PARK EMPLOYEES' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND

Component Unit of Chicago Park District

State of Illinois

ANNUAL COMPREHENSIVE FINANCIAL REPORT

PARK EMPLOYEES' ANNUITY AND BENEFIT FUND OF CHICAGO

FOR THE YEARS ENDED DECEMBER 31, 2022 and 2021

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Chicago, IL 60609
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PARK EMPLOYEES' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND

ANNUAL COMPREHENSIVE FINANCIAL REPORT

FOR THE YEARS ENDED DECEMBER 31, 2022 AND 2021

Prepared by:

Administrative Staff of the Retirement Board

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INTRODUCTORY SECTION

This section includes miscellaneous data regarding the Fund including: Letter of Transmittal, Principal Officials, Organizational Chart, and Certificate of Achievement for Excellence in Financial Reporting.

Retirement Board of the
PARK EMPLOYEES' ANNUITY AND BENEFIT FUND

3500 S. Morgan Street
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Chicago, Illinois 60609
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June 12, 2023

To the Members of the Park Employees' and
Retirement Board Employees' Annuity and Benefit Fund

The Park Employees' and Retirement Board Employees' Annuity and Benefit Fund of Chicago (Fund) presents its Annual Comprehensive Financial Report (Annual Report) for the year ended December 31, 2022. The accuracy of the information contained in the report, including all disclosures, is the sole responsibility of the Fund. The intent of the Annual Report is to present the financial condition of the Fund and its related results of operations. The statements and disclosures contained in the Annual Report are necessary to assist the Fund's participants, taxpayers, and other interested parties in fully understanding the Fund's financial condition. Lauterbach & Amen, LLP, the Fund's new auditors, has issued an unmodified opinion on the Fund's financial statements as of December 31, 2022. Readers of the Annual Report are encouraged to review the Independent Audit Report, located in the Financial Section of this report.

Fund Background

The Fund is a single employer, defined benefit plan covering the eligible public employees of the Chicago Park District. The Fund was created by an act of the Legislature of the State of Illinois, approved June 21, 1919 and effective July 1, 1919, covering the three major park systems of Chicago. With the statutory consolidation of the separate park districts of Chicago on May 1, 1934, the Chicago Park District was created authorizing the Fund to cover its employees. The Fund is administered in accordance with Chapter 40 of the Illinois Compiled Statutes, Act 5, Articles 1 and 12.

Responsibilities of the Board of Trustees

The Board of Trustees is composed of seven members. Four members are elected by the active participants for four-year terms and the Chicago Park District Board of Commissioners appoints three members for three-year terms. Elected members' terms are staggered so that one member is elected each year. All Trustees serve the Fund without compensation. The Board of Trustees elects a President, Vice President, and Secretary from within its ranks at its annual meeting in July. These elected office holders each have a prescribed set of duties. The Board of Trustees has various duties and responsibilities which include: invest funds in accordance with state law and its internal investment policy; approve the appointments of all necessary consultants and advisors; develop and approve all rules, regulations, and policies governing the operation of the Fund; review and approve all applications for disability, annuities, and other benefits; and monitor the financial and operational activities of the Fund. The day-to-day operations of the Fund are the responsibility of the Executive Director.

Overview

At December 31, 2022, total Fund membership, including active, inactive, disability, retired members and beneficiaries is 10,828. The Fund's fiduciary net position decreased by $48.8 million during 2022 resulting in a net position restricted for pension benefits of $365.8 million. The additions to the Fund, which include employer and employee contributions and net investment income, totaled $36.0 million. During 2022, the Chicago Park District contributed the statutorily required amounts, in addition to supplemental contributions of $42.0 million. The total Fund deductions for 2022 were $84.8 million, which is an increase in comparison to the total deductions from prior year. Fund deductions include annuity payments, disability and death benefits, refund of employee contributions, and administrative expenses. For a full understanding of the Fund's financial condition, we encourage the reader to review the Financial Section as well as the Actuarial Section of this report.

Accounting Method and Internal Controls

The Annual Report was prepared to conform with the principles of governmental accounting and reporting as pronounced by the Governmental Accounting Standards Board (GASB) and the American Institute of Certified Public Accountants (AICPA). In recording assets and liabilities, revenues and expenses, the accrual basis of accounting is used. All revenues including contributions are recognized when earned and expenses are recorded when incurred.

The Fund employs a system of internal controls to adequately safeguard its assets and assure the reliability of its financial records which includes the financial statements, supporting schedules and statistical tables. The internal control structure is designed to provide reasonable, but not absolute assurance that these objectives are met. The concept of reasonable assurance recognizes that the cost of control should not exceed the benefits likely to be derived, and that the valuation costs and benefits require estimates and judgments by management. An evaluation of the internal control structure during the Fund's annual independent audit disclosed no material weaknesses. Management, with the assistance of its outside auditors, continually reviews the system of internal control to insure its adequacy and effectiveness.

Actuarial Status

The Fund's independent actuary, Segal Consulting, conducts an actuarial valuation of the Fund annually. Each actuarial valuation involves a projection of the benefits expected to be paid in the future to all members of the Fund. The projection is based on the characteristics of members at the valuation date, the benefit provisions in effect on that date, and assumptions of future events and conditions. Segal Consulting also conducts an actuarial experience review every five years. These studies serve as the basis for recommended changes in actuarial assumptions and methods adopted by the Fund.

The funded ratio is the Fund's actuarial value of assets divided by the Fund's actuarial accrued liability. At December 31, 2022, the actuarial value of assets is $399,673,931 and the actuarial accrued liability is $1,269,016,883. The Fund's funded ratio at December 31, 2022 is 31.5% compared to 32.0% for the year ended December 31, 2021. The unfunded actuarial accrued liability at December 31, 2022 amounted to $869,342,952. The Fund's actuarial accrued liability increased during the current year, which resulted in a slight decrease in the Fund's funded ratio. The calculations of these figures are discussed further within the note disclosures of the Financial Section and within the Actuarial Section of this report.

Investment Policy and Performance

The Fund's investment policy was developed to insure the long-term financing of its funding requirements. Utilizing the services of Meketa Investment Group, Inc., the Trustees review the investment policy on an on-going basis making amendments as needed. The Fund's current investment policy, which details investment authority, asset allocation, diversification, liquidity, performance measurement, and objectives, is provided in the Investment Section of this report. The policy is designed to obtain the highest expected return on investments consistent with the level of risk for a public pension fund with the funded status described above.

As of December 31, 2022, the fair value of investments was $335,371,411, which compares to $396,037,174 as of December 31, 2021. As of December 31, 2022, the Fund's annual investment rate of return was -10.9% compared to 14.6% for December 31, 2021. The Fund's investment prospects in 2022 were challenging due to the overall market conditions. The Fund, with the guidance of its Investment Consultant, remained steadfast in its convictions to its diversified investment strategy. Despite the negative investment climate, the Fund's investment performance was still in the top 15% of our peers per Investment Metrics ratings. Most importantly, the Fund's need to sell assets to make benefit payments was greatly reduced in 2022 because of the larger employer contributions required by Public Act 102-0263. A more enhanced discussion about the Fund's performance history can be found in the Investment Section of this report.

GFOA Award

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Park Employees' and Retirement Board Employees' Annuity and Benefit Fund for its Annual Comprehensive Financial Report for the year ended December 31, 2021. In order to be awarded a Certificate of Achievement, a public pension fund must publish an easily readable and efficiently organized Annual Comprehensive Financial Report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current Annual Comprehensive Financial Report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

Governmental Accounting Standards Board

The Fund is currently in full compliance with all pronouncements from the Governmental Accounting Standards Board.

Retirement Board

The annual election for an employee representative to the Retirement Board was to be held on Friday, June 23, 2023. Only one candidate was nominated and therefore declared as winner. Frank Hodorowicz was re-elected for a four year term beginning July 1, 2023.

Acknowledgments

All the statistical and financial information compiled and presented in this Annual Report is due to the combined efforts of the administrative staff of the Fund. Their efforts are hereby acknowledged with thanks and appreciation.

On behalf of the Retirement Board,

Edward L. Affolter

Edward L. Affolter, President

Principal Officials
December 31, 2022

Elected by the Employees

Frank Hodorowicz
Term expires June 30, 2023

Edward L. Affolter
Term expires June 30, 2025

Brian Biggane
Term expires June 30, 2024

Matthew Duggan
Term expires June 30, 2026

Appointed by the Chicago Park District Board of Commissioners

Steven J. Lux
Term expires June 30, 2023

Cynthia Evangelisti
Term expires June 30, 2024

OFFICERS

Edward L. Affolter, President
Brian Biggane, Vice President
Frank Hodorowicz, Secretary

ADMINISTRATIVE STAFF

Steve Swanson, Executive Director
Jaime L. McCabe, Comptroller

CONSULTANTS

Jacobs, Burns, Orlove & Hernandez, Attorney
Lauterbach & Amen, LLP, Auditor
The Segal Company, Consulting Actuary
Meketa Investment Group, Inc., Investment Consultant

CUSTODIAN

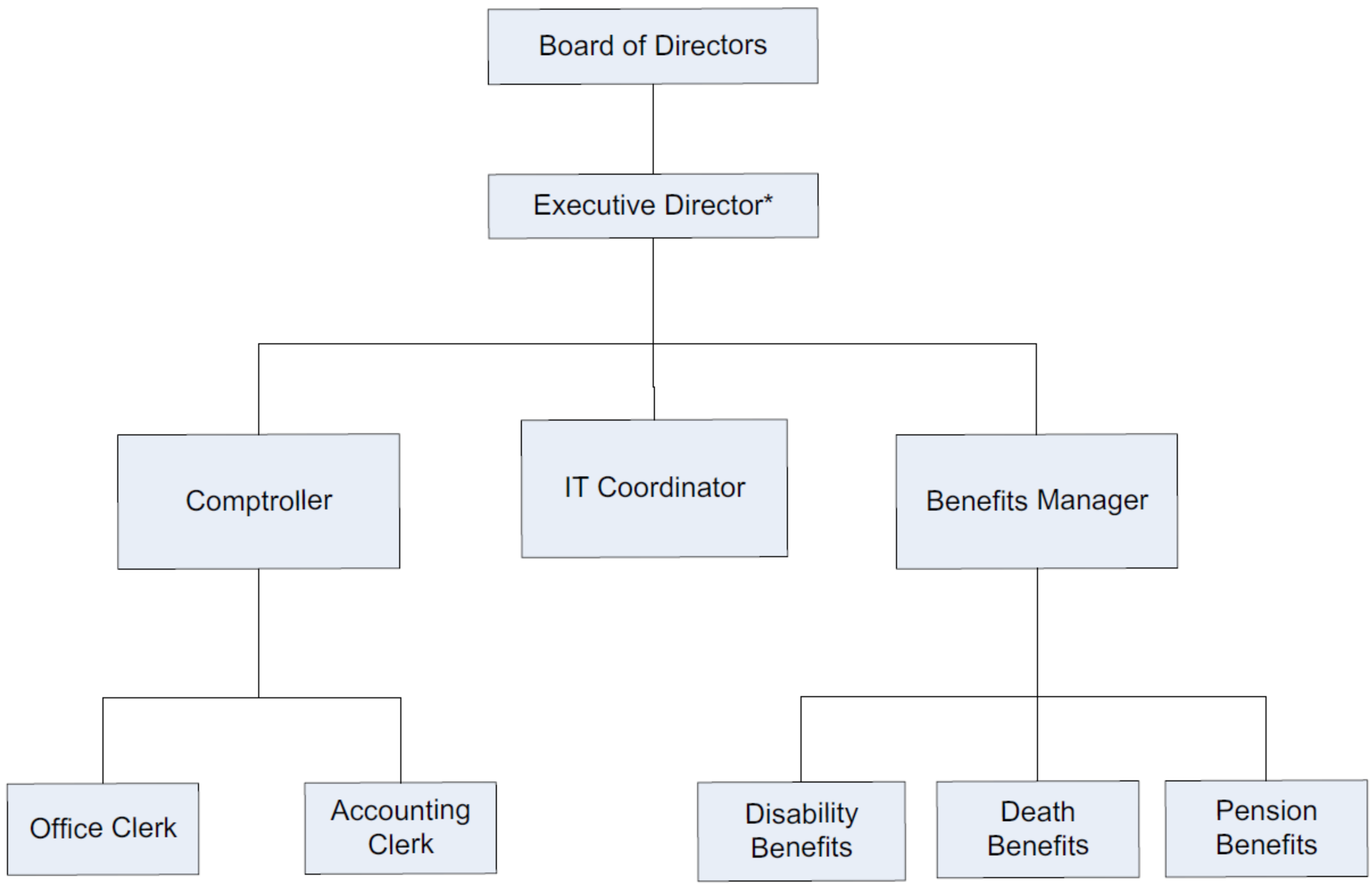
The Northern Trust Company of Chicago

INVESTMENT ADVISORS

Ariel Investments - *Chicago*
Ativo Capital - *Chicago*
Entrust - *New York*
Goldpoint Partners, LLC - *New York*
Great Lakes Advisors, LLC - *Chicago*
HarbourVest Partners, LLC - *Boston*
Industry Funds Management (IFM) - *New York*
LM Capital Group, LLC - *San Diego*
MacKay Shields, LLC - *New York*
Mesirow Financial Capital Partners - *Chicago*
National Investment Services - *Milwaukee*
Northern Trust Asset Management - *Chicago*
Parametric - *Washington*
PineBridge Investments - *New York*
Principal Global Investors - *Des Moines*
UBS Realty Investors, LLC - *Hartford*
ULLICO Investment Company - *Washington D.C.*
William Blair & Company - *Chicago*

PARK EMPLOYEES' AND RETIREMENT BOARD EMPLOYEES'
ANNUITY AND BENEFIT FUND

ORGANIZATION CHART



*The Executive Director is responsible for the handling of all investment matters. The Fund does not internally manage any investments.

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Park Employees' and Retirement Board Employees' Annuity and Benefit Fund
Illinois

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

December 31, 2021

Christopher P. Morrill

Executive Director/CEO

FINANCIAL SECTION

This section includes:

- Independent Auditors' Report
- Management's Discussion and Analysis
- Financial Statements
- Required Supplementary Information

INDEPENDENT AUDITORS’ REPORT

This section includes the opinion of the Fund’s independent auditing firm.

Lauterbach & Amen, LLP
CERTIFIED PUBLIC ACCOUNTANTS
668 N. RIVER ROAD • NAPERVILLE, ILLINOIS 60563
PHONE 630.393.1483 • FAX 630.393.2516
www.lauterbachamen.com

June 12, 2023

Members of the Retirement Board
Park Employees' and Retirement Board Employees' Annuity and Benefit Fund of Chicago
Chicago, Illinois

Opinions

We have audited the basic financial statements of the Park Employees' and Retirement Board Employees' Annuity and Benefit Fund of Chicago (the "Fund"), a pension trust fund of the Chicago Park District, Illinois, as of and for the year ended December 31, 2022, and the related notes to the financial statements, which collectively comprise the Pension Fund's basic financial statements as listed in the table of contents.

In our opinion, the financial statements referred to above present fairly, in all material respects, the plan net position of the Park Employees' and Retirement Board Employees' Annuity and Benefit Fund of Chicago, Illinois, as of December 31, 2022, and the respective changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Pension Fund, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Pension Fund's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

Auditor’s Responsibilities for the Audit of the Financial Statements - Continued

In performing an audit in accordance with generally accepted auditing standards, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 Pension Fund’s internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Pension Fund’s ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

As discussed in Note 1, these basic financial statements present only the Pension Fund and are not intended to present fairly the financial position and changes in financial position of the Park Employees' and Retirement Board Employees' Annuity and Benefit Fund of Chicago, Illinois, in conformity with accounting principles generally accepted in the United States of America.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management’s discussion and analysis and budgetary comparison information be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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 audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Park Employees' and Retirement Board Employees' Annuity and Benefit Fund of Chicago, Illinois, Illinois’ basic financial statements. The other supplementary information is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit 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, other supplementary information fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Information

Management is responsible for the other information included in the annual report. The other information comprises the introductory and statistical sections but does not include the basic financial statements and our auditor’s report thereon. Our opinions on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

Lauterbach & Amen, LLP

LAUTERBACH & AMEN, LLP

MANAGEMENT'S DISCUSSION AND ANALYSIS

Management's Discussion and Analysis
December 31, 2022

This section presents Management's Discussion and Analysis (MD&A) of the Park Employees' and Retirement Board Employees' Annuity and Benefit Fund of Chicago's (the Fund) financial performance and provides an overview of the Fund's financial activities for the year ended December 31, 2022 and 2021. Please read the MD&A in conjunction with the basic financial statements and the accompanying note disclosures to have a better understanding of the financial condition and performance of the Fund. Information provided for the year ended December 31, 2020 is presented for comparative purposes only.

Overview of Financial Statements and Accompanying Information

This discussion and analysis is intended to serve as an introduction to the Fund's financial reporting which is comprised of the following components:

1. The Fund's fiduciary net position decreased during the year by $48.8 million or 11.8 percent compared to an increase of $66.4 million or 19.1 percent for the year ended December 31, 2021.
2. The Fund's 2022 investment return of (10.9) percent fell short of the portfolio's annual targeted rate of return of 7.25 percent.
3. The Fund's five-year rate of return of 4.6 percent fell short of the portfolio's annual targeted rate of return of 7.25 percent.
4. The Fund's ten-year rate of return of 7.2 percent was slightly below the portfolio's annual targeted rate of return of 7.25 percent.
5. For the year ended December 31, 2022, the additions to the Fund's fiduciary net position of $36.0 million is $112.7 million less than the year ended December 31, 2021 additions.
6. For the year ended December 31, 2022, the deductions to the Fund's fiduciary net position of $84.8 million is $2.5 million more when compared to the deductions for the year ended December 31, 2021.
7. The Fund's actuarially computed funded ratio is 31.5 percent at December 31, 2022, which is 0.5 percent less than at December 31, 2021.

Using this Financial Report

The Management Discussion and Analysis introduces the Fund's basic financial statements. The basic financial statements include the Statements of Fiduciary Net Position and the Statements of Changes in Fiduciary Net Position, which are prepared on an accrual basis of accounting in accordance with Government Accounting Standards Board (GASB) pronouncements and reflect the Fund's overall financial condition.

The Statements of Fiduciary Net Position reports the Fund's assets at fair value and liabilities as amounts owed as of the statement date, resulting in the net position restricted for pension benefits.

The Statements of Changes in Fiduciary Net Position illustrate the additions and deductions made to the Fund during the statement date. These additions include employee and employer contributions, as well as net investment income. The deductions consist of benefit payments, refunds of contributions and administrative and general expenses. The net result indicates an increase or decrease in Fund net position restricted for pension benefits.

The accompanying notes are an integral part of the financial statements. They provide information essential to achieve full understanding of the Fund's financial statements.

Using this Financial Report - Continued

The required supplementary information, presented following the notes to the financial statements, is required by GASB. These schedules offer the reader additional details, which may be useful in evaluating the financial condition and performance of the Fund. The schedules include the Schedule of Changes in Employer's Net Pension Liability and Related Ratios, the Schedule of Employer Contributions, the Schedule of Investment Returns, as well as related disclosures. Other supplementary information consists of schedules of Tax Levies Receivable, Administrative and General Expenses, Professional Expenses, and Investment Expenses.

Net Position Restricted for Pension Benefits

The Fund's net position restricted for pension benefits at December 31, 2022 is $365,845,448. This is $48,813,202 less than the December 31, 2021 net position restricted for pension benefits of $414,658,650. This compares to an increase of $66,364,135 for the year ended December 31, 2021. The contribution due from employer is required by Illinois state statue, to be paid by the Chicago Park District. Under the current law, P.A. 102-0263, which took effect on August 6, 2021, employer contributions are actuarially determined. Tax multipliers used for the 2021 and 2020 employer's contributions were 1.1 times the amount of employee contributions received from two years prior. The Fund's capital assets - net of accumulated depreciation/ amortization increased from prior year primarily due to the implementation of GASB Statement No. 87, which related to improving accounting and financial reporting for leases by governments. The Fund also moved office locations in 2022 which incurred additional costs. The Fund's investment portfolio increases and decreases from year to year depending on the strength of the financial markets. Unfortunately, in 2022, the overall investment markets were challenging. With the guidance from the Fund's Investment Consultant, the Fund's diversified portfolio was still in the top 15% of its peers.

	Statement of Fiduciary Net Position		
	2022	2021	Increase (Decrease)
Assets			
Contributions Due from Employer	$ 25,000,000	13,566,840	11,433,160
Miscellaneous Receivables and Other Assets	6,567,075	6,245,375	321,700
Capital Assets - Net of Accumulated Depreciation/Amortization	1,458,161	124,839	1,333,322
Investments, at Fair Value	335,371,411	396,037,174	(60,665,763)
Invested Securities Lending Collateral	16,345,710	16,779,808	(434,098)
Total Assets	384,742,357	432,754,036	(48,011,679)
Liabilities			
Accrued Expenses and Other Liabilities	2,551,199	1,315,578	1,235,621
Securities Lending Collateral	16,345,710	16,779,808	(434,098)
Total Liabilities	18,896,909	18,095,386	801,523
Total Plan Net Position	365,845,448	414,658,650	(48,813,202)

Plan Net Position - Continued

	Statement of Fiduciary Net Position		
	2021	2020	Increase (Decrease)
Assets			
Contributions Due from Employer	$ 13,566,840	14,376,581	(809,741)
Miscellaneous Receivables and Other Assets	6,245,375	5,934,932	310,443
Capital Assets - Net of Accumulated Depreciation/Amortization	124,839	131,686	(6,847)
Investments, at Fair Value	396,037,174	329,229,908	66,807,266
Invested Securities Lending Collateral	16,779,808	16,670,194	109,614
Total Assets	432,754,036	366,343,301	66,410,735
Liabilities			
Accrued Expenses and Other Liabilities	1,315,578	1,378,592	(63,014)
Securities Lending Collateral	16,779,808	16,670,194	109,614
Total Liabilities	18,095,386	18,048,786	46,600
Total Plan Net Position	414,658,650	348,294,515	66,364,135

Changes in Fiduciary Net Position

The Fund's total additions during the year ended December 31, 2022 decreased by $112,656,053 as compared to an increase of $73,978,386 for the year ended December 31, 2021. Even during times of instability within the financial markets over the past few years, the Fund has remained steadfast in its convictions to its diversified investment strategy. During the current year, the Fund recognized a net investment loss during the year of $43,769,718 as compared to net investment gain of $53,108,732 in 2021 and a net investment gain of $28,131,778 in 2020. Additions from employer contributions decreased from $83,349,261 in 2021 to $67,128,978 in 2022. The Chicago Park District recognizes the financial burden the Fund is currently facing. In 2021, Public Act 102-0263 was signed into law which required the Chicago Park District to make a $40 million supplement employer contribution to the Fund. This contribution helped the Fund significantly, as the need to sell assets to make benefit payments in 2022 was greatly reduced. In 2022, 2021, and 2020, the Fund also received voluntary contributions from the Chicago Park District in addition to the required amounts by state statutes of approximately $10.1 million, $29.7 million, and $20.7 million, respectively. The employee contributions increased slightly during the year from $12,226,998 in 2021 to $12,669,678 in 2022. In 2022, the hiring restrictions from the global pandemic were lifted.

The number of retirees and beneficiaries has decreased from 2,775 and 2,752 in 2020 and 2021, respectively, to 2,745 in 2022. During the year, the Fund experienced an increase of applications for retirement than in the prior year but still saw a significant amount of deaths. While the Fund's total number of retirees and beneficiaries decreased slightly, the total benefit payments in 2022 increased in comparison to 2021 mainly due to annual increases.

Changes in Fiduciary Net Position - Continued

The following tables are comparative summaries of changes in fiduciary net position restricted for pension benefits:

	Statement of Change in Fiduciary Net Position		
	2022	2021	Increase (Decrease)
Additions			
Employer Contributions	$ 67,128,978	83,349,261	(16,220,283)
Employee Contributions	12,669,678	12,226,998	442,680
Net Investment (Loss) Income			
(includes Security Lending Activities	(43,769,718)	53,108,732	(96,878,450)
Total additions	36,028,938	148,684,991	(112,656,053)
Deductions			
Retirement Benefits	67,325,938	65,655,719	1,670,219
Spousal Benefits	12,403,651	12,126,482	277,169
Child Benefits	9,600	17,400	(7,800)
Disability Benefits	519,126	459,127	59,999
Death Benefits	244,500	277,500	(33,000)
Total Benefits	80,502,815	78,536,228	1,966,587
Refund of Contributions	2,337,305	2,066,616	270,689
Administrative and General Expenses	2,002,020	1,718,012	284,008
Total Deductions	84,842,140	82,320,856	2,521,284
Change in Net Position	(48,813,202)	66,364,135	(115,177,337)
Net Position - Beginning	414,658,650	348,294,515	66,364,135
Net Position - Ending	365,845,448	414,658,650	(48,813,202)

Changes in Fiduciary Net Position - Continued

	Statement of Change in Fiduciary Net Position		
	2021	2020	Increase (Decrease)
Additions			
Employer Contributions	$ 83,349,261	33,939,927	49,409,334
Employee Contributions	12,226,998	12,634,900	(407,902)
Net Investment (Loss) Income			
(includes Security Lending Activities	53,108,732	28,131,778	24,976,954
Total additions	148,684,991	74,706,605	73,978,386
Deductions			
Retirement Benefits	65,655,719	64,754,238	901,481
Spousal Benefits	12,126,482	12,298,065	(171,583)
Child Benefits	17,400	21,250	(3,850)
Disability Benefits	459,127	377,695	81,432
Death Benefits	277,500	311,000	(33,500)
Total Benefits	78,536,228	77,762,248	773,980
Refund of Contributions	2,066,616	1,607,760	458,856
Administrative and General Expenses	1,718,012	1,598,370	119,642
Total Deductions	82,320,856	80,968,378	1,352,478
Change in Net Position	66,364,135	(6,261,773)	72,625,908
Net Position - Beginning	348,294,515	354,556,288	(6,261,773)
Net Position - Ending	414,658,650	348,294,515	66,364,135

Actuarial Update

The actuarial valuation for the year ended December 31, 2022 includes the changes in actuarial assumptions and methods recommended by the Fund’s actuary, Segal Consulting, and adopted by the Board of Trustees in 2018. The valuations for 2022 and 2021 also reflect GASB 67 requirements that improve financial reporting for local governmental pension plans. The Board of Trustees elected to decrease the investment return assumption to 7.00% for the 2022 valuation. The notes to the financial statements include information about the individual components of the Fund’s net pension liability. The net pension liability is equal to the difference between the total pension liability and the Fund’s fiduciary net position. The Fund’s required supplementary information provides the reader with a more enhanced look on how the total pension liability, the fiduciary net position and net pension liability is measured.

The Fund’s actuarially computed funded ratio is 31.5 percent at December 31, 2022, which is 0.5 percent less than at December 31, 2021. The funded ratio is based on the percentage of the actuarial value of assets available to pay the actuarial accrued liability.

Investment Performance

The Fund’s annual investment return for the year ended December 31, 2022 was (10.90) percent, which is lower than the 14.60 percent return reported for the year ended December 31, 2021, and lower than the 9.30 percent return reported for the year ended December 31, 2020. The investment market was a turbulent environment in 2022. In 2022, every asset class in the investment portfolio, other than Real Estate and Infrastructure, generated negative returns for the year. The Fund’s (10.90) percent return for 2022 underperformed its performance benchmark by approximately 120 basis points. The best performing asset class was Infrastructure, which returned 5.4%, net of fees. The Fund’s Non-US Equities portfolio was the worst performing asset class, which returned (22.2%), net of fees. Over the trailing three-year period, the Fund underperformed its performance benchmark by 140 basis points. Over the trailing five-year period, the Fund underperformed its performance benchmark by 120 basis points. Over the trailing ten-year period, the Fund returned 7.2 percent, outperforming the performance benchmark by 10 basis points.

Supplemental Employer Contributions

In 2022, the Chicago Park District will make employer contributions calculated on an actuarial basis instead of a multiple of employee contributions. This is to ensure that the Fund is 100% funded within 35 years. In addition to the contributions required by state statue, the employer budgeted a supplemental contribution of $10.1 million to the Fund. On August 6, 2021, Public Act 102-0263 was signed into law which required the Chicago Park District to contribute a $40 million supplement contribution, for a total employer contribution of $83.3 million in 2021. In 2020, in addition to the contributions required by 40 ILCS 5/12-149, the employer made a supplemental contribution of $20.7 million to the Fund, for total employer contributions of $33.9 million.

Contacting the Fund’s Financial Management

This report is intended to provide a general overview of the Park Employees’ and Retirement Board Employees’ Annuity and Benefit Fund of Chicago for its employees and other interested parties. If you have questions, requests, or need additional information, please visit the Fund’s website at www.chicagoparkpension.org or contact the Fund at 3500 S. Morgan Street, Suite 400, Chicago, IL 60609

FINANCIAL STATEMENTS

Statement's of Fiduciary Net Position
December 31, 2022 and 2021

See Following Page

Statement's of Fiduciary Net Position
December 31, 2022 and 2021

	2022	2021
ASSETS		
Current Assets		
Investments, at Fair Value		
Common Stocks	$ 45,264,238	52,485,719
Fixed Income	22,761,976	25,851,555
Collective Investment Funds	122,855,973	127,783,646
Mutual Funds	—	20,423,662
Hedged Equity	26,852,038	29,066,132
International Equity	14,942,971	24,580,477
Private Equity	21,157,955	24,296,348
Real Estate	28,903,944	32,743,837
Infrastructure	49,440,352	37,319,370
Short-Term Investments	3,191,964	21,486,428
Accounts Receivables		
Contributions from Employer	25,000,000	13,566,840
Employee Contributions	328,445	305,713
Workers' Compensation	58,633	63,934
Accrued Investment Income	249,231	221,950
Miscellaneous Receivables	102,977	72,277
Other Prepaid Expenses	80,149	53,168
Total Current Assets	361,190,846	410,321,056
Noncurrent Assets		
Invested Securities Lending Collateral	16,345,710	16,779,808
Capital Assets - Net of Accumulated Depreciation/Amortization	1,458,161	124,839
Prepaid Annuity Benefits	5,747,640	5,528,333
Total Noncurrent Assets	23,551,511	22,432,980
Total Assets	384,742,357	432,754,036

The notes to the financial statements are an integral part of this statement.

LIABILITIES		
Current Liabilities		
Accounts Payable	408,682	353,081
Accrued Benefits Payable	795,732	886,252
Accrued Payroll	22,978	19,668
Lease Liability	85,610	—
Accrued Vacation	5,254	5,071
Unclaimed Checks	230,172	—
Unamortized Rent Abatement	—	31,222
Total Current Liabilities	1,548,428	1,295,294
Noncurrent Liabilities		
Lease Liability	981,757	—
Accrued Vacation	21,014	20,284
Securities Lending Collateral	16,345,710	16,779,808
Total Noncurrent Liabilities	17,348,481	16,800,092
Total Liabilities	18,896,909	18,095,386
NET POSITION		
Total Net Position	365,845,448	414,658,650

The notes to the financial statements are an integral part of this statement.

Statement's of Change in Fiduciary Net Position
Years Ended December 31, 2022 and 2021

	2022	2021
Additions		
Contributions - Employer	$ 67,128,978	83,349,261
Contributions - Plan Members	12,669,678	12,226,998
Other	175	455
Total Contributions	79,798,831	95,576,714
Investment Income		
Interest and Dividends Earned	1,823,309	1,590,582
Partnership and Real Estate Income	2,374,095	5,734,697
Net Change in Fair Value	(46,219,499)	47,381,030
	(42,022,095)	54,706,309
Less: Investment Expenses	(1,774,179)	(1,617,207)
Net Investment Income	(43,796,274)	53,089,102
Security Lending Activities		
Securities Lending Income	276,782	38,248
Borrower Rebates	(227,690)	(3,609)
Bank Fees	(22,711)	(15,464)
	26,381	19,175
Total Additions	36,028,938	148,684,991
Deductions		
Administration	2,002,020	1,718,012
Benefits and Refunds	82,840,120	80,602,844
Total Deductions	84,842,140	82,320,856
Change in Fiduciary Net Position	(48,813,202)	66,364,135
Net Position Restricted for Pensions		
Beginning	414,658,650	348,294,515
Ending	365,845,448	414,658,650

The notes to the financial statements are an integral part of this statement.

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Park Employees' and Retirement Board Employees' Annuity and Benefit Fund of Chicago (the Fund) is the administrator of a single employer defined benefit plan (PERS) established by the State of Illinois to provide annuities and benefits for substantially all employees of the Chicago Park District.

The accounting policies of the Fund conform to accounting principles generally accepted in the United States of America as applicable to governmental units. The accepted standard-setting body for establishing governmental accounting and financial reporting principles is the Governmental Accounting Standards Board (GASB).

REPORTING ENTITY

The Fund is a fiduciary fund, and specifically, a pension trust fund, of Chicago Park District pursuant to GASB Statement No. 61. The decision to include the Fund in the Chicago Park District's reporting entity was made based upon the significance of their operational or financial relationships with the Fund. Accordingly, these financial statements present only the Park Employees' and Retirement Board Employees' Annuity and Benefit Fund and are not intended to present fairly the financial position of the Chicago Park District and the result of its operations in conformity with generally accepted accounting principles.

BASIS OF PRESENTATION

Pension Trust Funds

The Fund uses a fund to report on its fiduciary net position and the changes in its fiduciary net position. Fund accounting is designed to demonstrate legal compliance and to aid financial management by segregating transactions related to certain government functions or activities. A fund is a separate accounting entity with a self-balancing set of accounts. The Fund is classified in this report in the fiduciary category.

MEASUREMENT FOCUS AND BASIS OF ACCOUNTING

Measurement focus is a term used to describe "which" transactions are recorded within the various financial statements. Basis of accounting refers to "when" transactions are recorded regardless of the measurement focus applied.

Measurement Focus

Pension trust funds utilize an "economic resources" measurement focus. The accounting objectives of this measurement focus are the determination of changes in net position. All assets/deferred outflows and liabilities/ deferred inflows (whether current or noncurrent) associated with their activities are reported. Pension trust fund equity is classified as net position.

Basis of Accounting

The accrual basis of accounting is utilized by pension trust funds. Under this method, additions to net position are recorded when earned and deductions from net position are recorded when the time related liabilities\deferred inflows are incurred. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due and the employer has made a formal commitment to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES - Continued

ASSETS, LIABILITIES, AND NET POSITION

Prepaids

Prepaids are valued at cost, which approximates market. The cost of prepaids are recorded as expenses when consumed rather than when purchased. Certain payments to vendors reflect costs applicable to future accounting periods and are recorded as prepaids in the financial statements.

Capital Assets

Capital assets purchased or acquired with an original cost of $1,000 or more, depending on asset class, are reported at historical cost or estimated historical cost. Contributed assets are reported at acquisition value as of the date received. Additions, improvements and other capital outlays that significantly extend the useful life of an asset are capitalized. Other costs incurred for repairs and maintenance are expensed as incurred.

Depreciation on property and equipment is computed and recorded using the straight-line method of depreciation over 3 to 7 years. Leasehold improvements are amortized using the straight line method over the remaining term of the lease.

Receivables

The Fund’s receivables consist of all revenues earned at year-end and not yet received. The major receivable balance for the Pension Fund is accrued interest from cash and investments.

Accrued Vacation

The Fund accrues accumulated unpaid vacation and associated employee-related costs when earned (or estimated to be earned) by the employee. In accordance with GASB Statement No. 16, no liability is recorded for nonvesting accumulation rights to receive sick pay benefits.

Administrative Expenses

Administrative expenses are budgeted and approved by the Fund’s Board of Trustees. Funding for these expenses is included in the employer contributions as determined by the annual actuarial valuation.

NOTE 2 - DETAIL NOTES ON ALL FUNDS

DEPOSITS, INVESTMENTS AND CONCENTRATIONS

Investment Policy

Illinois Compiled Statutes authorize the Fund to make deposits/investments in insured commercial banks, savings and loan institutions, obligations of the U.S. Treasury and U.S. Agencies, corporate and municipal debentures and obligations, insured mortgage notes and loans, mutual funds meeting certain requirements, common and preferred stocks, stock options, real estate, collective investment funds, and private equity partnerships. The Fund allows funds to be invested in any type of security authorized by the Illinois Pension Code.

The Fund’s policy in regard to the allocation of invested assets is established and may be amended by the Board. It is the policy of the Board to pursue an investment strategy that reduces risk through prudent diversification of the portfolio across a broad selection of distinct asset classes. The Fund’s investment policy discourages the use of cash equivalents, except to meet liquidity needs and aims to refrain from dramatically shifting asset class allocations over the short term.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimates ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan’s target asset allocation as of December 31, 2022 and 2021 are summarized below in the following table:

	2022		2021	
Asset Class	Target	Long-Term Expected Real Rate of Return	Target	Long-Term Expected Real Rate of Return
Fixed Income	15.0%	1.61%	17.5%	0.40%
Domestic Equities	24.0%	6.91%	28.5%	6.40%
International Equities	18.0%	7.21%	17.8%	6.80%
Emerging Market	6.0%	8.71%	2.2%	8.50%
Hedge Equity	3.0%	3.21%	7.0%	2.75%
Private Equity	7.0%	9.96%	7.0%	10.40%
Real Estate/Real Assets	10.0%	3.61%	10.0%	3.90%
Infrastructure	8.0%	5.71%	10.0%	5.40%
Private Debt	5.0%	6.3%	—%	—%
Short-term TIPS	4.0%	0.7%	—%	—%

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

DEPOSITS, INVESTMENTS AND CONCENTRATIONS - Continued

Fair Value of Investments

The Fund's investments are reported at fair value in the accompanying statement of fiduciary net position. The methods used to measure fair value may produce an amount that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Fund believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

The Fund categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

Following is a description of the valuation methodologies used for assets measured at fair value. There have been no changes in the methodologies used at December 31, 2022 and 2021.

Investments that are measured at fair value using the net asset value (NAV) per share (or its equivalent), as a practical expedient are not classified in the fair value hierarchy.

Equity securities and short-term investment securities classified in Level 1 are valued using prices quoted in active markets for those securities.

Debt securities classified in Level 2 or Level 3 are valued using matrix pricing techniques maintained by the various pricing vendors. Matrix pricing is used to value securities based on the securities relationship to a benchmark's quoted price. Equity securities classified in Level 2 are securities with a theoretical price calculated by applying a standardized formula to derive a price from a related security.

Equity securities classified in Level 2 are valued with last trade data having limited trading volume.

The valuation method for certain fixed income and alternative investments is based on the investments' NAV per share (or its equivalent), provided by the investment managers. The NAV is based on the fair value of the underlying investments held by the Fund less its liabilities. This practical expedient is not used when it is determined to be probable that the Fund will sell the investment for an amount different than the reported NAV.

The following table summarizes the valuation of the Fund's investments by the fair value hierarchy levels for the years ended December 31, 2022 and 2021:

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

DEPOSITS, INVESTMENTS AND CONCENTRATIONS - Continued

Fair Value of Investments - Continued

	2022			
		Fair Value Measurements Using		
Investments by Fair Value Level	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Debt Securities				
Government Bonds	$ 5,124,334	—	5,124,334	—
Government Agencies	1,642,386	—	1,642,386	—
Corporate Bonds	9,862,240	—	9,862,215	25
Government Mortgage-Backed Securities	6,133,016	—	6,133,016	—
Equity Securities				
Common Stock	96,498,228	45,264,238	51,233,990	—
Common Stock, Foreign	29,511,634	—	29,511,634	—
Short-Term Investment Securities				
Funds Short-Term Investments	3,191,964	3,191,964	—	—
Total Investments by Fair Value Level	151,963,802	48,456,202	103,507,575	25
Investments Measured at Net Asset Value (NAV)				
Hedged Equity	26,852,038			
Collective Investment Funds	42,110,349			
International Equity	14,942,971			
Private Equity	21,157,955			
Real Estate	28,903,944			
Infrastructure	49,440,352			
	183,407,609			
Total Investments Measured at Fair Value	335,371,411			

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

DEPOSITS, INVESTMENTS AND CONCENTRATIONS - Continued

Fair Value of Investments - Continued

	2021			
		Fair Value Measurements Using		
Investments by Fair Value Level	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Debt Securities				
Government Bonds	$ 5,472,483	—	5,472,483	—
Government Agencies	1,703,484	—	1,703,484	—
Corporate Bonds	11,306,583	—	11,306,534	49
Government Mortgage-Backed Securities	6,011,911	—	6,011,911	—
Index Linked Government Bonds	1,357,094	—	1,357,094	—
Equity Securities				
Common Stock	115,133,112	52,485,718	62,647,394	—
Common Stock, Foreign	51,691,016	20,423,662	31,267,354	—
Short-Term Investment Securities				
Funds Short-Term Investments	21,486,428	21,486,428	—	—
Total Investments by Fair Value Level	214,162,111	94,395,808	119,766,254	49
Investments Measured at Net Asset Value (NAV)				
Hedged Equity	29,066,132			
Collective Investment Funds	33,868,899			
International Equity	24,580,477			
Private Equity	24,296,348			
Real Estate	32,743,837			
Infrastructure	37,319,370			
	181,875,063			
Total Investments Measured at Fair Value	396,037,174			

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

DEPOSITS, INVESTMENTS AND CONCENTRATIONS - Continued

Fair Value of Investments - Continued

Investments measured at NAV for fair value are not subject to level classification. The valuation methods for investments measured at the NAV per share (or its equivalent) for the years ended December 31, 2022 and 2021 are presented on the following tables:

	2022			
Investments Measured at Net Asset Value (NAV)	Fair Value	Underfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Hedged Equity	$ 26,852,038	—	Monthly	5 days
International Equity	14,942,971	—	Daily/Quarterly	5-30 days
Private Equity	21,157,955	6,531,955	N/A	N/A
Real Estate	28,903,944	—	Quarterly	60-90 days
Infrastructure	49,440,352	—	Quarterly	90 days
Collective Investment Funds	42,110,349	—	Daily	1-3 days

	2021			
Investments Measured at Net Asset Value (NAV)	Fair Value	Underfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Hedged Equity	$ 29,066,132	—	Monthly	5 days
International Equity	24,580,477	—	Daily/Quarterly	5-30 days
Private Equity	24,296,348	7,944,992	N/A	N/A
Real Estate	32,743,837	—	Quarterly	60-90 days
Infrastructure	37,319,370	—	Quarterly	90 days
Collective Investment Funds	33,868,899	—	Daily	1-3 days

Hedged Equity

The hedged equity investment consists of one open-end long/short equity hedge fund of funds portfolio that primarily invests both long and short in publicly traded US equities.

International Equity

The international equity investment consist of one fund’s portfolio that primarily invests both long and short in publicly traded international equities.

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

DEPOSITS, INVESTMENTS AND CONCENTRATIONS - Continued

Private Equity Partnerships

The private equity investments consist of ten closed-end limited partnership private equity fund of funds. Generally, the types of partnership strategies included in these portfolios are venture capital, buyouts, special situations, mezzanine, and distressed debt. Private equity partnerships have an approximate life of 10-15 years and are considered illiquid. Redemptions are restricted over the life of the partnership. During the life of the partnerships, distributions are received as underlying investments are realized. The Fund has no plans to liquidate the total portfolio.

Real Estate

The real estate investments consists of two core open-end estate funds and one value-added open-end real estate fund that primarily invest in U.S. commercial real estate.

Infrastructure

The infrastructure investments consist of two core open-end infrastructure funds that primarily invest in global infrastructure assets.

The Fund shall apply the prudent investor rule in investing for funds under its supervision. The prudent investor rule means that in making investments, the fiduciaries shall exercise the judgment and care, under the circumstances then prevailing, that an institutional investor of ordinary prudence, discretion, and intelligence exercises in the management of large investments entrusted to it, with regards to preservation of capital and income and not speculation. The funds belonging to the Fund must be invested exclusively for the benefit of their members and in accordance with the respective Fund’s investment goals and objectives.

Collective Investment Funds

The collective investment funds consist of core plus fixed income commingled fund and an opportunistic fixed income commingled fund that primarily invest in US dollar denominated bonds with exposure to both investment grade and below investment grade securities.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the value of an investment. The Fund does not maintain a policy relative to interest rate risk. The Board of Trustees recognized that its investments are subject to short-term volatility. However, their goal is to maximize total return within prudent risk parameters.

As of December 31, 2022, the Fund’s investments were as follows (expressed in thousands):

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

DEPOSITS, INVESTMENTS AND CONCENTRATIONS - Continued

Interest Rate Risk - Continued

		Investment Maturities (in Years)			
Investment Type	Fair Value	Less Than 1	1-5	6-10	More Than 10
Corporate Bonds	$ 9,863	—	4,579	4,644	640
Government Agencies	1,642	—	1,477	165	—
Government Bonds	5,124	—	1,442	1,366	2,316
Government Mortgage Backed	6,133	—	30	727	5,376
Totals	$ 22,762	—	7,528	6,902	8,332

As of December 31, 2021, the Fund's investments were as follows (expressed in thousands):

		Investment Maturities (in Years)			
Investment Type	Fair Value	Less Than 1	1-5	6-10	More Than 10
Corporate Bonds	$ 11,307	—	3,479	5,210	2,618
Government Agencies	1,704	100	1,382	222	—
Government Bonds	5,472	—	1,248	2,742	1,482
Index Linked Government Bonds	1,357	—	345	439	573
Government Mortgage Backed	6,012	—	21	366	5,625
Totals	$ 25,852	100	6,475	8,979	10,298

Some investments are more sensitive to interest rate changes than others. Variable and floating rate collateralized mortgage obligations (CMOs), asset-backed securities (ABS), interest-only and principal-only securities are examples of investments whose fair values may be highly sensitive to interest rate changes.

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

DEPOSITS, INVESTMENTS AND CONCENTRATIONS - Continued

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. The Fund's investment policy requires diversification of the investment portfolio to minimize risk of loss resulting from over-concentration in a particular type of security, risk factor, issuer or maturity.

Investments that represent five percent or more of the Fund's net position (except those issued or guaranteed by the U.S. Government) are separately identified as follows:

	2022	2021
Collective Investment Funds, Common Stock		
NTGI QM Collective Daily US Market Cap Equity	$ 40,560,862	50,377,620
NTGI QM Collective Daily All Country World Index	22,785,769	22,856,315
Mackay Shields Core Plus Bond CIT - CL 1	22,471,383	26,285,714
Ullico Infrastructure Taxable Fund, LP	29,467,105	N/A
IFM Global Infrastructure (US), L.P. Class A Interests	19,973,247	N/A
Hedged Equity, Parametric Defensive Equity Fund	26,852,038	29,066,132

Custodial Credit Risk - Deposits

With respect to deposits, custodial credit risk refers to the risk that, in the event of a bank failure, the government's deposits may not be returned to it. As of December 31, 2022 and 2021, the Fund's bank deposits were covered by FDIC insurance.

Custodial Credit Risk - Investments

With respect to investments, custodial credit risk refers to the risk that, in the event of the failure of the counterparty to the investment, the Fund will not be able to recover the value of its investments that are in possession of an outside party. As of December 31, 2022 and 2021, no investments were exposed to custodial credit risk.

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Fund maintains a highly diversified portfolio of debt securities encompassing a wide range of credit ratings. Each fixed income manager is given a specific set of guidelines to invest within, based on the mandate for which it was hired. The guidelines specify which range of credit the manager may invest. These ranges include investment grade and high yield categories.

The Fund's investment policy authorizes investments in any type of security allowed for in Illinois statutes regarding the investment of public funds. The following tables present the Fund's ratings as of December 31, 2022 and 2021 (expressed in thousands).

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

DEPOSITS, INVESTMENTS AND CONCENTRATIONS - Continued

Credit Risk - Continued

2022

S&P Credit Rating	Fair Value	Corporate Bonds	Government Agencies	Government Bonds	Government Mortgage Backed
AAA	$ 159	159	—	—	—
AA	1,897	255	1,642	—	—
A	1,948	1,948	—	—	—
BBB	6,407	6,407	—	—	—
BB	1,093	1,093	—	—	—
NR	981	1	—	980	—
US Government Agency	10,277	—	—	4,144	6,133
	$ 22,762	9,863	1,642	5,124	6,133

2021

S&P Credit Rating	Fair Value	Corporate Bonds	Government Agencies	Government Mortgage Backed
AA	$ 2,144	440	1,704	—
A	1,251	1,251	—	—
BBB	8,436	8,436	—	—
BB	1,180	1,180	—	—
US Government Agency	6,012	—	—	6,012
	$ 19,023	11,307	1,704	6,012

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

DEPOSITS, INVESTMENTS AND CONCENTRATIONS - Continued

Foreign Currency Risk

Foreign currency risk is the risk that changes in currency exchange rates will adversely affect the fair value of an investment or a deposit. Forward currency contracts may be used to manage exposure to foreign currencies. The Fund has not adopted a formal policy related to foreign currency risk. At December 31, 2022 and 2021, the Fund had $29,511,634 and $51,691,016, respectively, in foreign investments, all of which was in mutual funds that were held in U.S. dollars. At December 31, 2022 and 2021, the Fund had $14,942,971 and $24,580,477 in foreign investments in two international equity hedge funds all of which were held in U.S. dollars.

Rate of Return

For the years ended December 31, 2022 and 2021, the annual money-weighted rate of return on plan investments, net of investment expense, was (10.90) percent and 14.60 percent, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Securities Lending

Under the provisions of state statutes, the Fund lends securities (both equity and fixed income) to qualified and Fund approved brokerage firms for collateral that will be returned for the same securities in the future. The Fund's custodian, the Northern Trust Co., manages the securities lending program, which includes the securities of the Fund as well as other lenders, and receives cash, U.S. Treasury securities or letters of credit as collateral. The collateral received cannot be pledged or sold by the Fund unless the borrower defaults. However, the Fund does have the right to close the loan at any time. All security loan agreements are initially collateralized at 102 percent of the loaned securities. Whenever adjustments are needed to reflect changes in the fair value of the securities loaned, the collateral is adjusted accordingly. Cash collateral is invested in the lending agent’s short-term investment pool, which at year end has a weighted average maturity of 93 days. As December 31, 2022 and 2021, the Fund had loaned to borrowers securities with a fair value of $15,961,636 and $16,382,613 respectively. As of December 31, 2022, the fair value of the collateral received by the Fund was $16,345,710 and the collateral invested by the Fund was $16,345,710. As of December 31, 2021, the fair value of the collateral received by the Fund was $16,779,808 and the collateral invested by the Fund was $16,779,808.

At year end, the Fund has no credit risk exposure to the borrowers because the amounts the Fund owes the borrowers exceed the amounts the borrowers owe the Fund.

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

CAPITAL ASSETS

Capital asset activity for the year ended December 31, 2022 was as follows:

	Beginning Balances	Increases	Decreases	Ending Balances
Depreciable/Amortizable Capital Assets				
Furniture and Equipment	$ 85,601	127,424	73,866	139,159
Computer Software	246,769	219,217	230,102	235,884
Leasehold Improvements	2,271	59,553	2,271	59,553
Leased Asset	—	1,124,340	—	1,124,340
	334,641	1,530,534	306,239	1,558,936
Less Accumulated Depreciation/Amortization				
Furniture and Equipment	80,725	14,176	73,866	21,035
Computer Software	127,942	3,103	129,124	1,921
Leasehold Improvements	1,135	3,999	2,271	2,863
Leased Asset	—	74,956	—	74,956
	209,802	96,234	205,261	100,775
Total Net Capital Assets	124,839	1,434,300	100,978	1,458,161

Capital asset activity for the year ended December 31, 2021 was as follows:

	Beginning Balances	Increases	Decreases	Ending Balances
Depreciable/Amortizable Capital Assets				
Furniture and Equipment	$ 85,601	—	—	85,601
Computer Software	228,026	18,743	—	246,769
Leasehold Improvements	2,271	—	—	2,271
	315,898	18,743	—	334,641
Less Accumulated Depreciation/Amortization				
Furniture and Equipment	76,573	4,152	—	80,725
Computer Software	106,617	21,325	—	127,942
Leasehold Improvements	1,022	113	—	1,135
	184,212	25,590	—	209,802
Total Net Capital Assets	131,686	(6,847)	—	124,839

Depreciation expense was $74,956 and $113 for 2022 and 2021, respectively.

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

LONG-TERM DEBT

Lease Payable

The Fund has the following leases outstanding at year end:

Lease	Term Length	Start Date	Payments	Interest Rate
Building	10 years	5/1/2022	Monthly	3.00%

Long-Term Liability Activity

Changes in long-term liabilities during the fiscal year were as follows:

Issue	Beginning Balances	Issuances	Retirements	Ending Balances	Due in One Year
Lease Payable	$ —	1,124,340	56,973	1,067,367	85,610
Compensated Absences	25,355	1,827	914	26,268	5,254
	25,355	1,126,167	57,887	1,093,635	90,864

Lease Payable Requirements to Maturity

The future principal and interest lease payments as of the year-end were as follows:

Fiscal Year End	Principal	Interest
2023	$ 85,610	30,862
2024	91,762	28,210
2025	98,199	25,369
2026	104,941	22,331
2027	112,009	19,087
2028	119,406	15,626
2029	127,138	11,938
2030	135,238	8,014
2031	143,707	3,841
2032	49,357	309
	1,067,367	165,587

COMMITMENTS

The Fund has committed to purchase $95,000,000 interests in private equity partnerships. At December 31, 2022 and 2021, the Fund had a remaining contractual obligation of $6,531,955 and $7,944,992 respectively, to purchase additional interests in the private equity partnerships.

NOTE 2 - DETAIL NOTES ON ALL FUNDS - Continued

DEFERRED COMPENSATION PLAN

The Fund is a governmental eligible employer as defined by Code Section 457(e)(1)(A) and has established a deferred compensation plan (457(b)) for eligible employees. Individual contributions to the plan are equal to the amount of salary reductions elected by each participant for the year up to a maximum allowable by Internal Revenue Service regulations. Total employee contributions were $34,225 and $55,650 for 2022 and 2021, respectively. Employer contributions are not allowed.

NOTE 3 - OTHER INFORMATION

CONTINGENT LIABILITIES

Litigation

The Fund is not a defendant in any lawsuits.

EMPLOYEE RETIREMENT SYSTEM - DEFINED BENEFIT PENSION PLAN

Plan Administration

The Fund is a defined benefit single-employer pension plan. Although this is a single-employer pension plan, the defined benefits and employee and minimum employer contributions are governed by Illinois Compiled Statutes (40 ILCS 5/12-1) and may be amended only by the Illinois legislature.

The Plan is governed by a seven-member board. Three members are appointed by the park commissioner's and four members of the board are elected from among the employees.

Plan Membership

The plan membership consisted of the following:

	2022	2021
Retirees and Beneficiaries Currently Receiving Benefits	2,745	2,752
Vested Terminated Members Entitled to Benefits	173	169
Current Employees	2,818	2,694
Total	5,736	5,615

Benefits Provided

As provided for in the Illinois Compiled Statutes, the Fund provides retirement benefits as well as death and disability benefits to employees grouped into three tiers. Tier 1 is for employees that contributed prior to January 1, 2011, Tier 2 is for employees that contributed after that date, and Tier 3 is for employees hired after January 1, 2022. The following is a summary of the Fund as provided for in Illinois Compiled Statutes.

NOTE 3 - OTHER INFORMATION - Continued

EMPLOYEE RETIREMENT SYSTEM - DEFINED BENEFIT PENSION PLAN - Continued

Benefits Provided - Continued

Tier 1. Covered employees attaining the age of 50 or more with ten or more years of creditable service are entitled to receive a service retirement pension. The retirement pension is based upon the average of the four highest consecutive years of salary within the last ten years of service. If the employee retires prior to the attainment of age 60, the rate associated with the service is reduced by one-quarter percent for each full month the employee is under age 60. There is no reduction if the participant has 30 years of service. Employees with four years of service at age 60 may receive a retirement benefit.

Tier 2. Covered employees attaining the age of 62 or more with ten or more years of creditable service are entitled to receive discounted service retirement pension. Employees attaining the age 67 or more, with at least 10 years of service are entitled to receive a nondiscounted annuity benefit. The annuity is discounted one-half percent for each full month the employee is under age 67. The retirement pension is based upon the average of the eight highest consecutive years of salary within the last ten years of service prior to retirement. Pensionable salary is limited to $119,892 in 2022 and $116,740 in 2021.

Tier 3. Covered employees attaining the age of 60 or more with ten or more years of creditable service are entitled to receive discounted service retirement pension. Employees attaining the age 65 or more, with at least 10 years of service are entitled to receive a nondiscounted annuity benefit. The annuity is discounted one-half percent for each full month the employee is under age 65. The retirement pension is based upon the average of the eight highest consecutive years of salary within the last ten years of service prior to retirement. Pensionable salary is limited to $119,892 in 2022 and $116,740 in 2021.

Post-Retirement Increase

Tier 1. An employee annuitant under Tier 1 who retires at age 50 or older with at least 30 years of service is eligible to receive an increase of three percent, based on the annuity granted at retirement, payable following the first 12 months of benefits on either the next January or July. If the employee annuitant retires before the age of 60 with less than 30 years of service, then the increases begin on the January or July following the later of the attainment of age 60 or 12 months of benefits received.

Tier 2 and Tier 3. An employee annuitant under Tier 2 that is eligible to receive an increase in the annuity benefit, shall receive an annual increase equal to the lesser of three percent or one-half 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 increase. The increase is based on the amount of the originally granted benefit (simple). This increase begins after age 67 on the first January following one full year of benefits received for Tier 2 and age 65 for Tier 3.

Surviving Spouse Pension

Tier 1. Upon the death of an employee annuitant under Tier 1, the surviving spouse, meeting certain eligibility requirements, is entitled to a spousal annuity. The surviving spouse is entitled to the lesser of a money purchase calculation, 50 percent of the highest salary or 75 percent of the granted annuity. With 20 years of service, the entitlement becomes the higher of the eligible money purchase calculation or 50 percent of retiree's annuity at the time of death. The surviving spouse is also eligible to receive an increase of three percent compounded, on the January following one full year after the date of death of the employee or annuitant.

NOTE 3 - OTHER INFORMATION - Continued

EMPLOYEE RETIREMENT SYSTEM - DEFINED BENEFIT PENSION PLAN - Continued

Surviving Spouse Pension - Continued

Tier 2 and Tier 3. The annuity payable to the surviving spouse of an employee annuitant under Tier 2 is equal to 66 2/3 percent of the participant's earned retirement annuity at the time of death without reduction due to age. The surviving spouse is also eligible to receive an increase equal to the lesser of three percent or 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 increase, on the January following one full year after the date of death of the employee or annuitant.

Child Annuity

Under Tier 1, Tier 2, and Tier 3, unmarried children under the age of 18 of a deceased employee or annuitant having at least two years of service are entitled to a benefit. The child's annuity is an amount equal to $100 a month when there is a surviving spouse or $150 when there is no surviving spouse, subject to maximum limitations.

Ordinary Disability Benefit

Under Tier 1, Tier 2 and Tier 3, an employee who becomes disabled as the result of any cause other than an accidental injury incurred while in the performance of an act of duty is entitled to an ordinary disability benefit at the amount equal to 45 percent of the employee's annual salary at the time of disablement. An employee can receive ordinary disability for a period equal to one fourth of his/her service credits up to a maximum of five years, exclusive of the disability period. Tier 2 and Tier 3 participants have salary limitations similar to employee contributions.

Duty Disability Benefit

Under Tier 1, Tier 2 and Tier 3, an employee who becomes disabled as the result of a work related injury incurred while in the performance of an act of duty is entitled to a duty disability benefit in the amount equal to 75 percent of the employee's annual salary at the time of injury, reduced by any benefits received by the employee under the provisions of the Workers' Compensation Act. Tier 2 and Tier 3 participants have salary limitations similar to employee contributions.

Contributions

Participants are required by Illinois Compiled Statutes (ILCS) to contribute 9.0 percent of their salary to the Fund except for those participants hired on or after January 1, 2022. Participants hired after January 1, 2022 are required to contribute 11.0 percent of their salary. For Tier 1, if a participant leaves covered employment before the age of 55, accumulated participant contributions are refundable without interest. For Tier 2 and 3, the refund is payable before age 62 and age 60, respectively, regardless of length of service. For payment year 2021, the District is required by state statute to contribute to the Fund one-fourth of the amount, as determined by an actuary retained by the Fund, equal to the sum of (i) the Park District's portion of the projected normal cost for that fiscal year, plus (ii) an amount determined by an actuary retained by the Fund, using a 35-year period starting on December 31, 2020 with the entry age normal actuarial cost method, that is sufficient to bring the total actuarial assets of the Fund up to 100% of the total actuarial accrued liabilities of the Fund by the end of 2055. In accordance with state statue, by 2059, the Fund should be 100% funded and going forward the District is required to contribute amounts each year to remain 100% funded. The District had no legal obligations to fund pension costs above that allowed by statute. The District's contributions to the Fund were $67,128,978 and $83,349,261

NOTE 3 - OTHER INFORMATION - Continued

EMPLOYEE RETIREMENT SYSTEM - DEFINED BENEFIT PENSION PLAN - Continued

Contributions - Continued

for the years ended December 31, 2022 and 2021, respectively.

Net Pension Liability

The components of the net pension liability were as follows:

	2022	2021
Total Pension Liability	$ 1,269,016,883	1,211,991,973
Plan Fiduciary Net Position	365,845,448	414,658,650
Plan's Net Pension Liability	903,171,435	797,333,323
Plan Fiduciary Net Position as a Percentage	28.8%	34.2%

Actuarial Assumptions

The total pension liability was determined by an actuarial valuation performed, using the following actuarial methods and assumptions:

Actuarial Valuation Date	December 31, 2022	December 31, 2021
Actuarial Cost Method	Entry Age Normal	Entry Age Normal
Asset Valuation Method	Fair Value	Fair Value
Actuarial Assumptions		
Interest Rate	7.00%	7.25%
Salary Increases	2.75% to 20%	2.75% to 20%
Inflation	2.50%	2.50%
Cost of Living Adjustments	Retirees - 3% of the original benefit for employees who first became a participant before January 1, 2011. Retirees - lesser of 3% and 1/2 CPI of the original benefit for employees who first become a participant on or after January 1, 2011. Beneficiary - 3% compounded for beneficiaries of employees who first became a participant by January 1, 2011.	Retirees - 3% of the original benefit for employees who first became a participant before January 1, 2011. Retirees - lesser of 3% and 1/2 CPI of the original benefit for employees who first become a participant on or after January 1, 2011. Beneficiary - 3% compounded for beneficiaries of employees who first became a participant by January 1, 2011.

NOTE 3 - OTHER INFORMATION - Continued

EMPLOYEE RETIREMENT SYSTEM - DEFINED BENEFIT PENSION PLAN - Continued

Actuarial Assumptions - Continued

Mortality rates for 2021 and 2022, are based on the healthy annuitants were based on 110 percent of PubG-2010 Healthy Annuitant Table, with mortality improvements projected generationally using scale MP-2017. For active participants, mortality rates were based on 110 percent of PubG-2010 Healthy Employee Table, with mortality improvements projected generationally using scale MP-2017.

The actuarial assumptions used in the December 31, 2022 and December 31, 2021 valuations were based on the results of an actuarial experience study for a five-year period ending December 31, 2018, and a recent review of the investment return assumption.

Discount Rate

The discount rate used to measure the total pension liability was 7.00 percent, for December 31, 2022. The projection of cash flows used to determine the discount rate assumed that member contributions will be made at the 9 percent contribution rate for Tier 1 and Tier 2, and 11% for Tier 3 for 2022 and thereafter.

The discount rate used to measure the total pension liability was 7.25 percent, for December 31, 2021. The projection of cash flows used to determine the discount rate assumed that member contributions will be made at the 9 percent contribution rate for 2021 and thereafter. Employer contributions will be made at the 1.1 multiple of member contributions from two years prior to 2021 and thereafter. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions and contributions from future plan members that are intended to fund the service costs of future plan members and their beneficiaries are not included. Based on those assumptions, the Fund’s fiduciary net position was not projected to be available to make all projected future benefit payments of current plan members. The projected benefit payments through 2026 were discounted at the expected long-term rate of returns (7.00 percent). Starting in 2027, the projected benefit payments were discounted at the municipal bond index (3.72 percent), based on the Bond Buyer 20-GO Municipal Bond Index as of December 31, 2022). Therefore, a single equivalent blended discount rate of 7.00 percent was calculated using the long-term expected rate of return and municipal bond index.

NOTE 3 - OTHER INFORMATION - Continued

EMPLOYEE RETIREMENT SYSTEM - DEFINED BENEFIT PENSION PLAN - Continued

Discount Rate Sensitivity

The following is a sensitivity analysis of the net pension liability to changes in the discount rate as of December 31, 2022 and December 31, 2021. The table below presents the net pension liability of the Fund calculated using the discount rate as well as what the Fund's net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

	December 31, 2022		
	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Net Pension Liability	$ 1,050,647,873	903,171,435	780,128,597

	December 31, 2021		
	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
Net Pension Liability	$ 937,845,142	797,333,323	680,060,469

SUBSEQUENT EVENT

Subsequent to December 31, 2022, the investment markets have experienced significant volatility. It is highly likely that the values of the Fund's investments have changed by material amounts since year end.

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Employer Contributions
December 31, 2022

Fiscal Year	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Excess/ (Deficiency)	Covered Payroll	Contributions as a Percentage of Covered Payroll
12/31/2013	$ 41,834,857	$ 15,707,814	$ (26,127,043)	$ 117,781,596	13.34%
12/31/2014	35,307,186	11,225,438	(24,081,748)	118,987,507	9.43%
12/31/2015	36,273,994	30,588,976	(5,685,018)	122,382,584	24.99%
12/31/2016	37,130,268	30,890,241	(6,240,027)	121,126,918	25.50%
12/31/2017	45,253,238	20,920,614	(24,332,624)	135,315,008	15.46%
12/31/2018	50,929,734	27,638,402	(23,291,332)	133,112,100	20.76%
12/31/2019	61,887,790	27,682,089	(34,205,701)	139,204,051	19.89%
12/31/2020	67,297,212	33,939,927	(33,357,285)	138,942,498	24.43%
12/31/2021	70,492,027	83,349,261	12,857,234	134,515,373	61.96%
12/31/2022	71,021,948	67,128,978	(3,892,970)	136,917,648	49.03%

Notes to the Required Supplementary Information:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Payroll
Remaining Amortization Period	20 years (Closed Period)
Asset Valuation Method	5-year Smoothed Fair Value
Inflation	2.50%
Salary Increases	2.75% to 20% based on Service
Investment Rate of Return	7.25%
Retirement Age	Age and Service Related
Mortality	Pub2010-Ps projected by MP-2017

Schedule of Changes in the Employer's Net Pension Liability
December 31, 2022

	12/31/2014	12/31/2015	12/31/2016
Total Pension Liability			
Service Cost	$ 12,975,774	13,417,795	13,763,768
Interest	64,929,834	65,921,805	66,523,889
Changes in Benefit Terms	—	—	93,579,710
Differences Between Expected and Actual Experience	5,447,687	682,159	(4,556,757)
Change of Assumptions	—	—	198,725,863
Benefit Payments, Including Refunds of Member Contributions	(70,536,042)	(70,602,016)	(74,077,877)
Net Change in Total Pension Liability	12,817,253	9,419,743	293,958,596
Total Pension Liability - Beginning	888,023,364	900,840,617	910,260,360
Total Pension Liability - Ending	900,840,617	910,260,360	1,204,218,956
Plan Fiduciary Net Position			
Contributions - Employer	$ 11,225,438	30,588,976	30,890,241
Contributions - Members	10,831,434	12,368,636	12,246,115
Net Investment Income	27,490,520	8,823,613	30,920,231
Benefit Payments, Including Refunds of Member Contributions	(70,536,042)	(70,602,016)	(74,077,877)
Administrative Expenses	(1,358,313)	(1,445,587)	(1,435,126)
Net Change in Plan Fiduciary Net Position	(22,346,963)	(20,266,378)	(1,456,416)
Plan Net Position - Beginning	435,768,679	413,421,716	393,155,338
Plan Net Position - Ending	413,421,716	393,155,338	391,698,922
Employer's Net Pension Liability	$ 487,418,901	517,105,022	812,520,034
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	45.89%	43.19%	32.53%
Covered Payroll	$ 118,987,507	122,382,584	121,126,918
Employer's Net Pension Liability as a Percentage of Covered Payroll	409.64%	422.53%	670.80%

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

12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022
20,115,813	38,102,341	33,317,058	51,348,187	60,952,502	17,019,445
68,982,467	59,290,982	69,086,515	58,440,058	51,017,625	86,100,373
36,183,940	—	—	—	—	960,812
2,785,815	5,001,084	15,529,818	(2,309,221)	846,816	2,969,970
370,422,560	(3,471,090)	359,734,367	203,245,789	(1,097,662,261)	32,814,430
(78,138,027)	(76,526,820)	(78,550,449)	(79,370,008)	(80,602,844)	(82,840,120)
420,352,568	22,396,497	399,117,309	231,354,805	(1,065,448,162)	57,024,910
1,204,218,956	1,624,571,524	1,646,968,021	2,046,085,330	2,277,440,135	1,211,991,973
1,624,571,524	1,646,968,021	2,046,085,330	2,277,440,135	1,211,991,973	1,269,016,883
20,920,614	27,638,402	27,682,089	33,939,927	83,349,261	67,128,978
13,675,292	12,125,457	12,664,855	12,634,900	12,226,998	12,669,678
51,082,314	(17,196,812)	51,982,545	28,071,327	53,089,102	(43,796,274)
(78,138,027)	(76,526,820)	(78,550,449)	(79,370,008)	(80,602,844)	(82,840,120)
(1,590,357)	(1,433,112)	(1,478,625)	(1,537,919)	(1,698,382)	(1,975,464)
5,949,836	(55,392,885)	12,300,415	(6,261,773)	66,364,135	(48,813,202)
391,698,922	397,648,758	342,255,873	354,556,288	348,294,515	414,658,650
397,648,758	342,255,873	354,556,288	348,294,515	414,658,650	365,845,448
1,226,922,766	1,304,712,148	1,691,529,042	1,929,145,620	797,333,323	903,171,435
24.48%	20.78%	17.33%	15.29%	34.21%	28.83%
135,315,008	133,112,100	139,204,051	138,942,498	134,515,373	136,917,648
906.72%	980.16%	1215.14%	1388.45%	592.75%	659.65%

Schedule of Investment Returns
December 31, 2022

Fiscal Year	Annual Money-Weighted Rate of Return, Net of Investment Expense
2014	5.60%
2015	5.61%
2016	5.77%
2017	5.58%
2018	(5.10%)
2019	17.00%
2020	9.30%
2021	14.60%
2022	(10.90%)

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

SUPPLEMENTARY INFORMATION

Schedule of Tax Levies Receivable
December 31, 2022

Levy Year	Tax Levy	Collections	Tax Levies Receivable	Allowance for Uncollectible Taxes	Net Tax Levies Receivable
2022	$ 25,000,000	—	25,000,000	—	25,000,000
2021	13,566,840	—	13,566,840	—	13,566,840

Schedule of Administrative and General Expenses
December 31, 2022

		2022	2021
Actuary Expense	$	54,627	67,843
Auditing		30,330	29,450
IT Consultant		39,790	38,497
Conference and Convention Expense		22,023	2,691
Contributions for Annuities of Retirement Board Employees		—	94,718
Depreciation		93,963	25,590
Equipment Rental		27,301	28,653
Filing Fee - State of Illinois		8,000	8,000
File Storage Expense		16,973	11,563
Hospitalization		120,158	107,495
Legal		37,756	76,569
Legislative Consultant		38,000	36,000
Office Supplies and Expenses		42,127	30,312
Postage		10,150	10,778
Insurance - Surety Bond and Other		21,572	17,281
Rent Expense		109,119	262,013
Office Relocation Expense		22,434	—
Salaries		831,078	806,483
Payroll Tax		11,570	11,221
Bank Fees		21,436	19,694
Telephone		11,487	9,353
Transportation		689	1,523
Trustees' Election Expense		2,750	22,285
Interest Expense - Lease		19,155	—
Professional Fees		306,283	—
Loss on Disposal of Capital Assets		103,249	—
	$	2,002,020	1,718,012

Schedule of Professional Expenses
December 31, 2022

		2022	2021
Legal	$	37,756	76,569
Actuary Expense		54,627	67,843
Auditing		30,330	29,450
IT Consultant		39,790	38,497
Legislative Consultant		38,000	36,000
		200,503	248,359

Schedule of Investment Expenses
December 31, 2022

	2022	2021
U.S. Equity		
Great Lakes Advisors, LLC	$ 66,524	68,283
Ariel Investments	166,220	212,507
Northern Trust Quantitative Advisors	10,643	10,332
	243,387	291,122
Non U.S. Equity		
Ativo Capital	85,640	106,037
Northern Trust Quantitative Advisors	13,844	14,579
	99,484	120,616
Fixed Income		
Entrust Global	33,159	20,935
LM Capital Group, LLC	36,205	33,372
National Investment Services	37,493	39,330
	106,857	93,637
Hedged Equity		
Parametric	95,477	82,008
Real Estate		
Principal Global Investors	224,015	166,486
UBS Realty Investors, LLC (Trumbull)	125,572	154,827
	349,587	321,313
Private Equity		
HarbourVest Partners, LLC	75,000	56,250
Mesirow Financial Capital Partners	119,635	132,961
GoldPoint Partners, LLC (NYL)	—	6,867
	194,635	196,078
Infrastructure		
ULLICO Infrastructure	347,808	241,239
IFM Global Infra (US) L.P.	146,944	101,194
	494,752	342,433
Other		
Custody, Northern Trust Co.	70,000	70,000
Investment consultant	120,000	100,000
	190,000	170,000
Total	1,774,179	1,617,207

INVESTMENT SECTION

INTRODUCTION

The Fund is authorized to invest in bonds, notes, and other obligations of the U.S. Government; corporate debentures and obligations; insured mortgage notes and loans; common and preferred stocks; stock options; real estate; collective investment funds; and private equity partnerships as set forth in the Illinois Compiled Statutes. Income on all investments is recognized on the accrual basis. Gains and losses on sales and exchanges of investments are recognized on the transaction date of such sale or exchange. Dividend income is recognized based on dividends declared. Investments are reported at fair value. Short term investments are reported at cost, which approximates fair value. Fair value for bonds and stocks are determined by quoted market prices and for investments for which market quotations are not readily available are valued at their fair values as determined by a bank administrator under the direction of the Board of Trustees, with the assistance of a valuation service.

The Investment Section was prepared by staff with assistance from Meketa Investment Group, the Fund's investment consultant and Northern Trust Company, the Fund's custodian. Return calculations were prepared using a time-weighted rate of return methodology in accordance with the performance presentation standards of the CFA Institute.

Investment Recap

Market Environment

The U.S. stock market decreased by 19.5% during the year ending December 31, 2022 (fiscal year), as measured by the Dow Jones Total US Stock Index. Within the U.S. stock market, there was some differentiation in returns between large-cap, mid-cap, and small-cap stocks over the year, with returns of (19.1%), (17.3%), and (20.4%) for the Russell 1000, Russell Mid-Cap and Russell 2000 respectively. In addition, there was an observable rotation from growth stocks to value stocks compared to prior year. Value stocks outperformed growth stocks by 21.6%, although both value and growth stocks finished the year in negative territory as measured by Russell 1000 Value (7.5%) and Russell 1000 Growth (29.1%).

Over the full year, international stocks outperformed domestic equities, with the MSCI EAFE returning (14.5%) for the year, compared to the S&P 500 at (18.1%). Both regions outperformed emerging markets that declined by (20.1%) as measured by the MSCI EM index. The MSCI China index returned (21.9%), posting a second consecutive year of double-digit declines. Within fixed income, Bloomberg TIPS index to decreased 11.8% over the full year, while the Bloomberg Aggregate index declined by (13%) on higher rates. Economic growth decreased around the global, as Central Banks both in the U.S. and Europe increased their rates to combat stubbornly high Inflation remained stubbornly high, particularly in the U.S. and Eurozone where it has reached levels not seen in many decades.

Performance Commentary

The Pension Fund posted a calendar year return of (10.9%), net of fees, underperforming the custom benchmark by 1.2%. In absolute terms, the best performing asset class for the year was Infrastructure, which returned 5.4%, net of fees. The worst performing asset class for the year was Non-US Equities, which returned -22.2%, net of fees.

The Fund posted a three-year annualized return of 4.0%, net of fees, underperforming the custom benchmark by 1.4%. On a five-year basis, the Fund returned 4.6%, net of fees, 1.2% below the custom benchmark. On a ten-year basis, the Fund returned 7.2%, 0.1% ahead of the custom benchmark.

Performance Commentary - Continued

The fixed income market, as measured by the Bloomberg US Aggregate Index, returned (13.0%) during the year. The Fund's fixed income portfolio returned (12.9%), net of fees, over that period, outperforming the benchmark by 0.1%. At the end of the year, the Fund's fixed income assets comprised 15.6% of the total Fund's assets.

The broad U.S. stock market, as measured by the Dow Jones Total US Stock Index, returned -19.5% during the year. The Fund's U.S. Equity portfolio returned (16.4%), net of fees, over that period, outperforming Russell 3000 Index by 2.8%. The outperformance of the U.S. Equity portfolio was the result of value manager outperformance.

The U.S. Equity portfolio was led by the Great Lakes Value strategy, which returned (3.9%), net of fees, for the year, surpassing the Russell 1000 Value index by nearly 3.6%. At the end of the year, the Fund's U.S. stock market assets comprised 28.8% of the total Fund's assets.

The international stock market, as measured by the MSCI ACWI ex US Index, returned (16.0%) during the year. The Fund's International Equity portfolio returned (22.2%), net of fees, over that period, underperforming the benchmark by 6.2%. The International portfolio was led by the NTGI ACWI ex US portfolio, which returned (15.5%), net of fees, for the year, outperforming its benchmark by 0.5%. At the end of the year, the Fund's international stock market assets comprised 14.9% of the total Fund's assets.

The real estate market, as measured by the NCREIF Fund Index, returned 7.6% during the year. The Fund's real estate portfolio returned 5.2%, net of fees, over that period, underperforming the benchmark by 2.4%. At the end of the year, the Fund's real estate assets comprised 9.1% of the total Fund's assets.

Summary of Investments
December 31, 2022

Type of Investment		December 31, 2022				December 31, 2021			
		Fair Value	%	Book Value	%	Fair Value	%	Book Value	%
Fixed Income	$	22,761,976	7%	25,647,860	9%	25,851,555	7%	25,950,430	9%
Domestic Equities		96,498,227	29%	64,412,386	23%	115,133,112	29%	60,045,679	21%
International Equities		44,454,605	13%	38,410,866	14%	76,271,493	19%	55,099,769	19%
Collective Investments		42,110,350	13%	46,382,231	16%	33,868,899	9%	33,435,290	11%
Hedged Equity		26,852,038	8%	18,700,000	7%	29,066,132	7%	18,700,000	6%
Private Equity		21,157,955	6%	34,866,786	12%	24,296,348	6%	34,603,587	12%
Real Estate		28,903,944	9%	15,166,921	5%	32,743,837	8%	18,481,499	6%
Infrastructure		49,440,352	15%	35,421,753	13%	37,319,370	9%	25,037,921	9%
Short-term		3,191,964	1%	3,191,964	1%	21,486,428	5%	21,486,428	7%
Total Assets		335,371,411	100%	282,200,767	100%	396,037,174	100%	292,840,603	100%

Statement of Investment Policy
December 31, 2022

The purpose of this statement is to establish the investment policy for the management of the assets of the Park Employees' Annuity and Benefit Fund.

Distinction of Responsibilities

The Trustees are responsible for establishing the investment policy that is to guide the investment of Fund assets. The target allocation that the Trustees deem appropriate for the Fund is displayed below. The Fund's investments are distributed to a number of asset classes to minimize investment risk through diversification and simultaneously provide enhanced investment performance. The Trustees review the investment policy every three to five years.

Investment managers appointed by the Trustees to execute the policy will invest Fund assets in accordance with established guidelines but will apply their own judgments concerning relative investment values. In particular, the investment managers are accorded full discretion, within established guidelines and policy limits, to select individual investments and diversify their portfolios.

Allocation of Assets

It is the Trustees' policy to invest the Fund's assets in the following proportions:

	Board Approved Policy		
Asset Category	Target (%)	Range (%)	
U.S. Equity	24.0	18.0	30.0
Developed Market Equity	18.0	12.0	24.0
Emerging Markets Equity	6.0	1.0	10.0
Private Equity	7.0	5.0	10.0
Private Debt	5.0	0.0	10.0
Real Estate	10.0	6.0	16.0
Infrastructure	8.0	4.0	12.0
Short-term TIPS	4.0	0.0	8.0
Short-term IGB	5.0	0.0	8.0
Investment Grade Bonds	7.0	2.0	12.0
Long-term Gov Bonds	3.0	0.0	6.0
Risk Mitigating HFs	3.0	0.0	6.0
Cash Equivalents	0.0	0.0	5.0
	100.0		

Normal cash flows (contributions and benefit payments) will be used to maintain the allocation as close as practical to the target allocation. If normal cash flows are insufficient to maintain the allocation within the permissible range as of any calendar quarter-end, the Trustees shall transfer balances as necessary between the asset types to bring the allocation back within the permissible ranges.

Diversification

The portfolio is to be diversified within each asset class to reduce the impact of large losses in individual investments in a manner that is consistent with Retirement Board policy, and otherwise at the discretion of each investment manager.

Liquidity

The cash flow needs of the Fund are approximately 15% of the total Fund assets annually.

Individual Investment Management Performance Benchmark

Individual performance benchmarks will be established by the Board of Trustees and used to evaluate individual manager's performance.

Investment Objective

The investment objective of the Fund is to equal or exceed the rate of return of a benchmark comprised of 24% Russell 3000 Index, 18% MSCI EAFE Index, 6% MSCI Emerging Markets, 7% Prequin Real Time Index, 5% Credit Suisse Leveraged Loans Index, 10% NCREIF ODCE Equal Weighted (Net) Index, 8% CPI + 3%, 4% Bloomberg US TIPS 1-5 Year Index, 7% Bloomberg US Aggregate Index, 5% Bloomberg US Aggregate 1-3 Year Index, 3% Bloomberg US Government Long Treasuries, 3% CBOE BXM Index.

Schedule of Investment Performance
December 31, 2022

Schedule of Investment Performance

	Years ended December 31, 2022 - 2017						Year ended December 31, 2022		
	12/31/22	12/31/21	12/31/20	12/31/19	12/31/18	12/31/17	3 Years	5 Years	10 Years
Total Fund	-10.9%	14.6%	10.1%	17.2%	-5.2%	14.4%	4.0%	4.6%	7.2%
Benchmark Portfolio	-9.7	15.7	12.8	17.6	-3.7	13.9	5.4	5.8	7.1
Public Funds Median Return	-13.8	13.8	13.0	19.5	-4.4	14.7	3.6	5.0	6.9
Actuarial Assumed Rate of Return	7.25	7.25	7.25	7.25	7.50	7.50	7.25	7.25	7.42
Consumer Price Index	6.5	7.0	1.4	2.3	1.9	2.1	4.9	3.8	2.6
Fixed Income	-12.9%	-1.2%	9.3%	7.7%	0.0%	3.4%	-2.0%	0.3%	1.2%
Bloomberg US Aggregate	-13.0	-1.5	7.5	8.7	0.0	3.5	-2.7	0.0	1.1
Universe Median	-11.5	-0.9	7.7	8.9	-0.2	5.2	-1.6	0.6	1.5
U.S. Equities	-16.4%	27.5%	14.3%	28.8%	-11.5%	18.1%	6.8%	6.8%	10.9%
Russell 3000	-19.2	25.7	20.9	31.0	-5.2	21.1	7.1	8.8	12.1
Universe Median	-17.4	25.7	17.6	29.9	-6.1	20.2	6.9	8.4	11.7
Non-U.S. Equities	-22.2%	9.7%	12.3%	24.2%	-16.5%	28.4%	-1.4%	-0.1%	4.1%
MSCI ACWI Ex US	-16.0	7.8	10.7	21.5	-14.2	27.2	0.1	0.9	3.8
Universe Median	-17.4	7.7	12.2	22.8	-15.1	28.3	-0.2	0.8	4.1
Hedged Equities	-7.7%	17.7%	4.6%	16.3%	-2.9%	10.1%	4.4%	5.1%	5.5%
HFRX Hedged Equity	-3.2	12.1	4.6	10.7	-9.4	10.0	4.3	2.6	3.3
Universe Median	-6.0	8.4	7.9	7.7	-2.1	5.8	3.7	3.1	3.4
Risk Parity	n/a	n/a	n/a	n/a	-6.0%	10.4%	n/a	n/a	n/a
60% MSCI World/40% BarCap Agg	n/a	n/a	n/a	n/a	-5.1	14.5	n/a	n/a	n/a
Real Estate	5.2%	17.9%	-1.2%	3.1%	7.5%	6.4%	7.0%	6.3%	8.4%
NCREIF-ODCE	7.6	21.0	0.3	4.4	7.4	6.7	9.7	8.3	9.5
Universe Median	6.8	20.4	0.5	5.1	7.3	6.4	8.7	7.7	8.6
Infrastructure	5.4%	13.2%	1.0%	10.9%	15.3%	10.9%	6.4%	9.1%	n/a
CPI+3%	9.6	10.2	4.4	5.3	5.0	5.2	8.1	6.9	5.7
Private Equity	-13.2%	34.8%	22.3%	9.8%	4.8%	14.9%	12.5%	10.4%	11.6%
Prequin Real Time	-3.9	38.1	25.6	15.2	10.9	19.2	18.6	16.3	15.3

NOTE: The basis for the calculations is a time-weighted rate of return based on the market rate of return.

As of June 1, 2022 the Policy Benchmark Consists of 24% Russell 3000 Index, 18% MSCI EAFE Index, 6% MSCI Emerging Markets, 7% Prequin Real Time Index, 5% Credit Suisse Leveraged Loans Index, 10% NCREIF ODCE Equal Weighted (Net) Index, 8% CPI + 3%, 4% Bloomberg US TIPS 1-5 Year Index, 7% Bloomberg US Aggregate Index, 5% Bloomberg US Aggregate 1-3 Year Index, 3% Bloomberg US Government Long Treasuries, 3% CBOE BXM Index. Prior to June 1, 2022 the Policy Benchmark consists of 28.5% Dow Jones U.S. Total Stock Market Index, 20.0% MSCI All Country World Ex-US Index, 17.5% BarCap Aggregate Index, 7% Prequin Private Equity 1Q Lagged Index, 7% HFRX Hedged Equity Index, 10.0% NCREIF ODCE Index, and 10% CPI+4%. Prior to February 1, 2019, the Policy Benchmark consisted of 28.5% Wilshire 5000 Stock Index, 20.0% MSCI All Country World Ex-US Index, 25.5% BarCap Aggregate Index, 7% Venture Economics All Private Equity Index, 10% HFRX Hedged Equity Index, and 9.0% NCREIF ODCE Index. Prior to August 1, 2016, the Policy Benchmark consisted of 32.5% Wilshire 5000 Stock Index, 16.0% MSCI All Country World Ex-US Index, 25.5% BarCap Aggregate Index, 7% Venture Economics All Private Equity Index, 10% HFRX Hedged Equity Index, and 9.0% NCREIF ODCE Index. Prior to December 1, 2013, the Policy Benchmark consisted of 27% BarCap Aggregate, 27% Wilshire 5000, 17% MSCI ACWI ex U.S., 12% NCREIF ODCE, 10% HFRX Hedged Equity, and 7% Venture Economics All Private Equity Index. Prior to April 1, 2011, the Policy Benchmark consists of 35% BarCap Aggregate, 38% Wilshire 5000, 12% MSCI ACWI ex U.S., 10% NCREIF Property Index, and 5% Venture Economics All Private Equity Index. Prior to February 29, 2008, the Policy Benchmark consisted of 35% BarCap Aggregate, 38% Wilshire 5000, 12% MSCI EAFE, 10% NCREIF Property Index, and 5% Venture Economics All Private Equity Index.

Schedule of Ten Largest Stock and Bond Holdings
December 31, 2022

U.S. Stocks*

Shares	Holdings		Fair Value
31,285	MSG Entertainment Corporation	$	1,401,535
15,677	Apply Inc		1,400,954
7,812	Microsoft Corp		1,301,770
9,682	Affilifated Managers Group, Inc		1,224,399
24,001	Boyd Gaming Corporation		1,189,890
33,857	Lazard, Ltd.		1,175,940
42,431	Axalta Coating Systems, Ltd		1,151,764
9,585	Merck & Co Inc		1,135,328
60,454	Paramount Group Inc		1,078,268
36,651	Gentex Corportation		1,026,084

International Stocks*

Shares	Holdings		Fair Value
50,147	Taiwan Semiconductor Manufacturing	$	735,267
13,737	Samsung Electronics Co		638,090
12,834	Tencent Hldgs Limited Common Stock		549,156
2,958	Nestle		346,709
40,081	Alibaba Group Holding Ltd		344,318
297,930	Repo SSB 123022		297,930
9,488	Technopro Holdings Inc		253,468
29,956	Beazley PLC		244,856
30,641	Au Small Finance Bank Ltd		242,388
732	Roche Hldgs Ag Genusscheine NPV		237,453

Bonds*

Holdings		Fair Value
Cash	$	997,255
T 4 3/8 10/31/24		982,539
T 4 11/15/42		938,820
T 4/11/15/52		821,238
US Treasury Note 11/15/2052 4.00&		707,464
US Treasury Note 02/29/2024 1.50%		557,055
US Treasury Note 08/15/2051 2.00%		532,543
FNMA PN# SD8230 05/01/2052 4.50%		507,901
FN MA4806 5% 11/01/52		494,200
Federal Home Loan Bank 04/14/2025 0.50%		458,975

*A complete listing of all individual securities held is available for review upon request.

Schedule of Investment Brokerage Commissions
December 31, 2022

Broker Name	Shares*	Commission	Cost per Share
Loop Capital Markets LLC	113,685	$ 2,901	$ 0.03
Cabrera Capital Markets LLC	140,592	2,478	0.02
Williams Capital Group LP	107,210	1,627	0.01
CastleOak Sec/Cantor Clearing	80,450	1,230	0.01
Academy Securities Inc	62,625	1050	0.02
Penserra Securities LLC	32,454	649	0.02
Blayloack Robert Van LLC	26,532	531	0.02
Broker commissions under $500	49,946	597	0.01
Total Broker Commissions	613,494	11,063	

*A complete listing of investment fees can be found in the Supplemental Information, Schedule of Investment Expenses

ACTUARIAL

Park Employees' Annuity and Benefit Fund of Chicago

Actuarial Valuation and Review as of December 31, 2022

This report has been prepared at the request of the Board of Trustees to assist in administering the Fund. The measurements shown in this actuarial valuation may not be applicable for other purposes.

Segal

Segal

101 North Wacker Drive,
Suite 500
Chicago, IL 60606-1724
segalco.com

June 5, 2023

Board of Trustees
Park Employees' Annuity and Benefit Fund of Chicago
3500 S. Morgan St. Suite 400
Chicago, Illinois 60609

Dear Board Members:

We are pleased to submit this annual Actuarial Valuation and Review as of December 31, 2022. It summarizes the actuarial data used in the valuation, establishes the net pension liability under Governmental Accounting Standards Board (GASB) Statement No. 67 and the funding requirements for the fiscal year ending December 31, 2023, and analyzes the preceding year's experience.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Park Employees' Annuity and Benefit Fund of Chicago.

Asset and Membership Data

The census information and financial information on which our calculations were based was prepared by the Fund staff. That assistance is gratefully acknowledged. We have not subjected the census data to any auditing procedures, but have examined the data for reasonableness and consistency with the prior year's data.

Plan Changes

Effective August 6, 2021, House Bill 417, or Public Act 102-0263 (P.A. 102-0263) was signed into law. The newly-enacted legislation created a new tier of participant benefits beginning on January 1, 2022. The new tier applies to participants hired on or after January 1, 2022, or participants hired on or after January 1, 2011, who made an irrevocable election to participate in the new tier between January 1, 2022, and April 1, 2022. See the plan provisions section of this report for details.

Actuarial Assumptions and Methods

The actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the Fund's actuary. The assumptions and methods used for the December 31, 2022, actuarial valuation were based on an experience analysis covering the five-year period ending December 31, 2017, and were adopted by the Board, effective for the December 31, 2018, valuation. These actuarial assumptions and methods comply with the parameters set by the Actuarial Standards of Practice and the parameters for disclosure in GASB Statement No. 67. The investment return assumption is based on the Fund being invested according to the target asset allocation in the Investment Policy Statement. To the extent that the liquidation of assets to pay benefit payments and expenses requires a shift in investment allocation to more liquid, lower return asset classes, a lower discount rate may be required in the future. On May 19, 2022, the Board of Trustees approved a decrease in the investment return assumption to 7.00% for the December 31, 2022, valuation.

Funding Adequacy

The current funding policy of the Fund, adopted by the Board, is to have contributions sufficient to amortize the unfunded actuarial accrued liability over the 30-year period ending December 31, 2042. However, the actual amount of employer contributions each year is set by statute. P.A. 102-0263 also included provisions that updated the method and amount of employer contributions. Under P.A. 102-0263, employer contributions are now the sum of employer normal cost plus a 35-year closed-period amortization of the unfunded actuarial accrued liability as of December 31, 2022, phased in from 2020 to 2023.

The Board is in the process of reviewing the funding policy in light of the enactment of P.A. 102-0263 and current model practice with respect to actuarial funding policies for public sector retirement plans.

This report includes the following schedules for the Actuarial and Financial sections of the Annual Comprehensive Financial Report, which were prepared by Segal:

- Actuarial
  - Active Member Valuation Data
  - Retirees and Beneficiaries Added to and Removed from Rolls
  - Solvency Test
  - Analysis of Financial Experience
- Financial
  - Schedule of Changes in Employer's Net Pension Liability
  - Schedule of Employer's Net Pension Liability
  - Schedule of Employer Contributions

Limitation of Actuarial Measurements

The measurements shown in this actuarial valuation may not be applicable for other purposes. 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; and changes in plan provisions or applicable law.

Qualifications

The actuarial calculations were directed under my supervision. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in my opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

Sincerely,

Matthew A. Strom, FSA, MAAA, EA
Senior Vice President and Actuary

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Section 1: Actuarial Valuation Summary

Purpose

This report has been prepared by Segal to present a valuation of the Park Employees' Annuity and Benefit Fund of Chicago (the Fund) as of December 31, 2022. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- The benefit provisions of the Fund, as outlined in 40 ILCS 5/12 and administered by the Board;
- The characteristics of covered active participants, inactive vested participants, and retired participants and beneficiaries as of December 31, 2022, provided by Fund staff;
- The assets of the Fund as of December 31, 2022, provided by Fund staff;
- Economic assumptions regarding future salary increases and investment earnings; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Valuation Highlights

The following key findings were the result of this actuarial valuation:

1. Under the employer contribution provisions contained in P.A. 102-0263, the Fund is now projected to remain solvent and reach a goal of 100% funding by 2057. A 40-year projection of the Fund's financial status is shown in Exhibit V.
2. The funded ratio based on the actuarial value of assets over the actuarial accrued liability as of December 31, 2022, is 31.5%, compared to 32.0% as of December 31, 2021. This ratio is a measure of funded status, and its history is a measure of funding progress. Using the fair value of assets, the funded ratio as of December 31, 2022, is 28.8%, compared to 34.2% as of December 31, 2021. These measurements are not necessarily appropriate for assessing the sufficiency of Fund assets to cover the estimated cost of settling the Fund's benefit obligation or the need for or the amount of future contributions.
3. Employer contributions to the Fund are mandated by statute and target 100% funding of the total actuarial accrued liability of the Fund over a 35-year period ending December 31, 2057. The Board's funding policy used to develop an actuarially determined contribution (ADC) is calculated on a level percentage of pay basis and is based on a closed 30-year period, which ends on December 31, 2042. For the fiscal year beginning January 1, 2023, the ADC based on the Board's funding policy is $77,592,063. Based on the employer contributions set in statue, the employer has budgeted $56,874,515, for the fiscal year beginning January 1, 2023. Compared to the ADC, the contribution deficiency is $20,717,548.
4. We have calculated the statutorily-required employer contribution for the fiscal year beginning January 1, 2024, to be $59,609,491.
5. For the year ended December 31, 2022, Segal has determined that the asset return on a fair value basis was −10.6%. After gradual recognition of investment gains and losses under the actuarial smoothing method, the actuarial rate of return was 4.3%. This represents an experience loss when compared to the assumed rate of 7.25% that was in effect for the year ending December 31, 2022. As of December 31, 2022, the actuarial value of assets ($399.6 million) represents 109.2% of the fair value ($365.8 million).
6. The portion of deferred investment gains and losses recognized in the calculation of the December 31, 2022, actuarial value of assets resulted in a loss of $11,524,107. Additionally, the demographic and liability experience resulted in a $1,166,351 net loss.
7. The total unrecognized investment loss as of December 31, 2022, is $33,710,791. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. This implies that earning the assumed rate of investment return of 7.00% per year (net of investment expenses) on a fair value basis will result in investment gains on the actuarial value of assets in the next few years. Therefore, if the actual fair value return is equal to the assumed 7.00% rate and all other actuarial assumptions are met, the contribution requirements would increase over the next few years.
8. As mentioned above, the current method used to determine the actuarial value of assets yields an amount that is 109.2% of the fair value of assets as of December 31, 2022. Guidelines in Actuarial Standard of Practice No. 44 (Selection and Use of Asset Valuation Methods for Pension Valuations) recommend that asset values fall within a reasonable range around the corresponding fair value. We believe the actuarial asset method currently complies with these guidelines.

9. When measuring pension liability for GASB purposes, the same actuarial cost method (Entry Age method) that is used for funding purposes is used to determine the Total Pension Liability. In large part due to the funding changes included in P.A. 102-0263, as of December 31, 2022, the GASB blended discount rate calculation results in the same discount rate (7.00%) as used for plan funding purposes. This means that the Total Pension Liability (TPL) measure for financial reporting shown in this report will not differ from the actuarial accrued liability (AAL) measure for funding. We note that the same is true for the normal cost component of the annual plan cost for funding and financial reporting.
10. The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan's fiduciary net position. The Plan's fiduciary net position is equal to the fair value of assets. The NPL as of December 31, 2022, is $903,171,435, which was based on a discount rate of 7.00%, compared to the NPL as of December 31, 2021, of $797,333,323, which was based on a discount rate of 7.25%.
11. This actuarial report as of December 31, 2022, is based on financial data as of that date. Changes in the value of assets subsequent to that date are not reflected. Declines in asset values will increase the cost of the plan, while increases in asset values (in excess of expected) will decrease the cost of the plan.

Summary of Key Valuation Results

	2024	2023	2022
Contributions for fiscal year beginning:			
Expected employer contributions provided by the Fund	$59,609,491	$56,874,515	$52,036,900
Actuarially determined contribution requirement	--	$77,592,063	71,021,948
Actual employer contributions	--	--	67,128,978
Funding elements for fiscal year beginning:			
Employer normal cost, including administrative expenses		$7,405,215	$6,390,769
Fair value of assets		365,845,448	414,658,650
Actuarial value of assets		399,555,117	388,163,499
Actuarial accrued liability		1,269,016,883	1,211,991,973
Unfunded actuarial accrued liability		869,461,766	823,828,474
Funded ratio (based on actuarial value of assets)		31.49%	32.03%
GASB information:			
Long-term expected rate of return		7.00%	7.25%
Municipal bond index		3.72%	2.06%
Single equivalent discount rate		7.00%	7.25%
Total pension liability		$1,269,016,883	$1,211,991,973
Plan fiduciary net position		365,845,448	414,658,650
Net pension liability		903,171,435	797,333,323
Plan fiduciary net position as a percentage of total pension liability		28.83%	34.21%
Demographic data for plan year beginning:			
Number of retired participants and beneficiaries		2,745	2,752
Number of vested former participants		173	169
Number of active participants		2,818	2,694
Total salary supplied by the Fund		$134,679,715	$131,000,642
Average salary		47,793	48,627

Important Information About Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal ("Segal") relies on a number of input items. These include:

- **Plan of benefits**: Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.

- **Participant data**: An actuarial valuation for a plan is based on data provided to the actuary by the Fund staff. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.

- **Assets**: The valuation is based on the fair value of assets as of the valuation date, as provided by the Fund staff. The Fund staff uses an "actuarial value of assets" that differs from fair value to gradually reflect year-to-year changes in the fair value of assets in determining the contribution requirements.

- **Actuarial assumptions**: In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results that does not mean that the previous assumptions were unreasonable.

- **Modeling**: Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Deterministic cost projections are based on a proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the direction of the supervising actuary.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared at the request of the Board. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the Fund.
- If the Board is aware of any event or trend that was not considered in the valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of Fund's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.
- The measurements shown in this actuarial valuation may not be applicable for other purposes. 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; and changes in plan provisions or applicable law.

As Segal has no discretionary authority with respect to the management or assets of the Fund, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Fund.

Section 2: Actuarial Valuation Results

A. Membership Data

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, inactive members, retirees and beneficiaries.

This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

A historical perspective of how the member population has changed over the past ten valuations can be seen in this chart.

Member Population: 2013 – 2022

Census Date (December 31)	Active Members	Vested Terminated Members*	Retired and Beneficiaries**	Ratio of Actives to Retirees and Beneficiaries
2013	3,076	148	2,904	1.06
2014	2,973	147	2,891	1.03
2015	3,063	145	2,876	1.07
2016	3,114	149	2,870	1.09
2017	3,543	150	2,876	1.23
2018	3,187	145	2,854	1.12
2019	3,132	147	2,843	1.05
2020	2,890	158	2,775	1.04
2021	2,694	169	2,752	1.08
2022	2,818	173	2,745	1.04

* *Excludes terminated members due a refund of employee contributions.*

** *Excludes QILDROs*

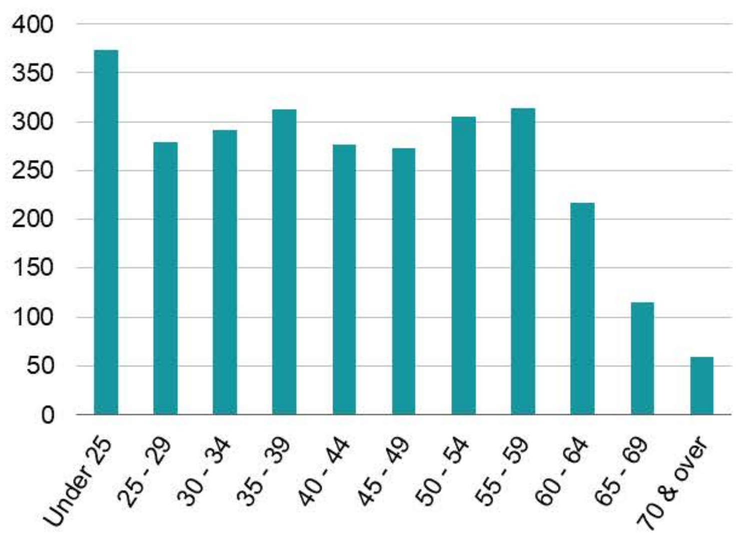
Active Members

Plan costs are affected by the age, years of service and payroll of active members. In this year's valuation, there were 2,818 active members with an average age of 43.2, average years of service of 10.8 years, and average salary of $47,793. The 2,694 active participants in the prior valuation had an average age of 43.8, average years of service of 11.6 years, and average salary of $48,627.

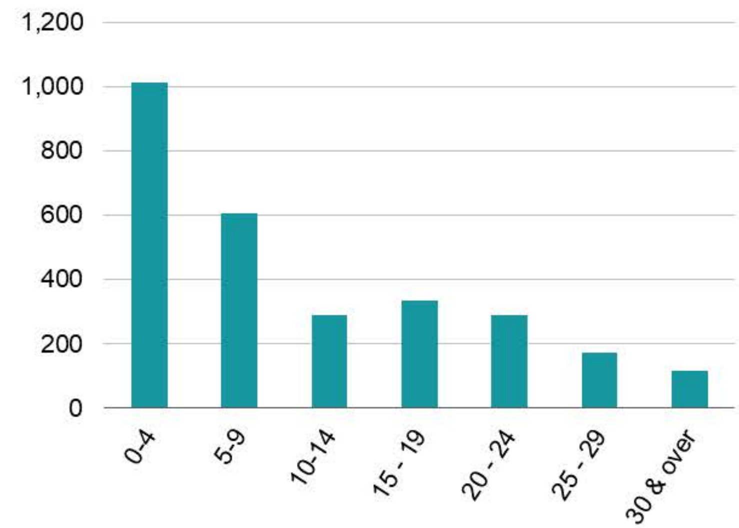
These graphs show a distribution of active members by age and by years of service.

Distribution of Active Members as of December 31, 2022

Actives by Age



Actives by Years of Service



Inactive Members

In this year's valuation, there were 173 members with a vested right to a deferred or immediate vested benefit.

In addition, there were 5,092 members entitled to a return of their employee contributions.

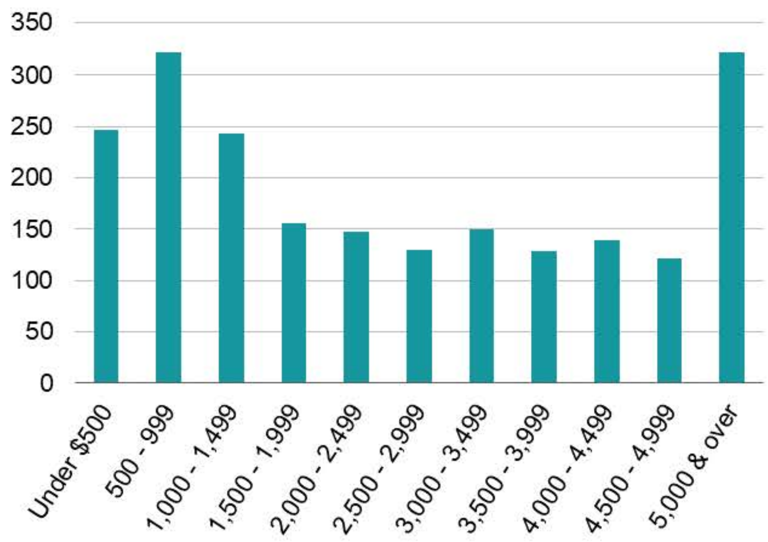
Retirees and Beneficiaries

As of December 31, 2022, 2,106 retirees, 631 beneficiaries, and 8 dependent children were receiving total monthly benefits of $6,707,750. For comparison, in the previous valuation, there were 2,104 retirees, 639 beneficiaries, and 9 dependent children receiving monthly benefits of $6,531,098.

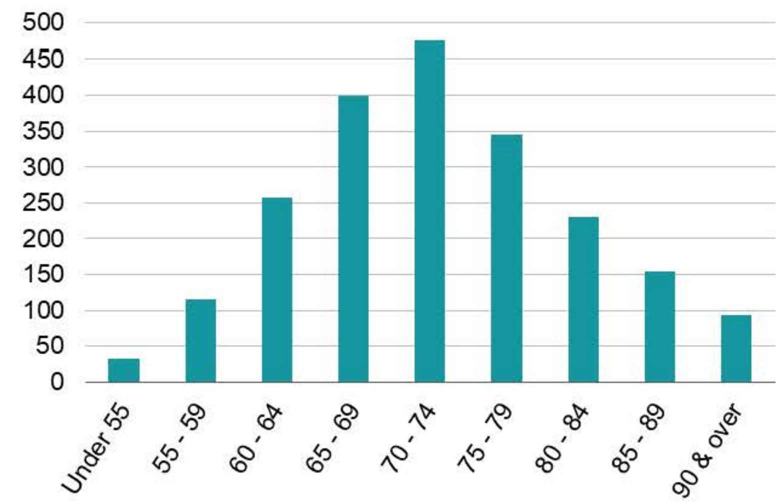
These graphs show a distribution of the current retirees and beneficiaries based on their monthly amount and age.

Distribution of Retirees as of December 31, 2022

Retirees by Monthly Amount



Retirees by Age



B. Financial Information

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board has approved an asset valuation method that gradually adjusts to fair value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable.

The amount of the adjustment to recognize fair value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value. The chart shows the determination of the actuarial value of assets as of the valuation date.

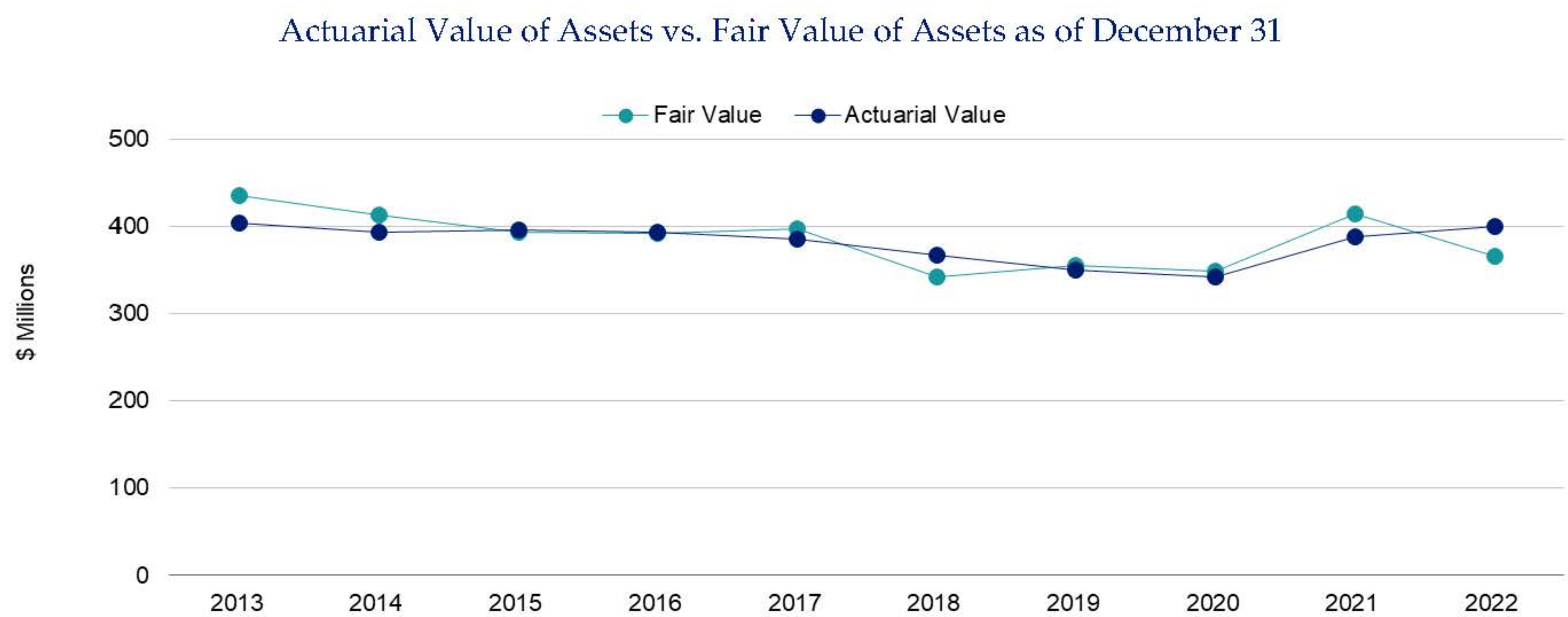
Determination of Actuarial Value of Assets for Fiscal Years Ended December 31

				2022		2021
1	Actuarial value of assets as of prior valuation date			$388,163,499		$342,131,743
2	Employer and employee contributions and other income			79,798,831		95,576,714
3	Benefits and expenses			84,842,140		82,320,856
4	Expected investment income			27,959,034		25,285,076
5	Total investment income, including income for securities lending			−43,769,893		53,108,277
6	Investment gain/(loss): **(5) − (4)**			−71,728,927		27,823,201
7	Expected actuarial value of assets: **(1) + (2) − (3) + (4)**			411,079,224		380,672,677
8	Calculation of recognized return	Original Amount*	Percent Recognized		Percent Recognized	
	(a) Year ended December 31, 2022	−$71,728,927	20%	−$14,345,785	--	--
	(b) Year ended December 31, 2021	27,823,201	20%	5,564,640	20%	$5,564,640
	(c) Year ended December 31, 2020	4,006,341	20%	801,268	20%	801,268
	(d) Year ended December 31, 2019	26,879,470	20%	5,375,894	20%	5,375,894
	(e) Year ended December 31, 2018	−44,600,621	20%	−8,920,124	20%	−8,920,124
	(f) Year ended December 31, 2017	23,345,719	0%	0	20%	4,669,144
	(g) Total recognized return			−11,524,107		7,490,822
9	Actuarial value of assets as of current valuation date: **(7) + (8g)**			$399,555,117		$388,163,499

* *Total return minus expected return on actuarial value*

Both the actuarial value and fair value of assets are representations of the fund's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the fair value of assets. The actuarial asset value is significant because the Fund's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

The chart shows the change in the actuarial value of assets versus the fair value over the past ten valuation dates.



C. Actuarial Experience

To calculate the actuarially determined contribution requirement, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience. If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total loss is $12,916,977; $11,524,107 from investment losses and $1,392,870 in losses from all other sources. The net experience variation from individual sources other than investments was 0.11% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience during the past year.

Actuarial Experience for Year Ended December 31, 2022

1	Net loss from investments*	−$11,524,107
2	Net loss from administrative expenses	−226,519
3	Net loss from other experience	−1,166,351
4	Net experience loss: **(1) + (2) + (3)**	−$12,916,977

* *Details on the next page*

Investment Experience

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on the Fund's investment policy. For valuation purposes, the assumed rate of return on the actuarial value of assets for the year ended December 31, 2022, was 7.25%. The actual rate of return on an actuarial basis for the year ended December 31, 2022, was 4.26%.

Since the actual return for the year was less than the assumed return, the Fund experienced an actuarial loss during the fiscal year ended December 31, 2022, with regard to its investments.

This chart shows the gain/(loss) due to investment experience.

Investment Experience

1	Actual return	$16,434,927
2	Average value of assets	385,641,845
3	Actual rate of return: **(1) ÷ (2)**	4.26%
4	Assumed rate of return	7.25%
5	Expected return: **(2) x (4)**	27,959,034
6	Actuarial loss: **(1) − (5)**	−$11,524,107

Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on an actuarial basis compared to the fair value investment return for the last ten valuation years, including five-year and ten-year averages.

Investment Return

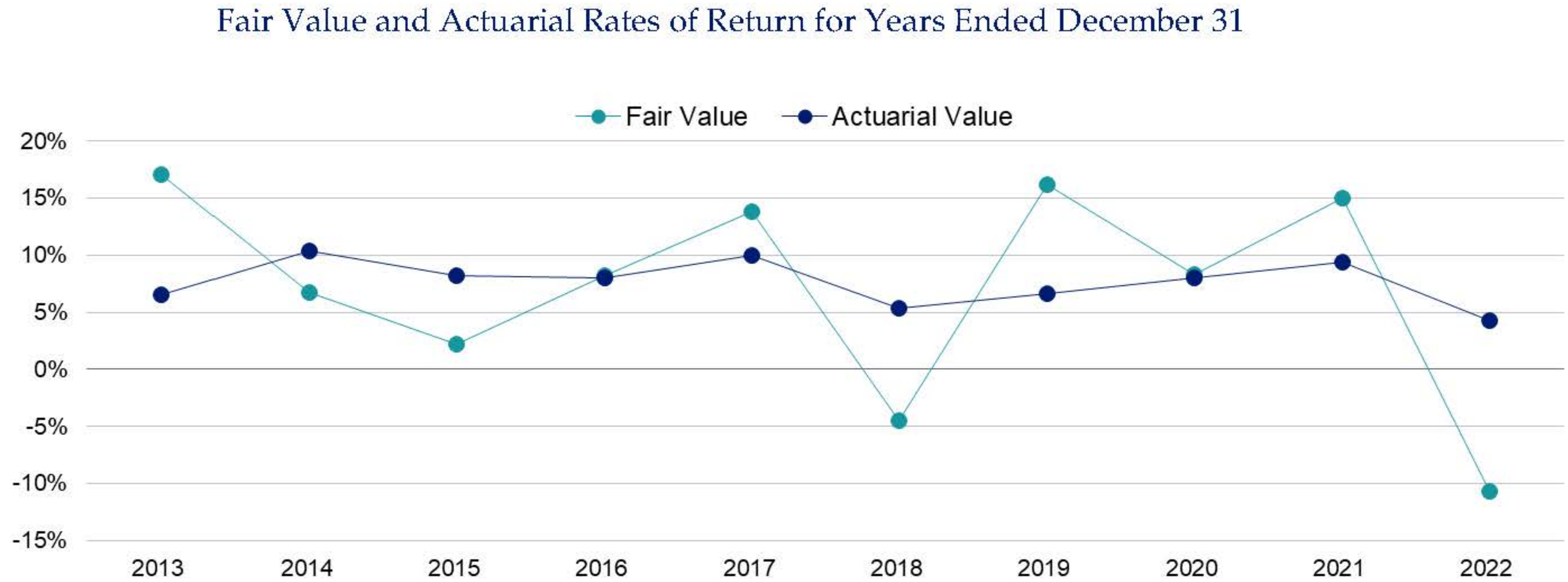
Fiscal Year Ended December 31	Fair Value**	Actuarial Value*
2013	16.9%	6.5%
2014	6.9%	10.4%
2015	1.9%	8.2%
2016	8.4%	8.0%
2017	14.2%	10.0%
2018	−5.1%	5.4%
2019	17.0%	6.6%
2020	9.3%	8.0%
2021	14.6%	9.4%
2022	−11.0%	4.3%
Average Returns		
Last 5 years	4.4%	6.7%
Last 10 years	6.9%	7.7%

* *As determined by Segal*

** *As determined by Investment Consultant*

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the fair value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling the actuarially required contribution.

This chart illustrates how this leveling effect has actually worked over the years 2013 - 2022.



Administrative Expenses

Administrative expenses for the year ended December 31, 2022, totaled $2,002,020 compared to the assumption of $1,722,354. This resulted in a loss of $226,519 for the year when adjusted for timing.

Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- the extent of turnover among participants,
- retirement experience (earlier or later than projected),
- mortality (more or fewer deaths than projected),
- the number of disability retirements, and
- salary increases different than assumed.

The net loss from this other experience for the year ended December 31, 2022, amounted to $1,166,351, which is 0.11% of the actuarial accrued liability.

A brief summary of the demographic gain/(loss) experience of the Fund for the year ended December 31, 2022, is shown in the chart below.

Experience Due to Changes in Demographics for Year Ended December 31, 2022

1	Turnover	−$2,452,944
2	Active Retirement	−4,562,715
3	Experience among retired members and beneficiaries related to mortality	4,668,049
4	Salary/service increase for continuing actives	−794,581
5	Other	1,975,840
6	Net Loss	−$1,166,351

D. Development of Employer Costs

At the discretion of the Board, the actuarial valuation includes the calculation of a funding policy benchmark contribution amount referred to as the actuarially determined contribution. The amount of actuarially determined contribution is comprised of an employer normal cost payment and a payment on the unfunded actuarial accrued liability. This total amount is then divided by the projected payroll for active members to determine the actuarially determined contribution of 55.19% of payroll.

The actuarially determined contribution is calculated on a level percentage of pay basis and is based on a closed 30-year period, which ends on December 31, 2042. As of January 1, 2023, there are 20 years remaining on the amortization period. The Board is in the process of reviewing the funding policy in light of the enactment of P.A. 102-0263 and current model practice with respect to actuarial funding policies for public sector retirement plans.

The chart compares this valuation's actuarially determined contribution with the prior valuation.

Actuarially Determined Contribution

		Year Beginning January 1			
		2023		2022	
		Amount	% of Payroll	Amount	% of Payroll
1	Total normal cost*	$18,511,656	13.17%	$17,019,445	12.52%
2	Administrative expenses	2,009,201	1.43%	1,722,354	1.27%
3	Expected employee contributions*	−13,115,642	−9.33%	−12,351,030	−9.09%
4	Employer normal cost: **(1) + (2) + (3)**	7,405,215	5.27%	6,390,769	4.70%
5	Employer normal cost, adjusted for timing*	7,658,563	5.45%	6,617,040	4.87%
6	Actuarial accrued liability	1,269,016,883		1,211,991,973	
7	Actuarial value of assets	399,555,117		388,163,499	
8	Unfunded/(overfunded) actuarial accrued liability: **(6) − (7)**	869,461,766		823,828,474	
9	Payment on unfunded actuarial accrued liability	69,933,500	49.74%	64,404,908	47.38%
10	Actuarially determined contribution, adjusted for timing*: **(5) + (9)**	77,592,063	55.19%	71,021,948	52.24%
11	Projected payroll	$140,585,920		$135,940,548	

** Recommended contributions are assumed to be paid at the middle of every month.*

The actuarially determined contribution as of January 1, 2023, is based on all the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

The chart reconciles the actuarially determined contribution from the prior valuation to the amount determined in this valuation.

Reconciliation of Actuarially Determined Contribution from January 1, 2022 to January 1, 2023

Actuarially Determined Contribution as of January 1, 2022	$71,021,948
Effect of expected change in amortization payment due to payroll growth	1,610,122
Effect of plan changes	241,667
Effect of change in administrative expense assumption	296,661
Effect of change in other actuarial assumptions	1,989,302
Effect of contributions less than the recommended contribution	338,318
Effect of investment losses	886,890
Effect of other gains and losses on accrued liability	107,195
Effect of net other changes	1,099,960
Total change	6,570,115
Actuarially Determined Contribution as of January 1, 2023	$77,592,063

E. Risk

Since the actuarial valuation results are dependent on a given set of assumptions and data as of a specific date, there is a risk that emerging results may differ significantly as actual experience differs from the assumptions.

This report does not contain a detailed analysis of the potential range of future measurements, but does include a brief discussion of some risks that may affect the Fund. Upon request, a more detailed assessment of the risks can be provided to enable a better understanding of the risks specific to this Fund.

Investment Risk (the risk that returns will be different than expected)

Since the Plan's assets are much larger than contributions, investment performance may create significant volatility in contribution requirements. For example, if the actual return on the fair value of assets for the next Plan Year were 1% different from the assumed (either higher or lower), the projected unfunded actuarial liability would change by 0.5%, or about $4.1 million and the actuarially determined contribution requirements would increase or decrease by approximately $0.3 million.

The fair value rate of return over the last 10 years has ranged from a low of −11.0% to a high of 17.0%, with an average of 6.9%.

Longevity Risk (the risk that mortality experience will be different than expected)

The actuarial valuation includes an expectation of future improvement in life expectancy. Emerging plan experience that does not match these expectations will result in either an increase or decrease in the Plan's funding policy and actuarially determined contribution requirement.

Contribution Risk

The Plan's funding policy contribution requires payment of the Employer's normal cost and an amortization payment according to a schedule sufficient to pay down unfunded actuarial liability over time. If the Plan's funding policy contribution were adhered to, contribution risk would be negligible.

Employer contribution requirements are set by statute and were increased with the enactment of P.A. 102-0263, effective August 6, 2021. Employer contributions to the Fund under P.A. 102-0263 target 100% funding of the total actuarial accrued liability of the Fund over a 35-year period ending December 31, 2057. Under this revised approach, if employer contribution requirements are adhered to, contribution risk would also be negligible.

Demographic Risk (the risk that participant experience will be different than assumed)

Examples of this risk include:

- Actual retirements occurring earlier or later than assumed. The value of retirement plan benefits is sensitive to the rate of benefit accruals and any early retirement subsidies that apply.
- More or less active participant turnover than assumed.
- Individual salary increases higher or lower than assumed.

Actual Experience Over the Last 10 years and Implications for the Future

Past experience can help demonstrate the sensitivity of key results to the Plan's actual experience. Over the past ten years:

- The investment gain/(loss) for a year has ranged from a gain of $37 million to a loss of $45 million.
- The non-investment gain/(loss) for a year has ranged from a gain of $5 million to a loss of $9 million.
- The funded percentage on the actuarial value of assets has ranged from a low of 28.74% to a high of 45.53%.

Section 3: Supplemental Information

Exhibit A – Table of Fund Coverage

Category	Year Ended December 31: 2022	2021	Change From Prior Year
Active members in valuation:			
Number	2,818	2,694	+4.6%
Average age	43.2	43.8	−0.6
Average years of service	10.8	11.6	−0.8
Total salary supplied by the Fund	$134,679,715	$131,000,642	+2.8%
Average salary	47,793	48,627	−1.7%
Total active vested members with at least 10 years of service	1,219	1,254	−2.8%
Vested terminated members	173	169	+2.4%
Non-vested terminated members eligible for a return of contributions	5,092	4,999	+1.9%
Service retirees:			
Number in pay status*	2,106	2,104	+0.1%
Average age	72.7	72.6	+0.1
Average monthly benefit	$2,715	$2,634	+3.1%
Beneficiaries			
Number in pay status	639	648	−1.4%
Average age	79.0	79.4	−0.4
Average monthly benefit	$1,550	$1,526	+1.6%
Total number of members	10,828	10,614	+2.0%

* Excluding QILDROS

Exhibit B – Participants in Active Service as of December 31, 2022 By Age, Years of Service, and Average Payroll provided by the Fund

		Years of Service								
Age	Total	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 & over
Under 25	374	358	16							
	$21,130	$20,800	$28,502							
25 – 29	279	155	117	7						
	$31,969	$29,096	$35,275	$40,318						
30 – 34	292	104	114	62	12					
	$43,613	$35,826	$48,882	$46,882	$44,166					
35 – 39	312	99	68	60	68	17				
	$50,108	$38,189	$53,401	$58,596	$54,518	$58,748				
40 – 44	277	78	60	34	52	45	8			
	$57,233	$38,274	$67,523	$64,705	$62,193	$61,598	$76,339			
45 – 49	272	69	58	31	42	33	35	4		
	$59,677	$40,482	$57,520	$73,770	$73,648	$66,028	$64,327	$73,083		
50 – 54	305	53	48	37	53	54	43	16	1	
	$60,955	$34,952	$62,745	$61,729	$56,541	$65,668	$72,447	$107,112	$71,332	
55 – 59	314	72	45	32	36	50	41	27	11	
	$55,577	$29,524	$55,076	$56,670	$59,852	$64,219	$74,649	$67,343	$71,746	
60 – 64	217	36	35	13	28	33	38	20	9	5
	$55,814	$34,843	$47,954	$50,163	$53,468	$67,069	$60,445	$73,601	$75,383	$73,810
65 – 69	116	15	20	12	15	21	11	8	6	8
	$53,297	$31,446	$47,177	$51,687	$59,519	$51,732	$56,869	$65,545	$70,705	$74,207
70 & Over	60	4	9	8	5	11	12	4	3	4
	$51,116	$14,825	$39,957	$44,809	$52,131	$59,994	$57,646	$73,938	$52,136	$56,267
Total	2,818	1,043	590	296	311	264	188	79	30	17
	$47,793	$29,727	$50,248	$57,161	$59,056	$63,129	$67,299	$77,424	$70,654	$69,869

Exhibit C – History of Active Member Valuation Data

Actuarial Valuation Date	Active Members	Percent Increase	Annual Salaries	Percent Increase	Average Salary	Percent Increase
2013	3,076	0.75%	$115,617,428	1.48%	$37,587	0.72%
2014	2,973	(3.35%)	120,376,477	4.12%	40,490	7.72%
2015	3,063	3.03%	126,294,812	4.92%	41,232	1.83%
2016	3,114	1.67%	124,502,908	(1.42%)	39,982	(3.03%)
2017	3,543	13.78%	134,258,328	7.84%	37,894	(5.22%)
2018	3,187	(10.05%)	129,923,175	(3.23%)	40,767	7.58%
2019	3,132	(1.73%)	136,105,381	4.76%	43,456	6.60%
2020	2,890	(7.73%)	135,162,943	(0.69%)	46,769	7.62%
2021	2,694	(6.78%)	131,000,642	(3.08%)	48,627	3.97%
2022	2,818	4.60%	134,679,715	2.81%	47,793	(1.72%)

Average Increase/(Decrease)						
Last 5 years		-4.34%		0.11%		4.81%
Last 10 years		-0.58%		1.75%		2.61%

Exhibit D – Reconciliation of Member Data

	Active Members	Inactive Members	Retirees	Beneficiaries	Total
Number as of December 31, 2021	2,694	5,168	2,104	648	10,614
New participants	456	N/A	N/A	N/A	456
Terminations	(153)	153	-	-	-
Retirements	(74)	(24)	98	N/A	-
New disabilities	-	-	N/A	N/A	-
Died with beneficiary	(9)	(1)	(36)	46	-
Died without beneficiary	(3)	-	(60)	(55)	(118)
Refunds	(111)	(26)	-	-	(137)
Rehires	18	(18)	-	-	-
Data adjustments	-	13	-	-	13
Number as of December 31, 2022	2,818	5,265	2,106	639	10,828

Exhibit E – Schedule of Pensioners and Beneficiaries Added to and Removed from Rolls

	Added to Rolls		Removed from Rolls		Rolls – End of Year			
Fiscal Year	Number	Annual Allowances	Number	Annual Allowances	Number*	Annual Allowances	% Increase in Avg. Annual Allowances	Average Annual Allowances
2013	147	$4,594,883	147	$2,788,285	2,888	$66,967,839	2.8	$23,188
2014	126	4,085,581	138	2,781,597	2,876	68,271,823	2.4	23,738
2015	94	1,823,238	106	2,271,591	2,864	67,823,470	-0.7	23,681
2016	126	5,283,834	133	2,711,190	2,857	70,396,114	4.0	24,640
2017	107	3,628,199	104	1,952,677	2,860	72,071,636	2.3	25,200
2018	135	5,446,939	153	2,967,901	2,842	74,550,674	4.1	26,232
2019	128	4,578,087	140	3,174,168	2,830	75,954,593	2.3	26,839
2020	80	3,824,254	146	3,171,408	2,764	76,607,439	3.3	27,716
2021	91	4,194,340	112	2,428,607	2,743	78,373,172	3.1	28,572
2022	109	4,563,266	115	2,443,435	2,737	80,493,003	2.9	29,409

* *Does not include child beneficiaries receiving a pension.*

Exhibit F – Summary Statement of Income and Expenses on a Fair Value Basis at Fiscal Year Ended December 31

	2022		2021	
Net position at value at the beginning of the year		$414,658,650		$348,294,515
Contribution income:				
Employer contributions	$67,128,978		$83,349,261	
Employee contributions	12,669,678		12,226,998	
Less administrative expenses	−2,002,020		−1,718,012	
Net contribution income		77,796,636		93,858,247
Securities leading income		26,381		19,175
Other income		175		455
Investment income:				
Interest, dividends and partnership income	$4,197,404		$7,325,279	
Asset appreciation	−46,219,499		47,381,030	
Less investment expenses	−1,774,179		−1,617,207	
Net investment income		−43,796,274		53,089,102
Total income available for benefits		$34,026,918		$146,966,979
Less benefit payments:				
Benefits and refunds	−$82,840,120		−$80,602,844	
Net benefit payments		−$82,840,120		−$80,602,844
Change in reserve for future benefits		−$48,813,202		$66,364,135
Net position at fair value at the end of the year		$365,845,448		$414,658,650

Exhibit G – Summary Statement of Fund Assets at Fiscal Year Ended December 31

	2022		2021	
Accounts receivable		$25,739,286		$14,230,714
Investments, at fair value:				
Collective investment funds	$122,855,973		$127,783,646	
Bonds	22,761,976		25,851,555	
Common and preferred stocks	45,264,238		52,485,719	
Real estate	28,903,944		32,743,837	
Private equity partnerships	21,157,955		24,296,348	
Hedged equity	26,852,038		29,066,132	
Infrastructure	49,440,352		37,319,370	
Mutual funds	0		20,423,662	
International equity	14,942,971		24,580,477	
Short-term investments	3,191,964		21,486,428	
Total investments at fair value		335,371,411		396,037,174
Invested securities lending collateral		16,345,710		16,779,808
Prepaid annuity benefits		5,747,640		5,528,333
Furniture and fixtures, net		1,458,161		124,839
Prepaid expenses		80,149		53,168
Total assets		$384,742,357		$432,754,036
Less accounts payable:				
Accounts payable	−$457,928		−$398,104	
Accrued benefits and member contributions payable	−795,732		−886,252	
Securities lending collateral	−16,345,710		−16,779,808	
Unclaimed Checks	−1,067,367			
Lease Liability	−230,172			
Deferred rent	0		−31,222	
Total accounts payable		−$18,896,909		−$18,095,386
Net position at fair value		$365,845,448		$414,658,650
Net position at actuarial value		$399,555,117		$388,163,499

Exhibit H – Development of the Fund Through December 31, 2022

Fiscal Year Ended December 31	Employer Contributions	Employee Contributions	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2013	$15,707,814	$10,732,730	$26,107,300	$1,367,443	$68,335,967	$404,292,435
2014	11,225,438	10,831,434	39,408,258	1,458,831	70,536,042	393,762,692
2015	30,588,976	12,368,636	31,067,518	1,533,700	70,602,016	395,652,106
2016	30,890,241	12,246,115	30,432,110	1,537,699	74,077,876	393,604,997
2017	20,920,614	13,675,292	37,038,766	1,682,136	78,138,027	385,419,506
2018	27,638,402	12,125,457	19,651,105	1,501,039	76,526,820	366,806,612
2019	27,682,089	12,664,855	22,886,182	1,528,861	78,550,449	349,960,428
2020	33,939,927	12,634,900	26,564,866	1,598,370	79,370,008	342,131,743
2021	83,349,261	12,226,998	32,776,353	1,718,012	80,602,844	388,163,499
2022	67,128,978	12,669,678	16,435,102	2,002,020	82,840,120	399,555,117

* *On an actuarial basis, net of investment, and includes other income.*

Exhibit I – Development of Unfunded Actuarial Accrued Liability

		Plan Year Ended December 31			
		2022		2021	
1	Unfunded actuarial accrued liability at beginning of year		$823,828,474		$848,233,901
2	Normal cost at beginning of year, including administrative expenses		18,741,799		18,541,658
3	Total contributions		79,798,656		95,576,259
4	Interest				
	(a) Unfunded actuarial accrued liability and normal cost	$61,086,345		$62,841,228	
	(b) Total contributions	2,618,136		3,135,787	
	(c) Total interest: **(4a) − (4b)**		$58,468,209		59,705,441
5	Expected unfunded actuarial accrued liability: **(1) + (2) − (3) + (4c)**		$821,239,826		$830,904,741
6	Changes due to (gain)/loss from:				
	(a) Investments	$11,524,107		−$7,490,822	
	(b) Demographics and other	1,392,870		414,555	
	(c) Total changes due to (gain)/loss: **(6a) + (6b)**		$12,916,977		−$7,076,267
7	Assumption changes		34,344,151		0
8	Plan changes		960,812*		0
9	Unfunded actuarial accrued liability at end of year: **(5) + (6c) + (7) + (8)**		$869,461,766		$823,828,474

* Impact due to the 119 Tier 2 participants that made an irrevocable election to participate in Tier 2a.

Exhibit J – Definition of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Actuarial Accrued Liability for Actives:	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial Accrued Liability for Pensioners:	The single-sum value of lifetime benefits to existing pensioners. This sum takes into account life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial Cost Method:	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial Gain or Loss:	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. Through the actuarial assumptions, rates of decrements, rates of salary increases, and rates of fund earnings have been forecasted. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted, or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., the Fund's assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield in actuarial liabilities that are larger than projected. Actuarial gains will shorten the time required for funding of the actuarial balance sheet deficiency while actuarial losses will lengthen the funding period.
Actuarially Equivalent:	Of equal actuarial present value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV):	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is: a. Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.) b. Multiplied by the probability of the occurrence of an event (such as survival, death, disability, termination of employment, etc.) on which the payment is conditioned, and c. Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

Actuarial Present Value of Future Plan Benefits:	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Plan Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would be provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation:	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB, such as the Actuarially Determined Contribution (ADC) and the Net Pension Liability (NPL).
Actuarial Value of Assets (AVA):	The value of the Fund's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the ADC.
Actuarially Determined:	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the law.
Actuarially Determined Contribution (ADC):	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Fund's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
Amortization Method:	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization Payment:	The portion of the pension plan contribution, or ADC, that is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.

Assumptions or Actuarial Assumptions:	The estimates upon which the cost of the Fund is calculated, including: a. Investment return - the rate of investment yield that the Fund will earn over the long-term future; b. Mortality rates - the death rates of employees and pensioners; life expectancy is based on these rates; c. Retirement rates - the rate or probability of retirement at a given age; d. Turnover rates - the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement; e. Salary increase rates - the rates of salary increase due to inflation and productivity growth.
Closed Amortization Period:	A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc. See Open Amortization Period.
Covered Payroll:	Calculated as follows: Total employee contributions less estimated total death benefit contributions, divided by the effective employee contribution rate.
Decrements:	Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or termination.
Defined Benefit Plan:	A retirement plan in which benefits are defined by a formula applied to the member's compensation and/or years of service.
Defined Contribution Plan:	A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.
Employer Normal Cost:	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Experience Study:	A periodic review and analysis of the actual experience of the Fund that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified as deemed appropriate by the Actuary.
Funded Ratio:	The ratio of the Actuarial Value of Assets (AVA) to the Actuarial Accrued Liability (AAL). Plans sometimes calculate a market funded ratio, using the fair value of assets (MVA), rather than the AVA.
GASB:	Governmental Accounting Standards Board.
GASB 67 and GASB 68:	Governmental Accounting Standards Board Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.

Investment Return:	The rate of earnings of the Fund from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Net Pension Liability (NPL):	The Net Pension Liability is equal to the Total Pension Liability minus the Plan Fiduciary Net Position.
Normal Cost:	That portion of the Actuarial Present Value of pension plan benefits and expenses allocated to a valuation year by the Actuarial Cost Method. Any payment in respect of an Unfunded Actuarial Accrued Liability is not part of Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of employee contributions and employer Normal Cost unless otherwise specifically stated.
Open Amortization Period:	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period with level percentage of payroll is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never decrease, but will become smaller each year, in relation to covered payroll, if the actuarial assumptions are realized.
Plan Fiduciary Net Position:	Fair value of assets.
Total Pension Liability (TPL):	The actuarially accrued liability under the entry age normal cost method and based on the blended discount rate as described in GASB 67 and 68.
Unfunded Actuarial Accrued Liability:	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus.
Valuation Date or Actuarial Valuation Date:	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Plan Benefits is determined. The expected benefits to be paid in the future are discounted to this date.

Section 4: Reporting Information

Exhibit I – Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us:			
1	Pensioners as of the valuation date (including 631 beneficiaries and 8 dependent children)		2,745
2	Members inactive as of the valuation date with vested rights		173
3	Members active as of the valuation date		2,818
	Fully vested	1,219	
	Not vested	1,599	
4	Other non-vested inactive members as of the valuation date		5,092
The actuarial factors as of the valuation date are as follows:			
5	Employer normal cost, including administrative expenses		$7,405,215
6	Actuarial accrued liability		$1,269,016,883
	Retirees and beneficiaries	$853,075,017	
	Inactive members with vested rights	28,669,114	
	Active members	387,272,752	
7	Actuarial value of assets ($365,845,448 at fair value)		399,555,117
8	Unfunded actuarial accrued liability: **(6) − (7)**		869,461,766
9	Funded ratio: **(8) ÷ (7)**		31.5%

Exhibit I – Summary of Actuarial Valuation Results *(continued)*

Actuarially Determined Contribution Split by Tier

		Total		Tier 1		Tier 2		Tier 2a	
		Amount	% of Payroll	Amount	% of Payroll	Amount	% of Payroll	Amount	% of Payroll
1	Total normal cost	$18,511,656	13.17%	$12,637,520	16.11%	$4,066,997	9.02%	$1,807,138	10.59%
2	Administrative expenses*	2,009,201	1.43%	1,946,401	2.48%	47,617	0.11%	15,183	0.09%
3	Expected employee contributions	−13,115,642	−9.33%	−7,118,252	−9.07%	−4,101,116	−9.10%	−1,896,275	−11.12%
4	Employer normal cost: **(1) + (2) + (3)**	7,405,215	5.27%	7,465,669	9.51%	13,498	0.03%	-73,953	−0.43%
5	Employer normal cost, adjusted for timing**	7,658,563	5.45%	7,721,085	9.84%	13,960	0.03%	-76,483	−0.45%
6	Actuarial accrued liability	1,269,016,883		1,229,351,921		30,075,225		9,589,737	
7	Actuarial value of assets	399,555,117							
8	Unfunded actuarial accrued liability: **(6) − (7)**	869,461,766							
9	Payment on unfunded actuarial accrued liability	69,933,500	49.74%						
10	Actuarially determined contribution, adjusted for timing**: **(5) + (9)**	77,592,063	55.19%						
11	Estimated employer contributions provided by the Fund***	56,874,515							
12	Projected payroll	140,585,920		78,463,368		45,050,788		17,071,764	

* *Administrative expenses are allocated by % of accrued liability.*

** *Recommended contributions are assumed to be paid at the middle of every month.*

*** *The Park District has been absorbing 3% losses on tax collections, however, the Park District is not guaranteed to do so in the future.*

Exhibit II – Comparison of Employer Contribution to Actuarially Determined Contribution

Fiscal Year Ended December 31	Actuarially Determined Contribution (ADC)*	Actual Contributions	Percentage Contributed
2013	$41,834,857	$15,707,814	37.5%
2014	35,307,186	11,225,438	31.8%
2015	36,273,994	30,588,976	84.3%
2016	37,130,268	30,890,241	83.2%
2017	45,253,238	20,920,614	46.2%
2018	50,929,734	27,638,402	54.3%
2019	61,887,790	27,682,089	44.7%
2020	67,297,212	33,939,927	50.4%
2021	70,492,027	83,349,261	118.2%
2022	71,021,948	67,128,978	94.5%
2023	77,592,063	- -	- -

* *Prior to 2015, this amount was referred to as the Annual Required Contribution (ARC)*

Exhibit III – Schedule of Funding Progress

Valuation Date (December 31)	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) − (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll* [(b) − (a)] / (c)
2013	$404,292,435	$888,023,364	$483,730,929	45.53%	$117,781,596	410.70%
2014	393,762,692	900,840,617	507,077,925	43.71%	118,987,507	426.16%
2015	395,652,106	910,260,360	514,608,254	43.47%	122,382,584	420.49%
2016	393,604,997	1,005,493,093	611,888,096	39.15%	121,126,918	505.16%
2017	385,419,506	1,039,279,444	653,859,938	37.09%	135,315,008	483.21%
2018	366,806,612	1,142,297,965	775,491,353	32.11%	133,112,100	582.59%
2019	349,960,428	1,170,602,980	820,642,552	29.90%	139,204,051	589.52%
2020	342,131,743	1,190,365,644	848,233,901	28.74%	138,942,498	610.50%
2021	388,163,499	1,211,991,973	823,828,474	32.03%	134,515,373	612.44%
2022	399,555,117	1,269,016,883	869,461,766	31.49%	136,917,648	635.03%

* *Not less than zero*

Exhibit IV – Solvency Test at December 31

	2022	2021	2020	2019	2018
1 Actuarial accrued liability (AAL)					
a. Active member contributions	$170,509,528	$175,568,599	$174,600,431	$173,843,745	$164,316,381
b. Retirees and beneficiaries	853,075,017	814,929,192	795,731,449	789,231,586	778,565,525
c. Active and inactive members (employer financed)	245,432,338	221,494,182	220,033,764	207,527,649	199,416,059
d. Total	$1,269,016,883	$1,211,991,973	$1,190,365,644	$1,170,602,980	$1,142,297,965
2 Actuarial value of assets	399,555,117	388,163,499	342,131,743	349,960,428	366,806,612
3 Cumulative portion of AAL covered					
a. Active member contribution	100.0%	100.0%	100.0%	100.0%	100.0%
b. Retirees and beneficiaries	26.8%	26.1%	21.1%	22.3%	26.0%
c. Active and inactive members (employer financed)	0.0%	0.0%	0.0%	0.0%	0.0%

	2017	2016	2015	2014	2013
1 Actuarial accrued liability (AAL)					
a. Active member contributions	$173,903,043	$172,808,623	$173,241,768	$169,952,178	$171,065,449
b. Retirees and beneficiaries	706,084,520	694,881,116	625,396,307	625,641,580	621,827,982
c. Active and inactive members (employer financed)	159,291,881	137,803,354	111,622,285	105,246,859	95,129,933
d. Total	$1,039,279,444	$1,005,493,093	$910,260,360	$900,840,617	$888,023,364
2 Actuarial value of assets	385,419,506	393,604,997	395,652,106	393,762,692	404,292,435
3 Cumulative portion of AAL covered					
a. Active member contribution	100.0%	100.0%	100.0%	100.0%	100.0%
b. Retirees and beneficiaries	30.0%	31.8%	35.6%	35.8%	37.5%
c. Active and inactive members (employer financed)	0.0%	0.0%	0.0%	0.0%	0.0%

Exhibit V – Projection of Contributions, Liabilities, and Assets

Based on the results of the December 31, 2022, actuarial valuation, we have projected valuation results for a 40-year period (the "projection period") commencing with Fiscal Year 2023.

For purposes of the projections, all assets, contributions, and benefit payments have been included. Our projections of contributions, liabilities, and assets are based on the actuarial assumptions, membership data and benefit provisions that were used for the regular actuarial valuation.

In order to determine projected contributions, liabilities, and assets, certain calculations needed to be made that are not normally required in a regular actuarial valuation. Benefit payout requirements, actuarial liabilities, and payroll were estimated over the projection period from 2023 through 2062 by projecting the membership of the Fund over the projection period, taking into account the impact of new entrants into the Fund over the projection period.

To make the required projections, assumptions needed to be made regarding the age and salary distribution of new entrants as well as the size of the active membership of the Fund. The assumptions regarding the profile of new entrants to the Fund were based on the recent experience of the Fund with regard to new entrants. The size of the active membership of the Fund was assumed to remain constant over the projection period. The results of our projections are shown on the following pages.

For purposes of this projection, budgeted supplemental contributions for future years are included, if applicable. It reflects a budgeted employer contribution of $56.9 million and no supplemental contribution for 2023.

Plan provisions for Tier 2a are effective January 1, 2022, per HB 417 legislation. Tier 1 and 2 member contributions are 9% and Tier 2a member contributions are 11% for Fiscal Year 2021 and thereafter. Employer Contributions are Employer Normal Cost plus a 35-year closed period amortization of unfunded actuarial accrued Liability as of December 31, 2023.

Exhibit V – Projection of Contributions, Liabilities, and Assets *(continued)*

Fiscal Year	Employee Contributions	Employer Contributions	Payroll	Normal Cost	Benefit Payouts	Estimated Expenses	Total Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability	Funded Ratio
2022							$1,269,016.9	$399,555.1	$869,461.8	31.5%
2023	$13,115.6	$56,874.5	$140,585.9	$18,511.7	$86,755.1	$2,072.1	1,287,864.1	404,951.8	882,912.3	31.4%
2024	13,093.3	59,609.5	139,132.7	18,177.4	88,194.6	2,144.6	1,306,182.9	406,131.0	900,051.9	31.1%
2025	13,110.3	61,136.6	138,193.0	17,926.7	89,658.6	2,219.7	1,324,000.7	406,227.3	917,773.3	30.7%
2026	13,146.8	62,802.1	137,532.5	17,714.6	91,223.3	2,297.4	1,341,219.3	400,573.2	940,646.0	29.9%
2027	13,188.3	64,845.3	136,966.0	17,476.2	92,811.3	2,377.8	1,357,744.4	409,250.8	948,493.6	30.1%
2028	13,245.6	66,071.8	136,606.3	17,265.7	94,785.4	2,461.0	1,373,158.0	418,177.0	954,981.0	30.5%
2029	13,284.4	67,270.9	136,071.9	17,004.3	96,749.2	2,547.1	1,387,338.3	427,333.4	960,004.9	30.8%
2030	13,342.9	68,514.2	135,755.6	16,801.1	98,669.6	2,636.3	1,400,306.1	436,760.5	963,545.7	31.2%
2031	13,408.9	69,772.7	135,525.4	16,611.5	100,818.3	2,728.5	1,411,754.9	446,150.4	965,604.5	31.6%
2032	13,479.1	71,045.9	135,367.7	16,425.4	102,702.3	2,824.0	1,421,856.1	455,587.3	966,268.8	32.0%
2033	13,560.6	72,347.0	135,340.0	16,250.1	104,507.3	2,922.9	1,430,608.6	465,174.9	965,433.7	32.5%
2034	13,658.3	73,670.8	135,481.4	16,083.8	106,390.2	3,025.2	1,437,847.0	474,866.0	962,981.0	33.0%
2035	13,749.9	75,019.9	135,560.0	15,906.1	108,033.6	3,131.1	1,443,701.1	484,923.2	958,777.9	33.6%
2036	13,860.1	76,412.5	135,850.1	15,758.3	109,874.5	3,240.7	1,447,901.4	495,223.6	952,677.9	34.2%
2037	13,950.9	77,814.3	135,919.0	15,569.0	108,607.2	3,354.1	1,453,505.0	508,985.3	944,519.7	35.0%
2038	14,082.0	79,268.3	136,408.1	15,439.8	110,042.7	3,471.5	1,457,876.7	523,744.2	934,132.5	35.9%
2039	14,207.3	80,739.0	136,829.3	15,290.3	111,148.4	3,593.0	1,461,250.1	539,918.3	921,331.8	36.9%
2040	14,353.3	82,250.9	137,478.1	15,171.3	112,026.0	3,718.7	1,463,824.0	557,902.2	905,921.8	38.1%
2041	14,512.4	83,810.9	138,292.6	15,082.1	112,563.9	3,848.9	1,465,925.8	578,232.7	887,693.1	39.4%
2042	14,698.9	85,426.9	139,401.5	15,046.0	112,851.8	3,983.6	1,467,838.3	601,414.7	866,423.6	41.0%
2043	14,898.8	87,071.6	140,679.7	15,023.7	112,732.6	4,123.0	1,469,984.0	628,107.5	841,876.5	42.7%
2044	15,129.5	88,774.0	142,290.7	15,062.5	112,522.6	4,267.3	1,472,538.9	658,737.6	813,801.3	44.7%
2045	15,365.7	90,516.7	143,978.1	15,122.7	111,829.0	4,416.7	1,476,054.9	694,123.4	781,931.5	47.0%
2046	15,638.6	92,284.3	146,070.8	15,223.7	111,293.7	4,571.3	1,480,479.1	734,492.1	745,987.0	49.6%

Exhibit V – Projection of Contributions, Liabilities, and Assets *(continued)*

Fiscal Year	Employee Contributions	Employer Contributions	Payroll	Normal Cost	Benefit Payouts	Estimated Expenses	Total Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability	Funded Ratio
2047	$15,903.4	$94,102.2	$148,089.4	$15,349.6	$110,545.5	$4,731.3	$1,486,122.1	$780,451.0	$705,671.1	52.5%
2048	16,191.4	95,947.6	150,350.1	15,515.5	109,649.8	4,896.9	1,493,264.6	832,590.7	660,674.0	55.8%
2049	16,500.5	97,803.3	152,815.1	15,710.9	108,825.3	5,068.2	1,501,969.7	891,296.7	610,673.0	59.3%
2050	16,811.2	99,654.6	155,293.1	15,913.5	107,795.5	5,245.6	1,512,566.7	957,232.0	555,334.6	63.3%
2051	17,139.7	101,491.0	157,978.5	16,145.9	106,926.7	5,429.2	1,525,053.3	1,030,732.7	494,320.6	67.6%
2052	17,475.1	103,279.9	160,708.8	16,390.8	106,092.6	5,619.3	1,539,539.3	1,112,243.7	427,295.6	72.2%
2053	17,820.1	104,980.0	163,529.1	16,651.1	105,122.0	5,815.9	1,556,322.5	1,202,378.3	353,944.2	77.3%
2054	18,187.9	106,518.9	166,572.2	16,939.9	104,241.9	6,019.5	1,575,500.4	1,301,495.9	274,004.5	82.6%
2055	18,567.3	107,753.8	169,721.9	17,246.2	103,185.7	6,230.2	1,597,441.6	1,410,097.6	187,344.0	88.3%
2056	18,968.8	108,330.5	173,095.7	17,578.3	102,203.3	6,448.2	1,622,290.9	1,528,104.9	94,186.0	94.2%
2057	19,387.7	103,198.8	176,633.3	17,935.2	101,140.6	6,673.9	1,650,361.4	1,650,361.4	0.0	100.0%
2058	19,825.6	6,019.9	180,385.2	18,318.6	100,113.8	6,907.5	1,681,869.8	1,681,869.8	0.0	100.0%
2059	20,283.2	6,224.7	184,326.1	18,725.5	99,005.3	7,149.3	1,717,166.4	1,717,166.4	0.0	100.0%
2060	20,756.2	6,445.9	188,444.4	19,154.9	97,794.1	7,399.5	1,756,646.9	1,756,646.9	0.0	100.0%
2061	21,252.0	6,679.7	192,802.1	19,610.2	96,826.0	7,658.5	1,800,380.2	1,800,380.2	0.0	100.0%
2062	21,763.4	6,923.6	197,289.5	20,081.5	96,173.1	7,926.5	1,848,354.8	1,848,354.8	0.0	100.0%

Exhibit VI – Actuarial Assumptions and Actuarial Cost Method

Rationale for Assumptions:	The information and analysis used in supporting each assumption that has a significant effect on this actuarial valuation is shown in the Experience Review dated October 25, 2018. Current data is reviewed in conjunction with each annual valuation. The economic assumptions, including the investment return assumption, were evaluated separately and modified by the Board of Trustees on May 19, 2022 based on analysis presented at the Board of Trustees meeting on May 19, 2022. See presentation for details.
Mortality Rates:	
Healthy Post-retirement Mortality	110% of PubG-2010 Healthy Annuitant Table, with mortality improvements projected generationally using scale MP-2017.
Pre-retirement	110% of PubG-2010 Healthy Employee Table, with mortality improvements projected generationally using scale MP-2017. The mortality tables specified above were determined to contain provisions appropriate to reasonably reflect future mortality improvement, based on a review of mortality experience as of the most recent experience study date.

Termination Rates:

Select and ultimate termination rates are based on recent experience of the Fund. Ultimate rates applicable for members with eight or more years of service are shown for sample ages in the table on the next page. Select rates are as follows:

Years of Service	Rate (%)
0 – 0.99	17.5
1 –1.99	13.0
2 – 2.99	13.0
3 – 3.99	12.5
4 – 4.99	12.5
5 – 5.99	10.0
6 – 6.99	10.0
7 – 7.99	10.0

Ultimate rates:

Age	Rate (%)
20	7.0
25	7.0
30	6.0
35	4.0
40	4.0
45	4.0
50	3.0
55	3.0

Retirement Rates:

For employees first hired prior to January 1, 2011, rates of retirement for each age from 50 to 75 based on the recent experience of the Fund were used. Sample rates are shown below.

	Rate (%)	
Age	<30 Years of Service	30+ Years of Service
50	2.5	30.0
55	2.0	20.0
60	5.0	5.0
65	15.0	15.0
70	20.0	20.0
75	100.0	100.0

For employees first hired on or after January 1, 2011, but before January 1, 2022, rates of retirement for each age from 62 to 75 were used. Sample rates are shown below

Age	Rate (%)
62	50.0
65	20.0
67	50.0
70	20.0
75	100.0

Retirement Rates *(continued)*:

For employees first hired on or after January 1, 2022, rates of retirement for each age from 60 to 75 were used. Sample rates are shown below

Age	Rate (%)
60	50.0
65	20.0
67	50.0
70	20.0
75	100.0

Salary Increases: Assumed salary increases are based on the recent experience of the Fund were used. Rates are shown below.

Years of Service	Rate (%)
0 – 0.99	20.00
1 – 1.99	7.50
2 – 2.99	5.00
3 – 3.99	3.50
4 - 4.99	3.50
5+	2.75

Valuation of Inactive Vested Participants: The liability for an inactive member is equal to his or her existing account balance, or, if the participant has at least 10 years of service, twice the existing account balance.

Unknown Data for Participants: Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.

Spouse: 75% of members are assumed to be married and female spouses are assumed to be two years younger than males.

Disability Benefit Valuation: Disability benefits are valued in normal cost by annualizing the actual monthly disability payment amounts for the month prior to the valuation date.

Investment Return: 7.00% per year, net of investment expenses

Inflation: 2.50% per year

Payroll Growth: 2.50% per year

Administrative Expenses: Equal to actual expenses for the prior year, increased by 3.5% each year.

Actuarial Value of Assets: The actuarial value of assets was determined by smoothing unexpected gains and losses over a period of 5 years. The gain or loss for a year is calculated as the total investment income on the fair value of assets, minus expected investment return on the prior actuarial value of assets. The final actuarial value is equal to the expected actuarial value plus (or minus) 20% of the calculated gain (or loss) in the prior 5 years.

Actuarial Cost Method:	Entry Age Normal. Under this method, a normal cost is calculated for each employee that is the level annual contribution as a percent of pay required to be made from the employee's date of hire for as long as he/she remains active so that sufficient assets will be accumulated to provide his/her benefit. The accrued liability is the difference between the present value of all future benefits and the present value of all future normal costs.

Exhibit VII – Summary of Plan Provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Membership:	Any person employed by the Chicago Park District in a position requiring service for 6 months or more in a calendar year is required to become a member of the Fund as a condition of employment.
Employee Contributions:	All members of Tier 1 and Tier 2 are required to contribute 9% of salary to the Fund as follows: 7% for the retirement pension, 1% for the spouse's pension, and 1% for the automatic increases in the retirement pension. All members of Tier 2a are required to contribute 11% of salary to the Fund as follows: 9% for the retirement pension, 1% for the spouse's pension, and 1% for the automatic increases in the retirement pension. In addition, all employees are required to contribute $3.60 per month toward the cost of the single sum death benefit.
Tiers:	Tier 1: First hired before January 1, 2011. Tier 2: First hired on or after January 1, 2011. Tier 2a*: First hired on or after January 1, 2022. *119 Tier 2 participants made an irrevocable election to participate in the new tier.

Retirement Pension:	a. Eligibility – An employee may retire at age 50 with at least 10 years of service or at age 60 with 4 years of service. If retirement occurs before age 60, the retirement pension is reduced ¼ of 1% of each month that the age of the member is below 60. However, there is no reduction if the employee has at least 30 years of service. b. Amount – The retirement pension is based on the average of the 4 highest consecutive years of salary within the last 10 years. For an employee who withdraws from service on or after December 31, 2003, the amount of the retirement pension is 2.4% of highest average salary for each year of service. The maximum pension payable is 80% of the highest annual salary. An employee who was a participant before July 1, 1971 is entitled to the pension provided under the money purchase formula if it provides a greater pension than that provided under the above fixed benefit formula. An employee who first becomes a participant on or after January 1, 2011 is subject to the following provisions: 1. The highest salary for annuity purposes is equal to the average monthly salary obtained by dividing the participant's total salary during the 96 consecutive months of service within the last 120 months of service in which the total compensation was the highest by the number of months in that period. 2. For 2022, the annual salary is limited to $119,892.41. Limitations for future years shall automatically be increased by the lesser of 3% or one-half the percentage change in the Consumer Price Index-U during the preceding calendar year. 3. A participant is eligible to retire with unreduced benefits after attainment of age 67 with at least 10 years of service credit. However, a participant may elect to retire at age 62 with at least 10 years of service credit and receive a retirement annuity reduced by ½ of 1% for each month that the age of the member is below 67. An employee who first becomes a participant on or after January 1, 2022 or elects Tier 2a is subject to the following provision: A participant is eligible to retire with unreduced benefits after attainment of age 65 with at least 10 years of service credit. However, a participant may elect to retire at age 60 with at least 10 years of service credit and receive a retirement annuity reduced by ½ of 1% for each month that the age of the member is below 65; otherwise, the same as Tier 2.

Post-Retirement Increase:	Section 1 An employee retiring at age 60 or over, or an employee with 30 or more years of service, is entitled to automatic annual increases of 3% of the originally granted pension following one year's receipt of pension payments. In the case of an employee with less than 30 years of service who retires before age 60, the increases begin following the later of attainment of age 60 and receipt of one year's pension payments. Automatic annual increases (AAI) in the retirement annuity for employees who first became a participant on or after January 1, 2011 are equal to the lesser of 3% or one-half the annual change in the Consumer Price Index-U, whichever is less, based on the originally granted retirement annuity.
Surviving Spouse's Pension:	A surviving spouse is entitled to a pension upon the death of an employee while in service or on retirement. If the surviving spouse is age 60 or over and the employee or retiree had at least 20 years of service, the minimum surviving spouse's pension is 50% of the deceased employee's or retired employee's pension at the date of death. If the age of the surviving spouse is less than 60, the pension is reduced ½ of 1% for each month the surviving spouse is under age 60. If the employee had less than 20 years of service, the surviving spouse is entitled to a pension under the money purchase formula, taking into account employee and employer contributions toward the surviving spouse's pension. Surviving spouse's pensions are subject to annual increases of 3% per year based on the current amount of pension. For employees who first become a participant on or after January 1, 2011, the initial survivor's annuity is equal to 66 2/3% of the participant's earned retirement annuity at the date of death, subject to automatic annual increases of the lesser of 3% or one-half of the increase in the Consumer Price Index-U during the preceding calendar year, based on the originally granted survivor's annuity.
Children's Pension:	Unmarried children of a deceased employee under the age of 18 are entitled to a children's pension. If either parent is living, the pension is $100.00 per month. If no parent survives, the pension for each child is $150.00 per month. The total amount payable to a spouse or children may not exceed 60% of the employee's final salary.
Single Sum Death Benefit:	A death benefit is payable upon the death of an employee in service in addition to any other benefits payable to the surviving spouse or minor children. The death benefit payable is as follows: $3,000 benefit during the first year of service, $4,000 benefit during the second year of service, $5,000 benefit during the third year of service, $6,000 benefit during the fourth through ninth year of service, and $10,000 benefit if death occurs after ten or more years of service. Upon the death of a retired member with ten or more years of service, the $10,000 maximum benefit is reduced to $6,000 if death occurs during the first year of retirement. Thereafter, it is reduced by $1,500 for each year or fraction of a year while on retirement, but shall not be less than $3,000.

Ordinary Disability Benefit:	An ordinary disability benefit is payable after eight consecutive days of absence for illness without pay. The amount of the benefit is 45% of salary. The benefit is payable for a period not to exceed ¼ of the length of service or five years, whichever is less.
Occupational Death Benefit:	Upon disability resulting from an injury incurred while on duty, an employee is entitled to a disability benefit of 75% of salary from the first day of absence without pay. The benefit is payable during the period of disability until the employee attains age 65 if disability is incurred before age 60, or for a period of five years if disability is incurred after age 60.
Refunds:	An employee who terminates employment before qualifying for a pension is entitled to a refund of employee contributions. The refund is payable to any employee who withdraws before age 55, regardless of the length of service. It is also payable to an employee who withdraws between age 55 and 60 with less than 10 years of service, and to an employee who withdraws after age 60 with less than 5 years of service. An employee who is unmarried at date of retirement is entitled to a refund of the full amount contributed for the spouse's pension, without interest.
Plan Year:	January 1 through December 31. Prior to December 31, 2012, the plan year was July 1 through June 30.
Employer Contributions:	Per HB 417 establishing Public Act 102-0263.

Section 5: GASB 67 Information

Exhibit 1 – Net Pension Liability

The components of the Net Pension Liability of the Fund at December 31, 2022, were as follows:	
Total Pension Liability	$1,269,016,883
Plan Fiduciary Net Position	365,845,448
Net Pension Liability	903,171,435
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	28.83%

Actuarial assumptions. The Total Pension Liability was determined by an actuarial valuation as of December 31, 2022, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.50%
Salary increases	Service-based ranging from 20.00% to 2.75%
Single equivalent discount rate	7.00%, net of pension plan investment expense, including inflation
Cost of living adjustments	3% of original benefit for employees who first became a participant before January 1, 2011; the lesser of 3% and 1/2 of CPI of original benefit for employees and beneficiaries of employees who first became a participant on or after January 1, 2011; 3% compounded for beneficiaries of employees who first became a participant by January 1, 2011.

For healthy annuitants, mortality rates were based on 110% of PubG-2010 Healthy Annuitant Table, with mortality improvements projected generationally using scale MP-2017. For active participants, mortality rates were based on 110% of PubG-2010 Healthy Employee Table, with mortality improvements projected generationally using scale MP-2017.

The actuarial assumptions used in the December 31, 2022, valuation were based on the results of an experience study for the five-year period ending December 31, 2018 and a recent review of the investment return assumption.

Discount rate: The discount rate used to measure the Total Pension Liability was 7.00%. The projection of cash flows used to determine the discount rate assumed member contributions will be made at a 9% contribution rate for Tier 1 and Tier 2, and 11% for Tier 2a, for 2022 and thereafter.

Employer contributions will be made per statute. For this purpose, only employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Projected employer contributions and contributions from future plan members that are intended to fund the service costs of future plan members and their beneficiaries are not included. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. The projected benefit payments were discounted at the expected long-term rate of return (7.00%). No projected benefit payments were discounted at the municipal bond index (3.72%, based on the Bond Buyer 20-GO Municipal Bond Index as of December 31, 2022).

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the Net Pension Liability of the Fund, calculated using the discount rate of 7.00%, as well as what the Fund's Net Pension Liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.00%) or 1-percentage-point higher (8.00%) than the current rate:

	1% Decrease (6.00%)	**Current Discount Rate (7.00%)**	**1% Increase (8.00%)**
Net Pension Liability as of December 31, 2022	$1,050,647,873	$903,171,435	$780,128,597

Exhibit 2 – Schedules of Changes in Net Pension Liability

	2022	2021
Total Pension Liability		
Service cost	$17,019,445	$60,952,502
Interest	86,100,373	51,017,625
Change of benefit terms	960,812	0
Differences between expected and actual experience	2,969,970	846,816
Changes of assumptions	32,814,430	−1,097,662,261
Benefit payments, including refunds of employee contributions	−82,840,120	−80,602,844
Net change in Total Pension Liability	57,024,910	−1,065,448,162
Total Pension Liability – beginning	1,211,991,973	2,277,440,135
Total Pension Liability – ending (a)	1,269,016,883	1,211,991,973
Plan Fiduciary Net Position		
Contributions – employer	67,128,978	83,349,261
Contributions – employee	12,669,678	12,226,998
Net investment income	−43,796,274	53,089,102
Benefit payments, including refunds of employee contributions	−82,840,120	−80,602,844
Administrative expense	−2,002,020	−1,718,012
Other	26,556	19,630
Net change in Plan Fiduciary Net Position	−48,813,202	66,364,135
Plan Fiduciary Net Position– beginning	414,658,650	348,294,515
Plan Fiduciary Net Position– ending (b)	365,845,448	414,658,650
Fund's Net Pension Liability – ending (a) – (b)	903,171,435	797,333,323
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	28.83%	34.21%
Covered payroll	$136,917,648	$134,515,373
Fund's Net Pension Liability as percentage of covered payroll	659.65%	592.75%

Exhibit 3 – Schedule of Employer Contribution – Last Ten Fiscal Years

Fiscal Year Ended December 31	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered-Payroll	Contributions as a Percentage of Covered Payroll
2013	$41,834,857	$15,707,814	$26,127,043	$117,781,596	13.34%
2014	35,307,186	11,225,438	24,081,748	118,987,507	9.43%
2015	36,273,994	30,588,976	5,685,018	122,382,584	24.99%
2016	37,130,268	30,890,241	6,240,027	121,126,918	25.50%
2017	45,253,238	20,920,614	24,332,624	135,315,008	15.46%
2018	50,929,734	27,638,402	23,291,332	133,112,100	20.76%
2019	61,887,790	27,682,089	34,205,701	139,204,051	19.89%
2020	67,297,212	33,939,927	33,357,285	138,942,498	24.43%
2021	70,492,027	83,349,261	−12,857,234	134,515,373	61.96%
2022	71,021,948	67,128,978	3,892,970	136,917,648	49.03%

Notes to Exhibit 3

Valuation date	Actuarially determined contribution amount is determined as of December 31, with appropriate interest to the middle of the year.
Methods and assumptions used to establish "actuarially determined contribution" for the fiscal year ended December 31, 2022:	
Actuarial cost method	Entry Age Actuarial cost method
Amortization method	20-year closed, level percentage of payroll amortization
Asset valuation method	5-year smoothed fair value
Actuarial assumptions:	
Investment rate of return	7.25%, net of investment expense
Projected salary increases	Service-based ranging from 20.00% to 2.75%
Mortality	For healthy annuitants, mortality rates were based on 110% of PubG-2010 Healthy Annuitant Table, with mortality improvements projected generationally using scale MP-2017. For active participants, mortality rates were based on 110% of PubG-2010 Healthy Employee Table, with mortality improvements projected generationally using scale MP-2017.
Cost of living adjustments	3% of original benefit for employees who first became a participant before January 1, 2011; the lesser of 3% and 1/2 of CPI of original benefit for employees and beneficiaries of employees who first became a participant on or after January 1, 2011; 3% compounded for beneficiaries of employees who first became a participant by January 1, 2011.
Other assumptions:	Same as those used in the December 31, 2022, actuarial funding valuations based on the results of an experience study for the five-year period ending December 31, 2018.

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STATISTICAL SECTION
(Unaudited)

The information in this section is not covered by the Independent Auditor's Report but is presented as supplemental data for the benefit of the readers of the Annual Comprehensive Financial Report. The objectives of the statistical section information are to provide financial statement users with additional historical perspective, context, and detail to assist in using the financial statements, notes to financial statements, and required supplementary information, to better understand and assess the Fund's overall financial health.

Membership

These schedules provide financial data regarding the Fund's members.

Other Financial Data

These schedules provide additional information regarding members as well as data regarding refunds and disability.

GASB No. 44

Additional schedules to address the requirements defines by GASB No. 44.

Membership Statistics
December 31, 2022

	December 31, 2022	December 31, 2021
Active Participants	2,818	2,694
Retired Employees' - Annuities	2,106	2,104
Surviving Spouses' - Annuities	631	639
Children - Annuities	8	9
Member Retirements Granted during the Year	98	84
New Members	456	112
Withdrawals with Refund	137	128

The above schedule provides details about the changes in the number of active participants, as well as the changes in the number and type of annuitants for the year.

Active Members and Total Annual Salaries by Age
December 31, 2022

Age at 12/31/2022	Male Number	Male Annual Salaries	Female Number	Female Annual Salaries	Total Number	Total Annual Salaries
16	4	$ 14,480	—	$ —	4	$ 14,480
17	7	20,526	10	34,120	17	54,646
18	19	104,665	21	106,008	40	210,673
19	19	173,883	21	126,338	40	300,221
20	30	435,483	18	180,639	48	616,122
21	24	432,275	20	344,474	44	776,749
22	24	488,600	31	512,942	55	1,001,542
23	35	695,537	35	644,662	70	1,340,199
24	29	530,625	27	500,645	56	1,031,270
25	18	445,046	17	550,033	35	995,079
26	32	969,233	18	359,562	50	1,328,795
27	40	1,093,944	24	605,388	64	1,699,332
28	28	923,300	34	839,740	62	1,763,040
29	38	1,319,270	30	977,472	68	2,296,742
30	24	713,012	28	1,042,649	52	1,755,661
31	35	1,537,508	24	1,013,915	59	2,551,423
32	31	1,179,571	31	1,168,702	62	2,348,273
33	28	1,175,248	29	1,576,136	57	2,751,384
34	34	1,555,967	28	974,361	62	2,530,328
35	32	1,481,779	17	742,345	49	2,224,124
36	41	1,972,983	26	1,133,592	67	3,106,575
37	37	1,801,473	29	1,179,185	66	2,980,658
38	34	1,961,382	26	1,467,853	60	3,429,235
39	41	2,012,502	29	1,417,227	70	3,429,729
40	30	1,720,538	22	851,310	52	2,571,848
41	32	1,828,331	24	1,411,550	56	3,239,881
42	40	2,572,739	21	891,205	61	3,463,944
43	37	2,114,497	20	940,628	57	3,055,125
44	32	1,912,904	18	1,074,463	50	2,987,367
45	30	1,935,456	20	942,184	50	2,877,640
46	35	2,045,199	17	814,074	52	2,859,273
47	34	1,852,155	23	1,255,222	57	3,107,377
48	32	2,107,669	32	2,030,972	64	4,138,641

Age at 12/31/2022	Male		Female		Total	
	Number	Annual Salaries	Number	Annual Salaries	Number	Annual Salaries
49	31	1,756,331	19	1,135,777	50	2,892,108
50	38	2,178,008	14	769,943	52	2,947,951
51	26	1,676,816	27	1,763,490	53	3,440,306
52	40	2,222,275	28	2,032,856	68	4,255,131
53	50	3,052,227	26	1,622,170	76	4,674,397
54	39	2,143,530	17	850,670	56	2,994,200
55	42	2,105,064	20	970,738	62	3,075,802
56	31	1,844,102	27	1,386,299	58	3,230,401
57	41	2,201,331	28	1,639,888	69	3,841,219
58	33	2,033,078	28	1,314,742	61	3,347,820
59	43	2,218,019	21	1,238,636	64	3,456,655
60	23	1,387,952	15	854,610	38	2,242,562
61	21	1,361,666	25	1,196,006	46	2,557,672
62	27	1,548,616	20	1,109,707	47	2,658,323
63	29	1,360,079	12	743,128	41	2,103,207
64	31	1,561,063	14	835,633	45	2,396,696
65	21	1,005,910	11	529,673	32	1,535,583
66	12	756,798	11	577,426	23	1,334,224
67	12	630,490	5	257,008	17	887,498
68	17	753,100	11	572,372	28	1,325,472
69	8	679,815	8	308,539	16	988,354
70	12	821,592	3	121,041	15	942,633
71	8	381,112	1	48,665	9	429,777
72	5	305,199	2	115,259	7	420,458
73	3	171,765	2	107,752	5	279,517
74	8	312,460	—	—	8	312,460
75	2	93,911	1	17,581	3	111,492
76	2	47,398	—	—	2	47,398
77	3	93,169	—	—	3	93,169
78	—	—	1	46,643	1	46,643
79	1	11,056	1	109,279	2	120,335
81	—	—	2	95,842	2	95,842
82	1	113,519	—	—	1	113,519
84	1	35,783	—	—	1	35,783
88	—	—	1	11,614	1	11,614
	1,647	77,991,014	1,171	50,092,583	2,818	128,083,597

	Male	Female	Both
Average Age	43.6	41.0	42.7
Average	47,353	42,778	45,452

Active Members and Total Annual Salaries by Length of Service
December 31, 2022

Years of Service	Male Number	Male Annual Salaries	Female Number	Female Annual Salaries	Total Number	Total Annual Salaries
< 1	244	$ 1,880,928	201	$ 1,645,083	445	$ 3,526,011
1	124	5,023,478	56	1,537,502	180	6,560,980
2	21	368,597	14	438,019	35	806,616
3	110	4,536,827	88	2,511,377	198	7,048,204
4	110	4,564,227	75	2,194,017	185	6,758,244
5	88	3,755,577	49	1,934,215	137	5,689,792
6	78	3,560,674	63	2,572,560	141	6,133,234
7	82	4,980,353	40	2,014,892	122	6,995,245
8	52	3,205,657	42	1,923,058	94	5,128,715
9	59	3,451,722	37	2,047,801	96	5,499,523
10	41	2,441,418	32	1,852,470	73	4,293,888
11	59	3,591,781	44	2,478,868	103	6,070,649
12	25	1,489,688	17	770,078	42	2,259,766
13	24	977,571	10	554,914	34	1,532,485
14	36	2,236,813	8	456,401	44	2,693,214
15	41	2,080,907	33	1,739,357	74	3,820,264
16	33	2,003,568	40	2,150,126	73	4,153,694
17	48	2,812,858	34	1,948,401	82	4,761,259
18	33	2,645,914	15	906,162	48	3,552,076
19	19	1,051,673	15	1,005,870	34	2,057,543
20	17	1,168,979	8	525,911	25	1,694,890
21	35	2,091,588	26	1,300,442	61	3,392,030
22	26	1,573,443	26	1,768,671	52	3,342,114
23	38	2,587,058	29	1,862,003	67	4,449,061
24	35	2,346,766	24	1,441,273	59	3,788,039
25	29	1,853,540	23	1,415,258	52	3,268,798
26	24	1,770,564	30	1,980,364	54	3,750,928
27	16	903,826	17	1,156,702	33	2,060,528
28	14	978,478	17	1,281,409	31	2,259,887
29	8	518,629	10	793,396	18	1,312,025
30	9	662,838	9	769,814	18	1,432,652
31	16	1,023,828	11	1,166,062	27	2,189,890
32	6	469,284	7	444,321	13	913,605
33	7	503,224	8	584,636	15	1,087,860
34	4	356,028	2	136,467	6	492,495

Years of Service	Male Number	Male Annual Salaries	Female Number	Female Annual Salaries	Total Number	Total Annual Salaries
35	1	71,332	1	65,675	2	137,007
36	8	524,831	4	305,024	12	829,855
37	8	562,868	1	61,403	9	624,271
38	4	278,810	—	—	4	278,810
39	1	100,195	—	—	1	100,195
40	3	170,623	1	73,735	4	244,358
41	3	315,571	—	—	3	315,571
42	3	181,603	1	83,806	4	265,409
43	1	75,744	—	—	1	75,744
44	3	153,363	1	67,102	4	220,465
49	—	—	1	80,245	1	80,245
50	1	87,770	—	—	1	87,770
53	—	—	1	47,693	1	47,693
	1,647	77,991,014	1,171	50,092,583	2,818	128,083,597

	Male	Female	Both
Average Age	10.7	11.0	10.8
Average Salary	47,353	42,778	45,452

Retirement Pensions by Age and Annual Payments
December 31, 2022

Age at 12/31/2022	Male Number	Male Annual Salaries	Female Number	Female Annual Salaries	Total Number	Total Annual Salaries
50	2	$ 52,602	1	$ 49,229	3	$ 101,831
51	3	81,853	1	10,358	4	92,211
52	4	123,219	1	12,536	5	135,755
53	9	164,169	6	276,096	15	440,265
54	10	263,933	4	176,551	14	440,484
55	11	285,886	12	399,623	23	685,509
56	12	335,544	6	205,148	18	540,692
57	16	534,597	9	329,912	25	864,509
58	15	709,009	9	254,843	24	963,852
59	27	883,287	6	144,524	33	1,027,811
60	25	922,361	12	326,428	37	1,248,789
61	34	1,199,331	19	614,361	53	1,813,692
62	33	1,205,714	18	570,340	51	1,776,054
63	49	1,816,113	22	484,267	71	2,300,380
64	48	2,003,085	17	573,580	65	2,576,665
65	42	1,773,757	16	365,778	58	2,139,535
66	51	1,643,136	20	739,448	71	2,382,584
67	69	2,625,880	26	896,872	95	3,522,752
68	65	2,410,498	25	820,743	90	3,231,241
69	72	2,515,822	32	971,275	104	3,487,097
70	58	1,994,548	32	811,730	90	2,806,278
71	75	2,839,607	33	964,974	108	3,804,581
72	76	2,572,474	33	1,014,019	109	3,586,493
73	57	2,144,190	19	540,894	76	2,685,084
74	57	1,813,476	19	537,358	76	2,350,834
75	69	2,298,591	20	533,683	89	2,832,274
76	48	1,415,206	17	317,984	65	1,733,190
77	50	1,331,689	13	294,390	63	1,626,079
78	34	1,263,313	22	498,529	56	1,761,842
79	44	1,598,148	17	406,868	61	2,005,016
80	46	1,484,580	18	279,787	64	1,764,367
81	28	962,743	12	387,591	40	1,350,334
82	33	1,301,759	15	215,374	48	1,517,133
83	21	742,322	12	250,695	33	993,017
84	35	1,082,289	8	173,505	43	1,255,794

Age at 12/31/2022	Male Number	Male Annual Salaries	Female Number	Female Annual Salaries	Total Number	Total Annual Salaries
85	24	793,538	7	66,004	31	859,542
86	18	453,901	11	357,013	29	810,914
87	26	828,083	4	104,940	30	933,023
88	20	855,100	12	148,427	32	1,003,527
89	15	518,489	2	55,137	17	573,626
90	15	447,782	10	119,368	25	567,150
91	13	241,122	1	16,148	14	257,270
92	6	186,917	4	121,719	10	308,636
93	6	168,831	—	—	6	168,831
94	6	187,326	4	53,716	10	241,042
95	7	256,334	4	64,656	11	320,990
96	—	—	2	16,863	2	16,863
97	1	52,487	1	26,451	2	78,938
98	2	154,380	2	47,305	4	99,792
99	1	60,010	—	—	1	154,380
100	1	50139	—	—	1	60,010
101	1	45,702	—	—	1	50,139
	1,490	51,694,872	616	16,647,040	2,106	68,348,697

	Male	Female	Both
Average Age	73	72	73
Average Salary	34,695	27,024	32,451

Retirement Pensions by Age at Time of Retirement
December 31, 2022

Age at 12/31/2022	Male Number	Male Annual Salaries	Female Number	Female Annual Salaries	Total Number	Total Annual Salaries
50	155	$ 4,752,839	47	$ 1,373,864	202	$ 6,126,703
51	102	4,346,193	31	1,338,140	133	5,684,333
52	83	3,444,786	28	947,536	111	4,392,322
53	73	3,017,639	26	1,004,122	99	4,021,761
54	88	3,807,806	34	1,319,523	122	5,127,329
55	95	3,150,952	52	1,260,040	147	4,410,992
56	92	2,869,530	30	727,711	122	3,597,241
57	74	2,669,197	25	920,022	99	3,589,219
58	70	2,235,539	30	720,910	100	2,956,449
59	47	1,744,171	26	696,113	73	2,440,284
60	104	3,357,887	50	855,476	154	4,213,363
61	70	2,581,569	32	706,160	102	3,287,729
62	82	2,098,785	44	960,756	126	3,059,541
63	42	1,381,483	20	486,175	62	1,867,658
64	48	1,528,211	22	447,096	70	1,975,307
65	68	2,201,743	32	702,552	100	2,904,295
66	45	1,262,393	20	608,755	65	1,871,148
67	39	1,301,455	19	392,498	58	1,693,953
68	23	939,888	19	433,683	42	1,373,571
69	20	914,946	7	114,309	27	1,029,255
70	15	344,503	5	152,099	20	496,602
71	14	475,668	4	98,442	18	574,110
72	9	261,871	5	173,056	14	434,927
73	2	33,971	1	8,352	3	42,323
74	5	133,305	1	18,580	6	151,885
75	8	245,443	—	0	8	245,443
76	5	207,789	1	4,898	6	212,687
77	1	25,333	4	162,898	5	188,231
78	1	7,889	—	—	1	7,889
79	3	43,023	1	13,274	4	56,297
80	2	115,434	—	—	2	115,434
81	2	70,505	—	—	2	70,505
82	1	37,372	—	—	1	37,372
85	1	7,410	—	—	1	7,410
86	1	78,344	—	—	1	78,344
	1,490	51,694,872	616	16,647,040	2,106	68,341,912

	Male	Female	Both
Average Age	58.7	59.0	58.8
Average Salary	34,695	27,024	32,451

Surviving Spouses' Pension by Age and Annual Payments
December 31, 2022

Age at 12/31/20	Number	Annual Payments
44	1	$ 4,076
51	4	66,932
52	2	21,765
53	3	59,205
54	4	50,534
55	3	61,932
56	2	48,367
57	3	69,525
58	4	45,295
59	5	45,953
60	4	51,245
61	5	87,814
62	7	119,770
63	13	235,766
64	9	212,625
65	9	162,683
66	8	177,882
67	12	397,287
68	15	245,061
69	15	329,386
70	12	231,177
71	23	449,974
72	24	529,173
73	9	180,965
74	17	345,026
75	22	424,322
76	23	459,800
77	11	213,483

Age at 12/31/2022	Number	Annual Payments
78	24	$ 552,070
79	24	487,969
80	26	545,310
81	19	252,085
82	26	439,909
83	22	350,952
84	30	529,866
85	20	376,796
86	19	308,435
87	13	189,843
88	19	397,681
89	16	235,661
90	14	270,203
91	19	373,863
92	10	240,507
93	12	221,006
94	9	162,736
95	17	237,439
96	4	106,816
97	6	97,750
98	5	61,381
99	5	76,782
101	3	35,511
	631	11,877,594
	Average	79.1
	Average Annual Payments	18,823

Survivng Spouses' Pension by Age at Commencement
December 31, 2022

Age at Commencement	Number	Annual Payments
27	1	$ 4,583
28	2	13,530
29	2	6,171
30	1	17,090
31	2	13,204
33	2	27,164
34	1	8,811
35	1	3,060
36	4	46,312
37	2	10,875
38	3	23,097
39	5	90,127
40	2	49,032
41	5	88,291
42	6	126,004
43	5	82,082
44	8	102,062
45	8	122,461
46	5	89,806
47	4	88,875
48	7	148,850
49	8	177,025
50	14	296,272
51	9	176,625
52	7	135,906
53	16	328,470
54	12	310,059
55	14	370,154
56	9	186,347
57	12	322,828
58	15	376,497
59	13	266,051
60	16	383,640
61	15	196,125

Age at Commencement	Number	Annual Payments
62	13	$ 271,249
63	15	286,973
64	24	427,477
65	17	385,627
66	16	307,550
67	24	446,652
68	14	299,709
69	24	522,979
70	20	387,104
71	22	438,144
72	16	239,647
73	12	186,936
74	17	292,707
75	14	301,491
76	20	342,842
77	14	328,152
78	13	220,691
79	15	248,187
80	18	254,645
81	10	138,121
82	9	131,345
83	8	118,151
84	10	168,230
85	10	112,422
86	2	16,554
87	5	129,020
88	1	22,999
89	1	1,479
90	6	69,549
91	3	68,955
92	1	14,393
96	1	10,128
	631	11,877,594

Average Age	65
Average Annual Payments	18,823

Annuities and Refunds by Type - Last Ten Fiscal Years
December 31, 2022

Year Ended	Retirement	Surviving Spouse	Children	Refunds Employees'	Refunds Pensioners'
December 31, 2013	$ 54,256,588	11,319,614	21,619	2,033,334	82,829
December 31, 2014	55,519,537	11,665,763	20,800	2,427,646	301,745
December 31, 2015	56,094,931	11,823,316	17,100	1,493,229	554,946
December 31, 2016	58,967,909	12,043,511	18,000	2,228,079	281,414
December 31, 2017	59,488,303	12,252,673	15,900	1,834,626	191,179
December 31, 2018	61,178,336	12,108,228	16,900	2,589,760	136,207
December 31, 2019	63,644,273	12,187,742	18,450	1,792,130	292,308
December 31, 2020	64,754,238	12,298,065	21,250	1,592,251	15,509
December 31, 2021	65,655,719	12,126,482	17,400	1,947,282	119,334
December 31, 2022	67,325,938	12,403,651	9,600	2,190,223	147,082

Death and Disability Benefits - Last Ten Fiscal Years
(in Thousands)
December 31, 2022

Year Ended		Death Benefit	Ordinary Disability	Duty Disability		Total
December 31, 2013	$	266,000	302,316	53,667		621,983
December 31, 2014		279,500	281,640	39,411		600,551
December 31, 2015		317,000	207,846	93,648		618,494
December 31, 2016		255,000	184,173	99,790		538,963
December 31, 2017		305,000	217,423	(26,959)	(a)	495,464
December 31, 2018		229,000	219,793	48,596		497,389
December 31, 2019		228,500	291,886	95,160		615,546
December 31, 2020		311,000	280,742	96,953		688,695
December 31, 2021		277,500	445,581	13,546		736,627
December 31, 2022		244,500	473,876	45,250		763,626

(a) Reflects net of recoveries of prior duty disability payments in accordance with state statute.

Number of Active Participants - Last Ten Fiscal Years
December 31, 2022

Year Ended	Male Participants	Female Participants	Total
December 31, 2013	1,819	1,257	3,076
December 31, 2014	1,742	1,231	2,973
December 31, 2015	1,796	1,267	3,063
December 31, 2016	1,800	1,314	3,114
December 31, 2017	2,114	1,429	3,543
December 31, 2018	1,871	1,316	3,187
December 31, 2019	1,818	1,314	3,132
December 31, 2020	1,683	1,207	2,890
December 31, 2021	1,565	1,129	2,694
December 31, 2022	1,647	1,171	2,818

Active Participants Statistical Averages - Last Ten Fiscal Years
December 31, 2022

	Male			Female			Combined		
Year Ended	Annual Salary	Age	Service	Annual Salary	Age	Service	Annual Salary	Age	Service
December 31, 2013	$ 37,809	43.1	10.1	$ 32,664	39.5	8.9	$ 35,706	41.6	9.6
December 31, 2014	41,199	43.4	10.0	35,245	39.8	9.6	38,734	41.9	10.3
December 31, 2015	40,361	43.0	10.7	34,578	40.0	9.6	37,969	41.8	10.1
December 31, 2016	41,248	42.7	10.5	34,041	39.5	9.3	38,207	41.3	9.9
December 31, 2017	35,986	41.9	10.4	32,383	39.6	8.7	34,532	41.0	8.8
December 31, 2018	40,973	42.6	8.9	35,712	39.9	9.5	38,800	41.5	9.7
December 31, 2019	44,525	43.0	9.8	38,312	40.1	9.6	41,919	41.8	10.0
December 31, 2020	47,895	43.9	10.2	42,647	41.6	10.8	45,703	42.9	10.9
December 31, 2021	49,216	44.7	11.0	43,831	42.7	11.6	46,959	43.8	11.6
December 31, 2022	47,353	43.6	10.7	42,778	41.3	11.0	45,452	42.7	10.8

Retirees and Beneficiaries Receiving Benefits - Last Ten Fiscal Years
December 31, 2022

Year Ended	Retirees	Surviving Spouses	Children	Total
December 31, 2013	2,102	786	16	2,904
December 31, 2014	2,101	773	17	2,891
December 31, 2015	2,097	767	12	2,876
December 31, 2016	2,113	744	13	2,870
December 31, 2017	2,115	745	16	2,876
December 31, 2018	2,136	706	12	2,854
December 31, 2019	2,144	686	13	2,843
December 31, 2020	2,116	648	11	2,775
December 31, 2021	2,104	639	9	2,752
December 31, 2022	2,106	631	8	2,745

Average Annual Retirees/Surviving Spouses' Benefit Payments - Last Ten Fiscal Years
December 31, 2022

	Average Annual Payments	
Year Ended	Retiree	Spouse
December 31, 2013	$ 26,330	14,500
December 31, 2014	26,855	15,062
December 31, 2015	26,683	15,525
December 31, 2016	28,048	16,119
December 31, 2017	28,678	16,577
December 31, 2018	29,571	17,101
December 31, 2019	29,808	17,127
December 31, 2020	30,613	17,750
December 31, 2021	31,474	18,551
December 31, 2022	32,451	18,823

Funded Ratio - Last Ten Fiscal Years
December 31, 2022

Year Ended		(1) Actuarial Value of Assets	(2) Unfunded Accrued Liabilities	(3) Statutory Reserve Requirements (1) + (2)	(4) % Percent Funded (1) / (3)
December 31, 2013	$	404,292,435	483,730,929	888,023,364	45.5%
December 31, 2014		393,762,692	507,077,925	900,840,617	43.7%
December 31, 2015		395,652,106	514,608,254	910,260,360	43.5%
December 31, 2016		393,604,997	611,888,096	1,005,493,093	39.1%
December 31, 2017		385,419,506	653,859,938	1,039,279,444	37.1%
December 31, 2018		366,806,612	775,491,353	1,142,297,965	32.1%
December 31, 2019		349,960,428	820,642,552	1,170,602,980	29.9%
December 31, 2020		342,131,743	848,233,901	1,190,365,644	28.7%
December 31, 2021		388,163,499	823,828,474	1,211,991,973	32.0%
December 31, 2022		399,555,117	869,461,766	1,269,016,883	31.5%

Ratio of Unfunded Liability to Payroll - Last Ten Fiscal Years
December 31, 2022

Year Ended		Covered Payroll	Unfunded Liability	Liability % of Payroll
December 31, 2013	$	117,781,596	483,730,929	410.70%
December 31, 2014		118,987,507	507,077,925	426.16%
December 31, 2015		122,382,584	514,608,254	420.49%
December 31, 2016		121,126,918	611,888,096	505.16%
December 31, 2017		135,315,008	653,859,938	483.21%
December 31, 2018		133,112,100	775,491,353	582.59%
December 31, 2019		139,204,051	820,642,552	589.52%
December 31, 2020		138,942,498	848,233,901	610.49%
December 31, 2021		134,515,373	823,828,474	612.44%
December 31, 2022		136,917,648	869,461,766	635.03%

Revenue by Sources - Last Ten Fiscal Years
December 31, 2022

Year Ended	Employer Contribution	Employee Contributions	Other Income (a)	Total
December 31, 2013	$ 15,804,452	10,732,730	66,642,528	93,179,710
December 31, 2014	11,225,438	10,831,434	27,591,038	49,647,910
December 31, 2015	30,588,976	12,368,636	8,911,726	51,869,338
December 31, 2016	30,890,241	12,246,115	31,022,803	74,159,159
December 31, 2017	20,920,614	13,675,292	51,174,093	85,769,999
December 31, 2018	27,638,402	12,125,457	(17,128,885)	22,634,974
December 31, 2019	27,682,089	12,664,855	52,032,781	92,379,725
December 31, 2020	33,939,927	12,634,900	28,131,778	74,706,605
December 31, 2021	83,349,261	12,226,998	53,108,732	148,684,991
December 31, 2022	67,128,978	12,669,678	(43,769,718)	36,028,938

(a) includes other contributions, net investment income, and securities lending

PARK EMPLOYEES' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND

Average Benefit Payments - Last Ten Fiscal Years
(in Thousands)
December 31, 2022

		Years of Credited Service						
		0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 1/1/13 to 12/31/13								
Average Monthly Benefit	$	581	822	1,311	1,288	2,221	3,234	3,877
Average Final Average Salary	$	7,186	4,677	4,797	3,344	4,428	4,780	5,076
Number of Retired Members		10	17	21	12	16	14	20
Period 1/1/14 to 12/31/14								
Average Monthly Benefit	$	299	736	941	1,364	2,615	3,762	4,608
Average Final Average Salary	$	5,274	4,072	3,198	3,320	4,844	5,705	5,893
Number of Retired Members		13	8	11	15	13	9	21
Period 1/1/15 to 12/31/15								
Average Monthly Benefit	$	466	914	1,019	1,623	2,323	3,478	3,740
Average Final Average Salary	$	7,554	5,306	3,671	3,652	4,401	5,433	4,752
Number of Retired Members		8	10	16	14	7	7	22
Period 1/1/16 to 12/31/16								
Average Monthly Benefit	$	391	869	1,087	1,546	1,984	3,249	3,973
Average Final Average Salary	$	6,774	5,489	3,956	3,407	3,949	4,619	4,838
Number of Retired Members		13	13	11	12	11	12	27
Period 1/1/17 to 12/31/17								
Average Monthly Benefit	$	608	1,113	1,168	1,554	2,414	3,041	4,732
Average Final Average Salary	$	7,626	6,255	4,107	3,824	4,909	4,502	5,605
Number of Retired Members		12	13	16	18	8	9	22
Period 1/1/18 to 12/31/18								
Average Monthly Benefit	$	445	992	1,091	2,184	2,033	3,543	4,438
Average Final Average Salary	$	5,497	5,913	4,057	5,639	3,948	5,185	5,641
Number of Retired Members		5	7	19	14	17	9	31
Period 1/1/19 to 12/31/19								
Average Monthly Benefit	$	628	1,313	788	1,675	2,166	4,016	4,414
Average Final Average Salary	$	8,882	8,164	3,028	4,052	4,230	5,991	5,568
Number of Retired Members		13	11	15	14	11	9	20
Period 1/1/20 to 12/31/20								
Average Monthly Benefit	$	641	1,015	945	1,974	2,340	4,115	4,252
Average Final Average Salary	$	8,277	5,351	3,211	4,895	4,602	6,403	5,377
Number of Retired Members		13	3	7	14	7	10	21
Period 1/1/21 to 12/31/21								
Average Monthly Benefit	$	696	1,344	1,073	2,166	2,906	4,449	4,648
Average Final Average Salary	$	9,195	7,749	3,735	5,348	4,966	6,872	6,092
Number of Retired Members		10	3	12	9	13	6	31
Period 1/1/22 to 12/31/22								
Average Monthly Benefit	$	856	1,617	1,098	2,004	2,625	3,349	4,697
Average Final Average Salary	$	9,201	9,475	3,592	5,103	5,482	4,926	5,979
Number of Retired Members		7	7	16	13	18	13	24

Principal Participating Employers - Current Year and Nine Fiscal Years Ago
December 31, 2022

	December 31, 2022			December 31, 2013		
Participating Government	Covered Employees'	Rank	Percentage of Total System	Covered Employees'	Rank	Percentage of Total System
Chicago Park District	2,809	1	99.68%	3064	1	99.61%
Retirement Board of the Park Employees' Annuity and Benefit Fund	9	2	0.32%	12	2	0.39%
	2,818		100.00%	3,076		100.00%

PARK EMPLOYEES' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND

Changes in Fiduciary Net Position - Last Ten Fiscal Years
(in Thousands)
December 31, 2022

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Additions										
Employer Contributions	$ 15,804	11,226	30,589	30,890	20,921	27,638	27,682	33,940	83,349	67,129
Employee Contributions	10,733	10,831	12,369	12,246	13,675	12,126	12,665	12,635	12,227	12,670
Investment Income (Loss)	66,643	27,591	8,912	31,023	51,174	(17,129)	52,033	28,132	53,109	(43,770)
Total Additions	93,180	49,648	51,870	74,159	85,770	22,635	92,380	74,707	148,685	36,029
Deductions										
Benefit Payments	66,220	67,807	68,554	71,568	72,252	73,801	76,466	77,762	78,536	80,503
Refunds	2,116	2,729	2,048	2,509	5,886 *	2,726	2,084	1,608	2,067	2,337
Administrative Expenses	1,464	1,459	1,534	1,538	1,682	1,501	1,529	1,599	1,718	2,002
Total Deductions	69,800	71,995	72,136	75,615	79,820	78,028	80,079	80,969	82,321	84,842
Changes in Fiduciary Net Position	23,380	(22,347)	(20,266)	(1,456)	5,950	(55,393)	12,301	(6,262)	66,364	(48,813)

*Includes refund of increased contributions and reduced disability benefits per court order

PARK EMPLOYEES' AND RETIREMENT BOARD EMPLOYEES' ANNUITY AND BENEFIT FUND

Benefit and Refund Deductions from Fiduciary Net Position by Type - Last Ten Fiscal Years
(in Thousands)
December 31, 2022

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Type of Benefit										
Age and Service Benefits										
Retirees	$ 54,256	55,520	56,095	58,968	59,488	61,178	63,644	64,754	65,656	67,326
Spousal	11,320	11,666	11,823	12,044	12,253	12,108	12,188	12,298	12,126	12,404
Children	22	21	17	18	16	17	18	21	17	10
Death Benefits	26	280	317	255	305	229	229	311	278	244
Disability Benefits										
Member-Duty	54	39	94	99	(27)	49	95	97	13	45
Member-Non-Duty	302	281	208	184	217	220	292	281	446	474
Total Benefits	65,980	67,807	68,554	71,568	72,252	73,801	76,466	77,762	78,536	80,503
Type of Refund										
Separation	$ 2,033	2,427	1,493	2,228	1,835	2,590	1,792	1,592	1,947	2,190
Death	83	302	555	281	191 *	136	292	16	120	147
Refund of Increased and Reduced Disability Benefits	—	—	—	—	3,860	—	—	—	—	—
Total Refunds	2,116	2,729	2,048	2,509	5,886	2,726	2,084	1,608	2,067	2,337

*Includes refund of increased contributions and reduced disability benefits per court order

Retired Members by Type of Benefit
December 31, 2022

Amount of Monthly Benefit	Number of Retired Members	Type of Retirement 1	Type of Retirement 2	Type of Retirement 3
$ 1-250	137	72	57	8
251-500	239	176	63	—
501-750	243	182	61	—
751-1,000	189	139	50	—
1,001-1,250	182	135	47	—
1,251-1,500	168	109	59	—
1,501-1,750	114	79	35	—
1,751-2,000	135	77	58	—
Over 2,000	1,338	1,137	201	—
	2,745	2,106	631	8

Type of Retirement
1 Normal Retirement of age and service, including incentive retirements
2 Beneficiary payment, normal surviving spouse
3 Beneficiary payments, child(ren)