

Employees' Retirement System of Baltimore County, Maryland

ANNUAL COMPREHENSIVE FINANCIAL REPORT

A Component Unit of Baltimore County

For the Fiscal Years Ended June 30, 2023 and 2022



**ANNUAL COMPREHENSIVE
FINANCIAL REPORT OF THE
EMPLOYEES' RETIREMENT SYSTEM
OF BALTIMORE COUNTY**

**FOR THE YEARS ENDED
JUNE 30, 2023 AND 2022**

**A COMPONENT UNIT OF
BALTIMORE COUNTY,
MARYLAND**

Prepared By:
Office of Budget and Finance

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***INTRODUCTORY
SECTION***



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

**Employees' Retirement System of Baltimore County
Maryland**

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2022

Christopher P. Morill

Executive Director/CEO

INTRODUCTORY SECTION

EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY



Letter of Transmittal

January 25, 2023

The Board of Trustees
Employees' Retirement System of Baltimore County
Towson, Maryland 21204

The Annual Comprehensive Financial Report of the Employees' Retirement System of Baltimore County, Maryland (the "System") for the year ended June 30, 2023 (FY 2023), is submitted herewith. The System is a Component Unit, included in the financial statements of Baltimore County, Maryland. The System administration is responsible for the accuracy and fairness of the information contained in this report. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the fiduciary net position and changes in the fiduciary net position of the System in conformity with accounting principles generally accepted in the United States of America.

Generally accepted accounting principles require management to provide a narrative introduction, overview, and analysis to accompany the basic financial statements in the form of Management's Discussion and Analysis (MD&A). This letter of transmittal is designed to complement the MD&A and should be read in conjunction with it. The MD&A may be found immediately following the report of the independent auditors.

Plan History. The System, a defined benefit plan, was established January 1, 1945 by County ordinance. The authority to establish and maintain the System is specified in Section 5-1-101 of the Baltimore County Code. Membership in the System is open to employees in both the classified and unclassified service of Baltimore County, and employees of the Baltimore County Revenue Authority, the Baltimore County Board of Education, the Baltimore County Board of Library Trustees and the Community College of Baltimore County who are not eligible to participate in the Maryland State Retirement and Pension Systems. Direct appointees of the Governor of Maryland, temporary employees and employees for whom there are existing pension provisions are excluded. System membership is compulsory for general County merit employees after sixty days of service for members hired on or after January 1, 2014, but before July 1, 2022. Beginning July 1, 2022, system membership was made compulsory for all employees as a condition of employment, except for employees hired at age 55 or over who have the option to join.

Benefits and Services Provided. The System provides normal service retirement and discontinued service retirement benefits for members who attain the age and service requirements. Coverage for occupational disability benefits is immediate upon entry into the System. Disability benefits for non-occupational related injury or illness are provided to vested members. Members hired prior to July 1, 2007 are vested after five years of creditable service. Members hired on or after July 1, 2007 are vested after ten years of creditable service. Ordinary disability benefits are provided to Police Officers and Firefighters after five years of creditable service if hired prior to July 1, 2007, and after ten years of creditable service for all other members. Occupational death benefits are provided upon membership for any member whose death results from an injury occurring in the actual performance of their job.

INTRODUCTORY SECTION

Letter of Transmittal, continued

Post-Retirement Cost-of-Living Adjustments (COLAs) are granted annually as of July 1, to members who have been retired for more than 60 months, provided sufficient excess investment earnings exist in the Post Retirement Increase Fund (PRIF). For active members who select the Deferred Retirement Option Program (DROP), the eligibility period to receive COLAs in the DROP remains a minimum of 12 months. Once the member actually retires, the eligibility period for a post-retirement COLA is a minimum of 48 months. Members retiring on or after July 1, 2010 and hired prior to July 1, 2007 must have 20 years of creditable service to qualify for COLAs. Members hired on or after July 1, 2007 must have 25 years of creditable service to qualify for COLAs.

The staff makes benefit presentations at retirement seminars that are held twice a year.

INVESTMENT PERFORMANCE

The System's investment portfolio time-weighted rate of return, gross of fees, was 7.3% in FY 2023 and -9.9% in FY 2022. The Comparative Balanced Index was 9.8% and -9.8% respectively, for the same periods.

FUNDING STATUS

For actuarial valuation purposes, gains and losses are smoothed over a five-year period. The actuarially determined target investment return is a long-term target and significant deviations from this target can be expected. The actuarial cost method applied is the projected unit credit. Based on the latest available actuarial reports, the funded status (based on the accrued liability and the actuarial value of assets) for the System as of July 1, 2022 was 60.2%.

INVESTMENT STRATEGIES

During FY 2023, the Trustees conducted an annual asset allocation review. As a result of the review, the Board decreased emerging market equities from 5% to 3% and increased fixed income from 22% to 24%. One new manager was added to fund a passive mandate for U.S. Treasury exposure, and several managers were also added to the private equity and private debt asset classes. One manager was terminated with the elimination of the target to emerging market small cap equity. The Board implemented these changes to better meet the System's long-term risk and return objectives.

MAJOR ISSUES AND INITIATIVES

LEGISLATIVE AND ADMINISTRATIVE CHANGES

On June 8, 2023, the County Council enacted Bill No. 34-23, effective July 1 2023, for the purpose of establishing provisions relating to the pensions of Correctional Officers on Pay Schedule I-C; allowing such officers an option to elect the Option 7 benefit, a 50% spousal benefit; eliminating the requirement that all county employees must pass a physical examination to become eligible to join the Employees' Retirement System; modifying a Special Personnel Rule to correct an obsolete reference to "official physicians for the county employees' retirement system"; authorizing certain beneficiaries to return to active service if the beneficiary is employed by the board of education under certain circumstances; and generally relating to the Employees' Retirement System.

INTRODUCTORY SECTION

Letter of Transmittal, continued

FINANCIAL INFORMATION

Accounting System. The System's financial statements have been prepared using the economic resources measurement focus and the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America. Accordingly, contributions and investment income are recorded when earned regardless of the date of collection and benefits and other expenses are recorded when liabilities are incurred regardless of when payment is made.

Internal Control. In developing and evaluating the accounting system, consideration is given to the adequacy of internal accounting controls. Internal accounting controls are designed to provide reasonable, but not absolute, assurance regarding the safeguarding of assets against loss from unauthorized use or disposition and the reliability of financial records for preparing financial statements and maintaining accountability for assets. The concept of reasonable assurance recognizes that the cost of a control should not exceed the benefits likely to be derived; and the evaluation of cost and benefits requires estimates and judgments by management. All internal control evaluations occur within this framework. Management believes the System's internal accounting controls adequately safeguard assets and provide reasonable assurance of proper recording of financial transactions.

Investments. As provided in Section 5-1-251 of the Baltimore County Code, the Board of Trustees is empowered to invest the System's assets utilizing the "prudent person" standard and to take appropriate action regarding the investment, management and custodianship of plan assets. The investment responsibilities include establishing reasonable investment objectives, developing investment policy guidelines, selecting investment managers and evaluating performance results to ensure adherence to guidelines and the achievement of objectives.

OTHER INFORMATION

Independent Audit. The County has contracted with a firm of independent certified public accountants to audit the System's financial statements. The independent auditors' report is contained herein.

Professional Services. The Board of Trustees has appointed an actuary, a pension investment consultant, an asset custodian, a medical board and numerous investment managers to provide services to the System. The list of professionals which provide services to the System is found on pages 7 through 9. The Schedule of Fees and Schedule of Commissions paid to investment professionals is located on pages 61 through 62 of the Investment Section.

Certificate of Achievement. The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Employees' Retirement System of Baltimore County for its annual comprehensive financial report for the fiscal year ended June 30, 2022. This was the twenty ninth consecutive year that the System has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government 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 our current annual comprehensive financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to GFOA to determine its eligibility for another certificate.

Letter of Transmittal, continued

ACKNOWLEDGMENTS

The preparation of this report on a timely basis reflects the combined effort and dedication of the System's staff. On behalf of the Board of Trustees, I would like to take this opportunity to express my gratitude to the staff who have worked so diligently to assure the successful operation of the System. This report is intended to provide complete and reliable information as a basis for making management decisions, as a means of determining compliance with legal provisions and for determining responsible stewardship for the assets of the System.

Respectfully submitted,



Kevin D. Reed
Director of Budget and Finance and
Secretary to the Board of Trustees
Employees' Retirement System of Baltimore County

INTRODUCTORY SECTION

Board of Trustees

Michael K. Day, Chairman Employee Representative	Elected by active membership Four-year term expires November 30, 2024
Dori Henry Chief of Staff	County Executive Designee
Kevin D. Reed Director of Budget and Finance	Ex-officio Trustee
Renee Coleman Director of Human Resources	Ex-officio Trustee
Robert McCullough Chief of Police	Ex-officio Trustee
D'Andrea Walker Director of Public Works	Ex-officio Trustee
William D. Patterson Retiree Representative	Elected by retired membership Four-year term expires November 30, 2024
David Rose Employee Representative	Elected by active membership Four-year term expires November 30, 2024
Ed Crawford County Council Appointee	Appointed by County Council Four-year term expires June 30, 2027
Fred Hill County Council Appointee	Appointed by County Council Four-year term expires June 30, 2025
Vacant County Executive Appointee	Appointed by County Executive

The Ex-officio trustees serve by virtue of their position with Baltimore County.

INTRODUCTORY SECTION

Consultants and Professional Services

Actuary

Korn Ferry, Inc.
Reston, Virginia

Auditors

CliftonLarsonAllen, LLP
Baltimore, Maryland

Pension Investment Consultants

NEPC, LLC
Cambridge, Massachusetts

EDP Consultant

CPAS Systems, Inc.
Toronto, Ontario, Canada

CASI

Baltimore, Maryland

Medical Board

Rubin Reider, M.D.
Jose Morelos, M.D.
Deepti Dar Razdan, M.D.

Asset Custodian

BNY Mellon
Pittsburgh, Pennsylvania

Operational Banking

M & T Bank
Buffalo, New York

Investment Managers

Domestic Equity

Benchmark Plus Management
Tacoma, Washington

BlackRock
San Francisco, California

Brown Advisory
Baltimore, Maryland

Brown Capital Management
Baltimore, Maryland

Channing Capital Management
Atlanta, Georgia

Earnest Partners
Atlanta, Georgia

Edgar Lomax Company
Alexandria, Virginia

International Equity

Arrowstreet Capital International
Boston, Massachusetts

Ativo International Equity Fund
Chicago, Illinois

BlackRock
San Francisco, California

Mondrian Investment Partners
Wilmington, Delaware

Metis Global Partners
San Diego, CA

Silchester International
New York, New York

Strategic Global Advisors
Newport Beach, California

INTRODUCTORY SECTION

Fixed Income

PIMCO
Newport Beach, California

Guggenheim Investments
New York, New York

Garcia Hamilton & Associates
Houston, Texas

Reams Asset Management
Columbus, Indiana

Western Asset Management
Pasadena, California

Pacific Asset Management
Newport Beach, California

BlackRock
San Francisco, California

Private Equity

HarbourVest Partners, Inc.
Boston, Massachusetts

Mesirow Private Equity
Chicago, Illinois

Energy Spectrum Partners
Dallas, Texas

Ares Capital
Los Angeles, California

Vista Equity Partners
San Francisco, California

Apogem Capital
Richmond, Virginia

Warburg Pincus
New York, New York

Axiom Asia
Singapore, Singapore

StepStone Group
La Jolla, CA

Apollo Global Management
New York, New York

Paul Capital Partners
San Francisco, California

Lexington Partners
New York, New York

Sterling Capital Management, LLC
Baltimore, Maryland

CCMP Capital Advisors, LLC
New York, New York

Riverstone Holdings, LLC
New York, New York

Siris Partners
New York, NY

KPS Capital Partners, LP
New York, New York

Trive Capital Fund
Dallas, Texas

Top Tier Capital Partners
San Francisco, California

INTRODUCTORY SECTION

Investment Managers, continued

Private Debt

Comvest Partners
West Palm Beach, FL

Crescent Capital Group
Los Angeles, California

EIG Global Energy Partners
Washington, District of Columbia

HarbourVest Partners, Inc.
Boston, Massachusetts

Park Square Capital
London, England

Riverstone Holdings, LLC
New York, New York

Siguler Guff
New York, New York

PIMCO
Newport Beach, California

Newstone Capital Partners
Los Angeles, California

Real Estate

ING Clarion
New York, New York

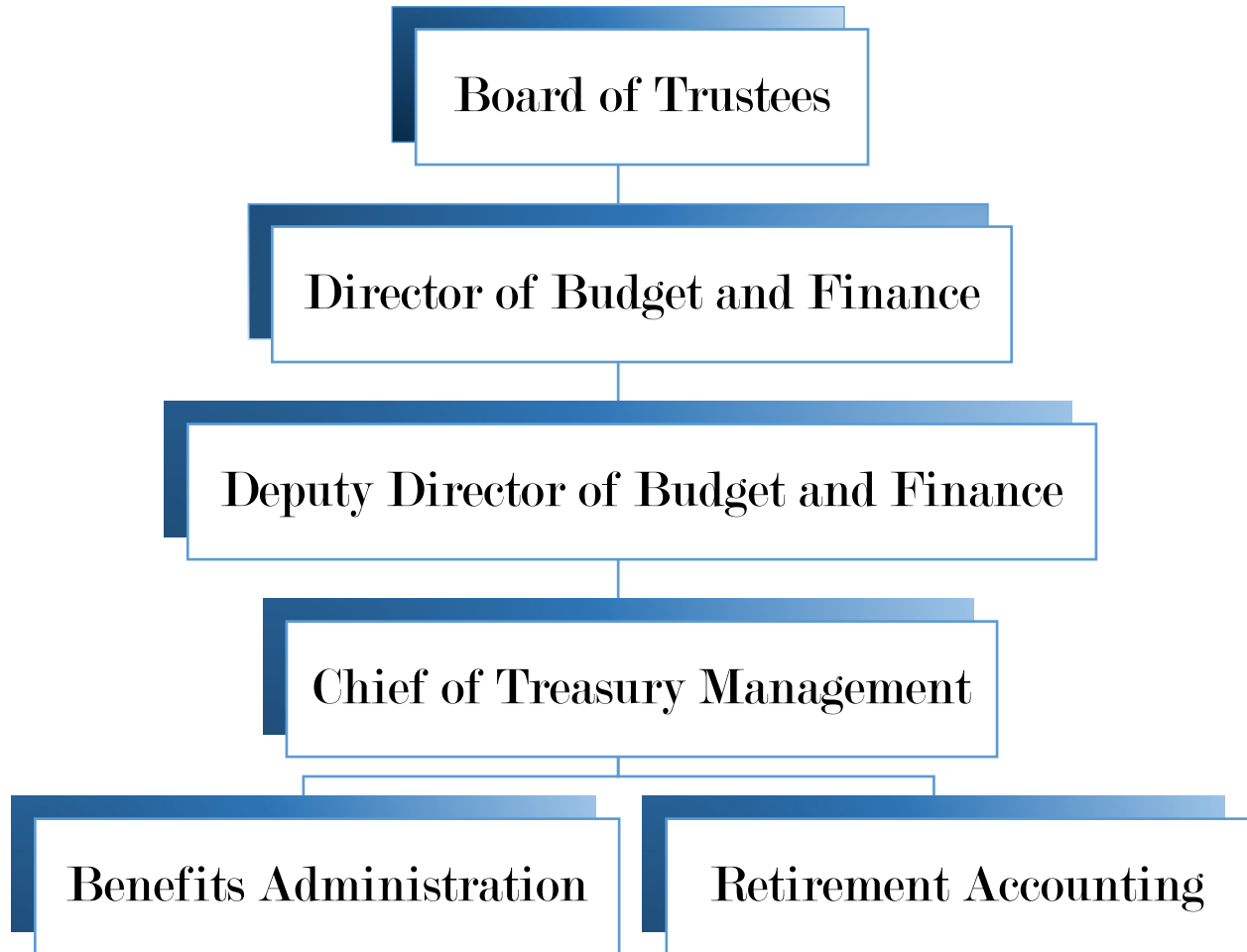
JP Morgan
New York, New York

UBS Global Asset Management
Hartford, Connecticut

Global Asset Allocation

Bridgewater
Westport, Connecticut

Administrative Organizational Chart



***FINANCIAL
SECTION***



INDEPENDENT AUDITORS' REPORT

The Honorable County Executive and
Members of County Council
Baltimore County, Maryland

Report on the Audit of the Financial Statements

Opinion

We have audited the accompanying financial statements of the Employees' Retirement System of Baltimore County, Maryland (the System), a fiduciary component unit of Baltimore County, Maryland, as of and for the years ended June 30, 2023 and 2022, and the related notes to the financial statements, which collectively comprise the System'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 fiduciary net position of the System as of June 30, 2023 and 2022, and the changes in fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the 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 System'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.

Auditors' 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 auditors' report that includes our opinion. 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 GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists.

FINANCIAL SECTION

The Honorable County Executive and
Members of County Council

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.

In performing an audit in accordance with GAAS and *Government 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 System'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 System'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.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, and the schedules of changes in the net pension liability and related ratios, investment returns and employer contributions, 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 GAAS, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

FINANCIAL SECTION

The Honorable County Executive and
Members of County Council

Supplementary Information

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The schedules of investment expenses, administrative expenses and professionals/consultants fees are presented for purposes of additional analysis and are 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 audits of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with GAAS. In our opinion, the schedules of investment expenses, administrative expenses and professionals/consultants fees are 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, investment, actuarial, and statistical sections, but does not include the basic financial statements and our auditors' report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audits 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.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated January 25, 2024, on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the System's internal control over financial reporting and compliance.



CliftonLarsonAllen LLP

Baltimore, Maryland
January 25, 2024

Management's Discussion and Analysis

Our discussion and analysis of the financial performance of the Employees' Retirement System of Baltimore County (the "System") provides an overview of financial activities for the fiscal years ended June 30, 2023 (FY 2023) and June 30, 2022 (FY 2022). Please read it in conjunction with the transmittal letter in the Introductory Section beginning on Page 2 and the basic financial statements, which follow this discussion.

FINANCIAL HIGHLIGHTS

- The System's net position restricted for pensions at the close of FY 2023 and FY 2022 were \$2.937 billion and \$2.836 billion, respectively. This increase was primarily due to the gain in the System's investment portfolio of 7.3%.
- Total contributions for FY 2023 and FY 2022 were \$272.3 million and \$212.6 million, respectively, an increase of 28.1%. The employer contributions for FY 2023 and FY 2022 were \$215.6 million and \$160.6 million, respectively, an increase of 34.3%. This increase was primarily due to an additional \$50 million above the actuarial determined contribution by the County, scheduled increase in amortization contribution, increase due to salary changes, increase due to demographic factors, and other factors.
- Net investment income of \$195.6 million resulted in a time-weighted, gross of fees return of 7.3% for FY 2023 vs. net investment loss of \$331.9 million for FY 2022 which resulted in a time-weighted, gross of fees return of -9.9%. The Comparative Balanced Index was 9.8% and -9.8% respectively, for the same periods. The investment gains in FY 2023 were due to positive returns across all asset categories, except for real estate investments.
- Total deductions increased to \$366.1 in FY 2023 from \$332.5 in FY2022 or by \$33.6 million, an increase of 10.1%. The increase was primarily due to an increase in benefit payments.
- The System's Total Pension Liability was \$5.3 billion for FY 2023 and \$5.1 billion for FY 2022. The Fiduciary Net Position, as a percentage of Total Pension Liability was 55.52% as of June 30, 2023, and 55.62% as of June 30, 2022.
- Covered payroll was \$660.2 million as of June 30, 2023 and \$630.1 million as of June 30, 2022. The System had a Net Pension Liability of \$2.35 billion for FY 2023, and \$2.26 billion for FY 2022. The Net Pension Liability as a percentage of Covered payroll was 356.5% as of June 30, 2023 and 359.1% as of June 30, 2022.
- The System's funding objective is to meet long-term benefit obligations through contributions and investment income. Based on the latest actuarial valuations, as of July 1, 2022, the funded ratio was 60.2%.

THE STATEMENT OF FIDUCIARY NET POSITION AND THE STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

This Annual Comprehensive Financial Report (ACFR) consists of two financial statements: Statements of Fiduciary Net Position (Page 22) and Statements of Changes in Fiduciary Net Position (Page 23). These financial statements report information about the System as a whole, and about its financial condition that should help answer the question: Is the System, as a whole, better or worse off as a result of this year's activities? These statements include all assets and liabilities that are due and payable using the economic resources measurement focus and the accrual basis of accounting. Under the accrual basis of accounting, all revenues and expenses are taken into account regardless of when cash is received or paid.

The Statements of Fiduciary Net Position present all of the System's assets and liabilities, with the difference between the two reported as the net position. Over time, increases and decreases in the net position measure whether the System's assets available for benefits is improving or deteriorating. The Statements of Changes in Fiduciary Net Position present how the System's net position changed during the most recent fiscal year. These two sets of financial statements should be reviewed along with the Notes to the Financial Statements, and the Required Supplementary Information (RSI), including, the Schedule of Changes in Net Pension Liability, the Schedule of Employer Contributions, the Schedule of

FINANCIAL SECTION

Management's Discussion and Analysis, continued

Investment Returns, and the Notes to the RSI, to determine whether the System is becoming financially stronger or weaker and to understand changes over time in the funded status of the System.

FINANCIAL ANALYSIS

The System's overall funding objective is to accumulate sufficient assets over time to meet its long-term benefit obligations as they become due.

The System's assets exceeded its due and payable liabilities at the close of FY 2023 and FY 2022 by \$2.937 billion and \$2.836 billion, respectively. In FY 2023, the net position restricted for pension benefits increased 3.6% or \$101.7 million from FY 2022. In FY 2022, the net position restricted for pension benefits decreased 13.7% or \$451.8 million from FY 2021.

The following table illustrates a condensed version of the Combined Statements of Fiduciary Net Position and Changes in Fiduciary Net Position for the System, Plan A and Plan B for fiscal years ending June 30, 2023, 2022 and 2021.

EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY
COMBINED FIDUCIARY NET POSITION
AS OF JUNE 30, 2023, 2022 AND 2021
(IN THOUSANDS)

THE SYSTEM

	<u>FY 2023</u>	<u>FY 2022</u>	<u>FY 2021</u>	<u>2023-2022</u> <u>% Change</u>	<u>2022-2021</u> <u>% Change</u>
Assets					
Cash and short term investments	\$ 55,149	\$ 40,611	\$ 64,890	35.8%	-37.4%
Collateral for loaned securities	10,157	10,662	10,667	-4.7%	0.0%
Receivables	35,525	19,203	7,850	85.0%	144.6%
Investments	2,912,226	2,814,846	3,234,295	3.5%	-13.0%
Total assets	<u>3,013,057</u>	<u>2,885,322</u>	<u>3,317,702</u>	4.4%	-13.0%
Liabilities					
Accounts payable and other accrued liabilities	65,526	38,984	19,516	68.1%	99.8%
Obligations under securities lending	10,157	10,662	10,667	-4.7%	0.0%
Total liabilities	<u>75,683</u>	<u>49,646</u>	<u>30,183</u>	52.4%	64.5%
Net position restricted for pensions	<u>\$ 2,937,374</u>	<u>\$ 2,835,676</u>	<u>\$ 3,287,519</u>	3.6%	-13.7%

FINANCIAL SECTION

Management's Discussion and Analysis, continued
EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY
FIDUCIARY NET POSITION
AS OF JUNE 30, 2023, 2022 AND 2021
(IN THOUSANDS)

PLAN A

	<u>FY 2023</u>	<u>FY 2022</u>	<u>FY 2021</u>	<u>2023-2022</u> <u>% Change</u>	<u>2022-2021</u> <u>% Change</u>
Assets					
Cash and short term investments	\$ 52,864	\$ 37,213	\$ 60,362	42.1%	-38.4%
Collateral for loaned securities	9,232	9,839	9,948	-6.2%	-1.1%
Receivables	31,554	17,066	6,447	84.9%	164.7%
Investments	<u>2,647,077</u>	<u>2,597,592</u>	<u>3,016,470</u>	1.9%	-13.9%
Total assets	<u>2,740,727</u>	<u>2,661,710</u>	<u>3,093,227</u>	3.0%	-14.0%
Liabilities					
Accounts payable and other accrued liabilities	54,489	31,733	14,212	71.7%	123.3%
Obligations under securities lending	9,232	9,839	9,948	-6.2%	-1.1%
Total liabilities	<u>63,721</u>	<u>41,572</u>	<u>24,160</u>	53.3%	72.1%
Net position restricted for pensions	<u>\$ 2,677,006</u>	<u>\$ 2,620,138</u>	<u>\$ 3,069,067</u>	2.2%	-14.6%

PLAN B

	<u>FY 2023</u>	<u>FY 2022</u>	<u>FY 2021</u>	<u>2023-2022</u> <u>% Change</u>	<u>2022-2021</u> <u>% Change</u>
Assets					
Cash and short term investments	\$ 2,285	\$ 3,398	\$ 4,528	-32.8%	-25.0%
Collateral for loaned securities	925	823	719	12.4%	14.5%
Receivables	3,971	2,137	1,403	85.8%	52.3%
Investments	<u>265,149</u>	<u>217,254</u>	<u>217,825</u>	22.0%	-0.3%
Total assets	<u>272,330</u>	<u>223,612</u>	<u>224,475</u>	21.8%	-0.4%
Liabilities					
Accounts payable and other accrued liabilities	11,037	7,251	5,304	52.2%	36.7%
Obligations under securities lending	925	823	719	12.4%	14.5%
Total liabilities	<u>11,962</u>	<u>8,074</u>	<u>6,023</u>	48.2%	34.1%
Net position restricted for pensions	<u>\$ 260,368</u>	<u>\$ 215,538</u>	<u>\$ 218,452</u>	20.8%	-1.3%

FINANCIAL SECTION

Management's Discussion and Analysis, continued

EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY COMBINED CHANGES IN FIDUCIARY NET POSITION FOR THE FISCAL YEARS ENDED JUNE 30, 2023, 2022 AND 2021 (IN THOUSANDS)

THE SYSTEM

	<u>FY 2023</u>	<u>FY 2022</u>	<u>FY 2021</u>	<u>2023-2022</u> <u>% Change</u>	<u>2022-2021</u> <u>% Change</u>
Additions					
Contributions:					
Employer	\$ 215,571	\$ 160,572	\$ 151,903	34.3%	5.7%
Member	56,688	52,007	52,312	9.0%	-0.6%
Total contributions	<u>272,259</u>	<u>212,579</u>	<u>204,215</u>	28.1%	4.1%
Net investment income (loss)	195,539	(331,975)	727,170	158.9%	-145.7%
Net securities lending income	47	64	113	-26.6%	-43.4%
Total net investment income (loss)	<u>195,586</u>	<u>(331,911)</u>	<u>727,283</u>	158.9%	-145.6%
Total additions	<u>467,845</u>	<u>(119,332)</u>	<u>931,498</u>	492.1%	-112.8%
Deductions					
Benefits	354,432	320,684	334,290	10.5%	-4.1%
Refunds of contributions	10,067	10,434	6,383	-3.5%	63.5%
Administrative expenses	1,648	1,393	1,481	18.3%	-5.9%
Total deductions	<u>366,147</u>	<u>332,511</u>	<u>342,154</u>	10.1%	-2.8%
Net increase (decrease)	101,698	(451,843)	589,344	122.5%	-176.7%
Net position restricted for pension benefits					
Beginning of year	2,835,676	3,287,519	2,698,175	-13.7%	21.8%
End of year	<u>\$ 2,937,374</u>	<u>\$ 2,835,676</u>	<u>\$ 3,287,519</u>	3.6%	-13.7%

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FINANCIAL SECTION

Management's Discussion and Analysis, continued

EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY CHANGES IN FIDUCIARY NET POSITION FOR THE FISCAL YEARS ENDED JUNE 30, 2023, 2022 AND 2021 (IN THOUSANDS)

PLAN A

	<u>FY 2023</u>	<u>FY 2022</u>	<u>FY 2021</u>	<u>2023-2022</u> <u>% Change</u>	<u>2022-2021</u> <u>% Change</u>
Additions					
Contributions:					
Employer	\$ 208,800	\$ 154,751	\$ 147,818	34.9%	4.7%
Member	25,069	25,987	27,914	-3.5%	-6.9%
Total contributions	<u>233,869</u>	<u>180,738</u>	<u>175,732</u>	29.4%	2.8%
Net investment income (loss)	179,117	(307,045)	684,192	158.3%	-144.9%
Net securities lending income	43	60	106	-28.3%	-43.4%
Total net investment income (loss)	<u>179,160</u>	<u>(306,985)</u>	<u>684,298</u>	158.4%	-144.9%
Total additions	<u>413,029</u>	<u>(126,247)</u>	<u>860,030</u>	427.2%	-114.7%
Deductions					
Benefits	353,132	319,629	333,711	10.5%	-4.2%
Refunds of Contributions	1,526	1,767	2,523	-13.6%	-30.0%
Administrative Expenses	1,503	1,286	1,382	16.9%	-6.9%
Total deductions	<u>356,161</u>	<u>322,682</u>	<u>337,616</u>	10.4%	-4.4%
Net increase (decrease)	56,868	(448,929)	522,414	112.7%	-185.9%
Net position restricted for pension benefits					
Beginning of year	<u>2,620,138</u>	<u>3,069,067</u>	<u>2,546,653</u>	-14.6%	20.5%
End of year	<u>\$ 2,677,006</u>	<u>\$ 2,620,138</u>	<u>\$ 3,069,067</u>	2.2%	-14.6%

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FINANCIAL SECTION

Management's Discussion and Analysis, continued

EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY CHANGES IN FIDUCIARY NET POSITION FOR THE FISCAL YEARS ENDED JUNE 30, 2023, 2022 AND 2021 (IN THOUSANDS)

PLAN B

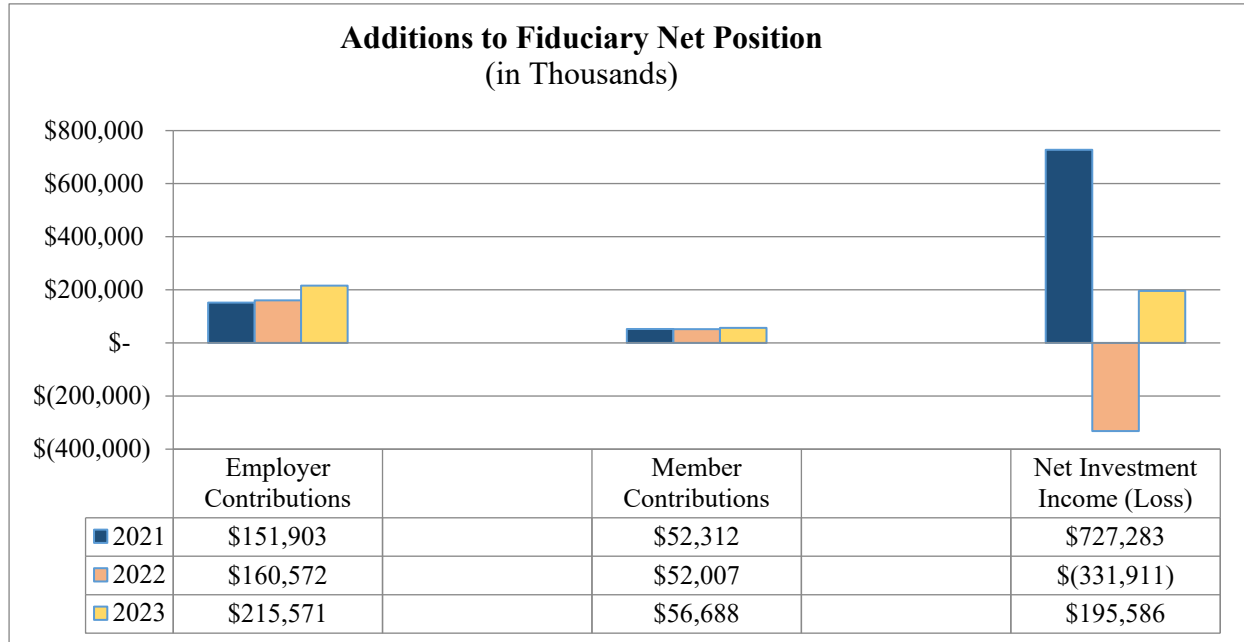
	FY 2023	FY 2022	FY 2021	2023-2022 % Change	2022-2021 % Change
Additions					
Contributions:					
Employer	\$ 6,771	\$ 5,821	\$ 4,085	16.3%	42.5%
Member	31,619	26,020	24,398	21.5%	6.6%
Total contributions	38,390	31,841	28,483	20.6%	11.8%
Net investment income (loss)	16,422	(24,930)	42,978	165.9%	-158.0%
Net securities lending income	4	4	7	0.0%	-42.9%
Total net investment income (loss)	16,426	(24,926)	42,985	165.9%	-158.0%
Total additions	54,816	6,915	71,468	692.7%	-90.3%
Deductions					
Benefits	1,300	1,055	579	23.2%	82.2%
Refunds of contributions	8,541	8,667	3,860	-1.5%	124.5%
Administrative Expenses	145	107	99	35.5%	8.1%
Total deductions	9,986	9,829	4,538	1.6%	116.6%
Net increase (decrease)	44,830	(2,914)	66,930	1638.4%	-104.4%
Net position restricted for pension benefits					
Beginning of year	215,538	218,452	151,522	-1.3%	44.2%
End of year	\$ 260,368	\$ 215,538	\$ 218,452	20.8%	-1.3%

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FINANCIAL SECTION

Management's Discussion and Analysis, continued

THE SYSTEM



ADDITIONS TO FIDUCIARY NET POSITION

The reserves needed to finance retirement benefits are accumulated through the collection of employer and employee contributions and earnings on investments. Employer contributions, employee contributions and net investment income for fiscal years 2023 and 2022 were \$467.8 million and -\$119.3 million, respectively. This increase was primarily due to an increase in investment income of 7.3%.

Additions for FY 2023 were \$467.8 million. This was due to the significant increase in investment income and employer contributions.

Additions for FY 2022 were -\$119.3 million. This was due to the significant decrease in investment income from \$727.3 million in FY 2021 to -\$331.9 million in FY 2022.

The overall System portfolio, calculated using a time-weighted rate of return methodology, returned 7.3% gross of fees for FY 2023. All asset categories contributed to these positive returns, except for real estate investments.

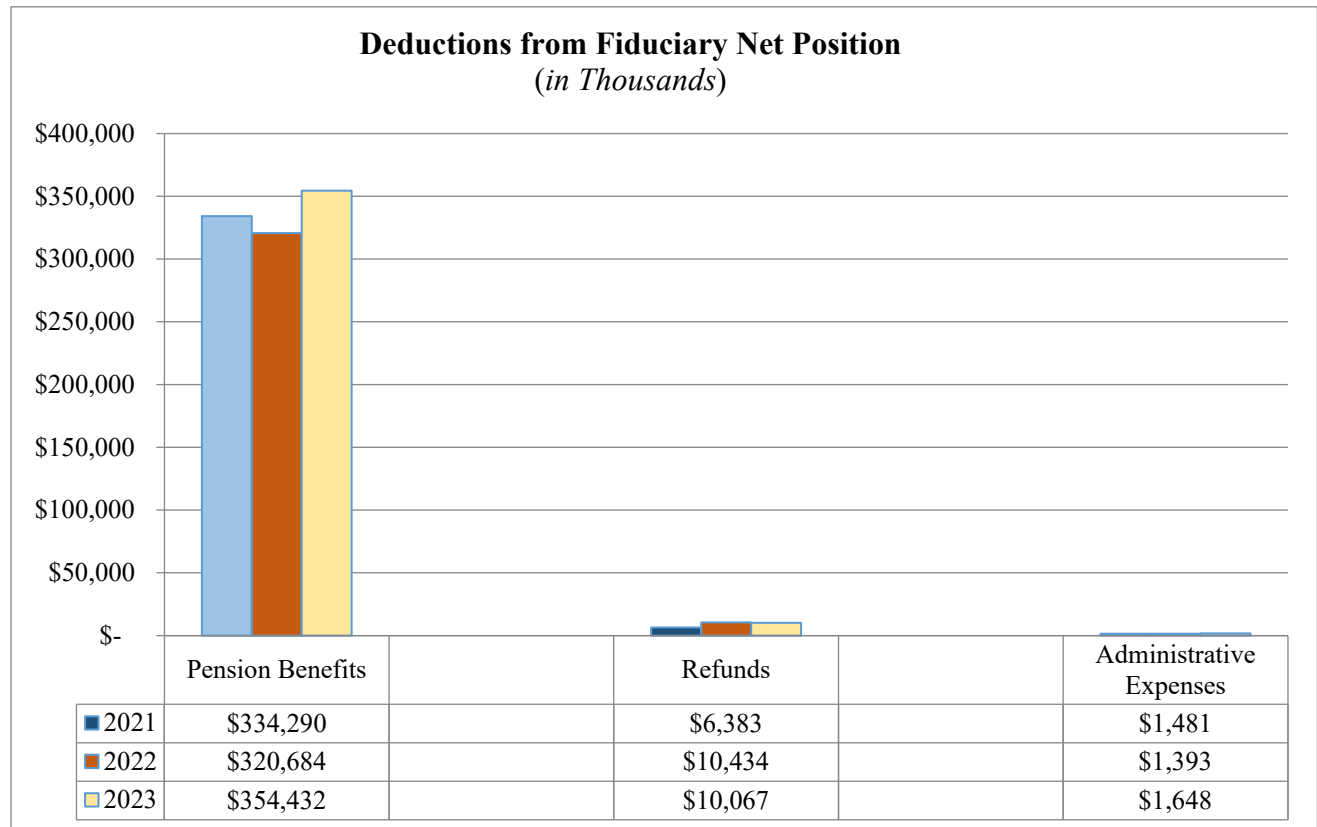
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FINANCIAL SECTION

Management’s Discussion and Analysis, continued

DEDUCTIONS FROM FIDUCIARY NET POSITION

The deductions include pension payments to members and beneficiaries, refunds of contributions to former members, and the cost of administering the System. Total deductions for FY 2023 increased by 10.1% or \$33.6 million over FY 2022 due to the increase in benefit payments. Total deductions for FY 2022 decreased by -2.8% or \$9.6 million over FY 2021 due to the decrease in benefit payments.



RETIREMENT SYSTEM AS A WHOLE

The net position held in trust for pension benefits increased by \$101.7 million in FY 2023 over FY 2022. Based on the latest actuarial valuation available, the System’s funding ratio, as determined by the County’s actuary, was 60.2% as of July 1, 2022. The Board continues to utilize the concepts of prudent investment management, cost controls and strategic planning.

CONTACTING SYSTEM FINANCIAL MANAGEMENT

This financial report is designed to provide the Retirement Board, our membership, taxpayers, investors, and creditors with a general overview of the System’s finances and to demonstrate the System’s accountability for the money it receives. If you have any questions about this report or need additional financial information, you may contact the Office of Budget and Finance, Mezzanine, Historic Court House, 400 Washington Avenue, Towson, Maryland 21204 or email ers@baltimorecountymd.gov.

The Employees’ Retirement System Annual Comprehensive Financial Report may be found online at: www.baltimorecountymd.gov/Agencies/budfin/retirement/index.html.

FINANCIAL SECTION

Statements of Fiduciary Net Position As of June 30, 2023 and 2022 (IN THOUSANDS)

	FY 2023			FY 2022		
	Plan A	Plan B	The System	Plan A	Plan B	The System
Assets:						
Cash and short term investments	\$ 52,864	\$ 2,285	\$ 55,149	\$ 37,213	\$ 3,398	\$ 40,611
Collateral for loaned securities	9,232	925	10,157	9,839	823	10,662
Receivables:						
Accrued interest and dividend income	2,532	254	2,786	2,946	241	3,187
Receivable for investments sold	28,242	2,829	31,071	13,327	1,115	14,442
Receivables - other	780	888	1,668	793	781	1,574
Total receivables	31,554	3,971	35,525	17,066	2,137	19,203
Investments, at fair value						
U.S. Government and agency securities	120,848	12,105	132,953	94,175	7,876	102,051
Municipal Debt	-	-	-	21	2	23
Foreign debt	18,666	1,870	20,536	11,443	957	12,400
Corporate debt	106,377	10,655	117,032	148,580	12,427	161,007
Stocks	321,597	32,213	353,810	328,909	27,509	356,418
Bond mutual funds	407,667	40,835	448,502	394,760	33,016	427,776
Stock mutual funds	1,051,509	105,326	1,156,835	1,003,875	83,960	1,087,835
Real estate equity funds	149,955	15,020	164,975	185,597	15,523	201,120
Private equity funds	269,048	26,950	295,998	307,681	25,734	333,415
Private debt funds	82,622	8,276	90,898	-	-	-
Global asset allocation	118,788	11,899	130,687	122,551	10,250	132,801
Total investments	2,647,077	265,149	2,912,226	2,597,592	217,254	2,814,846
Total assets	2,740,727	272,330	3,013,057	2,661,710	223,612	2,885,322
Liabilities:						
Investment expenses payable	1,627	140	1,767	1,482	123	1,605
Refunds payable	56	6,388	6,444	57	5,222	5,279
Payable for investments purchased	44,924	4,500	49,424	22,791	1,906	24,697
Payable for collateral for loaned securities	9,232	925	10,157	9,839	823	10,662
Payables - other	7,882	9	7,891	7,403	-	7,403
Total liabilities	63,721	11,962	75,683	41,572	8,074	49,646
Net position restricted for pension benefits						
	\$ 2,677,006	\$ 260,368	\$ 2,937,374	\$ 2,620,138	\$ 215,538	\$ 2,835,676

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

FINANCIAL SECTION

Statements of Changes in Fiduciary Net Position

For the Years Ended June 30, 2023 and 2022

(IN THOUSANDS)

	FY 2023			FY 2022		
	Plan A	Plan B	The System	Plan A	Plan B	The System
Additions						
Contributions:						
Employer	\$ 208,800	\$ 6,771	\$ 215,571	\$ 154,751	\$ 5,821	\$ 160,572
Member	25,069	31,619	56,688	25,987	26,020	52,007
Total contributions	<u>233,869</u>	<u>38,390</u>	<u>272,259</u>	<u>180,738</u>	<u>31,841</u>	<u>212,579</u>
Investment income:						
Change in fair value of investments	150,999	13,887	164,886	(328,577)	(26,535)	(355,112)
Interest and dividends	43,018	3,974	46,992	44,775	3,427	48,202
	<u>194,017</u>	<u>17,861</u>	<u>211,878</u>	<u>(283,802)</u>	<u>(23,108)</u>	<u>(306,910)</u>
Less: Investment expenses	<u>(14,900)</u>	<u>(1,439)</u>	<u>(16,339)</u>	<u>(23,243)</u>	<u>(1,822)</u>	<u>(25,065)</u>
Net investment income (loss)	179,117	16,422	195,539	(307,045)	(24,930)	(331,975)
Securities lending:						
Securities lending income	353	35	388	58	4	62
Borrower rebates	(289)	(29)	(318)	27	2	29
Agent fees	(21)	(2)	(23)	(25)	(2)	(27)
Net income from securities lending	<u>43</u>	<u>4</u>	<u>47</u>	<u>60</u>	<u>4</u>	<u>64</u>
Total net investment income (loss)	<u>179,160</u>	<u>16,426</u>	<u>195,586</u>	<u>(306,985)</u>	<u>(24,926)</u>	<u>(331,911)</u>
Total additions	<u>413,029</u>	<u>54,816</u>	<u>467,845</u>	<u>(126,247)</u>	<u>6,915</u>	<u>(119,332)</u>
Deductions						
Benefits	353,132	1,300	354,432	319,629	1,055	320,684
Refunds of contributions	1,526	8,541	10,067	1,767	8,667	10,434
Administrative expenses	1,503	145	1,648	1,286	107	1,393
Total deductions	<u>356,161</u>	<u>9,986</u>	<u>366,147</u>	<u>322,682</u>	<u>9,829</u>	<u>332,511</u>
Net increase (decrease)	56,868	44,830	101,698	(448,929)	(2,914)	(451,843)
Net position restricted for pension benefits						
Beginning of year	<u>2,620,138</u>	<u>215,538</u>	<u>2,835,676</u>	<u>3,069,067</u>	<u>218,452</u>	<u>3,287,519</u>
End of year	<u>\$ 2,677,006</u>	<u>\$260,368</u>	<u>\$2,937,374</u>	<u>\$ 2,620,138</u>	<u>\$215,538</u>	<u>\$2,835,676</u>

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

FINANCIAL SECTION

Notes to Financial Statements

1. Plan Description

The Employees' Retirement System of Baltimore County (the "System") is a cost-sharing multiple-employer defined benefit public employee retirement system that acts as a common investment and administrative agent serving five entities including Baltimore County (the "County") and certain employees of the Baltimore County Board of Education, Baltimore County Board of Library Trustees, the Community College of Baltimore County and the Baltimore County Revenue Authority. The System is not an employer. The System provides retirement, disability and death benefits to plan members and beneficiaries. The authority to establish and maintain the System is specified in Section 5-1-101 of the Baltimore County Code (the "Code").

Separate Plans:

On October 15, 2012, the County Council passed Bill No. 65-12 that formally closed the System for members hired prior to July 1, 2007, now known as members of "Plan A". Members hired on or after July 1, 2007 are members of "Plan B". The assets of each plan are separated and cannot be used to pay benefits of the other plan.

The System is considered part of the Baltimore County, Maryland reporting entity and its financial statements are included in the County's basic financial statements as a component unit. The System is fiscally dependent on the County by virtue of the legislative and executive controls exercised with respect to its operations, policies and administrative budget. In accordance with Section 5-1-238 of the Code, responsibility for the proper operation of the System is vested in an eleven-member Board of Trustees (the "Board"), comprised of a combination of ex-officio, appointed and elected representatives. The general administration of the System is vested in the Director of Budget and Finance.

Plan Membership: As of June 30, 2023 and 2022 System membership consisted of:

Membership Status (as of June 30, 2023)	Plan - A* Count	Plan - B Count	Total Count
Inactive plan members and beneficiaries currently receiving benefits	8,493	96	8,589
Inactive plan members entitled, but not yet receiving benefits	351	96	447
Active plan members	<u>3,111</u>	<u>6,311</u>	<u>9,422</u>
Total	<u>11,955</u>	<u>6,503</u>	<u>18,458</u>

*Plan A is closed to new members hired on or after July 1, 2007.

Membership Status (as of June 30, 2022)	Plan - A* Count	Plan - B Count	Total Count
Inactive plan members and beneficiaries currently receiving benefits	8,441	63	8,504
Inactive plan members entitled, but not yet receiving benefits	361	70	431
Active plan members	<u>3,444</u>	<u>5,895</u>	<u>9,339</u>
Total	<u>12,246</u>	<u>6,028</u>	<u>18,274</u>

*Plan A is closed to new members hired on or after July 1, 2007.

Notes to Financial Statements, continued

The following is a brief description of the System's plan provisions. For a more complete description, see the Summary of Plan Provisions included in the Actuarial Section of this report.

Members are designated as classified or merit system employees, part-time employees, non-merit employees, elected officials, department heads, or agency employees. Merit system employees include full-time general employees, police officers, firefighters, deputy sheriffs and correctional officers. Agency employees include the Board of Education, the Board of Library Trustees, the Community College of Baltimore County and the Baltimore County Revenue Authority. Agency employees that are not eligible to participate in the Maryland State Retirement and Pension Systems are entitled to membership in the System. The term "general employees" is hereafter used to refer to both county general employees and agency employees.

Beginning July 1, 2022, System membership is compulsory for all employees as a condition of employment.

Members hired prior to July 1, 2007 are vested after five years of creditable service. System members hired on or after July 1, 2007 are vested after ten years of creditable service.

Employees who terminate employment or die in service prior to meeting vesting eligibility are entitled to a refund of their contributions. Interest is credited on member contributions at the rate of 5% per annum. Employers are required to contribute an actuarially determined amount annually to finance the System as specified by Sections 5-1-203 and 5-1-257 of the Code.

Members are eligible for a normal retirement for service based on age and/or years of creditable service. There is no mandatory retirement age for general employees, deputy sheriffs and correctional officers. Firefighters and police officers must retire at age 65 unless approved for continuation of service by the Board on an annual basis.

The County has adopted a Back DROP (the election is made at date of retirement) for Police Officers and Firefighters under which eligible active members may elect to receive a lump sum payment with a 6% bonus at retirement in exchange for a reduced monthly benefit for life. The DROP period is between three and five years, effective with retirements that occurred on or after July 1, 2004. Police Officers and Firefighters hired on or after July 1, 2007 are now eligible to participate in the Back DROP, per Bill No. 42-22, enacted June 16, 2022 and effective July 1, 2022.

The County has adopted a Back DROP (the election is made at date of retirement) for Correctional Officers and Deputy Sheriffs hired prior to July 1, 2007. Eligible active members may elect to receive a lump sum payment at retirement in exchange for a reduced monthly benefit. The Back DROP period is between three and five years, effective with retirements that occur on or after July 1, 2010. Correctional Officers and Deputy Sheriffs hired on or after July 1, 2007 are not eligible to participate in the Back DROP.

The County has adopted a Forward DROP (the election is made at least 5 years prior to the date of retirement) for General Employees hired prior to July 1, 2007. Eligible active members may elect to receive a lump sum payment at retirement in exchange for a reduced monthly benefit. The Forward DROP period is between five and ten years, effective with retirements that occur on or after July 1, 2012. A member may opt out of the DROP at any time and the member's benefit shall be treated as if the member had not elected to enter the DROP. General employees hired on or after July 1, 2007 are not eligible to participate in the Forward DROP.

An ordinary disability retirement may be granted to a member who can no longer perform their job due to a non-occupational related injury. Police officers and firefighters ("Group 4") hired prior to July 1, 2007 must have 5 years of creditable service while all other members must have ten years of creditable service. All members must be medically certified as incapacitated for continued performance of their duties. The ordinary disability retirement allowance is determined in accordance with Section 5-1-222 of the Code.

FINANCIAL SECTION

Notes to Financial Statements, continued

An accidental disability retirement may be granted to a member who has been incapacitated for duty as a result of an occupational related injury. Accidental disability payments are tiered (75%, 66.67%, or 50%), based upon the degree of disability. The accidental disability retirement allowance is determined in accordance with Section 5-1-226 of the Code.

An ordinary death benefit is granted as a result of a member's death from non-occupational causes. A member's designated beneficiary or estate receives a lump sum payment of the member's contributions plus interest. Additionally, after one year of creditable service, the member's designated beneficiary or estate may receive a minimum one-time payment equal to 100% of the member's annual earnable compensation. If a member was eligible for a service retirement or had 15 years of creditable service at the time of death, the spouse, if designated as the beneficiary, may receive a retirement allowance based on service years equivalent to a 100% survivorship option (*Option 2*).

An accidental death benefit is granted as the result of death from an occupational related injury. The dependent beneficiary of a general employee may receive an allowance equal to $66\frac{2}{3}\%$ of average final compensation (AFC) plus their annuity (i.e. employee contributions plus interest). The dependent beneficiary of a firefighter or police officer may receive an allowance equal to 100% of the annual earnable compensation at the time of death plus their annuity. If a member was eligible for a service retirement or had 15 years of creditable service at the time of death, the spouse, if designated as the beneficiary, may receive a retirement allowance based on service years equivalent to a 100% survivorship option (*Option 2*).

Retirement allowances are comprised of an annuity equal to the actuarial equivalent of the accumulated contributions plus a pension which together with the annuity shall provide a total allowance as provided for in the System's plan. The retirement allowance is determined based on the AFC and number of years of creditable service. AFC is defined as the rate of annual earnable compensation during the twelve or thirty-six consecutive calendar months of service, depending upon group and hire date, affording the highest average. The normal retirement for service allowance is determined as follows:

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FINANCIAL SECTION

Notes to Financial Statements, continued

Employee Designation

Allowance formula for Vested Employees

<p>General employees - Plan A (Hired prior to July 1, 2007)</p>	<p>1.82% of AFC times the number of years of creditable service for:</p> <ul style="list-style-type: none"> (i) 30 years of creditable service or (ii) Age 65 with 5 years of creditable service or, <p>General employees hired prior to July 1, 2007, retiring at age 60 with less than 30 years of creditable service, will receive a blended benefit, (i.e. 1.82% of AFC times the number of years of creditable service earned prior to July 1, 2007 plus 1.43% of AFC times the number of years of creditable service earned on or after July 1, 2007).</p>
<p>General employees – Plan B (Hired on or after July 1, 2007)</p>	<p>1.43% of AFC times the number of years of creditable service.</p>
<p>Appointed Officials</p>	<p>2.5% of AFC times the number of years of creditable service.</p>
<p>Elected Officials</p>	<p>5.0% of AFC times the number of years of creditable service. Any Council member who elects to be member of the retirement system on or after February 1, 2010 may not receive a retirement allowance in excess of 60% of the member’s AFC.</p>
<p>Firefighters</p>	<p>2.5% of AFC times the number of years of creditable service up to 20 years, plus 2.0% of AFC for each year of creditable service in excess of 20 years, and 3.0% of AFC for each year of creditable service in excess of 30 years for service years on or after July 1, 2007. 2.0% of AFC times the number of years of creditable service – if less than 20 years of creditable service.</p>
<p>Correctional Officers and Deputy Sheriffs</p>	<p>2.5% of AFC times the number of years of creditable service up to 20 years, plus 2.0% of AFC times the number of years of creditable service in excess of 20 years. 3.0% of AFC times the number of years of creditable service in excess of 25 years, if retired after July 1, 2020. <u>If hired prior to July 1, 2007 and age 65 with at least 5 but less than 20 years of creditable service:</u> 1.82% of AFC times the number of years of creditable service. <u>If hired prior to July 1, 2007 and age 60 with less than 20 years of creditable service:</u> 1.82% of AFC times the number of years of creditable service earned prior to July 1, 2007, plus 1.43% of AFC times the number of years of creditable service earned after June 30, 2007. <u>If hired on or after July 1, 2007 with less than 25 years of creditable service at retirement:</u> 1.43% of AFC times the number of years of creditable service.</p>
<p>Police Officers</p>	<p>2.5% of AFC times the number of years of creditable service up to 20 years, plus 2.0% of AFC for each year of creditable service in excess of 20 years, and 3.0% of AFC for each year of creditable service in excess of 25 years for service years on or after July 1, 2007. 2.0% of AFC times the number of years of creditable service – if less than 20 years of creditable service.</p>

Notes to Financial Statements, continued

In addition to the maximum retirement allowance, members may select one of six retirement allowance options to provide payments to a beneficiary upon the death of a retired member. A selection of an option reduces the maximum allowance. Police officers on Pay Schedule VII (Supervisory, Management and Confidential (SMC)) and firefighters with at least 25 years of actual service as a sworn Baltimore County Police Officer or sworn Baltimore County Firefighter may select a 7th option that allows 50% of member's retirement to continue to the original beneficiary at no cost to the employee. Police officers on Pay Schedule IV (Fraternal Order of Police Lodge 4) with at least 25 years of creditable service may select a 7th option that allows 50% of member's retirement to continue to the original beneficiary at no cost to the employee.

In accordance with Section 5-1-235 of the Code, each July 1, post-retirement allowance adjustments may be granted to retirees who have been retired for more than 60 months. Active members hired prior to July 1, 2007 and retire on or after July 1, 2010 must have at least 20 years of creditable service to be eligible for post-retirement COLAs. Active members hired on or after July 1, 2007 must have at least twenty five (25) years of creditable service to be eligible for post-retirement COLAs. For active members who select the DROP program, the eligibility period to receive COLAs in the DROP remains a minimum of 12 months. Once the member actually retires, the eligibility period for a post-retirement COLA is a minimum of 48 months. The post-retirement allowance adjustment is equal to the increase in the Consumer Price Index - All Urban Consumers (CPI-U) for the previous calendar year, in an amount not to exceed 3%, provided sufficient investment income in excess of valuation requirements has accumulated in the Post-Retirement Increase Fund Balance Account described in Note 2. The maximum Post-Retirement Increase Fund Account Balance is equal to twice the cost of a 3% COLA. Additional details regarding cost-of-living increases may be found in the Summary of Plan Provisions under the heading Post-Retirement Allowance Increases.

2. Summary of Significant Accounting Policies and Plan Asset Matters

Basis of Accounting - The financial statements of the System are presented using the economic resource measurement focus and the accrual basis of accounting. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due and a formal commitment to provide the contributions has been made. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

The System records investment purchases and sales on a trade-date basis. These transactions are not finalized until settlement date. Cash received as collateral on securities lending transactions and investments made with such cash are reported as assets along with a related liability for collateral received.

Method Used To Value Investments - Plan investments are reported at fair value. Securities traded on national or international exchanges are valued at the last reported sales price at current exchange rates. The fair value of real estate equity funds is based on independent appraisals. The fair value of mutual funds is based on the fair value of the underlying securities. Hedge Fund-of-Funds are valued based on information provided by the respective fund managers. The fair value for alternative investments which include private equity funds is based upon the partnership's most recent available financial information. For more information on fair value measurement, please refer to Note 4, Cash deposits, Investments and Securities Lending.

Administrative Costs - The System pays for the following administrative expenses: professional actuarial costs, pension consultant fees, data processing, medical board examinations, salaries, benefits, audit/legal fees, equipment and supplies, postage, printing and miscellaneous expenses. These administrative expenses are funded from employer contributions.

Net Position Accounts - As provided by the Code, all assets of the System must be credited according to the purpose for which they are held to the annuity savings fund, the pension accumulation fund or the post-retirement increase fund.

FINANCIAL SECTION

Notes to Financial Statements, continued

These funds are classified together as the net position held in trust for pension benefits for financial reporting purposes and are explained below:

Annuity Savings Fund Balance Account - This Account records the accumulated contributions credited to individual members' accounts together with the interest thereon. Upon termination of employment, accumulated contributions plus interest are refunded from this account. When a member retires, the member's accumulated contributions plus interest are transferred to the Pension Accumulation Fund Balance Account.

Pension Accumulation Fund Balance Account - This Account records all accumulated reserves used to pay member pensions, other benefits and administrative expenses. The reserves are accumulated from employer contributions, investment income, gains on sales of investments and amounts transferred from the Annuity Savings Fund Balance Account when a member retires.

Post-Retirement Increase Fund Balance Account - This Account records all investment earnings in excess of valuation requirements transferred from the Pension Accumulation Fund Balance Account in order to finance post-retirement allowance increases to retired members.

At June 30, 2023 and 2022, the balances in the legally required accounts are as follows:

	FY 2023 (in Thousands)	FY 2022 (in Thousands)
Annuity Savings Fund	\$693,303	\$680,104
Pension Accumulation Fund	2,213,623	2,063,626
Post-Retirement Increase Fund	30,448	91,946
Net Position Held in Trust for Pension Benefits	<u>\$2,937,374</u>	<u>\$2,835,676</u>

3. Contributions

System members contribute a percentage of their salary to the System as determined by County Code. The contribution rates for members are based on employee classification. A chart of member contribution rates is provided in the Summary of Plan Provisions in the Actuarial Section of this report. The County and the participating employers intend to fund the System according to the actuarially determined employer contributions (ADEC). The ADEC is equal to the normal cost plus amortization of the unfunded actuarial accrued liability. The employer contributions to the System are equal to 100% of the ADEC. Per Section 5-1-203 of the Code, contribution requirements of the plan members and the participating employers are established and may be amended by the Board.

4. Cash Deposits, Investments and Securities Lending

Custodial Credit Risk - For Cash Deposits, Investments and Securities Lending, custodial credit risk is the risk that, in the event of the failure of the bank or counterparty, the System will not be able to recover the deposits, value of its investments or collateral securities that are in possession of an outside party. The System cash deposits are fully covered by FDIC insurance and/or collateral pledged to the System's account held by the System's agent in the System's name at year-end. The collateral pledged and held consists of obligations issued by the U.S. government and agencies.

Investment securities are registered in the name of the System. As of June 30, 2023 and 2022, the carrying amount of cash and cash equivalents was \$55.1 million and \$40.6 million, respectively.

FINANCIAL SECTION

Notes to Financial Statements, continued

Investment Policy - Pursuant to Section 5-1-251 of the Baltimore County Code, the Board of Trustees utilizes the “prudent person” standard for managing the assets of the System. The Board has established the following policies:

- 1) Assure that the System’s investment policy has been designed to provide broad diversification among asset classes in order to maximize return at an appropriate level of risk and minimize the risk of large losses to the System.
- 2) Employ a diversity of investment managers with different investment styles on how to obtain their investment objective.
- 3) Closely monitor the performance of all investment managers not only in relation to specific objectives, but also in relation to other fund managers following the same investment objectives.

The System is currently invested in stocks (domestic and foreign), fixed income securities, private equity funds, real estate funds, and global asset allocation funds. The Code provides for full power to hold, purchase, sell, assign, transfer and dispose of any of the securities and investments in any of the System’s funds.

For the year ended June 30, 2023 and 2022, the System has operated in all material respects in accordance with the System’s investment policy. The System’s investment policy as of June 30, 2023 and 2022, are shown below for the broad investment categories:

<i>Asset Class – FY2023</i>	<i>Allocation Target</i>	<i>Allocation Range</i>
<i>U. S. Equities</i>	33%	27 – 39%
<i>International Equities</i>	17%	11 - 23%
<i>Private Equity</i>	9%	0 - 12%
<i>Private Debt</i>	5%	0 - 10%
<i>Fixed Income</i>	24%	18 - 30%
<i>Real Estate</i>	7%	4 - 10%
<i>Global Asset Allocation</i>	5%	2 - 8%
<i>Cash and Cash equivalents</i>	<u>0%</u>	0 - 5%
<i>Total</i>	<u>100%</u>	

<i>Asset Class – FY2022</i>	<i>Allocation Target</i>	<i>Allocation Range</i>
<i>U. S. Equities</i>	33%	27 – 39%
<i>International Equities</i>	19%	11 - 27%
<i>Private Equity</i>	9%	0 - 12%
<i>Private Debt</i>	5%	0 - 10%
<i>Fixed Income</i>	22%	10 - 34%
<i>Real Estate</i>	7%	4 - 10%
<i>Global Asset Allocation</i>	5%	2 - 8%
<i>Cash and Cash equivalents</i>	<u>0%</u>	0 - 5%
<i>Total</i>	<u>100%</u>	

FINANCIAL SECTION

Notes to Financial Statements, continued

Rate of Return - For the years ended June 30, 2023 and 2022, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 7.06% and -10.20% respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Interest Rate Risk - The investment policy guidelines of the Employees' Retirement System of Baltimore County do not specifically address limits on maturities as a means of managing its exposure to fair value losses arising from changing interest rates. The manager of each fixed income portfolio is responsible for determining the average maturity of their portfolio. The following is a maturity schedule of the System's fixed income investments of bonds and short term investments as of June 30, 2023 and 2022.

Investment Maturities (in Years) FY 2023 (Expressed in Thousands)

Investment Type	Fair Value	Less than 1	1 - 4.9	5 - 9.9	10-19.9	20-30	More Than 30
U.S. Govt. Obligations	\$ 52,889	\$ 1,885	\$ 13,422	\$ 15,463	\$ 3,580	\$ 18,330	\$ 209
U.S. Agency Securities	80,064	20,166	8,390	5,413	15,314	28,508	2,273
Corporate debt	117,032	5,062	61,663	17,089	5,768	10,492	16,958
Bond Mutual Funds	448,502	-	102,139	346,363	-	-	-
Foreign debt	20,536	8,355	10,741	585	772	83	-
Total	\$ 719,023	\$ 35,468	\$ 196,355	\$ 384,913	\$ 25,434	\$ 57,413	\$ 19,440

Investment Maturities (in Years) FY 2022 (Expressed in Thousands)

Investment Type	Fair Value	Less than 1	1 - 4.9	5 - 9.9	10-19.9	20-30	More Than 30
U.S. Govt. Obligations	\$ 76,715	\$ 5,588	\$ 19,499	\$ 31,937	\$ 6,772	\$ 12,438	\$ 481
U.S. Agency Securities	25,336	8,899	121	1,172	7,484	7,447	213
Municipal debt	23	-	-	-	-	23	-
Corporate debt	161,007	12,611	92,133	28,077	5,835	11,208	11,143
Bond Mutual Funds	427,776	-	93,854	333,922	-	-	-
Foreign debt	12,400	8,216	53	2,303	780	1,017	31
Total	\$ 703,257	\$ 35,314	\$ 205,660	\$ 397,411	\$ 20,871	\$ 32,133	\$ 11,868

Credit Risk - The System's investment policy is to apply the prudent-person rule: Investments are made as a prudent person would be expected to act with discretion and intelligence, to seek reasonable income, preserve capital and in general, avoid speculative investments. Investments in high yield securities are limited to 20% in the guidelines for core plus fixed income manager Western Asset Management, and 15% for Reams Asset Management. PIMCO Diversified Fixed Income Fund target 1/3 of their portfolio in high yield securities.

FINANCIAL SECTION

Notes to Financial Statements, continued

As of June 30, 2023 and 2022, the System's fixed income investments had the following credit risk characteristics:

Moody's Ratings or Comparable	FY 2023		FY 2022	
	Fair Value (in Thousands)	Percent of Fixed Income Investments	Fair Value (in Thousands)	Percent of Fixed Income Investments
AAA	\$ 156,021	21.7%	\$ 134,933	19.2%
AA	7,508	1.1	7,374	1.1
A	43,266	6.0	58,992	8.4
BBB	27,483	3.8	41,981	6.0
BB	4,379	0.6	7,077	1.0
B	978	0.1	919	0.1
CCC	100	-	289	-
CC	54	-	87	-
NR*	479,234	66.7	451,605	64.2
Total	<u>\$ 719,023</u>	100.0%	<u>\$ 703,257</u>	100.0%

*NR represents securities not rated, primarily made up of swaps and commingled funds, which by their nature do not have credit quality ratings.

Investments in Excess of 5% of the Net Position Held in Trust for Pension Benefits - The System had no individual investments at fair value in excess of 5% of the System's net position held in trust for pension benefits as of June 30, 2023 and 2022.

Concentration of Credit Risk - Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer. As of June 30, 2023 and 2022, the System had no single issuer that exceeded 5% of total investments. Investments issued or explicitly guaranteed by the U.S. government and investments in mutual funds, external investment pools, and other pooled investment were excluded.

Derivative Policy:

As permitted by guidelines established by the Board of Trustees the System may invest in Derivatives.

A derivative is a security or contractual agreement, which derives its value from some underlying security, commodity, currency, or index.

1. Types of derivative contracts
 - a. Forward-based derivatives, including forward contracts, futures contracts, swaps, and similar instruments, and
 - b. Option-based derivatives, including put options, call options, interest rate caps and floors, and similar instruments.

2. Types of Derivative Securities
 - a. Collateralized Mortgage Obligations (CMOs)
 - b. Structured Notes

3. Domestic Debt Securities are permitted and may include U.S. Government and Agency obligations, corporate bonds, asset backed securities, agency guaranteed mortgage pass-through securities and low risk collateralized mortgage obligations of comparable or lower risk, such as Planned Amortizations Class Level 1 and sequentials, commercial paper, and certificates of deposit. Managers may also invest in U.S. dollar denominated issues of international agencies, foreign governments and foreign corporations (i.e., Eurodollar and Yankee bonds).

FINANCIAL SECTION

Notes to Financial Statements, continued

4. Futures and Options strategies may be employed, upon specific authorization of the Board, on equity and fixed income investments to provide volatility protection or enhance the rate of return over time.
5. Where appropriate, managers may use derivative contracts for the following reasons:
 - a. Hedging. To the extent that the portfolio is exposed to clearly defined risks and there are derivative contracts that can be used to reduce those risks, the investment managers are permitted to use such derivatives for hedging purposes, including cross hedging of currency exposures.
 - b. Creation of Market Exposures. Managers are permitted to use derivatives to replicate the risk/return profile of an asset or asset class provided that the guidelines for the Manager allow for such exposures to be created with the underlying assets themselves.
6. The following two uses of derivative contracts and securities are strictly prohibited:
 - a. Leverage. Derivatives shall not be used to magnify overall portfolio exposure to an asset, asset class, interest rate, or any other financial variable beyond that which would be allowed by a portfolio's investment guidelines if derivatives were not used.
 - b. Unrelated speculation. Derivatives shall not be used to create exposures to securities, currencies, indices, or any other financial variable unless such exposures would be allowed by a portfolio's investment guidelines if created with non-derivative securities.

The System utilizes certain derivative instruments for the purpose of obtaining income or profit. The derivatives are subject to credit risks, interest rate risk, and foreign currency risk. Classified and aggregated by type, the fair value balances and notional amounts of derivative instruments outstanding at June 30, 2023 and 2022, and the changes in fair value of such derivative instruments for the year then ended are as follows:

	Changes in Fair Value		Fair Value as of June 30, 2023	
	<i>(in Thousands)</i>		<i>(in Thousands)</i>	
<u>Investment Derivatives:</u>	<u>Classification</u>	<u>Amount</u>	<u>Amount</u>	<u>Notional Value</u>
Futures	Investment Revenue	\$46	\$ 46	\$ 9,800
Options	Investment Revenue	(4)	(55)	690
Swaps	Investment Revenue	173	339	339
TBA Transactions	Investment Revenue	(75)	16,561	16,561

	Changes in Fair Value		Fair Value as of June 30, 2022	
	<i>(in Thousands)</i>		<i>(in Thousands)</i>	
<u>Investment Derivatives:</u>	<u>Classification</u>	<u>Amount</u>	<u>Amount</u>	<u>Notional Value</u>
Futures	Investment Revenue	\$ -	(\$344)	\$ 29,626
Options	Investment Revenue	(75)	(174)	153
Swaps	Investment Revenue	257	724	724
TBA Transactions	Investment Revenue	(109)	8,904	8,904

FINANCIAL SECTION

Notes to Financial Statements, continued

Foreign Currency Risk - The System's exposure to foreign currency risk is derived from its positions in foreign currency-denominated common stock and fixed income investments. Managers are allowed to use derivatives to hedge out foreign currency; however, there is no formal policy regarding foreign currency risk. The Systems exposure to foreign currency risk as of June 30, 2023 and 2022 is as follows:

Currency	FY 2023 Fair Value (in Thousands)	FY 2022 Fair Value (in Thousands)
Australian Dollar	\$ 2	\$ 565
Brazil Real	9	2,867
Canadian Dollar	1	3,694
Colombian Peso	-	8
Danish Krone	76	1,172
Euro Currency Unit	567	8,223
Hong Kong Dollar	-	3,403
Indonesian Rupiah	-	263
Japanese Yen	85	2,829
Mexican Peso	-	1,084
New Taiwan Dollar	-	1,746
Norwegian Krone	3	295
Pound Sterling	4	3,125
South African Rand	16	935
South Korean Won	-	216
Swedish Krona	-	1,440
Swiss Franc	261	1,706
Thailand Baht	-	198
Total	<u>\$ 1,024</u>	<u>\$ 33,769</u>

Securities Lending Transactions - The Board's policies permit the System to lend its securities to broker-dealers and other entities with a simultaneous agreement to return the collateral for the same securities in the future. The System's custodian lends U.S. government and agency securities, corporate bonds and stocks for collateral in the form of cash, other securities and irrevocable bank letters of credit. Collateral securities, letters of credit and cash are initially pledged at 102% of the fair value of the securities lent. Additional collateral is to be provided by the next business day if the collateral value falls to less than 100% of the fair value of the securities lent. The System did not impose any restrictions during the fiscal year on security loans the custodian made on its behalf. At June 30, 2023, the System had no credit risk exposure to borrowers because the amounts the System owes the borrowers exceed the amounts the borrowers owe the System. The relationship between the maturities of the investment pool and the System's loans is affected by the maturities of the security loans made by other entities that use the agent's pool, which the System cannot determine. The System cannot pledge or sell collateral securities received unless the borrower defaults. All securities loans can be terminated on demand by either the System or the borrower. Cash collateral is invested in both a separately managed fixed income account and a cash collateral pool, which at year-end had a weighted-average days to reprice of 3.24 days. The collateral held as of June 30, 2023 and 2022 was \$32.9 million and \$37.9 million, respectively. The fair value of securities on loan as of June 30, 2023 and 2022 totaled \$32.2 million and \$36.3 million, respectively.

FINANCIAL SECTION

Notes to Financial Statements, continued

The following tables present the fair value of the underlying securities, and the value of the collateral pledged at June 30, 2023 and 2022 (in thousands):

FY 2023	Fair Value of Loaned	Collateral Fair Value	Percent Collateralized
Securities Lent for:	Securities		
Cash Collateral	\$ 9,898	\$10,157	102.61%
Non-Cash Collateral	<u>22,293</u>	<u>22,699</u>	101.82%
Total	<u>\$ 32,191</u>	<u>\$32,856</u>	102.06%

FY 2022	Fair Value of Loaned	Collateral Fair Value	Percent Collateralized
Securities Lent for:	Securities		
Cash Collateral	\$10,154	\$10,662	105.01%
Non-Cash Collateral	<u>26,122</u>	<u>27,210</u>	104.17%
Total	<u>\$36,276</u>	<u>\$37,872</u>	104.40%

Fair Value Measurement - Investments measured and reported at fair value are classified according to the following hierarchy:

Level 1 – Investments reflect quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 – Investments reflect prices (other than quoted prices) that are observable for the asset or liability, whether directly or indirectly, which may include inputs in markets that are not considered to be active.

Level 3 – Investments reflect prices based upon unobservable sources, when there is little, if any market activity.

The categorization of investments within the hierarchy is based upon the pricing transparency of the instrument and should not be perceived as the particular investment’s risk.

Debt, equities, and investment derivatives classified in Level 1 of the fair value hierarchy are valued based on prices quoted in active markets for those securities, such as the New York Stock Exchange or the Nasdaq stock market. Investments classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique, which is based on the securities’ relationship to benchmark quoted prices. Derivative instruments classified in Level 2 of the fair value hierarchy are valued using a market approach that considers benchmark interest rates and foreign exchange rates. Securities classified in Level 3 of the fair value hierarchy, are valued using unobservable inputs for the asset or liability.

FINANCIAL SECTION

Notes to Financial Statements, continued

Investment Valuation - June 30, 2023

(expressed in thousands)

The following table presents the System's recurring fair value measurements as of June 30, 2023.

INVESTMENT VALUATION - THE SYSTEM

	Fair Value	Fair Value Measurement Using		
		Quoted Prices in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
<u>Investments by Fair Value Level</u>				
Debt Securities:				
U.S. Government Obligations	\$ 52,416	\$ 47,756	\$ 4,660	\$ -
U.S. Securities and Agencies	62,826	-	62,826	-
Municipal debt	-	-	-	-
Corporate debt	117,934	-	114,793	3,141
Foreign debt	20,454	-	12,099	8,355
Total Debt Securities	253,630	47,756	194,378	11,496
Equity Securities:				
Domestic	353,810	353,810	-	-
Total Equity Securities:	353,810	353,810	-	-
Securities Lending Cash Collateral	10,157	10,157	-	-
<u>Investments Derivative Instruments:</u>				
Futures	\$ 46	\$ 46	\$ -	\$ -
Options	(55)	(55)	-	-
Swaps	339	-	339	-
TBAs	16,561	-	16,561	-
Total Investments Derivative Instruments	\$ 16,891	\$ (9)	\$ 16,900	\$ -
Total Investments by Fair Value Level	\$ 634,488	\$ 411,714	\$ 211,278	\$ 11,496
<u>Investments Measured at the Net Asset Value (NAV):</u>				
Commingled Fixed Income Funds	\$ 448,502			
Commingled Domestic Equity	614,005			
Commingled International Equity	437,150			
Commingled Emerging Market Equity	105,680			
Real Estate Funds	164,975			
Private Equity Funds	295,998			
Private Debt Funds	90,898			
Global Asset Allocation	130,687			
Total Investments Measured at the NAV	\$ 2,287,895			
Total Investments and Collateral for Loaned Securities	\$ 2,922,383			

FINANCIAL SECTION

Notes to Financial Statements, continued

Investment Valuation - June 30, 2022

(Expressed in thousands)

The following table presents the System's recurring fair value measurements as of June 30, 2022.

INVESTMENT VALUATION - THE SYSTEM

	Fair Value	Fair Value Measurement Using		
		Quoted Prices in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
<u>Investments by Fair Value Level</u>				
Debt Securities:				
U.S. Government Obligations	\$ 76,469	\$ 73,705	\$ 2,764	\$ -
U.S. Securities and Agencies	16,705	-	16,705	-
Municipal debt	23	-	23	-
Corporate debt	161,015	-	156,678	4,337
Foreign debt	12,159	-	3,536	8,623
Total Debt Securities	266,371	73,705	179,706	12,960
Equity Securities:				
Domestic	325,452	325,452	-	-
International	30,966	30,966	-	-
Total Equity Securities:	356,418	356,418	-	-
Securities Lending Cash Collateral	10,662	10,662	-	-
<u>Investments Derivative Instruments:</u>				
Futures	\$ (344)	\$ (344)	\$ -	\$ -
Options	(174)	(169)	(5)	-
Swaps	724	-	724	-
TBAs	8,904	-	8,904	-
Total Investments Derivative Instruments	\$ 9,110	\$ (513)	\$ 9,623	\$ -
Total Investments by Fair Value Level	\$ 642,561	\$ 440,272	\$ 189,329	\$ 12,960
<u>Investments Measured at the Net Asset Value (NAV):</u>				
Commingled Fixed Income Funds	\$ 427,776			
Commingled Domestic Equity	556,552			
Commingled International Equity	372,796			
Commingled Emerging Market Equity	158,487			
Real Estate Funds	201,120			
Private Equity Funds	333,415			
Global Asset Allocation	132,801			
Total Investments Measured at the NAV	\$ 2,182,947			
Total Investments and Collateral for Loaned Securities	\$ 2,825,508			

FINANCIAL SECTION

Notes to Financial Statements, continued

Investments in Entities That Calculate Net Asset Value Per Share

The fair values of investments in certain equity, fixed income, and marketable alternatives funds are based on the investments' net asset value (NAV) per share (or its equivalent) of the System's ownership interest in the partners' capital provided by the investee. The fair values of investments in certain private equity funds have been determined using recent observable transaction information for similar investments and nonbinding bids received from potential buyers of the investments.

The following table presents the System's unfunded commitments, redemption terms and investments measured at the NAV as of June 30, 2023.

Investments Measured at the NAV (expressed in thousands)	Fair Value	Strategy Type	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Blackrock Govt. Bond Index Fund	\$ 110,638	Govt. Bond Index Fund	-	Daily	3 day
Blackrock US TIPS Fund	89,792	US Tips and Index Fund	-	Daily	3 days
Guggenheim Investments	61,053	Bank Loans	-	Monthly	21 days
Pacific Asset Management	41,086	Bank Loans	-	Monthly	30 days
Pimco Diversified Income	145,933	Global, High Yield , Emg. Mkt.	-	Daily	1 day
(a) Commingled Fixed Income Funds	<u>448,502</u>				
Benchmark	36,121	Portable Alpha	-	Annually	90 days
Blackrock Russell 1000 Value	65,185	Russell 1000 Value Index	-	Daily	3 days
Blackrock US Equity	512,699	Wilshire 5000 Index	-	Daily	3 days
(b) Commingled Domestic Equity	<u>614,005</u>				
Arrowstreet Capital	101,454	International Equity	-	Daily	1 day
Ativo International Equity Fund	33,538	International Equity	-	Monthly	10 days
Blackrock ACWI Ex-US	146,587	All Country World Ex US Index	-	Daily	5 days
Metis International Small Cap	29,811	International Equity - Small Cap	-	Monthly	30 Days
Silchester International Investors	91,236	MSCI World Ex USA Small Cap	-	Monthly	10 days
Strategic Global Advisors	34,524	MSCI World Ex USA Small Cap	-	Daily	5 days
(c) Commingled International Equity	<u>437,150</u>				
Mondrian Emerging Markets	105,680	Emerging Market Equity	-	Monthly	15 days
(d) Commingled Emerging Market Equity	<u>105,680</u>				
Clarion Lion	60,250	Core Real Estate	-	Quarterly	90 days
JP Morgan	57,422	Value Added Real Estate	-	Monthly	15 days
UBS Real Estate	47,303	Core Real Estate	-	Quarterly	60 days
(e) Real Estate Funds	<u>164,975</u>				
(f) Private Equity Funds	295,998	Private Equity	\$164,871	N/A	N/A
(f) Private Debt Funds	90,898	Private Debt	\$26,121	N/A	N/A
Bridgewater All Weather	130,687	Risk Parity	-	Monthly	5 days
(g) Global Asset Allocation	<u>130,687</u>				
Total Investments Measured at NAV	<u>\$ 2,287,895</u>				

FINANCIAL SECTION

Notes to Financial Statements, continued

The following table presents the System's unfunded commitments, redemption terms and investments measured at the NAV as of June 30, 2022.

Investments Measured at the NAV (expressed in thousands)	Fair Value	Strategy Type	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Pimco Diversified Income	\$ 241,433	Global, High Yield , Emg. Mkt.	-	Daily	1 day
Blackrock US TIPs Fund	92,490	US Tips and Index Fund	-	Daily	2 days
Guggenheim Investments	56,392	Bank Loans	-	Monthly	21 days
Pacific Asset Management	37,461	Bank Loans	-	Monthly	30 days
(a) Commingled Fixed Income Funds	<u>427,776</u>				
Benchmark	30,455	Portable Alpha	-	Annually	90 days
Blackrock US Equity	466,727	Wilshire 5000 Index	-	Daily	3 days
Blackrock Russell 1000 Value	59,370	Russell 1000 Value Index	-	Daily	3 days
(b) Commingled Domestic Equity	<u>556,552</u>				
Arrowstreet Capital	86,912	International Equity	-	Daily	1 day
Blackrock ACWI Ex-US	131,804	All Country World Ex US Index	-	Daily	5 days
Metis International Small Cap	27,477	International Equity - Small Cap	-	Monthly	30 Days
Silchester International Investors	94,740	MSCI World Ex USA Small Cap	-	Monthly	10 days
Strategic Global Advisors	31,863	MSCI World Ex USA Small Cap	-	Daily	5 days
(c) Commingled International Equity	<u>372,796</u>				
Mondrian Emerging Markets	99,705	Emerging Market Equity	-	Monthly	15 days
Invesco Emerging Mkts Innovators	58,782	Emerging Mky Equity - Small Cap	-	Daily	5 days
(b) Commingled Emerging Market Equity	<u>158,487</u>				
JP Morgan	71,747	Value Added Real Estate	-	Monthly	15 days
Clarion Lion	72,570	Core Real Estate	-	Quarterly	90 days
UBS Real Estate	56,803	Core Real Estate	-	Quarterly	60 days
(d) Real Estate Funds	<u>201,120</u>				
(f) Private Equity Funds	<u>333,415</u>	Private Equity	\$175,313	N/A	N/A
Bridgewater All Weather	132,801	Risk Parity	-	Monthly	5 days
(g) Global Asset Allocation	<u>132,801</u>				
Total Investments Measured at NAV	<u>\$ 2,182,947</u>				

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Notes to Financial Statements, continued

Investments measured at the NAV above are comprised of the following:

- (a) **Commingled Fixed Income Funds** – These include investments in five funds in FY2023 and four funds in FY2022, utilizing a variety of strategies which include High Yield Debt; U.S. TIPs; Emerging Market Multi Sector Debt, and Bank Loans. The redemption notice period for one of the funds is one day, and for the other four funds are three, twenty one and thirty days. Three of the funds may be redeemed daily, and the other two funds may be redeemed monthly. The fair value of the investments in this type has been determined using the NAV per share (or its equivalent) of the investments.
- (b) **Commingled Domestic Equity Funds** – These include investments in three funds in FY2023 and FY2022, with investments in U.S. common stocks. The strategy type employed are Portable Alpha, the Wilshire 5000 index, and the Russell 1000 Value index. The fund utilizing the Portable Alpha strategy may only be redeemed annually with a redemption notice period of ninety days. The fund utilizing the Wilshire 5000 index, and the Russell 1000 Value index strategies may be redeemed daily with a redemption notice period of three days. The fair value of the investments in this type has been determined using the NAV per share (or its equivalent) of the investments.
- (c) **Commingled International Equity Funds** – These include investments in six funds in FY2023 and five in FY2022. One of the funds utilize the International Equity Index, with a daily redemption frequency and a redemption notice period of one day. One of the funds utilize the International Equity Index, with a monthly redemption frequency and a redemption notice period of ten days. One of the funds utilize the All Country World Ex US Index with a daily redemption frequency and a redemption notice period of five days. One of the funds utilize the International Equity Small Cap index strategy with a monthly redemption frequency and a redemption notice period of thirty days. The other two funds utilize the MSCI World Ex USA Small Cap strategy, with a daily redemption frequency and a redemption notice period of five days; and with a monthly redemption frequency and a redemption notice period of ten days. The fair value of the investments in this type has been determined using the NAV per share (or its equivalent) of the investments.
- (d) **Emerging Market Equity** – These include investments in one fund in FY 2023 and two funds in FY2022. One fund utilizes an Emerging Market Equity strategy with a monthly redemption frequency and a redemption notice period of fifteen days. The other fund utilizes an Emerging Market Equity- Small Cap strategy with a daily redemption frequency and a redemption notice period of five days. The fair value of the investments in this type has been determined using the NAV per share (or its equivalent) of the investments.
- (e) **Real Estate Funds** – This includes investments in three funds in U.S. commercial real estate. The strategy type for two of these funds is Core Real Estate, with a quarterly redemption frequency and a redemption notice period of sixty and ninety days, respectively. The other fund employs a Value Added Real Estate strategy with a monthly redemption frequency and a redemption notice period of fifteen days. The fair value of the investments in this type has been determined using the NAV per share (or its equivalent) of the investments.
- (f) **Private Equity and Private Debt Funds** – These investments are not publicly traded on a stock exchange. For FY2023, the investment consists of forty-seven private equity funds and fourteen private debt funds. The outstanding commitments were \$164,871,483 and \$26,121,412, respectively. For FY2022, the investment consisted of fifty-six private equity funds. The outstanding commitments were \$175,313,000. These investments cannot be redeemed with the funds. Instead, the nature of the investments in this type is that distributions are received through the liquidation of the underlying assets of the fund. If these investments were held, it is expected that the underlying assets of the fund would be generally liquidated over ten years.

Notes to Financial Statements, continued

The fair values of the investments in these private equity funds have been determined using the NAV per share (or equivalent) of the primary government’s ownership interest in partners’ capital.

- (g) Global Asset Allocation – This investment type includes one fund in FY2023 and FY2022. The fund utilizes the Risk Parity strategy. The strategy is employed to balance risk by investing in a variety of asset classes through active management. Funds may be invested in global equities, bonds and commodities. The fund allows only monthly redemptions with a redemption notice period of five days. The fair value of the investments in this type has been determined using the NAV per share (or its equivalent) of the investments.

5. Litigation

There is a class action case brought by current and former employees who claim that the County miscalculated their pension benefits. Plaintiffs are all former state employees who transferred their time in the state system over to the County’s pension system when they came to work with the County. The dispute is over an interpretation of Maryland state law concerning the interest rate the County was allowed to use when calculating the proper reduction in benefits these employees will get because they did not contribute to the County’s pension system in the years they were working for the state.

All of the Baltimore County Circuit Court judges recused themselves from hearing this case and it was transferred to Harford County, Maryland. The Court granted a motion for summary judgement filed by the County and entered judgement in its favor. Plaintiffs filed an appeal to the Court of Special Appeals.

The Court of Special Appeals disagreed with the Circuit Court’s conclusion that the County was entitled to use the valuation rate in calculating the deficiency for any members regardless of when they retired. In the Court’s judgement, the law required a retirement system to employ the regular rate of interest both before and after the clarifying took effect on July 1, 2007. However, the Court determined the County did not violate the members’ constitutional rights by employing a colorable interpretation of an ambiguous statute in calculating the deficiency. As such, the Court of Special Appeals affirmed the judgement in part, reversed it in part, and remanded the case for further proceedings consistent with its opinion.

The case is now pending before the Circuit Court for Harford County on two issues: (1) the amount owed to the Plaintiffs for their overcharged deficiency contributions; and (2) whether Plaintiffs are entitled to attorneys' fees. The parties have now reached an agreement as to the methodology by which the deficiencies should be calculated and the application of interest, as well as pre-judgement interest. What remains is to enter into a consent order on the agreed terms and coordinate the payments owed, probably using a third-party administrator.

6. Risk Management

The County bears any risk of loss related to the System (e.g. torts, theft of, damage to, or destruction of assets; errors or omissions, job-related illnesses, or injuries to employees; and natural disasters). The County manages its risks internally and sets aside assets for claims settlement in an internal service fund.

6. Deferred Retirement Option Program (DROP) – General Employees

Effective July 1, 2007, General employees hired prior to July 1, 2007, are offered a Forward DROP. The DROP allows eligible general employees to elect to receive a lump sum payment at retirement in exchange for a reduced monthly benefit. The DROP period is a minimum of 5 years and a maximum of 10 years. Eligibility is age 55 plus a total of age and service of at least 85. The DROP account will include benefit payments at the maximum option, employee contributions, an interest credit of 5%, plus any cost of living increase granted to retirees, provided the member has been in the DROP for at least 12 months. As of June 30, 2023 and 2022, the balance of the System’s DROP allowance for General employees’ was \$41.6 and \$44.1 million, respectively, and DROP payables were \$4.5 and \$7.1 million, respectively. These DROP payables are included with “Payables – Other” in the Statement of Fiduciary Net Position.

FINANCIAL SECTION

Notes to Financial Statements, continued

7. Net pension Liability of the System

The components of the net pension liability as of June 30, 2023, were (in thousands):

Components of Net Pension Liability	Plan A	Plan B	Total
Total pension liability	\$4,902,282	\$388,649	\$5,290,931
The Plan's fiduciary net position	<u>(2,677,006)</u>	<u>(260,368)</u>	<u>(2,937,374)</u>
The Plan's net pension liability	<u>\$2,225,276</u>	<u>\$ 128,281</u>	<u>\$2,353,557</u>
The Plan's net position as a percentage of the total pension liability	54.61%	66.99%	55.52%

The components of the net pension liability as of June 30, 2022, were (in thousands):

Components of Net Pension Liability	Plan A	Plan B	Total
Total pension liability	\$4,788,717	\$309,390	\$5,098,107
The Plan's fiduciary net position	<u>(2,620,138)</u>	<u>(215,538)</u>	<u>(2,835,676)</u>
The Plan's net pension liability	<u>\$2,168,579</u>	<u>\$ 93,852</u>	<u>\$2,262,431</u>
The Plan's net position as a percentage of the total pension liability	54.71%	69.67%	55.62%

Actuarial Assumptions

The total pension liability as of June 30, 2023, was determined by an actuarial valuation as of July 1, 2022 rolled forward to June 30, 2023; and the total pension liability as of June 30, 2022, was determined by an actuarial valuation as of July 1, 2021 rolled forward to June 30, 2022 using the actuarial assumptions set forth below. These assumptions were applied to all periods included in the measurement. For GASB No. 67 purposes, the Post Retirement Increase Fund (PRIF) assets equal to \$30,448,072 for FY 2023 and \$91,945,512 for FY 2022, respectively, were excluded from retiree and beneficiary liabilities but included in the Plan's fiduciary net position. (Detailed actuarial assumptions are set forth in the Actuarial Section of this report).

The last experience study dated April 28, 2023, covered the period July 1, 2016 through June 30, 2021. The experience investigation was prepared in accordance with Article 5-1-245 of the Baltimore County Code, which requires that the actuary periodically undertake an experience investigation into the mortality, service, and compensation experience of the members and retirees of the System.

Investment Rate of Return: For FY 2023 and FY 2022, the expected rate of investment return was 6.375% for each year, net of investment expense and gain sharing, and including inflation.

Mortality for FY2023 & FY 2022: For healthy participants and beneficiaries: For males 108% of the RP-2000 Combined Healthy male table projected to 2032 by Scale AA and for females 100% of the RP-2000 Combined Healthy female table projected to 2032 by Scale AA. For disabled members, RP-2000 Disabled Annuitant Tables projected to 2032 with Scale AA.

FINANCIAL SECTION

Notes to Financial Statements, continued

Inflation for FY2023 & FY2022: 3.0% per annum

Salary Increase: Representative rates for FY2023 are as follows:

Age Band	Annual Rates of Salary Increase – FY2023	
	Police Officers and Firefighters	General Employees, Correctional Officers and Deputy Sheriffs
Under 25	13.50%	12.00%
25 - 29	7.50	8.25
30 - 34	5.50	5.00
35 - 39	4.00	4.00
40 - 44	3.25	3.25
45 - 49	2.75	2.75
50 - 54	1.75	2.25
55 or Over	1.75	1.75

Salary increases are based on the 2023 experience study

Salary Increase: Representative rates for FY2022 are as follows:

Age Band	Annual Rates of Salary Increase – FY2022	
	Police Officers and Firefighters	General Employees, Correctional Officers and Deputy Sheriffs
Under 25	10.00%	7.50%
25 - 29	6.50	6.50
30 - 34	4.00	3.75
35 - 39	3.50	2.75
40 - 44	3.00	2.75
45 - 49	2.50	2.50
50 - 54	2.00	2.00
55 or Over	1.75	1.75

Salary increases are based on the 2018 experience study

FINANCIAL SECTION

Notes to Financial Statements, continued

Marital Status for FY2023 and FY2022: For Firefighters and Police Officers, 90% of active members are assumed to be married. For all other employees, 90% of active males and 50% of active females are assumed to be married. In all cases, it is assumed that the male spouse is 3 years older than the female spouse.

Credit for Unused Sick Leave for FY2023 and FY2022: For members entitled to receive credit for unused sick leave, it was assumed that each member will accumulate such credit as follows:

Supervisory, management and confidential (SMC) members, other than firefighters	¾ year
Firefighters including SMC members	1 year
Employees other than Police Officers and Firefighters, excluding SMC members	½ year
Police Officers	½ year

Long-term expected rate of return. The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of geometric real rates of return for each major asset class included in the pension plan’s target asset allocation as of June 30, 2023, and 2022 are summarized in the table below:

Schedule of Long-term Expected Real Rate of Return

Asset Class	FY 2023		FY 2022	
	Long-Term Expected Real Rate of Return*	Target Asset Allocation	Long-Term Expected Real Rate of Return*	Target Asset Allocation
Cash	0.73%	0.00%	0.23%	0.00%
Large Cap Equities	3.94	24.00	4.17	24.00
Small/Mid Cap Equities	4.74	9.00	4.75	9.00
International Equities (Unhedged)	3.76	14.00	4.26	14.00
Emerging International Equities	6.60	3.00	6.76	5.00
US TIPS	1.66	3.00	0.89	3.00
Core Bonds	1.94	9.00	1.32	5.00
Core Bonds – Short	1.61	4.00	1.07	4.00
Bank Loans	4.02	3.00	3.57	3.00
Diversified Fixed Income	3.30	5.00	3.04	7.00
Private Debt	6.24	5.00	5.87	5.00
Private Equity	7.33	9.00	7.46	9.00
Real Estate (Core)	3.09	7.00	2.52	7.00
Global Asset Allocation/Risk Parity	3.41	5.00	3.32	5.00

*Inflation assumption of 2.66%

Discount rate. The discount rate used to measure the total pension liability was the funding valuation interest rate of 6.375% as of June 30, 2023 and 2022, respectively. The projection of cash flow used to determine the discount rate assumed that employer contributions will continue to follow the current funding policy.

FINANCIAL SECTION

Notes to Financial Statements, continued

Based on those assumptions, the System’s fiduciary net position was projected to make all future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability, in accordance with the method prescribed by GASB Statement No. 67/68. We believe this assumption is reasonable for the purposes of the measurements required by the Statement. In the event of benefit payments not covered by the System’s fiduciary net position, a municipal bond rate of 4.13% and 4.09% for FY 2023 and FY 2022, respectively, would be used to discount the benefit payments not covered by the System’s fiduciary net position. The 4.13% and 4.09% rate equals the S&P Municipal Bond 20-Year High Grade Rate index at June 30, 2023 and 2022, respectively.

Sensitivity of the net pension liability to changes in the discount rate for FY 2023. The following schedule presents the net pension liability, calculated using the discount rate of 6.375%, as well as what the System’s net liability would be if it were calculated using a discount rate that is 1 percentage point lower (5.375%) or 1 percentage point higher (7.375%) than the current rate (in thousands):

FY 2023 Net Pension Liability	1.00% Decrease (5.375%)	Current Discount Rate (6.375%)	1.00% Increase (7.375%)
Plan A - Net Pension Liability	\$2,757,481	\$2,225,276	\$1,772,854
Plan B - Net Pension Liability	<u>207,311</u>	<u>128,281</u>	<u>64,608</u>
Total	<u>\$2,964,792</u>	<u>\$2,353,557</u>	<u>\$1,837,462</u>

Sensitivity of the net pension liability to changes in the discount rate for FY 2022. The following schedule presents the net pension liability, calculated using the discount rate of 6.375%, as well as what the System’s net liability would be if it were calculated using a discount rate that is 1 percentage point lower (5.375%) or 1 percentage point higher (7.375%) than the current rate (in thousands):

FY 2022 Net Pension Liability	1.00% Decrease (5.375%)	Current Discount Rate (6.375%)	1.00% Increase (7.375%)
Plan A - Net Pension Liability	\$2,703,853	\$2,168,579	\$1,719,625
Plan B - Net Pension Liability	<u>159,644</u>	<u>93,852</u>	<u>43,151</u>
Total	<u>\$2,863,497</u>	<u>\$2,262,431</u>	<u>\$1,762,776</u>

FINANCIAL SECTION

Required Supplementary Information (Unaudited) Schedule of Changes in the Net Pension Liability and Related Ratios - THE SYSTEM* (in Thousands)

	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014
Total pension liability										
Service cost	\$ 98,867	\$ 91,994	\$ 93,196	\$ 90,335	\$ 95,077	\$ 110,061	\$ 103,827	\$ 94,108	\$ 88,642	\$ 60,588
Interest	319,689	312,343	303,012	299,754	288,687	276,797	257,478	262,189	258,266	251,154
Changes of benefit terms	75,919	-	3,140	-	3,981	-	-	-	-	-
Differences between expected and actual experience	33,747	51,832	84,128	(22,769)	63,801	105,206	43,948	(52,809)	71,738	-
Changes of assumptions	29,099	-	-	-	21,120	-	173,216	106,774	21,165	-
Benefit payments, incl. refunds of member contributions	(364,498)	(331,118)	(340,673)	(297,525)	(291,103)	(285,630)	(277,787)	(253,159)	(247,854)	(228,834)
Net change in total pension liability	192,823	125,051	142,803	69,796	181,563	206,434	300,682	157,103	191,957	82,908
Beginning total pension liability	5,098,108	4,973,057	4,830,254	4,760,458	4,578,895	4,372,461	4,071,779	3,914,676	3,722,719	3,639,811
Ending total pension liability: (a)	\$ 5,290,931	\$ 5,098,108	\$ 4,973,057	\$ 4,830,254	\$ 4,760,458	\$ 4,578,895	\$ 4,372,461	\$ 4,071,779	\$ 3,914,676	\$ 3,722,719
Plan fiduciary net position										
Employer contributions	\$ 215,570	\$ 160,572	\$ 151,903	\$ 144,605	\$ 138,200	\$ 128,896	\$ 118,155	\$ 105,742	\$ 108,191	\$ 80,453
Employee contributions	56,688	52,007	52,312	51,193	48,198	45,697	43,244	40,812	39,725	37,845
Net investment income	195,586	(331,911)	727,282	7,376	112,089	212,476	330,746	(26,404)	23,026	327,264
Benefit payments, incl. refunds of member contributions	(364,498)	(331,118)	(340,672)	(297,525)	(291,103)	(285,630)	(277,787)	(253,159)	(247,854)	(228,834)
Administrative expense	(1,648)	(1,392)	(1,481)	(1,382)	(1,125)	(1,272)	(2,393)	(1,647)	(1,681)	(1,342)
Other	-	-	-	-	-	-	150,000	-	-	-
Net change in plan fiduciary net position	101,698	(451,842)	589,344	(95,733)	6,259	100,167	361,965	(134,656)	(78,593)	215,386
Beginning plan fiduciary net position	2,835,676	3,287,518	2,698,174	2,793,908	2,787,649	2,687,482	2,325,517	2,460,173	2,538,766	2,323,380
Ending plan fiduciary net position: (b)	2,937,374	2,835,676	3,287,518	2,698,174	2,793,908	2,787,649	2,687,482	2,325,517	2,460,173	2,538,766
Plan's net pension liability-ending (a) - (b)	\$ 2,353,557	\$ 2,262,432	\$ 1,685,539	\$ 2,132,080	\$ 1,966,550	\$ 1,791,246	\$ 1,684,979	\$ 1,746,262	\$ 1,454,503	\$ 1,183,953
Plan fiduciary net position as a percentage of the total pension liability	55.52%	55.62%	66.11%	55.86%	58.69%	60.88%	61.46%	57.11%	62.84%	68.20%
Covered payroll	\$ 660,207	\$ 630,111	\$ 620,691	\$ 609,702	\$ 588,645	\$ 572,829	\$ 569,281	\$ 540,702	\$ 519,380	\$ 509,899
System's net pension liability as a percentage of covered payroll	356.49%	359.05%	271.56%	349.69%	334.08%	312.70%	295.98%	322.96%	280.05%	232.19%
Expected average remaining service years of all participants	5.15	6	6	6	6	6	6	6	6	6

*Notes to the Schedule: Benefit changes: Correctional officers and Deputy Sheriffs were granted an increased accrual for service after 25 years. See that report and the latest funding valuation for the full set of assumptions. Totals may not add due to rounding.

FINANCIAL SECTION

Required Supplementary Information (Unaudited) Schedule of Changes in the Net Pension Liability and Related Ratios

PLAN A*

(in Thousands)

	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014
Total pension liability										
Service cost	\$ 59,483	\$ 58,363	\$ 62,293	\$ 64,213	\$ 70,490	\$ 81,996	\$ 80,892	\$ 76,121	\$ 74,949	\$ 51,438
Interest	297,768	294,037	288,149	287,573	277,756	267,900	250,988	257,134	253,796	247,768
Changes of benefit terms	62,931	-	2,778	-	3,981	-	-	-	-	-
Differences between expected and actual experience	20,825	43,021	71,903	(27,018)	66,329	102,264	43,910	(51,504)	80,967	-
Changes of assumptions	27,215	-	-	-	30,176	-	166,954	103,817	21,165	-
Benefit payments, including refunds of member contributions	(354,658)	(321,396)	(336,234)	(291,407)	(285,502)	(282,243)	(274,978)	(250,515)	(246,074)	(227,438)
Net change in total pension liability	113,564	74,025	88,889	33,362	163,230	169,917	267,766	135,053	184,803	71,768
Beginning total pension liability	4,788,717	4,714,692	4,625,803	4,592,441	4,429,211	4,259,294	3,991,528	3,856,475	3,671,672	3,599,904
Ending total pension liability: (a)	\$ 4,902,281	\$ 4,788,717	\$ 4,714,692	\$ 4,625,803	\$ 4,592,441	\$ 4,429,211	\$ 4,259,294	\$ 3,991,528	\$ 3,856,475	\$ 3,671,672
Plan fiduciary net position										
Employer contributions	\$ 208,800	\$ 154,751	\$ 147,818	\$ 140,583	\$ 131,510	\$ 123,028	\$ 115,276	\$ 104,306	\$ 106,912	\$ 80,127
Employee contributions	25,069	25,988	27,914	29,377	28,564	28,504	28,445	28,491	29,463	29,860
Net investment income	179,160	(306,985)	684,297	6,742	106,590	206,107	321,774	(25,912)	22,648	323,620
Benefit payments, including refunds of member contributions	(354,658)	(321,396)	(336,234)	(291,407)	(285,502)	(282,243)	(274,978)	(250,515)	(246,074)	(227,438)
Administrative expense	(1,503)	(1,285)	(1,382)	(1,313)	(1,071)	(1,223)	(2,350)	(1,608)	(1,651)	(1,326)
Other	-	-	-	-	-	-	150,000	-	-	-
Net change in plan fiduciary net position	56,868	(448,927)	522,413	(116,018)	(19,909)	74,173	338,167	(145,238)	(88,702)	204,843
Beginning plan fiduciary net position	2,620,139	3,069,066	2,546,653	2,662,671	2,682,580	2,608,407	2,270,240	2,415,478	2,504,180	2,299,337
Ending plan fiduciary net position: (b)	2,677,007	2,620,139	3,069,066	2,546,653	2,662,671	2,682,580	2,608,407	2,270,240	2,415,478	2,504,180
Plan's net pension liability - ending (a) - (b)	\$ 2,225,274	\$ 2,168,578	\$ 1,645,626	\$ 2,079,150	\$ 1,929,770	\$ 1,746,631	\$ 1,650,887	\$ 1,721,288	\$ 1,440,997	\$ 1,167,492
Plan fiduciary net position as a percentage of the total pension liability	54.61%	54.71%	65.10%	55.05%	57.98%	60.57%	61.24%	56.88%	62.63%	68.20%
Covered payroll	\$ 294,714	\$ 306,805	\$ 323,333	\$ 337,565	\$ 343,268	\$ 356,014	\$ 380,007	\$ 382,891	\$ 390,353	\$ 403,401
System's net pension liability as a percentage of covered payroll	755.06%	706.83%	508.96%	615.93%	562.18%	490.61%	434.44%	449.55%	369.15%	289.41%
Expected average remaining service years of all participants	2	2	3	3	3	3	4	4	4	4

*Notes to the Schedule: Benefit changes: Correctional officers and Deputy Sheriffs were granted an increased accrual for service after 25 years. See that report and the latest funding valuation for the full set of assumptions. Totals may not add due to rounding.

FINANCIAL SECTION

Required Supplementary Information (Unaudited) Schedule of Changes in the Net Pension Liability and Related Ratios

PLAN B*

(in Thousands)

	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014
Total pension liability										
Service cost	\$ 39,384	\$ 33,631	\$ 30,903	\$ 26,122	\$ 24,587	\$ 28,065	\$ 22,935	\$ 17,987	\$ 13,693	\$ 9,150
Interest	21,921	18,305	14,863	12,181	10,931	8,897	6,490	5,055	4,470	3,386
Changes of benefit terms	12,988	-	362	-	-	-	-	-	-	-
Differences between expected and actual experience	12,922	8,811	12,225	4,249	(2,528)	2,942	38	(1,305)	(9,229)	-
Changes of assumptions	1,884	-	-	-	(9,056)	-	6,262	2,957	-	-
Benefit payments, including refunds of member contributions	(9,840)	(9,722)	(4,439)	(6,118)	(5,601)	(3,387)	(2,809)	(2,644)	(1,780)	(1,396)
Net change in total pension liability	79,259	51,025	53,914	36,434	18,333	36,517	32,916	22,050	7,154	11,140
Beginning total pension liability	309,390	258,365	204,451	168,017	149,684	113,167	80,251	58,201	51,047	39,907
Ending total pension liability: (a)	\$ 388,649	\$ 309,390	\$ 258,365	\$ 204,451	\$ 168,017	\$ 149,684	\$ 113,167	\$ 80,251	\$ 58,201	\$ 51,047
Plan fiduciary net position										
Employer contributions	\$ 6,771	\$ 5,821	\$ 4,085	\$ 4,022	\$ 6,690	\$ 5,868	\$ 2,879	\$ 1,436	\$ 1,279	\$ 326
Employee contributions	31,619	26,020	24,398	21,816	19,634	17,193	14,799	12,321	10,262	7,985
Net investment income	16,426	(24,926)	42,985	634	5,499	6,369	8,972	(492)	379	3,644
Benefit payments, including refunds of member contributions	(9,840)	(9,722)	(4,439)	(6,118)	(5,601)	(3,387)	(2,809)	(2,644)	(1,780)	(1,396)
Administrative expense	(145)	(107)	(98)	(69)	(54)	(49)	(43)	(39)	(31)	(16)
Other	-	-	-	-	-	-	-	-	-	-
Net change in plan fiduciary net position	44,831	(2,914)	66,931	20,285	26,168	25,994	23,798	10,582	10,109	10,543
Beginning plan fiduciary net position	215,538	218,452	151,521	131,237	105,069	79,075	55,277	44,695	34,586	24,043
Ending plan fiduciary net position: (b)	260,369	215,538	218,452	151,521	131,237	105,069	79,075	55,277	44,695	34,586
Plan's net pension liability - ending (a) - (b)	\$ 128,280	\$ 93,852	\$ 39,913	\$ 52,930	\$ 36,780	\$ 44,615	\$ 34,092	\$ 24,974	\$ 13,506	\$ 16,461
Plan fiduciary net position as a percentage of the total pension liability	66.99%	69.67%	84.55%	74.11%	78.11%	70.19%	69.87%	68.88%	76.79%	67.75%
Covered payroll	\$ 365,493	\$ 323,306	\$ 297,358	\$ 272,137	\$ 245,377	\$ 216,815	\$ 189,274	\$ 157,811	\$ 129,027	\$ 106,498
System's net pension liability as a percentage of covered payroll	35.10%	29.03%	13.42%	19.45%	14.99%	20.58%	18.01%	15.83%	10.47%	15.46%
Expected average remaining service years of all participants	11	12	12	12	12	12	12	13	13	13

*Notes to the Schedule: Benefit changes: Correctional officers and Deputy Sheriffs were granted an increased accrual for service after 25 years. See that report and the latest funding valuation for the full set of assumptions. Totals may not add due to rounding.

FINANCIAL SECTION

Required Supplementary Information, continued (Unaudited) Schedule of Investment Returns

THE SYSTEM	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014
Annual money-weighted rate of return, net of investment expenses	7.06%	10.20%	26.96%	0.27%	3.60%	8.10%	13.58%	-1.14%	0.78%	14.01%

Schedule of Employer Contributions Last 10 Fiscal Years (in thousands)

THE SYSTEM	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014
Actuarially Determined Employer Contribution	\$165,570	\$160,572	\$151,903	\$144,605	\$138,200	\$128,896	\$118,155	\$110,561	\$103,372	\$80,453
Contributions in relation to the Actuarially Determined Employer Contribution	<u>215,570</u>	<u>160,572</u>	<u>151,903</u>	<u>144,605</u>	<u>138,200</u>	<u>128,896</u>	<u>118,155</u>	<u>105,742</u>	<u>103,372</u>	<u>80,453</u>
Contribution Deficiency (Excess)	<u>\$ (50,000)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 4,819</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$660,207	\$630,111	\$620,691	\$609,702	\$588,645	\$572,829	\$569,281	\$540,702	\$519,380	\$509,899
Contributions as a Percentage of Covered Payroll	32.65%	25.48%	24.47%	23.72%	23.48%	22.50%	20.75%	19.56%	19.90%	15.78%

FINANCIAL SECTION

Required Supplementary Information, continued
(Unaudited)
Schedule of Employer Contributions – Plan A
Last 10 Fiscal Years
(in thousands)

PLAN A	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014
Actuarially Determined Employer Contribution	\$158,800	\$154,751	\$147,818	\$140,583	\$131,510	\$123,028	\$115,276	\$109,126	\$102,093	\$80,127
Contributions in relation to the Actuarially Determined Employer Contribution	<u>208,800</u>	<u>154,751</u>	<u>147,818</u>	<u>140,583</u>	<u>131,510</u>	<u>123,028</u>	<u>115,276</u>	<u>104,306</u>	<u>102,093</u>	<u>80,127</u>
Contribution Deficiency (Excess)	<u>\$ (50,000)</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 4,819</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$294,714	\$306,805	\$323,333	\$337,565	\$343,268	\$356,014	\$380,007	\$382,891	\$390,353	\$403,401
Contributions as a Percentage of Covered Payroll	70.85%	50.44%	45.72%	41.65%	38.31%	34.56%	30.34%	27.24%	26.15%	19.86%

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FINANCIAL SECTION

Required Supplementary Information, continued
(Unaudited)
Schedule of Employer Contributions – Plan B
Last 10 Fiscal Years
(in thousands)

PLAN B	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014
Actuarially Determined Employer Contribution	\$6,771	\$5,821	\$4,085	\$4,022	\$6,690	\$5,868	\$2,879	\$1,436	\$1,279	\$326
Contributions in relation to the Actuarially Determined Employer Contribution	<u>6771</u>	<u>5,821</u>	<u>4,085</u>	<u>4,022</u>	<u>6,690</u>	<u>5,868</u>	<u>2,879</u>	<u>1,436</u>	<u>1,279</u>	<u>326</u>
Contribution Deficiency (Excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$365,493	\$323,306	\$297,358	\$272,137	\$245,377	\$216,815	\$189,274	\$157,811	\$129,027	\$106,498
Contributions as a Percentage of Covered Payroll	1.85%	1.80%	1.37%	1.48%	2.73%	2.71%	1.52%	0.91%	0.99%	0.31%

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FINANCIAL SECTION

Notes to the Required Supplementary Information (Unaudited)

The actuarial method and assumptions used in the calculations of the actuarially determined employer contributions (ADEC) are calculated two years prior (i.e., the contribution determined by the valuation completed as of July 1, 2021 was contributed in the fiscal year ending June 30, 2023). Additional information as of the latest actuarial valuation follows:

Valuation Date:	July 1, 2022
Actuarial cost Method:	Projected Unit Credit (Entry Age Normal used for GASB 68*)
Normal Cost Allocation:	Service
Amortization Method:	Level percent closed
Remaining Amortization Period:	Fresh start as of July 1, 2015 over 30 years; Salary gains and losses amortized over 10 years;
Asset Valuation Method	5- year smoothed fair value without corridor
Actuarial Assumptions:	
-Investment Rate of Return ⁽¹⁾	6.375%
-Projected Salary Increases	Age-based rates
-Cost-of-Living Adjustments ⁽²⁾	None
-Healthy Mortality (Male)	108% of RP-2000 Healthy Annuitant Male Table projected to 2032 with Scale AA
-Healthy Mortality (Female)	RP-2000 Healthy Annuitant Female Table projected to 2032 with Scale AA
-Disabled Mortality	RP-2000 Disabled Annuitant Tables projected to 2032 with Scale AA

(1) Includes inflation at 3.0% and net of gain sharing.

(2) Increases equal to the CPI up to a maximum of 3% are granted to qualifying members only if only if sufficient reserves have accumulated in the Post Retirement Increase Fund.

*The Actuarial Cost Method used for the GASB 68 reporting is Entry Age Normal.

Actuarial valuations are performed every year.

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FINANCIAL SECTION

Supplementary Information

Schedule of Investment Expenses For the Years Ended June 30, 2023 and 2022 (in Thousands)

	FY 2023	FY 2022
Investment managers:		
Domestic equity managers	\$ 2,479	\$ 3,375
International equity managers	1,134	1,550
Emerging Market equity managers	765	1,256
Fixed income managers	2,842	2,997
Private equity & debt managers	5,854	12,548
Real estate managers	2,020	1,901
Global asset allocation managers	589	813
Total manager fees	15,683	24,440
Investment service fees:		
Custodian fees	324	309
Consultant fees	332	316
Total service fees	656	625
Total investment fees and expenses	\$ 16,339	\$ 25,065

Schedule of Administrative Expenses For the Years Ended June 30, 2023 and 2022 (in Thousands)

	FY 2023	FY 2022
Personal services:		
Salaries	\$ 766	\$ 655
Employee fringe benefits	295	285
Total personal services	1,061	940
Professional and		
Contractual services	502	370
Miscellaneous services:		
Communication	71	57
Equipment and supplies	14	26
Total miscellaneous services:	85	83
Total administrative expenses	\$ 1,648	\$ 1,393

Schedule of Professional / Consultants Fees For the Years Ended June 30, 2023 and 2022 (in Thousands)

	FY 2023	FY 2022
Actuary - Korn Ferry	\$ 265	\$ 174
Auditing – CliftonLarsonAllen, LLC	28	15
Death Audit Research services - PBI	9	10
Data Processing Services - CPAS	156	\$ 112
Pension Consultant Services -NEPC	332	316
Custodian Services - BNYMellon	324	309
Medical – Physician services - various	16	59
Total Professional and Consultant fees	\$ 1,130	\$ 995

***INVESTMENT
SECTION***

INVESTMENT SECTION

INVESTMENT CONSULTANT'S REPORT

Introduction

This report, prepared for the Employees' Retirement System of Baltimore County (the "System") by NEPC, LLC, is based on accounting information supplied by the System's custodian, BNY Mellon. NEPC relies on this source for security pricing, calculation of accruals, and all transactions. NEPC reconciles the monthly rates of return provided by BNY Mellon with those calculated by each investment manager. NEPC exercises reasonable professional care in preparing the performance report and the performance calculations are reported to the greatest degree possible in compliance with the presentation standards of the Global Investment Performance Standards (GIPS) promulgated by the CFA Institute. The returns, calculated using a time-weighted rate of return methodology based upon fair values, are reported on both net of fees and gross of fees to provide comparisons with the appropriate benchmarks.

Distinction of Responsibilities

The Board of Trustees (the "Trustees") of the System is responsible for establishing the investment goals and objectives for the System's Retirement Fund (the "Fund") and sets the appropriate risk levels and asset allocation policy. The criteria used in developing the System's investment policy include: actuarial information, such as funded status, the actuarial return assumption and benefits obligations; risk and return expectations of the capital markets; the financial conditions of the County; and practices of similar types of funds. The investment policy has been developed after the Trustees have given careful consideration of the potential financial implication of a wide range of investment policies. The policy describes the degree of pension fund risk that the Trustees, as System fiduciaries, deem appropriate.

In carrying out their duties the Trustees follow acceptable standards of prudence. These standards include: 1) acting for the exclusive benefit of the Fund participants and beneficiaries; 2) exercising skill, care and diligence of a prudent person acting in a similar capacity; and 3) diversifying investments to minimize the risk of large losses.

The investment managers required to execute the policy will invest System assets in accordance with the established policy and with their judgments concerning relative investment values. In particular, the investment managers are accorded full discretion to select individual securities, make periodic strategic adjustments and diversify their portfolios.

Investment Policy/Structure

The System's investment policy was designed to provide broad diversification among asset classes in order to maximize return at an appropriate level of risk and minimize the risk of large losses to the System. In addition, asset allocation ranges have also been implemented to maintain compliance with the investment policy and ensure the System will achieve its long-term risk and return objectives.

The System's investment policy is shown below for the broad investment categories:

Investment Policy as of June 30, 2023

<i>Asset Class</i>	<i>Allocation Target</i>	<i>Allocation Range</i>
<i>U. S. Equities</i>	33%	27 – 39%
<i>International Equities</i>	17%	11 - 23%
<i>Private Equity</i>	9%	0 - 12%
<i>Private Debt</i>	5%	0 - 10%
<i>Fixed Income</i>	24%	18 - 30%
<i>Real Estate</i>	7%	4 - 10%
<i>Global Asset Allocation</i>	5%	2 - 8%
<i>Cash and Cash equivalents</i>	<u>0%</u>	0 - 5%
<i>Total</i>	<u>100%</u>	

INVESTMENT SECTION

INVESTMENT CONSULTANT'S REPORT, continued

Within each asset class, the Trustees have employed several investment managers to further diversify the investment approach and minimize style bias. The Trustees have employed both active and passive investment strategies in order to obtain the desired asset allocation mix in the most cost effective and efficient manner.

Investment Objective

The System's long-term investment objective is to achieve a total rate of return which exceeds the Policy Index, defined here as the asset allocation target for each asset class invested in its respective index. The Trustees recognize that there will be short-term deviations from these long-term investment objectives, and therefore, have developed performance expectations for the Fund and individual investment managers. The overall Fund is also compared to the Investment Metrics Public Funds Universe with more than \$1.0 trillion in assets, a large and representative universe of actual institutional performance results in the industry.

Market Overview

Throughout FY2023, capital markets were largely focused on persistent and elevated inflation, a hawkish stance from central banks, and related economic growth expectations. By June 30, 2023, the S&P 500 had entered a bull market after rallying over 20% since its lows in October. The gains were primarily fueled by technology companies, heightened concerns around narrowing market breadth, and the unique influence of the so-called magnificent seven – Meta, Amazon, Apple, Nvidia, Microsoft, Google, and Tesla – on U.S. equities.

Major global equity indexes rose sharply in the second half of the fiscal year. US equity markets (as measured by the S&P 500 Index) ended the 12-months of FY2023 with a return of +19.6%. Within the U.S. stock market, small cap stocks (as measured by the Russell 2000 Index) underperformed large cap stocks, posting a one-year gain of +12.3%. Developed international equity markets (as measured by the MSCI EAFE Index) ended FY2023 with a 12-month return of +18.8%. Emerging markets stocks (as measured by the MSCI Emerging Markets Index) lagged developed equity markets but ended the fiscal year with a positive one-year return of +1.7%.

Headline inflation declined from its 40-year high of 9.1% in June 2022 to 3.0% in June 2023, but remained above the U.S. Federal Reserve's target 2.0%. During FY2023, the U.S. Federal Reserve raised its benchmark interest rate from a range of 1.50% - 1.75% at the end of FY2022 to a range of 5.0% - 5.25% by the end of FY2023, with an additional 0.25% rate hike in July 2023. The sharp increase in interest rates was a headwind for the U.S. investment grade bond market. The Bloomberg U.S. Aggregate Index ended the fiscal year down -0.9% for the trailing 12-month period ending June 30, 2023. The U.S. high yield bond market (as measured by the Bloomberg US High Yield Index) posted a positive return of +9.1% over the same period. In real assets, commodities declined, with the Bloomberg Commodities Index posting one-year loss of -9.6% and WTI crude oil prices falling -34.4% since June 30, 2022.

Investment Performance

For the fiscal year ended June 30, 2023, the System's investment portfolio returned 7.0% (net of fees), including dividends and interest income, unrealized gains and losses.

The System's domestic equity portfolio posted a 16.2% net of fee return over the fiscal year as compared to a 19.1% return of the broad U.S. equity market, as measured by the Wilshire 5000 Index (allocations to large cap underperformed while small cap outperformed). The System's non-US equity portfolio's net of fee return was 12.8%, compared to 12.7% for the international equity benchmark (MSCI ACWI ex- US). The System's domestic fixed income portfolio net of fee return was 3.0%, compared to -0.9% for the broader domestic fixed income benchmark, as measured by the Bloomberg Barclays U.S. Aggregate. The System's global asset allocation manager underperformed their respective benchmark during the fiscal year.

To gauge how the overall fund did relative to other public funds, the System's gross of fee return for the fiscal year was compared to the median public fund in the Investment Metrics Universe of Public Funds.

INVESTMENT SECTION

INVESTMENT CONSULTANT’S REPORT, continued

The System’s gross of fee return of 7.3% ranked in the 80th percentile of the Universe for the fiscal year. The fair value of the System investments increased from \$2.846 billion on June 30, 2022 to \$2.934 billion on June 30, 2023.

The net returns for various asset classes earned during the fiscal year ending June 30, 2023 are shown in the following table.

Investment Type	Fair Value (in Millions)	Percent of Total	Fiscal Year Rate of Return	
			System	Benchmark
U S Equities	\$ 977.5	33.3%	16.2%	19.1%
International Equities	437.3	14.9	14.4%	18.8%
Emerging Market Equity	105.7	3.6	9.0%	1.7%
Private Equity	296.0	10.1	0.4%	0.6%
Private Debt	90.9	3.1	3.2%	10.1%
Real Estate	165.0	5.6	-16.7%	-6.6%
Fixed Income	712.1	24.3	3.0%	-0.9%
GAA	130.7	4.5	0.0%	9.1%
Cash	<u>19.2</u>	<u>0.6</u>	3.9%	3.9%
Total Fund*	<u>\$2,934.4</u>	<u>100.0%</u>	7.0%	9.8%

*The Total Fund shown above in the amount of \$2,934.4 million includes short-term investments of \$37.7 million accrued interest and dividends receivable of \$2.8 million, receivables for investment sold of \$31.1 million and payables for investment purchased of \$49.4 million. These items are separately reported from “Total Investments” in the Statement of Fiduciary Net Position.

Investment Strategies

During FY 2023, the Trustees conducted an annual asset allocation review. As a result of the review, the Board decreased emerging market equities from 5% to 3% and increased fixed income from 22% to 24%. One new manager was added to fund a passive mandate for U.S. Treasury exposure, and several managers were also added to the private equity and private debt asset classes. One manager was terminated with the elimination of the target to emerging market small cap equity. The Board implemented these changes to better meet the System’s long-term risk and return objectives.

Keith Stronkowsky, CFA

Senior Consultant

INVESTMENT SECTION

Outline of Investment Policies

Investment Policy. As provided in Article 5 Title 1 of the Baltimore County Code, the Board of Trustees of the Employees' Retirement System of Baltimore County (the "Board") is empowered to invest the System's assets and to take appropriate action regarding the investment, management and custodianship of plan assets. The investment responsibilities include establishing reasonable investment objectives, developing investment policy guidelines, selecting investment managers and evaluating performance results to assure adherence to guidelines and the achievement of objectives.

The Board has carefully exercised these responsibilities by diversifying the assets into common stocks (domestic and foreign), fixed income, real estate, and private equity. The investment policy targets are 33% in U.S. equities, 24% in fixed income investments, 17% in international equities, 5% in global asset allocation, 9% in private equity, 5% in private debt and 7% in real estate. The investment policy authorizes the allocation targets to be maintained within the allocation ranges specified in the Investment Consultant's report.

A pension investment consultant has been appointed to advise and consult with the Board and the System staff, prepare recommendations on investment policies, investment management structure and asset allocation, and to monitor and evaluate the performance of the investment managers and the asset custodian.

The Board authorizes the managers to vote all proxies related to stocks in which they invest pension assets. The Board expects the managers to cast votes solely in the best interest of plan beneficiaries. Managers are required to report annually to the Board on its proxy-voting policies and activities on the System's behalf.

Investment Results

The following schedule compares rates of return, gross of fees, for the System portfolio with a comparative index, market indices and the inflation rate.

The market indices shown below are the Wilshire 5000 Stock Index, Morgan Stanley Capital International All Country World Ex-U.S. Index, the Barclays Capital Universal Index, 60% MSCI World/40% WGBI Blended Index, the NCREIF Property Index, and the Cambridge Associates Private Equity Index. The Comparative Index is a blend of market indices and is reflective of the total System's portfolio policy for each time period.

As of April 2019, the Balanced Index has been comprised of 19% S&P 500; 7% Russell 2000 Index; 16% MSCI EAFE Index; 5% MSCI EM Index; 3% MSCI EM Small Cap Index; 5% Bloomberg Barclays Capital Aggregate Bond Index, 5% Bank of America Merrill Lynch 1-3 years US Corporate & Government Index, 6% Diversified Fixed Income (1/3rd each to Bloomberg Barclays Capital Global Aggregate Bond Index ex-EM, JP Morgan EMBI Global Bond Index, Merrill Lynch Global High Yield BB-B Developed Markets), 3% to 3-month LIBOR +3%, 3% S&P LSTA Leveraged BB Loan Index, 4% JP Morgan GBI-EM Diversified Index, 12% to blended benchmark (60% MSCI World Index, 40% Citigroup World Government Bond Index), 5% NCREIF Property Index, 7% Cambridge Associates Private Equity Index.

As of October 2019, the Balanced Index has been comprised of 19% S&P 500; 7% Russell 2000 Index; 16% MSCI EAFE Index; 8% MSCI EM Index; 10% Bloomberg Barclays Capital Aggregate Bond Index, 9% Diversified Fixed Income (1/3rd each to Bloomberg Barclays Capital Global Aggregate Bond Index ex-EM, JP Morgan EMBI Global Bond Index, Merrill Lynch Global High Yield BB-B Developed Markets), 3% S&P LSTA Leveraged BB Loan Index, 4% JP Morgan GBI-EM Diversified Index, 12% to blended benchmark (60% MSCI World Index, 40% Citigroup World Government Bond Index), 5% NCREIF Property Index, 7% Cambridge Associates Private Equity Index.

As of April 2020, the Balanced Index has been comprised of 21% S&P 500; 7% Russell 2000 Index; 14% MSCI EAFE Index; 4% MSCI EM Index; 3% MSCI EM Small Cap Index; 10% Bloomberg Barclays Capital Aggregate

INVESTMENT SECTION

Outline of Investment Policies, continued

Bond Index, 9% Diversified Fixed Income (1/3rd each to Bloomberg Barclays Capital Global Aggregate Bond Index ex-EM, JP Morgan EMBI Global Bond Index, Merrill Lynch Global High Yield BB-B Developed Markets), 3% S&P LSTA Leveraged BB Loan Index, 5% EMD blended (50% JP Morgan GBI-EM Diversified Index, 50% JPM EMBI Index), 10% to blended benchmark (60% MSCI World Index, 40% Citigroup World Government Bond Index), 5% NCREIF Property Index, 9% Cambridge Associates Private Equity Index.

As of April 2021, the Balanced Index has been comprised of 22% S&P 500; 9% Russell 2000 Index; 14% MSCI EAFE Index; 4% MSCI EM Index; 3% MSCI EM Small Cap Index; 9% Bloomberg Barclays Capital Aggregate Bond Index, 9% Diversified Fixed Income (1/3rd each to Bloomberg Barclays Capital Global Aggregate Bond Index ex-EM, JP Morgan EMBI Global Bond Index, Merrill Lynch Global High Yield BB-B Developed Markets), 3% Credit Suisse Leveraged Loan Index, 5% EMD blended (50% JP Morgan GBI-EM Diversified Index, 50% JPM EMBI Index), 5% to blended benchmark (60% MSCI World Index, 40% FTSE World Government Bond Index), 5% NCREIF Property Index, 9% Cambridge Associates Private Equity Index, and 3% Bloomberg US TIPS Index.

As of April 2022, the Balanced Index has been comprised of 24% S&P 500; 9% Russell 2000 Index; 14% MSCI EAFE Index; 3% MSCI EM Index; 2% MSCI EM Small Cap Index; 9% Bloomberg Barclays Capital Aggregate Bond Index, 3% Bloomberg US TIPS Index, 7% Diversified Fixed Income (1/3rd each to Bloomberg Barclays Capital Global Aggregate Bond Index ex-EM, JP Morgan EMBI Global Bond Index, Merrill Lynch Global High Yield BB-B Developed Markets), 8% Credit Suisse Leveraged Loan Index (Bank Loans & Private Debt), 5% to blended benchmark (60% MSCI World Index, 40% FTSE World Government Bond Index), 7% NCREIF Property Index, and 9% Private Equity Index.

As of April 2023, the Balanced Index has been comprised of 24% S&P 500; 9% Russell 2000 Index; 14% MSCI EAFE Index; 3% MSCI EM Index; 13% Bloomberg Barclays Capital Aggregate Bond Index, 3% Bloomberg US TIPS Index, 5% Diversified Fixed Income (1/3rd each to Bloomberg Barclays Capital Global Aggregate Bond Index ex-EM, JP Morgan EMBI Global Bond Index, Merrill Lynch Global High Yield BB-B Developed Markets), 3% Credit Suisse Leveraged Loan Index, 5% Credit Suisse High Yield Index, 5% to blended benchmark (60% MSCI ACWI Index, 40% FTSE World Government Bond Index), 7% NCREIF Property Index, and 9% Private Equity Index.

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INVESTMENT SECTION

Outline of Investment Policies, continued

The rate of return measure for the financial asset class managers is time-weighted. This investment measure eliminates the influence of contributions and withdrawals that are beyond the control of the investment managers. This investment measure is an effective means of appraising a fund manager's ability to make assets perform.

Investment Return Summary

(Percentage Change)

<u>Rate of Return</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Annualized Rate Over 3 Years</u>	<u>Annualized Rate Over 5 Years</u>
U.S. Common Stock	7.2%	4.5%	44.1%	(15.4)%	16.5%	12.4%	9.7%
Wilshire 5000 Stock Index	8.8	6.5	44.8	(15.5)	19.1	13.4	11.1
International Common Stock	(0.8)	(6.5)	40.6	(22.2)	13.4	7.5	2.9
MSCI ACWIXUS	1.3	(4.8)	35.7	(19.4)	12.7	7.2	3.5
GAA	3.7	2.1	22.2	(13.8)	0.5	1.9	2.3
60% MSCI World / 40% WGBI	7.2	4.0	23.0	(15.8)	9.1	4.2	4.6
Domestic Fixed Income	7.1	3.7	5.8	(9.3)	3.4	(0.3)	2.0
Barclays Universal	8.1	7.9	1.1	(10.9)	0.0	(3.4)	1.0
Emerging Market Debt	7.7	(3.6)	8.3	N/A	N/A	N/A	N/A
JP Morgan GBI – EM Diversified/JP**							
Morgan EMBI Global Diversified (50/50)*	9.0	(2.8)	7.1	N/A	N/A	N/A	N/A
Real Estate	4.8	2.4	7.8	28.5	(15.8)	5.3	4.6
NCREIF Property Index	6.5	2.7	7.4	21.5	(6.6)	6.8	5.9
Private Investment Composite***	5.4	0.3	30.0	26.2	0.9	18.5	11.9
Cambridge Assoc. Private Equity Index	14.5	(4.2)	47.4	27.3	0.6	24.0	16.0
Total System Portfolio	4.4	0.7	27.5	(9.9)	7.3	7.2	5.4
<u>Comparative Index (Policy Index)</u>	6.8	1.3	28.0	(9.8)	9.8	8.2	6.5
<u>Inflation Rate (CPI)</u>	1.7	0.6	5.4	9.1	3.0	5.7	3.9

Note: Performance is gross of fees.

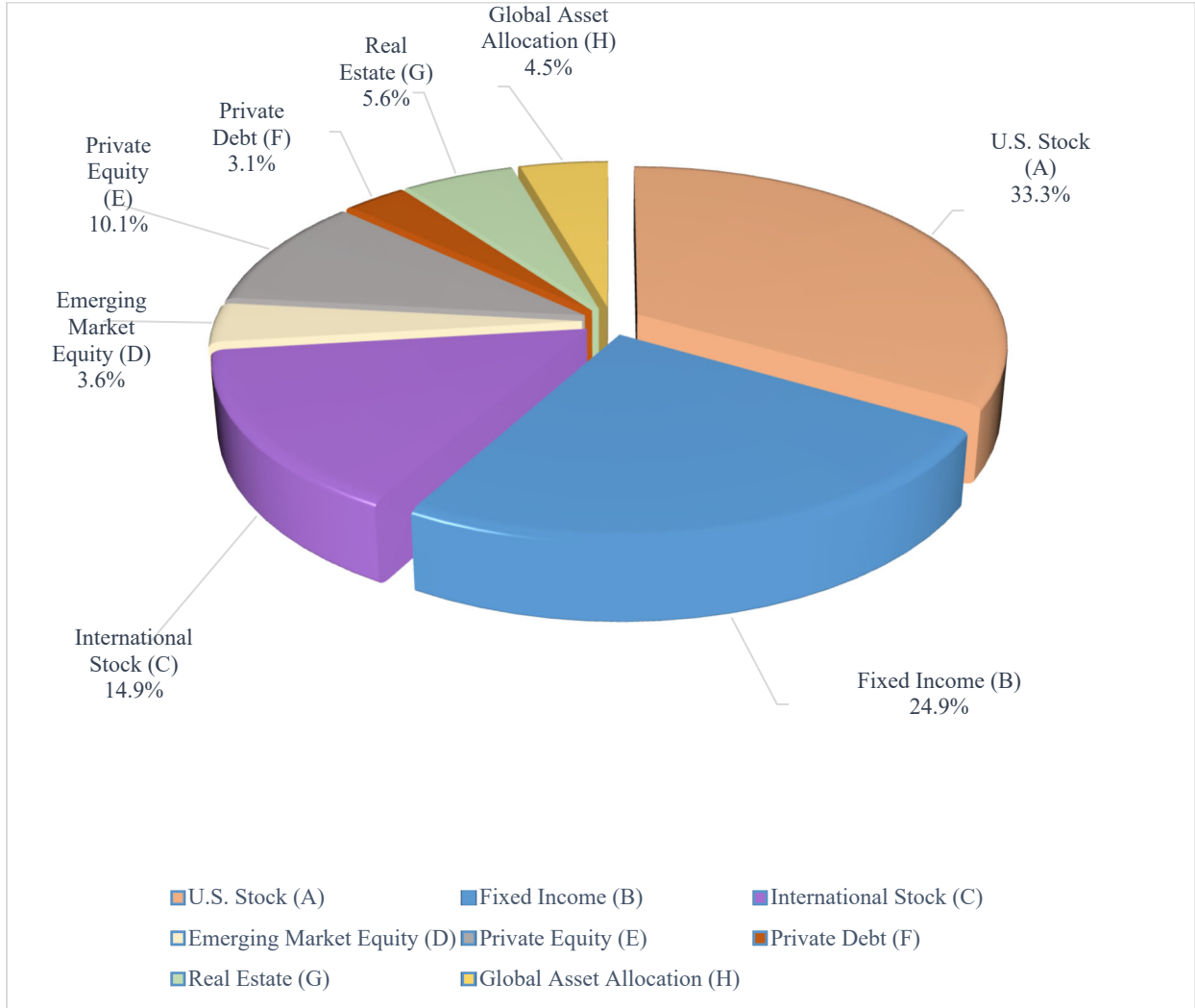
*Benchmark for Emerging Market Debt changed to 50/50 blend in 2021.

**100% JP Morgan GBI-EM Diversified prior to 2021.

*** Private Investment Composite includes Private Equity and Private Debt, but the benchmark is Private Equity only.

INVESTMENT SECTION

Portfolio Composition by Manager Type Fair Value of Investments Percent of Total Fund As of June 30, 2023

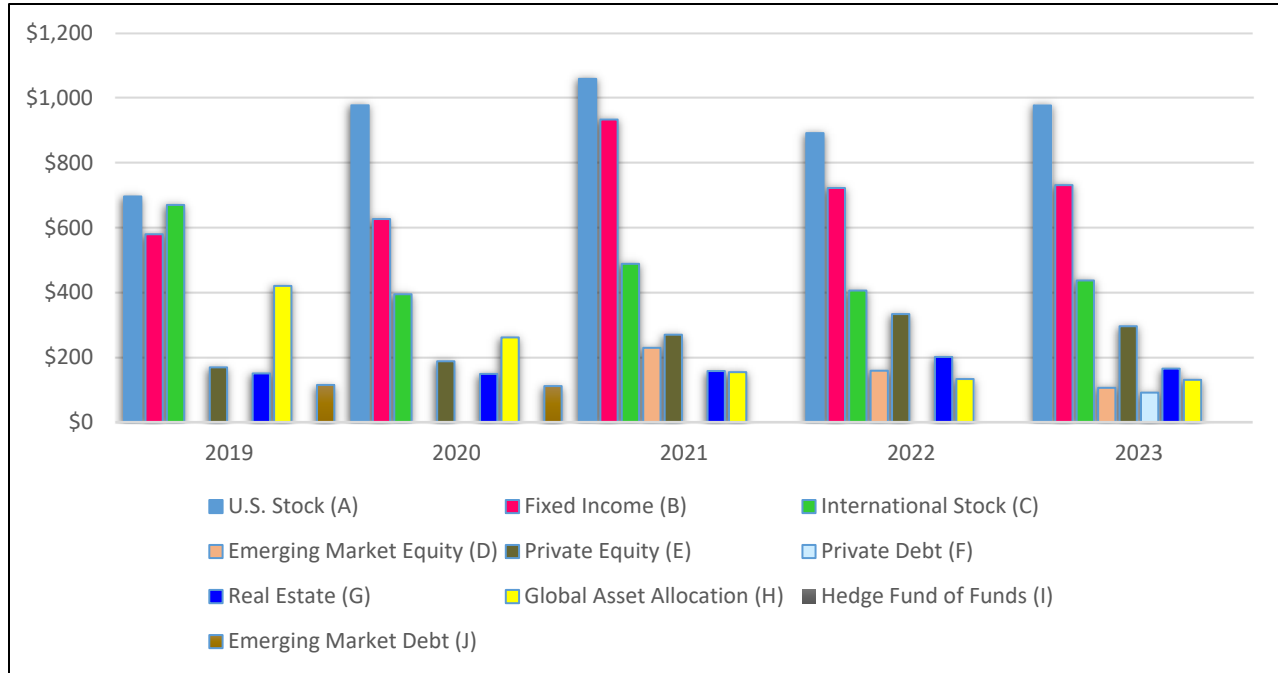


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INVESTMENT SECTION

Portfolio Composition by Manager Type

**Fair Value of Investments
Percent of Total Fund
As of June 30, 2019, 2020, 2021, 2022 & 2023
(Expressed in Millions)**



Investment Type	2019		2020		2021		2022		2023	
U.S. Stock (A)	\$ 696.4	24.9%	\$ 977.9	36.1%	\$1,059.2	32.2%	\$892.2	31.3%	\$977.5	33.3%
Fixed Income (B)	579.9	20.7	627.0	23.1	933.7	28.3	722.5	25.3	731.3	24.9
International Stock (C)	670.3	23.9	394.5	14.6	488.6	14.8	405.9	14.3	437.3	14.9
Emerging Market Equity (D)	-	-	-	-	229.1	7.0	158.5	5.6	105.7	3.6
Private Equity (E)	168.9	6.0	188.0	6.9	269.6	8.2	333.4	11.7	296.0	10.1
Private Debt (F)	-	-	-	-	-	-	-	-	90.9	3.1
Real Estate (G)	150.3	5.4	148.6	5.5	157.6	4.8	201.1	7.1	165.0	5.6
Global Asset Alloc. (H)	420.3	15.0	261.4	9.7	154.3	4.7	132.8	4.7	130.7	4.5
Hedge Fund of Funds (I)	0.1	-	-	-	-	-	-	-	-	-
Emerging Market Debt (J)	114.9	4.1	111.7	4.1	-	-	-	-	-	-
Total	\$2,801.1	100.0%	\$2,709.1	100.0%	\$3,292.1	100.0%	*\$2,846.4	100.0%	*\$2,934.4	100.0%

*The Total Fund shown above in the amount of \$2,934.4 million includes short-term investments of \$37.7 million accrued interest and dividends receivable of \$2.8 million, receivables for investment sold of \$31.1 million and payables for investment purchased of \$49.4 million. These items are separately reported from "Total Investments" in the Statement of Fiduciary Net Position.

INVESTMENT SECTION

List of Largest Assets Held* (Year Ended June 30, 2023)

Ten Largest Equity Holdings (STOCKS)		PAR VALUE/ SHARES	FAIR VALUE		
(1)	MICROSOFT, Corp.	15,053	\$5,125,995		
(2)	Manhattan Associates, Inc.	20,940	4,185,520		
(3)	Tyler Technologies, Inc.	9,813	4,086,818		
(4)	Datadog, Inc.	41,329	4,065,932		
(5)	Appfolio, Inc.	22,383	3,852,925		
(6)	ANSYS, Inc.	11,634	3,842,502		
(7)	Paycom Software, Inc.	11,827	3,799,203		
(8)	Veeva Systems, Inc.	18,723	3,702,177		
(9)	Cognex Corp.	62,771	3,516,423		
(10)	Vericel Corp.	92,975	3,493,079		
Ten Largest Fixed Income Holdings (NOTES & BONDS)		INTEREST RATE	MATURITY DATE	PAR VALUE/ SHARES	FAIR VALUE
(1)	US Treasury Note	4.250%	10/15/2025	7,730,711	\$7,643,122
(2)	Commit to purchase FNMA SF MTG	5.000	08/01/2053	6,922,890	6,787,686
(3)	Commit to purchase FNMA SF MTG	5.550	08/01/2053	5,081,600	5,058,377
(4)	US Treasury Note	0.750	03/31/2026	5,559,975	5,024,160
(5)	US Treasury Note	1.875	02/15/2032	5,740,493	4,914,379
(6)	US Treasury Bond	3.000	08/15/2052	4,075,209	3,458,996
(7)	FNMA Pool #OMA4899	5.000	01/01/2038	3,059,592	3,041,143
(8)	EQUINOR ASA	2.875	04/06/2025	3,091,382	2,962,255
(9)	US Treasury Note	1.125	02/15/2031	3,533,653	2,904,238
(10)	US Treasury Bond	2.500	02/15/2045	3,474,984	2,685,120

*A complete list of the portfolio holdings is available upon request.

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INVESTMENT SECTION

List of Largest Assets Held* (Year Ended June 30, 2022)

Ten Largest Equity Holdings (STOCKS)		PAR VALUE/ SHARES	FAIR VALUE		
(1)	MICROSOFT, Corp.	17,666	\$4,537,064		
(2)	VEEVA Systems, Inc.	19,026	3,767,869		
(3)	Paycom Software, Inc.	13,074	3,662,366		
(4)	Alarm Com Holdings, Inc.	58,764	3,635,145		
(5)	Manhattan Associates, Inc.	31,278	3,584,491		
(6)	ABIOMED, Inc.	14,048	3,477,097		
(7)	ANSYS, Inc.	14,173	3,391,468		
(8)	VISA, Inc.	17,000	3,347,084		
(9)	Tyler Technologies, Inc.	9,971	3,315,319		
(10)	Datadog, Inc.	34,190	3,256,284		
Ten Largest Fixed Income Holdings (NOTES & BONDS)		INTEREST RATE	MATURITY DATE	PAR VALUE/ SHARES	FAIR VALUE
(1)	US Treasury Note	1.750%	01/31/2029	9,478,963	\$8,758,372
(2)	US Treasury Note	1.500	02/15/2030	8,107,792	7,296,689
(3)	US Treasury Note	0.375	04/15/2024	6,323,895	6,041,786
(4)	US Treasury Note	1.625	04/30/2023	5,296,663	5,242,690
(5)	US Treasury Bond	3.750	08/15/2041	4,017,209	4,242,695
(6)	US Treasury Note	1.125	02/15/2031	4,815,148	4,147,817
(7)	US Treasury Note	2.625	02/15/2029	3,682,442	3,592,112
(8)	EQUINOR ASA	2.875	04/06/2025	3,654,927	3,590,052
(9)	US Treasury Bond	2.500	05/15/2046	3,897,977	3,328,210
(10)	US Treasury Note	0.250	11/15/2023	3,159,654	3,046,728

*A complete list of the portfolio holdings is available upon request.

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INVESTMENT SECTION

Schedule of Fees (Year Ended June 30, 2023) (in Thousands)

<u>Investment Services</u>	<u>Assets Under Management*</u>	<u>Fees</u>
Domestic Equity Managers	\$ 977,511	\$ 2,479
International Equity Managers	437,349	1,134
Emerging Market Equity Managers	105,679	765
Fixed Income Managers	712,105	2,842
Private Equity & Private Debt Managers	386,896	5,854
Real Estate Managers	164,975	2,020
Global Asset Allocation Managers	130,687	589
Short-Term Investment Manager	19,166	-
Other Investment Service Fees:		
Custodian		324
Investment consultant		332
Total Fund	\$2,934,368	\$16,339

*The Total Fund shown above in the amount of \$2,934,368 thousand includes short-term investments of \$37,713 thousand, accrued interest and dividends receivable of \$2,786 thousand, receivables for investment sold of \$31,071 thousand, and payables for investment purchased of \$49,424 thousand. These items are separately reported from "Total Investments" in the Statement of Fiduciary Net Position.

Schedule of Fees (Year Ended June 30, 2022) (in Thousands)

<u>Investment Services</u>	<u>Assets Under Management*</u>	<u>Fees</u>
Domestic Equity Managers	\$ 892,235	\$ 3,375
International Equity Managers	405,891	1,550
Emerging Market Equity Managers	158,487	1,256
Fixed Income Managers	701,193	2,997
Private Equity Managers	333,415	12,548
Real Estate Managers	201,120	1,901
Global Asset Allocation Managers	132,801	813
Short-Term Investment Manager	21,283	-
Other Investment Service Fees:		
Custodian		309
Investment consultant		316
Total Fund	\$2,846,425	\$25,065

*The Total Fund shown above in the amount of \$2,846,425 thousand includes short-term investments of \$38,648 thousand, accrued interest and dividends receivable of \$3,187 thousand, receivables for investment sold of \$14,442 thousand, and payables for investment purchased of \$24,697 thousand. These items are separately reported from "Total Investments" in the Statement of Fiduciary Net Position.

INVESTMENT SECTION

Schedule of Commissions (Year Ended June 30, 2023)

<u>Investment Broker Firms</u>	<u>Number of Shares Traded</u>	<u>Total Commissions</u>	<u>Commission Per Share</u>
Citigroup Global Markets	5,672	\$19,092	3.366
Raymond James and Associates, Inc.	344,177	11,933	0.035
Stifel Nicolas	361,835	10,965	0.030
Jefferies & Co. Inc., New York	396,320	9,730	0.025
Goldman Sachs & Co. New York	201,110	7,952	0.040
Apex Clearing Corporation, Dallas	209,898	7,862	0.037
Citibank, NY	2,104,819	7,633	0.004
Cabrera Capital Markets, Chicago	302,487	7,563	0.025
Jones Trading Inst. Svcs. LLC, NY	209,944	7,246	0.035
Loop Capital Markets, New Jersey	279,392	7,141	0.026
International Trading, Inc., New York	185,444	6,935	0.037
Baird, Robert W. & Company Inc.	199,900	6,442	0.032
Piper Jaffray & Co., Jersey City	223,364	6,226	0.028
Liquidnet Inc., New York	231,421	5,874	0.025
Williams Capital Group LP, Jersey City	227,725	5,689	0.025
Morgan Stanley and Co. LLC, New York,	150,805	5,533	0.037
Miscellaneous (Under \$5,000)	<u>7,771,240</u>	<u>80,378</u>	0.010
Total	<u>13,405,553</u>	<u>\$214,194</u>	

Schedule of Commissions (Year Ended June 30, 2022)

<u>Investment Broker Firms</u>	<u>Number of Shares Traded</u>	<u>Total Commissions</u>	<u>Commission Per Share</u>
Jefferies & Co. Inc., New York	1,854,421	\$35,910	0.019
Citigroup Global Markets	238,138	15,628	0.066
Raymond James and Associates, Inc.	282,563	9,632	0.034
Apex Clearing Corporation, Dallas	255,916	9,511	0.037
Loop Capital Markets, New Jersey	288,726	7,057	0.024
Jefferies & Co. Inc., London	950,816	6,647	0.007
Goldman Sachs & Co. New York	168,197	6,593	0.039
Exane, Paris	58,129	6,236	0.107
International Trading, Inc., New York	161,028	6,119	0.038
Baird, Robert W. & Company Inc.	173,771	5,774	0.033
Berenberg Gossler & CIE, Hamburg	153,026	5,729	0.037
Mirabaud Securities, LLP., London	41,503	5,143	0.124
Credit Suisse, New York	125,879	5,086	0.040
Miscellaneous (Under \$5,000)	<u>13,872,408</u>	<u>90,017</u>	0.006
Total	<u>18,624,521</u>	<u>\$215,082</u>	

INVESTMENT SECTION

Investment Summary (Year Ended June 30, 2023) (in Thousands)

TYPE OF INVESTMENTS	FAIR VALUE	% of FAIR VALUE*
Fixed Income:		
U.S. Government Obligations	\$52,889	1.8%
U.S. Agencies Securities	80,064	2.8
Corporate Bonds	117,032	4.0
Foreign Debt	20,536	0.7
Commingled Fixed Income Funds	<u>448,502</u>	15.4
Total Fixed Income	<u>\$719,023</u>	24.7%
Common Stock:		
Basic Materials	\$8,873	0.3%
Communications	20,865	0.7
Consumer, Cyclical	21,485	0.7
Consumer, Non-Cyclical	70,893	2.4
Energy	14,493	0.5
Financials	60,694	2.1
Industrials	70,795	2.4
Technology	79,339	2.7
Utilities	<u>6,373</u>	0.2
Total Common Stock	<u>\$353,810</u>	12.0%
Other Investments:		
Commingled Equity Funds – Domestic	\$614,005	21.1%
Commingled Equity Funds - International	437,150	15.0
Commingled Funds – Emerging Market Equity	105,680	3.6
Real Estate Funds	164,975	5.7
Private Equity Funds	295,998	10.2
Private Debt Funds	90,898	3.1
Global Asset Allocation Funds	<u>130,687</u>	4.5
Total Other Investments	<u>\$1,839,393</u>	63.2%
Total Investments at fair value	<u><u>\$2,912,226</u></u>	100.0%

*Totals may not add due to rounding.

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INVESTMENT SECTION

Investment Summary (Year Ended June 30, 2022) (in Thousands)

TYPE OF INVESTMENTS	FAIR VALUE	% of FAIR VALUE
Fixed Income:		
U.S. Government Obligations	\$76,715	2.7%
U.S. Agencies Securities	25,336	0.9
Municipals	23	-
Corporate Bonds	161,007	5.7
Foreign Debt	12,400	0.5
Commingled Fixed Income Funds	<u>427,776</u>	15.2
Total Fixed Income	<u>\$703,257</u>	25.0%
Common Stock:		
Basic Materials	\$7,811	0.3%
Communications	22,976	0.8
Consumer Cyclical	27,267	1.0
Consumer Non-Cyclical	86,337	3.1
Energy	11,019	0.4
Financial	74,109	2.6
Industrial	57,360	2.0
Technology	63,690	2.3
Utilities	<u>5,849</u>	0.2
Total Common Stock	<u>\$356,418</u>	12.7%
Other Investments:		
Commingled Equity Funds – Domestic	\$556,552	19.8%
Commingled Equity Funds - International	372,796	13.3
Commingled Funds – Emerging Market Equity	158,487	5.6
Real Estate Funds	201,120	7.1
Private Equity Funds	333,415	11.8
Global Asset Allocation Funds	<u>132,801</u>	4.7
Total Other Investments	<u>\$1,755,171</u>	62.3%
Total Investments at fair value	<u><u>\$2,814,846</u></u>	100.0%

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***ACTUARIAL
SECTION***



Actuary's Certification Letter

January 11, 2024

Board of Trustees
Employees' Retirement System of Baltimore County
400 Washington Avenue
Towson, Maryland 21204

Re: Actuarial Certification for the June 30, 2023 Financial Report

Members of the Board:

The following sets forth the actuarial information for the June 30, 2023 Annual Comprehensive Financial Report (ACFR) for the Employees' Retirement System of Baltimore County, Maryland. The valuation was conducted as of July 1, 2022 and the results were rolled forward to June 30, 2023 for financial reporting purposes. Valuations are conducted annually. The accounting results are based on plan provisions, census data and asset data submitted by the County. We have relied on this information for purposes of preparing these accounting results, but we have not performed an audit.

We prepared the following schedules for Plans A and B:

Financial Section

1. Net Pension Liability of the County
2. Changes in the County's Net Pension Liability and Related Ratios
3. Schedule of County Contributions
4. Changes in the Net Pension Liability

Actuarial Section

5. Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions
6. Components of County's Pension Expense for the Fiscal Year Ended June 30, 2023
7. Schedule of Differences between Projected and Actual Earnings on Pension Plan Investments
8. Schedule of Differences between Expected and Actual Experience
9. Schedule of Changes of Assumptions
10. Schedule of Active Member Valuation Data
11. Schedule of Retiree and Beneficiary Data
12. Solvency Test
13. Change in Unfunded Accrued Liability
14. Allocation of Amortization Bases
15. Schedule of Funding Progress

Statistical Section

16. Retirees and Beneficiaries - Distribution of Members by Type of Retirement
17. Retirees and Beneficiaries - Distribution to Members by Option Selected
18. Schedule of Participating Employers



Assumptions

The assumptions and methods used for funding purposes, to determine the Actuarially Determined Contribution (ADC), and for the preparation of the financial reporting under GASB 67/68 comply with the Actuarial Standards of Practice (ASOPs). These assumptions, other than the interest (discount) rate assumption, are primarily based upon recommendations made in the 2016-2021 actuarial experience study. The System's overall funding objective is to accumulate sufficient assets over time to meet its long-term benefit obligations as they become due.

The methods, assumptions, and participant data used are detailed in the July 1, 2022 actuarial valuation report with the exception of the actuarial cost method. These calculations are based on the Entry Age Normal cost method as required by GASB 67. The calculation of the Actuarially Determined Contribution for fiscal year ended June 30, 2023 is contained in the July 1, 2021 actuarial valuation report.

The undersigned credentialed actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. Korn Ferry is independent of Baltimore County Government. We are not aware of any relationship or interest that would impair the objectivity of our work. The July 1, 2022 actuarial valuation report contains information that is integral to the results contained herein.

Respectfully submitted,
Korn Ferry

By: 

Craig R. Graby
Member American Academy of Actuaries
Enrolled Actuary No. 23-7319

ACTUARIAL SECTION

Summary of Actuarial Assumptions and Methods

ASSUMPTIONS

Interest Rate: 6.375% per annum, compounded annually.

Inflation: 3.0% per year.

Salary Increase: Representative rates are as follows:

Age Band	Annual Rates of Salary Increase	
	Police Officers and Firefighters	General Employees, Correctional Officers and Deputy Sheriffs
Under 25	13.50%	12.00%
25 - 29	7.50	8.25
30 - 34	5.50	5.00
35 - 39	4.00	4.00
40 - 44	3.25	3.25
45 - 49	2.75	2.75
50 - 54	1.75	2.25
55 or Over	1.75	1.75

Salary increases are based on the 2023 experience study.

Expenses: The assumed interest rate is gross of the anticipated future administrative expenses of the fund. All administrative and operating expenses of the System are included in the normal cost.

DROP Election Rate:

Group	Election Rate
General Employee	50%
Agency	30%
Police	80%
Fire	85%
Corrections	95%

Rates are unchanged from the 2018 experience study.

ACTUARIAL SECTION

Summary of Actuarial Assumptions and Methods, continued

Illustrative Rates of Separation from Service:

Sample rates are as follows:

Age	Withdrawal		Termination Benefit After 10 Years of Service	Disability		Death		
	Refund Before 10 Years of Service	Refund After 10 Years of Service		Ordinary	Accidental	Ordinary		Accidental
						Male	Female	
General Employees, Correctional Officers and Deputy Sheriffs								
20	16.91%	-	-	0.01%	-%	0.01%	0.01%	-%
25	16.91	-	-	0.02	-	0.01	0.01	-
30	11.21	1.89%	2.84%	0.03	-	0.02	0.01	-
35	9.69	1.38	2.08	0.04	-	0.04	0.02	-
40	9.02	1.19	1.79	0.08	0.01	0.05	0.02	0.01
45	8.32	1.09	1.63	0.11	0.01	0.05	0.03	0.01
50	7.86	0.62	0.94	0.16	0.01	0.16	0.07	0.01
55	7.25	0.89	1.34	0.19	0.01	0.17	0.14	0.01
60	8.78	1.08	1.62	0.19	0.02	0.26	0.26	0.02
64	8.31	0.22	0.32	0.19	0.02	0.42	0.40	0.02
65	12.92	-	-	0.19	0.02	0.46	0.44	0.02
69	-	-	-	0.19	0.02	0.69	0.65	0.02
Police Officers								
20	5.00%	-	-	-%	0.01%	0.02%	0.01%	0.01%
25	2.60	-	-	-	0.02	0.03	0.01	0.01
30	2.40	0.53%	0.53%	-	0.02	0.04	0.02	0.02
35	1.60	0.34	0.34	-	0.04	0.07	0.03	0.02
40	1.20	0.21	0.21	-	0.03	0.09	0.04	0.04
45	3.60	0.16	0.16	-	0.04	0.11	0.07	0.05
50	2.40	0.13	0.13	-	0.07	0.32	0.14	0.08
55	1.50	0.10	0.10	-	0.15	0.35	0.27	0.14
59	0.30	0.02	0.02	-	0.20	0.48	0.47	0.24
60	-	-	-	-	0.20	0.53	0.53	0.27
64	-	-	-	-	0.20	0.83	0.80	0.40
Firefighters								
20	4.69%	-	-	-%	0.01%	0.02%	0.01%	0.01%
25	2.44	-	-	-	0.01	0.03	0.01	0.01
30	2.25	0.89%	0.89%	-	0.01	0.04	0.02	0.02
35	1.50	0.57	0.57	-	0.06	0.07	0.03	0.02
40	0.90	0.35	0.35	-	0.03	0.09	0.04	0.04
45	0.90	0.26	0.26	-	0.04	0.11	0.07	0.05
50	0.60	0.21	0.21	-	0.06	0.32	0.14	0.08
55	0.38	0.17	0.17	-	0.18	0.35	0.27	0.14
59	0.08	0.16	0.16	-	0.18	0.48	0.47	0.24
60	-	-	-	-	0.18	0.53	0.53	0.27
64	-	-	-	-	0.18	0.80	0.80	0.40

Rates are based on the 2023 experience study.

ACTUARIAL SECTION

Summary of Actuarial Assumptions and Methods, continued Retirement Rates for General Employees: Sample rates are as follows:

Plan A (Members hired before July 1, 2007)									Plan B (Members Hired after June 30, 2007)
Years of Credited Service									
Age	5-9	10-14	15	20	25	30	35	>=40	
Under 52	-	-	-	-	-	24.88%	24.88%	24.88%	-%
52	-	-	-	-	-	6.22	6.22	6.22	11.05
53	-	-	-	-	-	6.22	6.22	6.22	-
54	-	-	-	-	-	12.44	10.00	10.00	11.05
55	-	-	-	13.89%	13.89%	13.00	10.00	10.00	11.05
56	-	-	-	4.39	4.39	13.00	10.00	10.00	11.05
57	-	-	-	0.98	0.98	4.33	4.33	4.33	11.05
58	-	-	-	2.34	2.34	6.50	6.50	6.50	11.05
59	-	-	-	4.94	4.94	12.38	12.38	12.38	11.05
60	2.00%	4.00%	11.25%	22.50	8.25	8.25	7.38	7.38	11.05
61	2.70	5.36	5.36	30.15	15.58	15.58	13.23	13.23	12.71
62	4.00	8.00	8.00	15.00	23.25	23.25	21.50	21.50	23.11
63	3.60	18.00	18.00	13.50	11.70	11.70	18.00	18.00	16.48
64	3.60	18.00	18.00	13.50	11.70	11.70	19.58	19.58	18.69
65	15.69	15.69	15.69	26.74	26.74	42.93	30.76	58.94	30.29
69	9.91	9.91	9.91	20.00	13.00	30.50	30.50	48.00	25.76
>=70	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	24.44

Rates are based on the 2023 experience study. Retirement assumptions were selected based on DROP exit experience.

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ACTUARIAL SECTION

Summary of Actuarial Assumptions and Methods, continued
Retirement Rates for Correctional Officers and Deputy Sheriffs:
Sample rates are as follows:

Plan A (Members hired before July 1, 2007)									Plan B (Members hired after June 30, 2007)
Years of Credited Service									
Age	5-9	10-16	18	20	25	26	27	>=28	
Under 53	-	-	-	20.00%	27.54%	20.00%	37.19%	17.19%	14.95%
53	-	-	-	10.00	13.77	10.00	18.60	18.60	14.95
54	-	-	-	20.00	27.54	20.00	37.19	17.19	14.95
55	-	-	-	15.00	20.66	15.00	27.89	12.89	14.95
56	-	-	-	30.00	41.31	30.00	55.79	25.79	14.95
57	-	-	-	10.00	13.77	10.00	18.60	8.60	14.95
58	-	-	-	14.00	19.28	14.00	26.03	12.03	14.95
59	-	-	-	20.00	27.54	20.00	37.19	17.19	14.95
60	8.00%	20.00%	15.00%	40.00	55.08	40.00	74.38	34.38	14.95
61	8.00	24.00	18.00	40.00	58.96	40.00	79.54	39.54	17.19
62	8.00	28.00	28.00	40.00	83.24	40.00	100.00	71.94	31.27
63	8.00	32.00	32.00	40.00	67.76	40.00	91.30	51.30	22.30
64	8.00	36.00	36.00	30.56	72.92	40.00	98.16	58.16	25.29
65	8.00	20.00	20.00	27.59	45.69	20.00	61.14	41.14	40.99
69	8.00	28.00	28.00	14.69	14.69	20.00	48.49	28.49	29.77
>=70	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Rates are based on the 2023 experience study.

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ACTUARIAL SECTION

Summary of Actuarial Assumptions and Methods, continued Retirement Rates for Police Officers: Sample rates are as follows:

Plan A (Members hired before July 1, 2007)												Plan B (Members hired after June 30, 2007)
Years of Credited Service												
Age	5-9	10-14	15	20	25	26	27	28	29	30	>=35	
40	-	-	-	1.43%	2.48%	3.45%	23.93%	6.68%	11.63%	11.63%	26.10%	-%
45	-	-	-	1.13	2.55	3.68	12.15	6.98	12.15	12.15	27.38	9.41
50	-	-	-	1.65	12.98	3.98	12.45	7.65	13.28	13.28	29.93	9.91
55	0.42%	3.50%	3.50%	3.99	18.06	9.66	17.29	18.48	32.13	32.13	72.31	19.30
56	0.38	3.75	3.75	3.25	15.25	7.75	14.63	14.88	25.88	25.88	58.19	17.79
57	0.90	10.50	10.50	3.30	25.95	7.95	24.90	15.15	26.40	26.40	59.40	9.86
58	1.20	16.00	16.00	4.60	35.00	11.00	33.40	21.00	36.40	36.40	81.80	10.07
59	0.60	9.00	9.00	3.20	17.80	5.80	17.00	11.10	19.20	19.20	43.30	10.41
60	0.30	5.00	5.00	23.75	81.25	71.25	71.25	50.00	50.00	50.00	100.00	95.00
61	0.30	5.50	5.50	10.00	40.00	30.00	20.00	30.00	30.00	50.00	100.00	40.00
62	0.30	6.00	6.00	18.75	66.25	56.25	33.13	50.00	50.00	50.00	100.00	75.00
63	0.30	6.50	6.50	12.50	47.50	37.50	23.75	37.50	37.50	100.00	100.00	50.00
64	0.30	7.00	7.00	12.50	52.00	37.50	23.75	37.50	37.50	100.00	100.00	50.00
65	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Rates are based on the 2023 experience study.

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ACTUARIAL SECTION

Summary of Actuarial Assumptions and Methods, continued Retirement Rates for Firefighters: Sample rates are as follows:

Plan A (Members hired before July 1, 2007)												Plan B (Members Hired after June 30, 2007)
Years of Credited Service												
Age	5-9	10-19	20	22	25	26	27	28	29	30	>=35	
45-49	-	-	-	-	14.25%	13.50%	6.75%	6.75%	6.75%	6.75%	54.00%	-%
50	-	-	-	4.50%	26.55	11.55	5.70	4.88	4.88	4.88	46.14	10.25
55	-	-	-	2.03	16.81	10.06	5.06	5.06	5.06	5.06	40.28	19.89
56	-	-	-	2.30	13.63	7.88	3.97	3.97	3.97	3.97	31.60	18.32
57	-	-	-	4.30	18.92	8.17	4.09	4.09	4.09	4.09	32.59	10.10
58	-	-	-	4.50	19.91	8.66	4.39	4.39	4.39	4.39	34.79	10.31
59	-	-	-	5.80	29.87	11.60	5.80	5.80	5.80	5.80	46.34	10.65
60	1.20%	10.00%	25.00%	0.80	19.00	17.00	6.38	6.38	6.38	25.50	100.00	85.00
61	3.00	35.00	35.00	2.00	22.50	17.50	8.75	6.55	6.55	26.25	100.00	35.00
62	3.45	51.75	45.00	2.30	40.25	34.50	17.25	17.25	12.94	51.75	100.00	60.00
63	1.50	27.50	55.00	1.00	12.50	10.00	5.00	5.00	5.00	15.00	100.00	40.00
64	6.00	100.00	65.00	4.00	60.00	50.00	25.00	25.00	25.00	100.00	100.00	50.00
65	100.00	100.00	100.00	100.00	50.00	50.00	25.00	25.00	25.00	100.00	100.00	100.00
>=66	100.00	100.00	100.00	100.00	50.00	50.00	25.00	25.00	25.00	25.00	100.00	100.00

Rates are based on the 2023 experience study.

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ACTUARIAL SECTION

Summary of Actuarial Assumptions and Methods, continued

Death after Retirement: The mortality for service retirements and dependent beneficiaries is 108% of the RP-2000 Healthy Annuitant Table for males, projected to 2032 with Scale AA and 100% of the RP-2000 Healthy Annuitant Table for females, projected to 2032 with Scale AA. For disability retirements, the mortality tables are the RP-2000 Disabled Annuitant Tables, projected to 2032 with Scale AA. Illustrative rates are shown below:

Age	Annual Rates of Mortality			
	Service Pensioners		Disability Pensioners	
	Males	Female	Male	Female
45	0.107%	0.067%	1.485%	0.445%
50	0.323	0.135	1.620	0.666
55	0.345	0.273	1.918	1.279
60	0.528	0.528	2.509	1.860
65	0.923	0.883	3.196	2.387
70	1.479	1.426	3.859	3.206
75	2.602	2.174	5.227	4.039
80	5.040	3.664	7.929	5.776
85	9.554	6.388	11.310	8.265

Marital Status: 90% of active Police Officers and Firefighters are assumed to be married. For all other employees, 90% of active males and 50% of active females are assumed to be married. In all cases, it is assumed that the female spouse is three years younger than the male spouse.

Credit for Unused Sick Leave: For members entitled to receive credit for unused sick leave, it was assumed that each member will accumulate such credit as follows:

Supervisory, management and confidential (SMC) members, other than Firefighters	0.75 year
Firefighters including SMC members	1.00 year
Police Officers, excluding SMC Police Officers	0.50 year
Employees other than Police Officers and Firefighters, excluding SMC members	0.50 year

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ACTUARIAL SECTION

Summary of Actuarial Assumptions and Methods, continued

Actuarial Cost Method: Projected Unit Credit. Changes in benefits and assumptions and gains and losses are amortized over 25 years with payments that increase 3% per annum. Gains and losses due to actual salary experience differing from that assumed are amortized over 10 years with payments that increase 3% per annum.

The assumptions and methods used to determine the Actuarially Determined Contribution (ADC) and the preparation of the financial reporting under GASB 67/68 comply with the Actuarial Standards of Practice (ASOPs). These assumptions are based on the 2023 experience study. The System's overall funding objective is to accumulate sufficient assets over time to meet its long-term benefit obligations as they become due. The methods, assumptions, and participant data used are detailed in the July 1, 2022 actuarial valuation report with the exception of the actuarial cost method. These calculations are based on the Entry Age Normal cost method as required by GASB67.

Asset Valuation Method: A five-year moving average market value of assets that spreads the difference between the actual investment income and the expected income on the market value (based on the valuation interest rate) over a period of ten years. For purposes of this calculation, the gain/(loss) is defined as the difference between the actual and the expected return on the market value of assets. There is no corridor limiting the valuation assets to a certain percentage of the market value.

Liability Due to Assets in Post-Retirement Increase Fund: Liabilities for retirees and beneficiaries include the value of assets in the Post-Retirement Increase Fund.

Payroll Growth: 3% per annum, compounded annually.

Part-Time Employees: For valuation purposes, all part-time County employees are assumed to be full-time. All part-time Agency employees are assumed to be 50% of full-time equivalence.

Data: The valuation is based on members of the System as of June 30, 2023 and does not take into account future members. All census data was supplied by the County and was subject to reasonable consistency checks.

Roll Forward:

Total Plan A liabilities were rolled forward to the measurement date. The liability as of the census date and half of the normal cost were given a half year of interest to the valuation date. The resulting liability was reduced by half of the calendar year benefit payments with a quarter year of interest. The final liability as of the measurement date was allocated to the groups (e.g. General Employees, Agency, Police, Fire, and Corrections) based on the liabilities as of the census date. The same methodology was used for Plan B.

DROP Loads

Separate DROP loads for Plan A participants were determined by group, for each possible age and service combination based on the average service in the DROP. The DROP load is equal to the present value of the benefit at DROP Exit if the retiree elected the DROP benefit divided by the present value of the benefit if the retiree elected to not receive a DROP benefit.

Other Valuation Assumptions:

Decrements are assumed to occur at the beginning of the year.

Employee Contributions are assumed to be in the middle of the year.

ACTUARIAL SECTION

SCHEDULE OF ACTIVE MEMBER VALUATION DATA

GENERAL EMPLOYEES – THE SYSTEM

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	5	5,974	\$281,585,487	\$47,135	0.6%	2.1%
2015	5	6,170	290,549,549	47,091	(0.1)	0.1
2016	5	6,254	303,685,765	48,559	3.1	1.0
2017	5	6,280	317,642,385	50,580	4.2	1.6
2018*	5	6,354	327,729,955	51,579	2.0	2.9
2019	5	6,376	331,588,095	52,006	0.8	1.6
2020	5	6,500	345,184,683	53,105	2.1	0.6
2021	5	6,324	350,562,416	55,434	4.4	5.4
2022	5	6,133	355,097,628	57,899	4.4	9.1
2023	5	6,343	396,840,989	62,564	8.1	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

GENERAL EMPLOYEES – PLAN A

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	5	3,891	\$200,020,320	\$51,406	N/A	2.1%
2015	5	3,602	188,735,135	52,397	1.9%	0.1
2016	5	3,325	183,185,133	55,093	5.1	1.0
2017	5	3,006	175,229,046	58,293	5.8	1.6
2018*	5	2,750	167,148,407	60,781	4.3	2.9
2019	5	2,553	156,697,428	61,378	1.0	1.6
2020	5	2,367	150,262,274	63,482	3.4	0.6
2021	5	2,176	144,353,979	66,339	4.5	5.4
2022	5	1,932	133,710,374	69,208	4.3	9.1
2023	5	1,746	133,934,594	76,709	10.8	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

ACTUARIAL SECTION

SCHEDULE OF ACTIVE MEMBER VALUATION DATA, CONTINUED

GENERAL EMPLOYEES – PLAN B

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	5	2,083	\$81,565,167	\$39,158	N/A	2.1%
2015	5	2,568	101,814,414	39,647	1.3%	0.1
2016	5	2,929	120,500,632	41,141	3.8	1.0
2017	5	3,274	142,413,339	43,498	5.7	1.6
2018*	5	3,604	160,581,548	44,556	2.4	2.9
2019	5	3,823	174,890,668	45,747	2.7	1.6
2020	5	4,133	194,922,409	47,162	3.1	0.6
2021	5	4,148	206,208,438	49,713	5.4	5.4
2022	5	4,201	221,387,253	52,699	6.0	9.1
2023	5	4,597	262,906,395	57,191	8.5	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

POLICE OFFICERS – THE SYSTEM

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	1	1,819	\$146,728,596	\$80,664	1.4%	2.1%
2015	1	1,870	150,239,354	80,342	(0.4)	0.1
2016	1	1,852	153,813,966	83,053	3.4	1.0
2017	1	1,868	162,460,215	86,970	4.7	1.6
2018*	1	1,890	161,181,034	85,281	(1.9)	2.9
2019	1	1,889	161,103,668	85,285	0.0	1.6
2020	1	1,892	174,167,679	92,055	7.9	0.6
2021	1	1,854	172,811,326	93,210	1.3	5.4
2022	1	1,810	178,027,033	98,357	5.5	9.1
2023	1	1,731	177,579,981	102,588	4.3	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

ACTUARIAL SECTION

SCHEDULE OF ACTIVE MEMBER VALUATION DATA, CONTINUED

POLICE OFFICERS – PLAN A

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	1	1,528	\$131,455,172	\$86,031	N/A	2.1%
2015	1	1,488	129,997,544	87,364	1.5%	0.1
2016	1	1,435	130,464,784	90,916	4.1	1.0
2017	1	1,357	132,892,757	97,931	7.7	1.6
2018*	1	1,295	126,539,167	97,714	(0.2)	2.9
2019	1	1,240	122,639,051	98,902	1.2	1.6
2020	1	1,200	128,656,309	107,214	8.4	0.6
2021	1	1,100	121,000,209	110,000	2.6	5.4
2022	1	1,019	118,860,653	116,644	6.0	9.1
2023	1	920	112,954,406	122,777	5.3	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

POLICE OFFICERS – PLAN B

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	1	291	\$15,273,425	\$52,486	N/A	2.1%
2015	1	382	20,241,810	52,989	1.0%	0.1
2016	1	417	23,349,182	55,993	5.7	1.0
2017	1	511	29,567,458	57,862	3.3	1.6
2018*	1	595	34,641,867	58,222	0.6	2.9
2019	1	649	38,464,617	59,268	1.8	1.6
2020	1	692	45,511,370	65,768	11.0	0.6
2021	1	754	51,811,188	68,715	4.5	5.4
2022	1	791	59,166,380	74,799	8.9	9.1
2023	1	811	64,625,575	79,686	6.5	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

ACTUARIAL SECTION

SCHEDULE OF ACTIVE MEMBER VALUATION DATA, CONTINUED

FIREFIGHTERS – THE SYSTEM

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	1	963	\$69,048,320	\$71,701	(1.1)%	2.1%
2015	1	978	69,354,780	70,915	(1.1)	0.1
2016	1	994	72,235,285	72,671	2.5	1.0
2017	1	1,011	78,620,633	77,765	7.0	1.6
2018*	1	1,035	78,595,034	75,937	(2.4)	2.9
2019	1	1,051	80,064,623	76,179	0.3	1.6
2020	1	1,071	82,657,400	77,178	1.3	0.6
2021	1	1,039	82,262,843	79,175	2.6	5.4
2022	1	1,043	86,309,286	82,751	4.5	9.1
2023	1	1,017	89,114,901	87,625	5.9	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

FIREFIGHTERS – PLAN A

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	1	676	\$56,214,397	\$83,157	N/A	2.1%
2015	1	640	53,820,307	84,094	1.1%	0.1
2016	1	603	53,148,984	88,141	4.8	1.0
2017	1	563	54,731,489	97,214	10.3	1.6
2018*	1	516	50,686,571	98,230	1.0	2.9
2019	1	491	49,402,764	100,617	2.4	1.6
2020	1	461	47,938,148	103,987	3.3	0.6
2021	1	413	43,965,565	106,454	2.4	5.4
2022	1	383	43,239,027	112,896	6.1	9.1
2023	1	351	41,325,032	117,735	4.3	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

— ACTUARIAL SECTION —

SCHEDULE OF ACTIVE MEMBER VALUATION DATA, CONTINUED

FIREFIGHTERS – PLAN B

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	1	287	\$12,833,923	\$44,718	N/A	2.1%
2015	1	338	15,534,473	45,960	2.8%	0.1
2016	1	391	19,086,301	48,814	6.2	1.0
2017	1	448	23,889,144	53,324	9.2	1.6
2018*	1	519	27,908,464	53,774	0.8	2.9
2019	1	560	30,661,859	54,753	1.8	1.6
2020	1	610	34,719,252	56,917	4.0	0.6
2021	1	626	38,297,278	61,178	7.5	5.4
2022	1	660	43,070,259	65,258	6.7	9.1
2023	1	666	47,789,869	71,757	10.0	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

CORRECTIONAL OFFICERS and DEPUTY SHERIFFS – THE SYSTEM

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	1	397	\$21,311,072	\$53,680	(0.2)%	2.1%
2015	1	394	21,185,562	53,770	0.2	0.1
2016	1	425	22,924,402	53,940	0.3	1.0
2017	1	421	23,212,255	55,136	2.2	1.6
2018*	1	415	23,060,078	55,566	0.8	2.9
2019	1	393	22,086,250	56,199	1.1	1.6
2020	1	375	21,225,269	56,601	0.7	0.6
2021	1	374	21,212,469	56,718	0.2	5.4
2022	1	353	21,174,390	59,984	5.8	9.1
2023	1	331	22,113,105	68,807	11.4	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

ACTUARIAL SECTION

SCHEDULE OF ACTIVE MEMBER VALUATION DATA, CONTINUED

CORRECTIONAL OFFICERS and DEPUTY SHERIFFS – PLAN A

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	1	258	\$14,869,872	\$57,635	N/A	2.1%
2015	1	238	13,678,567	57,473	(0.3)%	0.1
2016	1	219	13,203,959	60,292	4.9	1.0
2017	1	200	12,441,204	62,206	3.2	1.6
2018*	1	177	11,345,890	64,101	3.0	2.9
2019	1	159	10,323,491	64,928	1.3	1.6
2020	1	146	9,705,501	66,476	2.4	0.6
2021	1	127	8,695,291	68,467	3.0	5.4
2022	1	110	8,241,676	74,924	9.4	9.1
2023	1	94	8,107,056	86,245	15.1	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

CORRECTIONAL OFFICERS and DEPUTY SHERIFFS – PLAN B

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	1	139	\$6,441,200	\$46,340	N/A	2.1%
2015	1	156	7,506,995	48,122	3.8%	0.1
2016	1	206	9,720,442	47,187	(1.9)	1.0
2017	1	221	10,771,051	48,738	3.3	1.6
2018*	1	238	11,714,189	49,219	1.0	2.9
2019	1	234	11,762,759	50,268	2.1	1.6
2020	1	229	11,519,768	50,305	0.1	0.6
2021	1	247	12,517,179	50,677	0.7	5.4
2022	1	243	12,932,714	53,221	5.0	9.1
2023	1	237	14,006,049	59,097	11.0	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

ACTUARIAL SECTION

SCHEDULE OF ACTIVE MEMBER VALUATION DATA, CONTINUED

ALL GROUPS – THE SYSTEM

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	5	9,153	\$518,673,476	\$56,667	0.4%	2.1%
2015	5	9,412	531,329,246	56,452	(0.4)	0.1
2016	5	9,525	552,659,417	58,022	2.8	1.0
2017	5	9,580	581,935,488	60,745	4.7	1.6
2018*	5	9,694	590,566,102	60,921	0.3	2.9
2019	5	9,710	594,842,637	61,261	0.6	1.6
2020	5	9,838	623,235,031	63,350	3.4	0.6
2021	5	9,591	626,849,055	65,358	3.2	5.4
2022	5	9,339	640,608,337	68,595	5.0	9.1
2023	5	9,422	685,648,977	72,771	6.1	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

ALL GROUPS – PLAN A

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	5	6,353	\$402,559,762	\$63,365	N/A	2.1%
2015	5	5,968	386,231,554	64,717	2.1%	0.1
2016	5	5,582	380,002,860	68,076	5.2	1.0
2017	5	5,126	375,294,496	73,214	7.5	1.6
2018*	5	4,738	355,720,034	75,078	2.5	2.9
2019	5	4,443	339,062,734	76,314	1.6	1.6
2020	5	4,174	336,562,232	80,633	5.7	0.6
2021	5	3,816	318,015,043	83,337	3.4	5.4
2022	5	3,444	304,051,731	88,284	5.9	9.1
2023	5	3,111	296,321,088	95,249	7.9	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

ACTUARIAL SECTION

SCHEDULE OF ACTIVE MEMBER VALUATION DATA, CONTINUED

ALL GROUPS – PLAN B

Valuation as of June 30	Participating Employers	Number of Active Members	Valuation Payroll	Average Salary	Percent Increase (Decrease)	CPI % Increase
2014	5	2,800	\$116,113,715	\$41,469	N/A	2.1%
2015	5	3,444	145,097,692	42,131	1.6%	0.1
2016	5	3,943	172,656,557	43,788	3.9	1.0
2017	5	4,454	206,640,992	46,394	6.0	1.6
2018*	5	4,956	234,846,068	47,386	2.1	2.9
2019	5	5,267	255,779,903	48,563	2.5	1.6
2020	5	5,664	286,672,799	50,613	4.2	0.6
2021	5	5,775	308,834,012	53,478	5.7	5.4
2022	5	5,895	336,556,606	57,092	6.8	9.1
2023	5	6,311	389,327,889	61,690	8.1	3.0

* Pay does not include 3% COLA deferred from July 1, 2018 to January 1, 2019

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— ACTUARIAL SECTION —

SCHEDULE OF RETIREE AND BENEFICIARY DATA – THE SYSTEM

Valuation as of June 30	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase In Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
2014	381	\$11,363,715	267	\$2,338,972	7,496	\$203,785,691	4.6%	\$27,186
2015	363	12,015,865	246	3,800,294	7,613	212,001,262	4.0	27,847
2016	369	12,252,451	226	4,428,386	7,756	219,825,327	3.7	28,343
2017	457	15,475,435	247	4,189,937	7,966	231,110,825	5.1	29,012
2018	414	14,425,273	242	2,271,372	8,138	243,264,725	5.3	29,892
2019	323	12,265,930	261	4,857,676	8,200	250,672,980	3.0	30,570
2020	343	10,896,342	270	5,096,788	8,273	256,472,534	2.3	31,001
2021	447	19,949,932	294	6,449,223	8,426	269,973,242	5.3	32,041
2022	436	15,694,680	358	7,780,592	8,504	277,887,331	2.9	32,677
2023	417	27,685,214	332	6,634,507	8,589	298,938,038	7.6	34,805

SCHEDULE OF RETIREE AND BENEFICIARY DATA – PLAN A

Valuation as of June 30	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase In Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
2014	381	\$11,363,715	267	\$2,338,972	7,496	\$203,785,691	4.6%	\$27,186
2015	363	12,015,865	246	3,800,294	7,613	212,001,262	4.0	27,847
2016	367	12,169,536	226	4,428,386	7,754	219,742,412	3.7	28,339
2017	457	15,475,435	247	4,189,937	7,964	231,027,910	5.1	29,009
2018	409	14,337,208	242	2,271,372	8,131	243,093,746	5.2	29,897
2019	315	12,148,956	261	4,857,676	8,185	250,385,026	3.0	30,591
2020	335	10,787,187	270	5,096,788	8,250	256,075,425	2.3	31,039
2021	428	19,719,420	291	6,354,274	8,387	269,440,571	5.2	32,126
2022	404	15,308,236	350	7,733,669	8,441	277,015,138	2.8	32,818
2023	384	27,265,656	332	6,634,507	8,493	297,646,287	7.4	35,046

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ACTUARIAL SECTION

SCHEDULE OF RETIREE AND BENEFICIARY DATA – PLAN B*

Valuation as of June 30	Added to Rolls		Removed from Rolls		Rolls – End of Year		Percent Increase In Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		
2016	2	\$82,915	-	-	2	\$82,915	N/A	\$41,457
2017	-	-	-	-	2	82,915	-%	41,457
2018	5	88,065	-	-	7	170,980	106.2	24,426
2019	8	116,974	-	-	15	287,954	68.4	19,197
2020	8	109,155	-	-	23	397,109	37.9	17,266
2021	19	230,512	3	\$94,949	39	532,672	34.1	13,658
2022	32	386,444	8	46,923	63	872,193	63.7	13,844
2023	33	419,558	-	-	96	1,291,751	48.1	13,456

*Prior to FY 2016, there were no Plan B retirees.

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ACTUARIAL SECTION

SCHEDULE OF FUNDING PROGRESS – THE SYSTEM

Valuation as of June 30*	Actuarial Accrued Liability	Actuarial Value of Assets	Funded Ratio	Unfunded Actuarial Liability	Covered Payroll	Unfunded as a Percentage of Covered Payroll
2013 ⁽¹⁾	\$3,466,604,253	\$2,490,481,231	71.8%	\$976,123,022	\$513,501,997	190.1%
2014	3,646,264,535	2,517,944,853	69.1	1,128,319,682	518,673,476	217.5
2015 ⁽²⁾	3,834,258,419	2,553,596,803	66.6	1,280,661,616	564,630,904	226.8
2016 ⁽³⁾	4,147,508,750	2,698,256,578	65.1	1,449,252,172	582,179,414	248.9
2017	4,376,400,536	2,766,439,218	63.2	1,609,961,318	603,615,484	266.7
2018 ⁽⁴⁾	4,539,007,711	2,847,332,062	62.7	1,691,675,649	609,417,459	277.6
2019 ⁽⁵⁾	4,617,222,021	2,919,690,535	63.2	1,697,531,486	637,426,563	266.3
2020	4,753,802,158	3,005,798,888	63.2	1,748,003,270	656,270,779	266.4
2021	4,808,207,558	2,956,205,387	61.5	1,852,002,171	650,267,276	284.8
2022	5,001,556,890	3,009,437,906	60.2	1,992,118,984	670,831,171	297.0

*Estimated

SCHEDULE OF FUNDING PROGRESS – PLAN A

Valuation as of June 30*	Actuarial Accrued Liability	Actuarial Value of Assets	Funded Ratio	Unfunded Actuarial Liability	Covered Payroll	Unfunded as a Percentage of Covered Payroll
2013 ⁽¹⁾	\$3,435,993,494	\$2,466,576,190	71.8%	\$969,417,304	\$410,932,051	235.9%
2014	3,607,583,308	2,485,014,469	68.9	1,122,568,839	391,704,374*	286.6
2015 ⁽²⁾	3,779,920,718	2,510,144,678	66.4	1,269,776,040	378,831,879	335.2
2016 ⁽³⁾	4,069,177,440	2,636,841,308	64.8	1,432,336,132	350,069,843	409.2
2017	4,259,494,591	2,674,646,897	62.8	1,584,847,694	331,061,302	478.7
2018 ⁽⁴⁾	4,405,464,479	2,731,175,964	62.0	1,674,288,515	302,163,507	554.1
2019 ⁽⁵⁾	4,462,617,426	2,768,826,104	62.0	1,693,791,322	324,970,777	521.2
2020	4,560,005,347	2,821,511,297	61.9	1,738,494,050	312,548,658	556.2
2021	4,586,082,466	2,759,769,184	60.2	1,826,313,282	318,565,124	573.3
2022	4,720,165,099	2,780,692,749	58.9	1,939,472,350	311,436,250	622.8

*Estimated

ACTUARIAL SECTION

SCHEDULE OF FUNDING PROGRESS – PLAN B

Valuation as of June 30*	Actuarial Accrued Liability	Actuarial Value of Assets	Funded Ratio	Unfunded Actuarial Liability	Covered Payroll	Unfunded as a Percentage of Covered Payroll
2013 ⁽¹⁾	\$30,610,759	\$23,905,041	78.1%	\$6,705,718	\$102,569,946*	6.5%
2014	38,681,227	32,930,384	85.1	5,750,843	126,969,102*	4.5
2015 ⁽²⁾	54,337,701	43,452,125	80.0	10,885,576	185,799,025	5.9
2016 ⁽³⁾	78,331,310	61,415,270	78.4	16,916,040	232,109,571	7.3
2017	116,905,945	91,792,321	78.5	25,113,624	272,554,182	9.2
2018 ⁽⁴⁾	133,543,232	116,156,098	87.0	17,387,134	307,253,952	5.7
2019 ⁽⁵⁾	154,604,595	150,864,431	97.6	3,740,164	312,455,786	1.2
2020	193,796,811	184,287,591	95.1	9,509,220	343,722,121	2.8
2021	222,125,092	196,436,203	88.4	25,688,889	331,702,152	7.7
2022	281,391,791	228,745,157	81.3	52,646,634	359,394,921	14.6

*Estimated

- (1) Interest rate decreased from 7.25% to 7.00% and the assumption changes recommended in the 2011 experience study were adopted.
- (2) Interest rate decreased from 7.00% to 6.75%.
- (3) Interest rate decreased from 6.75% to 6.375%.
- (4) Valuation Date moved to a calendar year basis. Results shown 2018 and later are as of January 1. Results prior to 2018 are as of June 30.
- (5) Assumption changes recommended in 2018 experience study were adopted.

Analysis of the dollar amounts of plan net assets, actuarial accrued liability and unfunded actuarial accrued liability in isolation can be misleading. Expressing plan net assets as a percentage of the actuarial accrued liability provides one indication of the system's funding status on a going-concern basis. Analysis of this percentage over time indicates whether the system is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the system. Trends in the unfunded actuarial accrued liability (or excess of) and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial accrued liability as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of the system's progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the system.

ACTUARIAL SECTION

Summary of Accrued Liability and Actuarial Value of Assets

Solvency Test

Baltimore County's funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the system are level in concept and soundly executed, the system will pay all promised benefits when due – the ultimate test of financial soundness. Testing for level contribution rates is the long-term test.

A short conditions test is one means of checking a system's progress under its funding program. In a short condition test, the system's present assets (cash and investments) are compared with: (1) the liabilities for future benefits to present retired lives; (2) the liabilities for service already rendered by active members. In a system that has been following the discipline of level percent of payroll financing, the liabilities for future benefits to present retired lives (liability B) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability A & C) will be at least partially covered by the remainder of present assets. Generally, if the system has been using level cost financing, the funded portion of liability A & C will increase over time. This is the relationship between accrued liabilities and assets of the System over the last ten years:

THE SYSTEM

Valuation as of June 30	Accrued Liability for:			Actuarial Value of Assets	Portion of Accrued Liability Covered by Actuarial Value of Assets		
	(A) Active Member Contribution	(B) Retirees and Beneficiaries	(C) Active Member Employer Financed		(A)	(B)	(C)
2013 ⁽¹⁾	\$483,966,112	\$1,992,569,006	\$990,069,135	\$2,490,481,231	100.0%	100.0%	1.4%
2014	490,356,233	2,041,957,711	1,113,950,591	2,517,944,853	100.0	99.3	-
2015 ⁽²⁾	513,180,004	2,153,486,824	1,167,591,591	2,553,596,803	100.0	94.7	-
2016 ⁽³⁾	533,502,719	2,296,643,507	1,317,362,524	2,698,256,578	100.0	94.3	-
2017	547,074,123	2,410,021,364	1,381,716,921	2,672,929,761	100.0	88.2	-
2018 ⁽⁴⁾	568,952,372	2,542,532,668	1,383,854,435	2,705,323,846	100.0	84.0	-
2019	591,382,134	2,624,282,258	1,353,926,802	2,800,178,246	100.0	84.2	-
2020	633,040,315	2,642,307,283	1,428,274,367	2,868,321,724	100.0	84.6	-
2021 ⁽⁵⁾	641,739,832	2,805,580,654	1,360,887,072	2,956,205,387	100.0	82.5	-
2022	648,236,489	2,927,853,258	1,425,467,143	3,009,437,906	100.0	80.6	-

- (1) Interest rate decreased from 7.25% to 7.00% and assumption changes recommended in the 2011 experience study were adopted.
- (2) Interest rate decreased from 7.00% to 6.75%.
- (3) Interest rate decreased from 6.75% to 6.375%.
- (4) Assumption changes recommended in the 2011-2016 experience study were adopted.
- (5) Actuarial Asset Method change: The Smoothing period was changed from 10 to 5 years.

ACTUARIAL SECTION

Summary of Accrued Liability and Actuarial Value of Assets, continued

Solvency Test, continued

Plan A*

Valuation as of June 30	Accrued Liability for:			Actuarial Value of Assets	Portion of Accrued Liability Covered by Actuarial Value of Assets		
	(A)	(B)	(C)		(A)	(B)	(C)
	Active Member Contribution	Retirees and Beneficiaries	Active Member Employer Financed				
2014	\$461,795,813	\$2,041,957,711	\$1,103,649,784	\$2,485,014,469	100.0%	99.1%	-%
2015 ⁽³⁾	474,797,680	2,153,486,824	1,151,636,214	2,510,144,678	100.0	94.5	-
2016 ⁽⁴⁾	483,927,859	2,295,696,303	1,289,553,278	2,636,841,308	100.0	93.8	-
2017	483,474,933	2,409,134,316	1,341,860,335	2,594,283,037	100.0	87.6	-
2018 ⁽⁵⁾	485,913,053	2,540,392,483	1,348,198,379	2,603,357,863	100.0	83.4	-
2019	489,487,410	2,620,975,654	1,314,947,080	2,688,600,594	100.0	83.9	-
2020	508,986,855	2,637,880,177	1,376,002,584	2,707,245,481	100.0	83.3	-
2021 ⁽⁶⁾	493,749,825	2,799,535,162	1,292,797,479	2,759,769,184	100.0	80.9	-
2022	484,384,180	2,919,104,400	1,316,676,519	2,780,692,749	100.0	78.7	-

*Ten-year historical trend information is not available but will be compiled going forward.

- (3) Interest rate decreased from 7.00% to 6.75%.
- (4) Interest rate decreased from 6.75% to 6.375%.
- (5) Assumption changes recommended in the 2011-2016 experience study were adopted.
- (6) Actuarial Asset Method change: The Smoothing period was changed from 10 to 5 years.

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ACTUARIAL SECTION

Summary of Accrued Liability and Actuarial Value of Assets, continued

Solvency Test, continued

Plan B*

Valuation as of June 30	Accrued Liability for:			Actuarial Value of Assets	Portion of Accrued Liability Covered by Actuarial Value of Assets		
	(A) Active Member Contribution	(B) Retirees and Beneficiaries	(C) Active Member Employer Financed		(A)	(B)	(C)
2014	\$28,380,420	-	\$10,300,807	\$32,930,384	100.0%	100.0%	44.2%
2015 ⁽³⁾	38,382,323	-	15,955,378	43,452,125	100.0	100.0	31.8
2016 ⁽⁴⁾	49,574,860	\$947,204	27,809,246	61,415,270	100.0	100.0	39.2
2017	63,599,190	887,048	39,856,586	78,646,724	100.0	100.0	35.5
2018 ⁽⁵⁾	83,039,319	2,140,185	35,656,056	101,965,983	100.0	100.0	47.1
2019	101,894,724	3,306,604	38,979,722	111,577,652	100.0	100.0	16.4
2020	124,053,460	4,427,106	52,271,783	161,076,243	100.0	100.0	62.4
2021 ⁽⁶⁾	147,990,007	6,045,492	68,089,593	196,436,203	100.0	100.0	62.3
2022	163,852,309	8,748,858	108,790,624	228,745,157	100.0	100.0	51.6

*Ten-year historical trend information is not available but will be compiled going forward.

- (3) Interest rate decreased from 7.00% to 6.75%.
- (4) Interest rate decreased from 6.75% to 6.375%.
- (7) Assumption changes recommended in the 2011-2016 experience study were adopted.
- (5) Actuarial Asset Method change: The Smoothing period was changed from 10 to 5 years.

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ACTUARIAL SECTION

Change in Unfunded Accrued Liability

The System

As of July 1, 2022

<i>Reconciliation of Gain (Loss) in the Unfunded Accrued Liability:</i>	Amount
1. Unfunded Accrued Liability (UAL) at July 1, 2022	\$1,848,793,106
2. Interest Charge at 6.375% to July 1, 2023	117,860,560
3. Contributions Toward Unfunded Accrued Liability	124,231,882
4. Expected UAL at July 1, 2022 [(1) + (2) - (3)]	1,842,421,784
5. Projected Unfunded Accrued Liability at July 1, 2023 (Based on the July 1, 2022 Actuarial Valuation)	1,941,789,180
6. Increase due to Plan Amendments	12,622,747
7. Increase due to Changes in Assumptions	57,768,181
8. Increase due to Salary Experience Greater than Assumed	60,866,218
9. Actual (Gain)/Loss [(5) - (4) - (6) - (7) - (8)]	(\$31,889,750)

Change in Unfunded Accrued Liability

Plan A

As of July 1, 2022

<i>Reconciliation of Gain (Loss) in the Unfunded Accrued Liability:</i>	Amount
1. Unfunded Accrued Liability (UAL) at July 1, 2022	\$1,823,077,585
2. Interest Charge at 6.375% to July 1, 2023	116,278,571
3. Contributions Toward Unfunded Accrued Liability	121,865,467
4. Expected UAL at July 1, 2023 [(1) + (2) - (3)]	1,818,390,689
5. Projected Unfunded Accrued Liability at July 1, 2023 (Based on the July 1, 2022 Actuarial Valuation)	1,890,467,316
6. Increase due to Plan Amendments	1,254,292
7. Increase due to Changes in Assumptions	52,219,095
8. Increase due to Salary Experience Greater than Assumed	53,182,671
9. Actual (Gain)/Loss [(5) - (4) - (6) - (7) - (8)]	(\$34,579,431)

ACTUARIAL SECTION

Change in Unfunded Accrued Liability – continued

Plan B

As of July 1, 2022

<i>Reconciliation of Gain (Loss) in the Unfunded Accrued Liability:</i>	Amount
1. Unfunded Accrued Liability (UAL) at July 1, 2022	\$24,815,521
2. Interest Charge at 6.375% to July 1, 2023	1,581,989
3. Contributions Toward Unfunded Accrued Liability	2,366,415
4. Expected UAL at July 1, 2022 [(1) + (2) - (3)]	24,031,095
5. Projected Unfunded Accrued Liability at July 1, 2023 (Based on the July 1, 2022 Actuarial Valuation)	51,321,864
6. Increase due to Plan Amendments	11,368,455
7. Increase due to Changes in Assumptions	5,549,086
8. Increase due to Salary Experience Greater than Assumed	7,683,547
9. Actual (Gain)/Loss [(5) – (4) – (6) – (7) –(8)]	\$2,689,681

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ACTUARIAL SECTION

Allocation of Amortization Bases For the Year Ended July 1, 2023

Description	Plan A	Plan B	Total	Amortization Period
2015 Fresh Start Employer Base	\$1,329,508,194	\$11,685,417	\$1,341,193,611	23 Years
2016 (Gain)/Loss	150,927,674	233,177	151,160,851	23 Years
2016 Change in Assumptions	12,756,467	5,943,264	18,699,731	23 Years
2017 (Gain)/Loss	205,835,033	9,061,088	214,896,121	23 Years
2017 Change in Measurement Date	(30,143,728)	(477,669)	(30,621,397)	23 Years
2018 (Gain)/Loss	5,031,161	4,004,021	9,035,182	23 Years
2018 Change in Assumptions	33,324,792	(16,855,426)	16,469,366	23 Years
2018 (Gain)/Loss Due to Salary Experience	27,845,506	3,250,468	31,095,974	6 Years
2018 Plan Amendment	3,794,189	-	3,794,189	12 Years
2019 (Gain)/Loss	47,551,023	(3,133,395)	44,417,628	23 Years
2020 Plan Amendment	1,834,338	-	1,834,338	4 Years
2020 Plan Amendment	-	249,530	249,530	8 Years
2020 (Gain)/Loss Due to Salary Experience	32,490,853	3,913,873	35,404,726	8 Years
2020 (Gain)/Loss	2,235,244	4,670,271	6,905,515	23 Years
2021 Plan Amendment	(28,405,830)	(2,021,869)	(30,427,699)	14 Years
2021(Gain)/Loss Due to Salary Experience	33,095,528	3,827,772	36,923,300	9 Years
2021(Gain)/Loss	(9,289,755)	680,573	(8,609,182)	23 Years
2022 Plan Amendment	1,254,292	11,368,455	12,622,747	10 Years
2022 Change in Assumptions	52,219,095	5,549,086	57,768,181	23 Years
2022 (Gain)/Loss Due to Salary Experience	53,182,671	7,683,547	60,866,218	10 Years
2022 (Gain)/Loss	(34,579,431)	2,689,681	(31,889,750)	23 Years
Total	\$1,890,467,316	\$51,321,864	\$1,941,789,180	

ACTUARIAL SECTION

Summary of Plan Provisions

The Employees' Retirement System provides members the following benefits:

- Retirement Benefits
- Disability Benefits
- Death Benefits

ELIGIBILITY

Members are designated as classified or merit system employees, part-time employees, non-merit employees, elected officials, department heads, or agency employees. Merit system employees included full-time general employees, police officers, firefighters, deputy sheriffs and correctional officers. Agency employees include the Board of Education, the Board of Library Trustees, the Community College of Baltimore County and the Baltimore County Revenue Authority. Agency employees that are not eligible to participate in the Maryland State Retirement and Pension Systems are entitled to membership in the System.

System membership is compulsory for merit system employees as a condition of employment, except for those members who were hired at age 55 or over. Merit employees, exclusive of police officers and firefighters, are required to join the System within the first sixty days of employment. Beginning July 1, 2022 all employees hired on or after July 1, 2022 are required to join the System as a condition of employment.

Any employee who was hired at age 55 or older, have the option of not joining the System. The option of not joining the System applies to all employees, except sworn members of the Police or Fire Departments.

Members hired prior to July 1, 2007 are vested after five years of creditable service. System members hired on or after July 1, 2007 are vested after ten years of creditable service.

MEMBER CONTRIBUTIONS

Contribution rates for System members were negotiated with all employee groups based on a percentage of their salary. As of fiscal year-end, contribution rates were as follows:

Classification	Contribution Rate as a % of Covered Payroll				
	Hired prior to July 1, 2007 (Range)	Hired from July 1, 2007 to June 30, 2011	Hired from July 1, 2011 to June 30, 2012	Hired from July 1, 2012 to June 30, 2014	Hired on or after July 1, 2014
Elected Officials	13.85%	13.85%	13.85%	13.85%	13.85%
Judges of the Orphans Court	13.85	13.85	13.85	13.85	13.85
Department Heads	10.00	10.50	10.50	10.50	10.50
General Employees	7.25	7.00	7.00	7.00	7.00
Correctional Officers	8.50	8.50	10.00	10.00	10.00
Deputy Sheriffs	7.50	8.00	10.00	10.00	10.00
Firefighters	9.50	10.28	10.78	10.78	10.78
Fire Supervisory, Mgmt. and Confidential (SMC)	10.00	10.78	10.78	10.78	10.78
Police Officers	9.50	10.80	10.80	10.80	11.30
Police Supervisory, Mgmt. and Confidential (SMC)	9.50	10.80	10.80	11.30*	11.30*

*Includes members who were appointed as Police SMC on or after July 1, 2012.

Interest is credited on member contributions at the rate of 5.0% per annum on the beginning of the fiscal year balance.

ACTUARIAL SECTION

Summary of Plan Provisions, continued

MILITARY SERVICE CREDIT

Members hired prior to July 1, 2007, with five years of creditable service, or members hired on or after July 1, 2007, with ten years of creditable service are entitled to a military service credit on a year-for-year basis for up to a maximum of four years. No such service credit shall be granted to a member if the member has received credit for a period of military service under any other retirement system for which retirement benefits have been or will be received by the member. To apply, a member must bring their DD214 to the Retirement Office and complete an Application for Military Credit.

SICK LEAVE CREDIT

At the time of retirement, all members, except 911 employees on pay schedule 1-E, firefighters and Police SMC (Supervisory, Management and Confidential) receive one month of service credit for each 22 unused sick leave days. One additional month is granted if fractional days of sick leave total 11 or more. Firefighters, Police SMC and 911 employees (on pay schedule 1-E), receive one month of service credit for each 16 unused sick leave days. Sick leave may be used to determine service credit except for the following circumstances: death benefit, ordinary disability, and vesting.

RETIREMENT ALLOWANCE DATES

Normal Retirement for Service: Plan A (Members hired prior to July 1, 2007)

Normal retirement for service can be granted to general employees and appointed officials who have reached the age of 60 with 5 years of creditable service or attained 30 years of creditable service. A normal retirement for service can be granted to elected officials who have attained 16 years of creditable service or age 55 and attained 4 years of creditable service. An early service retirement can be granted to general employees who have reached the age of 55 and have attained 20 years of creditable service. A normal retirement for service can be granted to correctional officers and deputy sheriffs who have reached the age of 60 with 5 years of creditable service or have attained 20 years of creditable service. A normal retirement for service can be granted to firefighters at the age of 60 with 5 years of creditable service, age 50 with 20 years of creditable service, or 25 years creditable service regardless of age. A normal retirement for service can be granted to police officers who have reached the age of 55 or have attained 20 or more years of creditable service. The System does not have a mandatory retirement age requirement for general employees, deputy sheriffs and correctional officers. Firefighters and police officers must retire at age 65 unless approved for continuation of service by the Board annually.

Normal Retirement for Service: Plan B (Members hired on or after July 1, 2007)

Normal retirement for service can be granted to general employees and appointed officials who have reached the age of 67 with 10 years of creditable service or attained 35 years of creditable service. A normal retirement for service can be granted to elected officials who have attained 16 years of creditable service or age 55 and attained 4 years of creditable service. A normal retirement for service can be granted to correctional officers who have reached the age of 67 with 10 years of creditable service or have attained 25 years of creditable service. A normal retirement for service can be granted to deputy sheriffs who have reached the age of 62 with 10 years of creditable service or have attained 25 years of creditable service. A normal retirement for service can be granted to firefighters at the age of 60 with 10 years of creditable service or 30 years creditable service. A normal retirement for service can be granted to police officers who have reached the age of 60 with 10 years of creditable service or have attained 25 years of creditable service. The System does not have a mandatory retirement age requirement for general employees, deputy sheriffs and correctional officers. Firefighters and police officers must retire at age 65 unless approved for continuation of service by the Board on an annual basis.

Ordinary Disability Retirement may be granted to a member who can no longer perform their job due to a non-occupational related injury. A sworn police officer or firefighter, hired prior to July 1, 2007 must have five years of creditable service and be medically certified as incapacitated to continue performance of their duties. All other members must have 10 years of creditable service and be medically certified as incapacitated to continue performance of their duties.

ACTUARIAL SECTION

Summary of Plan Provisions, continued

Accidental Disability Retirement may be granted to a member upon application who has been physically incapacitated for duty as a result of an occupational related injury. Accidental disabilities for all members are tiered based on the degree of disability (75%, 66.67%, or 50%).

Discontinued Service Retirement may be granted to a member whose employment has been discontinued through no fault of their own after completion of 25 years of creditable service or age 50 and 20 years of creditable service.

RETIREMENT ALLOWANCES

Retirement allowances are comprised of an annuity equal to the actuarial equivalent of the accumulated contributions plus a pension which together with the annuity shall provide a maximum allowance as provided for in the Code.

Normal Retirement for Service Allowance is granted as follows:

- (A) General employees (excluding appointed officials, correctional officers and part-time employees) hired prior to July 1, 2007, with 30 years of creditable service, or age 65 with 5 years of creditable service receive an allowance equal to 1/55th of the Average Final Compensation (AFC) times the number of years of creditable service. General employees hired prior to July 1, 2007 may retire at age 60 with at least 5 years of creditable service, however, such members will be granted a blended benefit. For creditable service earned prior to July 1, 2007, members will receive an allowance equal to 1/55th of AFC times the number of years of creditable service and for creditable service earned on or after July 1, 2007, members will receive an allowance equal to 1/70th of AFC times the number of years of creditable service. The AFC definition is determined by the employee's classification as the highest 12 or 36 consecutive months.

General employees (excluding appointed officials and correctional officers) hired on or after July 1, 2007, receive an allowance equal to 1/70th of the Average Final Compensation (AFC) times the number of years of creditable service. The AFC definition for general employees hired on or after July 1, 2007 is the annual earnable compensation for the highest 36 consecutive months.

Part-time employees earn creditable service on a proportionate basis equal to the time worked annually as compared to the standard work year.

Appointed officials receive an allowance equal to 2.5% of their AFC times the number of years of creditable service.

- (B) Elected officials receive an allowance equal to 5.0% of their AFC times the number of years of creditable service. Any Council member who becomes a member of the retirement system on or after February 1, 2010 may not receive a retirement allowance in excess of 70% of the member's AFC.
- (C) Firefighters receive an allowance equal to 2.5% times the years of creditable service up to 20 years plus 2% of AFC for each year of creditable service in excess of 20 years, and 3% of AFC for each year of creditable service in excess of 30 years for years beginning on or after July 1, 2007. Firefighters with less than 20 years of creditable service receive an allowance equal to 2% of AFC times years of creditable service. The 3% rate does not apply to service earned prior to July 1, 2007. AFC is defined as the annual earnable compensation during the 12 consecutive calendar months affording the highest average.
- (D) Police officers with 20 or more years of creditable service receive an allowance equal to 2.5% of AFC times years of creditable service up to 20 years plus 2% of AFC for each year of creditable service in excess of 20 years, and 3% of AFC for each year of creditable service in excess of 25 years for years beginning on or after July 1, 2007. The 3% rate does not apply to service earned prior to July 1, 2007. Police officers with less than 20 years of creditable service receive an allowance equal to 2% of AFC times years of creditable service. AFC is defined as the annual earnable compensation during the 12 consecutive calendar months affording the highest average.

ACTUARIAL SECTION

Summary of Plan Provisions, continued

- (E) Correctional officers and deputy sheriffs with 20 or more years of creditable service receive an allowance equal to 2.5% of AFC times years of creditable service up to 20 years plus 2% of AFC for each year of creditable service in excess of 20 years; and if retired after July 1, 2020, receive an allowance equal to 3% of AFC for each year of creditable service in excess of 25 years. Correctional officers and deputy sheriffs hired prior to July 1, 2007, with less than 20 years of creditable service receive the same benefit as a general employee. Correctional officers and deputy sheriffs hired on or after July 1, 2007, with 25 years of creditable service receive an allowance equal to 1.43% of AFC times the number of years of creditable service.
- (F) Judges of the Orphans' Court: Any person who becomes an Orphan Court Judge and was in office on or after January 1, 2022, receive an allowance equal to 4.0% of their AFC times the number of years of creditable service, not exceeding twenty four years.

Ordinary Disability Retirement Allowance

- (A) General employees, correctional officers and deputy sheriffs hired prior to July 1, 2007, receive an ordinary disability retirement allowance equal to 1.82% of AFC times the number of years of creditable service earned prior to July 1, 2007 and 1.43% for creditable service earned on or after July 1, 2007. General employees, correctional officers and deputy sheriffs hired on or after July 1, 2007, receive a retirement allowance equal to 1.43% of AFC times the number of years of creditable service. The minimum allowance is equal to 25% of AFC. The maximum allowance is equal to one-third of the members AFC. No member may receive a benefit in excess of that which they would have received at normal service retirement age. General employees, correctional officers and deputy sheriffs who are eligible for a normal service retirement and apply for an ordinary disability retirement may be required by the Board to accept a normal service retirement.
- (B) Firefighters and police officers receive an ordinary disability retirement allowance equal to 2.5% of AFC times the number of years of creditable service not in excess of 20 years, and 2% of AFC times the number of years of creditable service in excess of 20 years. The minimum retirement allowance for firefighters and police officers for an ordinary disability retirement allowance shall equal 50% of AFC. No member may receive a benefit in excess of that which they would have received at normal service retirement age.

RETIREMENT ALLOWANCE OPTIONS

Members may select the maximum retirement allowance or one of seven optional survivorship allowances. The selection of an option, excluding *Option 7*, reduces the maximum allowance. The options are as follows:

- Option 1.* Allows the member's undistributed accumulated contributions to be paid to the beneficiary in a lump sum if the member's death occurs prior to the complete payout of all member contributions.
- Option 2.* Allows 100% of the member's retirement allowance to continue to be paid to the beneficiary after the member's death.
- Option 3.* Allows 50% of the member's retirement allowance to continue to be paid to the beneficiary after the member's death.
- Option 4.* Allows any portion of the retirement allowance to continue to be paid to the beneficiary after the member's death.
- Option 5.* Allows 100% of the member's reduced retirement allowance to be paid to the beneficiary after the member's death. If the member becomes divorced from the beneficiary or the beneficiary dies before the retiree, upon notification to the Board of Trustees, the member's allowance will be increased to the maximum allowance described above. If after such death or divorce, the member wishes to select a new beneficiary and retirement option, the member may select *options 2, 3, 4, 5 or 6*. The retirement allowance will then be recomputed.

ACTUARIAL SECTION

Summary of Plan Provisions, continued

RETIREMENT ALLOWANCE OPTIONS, continued

Option 6. Allows 50% of the member's reduced retirement allowance to be paid to the beneficiary after the member's death. If the member becomes divorced from the beneficiary or the beneficiary dies before the retiree, upon notification to the Board of Trustees, the member's allowance will be increased to the maximum allowance described above. If after such death or divorce, the member wishes to select a new beneficiary and retirement option, the member may select *options 2, 3, 4, 5 or 6*. The retirement allowance will then be recomputed.

Option 7. Allows 50% of the member's retirement allowance to continue to be paid to the original beneficiary at no cost to the employee. This option is available to employees who have completed at least 25 years of actual service as a sworn Baltimore County Police Officer on Pay Schedule VII or 25 years of actual service as a sworn Baltimore County firefighter. Police Officers on Pay Schedule IV are eligible for this option upon 25 years of creditable service. If after such death or divorce, the member wishes to select a new beneficiary and retirement option, the member may select *options 2, 3, 4, 5 or 6*. The retirement allowance will then be recomputed.

DEFERRED RETIREMENT OPTION PLAN (DROP)

Police Officers and Firefighters DROP (hired prior to July 1, 2007) – Plan A

The County has adopted a Back DROP for police officers with at least 27 years of service and firefighters with at least 32 years of service, under which eligible active members may elect to receive a lump sum payment with a 6% bonus at retirement in exchange for a reduced monthly benefit for life. Election to participate in the DROP will be made at retirement. The DROP participant benefit will be calculated along with all other available options, and the member will then choose between the DROP benefit and the regular pension benefits provided by the County. The DROP participant monthly pension will be determined as of a date that is 3, 3½, 4, 4½ or 5 years prior to retirement date based on the plan provisions, the member's salary and service at that earlier date. The lump sum payment will be based on the accumulation of member contributions, monthly pension payments, interest earned in the DROP at the greater of the rate of return on the actuarial value of assets minus 50 basis points or the regular rate of interest (currently 5%), and any retiree COLAs after at least twelve months in the DROP. This program became effective with retirements that occurred on or after July 1, 2004.

Police Officers and Firefighters DROP (hired after June 30, 2007) – Plan B

The County adopted a Back Drop, for Police Officers and Firefighters hired after June 30, 2007. Only a three-year DROP is allowed. Police officers must attain twenty-eight years of creditable service to be eligible for the DROP. Firefighters must attain thirty-three years of creditable service to be eligible for the DROP. DROP benefit is calculated based on the actual accrual. DROP allowance payments and member contributions are credited with 5% interest annually, after the first year in the DROP.

Correctional Officers and Deputy Sheriffs Deferred Retirement Option Plan (DROP)

Effective July 1, 2010, a Back-DROP is offered to eligible correctional officers and deputy sheriffs hired prior to July 1, 2007. The Back-DROP program allows eligible correctional officers and deputy sheriffs to elect to receive a lump sum payment at retirement in exchange for a reduced monthly benefit. The DROP period is 3, 3½, 4, 4½ or 5 years prior to retirement date based on the plan provisions, the member's salary and service at that earlier date. Eligibility is based on at least 27 years of service. The lump sum payment will be based on the accumulation of member contributions, monthly pension payments, interest earned in the DROP period at the regular rate of interest (currently 5%), and any retiree COLAs after at least twelve months in the DROP. Correctional officers and deputy sheriffs hired on or after July 1, 2007 are not eligible to participate in the DROP.

ACTUARIAL SECTION

Summary of Plan Provisions, continued

General Employees Deferred Retirement Option Plan (DROP)

Effective July 1, 2007, General employees hired prior to July 1, 2007, are offered a Forward DROP. The DROP allows eligible general employees to elect to receive a lump sum payment at retirement in exchange for a reduced monthly benefit. The DROP period is a minimum of 5 years and a maximum of 10 years. Eligibility is age 55 plus a total of age and service of at least 85. The DROP account will include benefit payments at the maximum option, employee contributions, interest earned in the DROP period at the regular rate of interest (currently 5%), plus any cost-of-living increase granted to retirees, provided the member has been in the DROP for at least 12 months and a one-time credit of unused sick time earned while in the DROP over the member's benefit basis times the member's average final compensation. This program is effective for retirements that occur on or after July 1, 2012. General employees hired on or after July 1, 2007 are not eligible to participate in the DROP.

DEATH BENEFITS

Ordinary Death Benefit is granted as a result of a member's death from non-occupational causes as follows:

- (A) A general employee's designated beneficiary or estate receives a lump sum payment of the member's contributions plus interest. Additionally, after five years of creditable service, the member's designated beneficiary or estate may receive a one-time payment equal to 100% of the member's annual earnable compensation. If the member was eligible for a service retirement or had 15 years of creditable service at the time of death, the surviving spouse or surviving minor children, if designated as the beneficiary, may receive a retirement allowance, in lieu of other benefit payments, based on service years equivalent to *Option 2*.
- (B) A firefighter's or police officer's designated beneficiary or estate receives a lump sum payment consisting of the member's accumulated contributions plus interest. Additionally, after one year of creditable service, the member's designated beneficiary or estate may receive a one-time payment equal to 100% of the member's annual earnable compensation. If the firefighter or police officer had two years of creditable service, a surviving dependent family member, if designated as the beneficiary, may receive an allowance equal to 25% of AFC in lieu of another benefit. If the firefighter or police officer had 15 years of creditable service or was eligible for a service retirement, the surviving spouse or surviving minor children, if designated as the beneficiary, may receive a retirement allowance in lieu of other benefit payments based on the service years equivalent to *Option 2*.

Accidental Death Benefit is granted as the result of death from an occupational related injury as follows:

- (A) The dependent beneficiary of a general employee may receive an allowance equal to $66\frac{2}{3}\%$ of AFC plus the annuity.
- (B) The dependent beneficiary of a firefighter or police officer may receive an allowance equal to 100% of the annual earnable compensation at the time of death plus the annuity.

TERMINATION BENEFITS

Employees hired prior to July 1, 2007, with 5 or more years of creditable service have the option of requesting a refund of their contributions and interest or remain in the System. If such member terminates employment or dies in service, with less than 5 years creditable service, the employee contributions plus interest are refundable to the former member or a designated beneficiary.

Employees hired on or after July 1, 2007, with 10 or more years of creditable service have the option of requesting a refund of their contributions and interest or remain in the System. If such member terminates employment or dies in service, with less than 10 years creditable service, the employee contributions plus interest are refundable to the former member or a designated beneficiary.

ACTUARIAL SECTION

Summary of Plan Provisions, continued

POST-RETIREMENT ALLOWANCE INCREASES

Retirement allowance increases can be granted each July 1 if sufficient investment income has accumulated in the Post-Retirement Increase Fund balance account. Increases will be granted in an amount equal to the Consumer Price Index - All Urban Consumers (CPI-U) increase for the previous calendar year. The increase cannot exceed 3%. If there are insufficient funds in the Post-Retirement Increase Fund balance account to finance the full CPI increase, the allowance will be increased to the nearest ¼% for which there are sufficient moneys. If there are insufficient funds to finance a one percent increase, no retirement allowance increase shall be granted. Effective July 1, 2010 the following changes regarding COLAs were implemented:

- Members retired prior to July 1, 2010 are eligible to receive a COLA.
- Active members hired prior to July 1, 2007 and retired after July 1, 2010, must have at least 20 years of creditable service to be eligible for post-retirement COLAs.
- Active members hired on or after July 1, 2007 must have at least twenty five (25) years of creditable service to be eligible for post-retirement COLAs.
- The cap on post-retirement COLAs is 3% for all members.
- The maximum account balance in the PRIF is 2 times the cost of a 3% COLA for all members.
- For active members who do not select the Deferred Retirement Option Program (DROP), the eligibility period to receive post-retirement COLAs is a minimum of 60 months.
- For active members who select the DROP program, the eligibility period to receive COLAs in the DROP is a minimum of 12 months. Once the member actually retires, the eligibility period for a post-retirement COLA is a minimum of 48 months.

Changes to Plan Provisions

LEGISLATIVE AND ADMINISTRATIVE CHANGES

On June 8, 2023, the County Council approved Bill No. 34-23, effective July 1 2023, for the purpose of establishing provisions relating to the pensions of correctional officers on Pay Schedule I-C; allowing such officers an option to elect the Option 7 benefit, a 50% spousal benefit; eliminating the requirement that all county employees must pass a physical examination to become eligible to join the Employees' Retirement System; modifying a Special Personnel Rule to correct an obsolete reference to "official physicians for the county employees' retirement system"; authorizing certain beneficiaries to return to active service if the beneficiary is employed by the board of education under certain circumstances; and generally relating to the Employees' Retirement System.

Any person who becomes an employee on or after July 1, 2023 shall become a member of the retirement system as a condition of employment, but with no requirement to pass a physical examination.

The County Council passed Bill 34-23, effective July 1, 2023, allowing Correctional Officers on Pay Schedule 1-C an option to elect a 50% spousal benefit. The Bill also required a 1% increase to the member contribution rate for Correctional Officers on Pay Schedule 1-C effective July 1, 2023.

Beginning July 1, 2023, the rate of contribution for a Pay Schedule I-C, hired prior to July 1, 2011 is 9.5 percent. Beginning July 1, 2023, the rate of contribution for correctional officers on Pay Schedule I-C who began service on or after July 1, 2011 is 11 percent.

ACTUARIAL SECTION

Changes to Plan Provisions, continued

LEGISLATIVE AND ADMINISTRATIVE CHANGES, continued

Effective July 1, 2026, a Pay Schedule I-C Correctional Officer member who has completed at least twenty-five (25) years of creditable service will be entitled to elect the option 7 benefit, provided the member meets the 36-month contribution requirement to pay for the option 7 benefit. A Pay Schedule I-C correctional officer member who retires between July 1, 2023 and June 30, 2026 may purchase the option 7 benefit by paying a post-tax lump-sum equivalent of the additional 1% contributions for the period of time between their retirement effective date and July 1, 2026 based on the member's base salary at the time of retirement. The lump sum payment must be made on or before the member's retirement effective date.

A Pay Schedule I-C Correctional Officer who retires on or after July 1, 2023 and selects both the drop and the Option 7 benefit may recoup some of the additional contributions for the option 7 benefit in the member's drop account. In order to meet the 36-month contribution requirement to pay for the option 7 benefit, those members who select both the drop and the option 7 benefit must pay a post-tax lump-sum equivalent of the additional 1% contributions to cover the portion of the 36-month requirement that was included in the member's drop benefit. The lump sum payment must be made prior to the member's retirement effective date and will not be included in the member's drop account.

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***STATISTICAL
SECTION***

STATISTICAL SECTION

Summary

The purpose of the Statistical Section is to provide financial statement users with a historical perspective, context and detail to assist the reader to better understand and assess the System's overall economic condition. The data presented is intended to provide users with a broader and more complete understanding of the System than is possible from the information presented in the Financial Section alone.

The schedules within the Statistical Section are classified into the following categories.

Financial Trends

The schedules on Pages 105 through 107 show financial trend information to help the reader understand how the System's financial position has changed over the last 10 years. The schedules presented are:

- Schedule of Changes in Fiduciary Net Position
- Schedule of Benefit and Refund Deductions from Fiduciary Net Position by Type

Other Information

The schedules beginning on Page 108 provide information to assist the reader to understand the retired member characteristics and the participating employer composition of the System. The schedules presented are:

- Retirees and Beneficiaries - Distribution to Members by Type of Retirement
- Retirees and Beneficiaries - Distribution to Members by Option Selected
- Schedule of Average Benefit Payments
- Schedule of Participating Employers

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STATISTICAL SECTION

Schedule of Changes in Fiduciary Net Position – The System For the Ten Years Ended June 30 (Expressed in thousands)

Fiscal Year	ADDITIONS				DEDUCTIONS				Changes in Net Position
	Member Contributions	Employer Contributions	Total Net Investment Income	Total Additions to Fiduciary Net Position	Benefit Payments	Refunds of Contribution	Administrative Expenses	Total Deductions from Fiduciary Net Position	
2014	\$37,844	\$80,454	\$327,264	\$445,562	\$225,668	\$3,166	\$1,342	\$230,176	\$215,386
2015	39,725	108,191	23,027	170,943	244,314	3,540	1,682	249,536	(78,593)
2016	40,812	105,742	(26,404)	120,150	249,016	4,143	1,647	254,806	(134,656)
2017	43,244	268,156	330,745	642,145	272,659	5,128	2,393	280,180	361,965
2018	45,697	128,896	212,476	387,069	280,832	4,798	1,272	286,902	100,167
2019	48,198	138,200	112,089	298,487	283,317	7,786	1,125	292,228	6,259
2020	51,193	144,605	7,376	203,174	290,035	7,490	1,382	298,907	(95,733)
2021	52,312	151,903	727,283	931,498	334,290	6,383	1,481	342,154	589,344
2022	52,007	160,572	(331,911)	(119,332)	320,684	10,434	1,393	332,511	(451,843)
2023	56,688	215,571	195,586	467,845	354,432	10,067	1,648	366,147	101,698

Schedule of Changes in Fiduciary Net Position – Plan A For the Ten Years Ended June 30 (Expressed in thousands)

Fiscal Year	ADDITIONS				DEDUCTIONS				Changes in Net Position
	Member Contributions	Employer Contributions	Total Net Investment Income	Total Additions to Fiduciary Net Position	Benefit Payments	Refunds of Contribution	Administrative Expenses	Total Deductions from Fiduciary Net Position	
2014	\$29,860	\$80,127	\$323,620	\$433,607	\$225,668	\$1,770	\$1,326	\$228,764	\$204,843
2015	29,463	106,912	22,648	159,023	244,314	1,760	1,651	247,725	(88,702)
2016	28,491	104,306	(25,912)	106,885	248,972	1,543	1,608	252,123	(145,238)
2017	28,445	265,277	321,773	615,495	272,576	2,402	2,350	277,328	338,167
2018	28,504	123,028	206,107	357,639	280,704	1,539	1,223	283,466	74,173
2019	28,564	131,510	106,590	266,664	283,043	2,459	1,071	286,573	(19,909)
2020	29,377	140,583	6,742	176,702	289,646	1,761	1,313	292,720	(116,018)
2021	27,914	147,818	684,298	860,030	333,711	2,523	1,382	337,616	522,414
2022	25,987	154,751	(306,985)	(126,247)	319,629	1,767	1,286	322,682	(448,929)
2023	25,069	208,800	179,160	413,029	353,132	1,526	1,503	356,161	56,868

———— STATISTICAL SECTION ————

Schedule of Changes in Fiduciary Net Position – Plan B
For the Ten Years Ended June 30
(Expressed in thousands)

Fiscal Year	ADDITIONS				DEDUCTIONS				Changes in Net Position
	Member Contributions	Employer Contributions	Total Net Investment Income	Total Additions to Fiduciary Net Position	Benefit Payments	Refunds of Contribution	Administrative Expenses	Total Deductions from Fiduciary Net Position	
2014	\$7,984	\$327	\$3,644	\$11,955	-	\$1,396	\$16	\$1,412	\$10,543
2015	10,262	1,279	379	11,920	-	1,780	31	1,811	10,109
2016	12,321	1,436	(492)	13,265	\$44	2,600	39	2,683	10,582
2017	14,799	2,879	8,972	26,650	83	2,726	43	2,852	23,798
2018	17,193	5,868	6,369	29,430	128	3,259	49	3,436	25,994
2019	19,634	6,690	5,499	31,823	274	5,327	54	5,655	26,168
2020	21,816	4,022	634	26,472	389	5,729	69	6,187	20,285
2021	24,398	4,085	42,985	71,468	579	3,860	99	4,538	66,930
2022	26,020	5,821	(24,926)	6,915	1,055	8,667	107	9,829	(2,914)
2023	31,619	6,771	16,426	54,816	1,300	8,541	145	9,986	44,830

Schedule of Benefit and Refund Deductions from Fiduciary Net Position by Type –The System
For the Ten Years Ended June 30
(Expressed in thousands)

Year Ending June 30	Age & Service Benefits		Disability Benefits			Death Benefits	Total Benefits	Refunds		Total Refunds
			Retirees		Beneficiaries			Separation	Death	
	Retirees	Beneficiaries	Occupational	Non-Occupational						
2014	\$195,613	\$4,820	\$16,453	\$5,881	\$765	\$2,136	\$225,668	\$2,861	\$305	\$3,166
2015	211,893	7,030	16,205	5,780	1,133	2,273	244,314	3,458	82	3,540
2016	219,035	5,933	15,247	5,578	874	2,349	249,016	3,964	179	4,143
2017	242,309	6,624	14,775	5,437	935	2,579	272,659	4,324	804	5,128
2018	249,856	7,351	14,509	5,421	907	2,788	280,832	4,515	283	4,798
2019	251,024	8,217	14,520	5,492	835	3,229	283,317	7,465	321	7,786
2020	257,808	8,788	13,956	5,393	864	3,226	290,035	6,870	620	7,490
2021	302,823	9,217	13,163	5,046	909	3,131	334,289	5,595	788	6,383
2022	287,620	10,506	13,182	5,057	1,000	3,319	320,684	9,513	921	10,434
2023	319,909	11,926	12,983	5,020	1,079	3,514	354,431	9,318	749	10,067

STATISTICAL SECTION

Schedule of Benefit and Refund Deductions from Fiduciary Net Position by Type – Plan A For the Ten Years Ended June 30 (Expressed in thousands)

Year Ending June 30	Age & Service Benefits		Disability Benefits			Death Benefits	Total Benefits	Refunds		Total Refunds
			Retirees		Beneficiaries			Separation	Death	
	Retirees	Beneficiaries	Occupational	Non-Occupational						
2014	\$195,613	\$4,820	\$16,453	\$5,881	\$765	\$2,136	\$225,668	\$1,409	\$360	\$1,769
2015	211,893	7,030	16,205	5,780	1,133	2,273	244,314	1,685	75	1,760
2016	218,991	5,933	15,247	5,578	874	2,349	248,972	1,396	147	1,543
2017	242,226	6,624	14,775	5,437	935	2,579	272,576	1,598	804	2,402
2018	249,728	7,351	14,509	5,421	907	2,788	280,704	1,297	242	1,539
2019	250,843	8,217	14,515	5,492	835	3,141	283,043	2,183	276	2,459
2020	257,541	8,788	13,939	5,372	852	3,154	289,646	1,191	570	1,761
2021	302,385	9,217	13,144	5,035	878	3,052	333,710	1,829	694	2,523
2022	286,994	10,506	13,011	5,028	969	3,122	319,629	1,071	696	1,767
2023	319,027	11,926	12,796	4,961	1,048	3,374	353,132	1,026	500	1,526

Schedule of Benefit and Refund Deductions from Fiduciary Net Position by Type – Plan B For the Ten Years Ended June 30 (Expressed in thousands)

Year Ending June 30	Age & Service Benefits		Disability Benefits			Death Benefits	Total Benefits	Refunds		Total Refunds
			Retirees		Beneficiaries			Separation	Death	
	Retirees	Beneficiaries	Occupational	Non-Occupational						
2014	-	-	-	-	-	-	-	\$1,343	\$54	\$1,397
2015	-	-	-	-	-	-	-	1,774	6	1,780
2016	\$44	-	-	-	-	-	\$44	2,568	32	2,600
2017	83	-	-	-	-	-	83	2,726	-	2,726
2018	128	-	-	-	-	-	128	3,218	41	3,259
2019	181	-	\$5	-	-	\$88	274	5,282	45	5,327
2020	268	-	17	\$21	\$11	72	389	5,679	50	5,729
2021	439	-	19	11	31	79	579	3,766	94	3,860
2022	626	-	171	29	31	197	1,055	8,442	225	8,667
2023	882	-	187	59	32	140	1,300	8,292	249	8,541

STATISTICAL SECTION

Retirees and Beneficiaries - Distribution of Members by Type of Retirement The System Fiscal Year Ended June 30, 2023

Amount of Monthly Benefit	Number of Retirees	Type of Retirement			
		Service Retiree	Accidental Disability	Ordinary Disability	Beneficiary
Under \$300	340	261	1	-	78
\$300 - \$599	689	528	31	2	128
\$600 - \$899	677	505	66	3	103
\$900 - \$1,199	610	473	56	2	79
\$1,200 - \$1,499	494	367	38	6	83
\$1,500 - \$1,799	490	363	29	23	75
\$1,800 - \$2,099	495	377	37	31	50
\$2,100 - \$2,399	481	376	17	50	38
\$2,400 - \$2,699	548	446	6	61	35
\$2,700 - \$2,999	488	403	9	56	20
\$3,000 and over	3,277	3,029	11	151	86
Totals	8,589	7,128	301	385	775

Retirees and Beneficiaries - Distribution of Members by Type of Retirement Plan A Fiscal Year Ended June 30, 2023

Amount of Monthly Benefit	Number of Retirees	Type of Retirement			
		Service Retiree	Accidental Disability	Ordinary Disability	Beneficiary
Under \$300	339	260	1	-	78
\$300 - \$599	654	495	30	2	127
\$600 - \$899	650	483	63	1	103
\$900 - \$1,199	601	467	55	2	77
\$1,200 - \$1,499	487	362	37	6	82
\$1,500 - \$1,799	486	359	29	23	75
\$1,800 - \$2,099	494	377	37	30	50
\$2,100 - \$2,399	478	374	17	50	37
\$2,400 - \$2,699	546	445	6	60	35
\$2,700 - \$2,999	487	402	9	56	20
\$3,000 and over	3,271	3,028	11	147	85
Totals	8,493	7,052	295	377	769

————— STATISTICAL SECTION —————

Retirees and Beneficiaries - Distribution of Members by Type of Retirement, continued
Plan B
 Fiscal Year Ended June 30, 2023

Amount of Monthly Benefit	Number of Retirees	Type of Retirement			
		Service Retiree	Accidental Disability	Ordinary Disability	Beneficiary
Under \$300	1	1	-	-	-
\$300 - \$599	35	33	1	-	1
\$600 - \$899	27	22	3	2	-
\$900 - \$1,199	9	6	1	-	2
\$1,200 - \$1,499	7	5	1	-	1
\$1,500 - \$1,799	4	4	-	-	-
\$1,800 - \$2,099	1	-	-	1	-
\$2,100 - \$2,399	3	2	-	-	1
\$2,400 - \$2,699	2	1	-	1	-
\$2,700 - \$2,999	1	1	-	-	-
\$3,000 and over	6	1	-	4	1
Totals	96	76	6	8	6

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STATISTICAL SECTION

Retirees and Beneficiaries - Distribution to Members by Option Selected The System Fiscal Year Ended June 30, 2023

Amount of Monthly Benefit	Number of Retirees	Option Selected*							
		M	1	2	3	4	5	6	7
Under \$300	340	178	107	17	4	-	22	12	-
\$300 - \$599	689	293	241	41	18	-	57	39	-
\$600 - \$899	677	330	213	39	20	-	40	35	-
\$900 - \$1,199	610	271	178	39	19	3	53	47	-
\$1,200 - \$1,499	494	203	152	33	17	2	39	48	-
\$1,500 - \$1,799	490	223	115	35	17	4	45	51	-
\$1,800 - \$2,099	495	223	121	27	18	5	44	57	-
\$2,100 - \$2,399	481	204	112	33	23	10	52	47	-
\$2,400 - \$2,699	548	232	121	41	19	20	55	60	-
\$2,700 - \$2,999	488	206	92	31	12	16	54	77	-
\$3,000 and over	3,277	823	490	129	101	143	170	276	1,145
Totals	8,589	3,186	1,942	465	268	203	631	749	1,145

Retirees and Beneficiaries - Distribution to Members by Option Selected Plan A Fiscal Year Ended June 30, 2023

Amount of Monthly Benefit	Number of Retirees	Option Selected*							
		M	1	2	3	4	5	6	7
Under \$300	339	177	107	17	4	-	22	12	-
\$300 - \$599	654	279	231	35	17	-	55	37	-
\$600 - \$899	650	319	208	32	20	-	38	33	-
\$900 - \$1,199	601	265	177	37	19	3	53	47	-
\$1,200 - \$1,499	487	199	150	33	16	2	39	48	-
\$1,500 - \$1,799	486	223	115	33	17	4	44	50	-
\$1,800 - \$2,099	494	223	120	27	18	5	44	57	-
\$2,100 - \$2,399	478	202	111	33	23	10	52	47	-
\$2,400 - \$2,699	546	232	120	41	18	20	55	60	-
\$2,700 - \$2,999	487	206	92	31	12	16	53	77	-
\$3,000 and over	3,271	822	485	129	101	143	170	276	1,145
Totals	8,493	3,147	1,916	448	265	203	625	744	1,145

STATISTICAL SECTION

Retirees and Beneficiaries - Distribution to Members by Option Selected, continued Plan B Fiscal Year Ended June 30, 2023

Amount of Monthly Benefit	Number of Retirees	Option Selected*							
		M	1	2	3	4	5	6	7
Under \$300	1	1	-	-	-	-	-	-	-
\$300 - \$599	35	14	10	6	1	-	2	2	-
\$600 - \$899	27	11	5	7	-	-	2	2	-
\$900 - \$1,199	9	6	1	2	-	-	-	-	-
\$1,200 - \$1,499	7	4	2	-	1	-	-	-	-
\$1,500 - \$1,799	4	-	-	2	-	-	1	1	-
\$1,800 - \$2,099	1	-	1	-	-	-	-	-	-
\$2,100 - \$2,399	3	2	1	-	-	-	-	-	-
\$2,400 - \$2,699	2	-	1	-	1	-	-	-	-
\$2,700 - \$2,999	1	-	-	-	-	-	1	-	-
\$3,000 and over	6	1	5	-	-	-	-	-	-
Totals	96	39	26	17	3	-	6	5	-

***Option Selected:**

M = Maximum. At member's death, all payments cease. Surviving beneficiary will receive pro-rated payment for number of days in final month.

Option 1. Guarantees the return of the member's accumulated contributions and interest less the member's accumulated reserves already paid.

Option 2. Guarantees 100% of the member's payment to the designated beneficiary for their lifetime.

Option 3. Guarantees 50% of the member's payment to the designated beneficiary for their lifetime.

Option 4. Guarantees an alternative specified % of the member's payment to the designated beneficiary for their lifetime.

Option 5. Guarantees 100% payment to beneficiary, unless beneficiary divorces or predeceases member. Allowance then pops-up to maximum.

Option 6. Guarantees 50% payment to beneficiary, unless beneficiary divorces or predeceases member. Allowance then pops-up to maximum.

Option 7. Guarantees 50% of the member's payment to the designated beneficiary for their lifetime, at no cost. (*Option 7* is applicable to police and firefighters only with 25 years of creditable service). Allowed to change beneficiary if beneficiary divorces or predeceases member.

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STATISTICAL SECTION

Schedule of Average Benefit Payments The System For the Six Years Ended June 30

Retirement Effective Dates	Years Creditable Service					
	0-10	11-15	16-20	21-25	26-30	31+
July 1, 2017 to June 30, 2018						
Average Monthly Benefit	\$476	\$771	\$1,230	\$2,454	\$3,809	\$5,069
Average - Average Final Compensation	\$41,548	\$47,077	\$50,691	\$66,939	\$82,017	\$98,205
Number of Active Retirees	25	42	51	45	58	130
July 1, 2018 to June 30, 2019						
Average Monthly Benefit	\$1,012	\$1,091	\$1,282	\$2,647	\$4,157	\$5,201
Average - Average Final Compensation	\$48,867	\$57,563	\$55,057	\$72,154	\$86,994	\$96,970
Number of Active Retirees	23	44	34	53	43	119
July 1, 2019 to June 30, 2020						
Average Monthly Benefit	\$348	\$863	\$1,173	\$2,453	\$4,323	\$4,466
Average - Average Final Compensation	\$47,028	\$50,762	\$50,327	\$69,100	\$92,855	\$90,170
Number of Active Retirees	8	33	21	43	28	93
July 1, 2020 to June 30, 2021						
Average Monthly Benefit	\$437	\$994	\$1,323	\$3,009	\$4,517	\$5,410
Average - Average Final Compensation	\$37,022	\$60,900	\$55,948	\$80,205	\$96,735	\$104,905
Number of Active Retirees	7	33	34	69	50	190
July 1, 2021 to June 30, 2022						
Average Monthly Benefit	\$914	\$1,058	\$1,879	\$3,001	\$4,947	\$4,952
Average - Average Final Compensation	\$64,855	\$55,577	\$65,316	\$79,368	\$103,534	\$95,172
Number of Active Retirees	11	50	65	50	71	110
July 1, 2022 to June 30, 2023						
Average Monthly Benefit	\$775	\$1,055	\$2,531	\$3,771	\$5,075	\$5,981
Average - Average Final Compensation	\$49,004	\$57,370	\$78,307	\$93,776	\$107,195	\$110,408
Number of Active Retirees	12	25	51	47	58	117

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STATISTICAL SECTION

Schedule of Average Benefit Payments Plan A For the Six Years Ended June 30

Retirement Effective Dates	Years Creditable Service					
	0-10	11-15	16-20	21-25	26-30	31+
July 1, 2017 to June 30, 2018						
Average Monthly Benefit	\$476	\$796	\$1,262	\$2,444	\$3,809	\$5,069
Average - Average Final Compensation	\$41,548	\$47,891	\$51,055	\$66,877	\$82,017	\$98,205
Number of Active Retirees	25	39	52	44	58	130
July 1, 2018 to June 30, 2019						
Average Monthly Benefit	\$966	\$1,142	\$1,282	\$2,647	\$4,157	\$5,201
Average - Average Final Compensation	\$49,397	\$56,328	\$55,057	\$71,354	\$86,994	\$96,970
Number of Active Retirees	21	38	34	52	43	119
July 1, 2019 to June 30, 2020						
Average Monthly Benefit	\$348	\$834	\$1,173	\$2,453	\$4,323	\$4,466
Average - Average Final Compensation	\$47,028	\$47,869	\$50,327	\$69,100	\$92,855	\$90,170
Number of Active Retirees	8	28	21	43	28	93
July 1, 2020 to June 30, 2021						
Average Monthly Benefit	\$437	\$946	\$1,310	\$3,009	\$4,517	\$5,410
Average - Average Final Compensation	\$37,022	\$55,489	\$54,293	\$80,205	\$96,735	\$104,905
Number of Active Retirees	7	16	33	69	50	190
July 1, 2021 to June 30, 2022						
Average Monthly Benefit	\$625	\$1,287	\$1,887	\$3,001	\$4,947	\$4,952
Average - Average Final Compensation	\$59,885	\$60,513	\$65,209	\$79,368	\$103,534	\$95,172
Number of Active Retirees	7	31	64	50	71	110
July 1, 2022 to June 30, 2023						
Average Monthly Benefit	\$560	\$1,464	\$2,569	\$3,771	\$5,075	\$5,487
Average - Average Final Compensation	\$48,936	\$67,024	\$78,307	\$93,776	\$107,195	\$108,647
Number of Active Retirees	7	8	51	47	58	116

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STATISTICAL SECTION

Schedule of Average Benefit Payments Plan B For the Six Years Ended June 30

Retirement Effective Dates	Years Creditable Service					
	0-10	11-15	16-20	21-25	26-30	31+
July 1, 2017 to June 30, 2018						
Average Monthly Benefit	-	\$445	-	-	-	-
Average - Average Final Compensation	-	\$36,502	-	-	-	-
Number of Active Retirees	-	3	-	-	-	-
July 1, 2018 to June 30, 2019						
Average Monthly Benefit	\$1,489	\$1,036	-	\$2,639	-	-
Average - Average Final Compensation	\$43,302	\$72,297	-	\$113,762	-	-
Number of Active Retirees	2	6	-	1	-	-
July 1, 2019 to June 30, 2020						
Average Monthly Benefit	-	\$1,029	-	-	-	-
Average - Average Final Compensation	-	\$66,961	-	-	-	-
Number of Active Retirees	-	5	-	-	-	-
July 1, 2020 to June 30, 2021						
Average Monthly Benefit	-	\$1,039	\$1,731	-	-	-
Average - Average Final Compensation	-	\$65,993	\$110,547	-	-	-
Number of Active Retirees	-	17	1	-	-	-
July 1, 2021 to June 30, 2022						
Average Monthly Benefit	\$1,420	\$935	\$1,424	-	-	-
Average - Average Final Compensation	\$73,553	\$59,324	\$72,142	-	-	-
Number of Active Retirees	4	19	1	-	-	-
July 1, 2022 to June 30, 2023						
Average Monthly Benefit	\$1,077	\$1,009	-	-	-	\$4,395
Average - Average Final Compensation	\$49,098	\$52,828	-	-	-	\$104,188
Number of Active Retirees	5	17	-	-	-	1

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STATISTICAL SECTION

Schedule of Participating Employers

Current Year and Nine Years ago

Participating Government Employers	The System			The System		
	FY 2023			FY 2014		
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
Baltimore County, Maryland	6,686	1	70.96%	6,573	1	72.06%
<u>Certain employees of:</u>						
Board of Education	2,490	2	26.43%	2,312	2	25.35%
Community College	162	3	1.72%	150	3	1.64%
Revenue Authority	58	4	0.61%	51	4	0.56%
Board of Library Trustees	26	5	0.28%	36	5	0.39%
Total	9,422		100.00%	9,122		100.00%

Participating Government Employers	Plan A			Plan A		
	FY 2023			FY 2014		
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
Baltimore County, Maryland	2,435	1	78.27%	4,752	1	74.85%
<u>Certain employees of:</u>						
Board of Education	628	2	20.19%	1,470	2	23.15%
Community College	22	3	0.71%	75	3	1.18%
Revenue Authority	20	4	0.64%	32	4	0.50%
Board of Library Trustees	6	5	0.19%	20	5	0.32%
Total	3,111		100.00%	6,349		100.00%

Participating Government Employers	Plan B			Plan B		
	FY 2023			FY 2014		
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
Baltimore County, Maryland	4,251	1	67.36%	1,821	1	65.67%
<u>Certain employees of:</u>						
Board of Education	1,862	2	29.50%	842	2	30.36%
Community College	140	3	2.22%	75	3	2.70%
Revenue Authority	38	4	0.60%	19	4	0.69%
Board of Library Trustees	20	5	0.32%	16	5	0.58%
Total	6,311		100.00%	2,773		100.00%

Plan A closed to members hired after June 30, 2007. Plan B was created for members hired on or after July 1, 2007.

