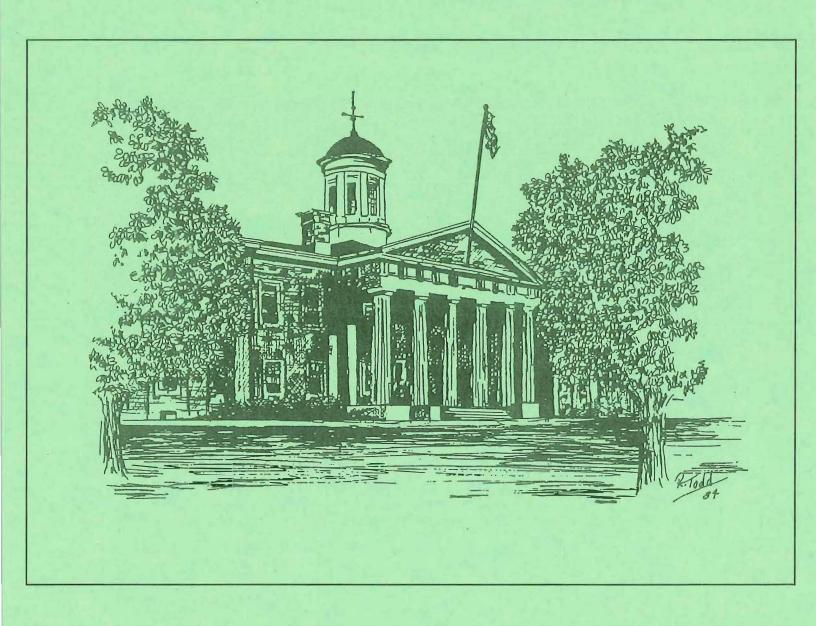
Employees' Retirement System of Baltimore County, Maryland

ANNUAL COMPREHENSIVE FINANCIAL REPORT

A Component Unit of Baltimore County

For the Fiscal Years Ended June 30, 2024 and 2023



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

FOR THE YEARS ENDED JUNE 30, 2024 AND 2023

A COMPONENT UNIT OF BALTIMORE COUNTY, MARYLAND

<u>Prepared By:</u> Office of Budget and Finance



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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, 2023

Christopher P. Morrill

Executive Director/CEO

Introductory Section –

EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY



Letter of Transmittal

December 18, 2024

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, 2024 (FY 2024), 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. 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.

Membership. 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. 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. 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.

Letter of Transmittal, continued

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.

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 10.2% in FY 2024 and 7.3% in FY 2023. The Comparative Balanced Index was 11.4% 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, 2023 was 59.2%.

INVESTMENT STRATEGIES

During FY 2024, the Trustees conducted an annual asset allocation review. As a result of the review, the Board increased domestic equity from 33% to 36%, added 3% to high yield, decreased global asset allocation from 5% to 0% and added Real Assets (to include real estate) with a target of 6%. One new manager was added to fund the high yield mandate, 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 global asset allocation. 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 3, 2024, the County Council approved Bill No. 40-24, effective July 18, 2024, for the purpose of clarifying the circumstance under which a former Council member who is receiving a service retirement allowance is entitled to a recalculation of their service retirement benefit.

On July 1, 2024, the County Council approved Bill No. 44-24, effective July 1, 2024, for the purpose of establishing provisions relating to the pensions of: Deputy Sheriffs on Pay Schedule XIII; and sworn personnel in the Police Department on Pay Schedule IV who are members of the Employees' Retirement System and eligible to receive an accidental disability allowance.

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 page 54 of the Financial Section, and pages 65 through 66 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, 2023. This was the thirtieth 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

Board of Trustees

Michael K. Day, Chairman Elected by retired membership

Retiree Representative Four-year term expires November 30, 2028

Rebecca Young County Executive Designee

Deputy County Administrative Officer

Kevin D. Reed Ex-officio Trustee

Director of Budget and Finance

Renee Coleman Ex-officio Trustee
Director of Human Resources

Robert McCullough Ex-officio Trustee Chief of Police

Lauren Buckler Ex-officio Trustee

Director of Public Works

John Sibiga Elected by active membership

Employee Representative Four-year term expires November 30, 2028

David Rose Elected by active membership

Employee Representative Four-year term expires November 30, 2028

Ed Crawford Appointed by County Council

County Council Appointee Four-year term expires June 30, 2027

Fred Hill Appointed by County Council

County Council Appointee Four-year term expires June 30, 2025

Vacant Appointed by County Executive

County Executive Appointee

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

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, California

Cortec Group New York, New York

Genstar Capital San Francisco, California 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, New York

KPS Capital Partners, LP New York, New York

Trive Capital Dallas, Texas

Arlington Capital Partners Bethesda, Maryland

Top Tier Capital Partners San Francisco, California

Investment Managers, continued

Private Debt

Comvest Partners West Palm Beach, Florida

EIG Global Energy Partners Washington, District of Columbia

> Park Square Capital London, England

Siguler Guff New York, New York

Western Technology Investment Portola Valley, California Crescent Capital Group Los Angeles, California

HarbourVest Partners, Inc. Boston, Massachusetts

Riverstone Holdings, LLC New York, New York

PIMCO Newport Beach, California

Newstone Capital Partners Los Angeles, California

Real Estate

ING Clarion New York, New York

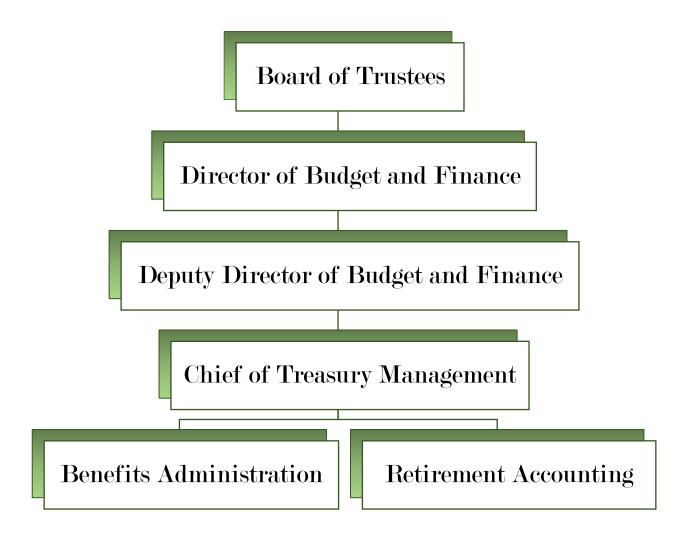
JP Morgan New York, New York

UBS Global Asset Management Hartford, Connecticut

Global Asset Allocation

Bridgewater Westport, Connecticut

Administrative Organizational Chart



^{*}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 page 54 of the Financial Section, and pages 65 through 66 of the Investment Section of this report.



CliftonLarsonAllen LLP CLAconnect.com

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, 2024 and 2023, 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, 2024 and 2023, 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.

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——— 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.

- ${f F}$ INANCIAL ${f S}$ ECTION -

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/consultant 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 December 18, 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

ton Larson Allen LLP

Baltimore, Maryland December 18, 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, 2024 (FY 2024) and June 30, 2023 (FY 2023). 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 2024 and FY 2023 were \$3.098 billion and \$2.937 billion, respectively. This increase was primarily due to the gain in the System's investment portfolio of 10.2%.
- Total contributions for FY 2024 and FY 2023 were \$239.9 million and \$272.3 million, respectively, a decrease of 11.9%. The employer contributions for FY 2024 and FY 2023 were \$179.6 million and \$215.6 million, respectively, a decrease of 16.7%. This decrease was primarily due to an additional \$50 million above the actuarial determined contribution by the County in FY 2023.
- Net investment income of \$282.5 million resulted in a time-weighted, gross of fees return of 10.2% for FY 2024 vs. net investment gain of \$195.6 million for FY 2023 which resulted in a time-weighted, gross of fees return of 7.3%. The Comparative Balanced Index was 11.4% and 9.8% respectively, for the same periods. The investment gains in FY 2024 and FY 2023 were due to positive returns across all asset categories, except for real estate investments.
- Total deductions decreased to \$362.1 in FY 2024 from \$366.1 in FY 2023 or by \$4.0 million, a decrease of 1.1%. The decrease was primarily due to a decrease in benefit payments.
- The System's Total Pension Liability was \$5.5 billion for FY 2024 and \$5.3 billion for FY 2023. The Fiduciary Net Position, as a percentage of Total Pension Liability was 56.59% as of June 30, 2024, and 55.52% as of June 30, 2023.
- Covered payroll was \$703.5 million as of June 30, 2024 and \$660.2 million as of June 30, 2023. The System had a Net Pension Liability of \$2.38 billion for FY 2024, and \$2.35 billion for FY 2023. The Net Pension Liability as a percentage of Covered payroll was 337.7% as of June 30, 2024 and 356.5% as of June 30, 2023.
- 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, 2023, the funded ratio was 59.2%.

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 23) and Statements of Changes in Fiduciary Net Position (Page 24). 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

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 2024 and FY 2023 by \$3.098 billion and \$2.937 billion, respectively. In FY 2024, the net position restricted for pension benefits increased 5.5% or \$160.2 million from FY 2023. In FY 2023, the net position restricted for pension benefits increased 3.6% or \$101.7 million from FY 2022.

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, 2024, 2023 and 2022.

EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY COMBINED FIDUCIARY NET POSITION AS OF JUNE 30, 2024, 2023 AND 2022

(IN THOUSANDS)

THE SYSTEM

	T	Y 2024	I.	Y 2023	E	Y 2022	2024-2023 % Change	2023-2022 % Change
A		1 2024	<u>_</u>	1 2023		1 2022	76 Change	76 Change
Assets								
Cash and short term investments	\$	39,288	\$	55,149	\$	40,611	-28.8%	35.8%
Collateral for loaned securities		4,775		10,157		10,662	-53.0%	-4.7%
Receivables		23,285		35,525		19,203	-34.5%	85.0%
Investments		3,092,984		2,912,226		2,814,846	6.2%	3.5%
Total assets		3,160,332		3,013,057		2,885,322	4.9%	4.4%
Liabilities								
Accounts payable and								
other accrued liabilities		57,949		65,526		38,984	-11.6%	68.1%
Obligations under securities lending		4,775		10,157		10,662	-53.0%	-4.7%
Total liabilities		62,724		75,683		49,646	-17.1%	52.4%
Net position restricted								
for pension benefits	\$	3,097,608	\$	2,937,374	\$	2,835,676	5.5%	3.6%

Management's Discussion and Analysis, continued EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY FIDUCIARY NET POSITION AS OF JUNE 30, 2024, 2023 AND 2022

(IN THOUSANDS)

PLAN A

F	Y 2024	F	Y 2023	F	Y 2022	2024-2023 % Change	2023-2022 % Change
\$	34,034	\$	52,864	\$	37,213	-35.6%	42.1%
	4,270		9,232		9,839	-53.7%	-6.2%
	19,984		31,554		17,066	-36.7%	84.9%
	2,766,002		2,647,077		2,597,592	4.5%	1.9%
	2,824,290	-	2,740,727		2,661,710	3.0%	3.0%
	46,161		54,489		31,733	-15.3%	71.7%
	4,270		9,232		9,839	-53.7%	-6.2%
	50,431		63,721		41,572	-20.9%	53.3%
<u> </u>	2.773.859	<u> </u>	2.677.006	<u> </u>	2.620.138	3.6%	2.2%
	\$	4,270 19,984 2,766,002 2,824,290 46,161 4,270	\$ 34,034 \$ 4,270 19,984 2,766,002 2,824,290 46,161 4,270 50,431	\$ 34,034 \$ 52,864 4,270 9,232 19,984 31,554 2,766,002 2,647,077 2,824,290 2,740,727 46,161 54,489 4,270 9,232 50,431 63,721	\$ 34,034 \$ 52,864 \$ 4,270 9,232 19,984 31,554 2,766,002 2,647,077 2,824,290 2,740,727 46,161 54,489 4,270 9,232 50,431 63,721	\$ 34,034 \$ 52,864 \$ 37,213 4,270 9,232 9,839 19,984 31,554 17,066 2,766,002 2,647,077 2,597,592 2,824,290 2,740,727 2,661,710 46,161 54,489 31,733 4,270 9,232 9,839 50,431 63,721 41,572	FY 2024 FY 2023 FY 2022 % Change \$ 34,034 \$ 52,864 \$ 37,213 -35.6% 4,270 9,232 9,839 -53.7% 19,984 31,554 17,066 -36.7% 2,766,002 2,647,077 2,597,592 4.5% 2,824,290 2,740,727 2,661,710 3.0% 46,161 54,489 31,733 -15.3% 4,270 9,232 9,839 -53.7% 50,431 63,721 41,572 -20.9%

Management's Discussion and Analysis, continued EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY FIDUCIARY NET POSITION AS OF JUNE 30, 2024, 2023 AND 2022

(IN THOUSANDS)

PLAN B

	E	Y 2024	E	Y 2023	E	Y 2022	2024-2023 % Change	2023-2022 % Change
•	<u> </u>	1 2024	<u> </u>	1 2023	<u> </u>	1 2022	76 Change	76 Change
Assets								
Cash and short term investments	\$	5,254	\$	2,285	\$	3,398	129.9%	-32.8%
Collateral for loaned securities		505		925		823	-45.4%	12.4%
Receivables		3,301		3,971		2,137	-16.9%	85.8%
Investments		326,982		265,149		217,254	23.3%	22.0%
Total assets		336,042		272,330		223,612	23.4%	21.8%
Liabilities								
Accounts payable and								
other accrued liabilities		11,788		11,037		7,251	6.8%	52.2%
Obligations under securities lending		505		925		823	-45.4%	12.4%
Total liabilities		12,293		11,962		8,074	2.8%	48.2%
Net position restricted								
for pension benefits	\$	323,749		260,368	\$	215,538	24.3%	20.8%

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, 2024, 2023 AND 2022 (IN THOUSANDS)

THE SYSTEM

	111E 5	LOTEM			
	FY 2024	FY 2023	FY 2022	2024-2023 % Change	2023-2022 % Change
Additions					
Contributions:					
Employer	\$ 179,645	\$ 215,571	\$ 160,572	-16.7%	34.3%
Member	60,220	56,688	52,007	6.2%	9.0%
Total contributions	239,865	272,259	212,579	-11.9%	28.1%
Net investment income (loss)	282,458	195,539	(331,975)	44.5%	158.9%
Net securites lending income	41_	47	64	-12.8%	-26.6%
Total net investment income (loss)	282,499	195,586	(331,911)	44.4%	158.9%
Total additions	522,364	467,845	(119,332)	11.7%	492.1%
Deductions					
Benefits	349,772	354,432	320,684	-1.3%	10.5%
Refunds of Contributions	10,728	10,067	10,434	6.6%	-3.5%
Administrative Expenses	1,630	1,648	1,393	-1.1%	18.3%
Total deductions	362,130	366,147	332,511	-1.1%	10.1%
Net increase (decrease)	160,234	101,698	(451,843)	57.6%	122.5%
Net position restricted					
for pension benefits					
Beginning of year	2,937,374	2,835,676	3,287,519	3.6%	-13.7%
End of year	\$ 3,097,608	\$ 2,937,374	\$ 2,835,676	5.5%	3.6%

Management's Discussion and Analysis, continued

EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY CHANGES IN FIDUCIARY NET POSITION FOR THE FISCAL YEARS ENDED JUNE 30, 2024, 2023 AND 2022 (IN THOUSANDS)

PLAN A

	FY 2024		F	Y 2023	F	Y 2022	2024-2023 % Change	2023-2022 % Change
Additions								
Contributions:								
Employer	\$ 1	68,015	\$	208,800	\$	154,751	-19.5%	34.9%
Member	-	24,611		25,069		25,987	-1.8%	-3.5%
Total contributions	1	92,626		233,869		180,738	-17.6%	29.4%
Net investment income (loss)	2	55,674		179,117		(307,045)	42.7%	158.3%
Net securites lending income		37		43		60	-14.0%	-28.3%
Total net investment income (loss)	2	55,711		179,160		(306,985)	42.7%	158.4%
Total additions	4	48,337		413,029		(126,247)	8.5%	427.2%
Deductions								
Benefits	3	48,072		353,132		319,629	-1.4%	10.5%
Refunds of Contributions		1,930		1,526		1,767	26.5%	-13.6%
Administrative Expenses		1,482		1,503		1,286	-1.4%	16.9%
Total deductions	3	51,484		356,161		322,682	-1.3%	10.4%
Net increase (decrease)		96,853		56,868		(448,929)	70.3%	112.7%
Net position restricted						, ,		
for pension benefits								
Beginning of year		77,006		2,620,138		3,069,067	2.2%	-14.6%
End of year	\$ 2,7	73,859	\$	2,677,006	\$	2,620,138	3.6%	2.2%

Management's Discussion and Analysis, continued

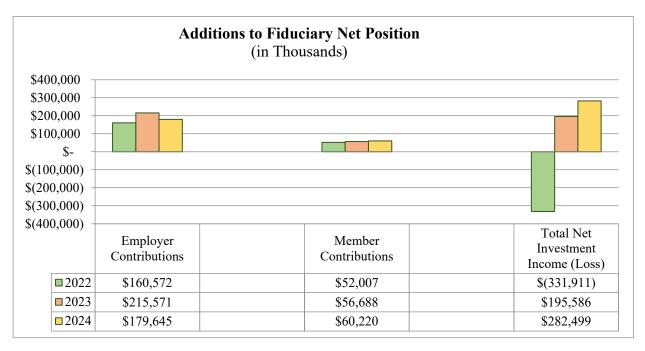
EMPLOYEES' RETIREMENT SYSTEM OF BALTIMORE COUNTY CHANGES IN FIDUCIARY NET POSITION FOR THE FISCAL YEARS ENDED JUNE 30, 2024, 2023 AND 2022 (IN THOUSANDS)

PLAN B

	FY 2024	FY 2023	FY 2022	2024-2023 % Change	2023-2022 % Change
Additions					
Contributions:					
Employer	\$ 11,630	\$ 6,771	\$ 5,821	71.8%	16.3%
Member	35,609	31,619	26,020	12.6%	21.5%
Total contributions	47,239	38,390	31,841	23.1%	20.6%
Net investment income (loss)	26,784	16,422	(24,930)	63.1%	-165.9%
Net securites lending income	4	4	4	0.0%	0.0%
Total net investment income (loss)	26,788	16,426	(24,926)	63.1%	-165.9%
Total additions	74,027	54,816	6,915	35.0%	692.7%
Deductions					
Benefits	1,700	1,300	1,055	30.8%	23.2%
Refunds of contributions	8,798	8,541	8,667	3.0%	-1.5%
Administrative Expenses	148	145	107	2.1%	35.5%
Total deductions	10,646	9,986	9,829	6.6%	1.6%
Net increase (decrease)	63,381	44,830	(2,914)	41.4%	-1638.4%
Net position restricted for pension benefits					
Beginning of year	260,368	215,538	218,452	20.8%	-1.3%
End of year	\$ 323,749	\$ 260,368	\$ 215,538	24.3%	20.8%

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.

For FY 2024 and FY 2023, employer contributions, employee contributions and net investment income were \$522.4 million and \$467.8 million, respectively. This increase was primarily due to an increase in investment income in FY 2024 of 10.2%.

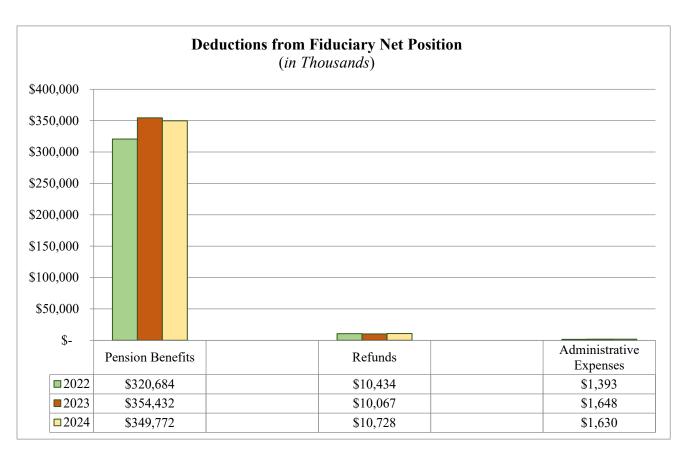
For FY 2023 and FY 2022, employer contributions, employee contributions and net investment income were \$467.8 million and -\$119.3 million, respectively. This increase was primarily due to an increase in investment income of 7.3%.

The overall System portfolio, calculated using a time-weighted rate of return methodology, returned 10.2% and 7.3% gross of fees, for FY 2024 and FY 2023, respectively. All asset categories contributed to these positive returns, except for real estate investments.

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 2024 decreased by 1.1% or \$4.0 million over FY 2023 due to the decrease in benefit payments. Total deductions for FY 2023 increased by 10.1% or \$33.6 million over FY 2022 due to the increase in benefit payments.



RETIREMENT SYSTEM AS A WHOLE

The net position held in trust for pension benefits increased by \$160.2 million in FY 2024 over FY 2023 or 5.5%. Based on the latest actuarial valuation available, the System's funding ratio, as determined by the County's actuary, was 59.2% as of July 1, 2023. 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.

Statements of Fiduciary Net Position As of June 30, 2024 and 2023

(IN THOUSANDS)

	FY 2024				FY 2023			
	Plan A	Plan B	The System	Plan A	Plan B	The System		
Assets:								
Cash and short term investments	\$ 34,034	\$ 5,254	\$ 39,288	\$ 52,864	\$ 2,285	\$ 55,149		
Collateral for loaned securities	4,270	505	4,775	9,232	925	10,157		
Receivables:			_			_		
Accrued interest and								
dividend income	2,644	312	2,956	2,532	254	2,786		
Receivable for investments sold	16,526	1,954	18,480	28,242	2,829	31,071		
Receivables - other	814	1,035	1,849	780	888	1,668		
Total receivables	19,984	3,301	23,285	31,554	3,971	35,525		
Investments, at fair value			_			_		
U.S. Government and								
agency securities	95,978	11,346	107,324	120,848	12,105	132,953		
Municipal Debt	18	2	20	-	-	-		
Foreign debt	24,478	2,894	27,372	18,666	1,870	20,536		
Corporate debt	130,162	15,387	145,549	106,377	10,655	117,032		
Stocks	374,336	44,252	418,588	321,597	32,213	353,810		
Bond mutual funds	426,988	50,476	477,464	407,667	40,835	448,502		
Stock mutual funds	1,073,221	126,871	1,200,092	1,051,509	105,326	1,156,835		
Real estate equity funds	125,699	14,859	140,558	149,955	15,020	164,975		
Private equity funds	301,714	35,667	337,381	269,048	26,950	295,998		
Private debt funds	85,444	10,101	95,545	82,622	8,276	90,898		
Global asset allocation	127,964	15,127	143,091	118,788	11,899	130,687		
Total investments	2,766,002	326,982	3,092,984	2,647,077	265,149	2,912,226		
Total assets	2,824,290	336,042	3,160,332	2,740,727	272,330	3,013,057		
-	2,02.,250	220,0.2	-,100,002		272,000	-,010,007		
Liabilities:								
Investment expenses payable	1,406	142	1,548	1,627	140	1,767		
Refunds payable	56	7,520	7,576	56	6,388	6,444		
Payable for investments								
purchased	33,986	4,018	38,004	44,924	4,500	49,424		
Payable for collateral for			ŕ			•		
loaned securities	4,270	505	4,775	9,232	925	10,157		
Payables - other	10,713	108	10,821	7,882	9	7,891		
Total liabilities	50,431	12,293	62,724	63,721	11,962	75,683		
-		12,275	~-,·-·	55,721	11,702			
Net position restricted								
for pension benefits	\$ 2,773,859	\$ 323,749	\$ 3,097,608	\$ 2,677,006	\$ 260,368	\$ 2,937,374		

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

Statements of Changes in Fiduciary Net Position

For the Years Ended June 30, 2024 and 2023

(IN THOUSANDS)

		F	Y 2024				FY	2023		
	Plan A		Plan B	T	he System	Plan A]	Plan B	TI	he System
Additions										
Contributions:										
Employer	\$ 168,015	\$	11,630	\$	179,645	\$ 208,800	\$	6,771	\$	215,571
Member	 24,611		35,609		60,220	 25,069		31,619		56,688
Total contributions	 192,626		47,239		239,865	 233,869		38,390		272,259
Investment income:										
Change in fair value of investments	224,442		23,533		247,975	150,999		13,887		164,886
Interest and dividends	 46,267		4,911		51,178	43,018		3,974		46,992
	270,709		28,444		299,153	194,017		17,861		211,878
Less: Investment expenses	 (15,035)		(1,660)		(16,695)	(14,900)		(1,439)		(16,339)
Net investment income	255,674		26,784		282,458	179,117		16,422		195,539
Securities lending:										
Securities lending income	379		44		423	353		35		388
Borrower rebates	(322)		(38)		(360)	(289)		(29)		(318)
Agent fees	 (20)		(2)		(22)	(21)		(2)		(23)
Net income from securities lending	 37		4		41_	 43		4		47
Total net investment income	 255,711		26,788		282,499	 179,160		16,426		195,586
Total additions	448,337		74,027		522,364	413,029		54,816		467,845
Deductions										
Benefits	348,072		1,700		349,772	353,132		1,300		354,432
Refunds of contributions	1,930		8,798		10,728	1,526		8,541		10,067
Administrative expenses	 1,482		148		1,630	 1,503		145		1,648
Total deductions	 351,484		10,646		362,130	 356,161		9,986		366,147
Net increase	96,853		63,381		160,234	56,868		44,830		101,698
Net position restricted										
for pension benefits										
Beginning of year	2,677,006		260,368		2,937,374	2,620,138		215,538		2,835,676
End of year	\$ 2,773,859	\$	323,749	\$	3,097,608	\$ 2,677,006	\$	260,368	\$	2,937,374

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

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, 2024 and 2023 System membership consisted of:

Membership Status	Plan - A*	Plan - B	Total
(as of June 30, 2024)	Count	Count	Count
Inactive plan members and beneficiaries currently receiving benefits Inactive plan members entitled, but not yet receiving benefits Active plan members Total	8,551	138	8,689
	356	106	462
	2,856	<u>7,054</u>	<u>9,910</u>
	11,763	<u>_7,298</u>	<u>19,061</u>

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

Membership Status	Plan - A*	Plan - B	Total
(as of June 30, 2023)	Count	Count	Count
Inactive plan members and beneficiaries currently receiving benefits Inactive plan members entitled, but not yet receiving benefits Active plan members Total	8,493	96	8,589
	351	96	447
	3,111	6,311	<u>9,422</u>
	11,955	6,503	<u>18,458</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. Effective July 1, 2022, the County adopted Bill 42-22, a three-year Back DROP (the election is made at date of retirement) for Police Officers and Firefighters hired on or after July 1, 2007, effective with retirements that occur on or after July 1, 2035 for Police Officers and July 1, 2040 for Firefighters.

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.

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 $66^2/_3\%$ 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:

Notes to Financial Statements, continued

Employee Designation Allowance formula for Vested Employees

General employees - Plan A (Hired prior to July 1, 2007)	 1.82% of AFC times the number of years of creditable service for: 30 years of creditable service or Age 65 with 5 years of creditable service or, 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).
General employees – Plan B (Hired on or after July 1, 2007)	1.43% of AFC times the number of years of creditable service.
Appointed Officials	2.5% of AFC times the number of years of creditable service.
Elected Officials	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 after 12 years of service; or not in excess of 70% of member's AFC after 16 years of service. Any former member who retires after January 1, 2025 and receives a retirement allowance, shall have their retirement allowance recalculated if the compensation paid to current members of the County Council is changed. Any former member who served as Chair during their tenure shall have their retirement allowance recalculated based on the change in compensation to the current Chair of the Council.
Firefighters	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.
Correctional Officers	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. If hired prior to July 1, 2007 and age 65 with at least 5 but less than 20 years of creditable service: 1.82% of AFC times the number of years of creditable service. If hired prior to July 1, 2007 and age 60 with less than 20 years of creditable service: 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. If hired on or after July 1, 2007 with less than 25 years of creditable service at retirement: 1.43% of AFC times the number of years of creditable service.
Deputy Sheriffs	 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. If hired prior to July 1, 2007 and at least 5 but less than 20 years of creditable service: 1.82% of AFC times the number of years of creditable service. If hired on or after July 1, 2007 with less than 25 years of creditable service at retirement: 1.82% of AFC times the number of years of creditable service.

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.

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.

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 Increases 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.

Notes to Financial Statements, continued

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. See page 54 of the Financial Section for a listing of Professional and Consultant fees.

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.

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, 2024 and 2023, the balances in the legally required accounts are as follows:

	FY 2024	FY 2023
	(in Thousands)	(in Thousands)
Annuity Savings Fund	\$728,278	\$693,303
Pension Accumulation Fund	2,356,035	2,213,623
Post-Retirement Increase Fund	13,295	30,448
Net Position Held in Trust for Pension Benefits	\$3,097,608	\$2,937,374

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, 2024 and 2023, the carrying amount of cash and cash equivalents was \$39.3 million and \$55.1 million, respectively

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:

- 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, private debt funds, and real assets. 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, 2024 and 2023, 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, 2024 and 2023, are shown below for the broad investment categories:

Asset Class – FY 2024	Allocation Target	Allocation Range
U. S. Equities	36%	26 – 46%
International Equities	17%	9 - 25%
Private Equity	9%	0 - 12%
Private Debt	5%	0 - 10%
Fixed Income	27%	18 - 36%
Real Assets	6%	0 - 10%
Cash and Cash equivalents	<u>0%</u>	0 - 5%
Total	<u>100%</u>	

Asset Class – FY 2023	Allocation Target	Allocation Range
U. S. Equities	33%	27 – 39%
International Equities	17%	11 - 23%
Private Equity	9%	0 - 12%
Private Debt	5%	0 - 10%
Fixed Income	24%	18 - 30%
Real Estate	7%	4 - 10%
Global Asset Allocation	5%	2 - 8%
Cash and Cash equivalents	_0%	0 - 5%
Total	<u>100%</u>	

Notes to Financial Statements, continued

Rate of Return - For the years ended June 30, 2024 and 2023, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 9.80% and 7.06% 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, 2024 and 2023.

Investment Maturities (in Years) FY 2024

(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	\$ 55,939	\$ 96	\$ 14,488	\$ 1,733	\$ 27,453	\$ 12,124	\$ 45
U.S. Agency Securities	51,385	18,179	-	57	420	32,729	-
Municipal debt	20	-	-	-	-	20	-
Corporate debt	145,549	4,122	40,162	30,337	35,619	12,967	22,342
Bond Mutual Funds	477,464	-	45,822	364,225	67,417	-	-
Foreign debt	27,372	16,005	6,540	4,007	668	152	-
Total	\$ 757,729	\$ 38,402	\$ 107,012	\$ 400,359	\$ 131,577	\$ 57,992	\$ 22,387

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

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.

Notes to Financial Statements, continued

As of June 30, 2024 and 2023, the System's fixed income investments had the following credit risk characteristics:

	FY 2024			FY	2023
		Percent of			Percent of
Moody's Ratings	Fair Value	Fixed Income		Fair Value	Fixed Income
or Comparable	(in Thousands)	Investments		(in Thousands)	Investments
AAA	\$ 189,157	25.0%		\$ 156,021	21.7%
AA	35,440	4.7		7,508	1.1
A	18,548	2.5		43,266	6.0
BAA	5,558	0.7		27,483	3.8
BA	199	-		4,379	0.6
В	18	-		978	0.1
CAA	54	-		100	-
CA	37	-		54	-
NR*	508,718	67.1		479,234	66.7
Total	<u>\$ 757,729</u>	100.0%		<u>\$ 719,023</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, 2024 and 2023.

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, 2024 and 2023, 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).

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, 2024 and 2023, and the changes in fair value of such derivative instruments for the year then ended are as follows:

	Changes in Fai	r Value	Fair Value as of June 30, 2024			
	(in Thousan	ıds)	(in Thousands)			
Investment Derivatives:				Notional		
	<u>Classification</u>	Amount	Amount	<u>Value</u>		
Futures	Investment Revenue	\$40	\$40	\$ 22,123		
Options	Investment Revenue	13	(5)	(163)		
Swaps	Investment Revenue	137	236	2,327		
TBA Transactions	Investment Revenue	(61)	18,285	18,285		

	Changes in Fair	Value	Fair Value as of June 30, 2023		
	(in Thousand	ds)	(in Thousands)		
Investment Derivatives:				Notional	
	<u>Classification</u>	<u>Amount</u>	Amount	<u>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	

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, 2024 and 2023 is as follows:

	FY 2024 Fair Value	FY 2023 Fair Value
Currency	(in Thousands)	(in Thousands)
Australian Dollar	\$ 3	\$ 2
Brazil Real	-	9
Canadian Dollar	-	1
Danish Krone	12	76
Euro Currency Unit	521	567
Japanese Yen	3	85
Norwegian Krone	2	3
Pound Sterling	-	4
South African Rand	-	16
Swiss Franc	<u>260</u>	<u>261</u>
Total	<u>\$ 801</u>	<u>\$ 1,024</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, 2024, 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 1 day. The collateral held as of June 30, 2024 and 2023 was \$48.8 million and \$32.9 million, respectively. The fair value of securities on loan as of June 30, 2024 and 2023 totaled \$47.7 million and \$32.2 million, respectively.

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, 2024 and 2023 (in thousands):

FY 2024 Securities Lent for:	Fair Value of Loaned Securities	Collateral Fair Value	Percent Collateralized
Cash Collateral	\$ 4,708	\$ 4,775	101.41%
Non-Cash Collateral	42,941	<u>44,046</u>	102.57%
Total	\$47,649	<u>\$48,821</u>	102.46%

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

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.

Notes to Financial Statements, continued

Investment Valuation - June 30, 2024

(Expressed in thousands)

The following table presents the System's recurring fair value measurements as of June 30, 2024.

INVESTMENT VALUATION - THE SYSTEM

			Fair Value Measurement Using			Using
		•	•	ouoted Prices in		
				tive Markets for	Significant Other	Significant
		D : 17.1	10	dentical Assets	Observable Inputs	Unobservable Inputs
Investments by Fair Value Level		Fair Value		Level 1	Level 2	Level 3
Debt Securities:						
U.S. Government Obligations	\$	55,798	\$	51,555		\$ -
U.S. Securities and Agencies		33,206		-	33,206	-
Municipal debt		20		-	20	-
Corporate debt		145,549		-	142,023	3,526
Foreign debt		27,136		-	18,161	8,975
Total Debt Securities		261,709		51,555	197,653	12,501
Equity Securities:						
Domestic		418,588		418,588	-	-
Total Equity Securities:		418,588		418,588	-	-
Securities Lending Cash Collateral		4,775		4,775	-	<u>-</u>
Investments Derivative Instruments:						_
Futures	\$	40	\$	40	\$ -	\$ -
Options		(5)		(6)	1	-
Swaps		236		-	236	-
TBAs		18,285		-	18,285	-
Total Investments Derivative Instruments	\$	18,556	\$	34	\$ 18,522	\$ -
Total Investments by Fair Value Level	\$	703,628	\$	474,952	\$ 216,175	\$ 12,501
Investments Measured at						
the Net Asset Value (NAV):						
Commingled Fixed Income Funds	\$	477,464				
Commingled Domestic Equity		672,772				
Commingled International Equity		432,889				
Commingled Emerging Market Equity		94,431				
Real Estate Funds		140,558				
Private Equity Funds		337,381				
Private Debt Funds		95,545				
Global Asset Allocation		143,091				
Total Investments Measured at the NAV	\$	2,394,131				
	-	-,,101	•			
Total Investments and Collateral for Loaned Securities	\$	3,097,759				

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 Measurement Using				
Investments by Fair Value Level		Fair Value	Act	uoted Prices in tive Markets for lentical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3		
Debt Securities:	-	raii vaiue		Level I	Level 2	Level 3		
U.S. Government Obligations	\$	52,416	¢	47,756	\$ 4,660	•		
<u> </u>	Ф	,	Ф	47,730		5 -		
U.S. Securities and Agencies		62,826		-	62,826	-		
Municipal debt		_		-	114 702	2 141		
Corporate debt		117,934		-	114,793	3,141		
Foreign debt		20,454		47.756	12,099	8,355		
Total Debt Securities		253,630		47,756	194,378	11,496		
Equity Securities:		252.010		252.010				
Domestic		353,810		353,810	-	-		
Total Equity Securities:		353,810		353,810	-	-		
Securities Lending Cash Collateral		10,157		10,157	_			
Investments Derivative Instruments:		•		· ·				
Futures	\$	46	\$	46	\$ -	\$ -		
Options		(55)		(55)	-	<u>-</u>		
Swaps		339		-	339	_		
TBAs		16,561		_	16,561	_		
Total Investments Derivative Instruments	\$	16,891	\$	(9)		\$ -		
Total Investments by Fair Value Level	\$	634,488	\$	411,714	\$ 211,278	\$ 11,496		
Investments Measured at								
the Net Asset Value (NAV):								
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						

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, 2024.

Investments Measured at the NAV (expressed in thousands)	Fair Value	Strategy Type	Unfunded Commitments	Redemptio n Frequency	Redemption Notice Period
Blackrock Govt. Bond Index Fund	\$ 112,753	Government Bonds	-	Daily	3 day
Blackrock US TIPs Fund	92,538	US Tips and Index Fund	-	Daily	3 days
Guggenheim Investments	67,417	Bank Loans	-	Monthly	21 days
Pacific Asset Management	45,822	Bank Loans	-	Monthly	30 days
Pimco Diversified Income	158,934	Global, High Yield, Emg. Mkt.	-	Daily	1 day
(a) Commingled Fixed Income Funds	477,464			·	•
Benchmark	43,734	Portable Alpha	-	Annually	90 days
Blackrock Russell 1000 Value	73,882	Russell 1000 Value Index	-	Daily	3 days
Blackrock US Equity	555,156	Wilshire 5000 Index	-	Daily	3 days
(b) Commingled Domestic Equity	672,772	•			
Arrowstreet Capital	120,196	MSCI EAFE	-	Daily	1 day
Ativo International Equity Fund	38,249	MSCI World ex USA		Monthly	10 days
Blackrock ACWI Ex-US	79,447	All Country World Ex US Index	-	Daily	5 days
Metis International Small Cap	32,694	International Equity - Small Cap	-	Monthly	30 Days
Silchester International Investors	121,909	MSCI World Ex USA Small Cap	-	Monthly	10 days
Strategic Global Advisors	40,394	MSCI World Ex USA Small Cap	-	Daily	5 days
(c) Commingled International Equity	432,889	•			
Mondrian Emerging Markets	94,431	Emerging Market Equity	-	Monthly	15 days
(d) Commingled Emerging Market Equity	94,431	•			
Clarion Lion	54,125	Core Real Estate	-	Quarterly	90 days
JP Morgan	42,981	Core Real Estate	-	Quarterly	60 days
UBS Real Estate	43,452	Value Added Real Estate	-	Monthly	15 days
(e) Real Estate Funds	140,558	•			
(f) Private Equity Funds	337,381	Private Equity	\$192,623	N/A	N/A
(f) Private Debt Funds	95,545	Private Debt	\$19,486	N/A	N/A
Bridgewater All Weather	143,091	Risk Parity	-	Monthly	5 days
(g) Global Asset Allocation	143,091	•		-	-
Total Investments Measured at NAV	\$2,394,131	• •			

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, 2023.

T A M D A NAV			Unfunded	•	Redemption
Investments Measured at the NAV (expressed in thousands)	Fair Value	Strategy Type	Commitments	n Frequency	Notice Period
(expressed in thousands)	Tail value	Strategy Type	Commitments	Trequency	Terrou
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	448,502	•			
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	614,005	•			
Arrowstreet Capital	101,454	MSCI EAFE	-	Daily	1 day
Ativo International Equity Fund	33,538	MSCI World ex USA		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	437,150	•			
Mondrian Emerging Markets	105,680	Emerging Market Equity	-	Monthly	15 days
(d) Commingled Emerging Market Equity				•	•
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	164,975	•			, , , , , , , , , , , , , , , , , , ,
(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
(1) I III ato Don I alias	70,070	I II at Deut	Ψ20,121	11/11	1 1/1 1
Bridgewater All Weather	130,687	Risk Parity	-	Monthly	5 days
(g) Global Asset Allocation	130,687	•			
Total Investments Measured at NAV	\$2,287,895	:			

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 FY 2024 and FY 2023, 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 FY 2024 and FY 2023, 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 FY 2024 and FY 2023. One of the funds utilize the MSCI EAFE Index, with a daily redemption frequency and a redemption notice period of one day. One of the funds utilize the MSCI World Ex USA Index, with a monthly redemption frequency and a redemption notice period 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 This include investments in one fund in FY 2024 and FY 2023. The fund utilizes an Emerging Market Equity 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.
- (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 FY 2024, the investment consisted of forty-eight private equity funds and fifteen private debt funds. The outstanding commitments for FY 2024 were \$192,623,075 and \$19,486,444, respectively. For FY 2023, the investment consisted of forty-seven private equity funds and fourteen private debt funds. The outstanding commitments were \$164,871,483 and \$26,121,412, respectively. 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 FY 2024 and FY 2023. 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 parties have reached an agreement as to the methodology by which the deficiencies should be calculated and the application of interest, as well as pre-judgment interest. The parties have approved language in a consent order and retained a third-party administrator to manage the payments to class members. The funds (approximately \$4.2 million) to pay the class members is coming out of the retirement fund, and a hearing to confirm the agreement is scheduled for January 2025.

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.

7. 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, 2024 and 2023, the balance of the System's DROP allowance for General employees' was \$34.9 million and \$41.6 million, respectively, and DROP payables were \$7.3 million and \$4.5 million, respectively. These DROP payables are included with "Payables – Other" in the Statement of Fiduciary Net Position.

Notes to Financial Statements, continued

8. Net pension Liability of the System

The components of the net pension liability as of June 30, 2024, were (in thousands):

Components of Net Pension Liability	Plan A	Plan B	Total
Total pension liability The Plan's fiduciary net position The Plan's net pension liability The Plan's net position as a percentage of the total pension liability	\$4,991,896	\$481,539	\$5,473,435
	(2,773,859)	(323,749)	(3,097,608)
	\$2,218,037	\$157,790	\$2,375,827
	55.57%	67.23%	56.59%

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

Actuarial Assumptions

The total pension liability as of June 30, 2024, was determined by an actuarial valuation as of July 1, 2023 rolled forward to June 30, 2024; and 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 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 \$13,294,871 for FY 2024 and \$30,448,072 for FY 2023, 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 2024 and FY 2023, the expected rate of investment return was 6.375% for each year, net of investment expense and gain sharing, and including inflation.

Mortality for FY 2024 & FY 2023: 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.

Notes to Financial Statements, continued

Inflation for FY 2024 & FY 2023: 3.0% per annum

Salary Increase: Representative rates for FY 2024 and FY 2023 are as follows:

	Annual Rates of Salary Increase									
Age Band	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

Marital Status for FY 2024 and FY 2023: 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 FY 2024 and FY 2023: 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	3/4 year
Firefighters including SMC members	1 year
Employees other than Police Officers and Firefighters, excluding SMC members	½ year
Police Officers	½ year

Notes to Financial Statements, continued

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, 2024, and 2023 are summarized in the table below:

Schedule of Long-term Expected Real Rate of Return

	FY 2	2024	FY 20	23
Asset Class	Long-Term Expected Real Rate of Return*	Target Asset Allocation	Long-Term Expected Real Rate of Return*	Target Asset Allocation
Cash	0.83%	0.00%	0.73%	0.00%
Large Cap Equities	3.75	26.00	3.94	24.00
Small/Mid Cap Equities	4.54	10.00	4.74	9.00
International Equities (Unhedged)	3.35	14.00	3.76	14.00
Emerging International Equities	6.40	3.00	6.60	3.00
US TIPS	2.07	3.00	1.66	3.00
Core Bonds	2.35	9.00	1.94	9.00
Core Bonds – Short	2.15	4.00	1.61	4.00
US High Yield Corporate Bonds	4.45	3.00	4.32	0.00
Bank Loans	3.90	3.00	4.02	3.00
Diversified Fixed Income	3.52	5.00	3.30	5.00
Private Debt	6.15	5.00	6.24	5.00
Private Equity	7.27	9.00	7.33	9.00
Real Assets	4.01	6.00	3.54	0.00
Real Estate (Core)	3.68	0.00	3.09	7.00
Global Asset Allocation/Risk Parity	3.86	0.00	3.41	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, 2024 and 2023, respectively. The projection of cash flow used to determine the discount rate assumed that employer contributions will continue to follow the current funding policy.

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 4.21% and 4.13% for FY 2024 and FY 2023, respectively, would be used to discount the benefit payments not covered by the System's fiduciary net position. The 4.21% and 4.13% rate equals the S&P Municipal Bond 20-Year High Grade Rate index at June 30, 2024 and 2023, respectively.

Sensitivity of the net pension liability to changes in the discount rate for FY 2024. 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):

Notes to Financial Statements, continued

FY 2024 Net Pension Liability	1.00% Decrease (5.375%)	Current Discount Rate (6.375%)	1.00% Increase (7.375%)
Plan A - Net Pension Liability Plan B - Net Pension Liability Total	\$2,752,421 	\$2,218,037 	\$1,763,407 <u>81,084</u> <u>\$1,844,491</u>

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 Plan B - Net Pension Liability Total	\$2,757,481	\$2,225,276	\$1,772,854
	<u>207,311</u>	128,281	<u>64,608</u>
	<u>\$2,964,792</u>	\$2,353,557	<u>\$1,837,462</u>

Required Supplementary Information (Unaudited) Schedule of Changes in the Net Pension Liability and Related Ratios <u>THE SYSTEM*</u>

(in Thousands)

						(in	1	nousun	w j											
	FY	7 2 0 2 4]	FY 2023	l	FY 2022		FY 2021	ŀ	Y 2020		FY 2019		FY 2018	F	FY 2017	F	FY 2016	I	Y 2015
To tal pension liability																				
Service cost	\$	101,251	\$	98,867	\$	91,994	\$	93,196	\$	90,335	\$	95,077	\$	110,061	\$	103,827	\$	94,108	\$	88,642
In te re st		332,261		319,689		312,343		303,012		299,754		288,687		276,797		257,478		262,189		258,266
Changes of benefit terms		26,863		75,919		-		3,140		-		3,981		-		-		-		-
Differences between expected and																				
a c tu a l e x p e rie n c e		82,629		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
Bene fit payments, incl. re funds of																				
member contributions	(3	360,500)		(364,498)		(331,118)		(340,673)		(297,525)		(291,103)		(285,630)		(277,787)		(253,159)		(247,854)
Netchange in total pension liability		182,504		192,823		125,051		142,803		69,796		181,563		206,434		300,682		157,103		191,957
Beginning total pension liability	5,	290,931		5,098,108	4	1,973,057	4	4,830,254	4	,760,458		4,578,895		4,372,461	4	4,071,779	3	3,914,676	3	,722,719
Ending total pension liability: (a)	\$ 5,4	473,435	\$	5,290,931	\$	5,098,108	\$ 4	4,973,057	\$ 4	,830,254	\$ -	4,760,458	\$ /	4,578,895	\$ 4	4,372,461	\$ 4	1,071,779	\$ 3	,914,676
Plan fiduciary net position							_						_				_			
Employercontributions	\$	179,645	\$	215,570	\$	160,572	\$	151,903	\$	144,605	\$	138,200	\$	128,896	\$	118,155	\$	105,742	\$	108,191
Employee contributions		60,220		56,688		52,007		52,312		51,193		48,198		45,697		43,244		40,812		39,725
Net in ve stment in come	2	282,499		195,586		(331,911)		727,282		7,376		112,089		212,476		330,746		(26,404)		23,026
Bene fit payments, incl. re funds of																				
member contributions	(3	360,500)		(364,498)		(331,118)		(340,672)		(297,525)		(291,103)		(285,630)		(277,787)		(253,159)		(247,854)
Administrative expense		(1,630)		(1,648)		(1,392)		(1,481)		(1,382)		(1,125)		(1,272)		(2,393)		(1,647)		(1,681)
Other		-		-		-		-		-		-		-		150,000		-		-
Netchange in plan fiduciary net position		160,234		101,698		(451,842)		589,344		(95,733)		6,259		100,167		361,965		(134,656)		(78,593)
Beginning plan fiduciary net position	2,9	937,374	2	2,835,676		3,287,518		2,698,174	2	,793,908		2,787,649	2	2,687,482	2	2,325,517	2	2,460,173	2	,538,766
Ending plan fiduciary net position: (b)	3,0	097,608	2	2,937,374	2	2,835,676		3,287,518	2	2,698,174		2,793,908	- :	2,787,649	2	,687,482	2	2,325,517	2	,460,173
Plan's net pension liability-ending (a) - (b)	\$ 2,3	375,827	\$ 2	2,353,557	\$ 2	2,262,432	\$	1,685,539	\$ 2	2,132,080	\$	1,966,550	\$	1,791,246	\$ 1	1,684,979	\$ 1	,746,262	\$ 1	,454,503
Plan fiduciary net position as a							_						_							
percentage of the total pension liability		56.59%		55.52%		55.62%		66.11%		55.86%		58.69%		60.88%		61.46%		57.11%		62.84%
Cove re d pa yroll	\$	703,456	\$	660,207	\$	630,111	\$	620,691	\$	609,702	\$	588,645	\$	572,829	\$	569,281	\$	540,702	\$	519,380
System's net pension liability as a																				
percentage of covered payroll	3	337.74%		356.49%		359.05%		271.56%		349.69%		334.08%		312.70%		295.98%		322.96%		280.05%
Expected a verage remaining service years	3																			
of all partic ipants		5.15		5.15		6		6		6		6		6		6		6		6
457	or					1.5		11 100												

^{*}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.

Required Supplementary Information (Unaudited) Schedule of Changes in the Net Pension Liability and Related Ratios <u>PLAN A*</u>

(in Thousands)

			(u	i inousano	1S)					
	FY 2024	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015
Total pension liability										_
Service cost	\$ 56,668	\$ 59,483	\$ 58,363	\$ 62,293	\$ 64,213	\$ 70,490	\$ 81,996	\$ 80,892	\$ 76,121	\$ 74,949
Interest	304,977	297,768	294,037	288,149	287,573	277,756	267,900	250,988	257,134	253,796
Changes of benefit terms	26,596	62,931	-	2,778	-	3,981	-	-	-	-
Differences between expected and actual										
experience	51,376	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	(350,002)	(354,658)	(321,396)	(336,234)	(291,407)	(285,502)	(282,243)	(274,978)	(250,515)	(246,074)
Net change in total pension liability	89,615	113,564	74,025	88,889	33,362	163,230	169,917	267,766	135,053	184,803
Beginning total pension liability	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
Ending total pension liability: (a)	\$ 4,991,896	\$ 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
Plan fiduciary net position										
Employer contributions	\$ 168,015	\$ 208,800	\$ 154,751	\$ 147,818	\$ 140,583	\$ 131,510	\$ 123,028	\$ 115,276	\$ 104,306	\$ 106,912
Employee contributions	24,611	25,069	25,988	27,914	29,377	28,564	28,504	28,445	28,491	29,463
Net investment income	255,711	179,160	(306,985)	684,297	6,742	106,590	206,107	321,774	(25,912)	22,648
Benefit payments, including refunds of										
member contributions	(350,002)	(354,658)	(321,396)	(336,234)	(291,407)	(285,502)	(282,243)	(274,978)	(250,515)	(246,074)
Administrative expense	(1,482	(1,503)	(1,285)	(1,382)	(1,313)	(1,071)	(1,223)	(2,350)	(1,608)	(1,651)
Other	-	-	-	-	-	-	-	150,000	-	-
Net change in plan fiduciary net position	96,853	56,868	(448,927)	522,413	(116,018)	(19,909)	74,173	338,167	(145,238)	(88,702)
Beginning plan fiduciary net position	2,677,006	2,620,138	3,069,066	2,546,653	2,662,671	2,682,580	2,608,407	2,270,240	2,415,478	2,504,180
Ending plan fiduciary net position: (b)	2,773,859	2,677,006	2,620,139	3,069,066	2,546,653	2,662,671	2,682,580	2,608,407	2,270,240	2,415,478
Plan's net pension liability - ending (a) - (b)	\$ 2,218,037	\$ 2,225,275	\$ 2,168,578	\$ 1,645,626	\$ 2,079,150	\$ 1,929,770	\$ 1,746,631	\$ 1,650,887	\$ 1,721,288	\$ 1,440,997
Plan fiduciary net position as a percentage										
of the total pension liability	55.57%	54.61%	54.71%	65.10%	55.05%	57.98%	60.57%	61.24%	56.88%	62.63%
Covered payroll	\$ 289,767	\$ 294,714	\$ 306,805	\$ 323,333	\$ 337,565	\$ 343,268	\$ 356,014	\$ 380,007	\$ 382,891	\$ 390,353
System's net pension liability as a percentage										
of covered payroll	765.46%	755.06%	706.83%	508.96%	615.93%	562.18%	490.61%	434.44%	449.55%	369.15%
Expected average remaining service years										
of all participants	2	2	2	3	3	3	3	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

(in Thousands)

			(111 1	nousunus	,					
	FY 2024	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015
Total pension liability										
Service cost	\$ 44,583	\$ 39,384	\$ 33,631	\$ 30,903	\$ 26,122	\$ 24,587	\$ 28,065	\$ 22,935	\$ 17,987	\$ 13,693
Interest	27,284	21,921	18,305	14,863	12,181	10,931	8,897	6,490	5,055	4,470
Changes of benefit terms	267	12,988	-	362	-	-	-	-	-	-
Differences between expected and actual										
experience	31,254	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	(10,498)	(9,840)	(9,722)	(4,439)	(6,118)	(5,601)	(3,387)	(2,809)	(2,644)	(1,780)
Net change in total pension liability	92,890	79,259	51,025	53,914	36,434	18,333	36,517	32,916	22,050	7,154
Beginning total pension liability	388,649	309,390	258,365	204,451	168,017	149,684	113,167	80,251	58,201	51,047
Ending total pension liability: (a)	\$481,539	\$388,649	\$309,390	\$258,365	\$204,451	\$168,017	\$149,684	\$113,167	\$ 80,251	\$ 58,201
Plan fiduciary net position										
Employer contributions	\$ 11,630	\$ 6,771	\$ 5,821	\$ 4,085	\$ 4,022	\$ 6,690	\$ 5,868	\$ 2,879	\$ 1,436	\$ 1,279
Employee contributions	35,609	31,619	26,020	24,398	21,816	19,634	17,193	14,799	12,321	10,262
Net investment income	26,788	16,426	(24,926)	42,985	634	5,499	6,369	8,972	(492)	379
Benefit payments, including refunds of										
member contributions	(10,498)	(9,841)	(9,722)	(4,439)	(6,118)	(5,601)	(3,387)	(2,809)	(2,644)	(1,780)
Administrative expense	(148)	(145)	(107)	(98)	(69)	(54)	(49)	(43)	(39)	(31)
Other	-	-	-	-	-	-	-	-	-	-
Net change in plan fiduciary net position	63,381	44,830	(2,914)	66,931	20,285	26,168	25,994	23,798	10,582	10,109
Beginning plan fiduciary net position	260,368	215,538	218,452	151,521	131,237	105,069	79,075	55,277	44,695	34,586
Ending plan fiduciary net position: (b)	323,749	260,368	215,538	218,452	151,521	131,237	105,069	79,075	55,277	44,695
Plan's net pension liability - ending (a) - (b)	\$157,790	\$128,281	\$ 93,852	\$ 39,913	\$ 52,930	\$ 36,780	\$ 44,615	\$ 34,092	\$ 24,974	\$ 13,506
Plan fiduciary net position as a percentage										
of the total pension liability	67.23%	66.99%	69.67%	84.55%	74.11%	78.11%	70.19%	69.87%	68.88%	76.79%
Covered payroll	\$413,689	\$365,493	\$323,306	\$297,358	\$272,137	\$245,377	\$216,815	\$189,274	\$157,811	\$129,027
System's net pension liability as a percentag	je									
of covered payroll	38.14%	35.10%	29.03%	13.42%	19.45%	14.99%	20.58%	18.01%	15.83%	10.47%
Expected average remaining service years										
of all participants	11	11	12	12	12	12	12	12	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

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

THE SYSTEM	FY 2024	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015
Annual money-weighted rate of return, net of investment expenses	9.80%	7.06%	-10.20%	26.96%	0.27%	3.60%	8.10%	13.58%	-1.14%	0.78%

Schedule of Employer Contributions Last 10 Fiscal Years

(in thousands)

			`							
THE SYSTEM	FY 2024	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015
Actuarially Determined Employer Contribution Contributions in relation to the	\$179,645	\$165,570	\$160,572	\$151,903	\$144,605	\$138,200	\$128,896	\$118,155	\$110,561	\$103,372
Actuarially Determined Employer Contribution Contribution Deficiency (Excess)	179,645 \$	215,570 \$ (50,000)	160,572 \$	151,903 \$	144,605 \$ -	138,200 \$ -	128,896 <u>\$</u>	<u>118,155</u> <u>\$</u>	105,742 \$ 4,819	103,372 \$ -
Covered Payroll	\$703,456	\$660,207	\$630,111	\$620,691	\$609,702	\$588,645	\$572,829	\$569,281	\$540,702	\$519,380
Contributions as a Percentage of Covered Payroll	25.54%	32.65%	25.48%	24.47%	23.72%	23.48%	22.50%	20.75%	19.56%	19.90%

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

(in thousands)

PLAN A	FY 2024	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015
Actuarially Determined Employer Contribution Contributions in relation to the	\$168,015	\$158,800	\$154,751	\$147,818	\$140,583	\$131,510	\$123,028	\$115,276	\$109,126	\$102,093
Actuarially Determined Employer Contribution Contribution Deficiency (Excess)	168,015 \$ -	208,800 \$ (50,000)	154,751 \$ -	<u>147,818</u> <u>\$</u>	140,583 \$ -	<u>131,510</u> <u>\$ -</u>	123,028 \$ -	<u>115,276</u> \$ -	104,306 \$ 4,819	102,093 \$ -
Covered Payroll	\$289,767	\$294,714	\$306,805	\$323,333	\$337,565	\$343,268	\$356,014	\$380,007	\$382,891	\$390,353
Contributions as a Percentage of Covered Payroll	57.98%	70.85%	50.44%	45.72%	41.65%	38.31%	34.56%	30.34%	27.24%	26.15%

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

(in thousands)

PLAN B	FY 2024	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016	FY 2015
Actuarially Determined Employer Contribution Contributions in relation to the	\$11,630	\$6,771	\$5,821	\$4,085	\$4,022	\$6,690	\$5,868	\$2,879	\$1,436	\$1,279
Actuarially Determined Employer Contribution Contribution Deficiency (Excess)	<u>11,630</u> <u>\$ -</u>	<u>6,771</u> \$ -	<u>5,821</u> <u>\$ -</u>	4,085 \$ -	<u>4,022</u> <u>\$ -</u>	6,690 \$ -	<u>5,868</u> \$	<u>2,879</u> \$	1,436 \$ -	1,279 \$
Covered Payroll	\$413,689	\$365,493	\$323,306	\$297,358	\$272,137	\$245,377	\$216,815	\$189,274	\$157,811	\$129,027
Contributions as a Percentage of Covered Payroll	2.81%	1.85%	1.80%	1.37%	1.48%	2.73%	2.71%	1.52%	0.91%	0.99%

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, 2022 was contributed in the fiscal year ending June 30, 2024). Additional information as of the latest actuarial valuation follows:

Valuation Date: July 1, 2023

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;

Plan changes are 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.

Actuarial valuations are performed every year.

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

Supplementary Information Schedule of Investment Expenses

For the Years Ended June 30, 2024 and 2023 (in Thousands)

•	FY 2024	FY 2023
Investment managers:		
Domestic equity managers	\$ 2,487	\$ 2,479
International equity managers	1,212	1,134
Emerging Market equity managers	658	765
Fixed income managers	2,361	2,842
Private equity & debt managers	7,056	5,854
Real estate managers	1,656	2,020
Global asset allocation managers	610	589
Total manager fees	16,040	15,683
Investment service fees:		
Custodian fees	307	324
Consultant fees	348	332
Total service fees	655	656
Total investment fees and expenses	\$ 16,695	\$ 16,339

Schedule of Administrative Expenses

For the Years Ended June 30, 2024 and 2023 (in Thousands)

FY 2024 FY 2023 Personal services: \$ Salaries 832 \$ 766 Employee fringe benefits 208 295 Total personal services 1,040 1,061 Professional and Contractual services 512 502 Miscellaneous services: Communication 71 67 Equipment and supplies 11 14 Total miscellaneous services: 78 85

Schedule of Professionals / Consultants Fees

\$ 1,630

\$ 1,648

Total administrative expenses

For the Years Ended June 30, 2024 and 2023 (in Thousands)

_	FY 2	2024	_	FY	2023
Actuary - Korn Ferry	\$	222		\$	265
Auditing – CliftonLarsonAllen, LLP		30			28
Death Audit Research services - PBI		9			9
Data Processing Services - CPAS		122			156
Pension Consultant Services -NEPC & CASI		348			332
Custodian Services - BNYMellon		307			324
Medical – Physician services - various		20			16
Total Professional and Consultant fees	\$	1,058		\$	1,130

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, 2024

Asset Class	Allocation Target	Allocation Range
U. S. Equities	36%	26 – 46%
International Equities	17%	9 - 25%
Private Equity	9%	0 - 12%
Private Debt	5%	0 - 10%
Fixed Income	27%	18 - 36%
Real Assets	6%	0 - 10%
Cash and Cash equivalents	_0%	0 - 5%
Total	<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, a large and representative universe of actual institutional performance results in the industry.

Market Overview

Throughout FY 2024, capital markets were largely focused on unemployment, wage growth, economic strength, and declining inflation in an effort to anticipate when the U.S. Federal Reserve would be in a position to reverse its policy stance and begin lowering its target federal funds interest rate. Between January 1 and June 30, 2024, the S&P 500 had reached over 30 new all-time highs. Equity market gains were largely concentrated within U.S. large cap technology-related stocks and were particularly influenced by artificial intelligence-related companies, such as Nvidia.

US equity markets (as measured by the S&P 500 Index) ended the 12-months of FY 2024 with a return of \pm 24.6%. 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 \pm 10.1%. Developed international equity markets (as measured by the MSCI EAFE Index) ended FY 2024 with a 12-month return of \pm 11.5%. Emerging markets stocks (as measured by the MSCI Emerging Markets Index) outperformed developed non-U.S. equity markets and ended the fiscal year with a positive one-year return of \pm 12.5%.

The headline annual inflation rate continued to decline throughout the year but remained above the U.S. Federal Reserve's target 2.0%. In July 2023, the Federal Reserve raised its target benchmark interest rate to 5.5% and maintained that target rate throughout the remainder of FY 2024. The Bloomberg U.S. Aggregate Index ended the fiscal year with a positive return of +2.6% for the trailing 12-month period ending June 30, 2024. The U.S. high yield bond market (as measured by the Bloomberg US High Yield Index) gained +10.4% over the same period. In real assets, commodities appreciated, with the Bloomberg Commodities Index posting a one-year return of +5.0% and WTI crude oil prices rose 17.2% since June 30, 2023.

Investment Performance

For the fiscal year ended June 30, 2024, the System's investment portfolio returned 9.8% (net of fees), including dividends and interest income, unrealized gains and losses.

The System's domestic equity portfolio posted a 17.9% net of fee return over the fiscal year as compared to a 23.1% return of the broad U.S. equity market, as measured by the Russell 3000 Index (allocations to large cap and small cap active managers underperformed). The System's non-US equity portfolio's net of fee return was 12.2%, compared to 11.6% for the international equity benchmark (MSCI ACWI ex- US). The System's domestic fixed income portfolio net of fee return was 5.4%, compared to 2.6% for the broader domestic fixed income benchmark, as measured by the Bloomberg Barclays U.S. Aggregate.

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 10.2% ranked in the 66th percentile of the Universe for the fiscal year. The fair value of the System investments increased from \$2.934 billion on June 30, 2023 to \$3.119 billion on June 30, 2024.

The net returns for various asset classes earned during the fiscal year ending June 30, 2024 are shown in the following table.

	Fiscal Year I	Rate of Return		
Investment Type	Fair Value (in Millions)	Percent of Total	System	Benchmark
U S Equities	\$ 1,103.8	35.5%	17.9%	23.1%
International Equities	433.1	13.9	12.7%	11.5%
Emerging Market Equity	94.4	3.0	10.4%	12.5%
Private Equity	337.4	10.8	5.5%	8.1%
Private Debt	95.5	3.1	6.9%	11.0%
Real Estate	140.6	4.5	-14.7%	-5.5%
Fixed Income	752.6	24.2	5.4%	3.5%
GAA	143.1	4.6	9.2%	11.4%
Cash	<u>11.4</u>	0.4	5.5%	5.4%
Total Fund*	<u>\$3,111.9</u>	<u>100.0</u> %	9.8%	11.4%

^{*}The Total Fund shown above in the amount of \$3,111.9 million includes short-term investments of \$35.5 million accrued interest and dividends receivable of \$3.0 million, receivables for investment sold of \$18.5 million and payables for investment purchased of \$38.0 million. These items are separately reported from "Total Investments" in the Statement of Fiduciary Net Position.

Investment Strategies

During FY 2024, the Trustees conducted an annual asset allocation review. As a result of the review, the Board increased domestic equity from 33% to 36%, added 3% to high yield, decreased global asset allocation from 5% to 0% and added Real Assets (to include real estate) with a target of 6%. One new manager was added to fund the high yield mandate, 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 global asset allocation. 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 36% in U.S. equities, 27% in fixed income investments, 17% in international equities, 9% in private equity, 5% in private debt and 6% in real assets. 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, S&P 500 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.

As of June 2024, the Balanced Index has been comprised of 26% S&P 500; 10% 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% Bloomberg U.S. Corporate High Yield, 3% Credit Suisse Leveraged Loan Index, 5% Credit Suisse High Yield Index (private debt), 9% Private Equity Index (quarter lagged), and 6% Real Assets Custom Index (2/3 NCREIF Property Index, 1/3 FTSE Global Core Infrastructure 50/50 Index.

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)

Rate of Return	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Annualized Rate Over <u>3 Years</u>	Annualized Rate Over <u>5 Years</u>
U.S. Common Stock	4.5%	44.1%	(15.4)%	16.5%	18.2%	5.2%	11.9%
Wilshire 5000 Stock Index	6.5	44.8	(15.5)	19.1	23.0	7.4	13.8
International Common Stock	(6.5)	40.6	(22.2)	13.4	12.8	(0.2)	5.5
MSCI ACWIXUS	(4.8)	35.7	(19.4)	12.7	11.6	0.5	5.5
GAA	2.1	22.2	(13.8)	0.5	9.7	(1.7)	3.5
60% MSCI World / 40% WGBI	4.0	23.0	(15.8)	9.1	11.4	0.8	5.5
Domestic Fixed Income	3.7	5.8	(9.3)	3.4	5.7	(0.3)	1.7
Barclays Universal	7.9	1.1	(10.9)	0.0	3.5	(2.7)	0.1
Emerging Market Debt	(3.6)	8.3	N/A	N/A	N/A	N/A	N/A
JP Morgan GBI – EM Diversified/JP** Morgan EMBI Global Diversified (50/50)*	(2.8)	7.1	N/A	N/A	N/A	N/A	N/A
Real Estate	2.4	7.8	28.5	(15.8)	(13.8)	(2.3)	0.6
NCREIF Property Index	2.7	7.4	21.5	(6.6)	(5.5)	2.3	3.4
Private Investment Composite***	0.3	30.0	26.2	0.9	5.5	10.6	11.9
Cambridge Assoc. Private Equity Index	(4.2)	47.4	27.3	0.6	8.1	11.5	15.0
Total System Portfolio	0.7	27.5	(9.9)	7.3	10.2	2.1	6.5
Comparative Index (Policy Index)	1.3	28.0	(9.8)	9.8	11.4	3.3	7.5
Inflation Rate (CPI)	0.6	5.4	9.1	3.0	3.0	5.0	4.2

Note: Performance is gross of fees.

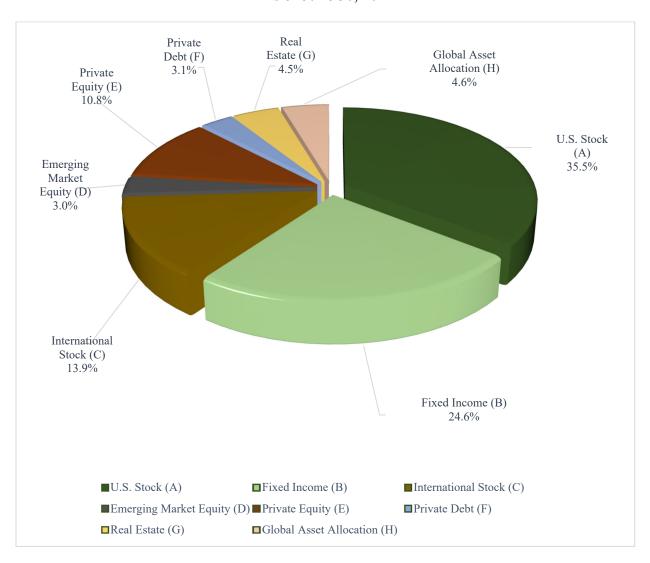
^{*}Benchmark for Emerging Market Debt changed to 50/50 blend in 2021. Liquidated in FY 2022.

^{**100%} JP Morgan GBI-EM Diversified prior to 2021. Liquidated in FY 2022.

^{***} 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, 2024

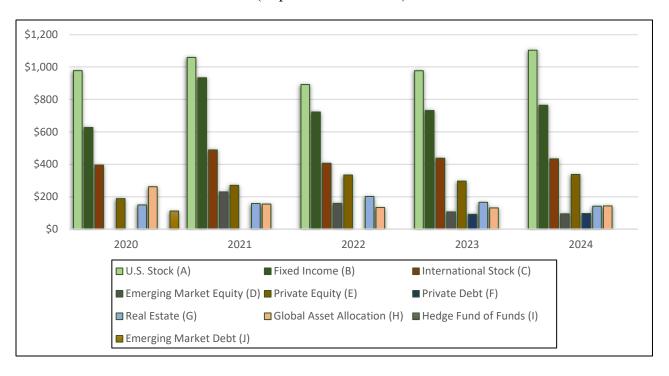


INVESTMENT SECTION

Portfolio Composition by Manager Type

Fair Value of Investments Percent of Total Fund As of June 30, 2020, 2021, 2022, 2023 & 2024

(Expressed in Millions)



Investment Type	202	20	202	:1	202	2	202	3	2024	1
U.S. Stock (A)	\$ 977.9	36.1%	\$1,059.2	32.2%	\$892.2	31.3%	\$977.5	33.3%	\$1,103.8	35.5%
Fixed Income (B)	627.0	23.1	933.7	28.3	722.5	25.3	731.3	24.9	764.0	24.6
International Stock (C)	394.5	14.6	488.6	14.8	405.9	14.3	437.3	14.9	433.1	13.9
Emerging Market Equity (D)	-	-	229.1	7.0	158.5	5.6	105.7	3.6	94.4	3.0
Private Equity (E)	188.0	6.9	269.6	8.2	333.4	11.7	296.0	10.1	337.4	10.8
Private Debt (F)	-	-	-	-	-	-	90.9	3.1	95.5	3.1
Real Estate (G)	148.6	5.5	157.6	4.8	201.1	7.1	165.0	5.6	140.6	4.5
Global Asset Alloc. (H)	261.4	9.7	154.3	4.7	132.8	4.7	130.7	4.5	143.1	4.6
Hedge Fund of Funds (I)	-	-	-	-	-	-	-	-	-	-
Emerging Market Debt (J)	111.7	4.1	-	-	-	-	-	-	-	-
Total	\$2,709.1	100.0%	\$3,292.1	100.0%	\$2,846.4	100.0%	\$2,934.4	100.0%	*\$3,111.9	100.0%

^{*}The Total Fund shown above in the amount of \$3,111.9 million includes short-term investments of \$35.5 million accrued interest and dividends receivable of \$3.0 million, receivables for investment sold of \$18.5 million and payables for investment purchased of \$38.0 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, 2024)

	Ten Largest Equity Holdings (STOCKS)			PAR VALUE/ SHARES	FAIR VALUE
(1)	MICROSOFT, Corp.			19,382	\$8,662,635
(2)	Meta Platforms, Inc.			10,793	5,442,264
(3)	Visa, Inc.			18,651	4,895,202
(4)	Mastercard, Inc.			11,046	4,873,006
(5)	Amazon.Com. Inc.			24,555	4,745,229
(6)	Alphabet, Inc.			24,645	4,520,452
(7)	Berkshire Hathaway, Inc.			10,917	4,441,198
(8)	KKR & Co., Inc.			41,827	4,401,901
(9)	Datadog, Inc.			32,419	4,204,446
(10)	Tyler Technologies, Inc.			8,292	4,168,766
	Ten Largest Fixed Income Holdings	INTEREST	MATURITY	PAR VALUE/	FAIR
	(NOTES & BONDS)	RATE	DATE	SHARES	VALUE
(1)	US Treasury Note	4.500%	04/15/2027	12,736,212	\$12,719,273
(2)	US Treasury Note	1.875	02/15/2032	6,809,236	5,725,342
(3)	Commit to purchase FNMA SF MTG	5.500	08/01/2054	4,795,874	4,735,206
(4)	Commit to purchase FNMA SF MTG	5.000	07/01/2054	4,347,957	4,209,344
(5)	US Treasury Note	4.000	02/15/2034	3,966,097	3,858,259
(6)	US Treasury Note	3.500	02/15/2033	4,053,871	3,806,382
(7)	US Treasury Note	1.125	02/15/2031	3,814,077	3,122,623
(8)	US Treasury Bond	2.500	02/15/2045	3,483,795	2,497,568
(9)	US Treasury Bond	2.250	02/15/2052	3,497,368	2,243,247
(10)	FNMA Pool #OMA4899	1.500	04/01/2052	2,756,351	2,076,359

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

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	INTEREST	MATURITY	PAR VALUE/	FAIR
	(NOTES & BONDS)	RATE	DATE	SHARES	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.

INVESTMENT SECTION -

Schedule of Fees

(Year Ended June 30, 2024) (in Thousands)

	Assets Under	
<u>Investment Services</u>	Management*	Fees
Domestic Equity Managers	\$ 1,103,818	\$ 2,487
International Equity Managers	433,104	1,212
Emerging Market Equity Managers	94,431	658
Fixed Income Managers	752,571	2,361
Private Equity Managers	337,381	4,037
Private Debt Managers	95,544	3,019
Real Estate Managers	140,559	1,656
Global Asset Allocation Managers	143,091	610
Short-Term Investment Manager	11,441	-
Other Investment Service Fees:		
Custodian		307
Investment consultant		348
Total Fund	\$3,111,940	\$16,695

^{*}The Total Fund shown above in the amount of \$3,111,940 thousand includes short-term investments of \$35,528 thousand, accrued interest and dividends receivable of \$2,957 thousand, receivables for investment sold of \$18,476 thousand, and payables for investment purchased of \$38,004 thousand. These items are separately reported from "Total Investments" in the Statement of Fiduciary Net Position.

Schedule of Fees

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

	Assets Under	
Investment Services	Management*	<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.

INVESTMENT SECTION —

Schedule of Commissions

(Year Ended June 30, 2024)

	Number of		
	Shares	Total	Commission
Investment Broker Firms	Traded	Commissions	Per Share
Citigroup Global Markets	10,032	\$25,764	2.568
Raymond James and Associates, Inc.	341,481	11,873	0.035
Stifel Nicolaus	363,920	8,863	0.024
Cowen and Company LLC, Jersey City	228,822	8,817	0.039
Apex Clearing Corporation, Dallas	186,035	7,044	0.038
Loop Capital Markets, New Jersey	259,022	6,906	0.027
Cabrera Capital Markets, Chicago	254,504	6,363	0.025
Williams Capital Group LP, Jersey City	253,324	6,324	0.025
Jefferies & Co. Inc., New York	275,889	6,204	0.022
Pershing LLC, New Jersey	181,675	5,972	0.033
Miscellaneous (Under \$5,000)	2,181,565	64,363	0.030
Total	4,536,269	<u>\$158,493</u>	

Schedule of Commissions

(Year Ended June 30, 2023)

	Number of		
	Shares	Total	Commission
Investment Broker Firms	Traded	Commissions	Per Share
Citigroup Global Markets	5,672	\$19,092	3.366
Raymond James and Associates, Inc.	344,177	11,933	0.035
Stifel Nicolaus	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>	80,378	0.010
Total	13,405,553	<u>\$214,194</u>	

INVESTMENT SECTION —

Investment Summary

(Year Ended June 30, 2024) (in Thousands)

TYPE OF INVESTMENTS	FAIR	% of FAIR
TYPE OF INVESTMENTS	VALUE	VALUE
Fixed Income:	***	4.007
U.S. Government Obligations	\$55,939	1.8%
U.S. Agencies Securities	51,385	1.7
Municipals	20	-
Corporate Bonds	145,549	4.7
Foreign Debt	27,372	0.9
Commingled Fixed Income Funds	477,464	15.4
Total Fixed Income	\$757,729	24.5%
Common Stock:		
Basic Materials	\$7,781	0.3%
Communications	34,371	1.1
Consumer Cyclical	29,658	1.0
Consumer Non-Cyclical	77,780	2.5
Energy	18,510	0.6
Financial	84,187	2.7
Industrial	66,329	2.1
Technology	92,455	3.0
Utilities	7,517	0.2
Total Common Stock	\$418,588	13.5%
Other Investments:		
Commingled Equity Funds – Domestic	\$672,772	21.8%
Commingled Equity Funds - Doniestic Commingled Equity Funds - International	432,889	14.0
Commingled Funds – Emerging Market Equity	94,431	3.1
Real Estate Funds	140,558	4.5
Private Equity Funds	337,381	10.9
Private Debt Funds	95,545	3.1
Global Asset Allocation Funds	143,091	4.6
Total Other Investments	\$1,916,667	62.0%
Total Other Investments	Ψ1,710,007	02.070
Total Investments at fair value	\$3,092,984	100.0%

^{*}Totals may not add due to rounding.

INVESTMENT SECTION —

Investment Summary

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

TYPE OF INVESTMENTS	FAIR VALUE	% of FAIR VALUE*
	VALUE	VALUE
Fixed Income:	452 000	1.00/
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	448,502	15.4
Total Fixed Income	\$719,023	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	6,373	0.2
Total Common Stock	\$353,810	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	130,687	4.5
Total Other Investments	\$1,839,393	63.2%
Total Investments at fair value	\$2,912,226	100.0%

^{*}Totals may not add due to rounding.



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Actuary's Certification Letter

December 5, 2024

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

Re: Actuarial Certification for the June 30, 2024 Financial Report

Members of the Board:

The following sets forth the actuarial information for the June 30, 2024 Annual Comprehensive Financial Report (ACFR) for the Employees' Retirement System of Baltimore County, Maryland. The valuation was conducted as of July 1, 2023 and the results were rolled forward to June 30, 2024 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, 2024
- 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, 2023 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, 2024 is contained in the July 1, 2022 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, 2023 actuarial valuation report contains information that is integral to the results contained herein.

Respectfully submitted, Korn Ferry

Craig R. Graby

Member American Academy of Actuaries

By: Cong M. Alex

Enrolled Actuary No. 23-7319

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:

	Annual Rates of Salary Increase							
Age Band	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.

Summary of Actuarial Assumptions and Methods, continued

Illustrative Rates of Separation from Service:

Sample rates are as follows:

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

Rates are based on the 2023 experience study.

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

		Pl	an A (Membe	ers hired befo	re July 1, 200	7)			Plan B (Members	
	Years of Credited Service									
Age	5-9	10-14	15	20	25	30	35	>=40	Hired after June 30, 2007)	
Under 52	-	-	-	-	-	24.88%	24.88%	24.88%	-%	
52	-	-	-	ı	-	6.22	6.22	6.22	11.05	
53	-	-	-	ı	-	6.22	6.22	6.22	-	
54	-	-	-	ı	-	12.44	10.00	10.00	11.05	
55	-	-	1	13.89%	13.89%	13.00	10.00	10.00	11.05	
56	-	-	1	4.39	4.39	13.00	10.00	10.00	11.05	
57	-	-	1	0.98	0.98	4.33	4.33	4.33	11.05	
58	-	-	1	2.34	2.34	6.50	6.50	6.50	11.05	
59	-	-	1	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.

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

		Pl	an A (Membe	ers hired befo	re July 1, 200	7)			Plan B (Members				
	Years of Credited Service												
Age	5-9	10-16	18	20	25	26	27	>=28	hired after June 30, 2007)				
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.

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

				Plan A (N	1embers hire	d before Jul	ly 1, 2007)					
Years of Credited Service										Plan B (Members		
Age	5-9	10-14	15	20	25	26	27	28	29	30	>=35	hired after June 30, 2007)
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.

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

				Plan A (N	lembers hire	d before Jul	y 1, 2007)					
Years of Credited Service											Plan B	
Age	5-9	10-19	20	22	25	26	27	28	29	30	>=35	(Members Hired after June 30, 2007)
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.

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:

	Annual Rates of Mortality							
	Service P	ensioners	Disability Pensioners					
Age	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

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.

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
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
2024	5	6,728	421,089,632	62,588	0.0	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
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
2024	5	1,582	124,966,330	78,993	3.0	3.0

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

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
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
2024	5	5,146	296,123,303	57,544	0.6	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
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
2024	1	1,746	187,216,687	107,226	4.5	3.0

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

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
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
2024	1	861	113,027,600	131,275	6.9	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
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
2024	1	885	74,189,086	83,829	5.2	3.0

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

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
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
2024	1	1,059	99,275,579	93,745	7.0	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
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
2024	1	328	42,535,836	129,682	10.1	3.0

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

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
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
2024	1	731	56,739,743	77,619	8.2	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
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	66,807	11.4	3.0
2024	1	377	26,317,016	69,806	4.5	3.0

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

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
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
2024	1	85	8,316,885	97,846	13.5	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
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
2024	1	292	18,000,131	61,644	4.3	3.0

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

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
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
2024	5	9,910	733,898,914	74,056	1.8	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
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
2024	5	2,856	288,846,651	101,137	6.2	3.0

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

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
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
2024	5	7,054	445,052,263	63,092	2.3	3.0

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

SCHEDULE OF RETIREE AND BENEFICIARY DATA - THE SYSTEM

Valuation	Added	l to Rolls	Removed	from Rolls	Rolls -	- End of Year	Percent Increase	Average
as of		Annual		Annual		Annual	In Annual	Annual
June 30	Number	Allowances	Number	Allowances	Number	Allowances	Allowances	Allowances
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
2024	368	14,934,710	268	6,314,676	8,689	307,558,073	2.9	35,396

SCHEDULE OF RETIREE AND BENEFICIARY DATA – PLAN A

Valuation	Added	d to Rolls	Removed	l from Rolls	Rolls -	- End of Year	Percent Increase	Average
as of		Annual		Annual		Annual	In Annual	Annual
June 30	Number	Allowances	Number	Allowances	Number	Allowances	Allowances	Allowances
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
2024	325	14,188,635	267	6,240,111	8,551	305,594,811	2.7	35,738

SCHEDULE OF RETIREE AND BENEFICIARY DATA – PLAN B*

Valuation	Added	l to Rolls	Removed	l from Rolls	Rolls -	- End of Year	Percent Increase	Average
as of		Annual		Annual		Annual	In Annual	Annual
June 30	Number	Allowances	Number	Allowances	Number	Allowances	Allowances	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
2024	43	746,075	1	74,565	138	1,963,261	52.0	14,227

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

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
2014	\$3,646,264,535	\$2,517,944,853	69.1%	\$1,128,319,682	\$518,673,476	217.5%
2015(1)	3,834,258,419	2,553,596,803	66.6	1,280,661,616	564,630,904	226.8
2016(2)	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(3)	4,539,007,711	2,847,332,062	62.7	1,691,675,649	609,417,459	277.6
2019(4)	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
2023	5,157,514,820	3,055,352,846	59.2	2,102,161,974	686,341,403	306.3

^{*}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
2014	\$3,607,583,308	\$2,485,014,469	68.9%	\$1,122,568,839	\$391,704,37*	286.6%
2015(1)	3,779,920,718	2,510,144,678	66.4	1,269,776,040	378,831,879	335.2
2016 ⁽²⁾	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(3)	4,405,464,479	2,731,175,964	62.0	1,674,288,515	302,163,507	554.1
2019(4)	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
2023	4,806,162,063	2,784,527,258	57.9	2,021,634,805	284,298,909	711.1

^{*}Estimated

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
2014	\$38,681,227	\$32,930,384	85.1%	\$5,750,843	\$126,969,102*	4.5%
2015(1)	54,337,701	43,452,125	80.0	10,885,576	185,799,025	5.9
2016(2)	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(3)	133,543,232	116,156,098	87.0	17,387,134	307,253,952	5.7
2019(4)	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
2023	351,352,757	270,825,588	77.1	80,527,169	402,042,494	20.0

^{*}Estimated

- (1) Interest rate decreased from 7.00% to 6.75%.
- (2) Interest rate decreased from 6.75% to 6.375%.
- (3) 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.
- (4) 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.

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

		Accrued Liability f	or:			ccrued Liability arial Value of A	
			(C)				
	(A)	(B)	Active				
Valuation	Active	Retirees	Member	Actuarial			
as of	Member	and	Employer	Value of			
June 30	Contribution	Beneficiaries	Financed	Assets	(A)	(B)	(C)
2014	\$490,356,233	\$2,041,957,711	\$1,113,950,591	\$2,517,944,853	100.0%	99.3%	-
2015(1)	513,180,004	2,153,486,824	1,167,591,591	2,553,596,803	100.0	94.7	-
2016(2)	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(3)	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(4)	641,739,832	2,805,580,654	1,360,887,072	2,956,205,387	100.0	82.5	-
2022(5)	648,236,489	2.927,853,258	1,425,467,143	3,009,437,906	100.0	80.6	-
2023	664,923,933	3,076,819,916	1,415,770,971	3,055,352,846	100.0	77.7	-

- (1) Interest rate decreased from 7.00% to 6.75%.
- (2) Interest rate decreased from 6.75% to 6.375%.
- (3) Assumption changes recommended in the 2011-2016 experience study were adopted.
- (4) Actuarial Asset Method change: The Smoothing period was changed from 10 to 5 years.
- (5) Assumption changes recommended in the 2016-2021 experience study were adopted.

Summary of Accrued Liability and Actuarial Value of Assets, continued

Solvency Test, continued

Plan A

		Accrued Liability f	or:			ccrued Liability arial Value of A	
			(C)				
	(A)	(B)	Active				
Valuation	Active	Retirees	Member	Actuarial			
as of	Member	and	Employer	Value of			
June 30	Contribution	Beneficiaries	Financed	Assets	(A)	(B)	(C)
2014	\$461,795,813	\$2,041,957,711	\$1,103,649,784	\$2,485,014,469	100.0%	99.1%	-%
2015(1)	474,797,680	2,153,486,824	1,151,636,214	2,510,144,678	100.0	94.5	-
2016(2)	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(3)	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(4)	493,749,825	2,799,535,162	1,292,797,479	2,759,769,184	100.0	80.9	-
2022 ⁽⁵⁾	484,384,180	2,919,104,400	1,316,676,519	2,780,692,749	100.0	78.7	-
2023	466,964,938	3,063,005,971	1,276,191,154	2,784,527,258	100.0	75.7	-

- (1) Interest rate decreased from 7.00% to 6.75%.
- (2) Interest rate decreased from 6.75% to 6.375%.
- (3) Assumption changes recommended in the 2011-2016 experience study were adopted.
- (4) Actuarial Asset Method change: The Smoothing period was changed from 10 to 5 years.
- (5) Assumption changes recommended in the 2016-2021 experience study were adopted.

Summary of Accrued Liability and Actuarial Value of Assets, continued

Solvency Test, continued

Plan B

		Accrued Liability	for:			ccrued Liability arial Value of A	
			(C)				
	(A)	(B)	Active				
Valuation	Active	Retirees	Member	Actuarial			
as of	Member	and	Employer	Value of			
June 30	Contribution	Beneficiaries	Financed	Assets	(A)	(B)	(C)
2014	\$28,380,420	-	\$10,300,807	\$32,930,384	100.0%	100.0%	44.2%
2015(1)	38,382,323	-	15,955,378	43,452,125	100.0	100.0	31.8
2016(2)	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(3)	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(4)	147,990,007	6,045,492	68,089,593	196,436,203	100.0	100.0	62.3
2022(5)	163,852,309	8,748,858	108,790,624	228,745,157	100.0	100.0	51.6
2023	197,958,996	13,813,945	139,579,816	270,825,588	100.0	100.0	42.3

- (1) Interest rate decreased from 7.00% to 6.75%.
- (2) Interest rate decreased from 6.75% to 6.375%.
- (3) Assumption changes recommended in the 2011-2016 experience study were adopted.
- (4) Actuarial Asset Method change: The Smoothing period was changed from 10 to 5 years.
- (5) Assumption changes recommended in the 2016-2021 experience study were adopted.

Change in Unfunded Accrued Liability

The System

As of July 1, 2023

Reconciliation of Gain (Loss) in the Unfunded Accrued Liability:	Amount
1. Unfunded Accrued Liability (UAL) at July 1, 2023	\$1,941,789,180
2. Interest Charge at 6.375% to July 1, 2024	123,789,060
3. Contributions Toward Unfunded Accrued Liability	138,626,229
4. Expected UAL at July 1, 2023 [(1) + (2) - (3)]	1,926,952,011
5. Projected Unfunded Accrued Liability at July 1, 2024	
(Based on the July 1, 2023 Actuarial Valuation)	2,095,814,703
6. Increase due to Plan Amendments	1,160,275
7. Increase due to Changes in Assumptions	-
8. Increase due to Salary Experience Greater than Assumed	81,026,880
9. Actual (Gain)/Loss [(5) – (4) – (6) – (7) – (8)]	\$86,675,537

Change in Unfunded Accrued Liability

Plan A

As of July 1, 2023

Reconciliation of Gain (Loss) in the Unfunded Accrued Liability:	Amount
1. Unfunded Accrued Liability (UAL) at July 1, 2023	\$1,890,467,316
2. Interest Charge at 6.375% to July 1, 2024	120,517,291
3. Contributions Toward Unfunded Accrued Liability	133,324,688
4. Expected UAL at July 1, 2024 [(1) + (2) - (3)]	1,877,659,919
5. Projected Unfunded Accrued Liability at July 1, 2024	
(Based on the July 1, 2023 Actuarial Valuation)	2,016,170,649
6. Increase due to Plan Amendments	938,103
7. Increase due to Changes in Assumptions	-
8. Increase due to Salary Experience Greater than Assumed	68,515,252
9. Actual (Gain)/Loss [(5) – (4) – (6) – (7) – (8)]	\$69,057,375

Change in Unfunded Accrued Liability – continued

Plan B

As of July 1, 2023

Reconciliation of Gain (Loss) in the Unfunded Accrued Liability:	Amount
1. Unfunded Accrued Liability (UAL) at July 1, 2023	\$51,321,864
2. Interest Charge at 6.375% to July 1, 2024	3,271,769
3. Contributions Toward Unfunded Accrued Liability	5,301,541
4. Expected UAL at July 1, 2023 [(1) + (2) - (3)]	49,292,092
5. Projected Unfunded Accrued Liability at July 1, 2024	
(Based on the July 1, 2023 Actuarial Valuation)	79,644,054
6. Increase due to Plan Amendments	222,172
7. Increase due to Changes in Assumptions	-
8. Increase due to Salary Experience Greater than Assumed	12,511,628
9. Actual (Gain)/Loss [(5) – (4) – (6) – (7) – (8)]	\$17,618,162

Allocation of Amortization Bases

For the Year Ended July 1, 2024

Description	Plan A	Plan B	Total	Amortization Period
2015 Fresh Start Employer Base	\$1,328,572,043	\$11,677,194	\$1,340,249,237	22 Years
2016 (Gain)/Loss	150,821,396	233,013	151,054,409	22Years
2016 Change in Assumptions	12,747,489	5,939,074	18,686,563	22 Years
2017 (Gain)/Loss	205,690,098	9,054,714	214,744,812	22 Years
2017 Change in Measurement Date	(30,122,502)	(477,341)	(30,599,843)	22 Years
2018 (Gain)/Loss	5,027,628	4,001,206	9,028,834	22 Years
2018 Change in Assumptions	33,301,343	(16,843,553)	16,457,790	22 Years
2018 (Gain)/Loss Due to Salary Experience	24,277,588	2,833,974	27,111,562	5 Years
2018 Plan Amendment	3,636,938	0	3,636,938	11 Years
2019 (Gain)/Loss	47,517,525	(3,131,180)	44,386,345	22 Years
2020 Plan Amendment	1,439,619	0	1,439,619	3 Years
2020 Plan Amendment	0	228,392	228,392	7 Years
2020 (Gain)/Loss Due to Salary Experience	29,738,946	2,667,082	32,406,028	7 Years
2020 (Gain)/Loss	2,233,662	4,666,987	6,900,649	22 Years
2021 Plan Amendment	(27,577,502)	(1,962,899)	(29,540,401)	13 Years
2021(Gain)/Loss Due to Salary Experience	30,770,588	3,558,879	34,329,467	8 Years
2021(Gain)/Loss	(9,283,223)	680,095	(8,603,128)	22 Years
2022 Plan Amendment	1,180,654	10,701,024	11,881,678	9 Years
2022 Change in Assumptions	52,182,324	5,545,179	57,727,503	22 Years
2022 (Gain)/Loss Due to Salary Experience	50,060,384	7,232,460	57,292,844	9 Years
2022 (Gain)/Loss	(34,555,079)	2,687,792	(31,867,287)	22 Years
2023 Plan Amendment	938,103	222,172	1,160,275	10 Years
2023 (Gain)/Loss Due to Salary Experience	68,515,252	12,511,628	81,026,880	10 Years
2023 (Gain)/Loss	69,057,375	17,618,162	86,675,537	22 Years
Total	\$2,016,170,649	\$79,644,054	\$2,095,814,703	

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:

		Contribution Rate as a % of Covered Payroll			
Classification	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 1-C	9.50	9.50	11.00	11.00	11.00
Correctional Officers VI	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.

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. 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.

Summary of Plan Provisions, continued

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.

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.

Summary of Plan Provisions, continued

- (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.
- (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. Deputy Sheriffs hired prior to July 1, 2007, or hired after July 1 2007, receive an allowance equal to 1.82% of AFC times the number of years of creditable service. Correctional officers hired prior to July 1, 2007, with 20 years of creditable service receive an allowance equal to 1.82% of AFC times the number of years of creditable service. Correctional officers 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.

Summary of Plan Provisions, continued

RETIREMENT ALLOWANCE OPTIONS, continued

- 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.
- 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. 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.

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 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.

ACTUARIAL SECTION -

Summary of Plan Provisions, continued

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.

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 $66^2/_3\%$ 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.

ACTUARIAL SECTION -

Summary of Plan Provisions, continued

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.

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 1/4% 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.

ACTUARIAL SECTION -

Changes to Plan Provisions

LEGISLATIVE AND ADMINISTRATIVE CHANGES

On July 18, 2024, the County Council approved Bill No. 40-24, for the purpose of clarifying the circumstance under which a former Council member who is receiving a service retirement allowance is entitled to a recalculation of their service retirement benefit.

On July 11, 2024, the County Council approved Bill No. 44-24, effective July 1, 2024, for the purpose of establishing provisions relating to the pensions of: Deputy Sheriffs on Pay Schedule XIII; and sworn personnel in the Police Department on Pay Schedule IV who are members of the Employees' Retirement System and eligible to receive an accidental disability allowance; and generally relating to the Employees' Retirement System.

Beginning July 1, 2024, the rate of contribution for deputy sheriffs on Pay Schedule XIII who began service on or after July 1, 2007 and before July 1, 2011 shall be 10.3%. Beginning July 1, 2024, the rate of contribution for deputy sheriffs on Pay Schedule XIII who began service on or after July 1, 2011 shall be 12.3%.

Beginning July 1, 2024, a member on Pay Schedule XIII who began service prior to July 1, 2007 and who retires with less than 20 years of creditable service shall be entitled to receive a service retirement allowance, consisting of an annuity and a pension which together will provide a benefit of one fifty-fifth (1/55) of the member's average final compensation multiplied by the number of years of creditable service.

Beginning July 1, 2024, a member on Pay Schedule XIII who began service on or after July 1, 2007 and who retires with less than 25 years of creditable service shall be entitled to receive a service retirement allowance, consisting of an annuity and a Pension which together will provide a benefit of one fifty-fifth (1/55) of the member's average final compensation multiplied by the number of years of creditable service.

Beginning July 1, 2024, the minimum retirement allowance for a Police Officer on Pay Schedule IV shall be equal to sixty-six and two-thirds (66 2/3) percent of the member's average final compensation plus one-fiftieth (1/50) of the member's average final compensation multiplied by the number of years of creditable service in excess of twenty-eight and four months.

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 109 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

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

(Expressed in thousands)

		ADDIT	IONS			DED	UCTIONS		
Fiscal Year	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	Changes in Net Position
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
2024	60,220	179,645	282,499	522,364	349,772	10,728	1,630	362,130	160,234

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

(Expressed in thousands)

(Expressed in inousands)												
		ADDIT	IONS				DED	UCTIONS				
Fiscal Year	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	Changes in Net Position		
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		
2024	24,611	168,015	255,711	448,337		348,072	1,930	1,482	351,484	96,853		

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

(Expressed in thousands)

		ADDIT	IONS			DED	UCTIONS		
Fiscal Year	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	Changes in Net Position
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
2024	35,609	11,630	26,788	74,027	1,700	8,798	148	10,646	63,381

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

(Expressed in thousands)

			Ι	Disability Benefit	S					
	Age & Ser	rvice Benefits	Reti	rees				Refunds		
Year Ending June 30	Retirees	Beneficiaries	Occupational	Non- Occupational	Beneficiaries	Death Benefits	Total Benefits	Separation	Death	Total Refunds
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
2024	314,284	12,893	12,934	4,916	1,095	3,650	349,772	9,749	978	10,727

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

(Expressed in thousands)

		i	Ι	Disability Benefit	S					
	Age & Se	rvice Benefits	Reti	rees				Refun	ds	
Year Ending June 30	Retirees	Beneficiaries	Occupational	Non- Occupational	Beneficiaries	Death Benefits	Total Benefits	Separation	Death	Total Refunds
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
2024	313,202	12,893	12,614	4,822	1,063	3,478	348,072	1,064	866	1,930

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

(Expressed in thousands)

			1	Disability Benefit						
	Age & Se	rvice Benefits		rees				Refun	ds	
Year Ending June 30	Retirees	Beneficiaries	Occupational	Non- Occupational	Beneficiaries	Death Benefits	Total Benefits	Separation	Death	Total Refunds
2015	-	-	-	-	-	-	-	\$1,774	\$6	\$1,780
2016	\$44	-	-	-	-	-	\$44	2,568	32	2,600
2017	83	-	-	-	-	-	83	2,726	-	2,726
2018	128	-	-	1	-	-	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
2024	1,082	-	320	94	32	172	1,700	8,685	112	8.797

Retirees and Beneficiaries - Distribution of Members by Type of Retirement The System

Fiscal Year Ended June 30, 2024

		Type of Retirement							
Amount of Monthly Benefit	Number of Retirees	Service Retiree	Accidental Disability	Ordinary Disability	Beneficiary				
Under \$300	328	250	1	-	77				
\$300 - \$599	689	531	31	2	125				
\$600 - \$899	660	498	62	2	98				
\$900 - \$1,199	610	466	59	2	83				
\$1,200 - \$1,499	499	371	37	7	84				
\$1,500 - \$1,799	488	364	28	22	74				
\$1,800 - \$2,099	506	387	35	30	54				
\$2,100 - \$2,399	476	372	16	49	39				
\$2,400 - \$2,699	551	446	6	61	38				
\$2,700 - \$2,999	494	408	9	56	21				
\$3,000 and over	3,388	3,134	10	149	95				
Totals	8,689	7,227	294	380	788				

Retirees and Beneficiaries - Distribution of Members by Type of Retirement Plan A

Fiscal Year Ended June 30, 2024

		Type of Retirement								
Amount of Monthly Benefit	Number of Retirees	Service Retiree	Accidental Disability	Ordinary Disability	Beneficiary					
Under \$300	327	249	1	-	77					
\$300 - \$599	639	483	30	2	124					
\$600 - \$899	626	469	59	-	98					
\$900 - \$1,199	593	455	55	2	81					
\$1,200 - \$1,499	487	362	36	6	83					
\$1,500 - \$1,799	483	359	28	22	74					
\$1,800 - \$2,099	504	386	35	29	54					
\$2,100 - \$2,399	473	370	16	49	38					
\$2,400 - \$2,699	549	445	6	60	38					
\$2,700 - \$2,999	493	407	9	56	21					
\$3,000 and over	3,377	3,130	10	143	94					
Totals	8,551	7,115	285	369	782					

Retirees and Beneficiaries - Distribution of Members by Type of Retirement, continued Plan B

Fiscal Year Ended June 30, 2024

		Type of Retirement								
Amount of Monthly Benefit	Number of Retirees	Service Retiree	Accidental Disability	Ordinary Disability	Beneficiary					
Under \$300	1	1	-	-	-					
\$300 - \$599	50	48	1	-	1					
\$600 - \$899	34	29	3	2	-					
\$900 - \$1,199	17	11	4	-	2					
\$1,200 - \$1,499	12	9	1	1	1					
\$1,500 - \$1,799	5	5	-	-	-					
\$1,800 - \$2,099	2	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	11	4	-	6	1					
Totals	138	112	9	11	6					

Retirees and Beneficiaries - Distribution to Members by Option Selected The System Fiscal Year Ended June 30, 2024

Amount of	Number of				Option S	Selected*			
Monthly Benefit	Retirees	M	1	2	3	4	5	6	7
Under \$300	328	172	103	17	4	-	20	12	-
\$300 - \$599	689	289	245	41	20	-	55	39	-
\$600 - \$899	660	322	205	44	15	1	41	33	-
\$900 - \$1,199	610	270	177	41	19	3	54	46	-
\$1,200 - \$1,499	499	207	148	35	17	2	39	51	-
\$1,500 - \$1,799	488	223	111	35	17	4	49	49	-
\$1,800 - \$2,099	506	224	125	27	20	4	49	57	-
\$2,100 - \$2,399	476	206	110	33	22	9	52	44	-
\$2,400 - \$2,699	551	236	121	39	22	19	55	59	-
\$2,700 - \$2,999	494	201	96	33	14	17	57	76	-
\$3,000 and over	3,388	853	504	139	101	135	188	279	1,189
Totals	8,689	3,203	1,945	465	271	193	659	745	1,189

Retirees and Beneficiaries - Distribution to Members by Option Selected Plan A

Fiscal Year Ended June 30, 2024

Amount of	Number	Option Selected*										
Monthly Benefit	of Retirees	M	1	2	3	4	5	6	7			
Under \$300	327	172	102	17	4	-	20	12	-			
\$300 - \$599	639	269	229	34	17	1	53	37	-			
\$600 - \$899	626	309	199	34	15	1	39	30	-			
\$900 - \$1,199	593	261	173	38	19	3	53	46	-			
\$1,200 - \$1,499	487	201	146	35	16	2	39	48	-			
\$1,500 - \$1,799	483	222	111	33	17	4	48	48	-			
\$1,800 - \$2,099	504	223	124	27	20	4	49	57	-			
\$2,100 - \$2,399	473	204	109	33	22	9	52	44	-			
\$2,400 - \$2,699	549	236	120	39	21	19	55	59	-			
\$2,700 - \$2,999	493	201	96	33	14	17	56	76	-			
\$3,000 and over	3,377	850	499	139	101	134	187	278	1,189			
Totals	8,551	3,148	1,908	462	266	192	651	735	1,189			

Retirees and Beneficiaries - Distribution to Members by Option Selected, continued Plan B

Fiscal Year Ended June 30, 2024

Amount of	Number		Option Selected*										
Monthly Benefit	of Retirees	M	1	2	3	4	5	6	7				
Under \$300	1	-	1	-	-	-	-	-	-				
\$300 - \$599	50	20	16	7	3	-	2	2	-				
\$600 - \$899	34	13	6	10	1	-	2	3	-				
\$900 - \$1,199	17	9	4	3	-	-	1	-	-				
\$1,200 - \$1,499	12	6	2	1	1	-	1	3	-				
\$1,500 - \$1,799	5	1	1	2	1	-	1	1	-				
\$1,800 - \$2,099	2	1	1	1	1	-	1	1	-				
\$2,100 - \$2,399	3	2	1	1	1	-	1	1	-				
\$2,400 - \$2,699	2	1	1	1	1	-	1	1	-				
\$2,700 - \$2,999	1	ı	-	1	1	-	1	1	-				
\$3,000 and over	11	3	5	1	-	1	1	1	-				
Totals	138	55	37	22	5	1	8	10	-				

*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. 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.

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

	Years Creditable Service									
Retirement Effective Dates	0-10	11-15	16-20	21-25	26-30	31+				
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	Ψ1,012	Ψ1,051	Ψ1,202	Ψ2,017	Ψ1,137	ψ5,201				
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 Number of Active Retirees	\$64,855 11	\$55,577 50	\$65,316 65	\$79,368 50	\$103,534 71	\$95,172				
Number of Active Retirees	11	30	03	30	/1	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	#40.004	Ф.5 7. 27 .0	ф до 20 Д	000 776	0107.107	0110 100				
Compensation Number of Active Retirees	\$49,004 12	\$57,370 25	\$78,307 51	\$93,776 47	\$107,195 58	\$110,408 117				
Number of Active Retirees	12	23	31	7/	30	117				
July 1, 2023 to June 30, 2024										
Average Monthly Benefit	\$759	\$1,311	\$2,215	\$3,109	\$5,708	\$5,453				
Average - Average Final	¢ (5, 502	¢((051	Φ 75 5 0 7	#04 2 60	¢116.700	¢107.107				
Compensation Number of Active Retirees	\$65,593 14	\$66,851 18	\$75,597 56	\$84,269 45	\$116,709 74	\$107,106 91				
rumber of Active Retrices	14	10	30	43	/4	71				

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

		Years Creditable Service											
Retirement Effective Dates	0-10	11-15	16-20	21-25	26-30	31+							
July 1, 2018 to June 30, 2019													
Average Monthly Benefit Average - Average Final	\$966	\$1,142	\$1,282	\$2,647	\$4,157	\$5,201							
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 Average - Average Final	\$348	\$834	\$1,173	\$2,453	\$4,323	\$4,466							
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 Average - Average Final	\$437	\$946	\$1,310	\$3,009	\$4,517	\$5,410							
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 Average - Average Final	\$625	\$1,287	\$1,887	\$3,001	\$4,947	\$4,952							
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 Average - Average Final	\$560	\$1,464	\$2,569	\$3,771	\$5,075	\$5,487							
Compensation	\$48,936	\$67,024	\$78,307	\$93,776	\$107,195	\$108,647							
Number of Active Retirees	7	8	51	47	58	116							
July 1, 2023 to June 30, 2024													
Average Monthly Benefit Average - Average Final	\$559	\$1,327	\$2,239	\$2,912	\$5,717	\$5,453							
Compensation	\$90,881	\$64,010	\$75,791	\$80,596	\$115,800	\$107,106							
Number of Active Retirees	1	2	55	44	73	91							

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

	Years Creditable Service									
Retirement Effective Dates	0-10	11-15	16-20	21-25	26-30	31+				
L.L. 1 2019 to L. 20 2010										
July 1, 2018 to June 30, 2019 Average Monthly Benefit	\$1,489	\$1,036	_	\$2,639	_	_				
Average - Average Final	Ψ1,102	Ψ1,050		Ψ2,039						
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		Φ.C.T. 0.0.2	Φ110 54 7							
Compensation Number of Active Retirees	-	\$65,993 17	\$110,547 1	-	-	-				
Number of Active Retirees	-	1 /	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	\$13,333 4	\$39,324 19	\$72,142	-	-	_				
Trained of Field ve Recinees	·	17	•							
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				
July 1, 2023 to June 30, 2024	# 513	#1 200	4000	ф11. 7 01	05.005					
Average Monthly Benefit Average - Average Final	\$513	\$1,309	\$898	\$11,781	\$5,007	-				
Compensation	\$41,217	\$67,206	\$64,950	\$245,897	\$183,038	_				
Number of Active Retirees	13	16	1	1	1	-				

Schedule of Participating Employers

Current Year and Nine Years ago

	The System				The System			
	FY 2024				FY 2015			
	Covered		Percentage of		Covered		Percentage of	
Participating	Employees	Rank	Total System		Employees	Rank	Total System	
Government Employers								
Baltimore County, Maryland	7,032	1	70.96%		6,765	1	71.27%	
Certain employees of:								
Board of Education	2,632	2	26.56%		2,487	2	26.20%	
Community College	158	3	1.59%		157	3	1.65%	
Revenue Authority	59	4	0.61%		58	4	0.61%	
Board of Library Trustees	29	5	0.29%		25	5	0.26%	
Total	9,910		100.00%		9,492		100.00%	

	Plan A				Plan A			
	FY 2024				FY 2015			
	Covered	Percentage of			Covered		Percentage of	
Participating	Employees	Rank	Total System		Employees	Rank	Total System	
Government Employers								
Baltimore County, Maryland	2,237	1	78.33%		4,549	1	75.38%	
Certain employees of:								
Board of Education	575	2	20.13%		1,376	2	22.80%	
Community College	21	3	0.74%		66	3	1.09%	
Revenue Authority	18	4	0.63%		32	4	0.53%	
Board of Library Trustees	5	5	0.18%		12	5	0.20%	
Total	2,856		100.00%		6,035		100.00%	

	Plan B				Plan B			
	FY 2024				FY 2015			
	Covered		Percentage of		Covered		Percentage of	
Participating	Employees	Rank	Total System		Employees	Rank	Total System	
Government Employers								
Baltimore County, Maryland	4,795	1	67.98%		2,216	1	64.10%	
Certain employees of:								
Board of Education	2,057	2	29.16%		1,111	2	32.14%	
Community College	137	3	1.94%		91	3	2.63%	
Revenue Authority	41	4	0.58%		26	4	0.75%	
Board of Library Trustees	24	5	0.34%		13	5	0.38%	
Total	7,054		100.00%		3,457		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.

