICAGO
(A Component Unit of the City of Chicago)
Schedule of Investment Fees
For the Years Ended December 31, 2020 and 2019

	2020	2019
Investment managers		
Acadian Asset Management	$ 871,931	$ 876,519
Artisan Partners	714,819	710,696
Blackrock	128,224	-
Blueprint Capital	(61,393)	61,393
BMO Asset Management	572,880	280,866
Chicago Equity Partners	52,075	190,129
Denali Advisors	-	57,573
Earnest Partners	754,942	854,396
Fisher Investments	-	456,508
Garcia Hamilton	182,733	43,788
Great Lakes Advisors	366,012	285,633
HGK Asset Management	86,758	146,915
ING Clarion	590	103,292
Invesco Capital Management	-	(39,121)
Lazard Asset Management	426,753	444,065
LM Capital Group	-	156,087
MacKay Shields LLC	-	199,560
Manulife Asset Management	91,446	248,590
Montag & Caldwell	-	37,058
National Investment Services	486,563	97,826
Northern Trust Global Investments - Index Funds	46,150	34,280
Pluscios Management, LLC	227,485	213,413
UBS Global Asset Management	277,835	404,180
UBS Realty Investors	90,342	163,915
Ullico Infrastructure Fund	885,919	908,107
Voya Collective Trust	46,729	39,084
Wellington Management	193,030	274,020
Wells Capital Management	-	148,207
William Blair & Co.	983,820	1,036,833
Total investment manager fees	7,425,643	8,433,812
Investment consultants and other		
Elkins McSherry Inc.	-	5,000
NEPC LLC	420,410	410,958
Total investment consultants and other fees	420,410	415,958
Master custodian		
The Northern Trust Company	302,722	362,158
Total investment fees	**$ 8,148,775**	**$ 9,211,928**

Investment Section

Investments[i]
(Compiled by NEPC, LLC Investment Consultant to the Fund)

Investment Authority
Since December 16, 1987, the Policemen's Annuity & Benefit Fund of Chicago has operated in accordance with the Illinois Public Act 85-964, which is the Prudent Person rule for the Policemen's Pension Fund. The Prudent-Person rule states that fiduciaries[ii] must discharge their duties with care, skill, prudence, and diligence that a prudent person acting in a like capacity and familiar with such matters would use under the prevailing conditions.

Investment Policy
In 1984, the Trustees undertook a restructuring of the Fund's investment policy to improve the Fund's investment diversification. The revised policy allows for investments in additional asset classes (e.g., international stocks and bonds, real estate and private equity investments). As a result of this policy change, the Fund was restructured. The Trustees allocated monies among new asset classes and added several new investment managers. The Trustees also allocated monies to passive investments (index funds), which provides a low-cost means of achieving market-like returns. The Trustees consistently review the investment policy and make changes when deemed appropriate. NEPC reviews the Fund's asset allocation policy annually. The most recent asset allocation policy review was presented to the Board during February 2020.

Distinction of Responsibilities
To clarify the roles and responsibilities of the Trustees and the various investment professionals engaged by the Trustees, the Trustees divided the responsibilities for the Fund as follows:

The Trustees assume the responsibility for establishing the investment policy that is to guide the investment of the Fund's assets. The investment policy describes the degree of investment risk that the Trustees deem appropriate.

Investment managers are appointed to execute the policy and invest pension assets in accordance with the policy and applicable statutes, but apply their own judgments concerning relative investment values. Investment managers are accorded full discretion, within policy limits, to (1) select individual investment, (2) make periodic adjustments to the proportions of equity and fixed income investments, and (3) diversify pension assets.

[i]NEPC provides PABF with quarterly economic and investment market updates and performance reviews, investment manager monitoring and selection advice, and related investment services for traditional and non-traditional asset classes. Investment performance analysis and comparisons produced by NEPC have been calculated using standard performance evaluation methodologies and are consistent with industry standards. The Board's goal of achieving market rates of return, while mitigating unwarranted risk, is measured against appropriate benchmarks and comparative universes on a quarterly basis. Performance is measured on a most recent quarter, year-to-date, and accumulated trailing annual periods, as well as 3 and 5 year periods (full market cycle). This review process allows the Board to evaluate and determine whether established goals and objective are being achieved. Data on traditional assets held by the Fund is provided by the Fund's custodian to NEPC. Data on alternative investments held by the Fund is provided by the investment manager to NEPC.
[ii]A fiduciary is any person who has authority or control with respect to the management or administration of plan assets.
[iii]IF and eVestment universe returns are presented gross of fees.

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Diversification

The Fund's assets are diversified in several ways to minimize the potential for overexposure to individual investments and provide a broad opportunity set for the portfolio while trying to minimize risk. Since 1984, the Trustees have expanded the number of asset classes available for investment and expanded on the current manager line up. As of December 31, 2020, the Fund had allocations to 11 broad asset classes.

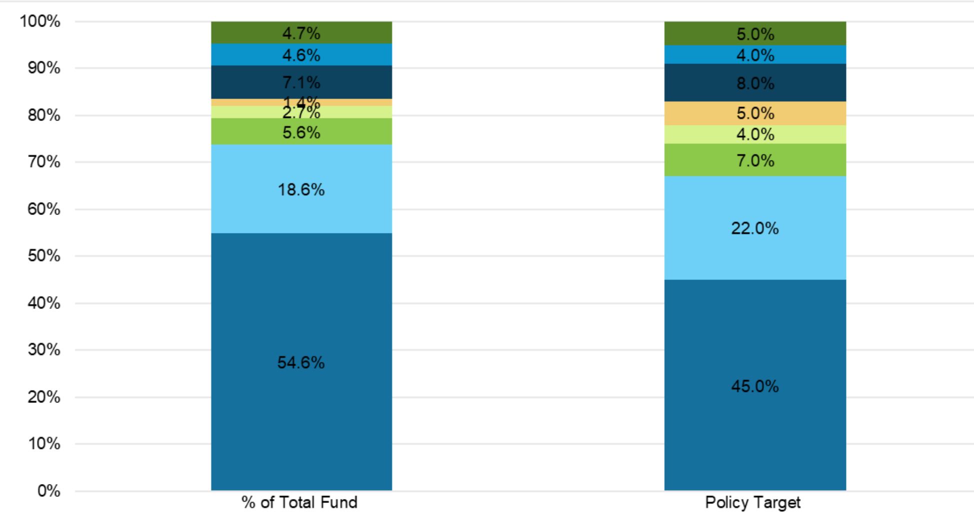
Investment Objective

The Fund's investment objective is to match or exceed its policy index return on a net of fees basis and over the long term meet or exceed the actuarial required rate of return. The Total Fund's return will also be compared to the InvestorForce total public fund universe.

2020 Asset Allocation

As of December 31, 2020, compared to the target allocation, the Fund was overweight to Equities (domestic, international and long/short), Opportunistic Credit, Hedge Funds and cash. The Fund was underweighting to Fixed Income, and private markets (Private Equity, Private Debt, Infrastructure and Real Estate). None of the Fund's allocation were out of the target policy ranges. The Global Asset Allocation (GAA) mandate was terminated during 2020.

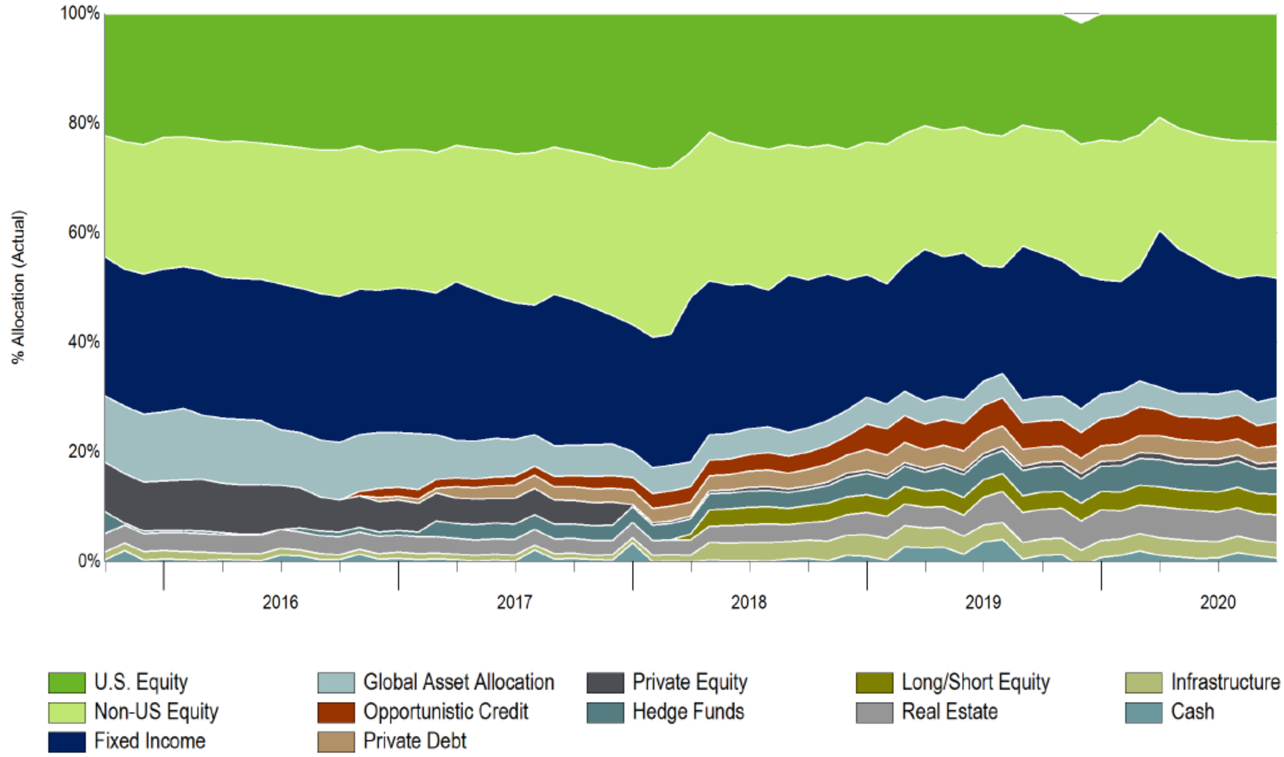
The Fund's asset allocation at the end of 2020 is shown below:



	% of Total Fund	Policy Target
Global Asset Allocation	4.7%	5.0%
Hedge Fund	4.6%	4.0%
Opportunistic Credit/Private Debt	7.1%	8.0%
Private Equity	1.4%	5.0%
Infrastructure	2.7%	4.0%
Real Estate	5.6%	7.0%
Fixed Income	18.6%	22.0%
Equity	54.6%	45.0%

*Total may not add up to 100% due to rounding.

Historic Asset Allocation by Asset Class



Fair Market Value as of December 31, 2020

Manager	Market Value as of 12/31/20	% of Total Fund
US Equity		
NTGI Russell 1000	406,818,834	15.3%
Great Lakes	109,766,233	4.1%
William Blair SMID	111,713,405	4.2%
BMO Harris	60,165,664	2.3%
Non-US Equity		
Artisan Partner	90,103,963	3.4%
UBS International	106,300,928	4.0%
William Blair International Growth	139,090,401	5.2%
Acadian	116,564,633	4.4%
EARNEST Partners	90,422,225	3.4%
Lazard	112,433,926	4.2%
Long/Short Equity		
UBS Bucktown	65,331,000	2.5%
Pluscios Long/Short	39,573,149	1.5%
Fixed Income		
EARNEST Partners	103,841,369	3.9%
Garcia Hamilton & Associates	105,981,200	4.0%
National Investment Services	100,774,966	3.8%
HGK Asset Management	42,409	0.0%
Lazard EM Income Fund	25,386,123	1.0%
Blackrock EM Local Currency	26,639,283	1.0%
Manulife Asset Management	23,728,444	0.9%
Wellington	107,912,236	4.1%
Global Asset Allocation		
PIMCO	124,224,332	4.7%
Private Equity		
Dover Street X	6,939,708	0.3%
Glendower Secondaries**	-	0.0%
Invesco	29,251,185	1.1%
Infrastructure		
Carlyle Infrastructure Partners, L.P.	239,223	0.0%
Global Infrastructure Partners III, L.P.	21,496,079	0.8%
Global Infrastructure Partners IV, L.P.	905,258	0.0%
Global Infrastructure Partners, L.P.	337,968	0.0%
Ullico Infrastructure Taxable Fund, L.P.	48,065,046	1.8%
Real Estate		
Angelo Gordon Core Plus Realty Fund II, L.P.	139,505	0.0%
Ares European Real Estate Fund III, L.P.	80,784	0.0%
Blackstone Property Partners, L.P.	29,973,311	1.1%
Brookfield Real Estate Finance Fund V, L.P.	5,397,971	0.2%
DRA Growth and Income Fund VI, L.P.	148,136	0.0%
Lone Star Fund VI (U.S.), L.P.	1,262,547	0.0%
Lone Star Fund X (U.S.), L.P.	13,751,945	0.5%
Lone Star Fund XI, L.P.	373,837	0.0%
Lone Star Real Estate Fund (U.S.), L.P.	381,157	0.0%
Mesirow Financial Real Estate Value Fund III, L.P.	10,302,942	0.4%
Prime Property Fund, LLC	20,567,897	0.8%
Sound Mark Horizons Fund, L.P.	17,394,377	0.7%
TA Realty Core Property Fund, L.P.	20,503,307	0.8%
TerraCap Partners IV (Institutional), L.P.	15,445,911	0.6%
Trumbull Property Fund, L.P.	12,387,504	0.5%

Private Credit/Opportunistic Credit		
Voya Mortgage Investment Fund	10,895,784	0.4%
Beach Point Select Fund, L.P.	27,973,242	1.1%
Blueprint CAP I, L.P.	35,162,246	1.3%
Clareant EDL (Levered) II USD Feeder SCSp	18,475,173	0.7%
Clareant EDL (Levered) III USD Feeder SCSp	8,103,794	0.3%
Crestline Opportunity Fund III (Cayman), Ltd.	19,037,583	0.7%
Dorchester Capital Secondaries Offshore IV, L.P.	11,509,239	0.4%
Eagle Point Credit US, L.P.	22,372,142	0.8%
Monroe Capital Private Credit Fund III, L.P.	8,808,852	0.3%
Monroe Capital Private Credit Fund II, L.P.	15,845,369	0.6%
Voya Credit Opportunities Fund	11,072,590	0.4%
Hedge Funds		
Entrust	53,626,459	2.0%
Pluscios	67,476,588	2.5%
Cash and Cash Equivalent	21,156,946	0.8%

*Fund was in the process of winding down as of December 31, 2020

** Fund was retained but has not called capital as of December 31, 2020

Summary of 2020 Investment Activity

Investment Manager Changes

During 2020, the Board of Trustees voted to retain 3 investment managers. When retaining investment managers, the Fund complies with 40 ILCS 5/1-113.14, which requires a competitive bid/RFP process prior to making an allocation to new investment managers/fund.

The list of managers/fund hired during 2020 can be found in the chart below:

Investment Manager Name	Strategy
Dover Street X, LP	Private Equity
Glendower Capital Secondaries Opportunity Fund V	Private Equity
TA Realty Core Property Fund, L.P.	Real Estate

For this same period 5 investment managers were terminated. The list of these managers and their mandates can be found in the chart below:

Investment Manager Name	Strategy
ING Clarion	Real Estate / REITs

Total Fund Fiscal Year End Performance (net of fees)

For 2020, on a net of fee basis, the Total Fund returned 12.29% which outperforming the policy index return of 11.75%. The Fund is exceeding its actuarial rate of return for the 3,5 and 10 year periods trailing periods.

Asset Class Fiscal Year End Performance (net of fees)

For the 1-year period ending December 31, 2020, the Total Equity portfolio, which is comprised of US Equity, Non-US Equity and Long/Short Equities, lagged the MSCI ACWI index by 25 basis points, posting a return of 16.50% versus the index return of 16.25%. Within the Total Equity portfolio, The US equity portfolio was the most significant underperforming component of the equity portfolio. The non-US equity portfolio was additive to performance for the 1 year period, posting a return of 15.13% versus the index return of 10.65%. The long/short equity portfolio was also additive for the 1 year period, returning 22.91% which bested the portfolio's return by 2,233 basis points.

For the 1-year period, ending December 31, 2020, the Total Fixed Income portfolio, which is comprised of core fixed income, core plus fixed income, global multi sector fixed income and emerging market debt) returned 6.60% underperforming the Barclay Bloomberg Aggregate Index which returned 7.51%. The core/core plus allocation of the portfolio outperformed for this time period, with the core portfolio posting a return of 8.02% besting the Barclay Bloomberg Aggregate Index by 51 basis points. The Global Multi Sector portfolio, which invests in global fixed income securities underperformed, posting a return of 7.50% versus the Barclay Bloomberg Global Aggregate index return of 9.20%. The Fund's fixed income portfolio continues to be comprised of mostly high quality (A or better) rated fixed income securities. The average duration of the portfolio was 6.8 years and the effective maturity was 9.2 years.

As of December 31, 2020, the Fund's Income Generating portfolio, which is comprised of private debt and credit opportunities investments. The purpose of this portfolio is to generate income that the Fund can use to offset pension obligation liabilities. As of December 31, 2020, the portfolio's distribution to paid-in (PDI) was 0.16. The DPI is a measure of the cumulative investment returned to the investor relative to invested capital, in laymen's terms it represents how much capital has been distributed back to the Fund. Since the inception of the portfolio, the Income Generating portfolio posted an IRR of 5.87%. Currently, the Fund has made $218 million in commitments to 11 private debt and opportunistic credit funds. Since inception, portfolio has gained $35 million in value for Chicago PABF.

As of December 31, 2020, the Fund's Real Estate portfolio ended the year with a since inception IRR of 3.09%. Since inception, the Total Value to Paid In Capital multiple (current valuation plus cumulative distributions, divided by total capital calls) was 1.13. Chicago PABF had commitments totaling $358 million. Since inception, the real estate program has earned $41 million in value for Chicago PABF. As of December 31, 2020, the real estate portfolio was diversified by investment strategy, with 36.7% allocated to core real estate, 16.3% allocated to core plus real estate, 13.6% allocated to real estate debt, 11.4% allocated to opportunistic real estate, 13.3% allocated to value-add real estate, 7% allocated to distressed real estate and 1.6% allocated to liquid real estate (REIT). The Fund's REIT portfolio is currently being liquidated.

As of December 31, 2020, the Fund's Infrastructure portfolio ended the year with a since inception IRR of 9.18%. Since inception, the Total Value to Paid In Capital multiple (current valuation plus cumulative distributions, divided by total capital calls) was 1.40. Chicago PABF had commitments totaling $150 million. Since inception, the Infrastructure program has gained $53 million in value for Chicago PABF.

As of December 31, 2020, the Fund's Private Equity portfolio ended the year with a since inception IRR of 14.43%. Since inception, the Total Value to Paid In Capital multiple (current valuation plus cumulative distributions, divided by total capital calls) was 1.28. Chicago PABF had commitments totaling $75 million; this includes a commitment to Glendower Capital Secondaries Opportunity Fund V, which is schedule to close the first have of 2021. Since inception, the real estate program has earned $8 million in value for Chicago PABF.

Trailing and Calendar Year Investment Returns (net of fees) – December 31, 2020

Below is a detailed analysis of the Fund's net of fee performance has been provided both on a trailing and calendar year basis. Calculations are prepared utilizing a time weighted rate of return.

Trailing Year Investment Returns as of December 31, 2020

ASSET CLASS/INDEX	1 YR (%)	3 YRS (%)	5 YRS (%)	10 YRS (%)
TOTAL FUND	**12.3**	**7.3**	**9.1**	**7.8**
Policy Portfolio	*11.8*	*8.1*	*9.2*	*7.5*
EQUITY	**16.5**	**9.1**	**12.2**	**10.0**
Russell 3000 Index	*16.3*	*10.1*	*12.3*	*9.1*
FIXED INCOME	**6.6**	**4.4**	**4.4**	**4.0**
Barclays Capital Aggregate Index	*7.5*	*5.3*	*4.4*	*3.8*
REAL ESTATE	**-0.2**	**2.9**	**4.1**	**6.1**
NCREIF Net Property Index (1 Quarter lag)	*2.0*	*5.1*	*6.3*	*9.4*
INFRASTRUCUTRE	**-7.3**	**5.3**	**16.3**	**14.3**
NCREIF Net Property Index (1 Quarter lag)	*1.6*	*4.9*	*5.9*	*9.0*
PRIVATE EQUITY	**16.7**	**10.6**	**5.7**	**9.9**
Cambridge Associates US All PE (1 Quarter lag)	*22.9*	*15.7*	*15.5*	*14.0*
PRIVATE DEBT	**-1.8**	**5.9**	**---**	**---**
Private Debt Custom Index	*3.6*	*4.8*	---	---
OPPORTUNISTIC CREDIT	**15.3**	**7.2**	**---**	**---**
Opportunistic Credit Custom Index	*5.1*	*5.2*	---	---
HEDGE FUND	**0.1**	**1.6**	**---**	**---**
HFRI Fund of Funds Composite Index	*10.9*	*4.9*	---	---
GLOBAL ASSET ALLOCATION	**8.3**	**4.7**	**7.3**	**---**
60% MSCI ACWI (Net) / 40% FTSE WGBI	*14.5*	*8.4*	*9.5*	---

Calendar Year Returns as of December 31, 2020

ASSET CLASS/INDEX	2016 (%)	2017 (%)	2018 (%)	2019 (%)	2020 (%)
TOTAL FUND	**6.7**	**17.2**	**-5.2**	**16.3**	**12.3**
Policy Portfolio	5.9	13.0	-5.2	*15.4*	*11.8*
EQUITY	**6.7**	**29.1**	**-10.7**	**25.8**	**16.5**
MSCI ACWI	7.9	24.0	-9.4	*26.6*	*16.3*
FIXED INCOME	**4.4**	**4.2**	**-0.4**	**7.1**	**6.6**
Barclays Capital Aggregate Index	2.7	3.5	1.0	*8.7*	*7.5*
REAL ESTATE	**6.0**	**5.4**	**1.5**	**7.4**	**-0.2**
NCREIF Net Property Index (1 Quarter lag)	9.2	6.9	7.2	*6.2*	*2.0*
INFRASTRUCUTRE	**29.2**	**38.6**	**14.2**	**10.2**	**-7.3**
NCREIF Net Property Index (1 Quarter lag)	7.1	7.1	6.7	*6.4*	*1.6*
PRIVATE EQUITY	**7.9**	**-6.9**	**12.4**	**3.2**	**16.7**
Cambridge Associates US All PE (1 Quarter lag)	4.2	11.8	18.0	*9.9*	*22.9*
PRIVATE DEBT	**---**	**---**	**10.5**	**9.4**	**-1.8**
Private Debt Custom Index	---	---	5.4	*5.4*	*3.6*
OPPORTUNISTIC CREDIT	**---**	**---**	**2.6**	**4.2**	**15.3**
Opportunistic Credit Custom Index	---	---	-0.4	*11.4*	*5.1*
HEDGE FUND	**---**	**5.8**	**4.6**	**0.3**	**0.1**
HFRI Fund of Funds Composite Index	---	*7.7*	-4.1	*8.3*	*10.9*
GLOBAL ASSET ALLOCATION	**8.1**	**14.7**	**-5.3**	**11.9**	**8.3**
60 MSCI ACWI (Net) / 40 FTSE WGBI	5.3	16.2	-5.9	*18.2*	*14.5*

Largest Stock Holdings as of December 31, 2020

	Shares	Stocks	Fair Value
1	225.069	SAMSUNG ELECTRONIC KRW 100	$ 19,019,229
2	641,000	TAIWAN SEMICON MAN TWD10	11,581,607
3	42,024	ADR ALIBABA GROUP HLDG ADS EACH REP 8 ORCH SHS	9,780,246
4	129,100	TENCENT HLDGS LIMITED COMMON STOCK	9,390,483
5	634,462	AIA GROUP LTD NPV	7,773,415
6	20,416	ADR NICE LTD SPONSORED ADR	5,788,753
7	384,468	ADR ICICI BK LTD	5,713,194
8	129,556	ADR BANCOLOMBIA SA SPONSRD REPSTG 4 PREF SHS	5,205,560
9	12,795	GENMAB AS DKKI	5,180,256
10	982,764	ADR BANCO BRADESCO SA SPONSRD ADR REPSTG PFD	5,169,339

Largest Bond Holdings as of December 31, 2020

	Par	Bonds	Fair Value
1	13,515,000	US TREASURY N/B 1.5% DUE 2-15-2030 REG	$ 14,297,920
2	7,500,000	UNITED STATES TREAS BOND 2.375% DUE 5-17-2027	8,365,723
3	6,915,000	FED FARM CR BKS CONS SYSTENWIDE BDS DTD .100.13% 6	6,915,644
4	6,690,000	FEDERAL HOME LN BKS FLTG 08-24-2021	6,689,647
5	4,505,000	CITIGROUP INC FIXED 3.98% 03-20-2030	5,297,914
6	4,340,000	WELLS FARGO & CO. 4.15% DUE 01-24-2029	5,151,586
7	4,440,000	MORGAN STANLEY 3.772% DUE 01-24-2029	5,147,232
8	4,780,000	FH FEDERAL HOME LN BKS FRN 08-04-2021	4,779,727
9	3,896,000	GOLDMAN SACHS GROUP 4.223% 05-01-2029	4,622,071
10	4,120,000	JP MORGAN CHASE & CO. 2.739% DUE 10-15-2030	4,479,812

A complete list of portfolio holdings is available upon request.

Commissions Paid by Investment Managers in 2020

Manager	Total Number of Trades	Total Number of Shares	Total Commissions
Acadian Asset Management	2,168	51,616,078	$ 41,780
Artisan Partners	2,915	6,685,831	108,236
BMO	1,731	5,753,290	120,785
Chicago Equity Partners	540	2,905,059	41,215
Earnest Partners	500	30,030,329	85,391
Great Lakes Advisors	76	1,013,833	35,484
Lazard Asset Management	671	16,083,518	97,107
UBS Global Asset Management	416	13,993,915	34,131
William Blair & Company	2,369	5,161,215	90,086
	11,386	**133,243,068**	**$ 654,215**

Commissions Paid to Brokers in 2020

Broker	Total Number of Shares	Total Commissions	Commissions Per Share
BNP Baribas	4,208,148	$11,836	$ 0.003
BNY Convergex Execution Solutions	9,852,706	37,908	0.004
Cabrera Capital Markets	532,282	17,650	0.033
Citigroup Global Markets	2,961,080	8,464	0.003
CLSA Securities	8,065,467	9,129	0.001
Cowen& Company, LLC	718,258	19,102	0.027
Credit Suisse	2,857,006	18,705	0.007
Goldman Sachs & Co	4,027,779	16,889	0.004
HSBC	5,365,100	15,854	0.003
Instinet	19,838,697	29,064	0.001
J .P. Morgan Securities	8,142,147	45,798	0.006
Jefferies & Co.	4,294,017	31,563	0.007
Jones Trading	3,820,857	7,278	0.002
Loop Capital Markets	1,735,873	41,013	0.024
Merrill Lynch	4,338,819	35,557	0.008
Mirae Asset Daewood Co., Ltd.	100,919	7,717	0.076
Morgan Stanley	12,727,704	39,092	0.003
National Financial Services	1,851,930	18,545	0.010
North South Capital, LLC	805,906	16,334	0.020
Penserra Securities	469,017	25,567	0.055
RBC	1,171,408	23,357	0.020
UBS	6,767,446	20,441	0.003
Virtue Americas LLC	1,423,395	31,388	0.022
Brokers with less than $7,000 in commissions	27,167,107	125,962	0.005
Totals	**133,243,068**	**$ 654,215**	**$ 0.005**

Investment Summary
as of 12/31/20

Investment Type	Fair Value	Percent of Total Fair Value
Fixed Income		
Government Bonds	$ 160,661,357	5.93%
Corporate Bonds	179,482,360	6.63%
Total Bonds	340,143,717	
Fixed Income Funds	258,406,228	9.54%
Total Fixed Income	598,549,945	22.11%
Equities		
U.S. Equities	279,217,903	10.31%
International Equities	604,256,498	22.32%
Stock Index Funds	570,210,465	21.06%
Total Equities:	1,453,684,866	53.69%
Other Investments		
Hedge Fund-of-Funds	223,802,930	8.27%
Infrastructure	67,867,536	2.51%
Real Estate	143,394,621	5.30%
Swaps	218,487	0.01%
Venture Capital	112,601,991	4.16%
Total Other:	547,885,565	20.25%
Short-term funds and Cash:	107,381,025	3.97%
Total Assets at Fair Value:	$ 2,707,501,401	100.0%

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Actuarial Section

P: 312.456.9800 | www.grsconsulting.com

April 22, 2021

Board of Trustees
Policemen's Annuity and Benefit Fund
City of Chicago
221 North LaSalle Street, Suite 1626
Chicago, Illinois 60601-1404

Subject: Actuarial Valuation Report for the Year Ending December 31, 2020

Dear Members of the Board:

At your request, we have performed an actuarial valuation of the Policemen's Annuity and Benefit Fund of Chicago ("the PABF" or "the Fund") as of December 31, 2020. The primary purposes of this actuarial valuation are to determine the statutory contribution for tax levy year 2022 (i.e., payment year 2023) and to measure the funded status of the Fund as of December 31, 2020, based on the statutes in effect as of December 31, 2020. This report also provides the development of the plan year end 2021 Actuarially Determined Contribution ("ADC") as required by GASB Statement Nos. 67 and 68. Other information required under GASB Statement Nos. 67 and 68 is provided in a separate report. The actuarial assumptions and methods used were recommended by the actuary and approved by the Board.

We have prepared the supporting schedules for the actuarial section of the comprehensive annual financial report, including:

- Summary of Actuarial Valuation Methods and Assumptions;
- Schedule of Active Member Data;
- Retirements and Beneficiaries Added to and Removed from Rolls;
- Prioritized Solvency (Termination) Test;
- Development of Actuarially Determined Contributions under GASB Statement Nos. 67 and 68;
- Development of Actuarial Gains and Losses; and
- Summary of Basic Actuarial Values.

This actuarial valuation is based upon:

Data relative to the members of the Fund – Data for active members and persons receiving benefits from the Fund was provided by the Fund's staff. We have tested this data for reasonableness.

Asset Values – The actuarial value of assets is used in the development of the statutory contribution requirements. In each future fiscal year, gains and losses will be phased in over a five-year period.

Actuarial Method – The actuarial method utilized by the Fund, as required by statute, is the Entry-Age Normal cost method. The objective of this method is to recognize the costs of Fund benefits over the entire career of each member as a level percentage of compensation. Any Unfunded Actuarial Accrued Liability (UAAL) under this method is separately financed. All actuarial gains and losses under this method are reflected in the UAAL.

Actuarial Assumptions – All actuarial assumptions remain unchanged from the prior actuarial valuation and reflect the results of the experience study performed for the period of January 1, 2014 through December 31, 2018, approved by the Board on August 27, 2019, first effective with the December 31, 2019, actuarial valuation. The assumptions used are set forth in Appendix 4: Actuarial Methods and Assumptions.

Plan Provisions – The actuarial valuation is based on plan provisions and statutes in effect as of December 31, 2020.

The funding objective of the Fund is to provide employer and employee contributions sufficient to provide the benefits of the Fund when due. Pursuant to Public Act ("P.A.") 99-0506, effective May 30, 2016, the funding policy was amended and requires City contributions to be equal to $420 million in payment year 2016, $464 million in payment year 2017, $500 million in payment year 2018, $557 million in payment year 2019 and $579 million in payment year 2020. For payment years after 2020, the City is required to make level percent of pay contributions for plan years 2020 through 2055 that along with member contributions and investment earnings are expected to generate a projected funded ratio of 90% by plan year end 2055. The projections are based on an open group, level percent of pay financing and the Entry-Age Normal cost method. This actuarial valuation determines the statutory contribution of **$799.4** million (63.4% of projected pay) for tax levy year 2022 (i.e., payment year 2023).

This is a severely underfunded plan. The funded ratio is only **23.1%** (using actuarial value of assets) and the unfunded liability is approximately $11 billion as of December 31, 2020. The funded ratio is not projected to even reach 50% funded for another 23 years until 2043.

The funding policy defined in P.A. 99-0506 significantly defers contributions when compared to the provisions of the prior funding policy defined in P.A. 96-1495. The amount of annual contributions defined under P.A. 99-0506 does not even cover normal cost plus interest on the unfunded liability for the next 10 years. This means the unfunded liability is actually projected to increase to a high of $12.2 billion in 2030, when contributions are finally sufficient to start reducing the unfunded liability.

We understand that P.A. 99-0506 defines the amount of City Contributions to the PABF. Nevertheless, we continue to recommend that the plan sponsor seriously consider making additional contributions (in excess of the statutory requirement) to ensure that there are sufficient assets available in the fund in all years to pay the promised benefits.

We also recommend that the Board perform projections which include pessimistic scenarios such as investment return lower than assumed, lower contributions received than expected, higher benefit payments than expected, etc., to more fully understand the impact of less than optimal future expectations.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Appendix 4 of this report. This report includes risk metrics on page 13 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this report.

This actuarial valuation assumes that the City will be able to make future contributions on a timely basis. We did not perform an analysis of the ability of the City to make future contributions. Such an analysis is not within the scope of our assignment. Failure to receive City contributions on a timely basis could jeopardize the sustainability of the Fund.

The funding actuarial valuation results contained in this report were prepared based on the statutes in effect as of December 31, 2020. The projected contributions contained in this report will be used to develop the blended discount rate under GASB Statement Nos. 67 and 68.

The actuarial valuation results set forth in this report are based on the data and actuarial techniques described above, and upon the provisions of the Fund as of the actuarial valuation date. To the best of our knowledge, this actuarial statement is complete and accurate based on the statutes in effect as of December 31, 2020, and fairly presents the actuarial position of the Fund as of December 31, 2020. Based on these items, we certify these results to be true and correct.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

Actuarial valuations do not affect the ultimate cost of the Plan, only the timing of contributions into the Plan. Plan funding occurs over time. Contribution shortfalls (the difference between the actual contributions and the annual required contributions) remain the responsibility of the Plan sponsor. If the contribution levels over a period of years are lower or higher than necessary, it is normal and expected practice for adjustments to be made to future contribution levels to take account of this variance, with a view to funding the plan over time.

This report should not be relied on for any purpose other than the purpose stated.

This report does not fully reflect the recent and still developing impact of COVID-19, which is likely to influence demographic experience and economic expectations, at least in the short term. We will continue to monitor these developments and their impact on retirement plans.

This report was prepared at the request of the Board and is intended for use by the Fund and those designated or approved by the Board. This report may be provided to parties other than the Fund only in its entirety and only with the permission of the Fund. GRS is not responsible for unauthorized use of this report.

Lance J. Weiss and Alex Rivera are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

The signing actuaries are independent of the plan sponsor.

Respectfully yours,

Lance J. Weiss Alex Rivera

Lance J. Weiss, EA, MAAA, FCA	Alex Rivera, FSA, EA, MAAA, FCA
Senior Consultant and Team Leader	Senior Consultant

Five-Year Projection of Statutory Contributions

Following is a five-year projection of the statutory contributions based on fixed dollar contributions for payment year 2021 and statutory actuarial calculations for payment years after 2021.

City Contributions $ in thousands		
Tax Levy Year	**Payment Year**	**Statutory Contribution**
2020	2021	$ 737,527
2021	2022	786,793
2022	2023	799,447
2023	2024	825,268
2024	2025	844,900

Statutory Contributions for payment years 2024 and 2025 are estimated amounts and will be updated in subsequent actuarial valuations

The statutory contribution for payment year 2023 is $799.4 million, which is approximately 63.4% of projected payroll in 2023. After 2023, the projected city contribution is 63.4% of projected payroll but will increase as a dollar amount as payroll increases. Full projection results through 2055 are shown in Table 3a. The Statutory contributions set forth in this report represent the contribution amount determined consistent with the State Statute.

Actuarial Methods and Assumptions as of December 31, 2020

I. Actuarial Cost Method

An Actuarial Cost Method is a set of techniques used by the actuary to develop contribution levels under a retirement plan. The Actuarial Cost Method used in this valuation for statutory funding and State reporting purposes and GASB accounting purposes is the Entry-Age Normal actuarial cost method.

Under the Entry-Age Normal Cost Method, each participant's projected benefit is allocated on a level percent of pay basis from entry age to assumed exit age. The Actuarial Accrued Liability is the portion of the present value associated with pay prior to the valuation date. The Normal Cost is the portion of the present value associated with pay during the current plan year.

To the extent that current assets and future Normal Costs do not support participants' expected future benefits, an Unfunded Actuarial Accrued Liability ("UAAL") develops. The UAAL is generally amortized over a fixed period of time (e.g., 30 years) from the date incurred. The total contribution developed under this method is the sum of the Normal Cost and the payment toward the UAAL.

II. Current Actuarial Assumptions

The current actuarial assumptions are based on an experience study for the period January 1, 2014 to December 31, 2018 adopted by the Board on August 27, 2019 and became effective December 31, 2019.

Demographic Assumptions

Post-Retirement Mortality

Scaling factors of 119 percent for males, and 102 percent for females of the Pub-2010 Amount-weighted Safety Healthy Retiree Mortality Tables, sex distinct, set forward one-year for males, with generational mortality improvement using MP-2018 2-dimensional mortality improvement scales recently released by the SOA. This assumption provides a margin for mortality improvements.

Disabled Mortality

Scaling factors of 129 percent for males, and 112 percent for females of the Pub-2010 Amount-weighted Safety Healthy Retiree Mortality Tables, sex distinct, set forward one-year for males, with generational mortality improvement using MP-2018 2-dimensional mortality improvement scales recently released by the SOA. This assumption provides a margin for mortality improvements.

Pre-Retirement Mortality

Scaling factors of 100 percent for males, and 100 percent for females of the Pub-2010 Amount-weighted Safety Employee Mortality Tables, sex distinct, with generational mortality improvement using MP-2018 2-dimensional mortality improvement scales recently released by the SOA. This assumption provides a margin for mortality improvements.

We use what is termed "the limited fluctuation credibility procedure" to determine the appropriate scaling factor of the base mortality tables for each gender and each member classification. We used a liability weighted basis. In each case, the partial credibility factor (or "Z-factor") is computed based on the experience of the specific group being studied. This Z-factor is a measure of the credibility of the pertinent group.

The Best Fit is the ratio of actual to expected deaths using the base table. The final scale is then determined as the weighted average of the Best Fit and 100 percent based on the Z-factor. For example, the Z-factor for male retirees is 97 percent, suggesting that the data for this group is 97 percent credible (there were not enough deaths among active members to be completely credible). The Best Fit for this group would be to scale the base tables by 119 percent. The final scale of 119 percent is the credibility-weighted average (119% = 97% x 119% + 3% x 100%). Factors for females are determined similarly.

	Future Life Expectancy (years) in 2020		Future Life Expectancy (years) in 2035	
	Postretirement		Postretirement	
Age	Male	Female	Male	Female
35	48.67	53.40	50.11	54.80
40	43.40	48.07	44.82	49.46
45	38.20	42.78	39.59	44.15
50	33.08	37.54	34.43	38.90
55	28.07	32.42	29.39	33.76
60	23.28	27.52	24.54	28.80
65	18.83	22.88	19.98	24.07
70	14.75	18.48	15.77	19.57
75	11.08	14.40	11.96	15.40

Rate of Retirement: The table below shows the assumed rates of retirement.

Attained Age	Tier 1	Tier 2
50	0.05	0.02
51	0.05	0.02
52	0.05	0.02
53	0.05	0.02
54	0.05	0.03
55	0.22	0.24
56	0.22	0.24
57	0.22	0.24
58	0.22	0.24
59	0.22	0.24
60	0.22	0.22
61	0.27	0.27
62	0.27	0.27
63	1.00	1.00
64	1.00	1.00
65	1.00	1.00

Rate of Termination: The table below shows the assumed rates of termination.

Years of Service	Rate
0	0.030
1	0.025
2	0.017
3	0.015
4	0.014
5	0.014
6	0.013
7	0.010
8	0.009
9	0.009
10	0.009
11	0.008
12	0.007
13	0.006
14 +	0.006

Actuarial Methods and Assumptions as of December 31, 2020

Rate of Disability: The rate at which members are assumed to become disabled under the provisions of the Fund. The rates assumed are as follows:

Attained Age	Rates
20-24	0.0002
25-29	0.0004
30-34	0.0007
35-39	0.0015
40-44	0.0026
45-49	0.0032
50-54	0.0042
55-59	0.0042
60-64	0.0043

Of the participants who become disabled in the future, the following distribution of disability types is assumed:

Duty Disability:	40%
Occupational Disease Disability:	10%
Ordinary Disability:	50%

Economic Assumptions

Investment Return: 6.75 percent per year, compounded annually, net of investment expenses. The 6.75 percent assumption is composed of a 2.25 percent inflation assumption and a 4.50 percent real rate of return assumption.

General Inflation: 2.25 percent per year, compounded annually.

This assumption serves as the basis for the determination of annual increases in pension and the pensionable salary cap for Tier 2 members.

Wage Inflation and Payroll Growth: 3.50 percent per year, compounded annually.

Actuarial Methods and Assumptions as of December 31, 2020

Future Salary Increases: The assumed base rate of individual salary increase is 3.50 percent per year (underlying wage inflation assumption), plus an additional percentage based on the following service scale:

Years of Service*	Base Rates	Wage Inflation	Total Rates
0	0.00%	3.50%	3.50%
1	38.50%	3.50%	42.00%
2	4.00%	3.50%	7.50%
3	3.50%	3.50%	7.00%
4	3.50%	3.50%	7.00%
5	3.50%	3.50%	7.00%
6-9	0.00%	3.50%	3.50%
10	4.00%	3.50%	7.50%
11-14	0.00%	3.50%	3.50%
15	4.00%	3.50%	7.50%
16-19	0.00%	3.50%	3.50%
20	4.00%	3.50%	7.50%
21-24	0.00%	3.50%	3.50%
25	4.00%	3.50%	7.50%
26-29	0.00%	3.50%	3.50%
30	4.00%	3.50%	7.50%

* *Includes increases at 12 and 18 months of service.*

Asset Value: The Actuarial Value of Assets is smoothed by using a five-year phase-in of each year's unexpected investment gains and losses.

Expenses: Statutory funding projections include an explicit administrative expense assumption of $4,311,000 for plan year end December 31, 2020, increased by 2.25% per year.

Projection Assumptions

Active Population: Active members who terminate, retire, become disabled or die during the year are replaced by new entrants such that the number of active members remains level during the projection period based on the most recent actuarial valuation. The number of active members as of the valuation at December 31, 2020 is 12,715.

New Entrant Profile: The entry age of future new entrants, which is summarized below, is based on the profile of current active members hired over the last five years with one or more years of service as of December 31, 2020. These members were hired from January 1, 2016 through December 31, 2019.

Entry Age	Number
Under 20	1
20 to 25	1,037
25 to 30	1,207
30 to 35	640
35 to 40	306
40 to 55	5

Approximately 73% of the new entrants are assumed to be male.

New Entrant Pay: Based on the most recent employment contract, new entrants were assumed to earn $48,078 for the plan year ending December 31, 2020. This amount does not include duty availability pay. The new entrant pay for members hired after 2020 is assumed to increase by the wage inflation assumption of 3.50% plus duty availability pay after three years, increased by CPI compounded.

New Entrant Pay Increases: Pay for a specific new entrant is assumed to increase in the future by the wage inflation and the service based increases disclosed in this actuarial valuation.

The projections assume a pay cap of $116,740.42 for plan year 2021, increasing by 1.125% per year after plan year 2021. The annual increase of 1.125% per year is based on 50% of the CPI-U increase which is assumed to be 2.25% per year.

Other Assumptions

Marital Status: It is assumed that 75 percent of active members have an eligible spouse. The male spouse is assumed to be three years older than the female spouse. No assumption is made about other dependents.

Reciprocal Service: No assumption for reciprocal service.

Benefit Service: Exact fractional years of service are used to determine the amount of benefit payable.

Decrement Timing: All decrements are assumed to occur mid-year.

Decrement Relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.

Actuarial Methods and Assumptions as of December 31, 2020

Decrement Operation:	Turnover decrements do not operate after member reaches retirement eligibility for a minimum annuity formula benefit.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service on the date the decrement is assumed to occur.
Pay Increase Timing:	Beginning of the (fiscal) year.
Tax Levy Loss:	No tax levy loss is assumed
Health Insurance Premium Subsidies:	Current recipients of the $55 per month for non-Medicare and $21 per month for Medicare health insurance premium subsidy were identified in the data provided by PABF staff. The subsidies for current recipients are assumed to continue during the recipient's lifetime. The valuation assumes 65 percent of future retirees eligible for the subsidy will receive it in the future and 20 percent of eligible retirees not currently receiving the subsidy will receive it in the future.

Exhibit K
History of Average Annual Salaries

Year End	Members in Service	Increase	Current Year Salary	Increase	Average Salary	Increase	Actuarial Assumptions	CPI Chicago
1991	12,513	3.9 %	$ 520,015,930	10.3 %	$ 41,558	6.1 %	6.00	3.0 %
1992	12,570	0.5	538,404,098	3.5	42,832	3.1	5.80	3.3
1993	12,591	0.2	561,156,282	4.2	44,568	4.1	5.80	2.3
1994	13,095	4.0	599,073,276	6.8	45,748	2.6	5.80	2.9
1995	13,437	2.6	622,413,737	3.9	46,321	1.3	5.80	2.2
1996	13,475	0.3	654,149,310	5.1	48,545	4.8	5.80	3.8
1997	13,435	(0.3)	675,515,532	3.7	50,280	3.6	5.80	1.7
1998 [1]	13,586	1.1	736,401,756	9.0	54,203	7.8	5.50	1.5
1999	13,829	1.8	755,303,667	2.6	54,617	0.8	5.50	2.6
2000	13,858	0.2	759,343,026	0.5	54,795	0.3	5.50	4.0
2001	13,889	0.2	763,352,475	0.5	54,961	0.3	5.50	0.8
2002	13,720	(1.2)	866,531,789	13.5	63,158	14.9	5.50	2.5
2003	13,746	0.2	887,555,791	2.4	64,568	2.2	5.50	1.7
2004	13,569	(1.3)	874,301,958	(1.5)	64,434	(0.2)	5.50	2.2
2005	13,462	(0.8)	948,973,732	8.5	70,493	9.4	5.50	3.6
2006	13,749	2.1	1,012,983,635	6.7	73,677	4.5	5.50	0.7
2007	13,748	0.0	1,038,957,026	2.6	75,572	2.6	5.50	4.7
2008	13,373	(2.7)	1,023,580,667	(1.5)	76,541	1.3	5.50	(0.6)
2009	13,154	(1.6)	1,011,205,359	(1.2)	76,874	0.4	5.50	2.5
2010	12,737	(3.2)	1,048,084,301	3.6	82,287	7.0	5.50	1.2
2011	12,236	(3.9)	1,034,403,526	(1.3)	84,538	2.7	5.50	2.1
2012	12,026	(1.7)	1,015,170,686	(1.9)	84,415	(0.1)	5.50	1.7
2013	12,161	1.1	1,015,426,126	0.0	83,499	(1.1)	5.50	0.5
2014	12,020	(1.2)	1,074,333,318	5.8	89,379	7.0	4.80	1.5
2015	12,061	0.3	1,086,607,979	1.1	90,093	0.8	4.80	0.0
2016	12,177	1.0	1,119,526,987	3.0	91,938	2.0	4.80	1.9
2017	12,633	3.7	1,150,406,094	2.8	91,064	(1.0)	4.80	1.7
2018	13,438	6.4	1,205,324,445	4.8	89,695	(1.5)	4.80	1.1
2019	13,353	(0.6)	1,228,986,864	2.0	92,038	2.6	5.60	2.2
2020	12,715	(4.8)	1,195,980,486 [2]	(2.7)	94,061	2.2	5.60 [3]	0.9
Average Increase (Decrease) for the last								
5 years:		**1.1 %**		**2.0 %**		**0.9 %**		**1.5 %**
10 years:		**0.0 %**		**1.4 %**		**1.4 %**		**1.3 %**
30 years:		**0.2 %**		**3.2 %**		**3.0 %**		**2.0 %**

[1] *Pay definition changed to include duty availability pay.*
[2] *Of the $1,195,980,486 current year salary, $37,549,536 is duty availability pay.*
[3] *See Appendix 4 for a complete description of the current assumptions.*

Exhibit A
Summary of Changes in Active Participants
For Fiscal Year Ending December 31, 2020

	Male	Female	Total
Number of Active Participants at Beginning of Fiscal Year[2]	**10,244**	**3,109**	**13,353**
Increases:			
Participants Added During Year	106	44	150
Participants Returning From Inactive or Disability Status	10	4	14
Totals	10,360	3,157	13,517
Decreases:			
Terminations During Year	618	184	802
Number of Active Participants at End of Fiscal Year	**9,742**	**2,973**	**12,715**
Total Inactive Participants			801
Terminations:			
Withdrawal (With Refunds)[1]	75	17	92
Withdrawal (Without Refunds)	138	37	175
Ordinary Disability Benefit	10	4	14
Occupational Disease Disability Benefit	0	0	0
Duty Disability Benefit	1	3	4
Retirements	379	121	500
Deaths (Occupational)	4	0	4
Deaths (Non-occupational)	11	2	13
Totals	**618**	**184**	**802**

[1] This total differs from the total of 141 shown in Exhibit D due to the fact that only 92 of the refunds were paid to participants who were considered to be active as of December 31, 2019.

[2] Includes five active members reclassified from male to female and eight active members reclassified from female to male.

Exhibit B
Summary of Changes in Annuitants and Beneficiaries
For Fiscal Year Ending December 31, 2020

	Number at Beginning of Year	Additions During Year	Terminations During Year	Number at End of Year
Service Retirement Annuities	10,078	558 [1]	353	10,283
Widow Annuities	3,070	143	188	3,025
Children's Annuities	201	14	17	198
Ordinary Disability Benefit (Non-Occupational)	40	14	23	31
Occupational Disease Disability Benefit	25	0	3	22
Duty Disability Benefit (Occupational)	167	7	14	160
Children's Disability Benefit	125	7	18	114
Widows' Compensation Annuities (Service Connected Death)	65	3	1	67
Totals	**13,771**	**746**	**617**	**13,900**
Annual Benefits	**$785,670,590**	**$ 67,249,604**	**$ 27,799,830**	**$825,120,364**

[1] *Includes five retirees whose benefits were previously classified as suspended annuities.*

Policemen's Annuity and Benefit Fund of Chicago
Total Annuitants and Beneficiaries (Last Seven Years)

	Annuitants and Beneficiaries Beginning of Year	Additions During The Year	Terminations During The Year	Annuitants and Beneficiaries at Year-end	Average Annuitants and Beneficiaries
2014	13,159	596	525	13,230	13,195
2015	13,230	588	608	13,210	13,220
2016	13,210	697	513	13,394	13,302
2017	13,394	806	572	13,628	13,511
2018	13,628	585	582	13,631	13,630
2019	13,631	735	595	13,771	13,701
2020	13,771	746	617	13,900	13,836

Exhibit S
History of Retirees and Beneficiaries
Added to and Removed from Benefit Payroll

Yr.	Added		Removed		End of Year		Average Annual Benefits	Increase to Avg. Benefits
	No.	Annual Benefits.	No.	Annual Benefits	No.	Annual Benefits		
Employee Annuitants (Male and Female)								
2011	500	$ 42,603,517	232	$ 10,471,101	8,763	$ 482,875,300	$ 55,104	3.9%
2012	539	43,830,960	267	12,652,422	9,035	514,053,838	56,896	3.3%
2013	401	36,004,890	242	11,690,500	9,194	538,368,228	58,556	2.9%
2014	392	34,915,092	275	13,594,175	9,311	559,689,145	60,111	2.7%
2015	363	34,830,781	289	15,450,195	9,385	579,069,731	61,702	2.6%
2016	494	44,891,597	276	15,314,830	9,603	608,646,498	63,381	2.7%
2017	581	56,599,441	285	15,718,884	9,899	649,527,055	65,615	3.5%
2018	343	37,905,119	312	17,816,794	9,930	669,615,380	67,434	2.8%
2019	482	43,818,101	334	20,607,160	10,078	692,826,321	68,746	1.9%
2020	558	61,036,082	353	21,689,922	10,283	732,172,481	71,202	3.6%
Widow/Widower Annuitants (Not Including Compensation) [1]								
2011	144	$ 3,709,829	132	$ 2,007,664	3,091	$ 55,323,666	$ 17,898	2.8%
2012	174	4,436,964	143	2,110,153	3,122	57,650,477	18,466	3.2%
2013	157	3,969,877	149	2,259,835	3,130	59,360,519	18,965	2.7%
2014	128	3,403,918	149	2,515,975	3,109	60,248,462	19,379	2.2%
2015	147	4,022,206	178	2,831,532	3,078	61,439,136	19,961	3.0%
2016	140	4,231,504	116	1,939,517	3,102	63,731,123	20,545	2.9%
2017	158	7,074,268	201	3,335,935	3,059	67,469,456	22,056	7.4%
2018	179	5,804,968	184	3,533,975	3,054	69,740,449	22,836	3.5%
2019	185	6,443,233	169	3,384,776	3,070	72,798,906	23,713	3.8%
2020	143	4,885,497	188	3,872,627	3,025	73,811,776	24,401	2.9%

[1] *Not including Compensation Annuitants.*

Actuarial Accrued Liability Prioritized Solvency Test

Table 8

Valuation Date 12/31	(1) Active and Inactive Member Contribution	(2) Retirees and Beneficiaries	(3) Active and Inactive Members (ER Financed Portion)	Actuarial Value of Assets	Portion (%) of Present Value Covered By Assets (1)	(2)	(3)
2006	$ 1,016,217,810	$ 4,858,554,051	$ 2,241,771,313	$ 3,997,990,919	100.00%	61.37%	0.00%
2007	1,082,742,927	5,006,931,293	2,309,718,259	4,231,681,817	100.00%	62.89%	0.00%
2008	1,144,380,257	5,208,199,833	2,299,966,099	4,093,719,894	100.00%	56.63%	0.00%
2009 [1]	1,217,645,647	5,391,373,730	2,291,882,108	3,884,978,241	100.00%	49.47%	0.00%
2010	1,251,147,487	5,717,654,520	2,406,050,870	3,718,954,539	100.00%	43.16%	0.00%
2011	1,286,345,939	6,041,684,411	2,360,319,555	3,444,690,362	100.00%	35.72%	0.00%
2012 [1]	1,309,825,828	6,475,282,318	2,435,530,363	3,148,929,770	100.00%	28.40%	0.00%
2013 [2]	1,358,193,244	6,594,792,197	2,127,620,103	3,053,881,777	100.00%	25.71%	0.00%
2014 [1]	1,410,544,951	7,159,705,456	2,477,941,780	2,954,318,954	100.00%	21.56%	0.00%
2015	1,484,316,625	7,279,289,531	2,524,630,892	3,186,423,762	100.00%	23.38%	0.00%
2016 [1,2]	1,518,846,208	8,018,211,337	3,319,492,854	3,052,056,555	100.00%	19.12%	0.00%
2017	1,532,514,218	8,344,902,504	3,216,465,846	3,103,989,602	100.00%	18.83%	0.00%
2018	1,602,674,638	8,390,112,363	3,221,871,110	3,145,136,204	100.00%	18.38%	0.00%
2019 [1]	1,634,237,599	8,887,010,483	3,748,521,831	3,179,502,852	100.00%	17.39%	0.00%
2020	1,648,385,618	9,453,458,094	3,601,274,947	3,399,988,145	100.00%	18.53%	0.00%

[1]*Change in actuarial assumptions.*
[2]*Change in benefits.*

Development of Statutory Contribution

Table 3B

Key Projection Result Items

	Total
(1) Total Normal Cost for 2022	$ 260,947,394
(2) Actuarial Accrued Liability (AAL) at 12/31/2021 [1]	$ 15,064,118,169
(3) Actuarial Value of Assets at 12/31/2021	$ 3,629,262,993
(4) Unfunded Actuarial Accrued Liability (UAAL) (2-3)	$ 11,434,855,176
(5) Estimated Member Contributions during 2022	$ 114,155,000
(6) Estimated City Contribution for Tax Levy Year 2022	$ 799,446,710

[1] *Liabilities were discounted at 6.75% per year.*

Development of Actuarial Gains and Losses for 2020

Table 5

UNFUNDED ACTUARIAL ACCRUED LIABILITY - BEGINNING OF 2020				
(1)	Actuarial Accrued Liability - 12/31/2019	$	14,269,769,913	
(2)	Actuarial Value of Assets - 12/31/2019		3,179,502,852	
(3)	Unfunded Accrued Actuarial Liability - 12/31/2019	$	11,090,267,061	
EXPECTED UNFUNDED ACTUARIAL ACCRUED LIABILITY - END OF 2020				
(4)	Normal Cost for 2020	$	268,838,655	
(5)	Total Contributions for 2020		853,535,175	
(6)	Interest on (3), (4), & (5) at Valuation Rates		729,181,736	
(7)	Expected Unfunded Actuarial Accrued Liability - 12/31/2020 ((3)+(4)-(5)+(6))	$	11,234,752,277	
DEVIATIONS FROM EXPECTED				% OF 12/31/19 AAL
(8)	(Gain)/Loss on Investment Return (Smoothed (Actuarial) Value)	$	6,464,923	0.05%
(9)	(Gain)/Loss from Salary Changes		(130,512,784)	-0.91%
(10)	(Gain)/Loss from Retirement		55,087,610	0.39%
(11)	(Gain)/Loss from Turnover		(7,473,493)	-0.05%
(12)	(Gain)/Loss from Mortality		(39,125,753)	-0.27%
(13)	(Gain)/Loss from Disability		(8,839,663)	-0.06%
(14)	(Gain)/Loss from New Entrants and Rehired Members		2,225,102	0.02%
(15)	(Gain)/Loss Due to New Retirees Previously Suspended or From Inactive		6,575,534	0.05%
(16)	(Gain)/Loss due to Programming Refinements		73,670,190	0.52%
(17)	(Gain)/Loss from All Other Sources [1]		110,306,571	0.77%
(18)	Composite Actuarial (Gain)/Loss	**$**	**68,378,237**	**0.48%**
(19)	(Gain)/Loss from Actuarial Cost Method Change	$	-	0.00%
(20)	(Gain)/Loss from Provision Changes	$	-	0.00%
(21)	(Gain)/Loss from Assumption Changes	$	-	0.00%
UNFUNDED ACTUARIAL ACCRUED LIABILITY - END OF 2020				
(22)	Unfunded Accrued Actuarial Liability - 12/31/2020 ((7)+(18)+(19)+(20)+(21))	$	11,303,130,514	

[1] *Includes difference for Retiree Health Insurance Premium Subsidy.*

Summary of Basic Actuarial Values

Table 2

	Actuarial Present Value (APV) of Projected Benefits As of 12/31/2020	Actuarial Accrued Liability (AAL) As of 12/31/2020 Total	Tier 1	Tier 2
(1) Values for Active Members				
(a) Retirement	$ 7,002,764,809	$ 4,999,098,862	$ 4,726,518,006	$ 272,580,856
(b) Termination	117,333,797	16,193,075	7,530,011	8,663,064
(c) Disability	394,297,376	147,929,207	120,154,740	27,774,467
(d) Death	54,560,759	19,576,504	16,774,190	2,802,314
Total for Actives	$ 7,568,956,741	$ 5,182,797,648	$ 4,870,976,947	$ 311,820,701
(2) Values for Inactive Members				
(a) Retired	$ 8,541,240,853	$ 8,541,240,853	$ 8,541,240,853	$ 0
(b) Survivor	666,500,780	666,500,780	666,500,780	0
(c) Disability	235,135,512	235,135,512	231,618,500	3,517,012
(d) Inactive (Deferred Vested/ Terminated Pending Refund)	66,862,917	66,862,917	63,655,338	3,207,579
(e) Children	10,580,949	10,580,949	10,580,949	0
Total for Inactives	$ 9,520,321,011	$ 9,520,321,011	$ 9,513,596,420	$ 6,724,591
(3) Grand Totals	$ 17,089,277,752	$ 14,703,118,659	$ 14,384,573,367	$ 318,545,292
(4) Normal Cost for Active Members	$ 257,808,478			
(5) Actuarial Present Value of Future Compensation	$ 12,248,555,344			

Inactive members whose tier was not provided in the valuation data are assumed to be in Tier 1.

Exhibit Q
Schedule of Retired Members by Types of Benefit and Monthly Benefit Levels

Monthly Benefit	Retirement		Disability		Widow [1]		Child		Totals	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Under $100	2								**2**	**0**
$100 to under $250	6	3					77	52	**83**	**55**
$250 to under $500	18	9					17	13	**35**	**22**
$500 to under $750	23	5			1		67	56	**91**	**61**
$750 to under $1,000	7	5					10	3	**17**	**8**
$1,000 to under $2,000	45	40			37	1,631	8	9	**90**	**1,680**
$2,000 to under $3,000	124	16			30	1,008			**154**	**1,024**
$3,000 to under $4,000	472	130	12	11	5	273			**489**	**414**
$4,000 to under $5,000	1,363	571	50	33		49			**1,413**	**653**
$5,000 to under $6,000	1,924	465	56	27	3	33			**1,983**	**525**
$6,000 to under $7,000	2,542	435	12	8	1	14			**2,555**	**457**
$7,000 to under $8,000	1,083	192	4			4			**1,087**	**196**
$8,000 to under $9,000	402	40							**402**	**40**
$9,000 to under $10,000	145	23				1			**145**	**24**
$10,000 and over	171	22				2			**171**	**24**
Totals:	**8,327**	**1,956**	**134**	**79**	**77**	**3,015**	**179**	**133**	**8,717**	**5,183**

[1] *Includes reversionary.*

Exhibit R
Schedule of Average Benefit Payments for New Annuities Granted during Year

	Years of Service:	0-9	10-14	15-19	20-24	25-29	30-34	>= 35	Total
	Number of Retired Members	0	1	13	105	161	140	131	**551**
2010	Average annual salary used	$0	$81,122	$70,339	$80,639	$88,735	$91,739	$92,194	**$88,330**
	Average Monthly Benefit	$0	$2,535	$2,667	$3,837	$5,385	$5,734	$5,762	**$5,199**
	Number of Retired Members	1	8	16	95	175	103	102	**500**
2011	Average annual salary used	$18,730	$76,848	$70,140	$82,778	$92,829	$93,780	$98,280	**$91,097**
	Average Monthly Benefit	$390	$2,158	$2,728	$3,949	$5,497	$5,861	$6,142	**$5,257**
	Number of Retired Members	0	9	22	123	217	88	80	**539**
2012	Average annual salary used	$0	$72,245	$65,305	$85,175	$92,825	$94,854	$98,415	**$90,773**
	Average Monthly Benefit	$0	$2,066	$2,511	$4,002	$5,408	$5,928	$6,151	**$5,108**
	Number of Retired Members	0	6	20	118	161	62	34	**401**
2013	Average annual salary used	$0	$62,730	$75,088	$86,979	$94,193	$99,759	$102,980	**$92,252**
	Average Monthly Benefit	$0	$1,809	$2,857	$4,164	$5,427	$6,235	$6,436	**$5,084**
	Number of Retired Members	0	4	18	122	180	44	24	**392**
2014	Average annual salary used	$0	$64,795	$72,985	$87,586	$95,372	$94,991	$104,035	**$92,097**
	Average Monthly Benefit	$0	$1,907	$2,815	$4,230	$5,746	$6,052	$6,634	**$5,189**
	Number of Retired Members	0	7	14	105	184	42	11	**363**
2015	Average annual salary used	$0	$34,263	$85,670	$90,037	$100,124	$104,876	$102,529	**$96,001**
	Average Monthly Benefit	$0	$951	$3,334	$4,271	$6,005	$6,555	$6,408	**$5,379**
	Number of Retired Members [1]	1	5	14	124	257	80	12	**493**
2016	Average annual salary used	$50,400	$23,820	$78,131	$91,293	$101,855	$108,887	$109,058	**$98,945**
	Average Monthly Benefit	$1,050	$622	$2,966	$4,292	$6,123	$6,805	$6,816	**$5,634**
	Number of Retired Members	1	2	21	166	258	118	15	**581**
2017	Average annual salary used	$94,501	$19,905	$74,798	$93,477	$98,445	$103,641	$104,267	**$97,099**
	Average Monthly Benefit	$5,709	$630	$2,904	$4,456	$5,735	$6,478	$6,517	**$5,421**
	Number of Retired Members [2]	0	1	15	105	112	95	11	**339**
2018	Average annual salary used	$0	$96,236	$85,713	$95,577	$100,721	$111,692	$130,922	**$102,505**
	Average Monthly Benefit	$0	$2,606	$3,301	$4,569	$5,901	$6,981	$8,183	**$5,740**
	Number of Retired Members [3]	1	5	14	133	204	117	7	**481**
2019	Average annual salary used	$29,649	$27,298	$72,912	$95,939	$104,238	$113,077	$122,510	**$102,493**
	Average Monthly Benefit	$618	$771	$2,935	$4,632	$6,181	$7,067	$7,657	**$5,828**
	Number of Retired Members [4]	0	1	5	126	279	134	8	**553**
2020	Average annual salary used	$0	$15,558	$60,593	$96,945	$106,449	$117,718	$125,965	**$106,718**
	Average Monthly Benefit	$0	$357	$2,361	$4,572	$6,270	$7,357	$7,873	**$6,124**

[1] *Excludes data correction for one retiree previously valued as deceased.*
[2] *Excludes four retirees whose annuities were reinstated after previously being classified as suspended.*
[3] *Excludes one retiree whose annuity was reinstated after previously being suspended.*
[4] *Excludes five retirees whose annuities were reinstated after previously being classified as suspended.*

Summary of Principal Eligibility and Benefit Provisions
As of December 31, 2020

PARTICIPANTS	An employee in the police department of the City of Chicago appointed and sworn or designated by law as a peace officer with the title of policeman, policewoman, chief surgeon, police surgeon, police dog catcher, police kennelman, police matron and members of the police force of the police department.
SERVICE	In computing service rendered by a police officer, the following periods shall be counted, in addition to all periods during which he performed the duties of his position, as periods of service for annuity purposes only: All periods of (a) vacation; (b) leave of absence with pay; (c) military service; (d) disability for which the police officer receives disability benefit. The calculation of service is based on a day-to-day basis for most purposes. For the purpose of calculating benefits under the Dominant Formula, one year of Service is credited for a year in any portion of which a police officer is compensated.
RETIREMENT	
Eligibility	Attainment of age 50 with at least 10 years of service. *For participants who first became members on or after January 1, 2011, attainment of age 55 with at least 10 years of service. Participants may retire at attainment of age 50 with 10 years of service with a reduced benefit.*
Mandatory	Effective in plan year 2003, retirement is mandatory for a participant who has attained age 63.
Accumulation Annuity	At age 50 or more, with 10 or more years of service, the employee is entitled to an annuity based on the sums accumulated for age and service annuity plus 1/10 of the sum accumulated from the contributions by the City for the age and service annuity for each completed year of service after the first 10 years. At age 50 or more with 20 or more years, the employee is entitled to an annuity based on all sums accumulated.
Formula Minimum Annuity	While there are several alternative formulas available with 20 or more years of service, the Dominant Formula is 50% of highest average salary (including duty availability pay) in 48 consecutive months within the last 10 years of service plus 2.5% for each year or fraction of service over 20 years, limited to 75% of average salary.

Summary of Principal Eligibility and Benefit Provisions
As of December 31, 2020

Mandatory Retirement Minimum Annuity	A police officer who is required to withdraw from service due to attainment of mandatory retirement age who has less than 20 years of service credit may elect to receive an annuity equal to 30% of average salary for the first 10 years of service, plus 2% of average salary for each completed year of service in excess of 10, to a maximum of 48% of average salary. This benefit qualifies for post-retirement increases.
Post-Retirement Increase	A retiree born before January 1, 1966, with at least 20 years of service or receiving a mandatory retirement minimum annuity, receives an increase of 3% of the original annuity, starting on the first of the month following the first anniversary of his retirement or the first of the month following attainment of age 55, whichever is later, and shall not be subject to a 30% maximum increase. For retirees born on and after January 1, 1966, automatic increases are 1.5% of the original annuity, commencing at age 60, or the first anniversary of retirement, if later, to a maximum of 30%. *For participants who first became members on or after January 1, 2011, increases are equal to the lesser of 3.00% and 50% of CPI-U of the original benefit, commencing at age 60.*

Summary of Principal Eligibility and Benefit Provisions
As of December 31, 2020

Minimum Annuity

Beginning with the monthly annuity payment due on January 1, 2016, the fixed and granted monthly annuity payment for any policeman who retired from the service before January 1, 2016, at age 50 or over with 20 or more years of service, and for any policeman who retired from service due to termination of disability and who is entitled to an annuity on January 1, 2016, shall be no less than 125% of the Federal Poverty Level.

For participants who first became members on or after January 1, 2011, the member is entitled to an annuity based on an accrual rate of 2.5% of the final average salary for each fraction of service. Maximum is 75% of the final average salary. Final average salary is calculated using salary from the eight highest consecutive years within the last 10 years of service prior to retirement. Pensionable salary is limited to $106,800 in 2011, increased by the lesser of 3% and one-half of the annual unadjusted percentage increase in the Consumer Price Index-U (but not less than zero) as measured in the preceding 12- month period ending with the September preceding the November 1, which is the date that the new amount will be calculated and made available to the pension funds.

For participants who first became members on or after January 1, 2011, who retire after age 50 but before age 55 is attained, the member is entitled to an annuity based on an accrual rate of 2.5% of the final average salary for each fraction of service, reduced by one half of one percent per month for retirement prior to age 55, subject to a maximum benefit of 75%.

Reversionary Annuity

A member, prior to retirement, may elect to reduce his own annuity, and provide a reversionary annuity, to begin upon the officer's death, for the officer's spouse.

SURVIVOR INCOME BENEFITS PAYABLE ON DEATH

Death in Service (Non-Duty):

Generally, a money-purchase benefit is provided, based on total salary deductions and City contributions. However, if a policeman dies in service after December 31, 1985, with at least 1.5 years of service, the widow's annuity is the greater of (a) 30% of the annual maximum salary attached to the classified civil service position of a first class patrolman at the time of his death (without dollar limit) or (b) 50% of the benefit accrued by the policeman at date of death.

The lifetime benefit is payable until death.

Summary of Principal Eligibility and Benefit Provisions
As of December 31, 2020

Death in Service (Duty Related)	
Compensation Annuity	75% of the member's salary attached to the civil service position that would ordinarily have been paid to such member as though in active discharge of his duties at the time of death payable until the date the policeman would have attained age 63.
Supplemental Annuity	Payable for life and is equal to the difference between the money purchase annuity for the spouse and an amount equal to 75% of the annual salary (including all salary increases and longevity raises) the police officer would have been receiving when he attained age 63 if the police officer had continued in service at the same rank last held in the department.
Death after Retirement	If a police officer retires on or after January 1, 1986, and subsequently dies, the widow's annuity is 40% before 1988 and 50% on and after January 1, 1988 of the retired policeman's annuity at the time of death (without dollar limit).
Maximum Annuity	$500 a month (after discount for age difference) under both the accumulation method and the old formula method. There is no dollar limit on the 30%, 40% or 50% benefit.
Minimum Annuity	The minimum widow’s annuity shall be no less than 125% of the Federal Poverty Level. *For participants who first became members on or after January 1, 2011, widow benefits are equal to 66-2/3% of the officer’s earned annuity at the date of death. Automatic increases to the annuity are equal to the lesser of 3.00% and 50% of CPI-U, commencing when the survivor reaches age 60, and applied to the original granted retirement annuity.*

CHILDREN'S ANNUITIES	
Eligibility	Payable at death of the policeman to all unmarried children less than 18 years of age.
Benefit	10% of the annual maximum salary of a first class patrolman during widow (widower) life, 15% otherwise.

Payable Until	Age 18. If the child is disabled, benefit is payable for life or as long as such disablement exists.
Family Maximum	60% (non-duty death) or 100% (duty death) of the salary that would ordinarily been paid to the policeman, if he had been in the active discharge of his duties.
Parent's Annuities Eligibility	Payable to a dependent parent at the death of a policeman who is in either active service, or receiving a disability benefit, or on leave of absence, or in receipt of an annuity granted after 20 years of service, or waiting to start receiving an annuity granted for 20 years of service. The benefit is only payable if there are no surviving spouses or children eligible for benefits.
Benefit	18% of the current salary attached to the rank at separation from service.
Payable until	Death of the dependent parent.

DUTY DISABILITY BENEFIT

Eligibility	Disabling condition incurred in the performance of duty.
Benefit	75% of salary at the time the disability is allowed plus $100.00 per month for each unmarried child less than age 18, (total amount of child's benefits shall not exceed 25% of salary). Beginning January 1, 2000, after seven years of payment, the benefit shall not be less than 60% of the current salary attached to the rank held by the policemen at the time of disability. Payable to employee's age 63 or by operation of law, whichever is later. Salary deductions are contributed by the City.

OCCUPATIONAL DISEASE DISABILITY BENEFIT

Eligibility	Heart attack or any disability heart disease after 10 years of service.

Summary of Principal Eligibility and Benefit Provisions
As of December 31, 2020

Benefit	65% of salary attached to the rank held by the police officer at the time of his or her removal from the police department payroll with a minimum after 10 years of 50% of the current salary attached to the rank. Each natural or legally adopted unmarried child of the officer under the age of 18 is entitled to a benefit of $100 per month. This benefit is not terminated at age 18 if the child is then dependent by reason of physical or mental disability. Salary deductions are contributed by the City.

ORDINARY DISABILITY BENEFIT

Eligibility	Disabling condition other than duty or occupational related.
Benefit	50% of salary at the time of injury, payable for a period not more than 25% of service (excluding any previous disability time) rendered prior to injury, nor more than five years. Disability shall cease at age 63. Salary deductions are contributed by the City.

DEATH BENEFIT

Eligibility	Payable upon the death of a police officer whose death occurs while in active service; on authorized leave of absence; within 60 days of receipt of salary; while receiving duty or ordinary disability benefit; occurring within 60 days of termination of such benefit; or occurring on retirement while in receipt of annuity and separation was effective after 20 years of service. This benefit is payable to beneficiaries or, if none, to estate.

Benefit

Death in Service:

Age at Death	Benefit
49 and under	$12,000
50-62	$12,000 less $400 for each year by which age at death exceeds 49

Death after Retirement:

Age at Death	Benefit
50 and over	$6,000

If death results from injury incurred in performance of duty before retirement on annuity, the benefit payable is $12,000 regardless of the attained age.

Summary of Principal Eligibility and Benefit Provisions
As of December 31, 2020

REFUNDS

Policemen Without regard to service and under age 50, or with less than 10 years of service and under age 57 at withdrawal: a refund of all salary deductions together with 1.5% simple interest until the date of withdrawal.

For Spouse's Annuity Upon retirement an unmarried policeman will receive a refund of contributions for spouse's annuity, accumulated at 3% compounded annually.

Of Remaining Amounts If at death of a retired policeman the total member contributions paid while active exceed the total retirement benefits paid to date of death, the difference is payable.

CONTRIBUTIONS

Salary Deductions

Employee	7 %	
Spouse	1½%	
Annuity Increase	½%	
	9 %	

***City Contributions* [1]**

Employee	9-5/7%	
Spouse	2%	
Annuity Increase	½%	Unallocated
	12-3/14%	

[1] *Credited to Participant's Accumulation Annuity and Widow's Annuity Account*

In addition to the above contributions, a contribution is made to support the Death Benefit. Policemen contribute $2.50 per month. City contributes a total of $224,000 for all policemen.

Prior to 2015, the total City contribution was generated by a tax equal to double the contributions by the policemen to the Fund two years prior to the year of the tax levy.

Under P.A. 99-0506, City contributions are equal to $420 million in payment year 2016, $464 million in payment year 2017, $500 million in payment year 2018, $557 million in payment year 2019 and $579 million in payment year 2020. For payment years after 2020, the City is required to make level percent of pay contributions for plan years 2020 through 2055 that along with member contributions and investment earnings are expected to generate a projected funded ratio of 90% by plan year end 2055.

Summary of Principal Eligibility and Benefit Provisions
As of December 31, 2020

"PICK UP" OF EMPLOYEE SALARY DEDUCTIONS

Beginning January 1, 1982, the employee contributions were "picked up" by the employer. The W-2 salary is therefore reduced by the amount of contribution. For pension purposes the salary remains unchanged. Income tax will be paid when a refund or annuity is received. For the purpose of benefits, refunds or contributions, these contributions will be treated as employee contributions.

SALARY CAP AND COLA DEVELOPMENT FOR MEMBERS HIRED ON OR AFTER JANUARY 1, 2011

Year Ending	CPI-U	½ CPI-U	COLA	Maximum Annual Pensionable Earnings
2011			3.00%	$106,800.00
2012	3.90%	1.95%	1.95%	$108,882.60
2013	2.00%	1.00%	1.00%	$109,971.43
2014	1.20%	0.60%	0.60%	$110,631.26
2015	1.70%	0.85%	0.85%	$111,571.63
2016	0.00%	0.00%	0.00%	$111,571.63
2017	1.50%	0.75%	0.75%	$112,408.42
2018	2.20%	1.10%	1.10%	$113,644.91
2019	2.30%	1.15%	1.15%	$114,951.83
2020	1.70%	0.85%	0.85%	$115,928.92
2021	1.40%	0.70%	0.70%	$116,740.42

Health Insurance Premium Subsidies

Pursuant to the court order Underwood, et. al., v. City of Chicago, et. al., PABF provides retiree health insurance premium subsidies to certain eligible annuitants.

To be eligible for the PABF paid subsidy, the annuitant must meet the following eligibility requirements to receive partial reimbursement for healthcare costs:

1) Annuitant must have retired on or after August 23, 1989;
2) Annuitant must have been hired prior to April 4, 2003; And
3) Annuitant must have either:
    a) participated in a group healthcare plan for which the Fund 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; the Aetna plans sponsored by the Labor Benefits Association; or the United American Insurance Co. plans sponsored by the Chicago Police Sergeants' Association);
    OR
    b) for the period between January 1, 2017, and December 31, 2019, participated in any health insurance plan and paid their healthcare insurance premiums themselves, either through an account on which the annuitant is named or an account established for the benefit of the annuitant.

Eligible annuitants are entitled to receive a health insurance premium subsidy payable from PABF for the lifetime of the employee annuitant in the amount of $55 per month if the annuitant is not receiving Medicare benefits or $21 per month if the annuitant is receiving Medicare benefits.

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Statistical Section

SUPPLEMENTAL INFORMATION

The following section contains special schedules designed to supplement benefit payment data contained elsewhere in this Annual Comprehensive Financial Report.

- **Revenue by Source and Expenses by Type** details the specific sources and uses of funds: Employee contributions obtained from participants through payroll deductions, employer contributions from the City of Chicago's real estate tax levy and finally, net investment income derived from the Fund's portfolio of assets. On the expense side, the largest component is benefit payments to participants, followed by refunds of contributions to participants and finally, the Fund's administrative expenses.

- **Schedule of Benefit Expenses by Type (Last 10 Years)** further details the total annual benefit expense by breaking it down into payments to annuitants, survivors, disability payments, death benefits, and health insurance supplements.

- **Average Employee Retirement Benefits Payable** provides some key demographics of the annuitant population including average annual benefit paid, average current age, average age at retirement, and average years of service prior to retirement.

- **Retirees and Beneficiaries by Type of Benefit** provides totals for each type of benefit payment including those to annuitants and their survivors as well as receiving disability benefits from the Fund.

- **Retirees and Beneficiaries by Type of Benefit** provides totals for each type of benefit payment including those to annuitants and their survivors as well as receiving disability benefits from the Fund.

REVENUES BY SOURCE AND EXPENSES BY TYPE

Year	Employee Contributions(1)	Employer Contributions(2)	Net Investment Income (3)	Total	Employer Contribution % of Current Year Payroll
2011	98,222,258	183,521,528	33,656,109	315,504,361	17.51%
2012	95,402,353	207,651,238	353,176,346	656,719,636	20.41%
2013	93,328,944	189,368,568	415,293,612	697,991,124	18.60%
2014	95,675,538	187,074,950	181,901,293	465,392,086	17.41%
2015	107,626,311	582,277,634	(5,333,795)	687,661,695	53.59%
2016	101,475,864	282,996,634	142,699,124	527,170,988	25.15%
2017	103,011,250	494,580,430	412,190,404	1,009,782,084	42.99%
2018	107,186,492	589,635,278	(137,885,926)	558,935,844	48.92%
2019	110,791,663	581,936,012	369,982,655	1,062,710,330	47.35%
2020	113,621,747	739,621,747	271,890,867	1,125,134,361	61.84%

Year	Benefits Expenses	Administrative Expenses	Refunds	Total	Income Less Payouts
2011	567,968,186	3,895,731	7,337,234	579,664,377	(264,160,016)
2012	602,756,032	4,396,638	11,150,565	618,795,083	37,924,553
2013	633,839,274	3,891,329	8,087,018	646,223,804	51,767,320
2014	655,346,057	3,817,256	8,991,636	668,578,318	(203,186,232)
2015	678,391,614	4,062,553	7,826,847	690,726,980	(3,065,285)
2016	705,646,617	4,280,280	10,704,842	721,101,221	(193,930,233)
2017	737,873,928	4,843,012	10,017,655	752,734,595	257,047,489
2018	764,367,368	4,064,802	6,737,073	775,169,243	(216,233,399)
2019	791,839,040	4,734,467	8,828,904	805,402,411	257,307,919
2020	828,901,654	4,359,314	12,696,058	845,957,026	279,177,335

(1) Includes deductions in lieu for disability.
(2) Net tax levy and miscellaneous income.
(3) Includes realized net gain or loss on sale and exchange of assets, and net of investment expense.

SCHEDULE OF BENEFIT EXPENSES BY TYPE (LAST 10YEARS)

Year	Employee	Spouse	Dependent	Ordinary, Duty and Children Disability	Death	Hospitalization	Total
2011	472,856,232	59,935,287	1,340,422	22,184,051	1,510,800	9,591,394	567,968,186
2012	506,760,531	61,250,640	1,416,014	21,427,161	1,543,000	9,756,686	602,756,032
2013	538,536,309	63,523,734	1,315,842	18,981,479	1,634,600	9,847,310	633,839,274
2014	559,600,101	64,434,631	1,293,297	18,793,972	1,566,933	9,657,123	655,346,057
2015	582,438,574	65,651,185	1,355,124	17,595,977	1,909,200	9,441,534	678,391,614
2016	609,713,604	67,839,603	1,266,204	16,101,692	1,570,000	9,155,514	705,646,617
2017	645,040,385	70,591,423	1,562,416	18,832,104	1,847,600	-	737,873,928
2018	667,186,632	75,809,241	1,386,152	17,841,384	2,071,800	-	764,295,209
2019	694,268,801	77,027,876	1,521,163	16,998,400	2,022,800	-	791,839,040
2020	730,374,710	79,269,578	1,569,090	15,613,708	2,074,568	-	828,901,654

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO
AVERAGE EMPLOYEE RETIREMENT BENEFITS PAYABLE

Years Ended	Average Annual Benefit	Average Current Age of Retirees	Average Age at Retirement Current Year*	Average Years of Benefit Service at Retirement Current Year*
1991	21,782	68	58.4	30.8
1992	23,128	68	57.7	30.3
1993	24,724	68	56.9	29.6
1994	25,636	68	55.7	29.5
1995	26,996	67	55.3	29.2
1996	28,412	67	55.5	29.8
1997	29,867	67	55.0	29.3
1998	31,682	66	54.6	30.0
1999	33,220	66	54.8	29.9
2000	34,880	66	56.3	31.6
2001	36,428	66	56.4	29.8
2002	38,199	66	55.6	29.4
2003	38,998	66	57.1	30.2
2004	41,914	66	57.5	30.4
2005	43,930	67	57.3	30.6
2006	45,680	67	58.0	29.6
2007	47,392	67	58.1	29.3
2008	49,239	68	58.3	29.4
2009	50,799	68	59.2	28.6
2010	53,060	68	59.1	28.1
2011	55,104	68	59.5	27.4
2012	56,896	69	58.7	26.7
2013	58,556	69	58.2	26.1
2014	60,111	69	57.6	26.2
2015	61,702	69	57.5	26.5
2016	63,381	69	57.5	26.9
2017	65,615	69	57.5	26.6
2018	67,434	70	57.7	26.6
2019	68,746	70	57.1	26.6
2020	71,202	70	56.9	27.3

** Averages for new annuitants in 2020.*

POLICEMEN'S ANNUITY AND BENEFIT FUND OF CHICAGO
RETIREES AND BENEFICIARIES BY TYPE OF BENEFIT

Years	ANNUITANTS				DISABILITY			Widow	Total
	Employee	Spouse[1]	Child	Ordinary	Duty	Occup.	Child[2]	Comp.	
1991	5,033	3,137	329	75	192			68	8,834
1992	5,109	3,129	310	83	204			66	8,901
1993	5,195	3,151	294	59	211		160	66	9,136
1994	5,309	3,123	281	51	221		159	64	9,208
1995	5,510	3,133	254	51	231	1	144	60	9,384
1996	5,714	3,120	252	67	256	12	158	59	9,638
1997	5,945	3,104	240	59	270	36	130	59	9,843
1998	6,241	3,093	228	56	279	57	150	57	10,161
1999	6,520	3,118	249	57	291	76	150	58	10,519
2000	6,876	3,107	267	48	274	87	149	59	10,867
2001	7,192	3,114	255	52	265	95	143	59	11,175
2002	7,392	3,092	235	38	289	103	150	59	11,358
2003	7,498	3,083	247	29	285	97	139	63	11,441
2004	7,815	3,133	249	44	287	85	130	65	11,808
2005	8,026	3,107	247	35	298	82	139	65	11,999
2006	8,083	3,093	255	39	291	69	132	64	12,026
2007	8,155	3,137	242	52	284	65	136	64	12,135
2008	8,210	3,148	237	39	286	58	139	66	12,183
2009	8,227	3,111	232	44	284	52	138	66	12,154
2010	8,495	3,079	222	37	284	40	155	69	12,381
2011	8,763	3,091	214	43	270	36	176	70	12,663
2012	9,035	3,122	214	47	263	36	180	69	12,966
2013	9,194	3,130	206	46	269	35	213	66	13,159
2014	9,311	3,109	197	48	259	36	204	66	13,230
2015	9,385	3,078	198	41	230	35	178	65	13,210
2016	9,603	3,102	186	40	202	33	164	64	13,394
2017	9,899	3,059	185	40	197	31	154	63	13,628
2018	9,930	3,054	190	36	182	29	147	63	13,631
2019	10,078	3,070	201	40	167	25	125	65	13,771
2020	10,283	3,025	198	31	160	22	114	67	13,900

[1] *Includes reversionary.*
[2] *Children's Disability Benefit not tracked before 1993.*

Schedule of Active Members Data - Last 10 Years

Year	Number of Members at Year End	Annual Average Salary	% Change in Average Salary
2011	12,236	84,538	2.7%
2012	12,026	84,414	(0.1)%
2013	12,161	83,499	(1.1)%
2014	12,020	89,379	7.0%
2015	12,061	90,093	0.8%
2016	12,177	91,938	2.0%
2017	12,633	91,064	(1.0)%
2018	13,438	89,695	(1.5)%
2019	13,353	92,038	2.6%
2020	12,715	94,061	2.2%

Schedule of Retired Members Data - Last 10 Years

Year	Number of Annuitants at Year End	Average Annual Benefit	Average Monthly Benefit	Average Age at Retirement	Average Age of Current Retirees	Average Years of Service at Retirement
2011	8,763	55,104	4,592	59.5	68	27.4
2012	9,035	56,896	4,741	58.7	69	26.7
2013	9,194	58,556	4,880	58.2	69	26.1
2014	9,311	60,111	5,009	57.6	69	26.2
2015	9,385	61,702	5,142	57.5	69	26.5
2016	9,603	63,381	5,282	57.5	69	26.9
2017	9,899	65,615	5,468	57.5	69	26.6
2018	9,930	67,434	5,620	57.7	70	26.6
2019	10,078	68,746	5,729	57.1	70	26.9
2020	10,283	71,202	5,934	56.9	70	27.3

Schedule of Widow Annuitants - Last 10 Years

Year	Number at Year End	Average Annual Benefit	% Change in Average Benefit
2011	3,091	17,898	2.8%
2012	3,122	18,466	3.2%
2013	3,130	18,965	2.7%
2014	3,109	19,379	2.2%
2015	3,078	19,961	3.0%
2016	3,102	20,545	2.9%
2017	3,059	22,056	7.4%
2018	3,054	22,836	3.5%
2019	3,070	23,713	3.8%
2020	3,025	24,401	2.9%

Schedule of Children's Annuities - Last 10 Years

Year	Number of Annuitants at Year End	Average Annual Benefit	% Change in Average Benefit
2011	214	5,992	5.4%
2012	214	6,365	6.2%
2013	206	6,388	0.4%
2014	197	6,565	2.8%
2015	198	6,844	4.2%
2016	186	6,808	(0.5)%
2017	185	6,947	2.0%
2018	190	7,187	3.5%
2019	201	7,417	3.2%
2020	198	7,542	1.7%

Schedule of Ordinary Disability Recipients Data - Last 10 Years

Year	Number of Recipients at Year End	Average Annual Benefit	% Change in Average Benefit
2011	43	41,864	2.9%
2012	47	42,164	0.7%
2013	46	41,958	(0.5)%
2014	48	41,917	(0.1)%
2015	41	44,184	5.4%
2016	40	45,373	2.7%
2017	40	47,255	4.1%
2018	36	47,615	(0.8)%
2019	40	46,046	(3.3)%
2020	31	48,060	4.4%

Schedule of Duty Disability Recipients Data - Last 10 Years

Year	Number of Recipients at Year End	Average Annual Benefit	% Change in Average Benefit
2011	270	54,703	3.6%
2012	263	54,910	0.4%
2013	269	55,587	1.2%
2014	259	56,301	1.3%
2015	230	59,057	4.9%
2016	202	60,244	2.0%
2017	197	61,411	1.9%
2018	182	62,166	1.2%
2019	167	64,364	3.5%
2020	160	63,638	(1.1)%

Schedule of Occupational Disease Disability Recipients Data - Last 10 Years

Year	Number of Recipients at Year End	Average Annual Benefit	% Change in Average Benefit
2011	36	49,341	1.9%
2012	36	50,375	2.1%
2013	35	52,191	3.6%
2014	36	53,579	2.7%
2015	35	56,287	5.1%
2016	33	57,573	2.3%
2017	31	58,140	1.0%
2018	29	58,348	0.4%
2019	25	58,355	0.0%
2020	22	58,751	0.7%

Schedule of Children's Disability Recipients Data - Last 10 Years

Year	Number of Recipients at Year End	Average Annual Benefit	% Change in Average Benefit
2011	176	1,200	0%
2012	180	1,200	0%
2013	213	1,200	0%
2014	204	1,200	0%
2015	178	1,200	0%
2016	164	1,200	0%
2017	154	1,200	0%
2018	147	1,200	0%
2019	125	1,200	0%
2020	114	1,200	0%

NOTE: Child disability benefits are $100 per month.

Schedule of Widows' Compensation Annuities - Last 10 Years

Year	Number of Annuitants at Year End	Average Annual Benefit	% Change in Average Benefit
2011	70	61,122	6.2%
2012	69	61,566	0.7%
2013	66	63,079	2.5%
2014	66	63,427	0.6%
2015	65	64,801	2.2%
2016	64	64,195	(0.9)%
2017	63	66,654	3.8%
2018	63	67,780	1.7%
2019	65	66,892	(1.3)%
2020	67	67,786	1.3%

Schedule of Health Insurance Supplement Data – Last 8 Years

Year	Number of Members at Year End	Annual Average Benefit Subsidy	% Increase in Average Benefit Subsidy
2013	10,809	$911	0.2%
2014	10,676	$905	(0.7)%
2015	10,405	$907	0.2%
2016	10,268	$892	(1.7)%
2017	0	$0	0.0%
2018	0	$0	0.0%
2019	0	$0	0.0%
2020	0	$0	0.0%

Note: Health Insurance Supplement benefits were $95 per month for each annuitant that was not qualified to receive Medicare benefits or $65 per month for each annuitant that was qualified to receive Medicare benefits. Health insurance supplement benefits were not based upon final average salary or credited service year. The benefit amount was exclusively determined by Medicare eligibility. Health Insurance Supplement benefits expired December 31, 2016.

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