



MARYLAND
STATE RETIREMENT
and PENSION SYSTEM

Annual Comprehensive Financial Report

Maryland State Retirement and Pension System
A Pension Trust Fund of the State of Maryland
For the Years Ended June 30, 2023 and 2022

2023

MISSION STATEMENT

The Board of Trustees of the Maryland State Retirement and Pension System (System) is charged with the fiduciary responsibility for administering the survivor, disability and retirement benefits of the System's participants and to ensure that sufficient assets are available to fund the benefits when due. To accomplish this mission the System has established the following key goals:

- To prudently invest System assets in a well diversified manner to optimize long-term returns, while controlling risk through excellence in execution of the investment objectives and strategies of the System.
- To effectively communicate with all retirement plan participants to inform them about the benefits provided by the System, and to educate them about planning and preparing for all aspects of their future retirement.
- To accurately and timely pay retirement allowances provided by State pension law to the System's retirees and their beneficiaries.
- To implement an automated, comprehensive and integrated pension administration and electronic document management system.
- To efficiently collect the required employer and members contributions necessary to fund the System.

Annual Comprehensive Financial Report Maryland State Retirement and Pension System



A Pension Trust Fund of the State of Maryland

For the Fiscal Years Ended June 30, 2023 and 2022

Prepared by:

Maryland State Retirement Agency
120 East Baltimore Street
Baltimore, Maryland 21202

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STATE RETIREMENT AGENCY
120 East Baltimore Street
Baltimore, MD 21202-6700

**MARYLAND
STATE RETIREMENT
and PENSION SYSTEM**

410-625-5555 • 1-800-492-5909
TTY Users: call via Maryland Relay
sra.maryland.gov

December 15, 2023

Dear Members, Retirees and Beneficiaries:

On behalf of the Board of Trustees, we are pleased to present the Annual Comprehensive Financial Report of the Maryland State Retirement and Pension System for the fiscal year that ended June 30, 2023. This report provides information on the financial status of the System during a period when it issued approximately \$396 million in average monthly payments to more than 174,000 retirees and beneficiaries.

The System generated a return of 3.14%, net of fees, for the fiscal year ending June 30, 2023, beating its policy benchmark of 2.20%. The fund's performance raised the System's assets to \$65.2 billion, an increase of nearly \$600 million over the prior fiscal year.

The fiscal year 2023 returns reflect a number of notable market factors: rising interest rates reflecting persistent inflation and a resilient real economy, higher U.S. stock prices despite higher interest rates and pressures on the banking system, weak emerging market stock relative performance reflecting a slower than expected post-pandemic recovery in China and the time delay for private market investments to reflect public market valuation changes.

While the focus will typically be on investment returns, the Board recognizes that the management of risk is equally important in the investment of plan assets. History has shown that returns will vary from year to year, at times by wide margins. The Board has adopted investment policies designed to minimize the downside impact of such volatility on the value of System assets, while still capturing significant value when markets are strong.

Your Retirement System remains administratively and financially sound. As a participant in the System, you can remain confident that your pension benefits are secure. As always, your commitment to and involvement in the concerns of the System are greatly appreciated. We value your input—this is your System. If you have any questions, please do not hesitate to contact us.

Sincerely,

DERECK E. DAVIS
Chairman

BROOKE LIERMAN
Vice Chair

BOARD OF TRUSTEES

Dereck E. Davis, *Chair*
Linda Vaughn Allen
Jamaal R. A. Craddock
James P. Daly, Jr.

Ayana K. English-Brown
Helene Grady
Sheila Hill

Michael J. Howard
Richard E Norman
Mia N. Pittman

Brooke Lierman, *Vice-Chair*
Douglas Prouty
Michelle RhodesBrown
Robert F. Sandlass, Jr.

Martin Noven, *Secretary to the Board*



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Baltimore, MD 21202-6700

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LETTER OF TRANSMITTAL

December 15, 2023

We are pleased to submit the Annual Comprehensive Financial Report for the Maryland State Retirement and Pension System for the fiscal year ended June 30, 2023. We believe this report fairly presents the operating results achieved during this 12-month reporting period.

The System is responsible for properly administering retirement, disability, and death benefits. At the same time, it strives to keep employer contribution rates as reasonable as possible by maximizing investment returns while maintaining an acceptable level of risk. Members covered by the plans include state employees, teachers, law enforcement officers, legislators, judges, as well as local government employees and correctional personnel whose employers have elected to participate in the System.

The System currently provides monthly allowances to more than 174,000 retirees and beneficiaries and is an essential element of the future financial security for more than 198,000 active participating members. Descriptions of the membership requirements and benefits provided by each plan administered by the System are included in the Plan Summary Section starting on page 146.

This Annual Comprehensive Financial Report contains six sections. The Introductory Section provides information about the administrative structure of the System. The Financial Section provides a comprehensive review of the System's financial position, the results of its operations and its funded status. It also contains the report from the System's independent auditor, the combined financial statements, and supplementary financial data. The Investment Section includes a report highlighting the System's investment performance in addition to various summary level portfolio compositions and other investment data. The Actuarial Section contains the independent actuary's report on the results of the System's annual actuarial valuation. The Statistical and Plan Summary Sections provide demographic composition of the System's membership segments affected by each plan and detailed descriptions of the various plans' provisions. In addition to this Letter of Transmittal, additional narrative, overview, and analysis can be found in Management's Discussion and Analysis beginning on page 18.

INVESTMENTS

The System's investment portfolio generated a return of 3.14% net of fees, for the fiscal year ending June 30, 2023, beating its policy benchmark of 2.20%. After the payment of benefits, the market value of assets increased by more than \$580 million from \$64.3 billion on June 30, 2022, to \$64.9 billion on June 30, 2023.

The System's long-term target strategic asset allocation is comprised of 34 percent public equities, 20 percent rate sensitive assets, 16 percent private equities, 9 percent credit/debt strategies, 15 percent real assets, and 6 percent absolute return. The System's portfolio is balanced across several asset and sub-asset classes and is globally diversified. This, coupled with a long-term investment horizon, provides the System with greater protection during short-term market volatility.

FINANCIAL REPORT CONTENT AND STRUCTURE

System management has committed the resources necessary to maintain an internal control structure that provides reasonable assurance that assets are adequately safeguarded, financial records are consistently and accurately maintained, and transactions are properly executed to permit preparation of financial statements in accordance with generally accepted accounting principles. The System's internal control structure includes written policies and procedures and an internal audit division that reports to the Board.

ACCOUNTING SYSTEM AND REPORTS

The System reports its transactions on the accrual basis of accounting. Under this method, revenues are reported in the accounting period they are earned and become measurable, and expenses are reported when the related liability is incurred and measurable. Investments are reported at fair value at fiscal year-end. Investment purchases and sales are reported in the accounting period in which the related trade dates occur.

REVENUES

The reserves necessary to finance retirement allowances and other benefits are accumulated through investment earnings and the collection of employer and member contributions. During fiscal year 2023, investment earnings were \$2.4 billion, while revenues from employer and member contributions were \$2.4 billion and \$964 million, respectively. For fiscal year 2023, member contribution rates on average were seven percent, while employer rates varied depending on the System.

EXPENSES

The System's expenses consist of monthly retirement allowances, refunds of contributions to terminated and transferring members, withdrawing employers, and the administrative cost of System operations. Payments to retirees, beneficiaries and transferring or withdrawing members and employers continued to be the System's primary disbursements during FY 2023, totaling \$4.7 billion. In addition, the System disbursed \$680 million to manage the investment portfolio and to administer the System, of which \$634 million was paid for investment management, portfolio custody, and securities lending services and \$46 million was used to fund the System's administrative operations.

FUNDING

Funds are derived from the excess of additions, which include contributions and investment earnings, over deductions, which are comprised of benefits and administrative expenses. Funds are accumulated to meet future benefit obligations to retirees and beneficiaries. This accumulated balance is referred to as the "fiduciary net position restricted for pensions" in the Statements of Fiduciary Net Position in the Financial Section of this report. The actuarial accrued liability is not disclosed in the basic financial statement but is disclosed in the Schedule of Funding Progress in Other Supplementary Information section to the financial statements along with the actuarial value of assets, which is based on a five-year smoothed expected rate of return, wherein the excess or shortfall of investment income over or under the actuarial assumed income of 6.80 percent is recognized over a five-year period. This is the value of assets used by the actuary in determining contribution rates for the Systems as disclosed in note five to the basic financial statements.

The actuarial accrued liability of the Systems is also determined by the actuary. It is a measure of the present value of actuarial accrued liabilities estimated to be payable in the future to current retirees, beneficiaries and employees for service earned to date. The percentage computed by dividing the actuarial value of net assets available for benefits by the actuarial accrued liability is generally referred to as the "funded ratio." This ratio provides an indication of the funded status of the System on a going-concern basis and generally, the greater this percentage, the stronger the System. The System's funded ratio decreased from 77.2 percent on June 30, 2022, to 75.3 percent on June 30, 2023.

On June 30, 2023, the System's actuarial accrued assets and liability were \$68.0 billion and \$90.3 billion, respectively. The unfunded actuarial accrued liability totaled \$22.3 billion, resulting in a funded status ratio of 75.3 percent. The unfunded actuarial accrued liability is being amortized over a closed 25-year period.

PROFESSIONAL SERVICES

The System contracts for the services of various independent consulting, investment advisory and financial professionals to assist the Board of Trustees in carrying out its fiduciary responsibility to manage the System efficiently and effectively. Actuarial services were provided by Gabriel Roeder Smith & Company and independent financial statement audit services were provided by CliftonLarsenAllen LLP. The System's asset custody and portfolio accounting services were provided by the State Street Bank & Trust Company under a multi-year, master custody arrangement. Meketa Investment Group, Inc. served as the System's general investment consultant. Specialty consulting services were provided by Hamilton Lane for private equity and Townsend Holdings, LLC for real estate. Aksia, LLC advises staff on the retirement System's Absolute Return portfolio. A complete listing of the System's professional consultants and external investment advisors is presented on page 11.

AWARDS

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Maryland State Retirement and Pension System for its Annual Comprehensive Financial Report for the fiscal year ended June 30, 2022. This was the thirty fourth consecutive year (1989 through 2022) that it has received this prestigious award. To be awarded a Certificate of Achievement, a governmental unit 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 the GFOA to determine its eligibility for another certificate.

Additionally, the Maryland State Retirement and Pension System received the Public Pension Coordinating Council's (PPCC) 2023 Recognition Award for meeting professional standards for plan funding and administration, as set forth in the Public Pension Standards.

The PPCC is a coalition of associations that represent public pension funds that cover most public employees in the U.S., including the National Association of State Retirement Administrators (NASRA), the National Council on Teacher Retirement (NCTR), and the National Conference on Public Employee Retirement Systems (NCPERS).

The Public Pension Standards are intended to reflect expectations for public retirement Systems management and administration and serve as a benchmark by which all defined benefit public plans should be measured. The Maryland State Retirement and Pension System is proud to be a recipient of this award

ACKNOWLEDGMENTS

This annual report reflects the dedicated efforts of the System's staff under the steady direction of the Board of Trustees. We extend our sincere gratitude to each member of the Board, the System's staff, the Board's advisors, and the many people who worked with diligence and dedication throughout fiscal year 2023. Special thanks go to the members of the Maryland State Retirement Agency's senior executive team and the agency's staff of professional and paraprofessionals who helped to gather and prepare the information for this report.



Martin Noven
*Executive Director
Secretary to the Board*



Melody Countess, CPA, CGMA
Chief Operating Officer

BOARD OF TRUSTEES AS OF NOVEMBER 2023



DERECK E. DAVIS, *Chair*
State Treasurer
Ex Officio since December 17, 2021
Member, Administrative Committee
Member, Investment Committee



BROOKE LIERMAN, *Vice Chair*
State Comptroller
Ex Officio since January 16, 2023
Member, Corporate Governance and Securities Litigation Committee
Member, Investment Committee



LINDA VAUGHN ALLEN
July 1, 2021 – June 30, 2026
Vice Chair, Administrative Committee
Member, Audit Committee



JAMAAL R. A. CRADDOCK
June 19, 2018 - July 31, 2025
Member, Administrative Committee
Member, Audit Committee



JAMES P. DALY, JR.
September 11, 2020 – June 30, 2025
Vice Chair, Investment Committee
Member, Corporate Governance and
Securities Litigation Committee



AYANA K. ENGLISH-BROWN
AUGUST 1, 2023 – JULY 31, 2027
MEMBER, ADMINISTRATIVE COMMITTEE



HELENE GRADY
Ex Officio since January 18, 2023
Member, Administrative Committee
Member, Corporate Governance and
Securities Litigation Committee
Member, Investment Committee



SHEILA HILL
August 1, 2015 – July 31, 2023
Vice Chair, Corporate Governance and
Securities Litigation Committee
Member, Investment Committee

BOARD OF TRUSTEES



MICHAEL J. HOWARD
June 10, 2022 - Present
Chair, Investment Committee
Vice Chair, Audit Committee
Member, Corporate Governance and
Securities Litigation Committee



RICHARD E. NORMAN
August 1, 2014 – July 31, 2026
Member, Audit Committee
Chair, Administrative Committee
Member, Investment Committee



MIA PITTMAN
August 1, 2023 – July 31, 2027
Chair, Audit Committee



DOUGLAS PROUTY
August 1, 2017 – July 31, 2025
Chair, Corporate Governance and
Securities Litigation Committee
Member, Investment Committee



MICHELLE RHODESBROWN
August 1, 2023 – July 31, 2027
Member, Corporate Governance and
Securities Litigation Committee
Member, Investment Committee



ROBERT F. SANDLASS, JR.
June 10, 2022 - June 30, 2025
Member, Administrative Committee
Member, Audit Committee
Member, Corporate Governance and
Securities Litigation Committee

ADVISORS TO THE INVESTMENT COMMITTEE



MICHAEL K. BARRY
JULY 1, 2016 – JUNE 30, 2025



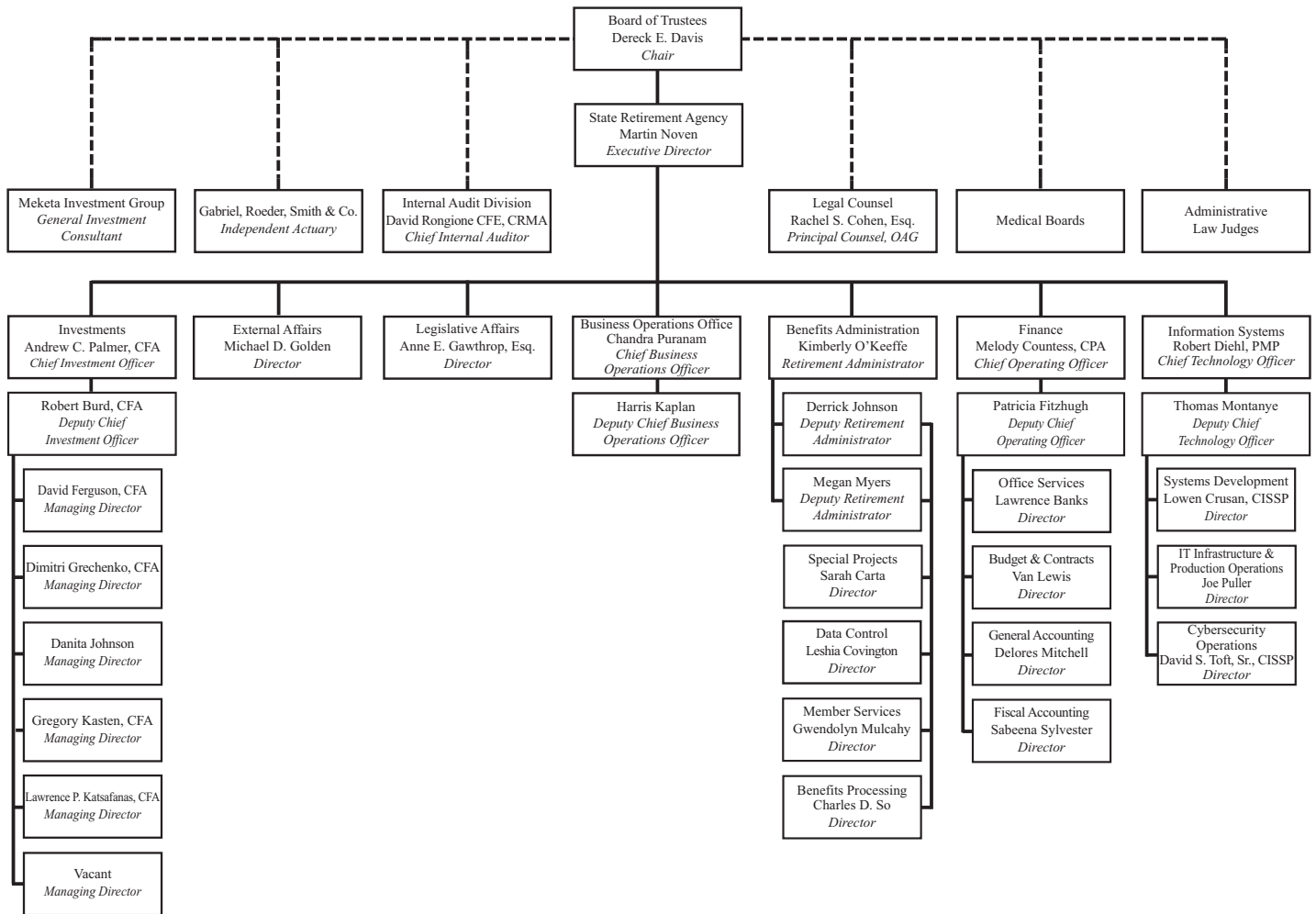
SHARCUS STEEN
JULY 1, 2023 – JUNE 30, 2026



MONTE TARBOX
JULY 1, 2018 – JUNE 30, 2024

ORGANIZATIONAL CHART

(November 2023)



*Additional information regarding investment professionals who provide services to the System can be found on pages 11, and 95-101.

PROFESSIONAL SERVICES

Global Custodial Bank and Security Lending

State Street Bank & Trust Company
Boston, Massachusetts

Deutsche Bank
New York, New York

Hearing Officers

Office of Administrative Hearings
Baltimore, Maryland

Independent Actuary

Gabriel Roeder Smith & Co.
Southfield, Michigan

Independent Public Accountant

CliftonLarsonAllen, LLC
Timonium, Maryland

Independent Investment Consultants

Hamilton Lane Advisors, LLC
Conshohocken, Pennsylvania

Meketa Investment Group, Inc.
Westwood, Massachusetts

Townsend Holdings, LLC
Cleveland, Ohio

Aksia, LLC
New York, New York

Operational Banking Services

M & T Bank
Baltimore, Maryland

The Harbor Bank of Maryland
Baltimore, Maryland



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Maryland State Retirement and Pension System

For its Annual Comprehensive
Financial Report
For the Fiscal Year Ended

June 30, 2022

Christopher P. Morill

Executive Director/CEO



***Public Pension Standards Award
For Funding and Administration
2023***

Presented to

Maryland State Retirement and Pension System

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

A handwritten signature in black ink that reads "Alan H. Winkle". The signature is fluid and cursive, with the first name "Alan" being particularly prominent.

Alan H. Winkle
Program Administrator



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The logo for the State Retirement Plan System (SRPS) is a large, semi-transparent watermark in the background. It features the letters 'SRPS' in a bold, serif font at the top. Below the letters is a stylized graphic of a building or structure with a central vertical element and horizontal bars, all rendered in a light gray color.

SRPS
Financial Section



REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To the Board of Trustees
Maryland State Retirement and Pension System
Baltimore, Maryland

Report on the Financial Statements

Opinion

We have audited the accompanying financial statements of the Maryland State Retirement and Pension System (the System), a pension trust fund of the State of Maryland, as of and for the years ended June 30, 2023 and 2022, and the related notes to the financial statements, which collectively comprise the System's basic financial statements.

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the System, as of June 30, 2023 and 2022, and the changes in fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Basis of 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. 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 management's discussion and analysis, the schedules of changes in the employers' net pension liability, employers' net pension liability and related ratios, employers' contributions and investment returns 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 audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming an opinion on the System's financial statements. The schedules of funding progress, fund balances, administrative expenses, investment expenses, fiduciary net position by system, and changes in fiduciary net position by system (other supplementary information) are presented for purposes of additional analysis and are not required parts of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with GAAS. In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the 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, plan summary, actuarial and statistical sections but does not include the basic financial statements and our auditors' report thereon. Our opinion on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

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

Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated November 29, 2023, on our consideration of the System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the System's internal control over financial reporting and compliance.



CliftonLarsonAllen LLP

Baltimore, Maryland

November 29, 2023

MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE YEARS ENDED JUNE 30, 2023 AND 2022

To help facilitate a better understanding of the Maryland State Retirement and Pension System's (the System) financial condition as of June 30, 2023 and 2022, the results of its operations for the fiscal years then ended, and the fiscal policies that govern its significant business operations, management has prepared this narrative analysis. This narrative is intended to supplement the System's audited financial statements and, as such should be read in conjunction with these statements, which are presented beginning on page 24.

OVERVIEW OF THE FINANCIAL STATEMENTS

As required by accounting principles generally accepted in the United States of America, the System's basic financial statements are comprised of the comparative Statements of Fiduciary Net Position and Statements of Changes in Fiduciary Net Position, along with the related note disclosures. In addition, the System's financial statements include certain required supplementary information (e.g., schedule of changes in employers' net pension liability, schedule of employers' net pension liability and related ratios, schedule of employers' contributions, and schedule of investment returns) as well as other supplementary schedules considered relevant to the financial statement user (e.g., schedules of fund balance accounts, administrative and investment expenses, fiduciary net position by system, and related changes by system). To better understand the relevance of the information presented in the System's financial statements, related notes, and supplementary information, it is helpful to first consider what purpose each component is intended to serve.

The Statements of Fiduciary Net Position presents a comparative, summary-level snapshot, as of a specific point in time (i.e., June 30th – the last day of the System's fiscal year), of the fair value of the net position available to pay future pension benefits to retirees and beneficiaries. To assist the reader in understanding the composition of the System's accumulated net position the most significant components (e.g., cash and cash equivalent securities, investments) are separately disclosed. In this regard, cash and cash equivalents represent that portion of the System's assets that, as of the end of the fiscal year, reside in the form of actual cash or short-term, highly liquid, investment securities. This amount gives an indication of the System's liquidity at fiscal year-end. Conversely, the amounts shown as investments represent those funds invested in longer-term securities (e.g., stocks, bonds, real estate) held for the purpose of generating investment income. The sum of these assets, reduced by any liabilities owed by the System as of fiscal year-end, represents the net position held in trust to pay pension benefits.

By contrast, the Statements of Changes in Fiduciary Net Position are intended to show, on a comparative basis, the major categories of income earned (additions to fiduciary Net position) and expenses incurred (deductions from fiduciary Net position) by the System during the previous fiscal year. As such, the System's net income or loss accounts for the entire change in the net position held in trust to pay pension benefits during the fiscal year as a result of System operations. As with the System's assets and liabilities, significant categories of income and expense, as reported on the Statements of Changes in Fiduciary Net Position, are separately disclosed to help clarify the major sources and uses of the System's resources.

Finally, the note disclosures are provided as an integral component of the basic financial statements to help explain in narrative form some of the more complex or less obvious elements of the statements. Further, the notes to the financial statements provide additional information (e.g., significant accounting policies, various types of investment risk) that is essential for a comprehensive understanding of the System's financial condition and the results of its operations.

The Schedule of Changes in Employers' Net Pension Liability, Schedule of Employers' Net Pension Liability and Related Ratios, Schedule of Employers' Contributions, and Schedule of Investment Returns share common characteristics with data disclosed in the basic financial statements. In this regard, both the Statements of Changes in Fiduciary Net Position and the Schedule of Contributions from Employers and Other Contributing Entity disclose the amount of contributions received from participating employers. However, the Schedule of Employer Contributions differs from the Statements of Changes in Fiduciary Net Position in that the Schedule's primary focus is to disclose the contributions required to be made in accordance with the System's funding policy and the percentage of the required contributions actually made during the fiscal years presented.

Finally, the other supplementary schedules, presented immediately after the required supplementary information, summarize the changes in fund balances, disclose major categories of operating and investment expenses, and provide combining, plan-level detail related to asset, liability, income, and expense amounts summarized in the basic financial statements.

ANALYSIS OF FINANCIAL POSITION AND RESULTS OF OPERATIONS.

The System's overall funding objective is to accumulate sufficient assets over time to meet its long-term benefit obligations as they become due. Accordingly, collecting employer and member contributions as well as earning an adequate long-term rate of return on its investments are essential components of the System's plan for accumulating the funds needed to finance future retirement benefits.

Fiscal Year 2023 Compared to 2022

The following condensed comparative Statement of Fiduciary Net Position for the fiscal years ended June 30, 2023 and 2022 reflects an increase of \$582.2 million (0.9%) in the System's net position. This increase is primarily due to positive performance returns in domestic stocks and private equity asset classes.

A schedule of the System's investments and changes (by type) for fiscal years 2023 and 2022 is presented below (expressed in millions):

	June 30,		Change	
	2023	2022	Variance	%
Cash & cash equivalents	\$ 1,373.4	\$ 2,005.8	\$ (632.4)	-31.5%
U.S. Government obligations	6,238.7	6,705.8	(467.1)	-7.0%
Domestic corporate obligations	3,663.1	3,866.2	(203.1)	-5.3%
International obligations	1,585.7	1,453.2	1323.5	9.1%
Domestic stocks	10,370.1	8,004.0	2,3366.1	29.6%
International stocks	9,558.1	10,149.8	(591.7)	-5.8%
Mortgages & mortgage-related securities	1,656.8	1,512.0	144.8	9.6%
Alternative investments	30,753.3	30,323.4	429.9	1.4%
Total managed investments	65,199.2	64,020.2	1,179.0	1.8%
Collateral for loaned securities	5,687.0	4,414.8	1,272.2	28.8%
Total investments and cash & cash equivalents	70,886.2	68,435.0	2,451.2	3.6%
Receivables	716.8	1,314.0	(597.2)	-45.4%
Total Assets	71,603.0	69,749.0	1,854.0	2.7%
Liabilities	6,710.0	5,438.1	1,271.9	23.4%
Total Fiduciary Net Position, End of Year	\$64,893.0	\$ 64,310.9	582.1	0.9%

As depicted in the following comparative Statement of Changes in Fiduciary Net Position for fiscal years 2023 and 2022, contributions to the System during fiscal year 2023 increased by \$280.6 million from prior fiscal year due to an increase in covered payroll and the State's continued reinvestment contribution of savings. The System's investments experienced a positive return of 3.14% net of fees in fiscal year 2023 primarily attributable to the System's public equity portfolio rendering the strongest return of 13.8%.

The System continues to pay out more benefits than contributions collected. An increase of \$258.8 million in benefits paid to retirees reflects a continuance of increasing retirements of the baby boomer generation in fiscal year 2023. However, the investment performance was a positive offset contributing to a \$0.6 billion increase in fiduciary net position.

A schedule of the System's additions to and deductions from fiduciary net position and related changes (by major category) for fiscal years 2023 and 2022, is as follows (expressed in millions):

	June 30,		Change	
	2023	2022	Variance	%
Employer contributions	\$ 1,700.3	\$ 1,489.1	\$ 211.2	14.2%
Member contributions	963.7	894.3	69.4	7.8%
State contributions on behalf of local governments & contribution interest	738.6	793.2	(54.6)	-6.9%
Net investment income (loss)	1,980.2	(1,942.2)	3,922.4	202.0%
Total additions	5,382.8	1,234.4	4,148.4	336.1%
Benefit payments	4,653.2	4,394.4	258.8	5.9%
Refunds	101.7	91.5	10.2	11.1%
Administrative expenses	46.0	42.1	3.9	9.3%
Total deductions	4,800.9	4,528.0	272.9	6.0%
Net increase(decrease) in plan net position	\$ 581.9	\$ (3,293.6)	\$ 3,875.5	117.7%

	June 30,		Change	
	2023	2022	Variance	%
Total Pension Liability (TPL)	\$ 87,923.3	\$ 84,319.5	\$ 3,603.8	4.3%
Plan Fiduciary Net Position	64,893.0	64,310.9	582.0	0.9%
Net Pension Liability	\$ 23,030.3	\$ 20,008.5	\$ 3,021.8	15.1%
Ratio - Fiduciary Net Position/TPL	73.8%	76.3%		

The TPL increased by \$3.6 billion from 2022 to 2023, due to an increase in service cost. The Plan Fiduciary Net Position increased by \$582 million from 2022 to 2023 primarily due to an investment return of 3.1%. These two events when netted increased the Net Pension Liability by \$3 billion from 2022 to 2023.

Fiscal Year 2022 Compared to 2021

The following condensed comparative Statement of Fiduciary Net Position for the fiscal years ended June 30, 2021 and 2020 reflects an increase in the System's net position of \$13 billion (23.8%) as a result of positive net returns across all investment categories but most notably in domestic and global equity and private alternative investments.

A schedule of the System's investments and changes (by type) from fiscal year 2020 to 2021 is presented below (expressed in millions):

	June 30,		Change	
	2022	2021	Variance	%
Cash & cash equivalents	\$ 2,005.8	\$ 2,407.2	\$ (401.4)	-16.7%
U.S. Government obligations	6,705.8	7,148.3	(442.5)	-6.2%
Domestic corporate obligations	3,866.2	4,503.9	(637.7)	-14.2%
International obligations	1,453.2	2,576.4	(1,123.2)	-43.6%
Domestic stocks	8,004.0	10,664.3	(2,660.3)	-24.9%
International stocks	10,149.8	13,465.8	(3,316.0)	-24.6%
Mortgages & mortgage-related securities	1,512.0	1,235.1	276.9	22.4%
Alternative investments	30,323.4	26,241.2	4,082.2	15.6%
Total managed investments	64,020.2	68,242.2	(4,222.0)	-6.2%
Collateral for loaned securities	4,414.8	4,745.2	(330.4)	-7.0%
Total investments and cash & cash equivalents	68,435.0	72,987.4	(4,552.4)	-6.2%
Receivables	1,314.0	1,028.8	285.2	27.7%
Total Assets	69,749.0	74,016.2	(4,267.2)	-5.8%
Liabilities	5,438.1	6,411.7	(973.6)	-15.2%
Total Fiduciary Net Position, End of Year	\$ 64,310.9	\$ 67,604.5	\$ (3,293.6)	-4.9%

As depicted in the following comparative Statement of Changes in Fiduciary Net Position for fiscal years 2022 and 2021, contributions to the System during fiscal year 2022 increased by \$107.3 million from prior fiscal year as a result of an increase in covered payroll and the State's reinvestment contribution of savings.

The System continued to pay out more benefits than contributions collected and experienced an increase in benefits paid to retirees in fiscal year 2022 resulting in a net decrease in fiduciary net position.

A schedule of the System's additions to and deductions from fiduciary net position and related changes (by major category) from fiscal year 2020 to 2021, is as follows (expressed in millions):

	June 30,		Change	
	2022	2021	Variance	%
Employer contributions	\$ 1,489.1	\$ 1,436.9	\$ 52.2	3.6%
Member contributions	894.3	865.7	28.6	3.3%
State contributions on behalf of local governments & contribution interest	793.2	766.7	26.5	3.5%
Net investment income	(1,942.2)	14,315.7	(16,257.9)	-113.6%
Total additions	<u>1,234.4</u>	<u>17,385.0</u>	<u>(16,150.6)</u>	-92.9%
Benefit payments	4,394.4	4,253.0	141.4	3.3%
Refunds	91.5	64.8	26.7	41.2%
Administrative expenses	42.1	48.7	(6.6)	-13.6%
Total deductions	<u>4,528.0</u>	<u>4,366.5</u>	<u>161.5</u>	3.7%
Net increase (decrease) in plan net position	<u>\$ (3,293.6)</u>	<u>\$ 13,018.5</u>	<u>\$ (16,312.1)</u>	-125.3%

Analysis of Net Pension Liability (expressed in millions)

	June 30,		Change	
	2022	2021	Variance	%
Total Pension Liability (TPL)	\$ 84,319.5	\$ 82,606.8	\$ 1,712.7	2.1%
Plan Fiduciary Net Position	64,310.9	67,604.5	(3,293.6)	-4.9%
Net Pension Liability	<u>\$ 20,008.6</u>	<u>\$ 15,002.3</u>	<u>\$ 5,006.3</u>	33.4%
Ratio - Fiduciary Net Position/TPL	<u>76.3%</u>	<u>81.8%</u>		

The TPL increased by \$1.7 billion from 2021 to 2022, due to an increase in service cost and a \$3.3 billion decrease in the Plan Fiduciary Net Position when netted resulted in a \$5 billion increased Net Pension Liability from 2021 to 2022.

Requests for Information

Members of the System's Board of Trustees and senior management are fiduciaries of the pension trust fund and, as such, are charged with the responsibility of ensuring that the System's assets are used exclusively for the benefit of plan participants and their beneficiaries. This financial report is designed to provide an overview of the System's finances and to demonstrate accountability for the resources entrusted to the System for the benefit of all of the System's stakeholders. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

State Retirement and Pension System of Maryland
 Attn: Melody Countess, CPA, CGMA
 120 E. Baltimore Street, Suite 1660
 Baltimore, Maryland 21202-1600

MARYLAND STATE RETIREMENT AND PENSION SYSTEM

STATEMENTS OF FIDUCIARY NET POSITION

As of June 30, 2023 and 2022

(Expressed in Thousands)

	2023	2022
Assets:		
Cash & Cash Equivalents (Note 3)	<u>\$ 1,373,369</u>	<u>\$ 2,005,811</u>
Receivables		
Contributions:		
Employers	77,513	65,430
Members	10,694	9,380
Accrued investment income	195,671	253,424
Investment sales proceeds	432,934	985,807
Total receivables	<u>716,812</u>	<u>1,314,041</u>
Investments, at fair value (Notes 2 & 3)		
U.S. Government obligations	6,238,670	6,705,763
Domestic corporate obligations	3,663,113	3,866,242
International obligations	1,585,721	1,453,221
Domestic stocks	10,370,101	8,003,951
International stocks	9,558,092	10,149,793
Mortgages & mortgage-related securities	1,656,754	1,512,031
Alternative investments	30,753,252	30,323,411
Collateral for loaned securities	5,686,982	4,414,793
Total investments	<u>69,512,685</u>	<u>66,429,205</u>
Total Assets	<u>71,602,866</u>	<u>69,749,057</u>
Liabilities		
Accounts payable & accrued expenses (Note 7)	57,797	65,402
Investment commitments payable	965,114	957,871
Obligation for collateral for loaned securities	5,686,982	4,414,793
Total Liabilities	<u>6,709,893</u>	<u>5,438,066</u>
Fiduciary Net position restricted for pensions	<u>\$ 64,892,973</u>	<u>\$ 64,310,991</u>

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

MARYLAND STATE RETIREMENT AND PENSION SYSTEM

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

for the Fiscal Years Ended June 30, 2023 and 2022

(Expressed in Thousands)

	2023	2022
ADDITIONS:		
Contributions:		
Employers	\$ 1,700,314	\$ 1,489,076
Members	963,702	894,267
State contributions on behalf of local governments	738,603	793,227
Total contributions	<u>3,402,619</u>	<u>3,176,570</u>
Investment Income:		
Net depreciation in fair value of investments	(496,268)	(5,033,012)
Interest	576,551	545,863
Dividends	2,306,842	3,086,502
Income (loss) before securities lending activity	<u>2,387,125</u>	<u>(1,400,647)</u>
Gross income from securities lending activity	226,992	31,972
Securities lending borrower rebates	(202,127)	(7,256)
Securities lending agent fees	(1,243)	(1,242)
Net income from securities lending activity	23,622	23,474
Total investment income (loss)	2,410,747	(1,377,173)
Investment expenses	(430,470)	(564,960)
Net investment income (loss)	<u>1,980,277</u>	<u>(1,942,133)</u>
TOTAL ADDITIONS	<u>5,382,896</u>	<u>1,234,437</u>
DEDUCTIONS		
Benefit payments	4,653,163	4,394,350
Refunds (Note 6)	101,737	91,535
Administrative expenses (Note 2)	46,014	42,061
TOTAL DEDUCTIONS	<u>4,800,914</u>	<u>4,527,946</u>
Net increase (decrease) in fiduciary net position	581,982	(3,293,509)
Fiduciary Net position restricted for pensions		
Beginning of the fiscal year	<u>64,310,991</u>	<u>67,604,500</u>
END OF THE FISCAL YEAR	<u>\$ 64,892,973</u>	<u>\$64,310,991</u>

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

NOTES TO THE FINANCIAL STATEMENTS

1. GENERAL DESCRIPTION OF THE SYSTEM

A. Organization

The State Retirement Agency (the Agency) is the administrator of the Maryland State Retirement and Pension System (the System). The System was established by the State Personnel and Pensions Article of the Annotated Code of Maryland to provide retirement allowances and other benefits to State employees, teachers, police, judges, legislators, and employees of participating governmental units. Responsibility for the System's administration and operation is vested in a 15-member Board of Trustees. The System is a cost-sharing multiple-employer defined benefit plan made up of two cost-sharing employer pools: the "State Pool" and the "Municipal Pool." The "State Pool" consists of the State agencies, boards of education, community colleges, and libraries. The "Municipal Pool" consists of the participating governmental units that elected to join the System. Neither pool shares in each other's actuarial liabilities, thus participating governmental units that elect to join the System (the "Municipal Pool") share in the liabilities of the Municipal Pool only. Although separate valuations are performed for each pool, all assets accumulated in the plan may legally be used to pay benefits to any member.

The State of Maryland is the statutory guarantor for the payment of all pensions, annuities, retirement allowances, refunds, reserves, and other benefits of the System. The State is obligated to annually pay into the accumulation fund of each State system at least an amount that, when combined with the System's accumulation funds, is sufficient to provide benefits payable under each plan during that fiscal year. The System is accounted for as a cost-sharing multiple-employer defined benefit plan as defined in accordance with accounting principles generally accepted in the United States of America. Additionally, the System is fiscally dependent on the State by virtue of the legislative and executive controls exercised with respect to its operations, policies, and administrative budget. Accordingly, the System is included in the State's reporting entity as a fiduciary component unit and disclosed in its financial statements as a pension trust fund.

The System is comprised of the Teachers' Retirement and Pension Systems, Employees' Retirement and Pension Systems, State Police Retirement System, Judges' Retirement System, and the Law Enforcement Officers' Pension System.

B. Covered Members

The Teachers' Retirement System was established on August 1, 1927, to provide retirement allowances and other benefits to teachers in the State. Effective January 1, 1980, the Teachers' Retirement System was closed to new members and the Teachers' Pension System was established. As a result, teachers hired after December 31, 1979, became members of the Teachers' Pension System as a condition of employment. On or after January 1, 2005, an individual who is a member of the Teachers' Retirement System may not transfer membership to the Teachers' Pension System.

On October 1, 1941, the Employees' Retirement System was established to provide retirement allowances and other benefits to State employees, elected and appointed officials, and the employees of participating governmental units. Effective January 1, 1980, the Employees' Retirement System was essentially closed to new members and the Employees' Pension System was established. As a result, State employees (other than correctional officers) and employees of participating governmental units hired after December 31, 1979, became members of the Employees' Pension System as a condition of employment, while all State correctional officers and members of the Maryland General Assembly continue to be enrolled as members of the Employees' Retirement System. On or after January 1, 2005, an individual who is a member of the Employees' Retirement System may not transfer membership to the Employees' Pension System. Currently, more than 150 governmental units participate in the Employees' Retirement System.

The State Police Retirement System was established on July 1, 1949, to provide retirement allowances and other benefits to any police employee or cadet of the Maryland State Police. The Judges' Retirement System was established on June 30, 1969, to provide retirement allowances and other benefits for State and local, appointed, or elected judges.

The Law Enforcement Officers' Pension System (LEOPS) was established on July 2, 1990, to provide retirement allowances and other benefits for certain State and local law enforcement officers. This System includes both retirement plan and pension plan provisions which are applicable to separate portions of this System's membership. The retirement plan provisions are only applicable to those members who, on the date they elected to participate in LEOPS, were members of the Employees' Retirement System. This System's pension plan provisions are applicable to all other participating law enforcement officers.

The following tables present a summary of membership by system as of June 30, 2023 and 2022, with comparative prior year totals:

	Inactive & Deferred Vested	Retirees & Beneficiaries	Active Plan Participants		
			Vested	Non-vested	Total
Teachers' Retirement & Pension Systems	23,702	84,177	60,297	52,476	112,773
Employees' Retirement & Pension Systems	22,976	84,846	38,111	43,225	81,336
Judges' Retirement System	8	468	220	106	326
State Police Retirement System	88	2,606	809	526	1,335
Law Enforcement Officers' Pension System	313	2,512	1,398	1,479	2,877
Totals as of June 30, 2023	47,087	174,609	100,835	97,812	198,647
Totals as of June 30, 2022	47,503	172,235	100,984	93,226	194,210

*Employees' Retirement and Pension Systems include 75 vested and 80 non-vested active members, 8 deferred vested members, and 63 retired members from the Correctional Officers Retirement System.

	Inactive & Deferred Vested	Retirees & Beneficiaries	Active Plan Participants		
			Vested	Non-vested	Total
Teachers' Retirement & Pension Systems	23,612	82,884	60,229	50,751	110,980
Employees' Retirement & Pension Systems*	23,500	83,898	38,424	40,397	78,821
Judges' Retirement System	10	463	209	108	317
State Police Retirement System	86	2,597	765	591	1,356
Law Enforcement Officers' Pension System	295	2,393	1,357	1,379	2,736
Total as of June 30, 2022	47,503	172,235	100,984	93,226	194,210
Total as of June 30, 2021	48,051	169,368	102,169	92,142	194,311

*Employees' Retirement and Pension Systems include 66 vested and 59 non-vested active members, 8 deferred vested members, and 53 retired members from the Correctional Officers Retirement System.

C. Summary of Significant Plan Provisions

All plan benefits are specified by the State Personnel and Pensions Article of the Annotated Code of Maryland. For all individuals who are members of the Employees', Teachers', Correctional Officers', or State Police Retirement System on or before June 30, 2011, retirement allowances are computed using both the highest three years' Average Final Compensation (AFC) and the actual number of years of accumulated creditable service. For individuals who become members of the State Police Retirement System or the Correctional Officers' Retirement System on or after July 1, 2011, retirement allowances are computed using both the highest five years' AFC and the actual number of years of accumulated creditable service. For all individuals who are members of the pension systems of the State Retirement and Pension System on or before June 30, 2011, pension allowances are computed using both the highest three consecutive years' AFC and the actual number of years of accumulated creditable service. For any individual who becomes a member of one of the pension systems on or after July 1, 2011, pension allowances are computed using both the highest five consecutive years' AFC and the actual number of years of accumulated creditable service. Various retirement options are available under each system which ultimately determines how a retiree's benefit allowance will be computed. Some of these options require actuarial reductions based on the retiree's and/or designated beneficiary's attained age and similar actuarial factors.

The member contribution rate for members of the Teachers' Retirement Pension System and Employees' Retirement Pension System is 7% and 6%, respectively, and 7% for members of the Law Enforcement Officers' Pension System. The member contribution rate for members of the Judges' Retirement System is 8%.

In addition, the benefit attributable to service on or after July 1, 2011 in many of the pension systems now will be subject to different cost-of-living adjustments (COLA) that is based on the increase in the Consumer Price Index (CPI) and capped at 2.5% or 1.0% based on whether the fair value investment return for the preceding calendar year was higher or lower than the investment return assumption used in the valuation.

A brief summary of the retirement eligibility requirements of and the benefits available under the various systems in effect during fiscal year 2023, are as follows:

Service Retirement Allowances

A member of either the Teachers' or Employees' Retirement System is generally eligible for full retirement benefits upon the earlier of attaining age 60 or accumulating 30 years of creditable service regardless of age. The annual retirement allowance equals $1/55$ (1.81%) of the member's AFC multiplied by the number of years of accumulated creditable service.

An individual who is a member of either the Teachers' or Employees' Pension System on or before June 30, 2011, is eligible for full retirement benefits upon the earlier of attaining age 62, with specified years of eligibility service, or accumulating 30 years of eligibility service regardless of age. An individual who becomes a member of either the Teachers' or Employees' Pension System on or after July 1, 2011, is eligible for full retirement benefits if the member's combined age and eligibility service equals at least 90 years, or if the member is at least age 65 and has accrued at least 10 years of eligibility service.

For most individuals who retired from either the Teachers' or Employees' Pension System on or before June 30, 2006, the annual pension allowance equals 1.2% of the member's AFC, multiplied by the number of years of creditable service accumulated prior to July 1, 1998, plus 1.4% of the member's AFC, multiplied by the number of years of creditable service accumulated subsequent to June 30, 1998. With certain exceptions, for individuals who are members of the Teachers' or Employees' Pension System on or after July 1, 2006, the annual pension allowance equals 1.2% of the member's AFC, multiplied by the number of years of creditable service accumulated prior to July 1, 1998, plus 1.8% of the member's AFC, multiplied by the number of years of creditable service accumulated subsequent to June 30, 1998. Beginning July 1, 2011, any new member of the Teachers' or Employees' Pension System shall earn an annual pension allowance equal to 1.5% of the member's AFC multiplied by the number of years of creditable service accumulated as a member of the Teachers' or Employees' Pension System.

Exceptions to these benefit formulas apply to members of the Employees' Pension System, who are employed by a participating governmental unit that does not provide the 1998 or 2006 enhanced pension benefits or the 2011 reformed pension benefits. The pension allowance for these members equals 0.8% of the member's AFC up to the social security integration level (SSIL), plus 1.5% of the member's AFC in excess of the SSIL, multiplied by the number of years of accumulated creditable service. For the purpose of computing pension allowances, the SSIL is the average of the social security wage bases for the past 35 calendar years ending with the year the retiree separated from service.

An individual who is a member of the State Police Retirement System on or before June 30, 2011, is eligible for full retirement benefits upon the earlier of attaining age 50 or accumulating 22 years of eligibility service regardless of age. An individual who becomes a member of the State Police Retirement System on or after July 1, 2011 is eligible for full retirement benefits upon the earlier of attaining age 50 or accumulating 25 years of eligibility service regardless of age. The annual retirement allowance equals 2.55% of the member's AFC multiplied by the number of years of accumulated creditable service and may not exceed 71.4% of the member's AFC.

A member of the Judges' Retirement System is eligible for full retirement benefits upon attaining age 60. The annual retirement allowance for a member with at least 16 years of accumulated creditable service equals $2/3$ (66.7%) of the salary of an active judge holding a comparable position. The annual retirement allowance is prorated if the member retires with fewer than 16 years of accumulated creditable service.

A member of the Law Enforcement Officers' Pension System is eligible for full retirement benefits upon the earlier of attaining age 50 or accumulating 25 years of eligibility service regardless of age. The annual retirement allowance for a member who is covered under the retirement plan provisions equals $1/50$ (2.0%) of the member's AFC multiplied by the number of years of accumulated creditable service up to 30 years, plus $1/100$ (1.0%) of the member's AFC multiplied by the number of years of accumulated creditable service in excess of 30 years. For members subject to the pension provisions, full-service pension allowances equal 2.0% of AFC up to a maximum benefit of 60% (30 years of credit).

Vested Allowances

Any individual who is a member of the State Retirement and Pension System on or before June 30, 2011 (other than a judge or a legislator), and who terminates employment before attaining retirement age but after accumulating five years of eligibility service is eligible for a vested retirement allowance. Any individual who joins the State Retirement and Pension System on or after July 1, 2011 (other than a judge or a legislator), and who terminates employment before attaining retirement age, but after accumulating 10 years of eligibility service, is eligible for a vested retirement allowance. An individual who is a member of the Judges' Retirement System on or before June 30, 2014, has no minimum service requirements prior to vesting. However, individuals who join the Judges' Retirement System on or after July 1, 2013, and terminate employment before attaining retirement age, will have to accrue five years of eligibility service in order to receive a vested retirement allowance. Legislators become eligible for a vested retirement allowance upon accumulating

eight years of eligibility services. A member, who terminates employment prior to attaining retirement age and before vesting, receives a refund of all member contributions and interest.

Early Service Retirement

A member of either the Teachers' or Employees' Retirement System may retire with reduced benefits after completing 25 years of eligibility service. Benefits are reduced by 0.5% per month for each month remaining until the retiree either attains age 60 or would have accumulated 30 years of creditable service, whichever is less. The maximum reduction for a Teachers' or Employees' Retirement System member is 30%.

An individual who is a member of either the Teachers' or Employees' Pension System on or before June 30, 2011, may retire with reduced benefits upon attaining age 55 with at least 15 years of eligibility service. Benefits are reduced by 0.5% per month for each month remaining until the retiree attains age 62. The maximum reduction for these members of the Teachers' or Employees' Pension System is 42%. An individual who becomes a member of either the Teachers' or Employees' Pension System on or after July 1, 2011, may retire with reduced benefits upon attaining age 60 with at least 15 years of eligibility service. Benefits are reduced by 0.5% per month for each month remaining until the retiree attains age 65. The maximum reduction for these members of the Teachers' or Employees' Pension System is 30%.

Members of the State Police, Judges', Law Enforcement Officers' and Local Fire and Police Systems are not eligible for early service benefits.

Disability and Death Benefits

Generally, a member covered under retirement plan provisions who is permanently disabled after five years of service receives a service allowance based on a minimum percentage (usually 25%) of the member's AFC. A member covered under pension plan provisions who is permanently disabled after accumulating five years of eligibility service receives a service allowance computed as if service had continued with no change in salary until the retiree attained age 62. A member (other than a member of the Maryland General Assembly or a judge, both of which are ineligible for accidental disability benefits) who is permanently and totally disabled as the result of an accident occurring in the line of duty receives 2/3 (66.7%) of the member's AFC plus an annuity based on all member contributions and interest. Death benefits are equal to a member's annual salary as of the date of death plus all member contributions and interest.

Adjusted Retirement Allowances

Retirement and pension allowances are increased annually to provide for changes in the cost of living according to prescribed formulae. Such adjustments for retirees are based on the annual change in the CPI. For the Teachers' and Employees' Retirement Systems (TRS/ERS) the method by which the annual COLA's are computed depends upon elections made by members who were active on July 1, 1984 (or within 90 days of returning to service, for members who were inactive on July 1, 1984) enabling the member to receive either an unlimited COLA, a COLA limited to 5% or a two-part combination COLA depending upon the COLA election made by the member.

Members of the State Police Retirement System (SPRS) and Law Enforcement Officers' Pension System (LEOPS) are eligible to participate in a Deferred Retirement Option Program (DROP). For members who enter the DROP on or after July 1, 2011, the member is deemed retired and the retirement allowance is placed in an account earning 4% interest per year, compounded annually. At the end of the DROP period, the lump sum held in the DROP account is paid to the retiree. The SPRS and LEOPS members must end employment and fully retire at the end of the DROP period. The maximum period of participation is 5 years for SPRS and 5 years for LEOPS. The amount of funds held in the DROP as of June 30, 2023 and 2022, was \$34,051,372 and \$31,001,707, respectively.

However, beginning July 1, 2011, for benefits attributable to service earned on or after July 1, 2011, in all of the systems except the judges' and legislators' systems, the adjustment is capped at the lesser of 2.5% or the increase in CPI if the most recent calendar year fair value rate of return was greater than or equal to the assumed rate. The adjustment is capped at the lesser of 1% or the increase in CPI if the fair value return was less than the assumed rate of return. In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied, and the zero COLA is fully recovered. Retirement allowances for legislators and judges are recalculated when the salary of an active member holding a comparable position is increased.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Basis of Accounting

The System's financial statements are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America. Accordingly, investment purchases and sales are recorded as of their respective trade dates. Employer and Member contributions are recognized in the period when due, pursuant to statutory or contractual requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

B. Investment Limitations

The State Personnel and Pensions Article of the Annotated Code of Maryland authorizes the System to invest plan assets in stocks, bonds, notes, certificates of indebtedness, mortgage notes, real estate, debentures or other obligations, subject to the terms, conditions, limitations and restrictions imposed by the Board of Trustees of the Maryland State Retirement and Pension System.

C. Portfolio Valuation Method

The System's investments are reported at fair value. Fair value is the amount that the System can reasonably expect to receive for an investment in a current sale. See Note 3.H for the description of investments at fair value.

Investment amounts presented in the accompanying Statements of Fiduciary Net Position represent the fair value of the respective portfolios as of the fiscal year-end. Similarly, investment income amounts reported in the accompanying Statements of Changes in Fiduciary Net Position represent the income or loss derived for the years then ended. Accordingly, significant market fluctuations could periodically occur subsequent to the financial statement valuation date, which are not reflected in either the fair value of investments or the related investment income presented in these financial statements.

D. Derivatives

As permitted by guidelines established by the Board of Trustees, the System may invest in derivatives. Compliance with these guidelines is monitored by Agency staff. Pursuant to such authority, the System invests in foreign currency forward contracts, options, futures, and swaps. The Agency does not purchase rights and warrants; however, it can accrue ownership through corporate actions. No derivatives were purchased with borrowed funds.

Derivatives are generally used to hedge against foreign currency risk and changes in interest rates, improve yield, and adjust the duration of the System's fixed income portfolio. These securities are subject to changes in value due to changes in currency valuations or interest rates. Credit risk for derivatives results from the same considerations as other counterparty risk assumed by the System, which is the risk that the counterparty might be unable to meet its obligations.

The System enters into forward foreign currency exchange contracts for hedging purposes to minimize the short-term impact of foreign currency fluctuations. Foreign currency exchange contracts are reported at fair value based on published market prices and quotations from major investment firms. The System could be exposed to risk if the counterparties to the contracts are unable to meet the terms of the contracts. The System seeks to minimize risk from counterparties by establishing minimum credit quality standards.

E. Administrative and Investment Expenses

All of the System's administrative and investment expenses (e.g., salaries of Agency employees, investment advisory fees, etc.) are incurred centrally and charged to each individual retirement or pension system on the basis of its active membership and percentage ownership in the System's net position, respectively. The System's investment expenses are funded from investment income. The System's administrative expenses are funded from administrative fees assessed to each participating employer. See pages 69 and 70 for detailed Schedules of Administrative and Investment Expenses, respectively.

F. Federal Income Tax Status

During the fiscal years ended June 30, 2023 and 2022, the System qualified under Section 401(a) of the Internal Revenue Code (the Code) and was exempt from Federal income taxes under Section 501(a) of the Code.

3. CASH, CASH EQUIVALENTS, AND INVESTMENTS

A. Legal Provisions

The Board of Trustees is required by Section 21-116 (c), State Personnel and Pensions Article, Annotated Code of Maryland (SPP), to establish and maintain an Investment Policy Manual (IPM), which is available on the Agency's web site. The IPM authorizes investing in all major sectors of the capital market in order to diversify and minimize total investment program risk. Such sectors include, but are not limited to:

Type	Description	As of June 30, 2023	
		Strategic Target	Actual
Public Equity	Investments in securities, known as shares or stocks, that represent an ownership interest in corporations and are generally traded on a stock exchange.	34.0%	30.2%
Private Equity	Investments in companies that are not registered with the SEC and are not traded in the public markets. Private equity may also be referred to as venture capital or buy-outs.	16.0%	21.9%
Rate Sensitive	Investments in securities, known as bonds, that represent an ownership interest in the debt of governments and corporations that are generally not traded on an exchange. They generally pay interest on a regular schedule and repay principal or face value at maturity. Short term investments such as money market funds U.S. treasury bills and currency are also included.	20.0%	17.1%
Credit/Debt Related Strategies	Debt issued by corporations and other non-government sectors of the fixed income market such as distressed debt, convertibles, corporate and mortgage related credit strategies, mezzanine debt, bank loans, high yield, emerging markets and preferred securities.	9.0%	8.7%
Absolute Return	Investments whose performance is expected to exceed the three month U.S. Treasury bill by 4-5% over a full market cycle and exhibit low correlation to public stocks. The System's program may include strategies such as hedge fund of funds, multi- strategy, global tactical asset allocation, event driven, relative value, macro, insurance and equity hedged.	6.0%	5.9%
Real Assets	Investments whose performance is expected to exceed the rate of inflation over an economic cycle. The System's Real Return program may include the following investment vehicles in both public and private investments: energy related, infrastructure, timber and other natural resources, multi-asset class portfolios with a real return mandate, and real estate including direct investments, REITs and private partnerships.	15.0%	15.4%
Cash/Cash Equivalents	Investments that provide daily liquidity and either have very low risk or principal loss such as treasury bills or high quality commercial paper.	0.0%	0.4%
Multi Assets	Investments that act as a proxy for all overall Asset allocation through a combination of Exchange Traded Funds and fully funded Futures contracts.	0.0%	0.4%

The above listed strategic targets were implemented in stages throughout the fiscal year. All asset classes are within the transitional target ranges.

The System is authorized by its Board of Trustees to operate a securities lending program and has contracted with Deutsche Bank to lend securities and reinvest cash collateral received from the transfer of securities in investment instruments authorized by the investment policy. Currently, the initial required collateral for foreign securities is equal to 105 percent of the aggregate market value of the transferred securities not denominated in the same currency as the collateral provided by the counterparty and 102 percent for domestic securities and foreign securities that are denominated in the same currency as the collateral provided by the counterparty. See section G of this note for additional information.

B. Cash and Cash Equivalents

The Cash and Cash Equivalents category reported on the Statement of Fiduciary Net Position consists of short-term investments that are used to meet the liquidity requirements of the System.

Cash and Cash Equivalents held by the System can include cash on deposit, foreign currencies, cash posted as collateral to counterparties, repurchase agreements, certificate of deposit, U.S. Treasury Bills, short-term investment funds, and other U.S. or foreign liquid financial instruments with original maturities that are generally less than three months. Cash and Cash Equivalents are reported at fair value or cost, which approximates fair value.

For cash deposits and cash equivalents, custodial credit risk is the risk that, in the event of a bank failure, the System's deposits may not be returned to it.

The System does not have any funds or deposits that are not covered by depository insurance, which are either uncollateralized, collateralized with securities held by the pledging financial institution, or collateralized with securities held by the pledging financial institution's trust department or agent, but not in the System's name and there are no legal or contractual provisions for deposits and investments. Nor does the System have any investments that are not registered in its name and are either held by the counterparty or the counterparty's trust department or agent, but not in the System's name.

The amount of the System's total Cash and Cash Equivalents as of June 30, 2023 and 2022, was \$1,373,369 and \$2,005,811 (in thousands), respectively.

C. Investments

These investments are accounted for as the System and are allocated to Teachers' Retirement and Pension, Employees' Retirement and Pension, Judges' Retirement, State Police Retirement and Law Enforcement Officers' Pension.

All investments are governed by the Prudent Person Rule as described in SPP Section 21-203 which states: A fiduciary shall discharge the fiduciary's duties with respect to the several systems solely in the interest of the participants and as follows: (1) for the exclusive purposes of providing benefits to the participants and for reasonable expenses of administering the several systems; (2) with the care, skill, prudence, and diligence under the circumstances then prevailing, that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims; (3) by diversifying the investments of the several systems so as to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so; (4) in accordance with the laws governing the several systems; and (5) in accordance with the documents and instruments governing the several systems to the extent that the documents and instruments are consistent with this subtitle.

D. Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. As of June 30, 2023 and 2022, the System had the following fixed income investments allocated by year of maturity except for the Commingled Funds, which are based on their average maturity:

Type:	Fair Value (in thousands)	As of June 30, 2023			
		Investment Maturities (in years)	Investment	Investment	Investment
		Less than 1	1 thru 5	5+ thru 10	More than 10
Asset Backed Securities	\$ 142,906	\$ 106	\$ 31,366	\$ 30,585	\$ 80,849
Bank Loans	487,715	18,858	326,514	142,343	-
Collateralized mortgage obligations	436,705	21	8,838	29,404	398,442
Credit/debt commingled funds	1,211,885	29,249	883,780	298,856	-
Domestic Corporate Obligations	2,915,025	30,242	1,116,456	1,276,481	491,846
International Obligations	336,270	630	98,784	111,915	124,941
Mortgage Pass-throughs	1,225,998	15	3,854	14,268	1,207,861
Municipals	48,040	743	3,104	12,140	32,053
Options	(5,212)	(5,212)	-	-	-
Short term	713,578	67,577	(3,772)	621,584	28,189
Swaps	(997)	(4,128)	202	(5,163)	8,092
U.S. Government Agency	31,078	-	621	10,345	20,112
U.S. Treasury Inflation Linked	2,272,403	-	1,095,244	821,459	355,700
U.S. Treasury Notes/Bonds	3,916,788	3,383	44,323	157,128	3,711,954
U.S. Treasury Strips	18,745	-	-	-	18,745
Yankee Bonds	1,171,089	34,892	452,683	339,807	343,707
Total	\$ 14,922,016	\$ 176,376	\$ 4,061,997	\$ 3,861,152	\$ 6,822,491

Type:	Fair Value (in thousands)	As of June 30, 2022			Investment More than 10
		Investment Maturities (in years)			
		Less than 1	1 thru 5	5+ thru 10	
Asset Backed Securities	\$ 1,333,266	\$ 83	\$ 20,489	\$ 31,524	\$ 81,170
Bank Loans	867,759	5,895	410,326	451,538	-
Collateralized mortgage obligations	465,519	236	10,428	36,743	418,112
Credit/debt commingled funds	743,998	34,130	566,201	127,131	16,536
Domestic Corporate Obligations	2,899,627	45,970	860,156	1,486,961	506,540
International Obligations	256,411	-	59,630	111,693	85,088
Mortgage Pass-throughs	1,056,455	11,352	16,054	1,039,048	-
Municipals	53,094	852	5,026	11,728	35,488
Options	(9,350)	(8,067)	(1,283)	-	-
Short term	1,396,368	139,752	-	1,256,616	-
Swaps	(6,560)	(502)	(11,420)	(2,171)	7,533
U.S. Government Agency	35,706	-	2,156	10,062	23,488
U.S. Treasury Inflation Linked	2,763,633	-	976,325	1,373,852	413,456
U.S. Treasury Notes/Bonds	3,840,547	1,529	63,176	125,236	3,650,606
U.S. Treasury Strips	66,437	-	-	-	66,437
Yankee Bonds	1,078,384	19,753	330,924	419,976	307,731
Total	\$ 15,641,294	\$ 239,633	\$ 3,293,486	\$ 5,456,943	\$ 6,651,232

Markets or interest rate risk is the greatest risk faced by an investor in the fixed income market. The price of a fixed income security typically moves in the opposite direction of the change in interest rates. Derivative securities, variable rate investments with coupon multipliers greater than one, and securities with long terms to maturity are examples of investments whose fair values may be highly sensitive to interest rate changes. These securities are reported at fair value in the Statements of Fiduciary Net Position.

Securities that would qualify as "highly interest rate sensitive" include interest only, principal only and inverse floaters, of which the System had no significant holdings as of June 30, 2023 and 2022.

As of June 30, 2023, and 2022, the System had \$1,225,998 and \$1,056,455 (in thousands), respectively, invested in mortgage pass-through securities issued by the Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, and Government National Mortgage Association. These investments are moderately sensitive to changes in interest rates because they are backed by mortgage loans in which the borrowers have the option of prepaying.

Investment guidelines developed for each mandate determines the amount of interest rate risk allowable for each manager. Derivatives held as of June 30, 2023 and 2022, are identified in greater detail in Note 4.

E. Credit Risk

Credit risk is the risk that an issuer or other counterparty to a debt instrument will not fulfill its obligations. This is measured by the assignment of ratings by nationally recognized statistical rating organizations. The ratings used to determine the quality of the individual securities in the table below are the ratings provided by Moody's and Standard & Poor's Global Inc. The listed ratings are based on the most conservative rating when multiple ratings were offered. Obligations issued or guaranteed by the U.S. government or government-sponsored agencies are eligible without limit. The System may invest in an unrated security if the security is comparable in quality to other rated securities that are eligible for purchase. The notation NR represents those securities that are not rated for which the rating disclosure requirements are not applicable, such as commingled short term and credit funds, mortgage securities, foreign sovereign bonds and bank loans which by nature do not have credit quality ratings. The current policy regarding credit risk is determined by each investment manager's mandate.

As of June 30, 2023 and June 30, 2022, the credit ratings of fixed income securities are shown below as a percentage of total investments:

Credit Quality Distribution for Securities with Credit Exposure as a Percentage of Total Investments (Expressed in Thousands)

Rating	2023		2022	
	Fair Value	Percentage Total Investments	Fair Value	Percentage Total Investments
AAA	\$ 97,721	0.141%	\$ 124,057	0.193%
AA	256,513	0.369%	232,580	0.362%
A	598,895	0.862%	469,541	0.730%
BBB	1,231,213	1.771%	1,281,648	1.993%
BB	1,207,899	1.738%	1,154,697	1.795%
B	825,537	1.188%	776,733	1.208%
CCC	90,121	0.130%	106,189	0.165%
CC	1,643	0.002%	2,030	0.003%
C	9	0.000%	1,832	0.003%
D	12,090	0.017%	10,280	0.016%
NR*	4,392,439	6.319%	4,811,091	7.481%
Total Exposed to Credit Risk	\$ 8,714,080		\$ 8,970,678	
U.S. Government Guaranteed**	6,207,936		6,670,616	
Total Fixed Income and Short-Term Investments	\$ 14,922,014		\$ 15,641,294	

*NR represents securities not rated.

**Comprised of U.S. government and agency obligations explicitly guaranteed by the U.S. Government.

The current policy regarding credit risk is determined by each investment manager's mandate. The above listed ratings are based on the most conservative rating when multiple ratings were offered.

F. Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The Systems investment exposure in foreign currency risk as of June 30, 2023 and 2022, is shown below:

International Investment Securities – At Fair Value as of June 30, 2023

(U.S. Dollars in Thousands)

Currency	Equity	Fixed Income	Cash	Alternative Investments	Total
Australian Dollar	\$ 241,969	\$ -	\$ 10,064	\$ 140,659	\$ 392,692
Brazilian Real	1,858	695	652	-	3,205
Canadian Dollar	368,081	(1,901)	3,555	236,642	606,377
Chilean Peso	-	-	11	-	11
Czech Koruna	-	-	44	-	44
Danish Krone	169,623	-	1,101	-	170,724
Egyptian Pound	24,452	-	245	-	24,697
Euro Currency	1,547,288	84,016	23,383	1,645,887	3,300,574
Hong Kong Dollar	208,309	-	1,693	60,721	270,723
Hungarian Forint	466	-	26	-	492
Indonesian Rupiah	60,460	9,368	1,592	-	71,420
Japanese Yen	963,441	(412)	6,124	20,397	989,550
Malaysian Ringgit	179	-	-	-	179
Mexican Peso	65,367	12,967	1,708	-	80,042
New Israeli Sheqel	34,124	-	72	-	34,196
New Taiwan Dollar	62,734	-	59	-	62,793
New Zealand Dollar	13,551	10,346	1,687	8,797	34,381
Norwegian Krone	6 1,411	-	892	-	62,303
Philippine Peso	702	-	24	-	726
Polish Zloty	416	(1,765)	2,794	-	1,445
Pound Sterling	596,593	37,063	6,514	273,861	914,031
Qatari Rial	156	-	-	-	156
Singapore Dollar	56,055	-	116	-	56,171
Sol	-	-	573	-	573
South African Rand	106,772	1,675	1,017	-	109,464
South Korean Won	194,790	-	78	-	194,868
Swedish Krona	106,541	-	2,674	-	109,215
Swiss Franc	387,168	-	1,968	5,479	394,615
Thailand Baht	20,514	-	8	-	20,522
Turkish Lira	2,663	-	21	-	2,684
Uae Dirham	34,401	-	-	-	34,401
Yuan Renminbi	(13,514)	-	25,684	-	12,170
Total foreign currency risk	\$ 5,316,570	\$ 152,052	\$ 94,379	\$ 2,392,443	\$ 7,955,444
Other holdings with potential exposure to foreign currency risk	5,574,733	1,288,714	-	2,449,601	9,313,048
Total investments subject to foreign currency risk *	\$ 10,891,303	\$ 1,440,766	\$ 94,379	\$ 4,842,044	\$ 17,268,492

* Includes Derivatives

International Investment Securities – At Fair Value as of June 30, 2022

(U.S. Dollars in Thousands)

Currency	Equity	Fixed Income	Cash	Alternative Investments	Total
Australian Dollar	\$ 197,174	\$ -	\$ 21,772	\$ 150,064	\$ 369,010
Brazilian Real	75,066	(2,004)	1,628	-	74,690
Canadian Dollar	372,460	(4,211)	6,772	193,381	568,402
Chilean Peso	-	-	-	-	-
Colombian Peso	-	-	-	-	-
Czech Koruna	-	-	16	-	16
Danish Krone	104,830	17,555	1,085	-	123,470
Egyptian Pound	11,753	-	-	-	11,753
Euro Currency	1,310,886	74,026	5,895	1,407,968	2,798,775
Hong Kong Dollar	321,890	-	832	51,860	374,582
Hungarian Forint	545	-	22	-	567
Indonesian Rupiah	37,400	9,020	1,219	-	47,639
Japanese Yen	717,050	(673)	4,658	14,476	735,511
Malaysian Ringgit	5,712	-	-	-	5,712
Mexican Peso	67,955	10,552	3,006	-	81,513
New Israeli Shekel	34,694	-	7	-	34,701
New Taiwan Dollar	101,065	-	450	-	101,515
New Zealand Dollar	9,657	10,105	2,125	3,927	25,814
Norwegian Krone	50,986	-	531	-	51,517
Philippine Peso	89	-	17	-	106
Polish Zloty	3,243	-	26	-	3,269
Pound Sterling	585,340	45,830	2,536	299,646	933,352
Qatari Rial	10,566	-	855	-	11,421
Romanian Leu	-	-	-	-	-
Russian Ruble	-	-	-	-	-
Singapore Dollar	37,182	-	613	-	37,795
Sol	-	5,097	504	-	5,601
South African Rand	87,544	1,971	875	-	90,390
South Korean Won	221,047	(288)	53	-	220,812
Swedish Krona	102,974	-	(27)	-	102,947
Swiss Franc	311,258	-	187	2,853	314,298
Thailand Baht	14,389	528	163	-	15,080
Turkish Lira	18,899	-	142	-	19,041
UAE Dirham	36,262	-	-	-	36,262
Yuan Renminbi	71,592	-	754	-	72,346
Total foreign currency risk	\$ 4,919,508	\$ 167,508	\$ 5 6,715	\$ 2,124,175	\$ 7,267,907
Other holdings with potential of exposure to foreign currency risk	5,532,758	1,559,219	-	2,459,314	9,551,291
Total Exposure	\$ 10,452,266	\$ 1,726,727	\$ 56,715	\$ 4,583,489	\$ 16,819,198

The majority of foreign currency-denominated investments are in non-US stocks.

The Agency has an overlay program to help minimize its currency risk.

Note: These schedules do not agree with the total international obligations and international equities as listed on the Statement of Fiduciary Net Position due to private and public partnerships or funds and American Depository Receipts which are valued in U.S. dollars but classified as International.

G. Security Lending Transactions

The System accounts for securities lending transactions in accordance with GASB Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions*.

The following table details the net income from securities lending for the years ended June 30, 2023 and 2022 (in thousands):

	<u>2023</u>	<u>2022</u>
Interest income	\$ 226,992	\$ 31,972
Less:		
Interest expense	202,127	7,256
Program fees	<u>1,243</u>	<u>1,242</u>
Expenses from securities lending	<u>203,370</u>	<u>8,498</u>
Net income from securities lending	<u>\$23,622</u>	<u>\$ 23,474</u>

The Board of Trustees has authorized the System to lend its securities to broker-dealers with a simultaneous agreement to return the collateral for the same securities in the future. Deutsche Bank, pursuant to a written agreement, is permitted to lend long-term securities to authorized broker-dealers subject to the receipt of acceptable collateral. The System lends securities for collateral in the form of either cash or other securities. The types of securities on loan as of June 30, 2023 included long-term U.S. government obligations, domestic and international equities, as well as domestic and international debt obligations. At the initiation of a loan, borrowers are required to provide collateral amounts of 102 percent (domestic securities and foreign securities that are denominated in the same currency as the collateral provided by the counterparty) and 105 percent (foreign securities that are not denominated in the same currency as the collateral provided by the counterparty). In the event the collateral fair value falls below 100 percent for domestic securities and foreign securities that are denominated in the same currency as the collateral or 103 percent on foreign securities not denominated in the same currency as the collateral provided by the counterparty, the borrower is required to provide additional collateral to the original levels by the end of the next business day. Deutsche Bank is obligated to indemnify the client if there are any losses of securities, collateral or investments of the client in the Bank's custody arising out of or related to the negligence or dishonesty of the Bank.

The System maintains the right to terminate the securities lending transactions upon notice. The lending agent reinvests the cash collateral received on each loan utilizing indemnified repurchase agreements (repos). As of June 30, 2023, such repos had average days to maturity of 47.69 days. The System cannot pledge or sell collateral securities received unless (and until) a borrower defaults. At year-end, the System had no credit risk exposure to borrowers because the amount the System owed the borrowers exceeded the amount the borrowers owed the System. The fair value of securities on loan and the fair value collateral held for the System as of June 30, 2023 (in thousands) was \$5,579,021 and \$5,686,982, respectively. The fair value of securities on loan and the fair value collateral held for the System as of June 30, 2022 (in thousands) was \$4,268,464 and \$4,414,793, respectively.

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

Securities Lent	As of June 30, 2023		
	Fair Value Loaned Securities	Collateral Fair Value	Percent Collateralized
Lent for cash collateral			
U.S. government and agency	\$ 3,433,594	\$3,505,835	102.1%
Domestic bond & equity	2,121,779	2,156,481	101.6%
International fixed	3,225	3,279	101.7%
International equity	<u>20,423</u>	<u>21,387</u>	104.7%
Total securities lent	<u>\$ 5,579,021</u>	<u>\$ 5,686,982</u>	101.9%

Securities Lent	As of June 30, 2022		
	Fair Value Loaned Securities	Collateral Fair Value	Percent Collateralized
Lent for cash collateral			
U.S. government and agency	\$ 2,863,595	\$ 2,961,969	103.4%
Domestic bond & equity	1,367,546	1,413,222	103.3%
International fixed	6,655	6,820	102.5%
International equity	30,668	32,782	106.9%
Total securities lent	\$ 4,268,464	\$ 4,414,793	103.4%

There were no significant under-collateralization events as of June 30, 2023.

H. Investments at Fair Value

The System follows the fair value measurement and disclosure guidance under U.S. GAAP, which establishes a hierarchical disclosure framework. This framework prioritizes and ranks the level of market price observability used in measuring investments at fair value. U.S. GAAP also allows investments to be valued at cost or net asset value (NAV).

Assets and liabilities measured at fair value are classified into one of the following categories:

Level 1 – Fair value is determined using unadjusted quoted prices in active markets for identical assets or liabilities accessible on the measurement date.

Level 2 – Fair value is determined using quoted prices in inactive markets or significant observable inputs (including, but not limited to, quoted prices for similar investments, interest rates, foreign exchange rates, volatility and credit spreads), either directly or indirectly. These inputs may be derived principally from, or corroborated by, observable market data through correlation or by other means.

Level 3 – Fair value is determined using unobservable inputs, including situations where there is little market activity, if any, for the asset or liability.

The System had the following recurring fair value measurements as of June 30, 2023 and 2022:

Debt and equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities.

Debt securities classified in Level 2 of the fair value hierarchy are valued using a combination of prevailing market prices and interest payments that are discounted at prevailing interest rates for similar instruments.

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.

Commercial and residential mortgage-backed securities classified in Level 3 are valued using discounted cash flow techniques. Collateralized debt obligations classified in Level 3 are valued using consensus pricing.

As of June 30, 2023 and 2022, the System had the following recurring fair value measurements:

As of June 30, 2023 Investments by fair value level (expressed in millions)	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Debt Securities				
U.S. Government obligations	\$ 6,239	\$ 6,239	\$ -	\$ -
Domestic corporate obligations	3,659	-	3,659	-
International obligations	932	-	932	-
Emerging markets debt	660	-	660	-
Mortgages & mortgage related securities	1,657	-	-	1,657
Total debt securities	<u>13,147</u>	<u>6,239</u>	<u>5,251</u>	<u>1,657</u>
Equity Securities				
Domestic stocks (includes REITs)	7,324	7,324	-	-
International stocks (includes REITs)	5,845	5,845	-	-
Total equity securities	<u>13,169</u>	<u>13,169</u>	<u>-</u>	<u>-</u>
Alternative Investments	433	433	-	-
Total investment by fair value level	<u>26,749</u>	<u>\$ 19,841</u>	<u>\$ 5,251</u>	<u>\$ 1,657</u>
Investment measured at the net asset value (NAV)				
Equity Open-End Fund	6,759			
Real Estate Open-End Fund	5,372			
Private Funds (includes equity, real estate, credit, energy, infrastructure, timber)	20,036			
Multi-asset	234			
Hedge Funds				
Equity long/short	1,196			
Event-driven	407			
Global Macro	1,114			
Relative Value	1,766			
Opportunistic	195			
Total investment measured at the NAV	<u>37,079</u>			
Investment derivative instruments (Liabilities)				
Forwards	(18)	\$ -	\$ (18)	\$ -
Options	(1)	-	(1)	-
Swaps	(1)	-	(1)	-
Rights/Warrants	0	-	0	-
Total investment derivative instruments	<u>(20)</u>	<u>\$ -</u>	<u>\$ (20)</u>	<u>\$ -</u>
Total*	<u>\$ 63,808</u>			

*Total Investments on the Statement of Fiduciary Net Position agrees to the total sum of \$63,808 on this table, \$5,687 of collateral for loaned securities, and \$18 of forward contracts.

As of June 30, 2022	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments by fair value level (expressed in millions)				
Debt Securities				
U.S. Government obligations	\$ 6,707	\$ 6,707	\$ -	\$ -
Domestic corporate obligations	3,872	-	3,872	-
International obligations	951	-	951	-
Emerging markets debt	512	-	512	-
Mortgages & mortgage related securities	1,512	-	-	1,512
Total debt securities	<u>13,554</u>	<u>6,707</u>	<u>5,335</u>	<u>1,512</u>
Equity Securities				
Domestic stocks (includes REITs)	5,490	5,490	-	-
International stocks (includes REITs)	6,359	6,359	-	-
Total equity securities	<u>11,849</u>	<u>11,849</u>	<u>-</u>	<u>-</u>
Alternative Investment	386	386	-	-
Total investment by fair value level	<u>25,789</u>	<u>\$ 18,942</u>	<u>\$ 5,335</u>	<u>\$ 1,512</u>
Investment measured at the net asset value (NAV)				
Equity Open-End Fund	6,237			
Private funds (includes equity, real estate, credit, energy, infrastructure and timber)	18,297			
Real estate-open ended	5,956			
Multi-asset	238			
Hedge Funds				
Equity long/short	1,172			
Event-driven	667			
Global macro	1,247			
Relative Value	2,157			
Opportunistic	203			
Total investment measured at the NAV	<u>36,174</u>			
Investment derivative instruments and foreign currency holdings				
Forwards	72	\$ -	\$ 72	\$ -
Options	(9)	-	(9)	-
Swaps	(7)	-	(7)	-
Rights/Warrants	68	-	68	-
Total investment derivative instruments	<u>124</u>	<u>\$ -</u>	<u>\$ 124</u>	<u>\$ -</u>
*Total	<u>\$ 62,087</u>			

*Total Investments on the Statement of Fiduciary Net Position agrees to the total sum of \$62,087 on this table, \$4,414 of collateral for loaned securities, and (\$72) of forwards contracts.

The valuation method for investments measured at net asset value (NAV) per share (or its equivalent) is presented in the following table (in millions):

	As of June 30, 2023				As of June 30, 2022			
	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice Period	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Private funds (includes equity, energy, credit, infrastructure, timber, commodity and real estate (1))	\$ 20,036	\$ 9,817			\$ 18,297	\$ 9,965		
Real estate open-end fund (3)	5,372		Quarterly	45 - 90 days	5,956		Quarterly	45 - 90 days
Equity open-end fund (2)	3,633		Daily	1 day	3,285		Daily	1 day
	2,465		Monthly	5 - 30 days	2,387		Monthly	5 - 30 days
	662		Triennially	150 days	566		Triennially	150 days
Multi-asset (9)	234		Monthly	5 days	238		Monthly	5 days
Hedge Funds								
Equity long/short (5)	808		Monthly	30 - 45 days	775		Monthly	30 - 45 days
	388		Quarterly	60 days	397		Quarterly	60 days
Event-driven (6)	104		Quarterly	15 days	12		Quarterly	15 days
	172		Quarterly	60 - 65 days	336		Quarterly	60 - 65 days
	17		Quarterly	90 days	137		Quarterly	90 days
	81		Quarterly	120 days +	141		Quarterly	120 days +
	33		N/A	Liquidating	41		N/A	Liquidating
Global macro (4)	275		Monthly	5 - 30 days	515		Monthly	5 - 30 days
	755		Monthly	60 - 90 days	505		Monthly	60 - 90 days
	84		Quarterly	60 - 90 days	226		Quarterly	60 - 90 days
Relative value (7)	134		Monthly	30 days	209		Monthly	30 days
	495		Quarterly	30 days	437		Quarterly	30 days
	1,136		Quarterly	45 - 90 days	1,511		Quarterly	45 - 90 days
Opportunistic (8)	191		Quarterly	90 days	203		Quarterly	90 days
	4		Semi Annual	90 - 120 days	-		Semi Annual	90 - 120 days
	<u>\$ 37,079</u>	<u>\$ 9,817</u>			<u>\$ 36,174</u>	<u>\$ 9,965</u>		

(1) Private funds (includes equity, real estate, credit, energy, infrastructure, commodities, and timber): This type includes 398 Global private funds, which cannot be redeemed. Instead, distributions are received through the liquidation of the underlying assets of the fund. These funds are valued-based on individual audited financial statements and assumptions used by fund managers.

(2) Equity Open-End Fund: This type includes investments in institutional investment funds, which invest in 3 domestic and 8 emerging market equities. The fair values of the funds within this type have been determined using the NAV per share, which has been valued by the fund based on the characteristics of the underlying assets. The five funds have a 5 to 30 days liquidity structures and one fund is redeemable in five months with triennial redemption restrictions.

(3) Real estate-open ended: This type includes 9 domestic open-ended real estate funds, which can be liquidated. The fair values of the funds within this type have been determined using the NAV per share, which has been valued by the fund based on the characteristics of the underlying assets.

- (4) Global macro: This category includes 6 hedge fund that invest in over 100 financial markets. The funds are diversified and take long, short and spread positions. The fair values of the funds within this type have been determined using the NAV per share, which has been valued by the fund based on the characteristics of the underlying assets. These assets have a liquidity structure which ranges from 5 to 90 days.
- (5) Equity long/short: This type includes investments in 4 hedge funds that invest both long and short primarily in U.S. and Asian common stocks. Management of each hedge fund has the ability to shift investment from value to growth strategies, from small to large capitalization stocks, and from a net long position to a net short position. The fair values of the funds within this type have been determined using the NAV per share, which has been valued by the fund based on the characteristics of the underlying assets. Two funds have a two-year hard lockup and the other two have a one-year soft lock-up and require a 30 day to 60-day notice.
- (6) Event-driven: This type includes 5 investments of which 2 are credit hedge funds. These funds invest in equities and bonds of companies and governments at risk of or in the process of reorganizing to profit from economic, political, corporate and government-driven events. The other 3 funds are focused on merger arbitrage and assets across the capital structure. The fair values of the funds within this type have been determined using the NAV per share, which has been valued by the fund based on the characteristics of the underlying assets. The funds have a 15 to 90 days liquidity structure.
- (7) Relative value: This category includes 7 hedge funds with a liquidity structure between 30 and 90 days. These funds invest in a wide range of strategies. The fair values of the funds within this type have been determined using the NAV per share, which has been valued by the fund based on the characteristics of the underlying assets.
- (8) Opportunistic: Currently there are 3 hedge funds in this category, which invests in re-insurance for catastrophe risk (mostly hurricane and earthquake). The fund has a quarterly redemption with a 90-day. The fair value of these funds has been determined using the NAV per share, which has been valued by the fund based on the characteristics of the underlying assets.
- (9) Multi-asset: This category includes 1 diversified fund. The fair value of the fund within this type has been determined using the NAV per share, which has been valued by the fund based on the characteristics of the underlying assets.

4. DERIVATIVES

In conjunction with the responsibility for implementing the Board's asset allocation strategy the Chief Investment Officer hires external investment managers or assigns responsibility to managers employed by the agency. These managers may use derivatives to manage the asset allocation, rebalance the portfolio, equitize cash balances, hedge or manage exposures, or to implement tactical positions. The System invested in swaps, futures, options, forwards, and rights and warrants that are either exchange traded or over-the-counter instruments. Each investment manager's guidelines outline the permissible use of derivatives, which is monitored by internal staff to ensure compliance. The use of derivatives is permitted to the extent that it does not materially alter total portfolio volatility relative to its benchmark and with reference to variance permitted by guideline. The manager is responsible for collateral management and derivatives must be collateralized with cash, cash equivalents, or current portfolio security holdings.

In addition, the System has exposure to derivatives through the ownership interests in commingled funds. These funds may hold derivatives in the fund and the System does not have control over the investment policy or guidelines of such funds. However, the risk associated with derivative instruments is limited to the capital contributed to the fund.

List of Derivatives Aggregated by Investment Type – At Fair Value as of June 30, 2023
(in Thousands)

Currency	Changes in Fair Value(4)		Fair Value at June 30, 2023		
	Classifications	Amount(1)	Classification	Amount(2)	Notional(3)
Commodity Futures Long	Investment Revenue	\$ (3,745)	Futures	\$ -	\$ 30,449.00
Credit Default Swaps Bought	Investment Revenue	6	Swaps	-	-
Credit Default Swaps Written	Investment Revenue	5,994	Swaps	2,036	96,573
Fixed Income Futures Long	Investment Revenue	(259,370)	Futures	-	2,954,515
Fixed Income Futures Short	Investment Revenue	9,363	Futures	-	(208,892)
Fixed Income Options Bought	Investment Revenue	491	Options	3,277	13,200
Fixed Income Options Written	Investment Revenue	5,324	Options	(6,479)	(128,809)
Foreign Currency Futures Short	Investment Revenue	293	Futures	-	(18,000)
Foreign Currency Options Written	Investment Revenue	35	Options	-	-
Futures Options Bought	Investment Revenue	(1)	Futures	-	-
Futures Options Written	Investment Revenue	1,870	Futures	(2,049)	(1,026)
FX Forwards	Investment Revenue	5,633	Long Term Instruments	(18,321)	7,774,463
Index Futures Long	Investment Revenue	240,684	Futures	-	792
Index Futures Short	Investment Revenue	(105,355)	Futures	-	(624)
Pay Fixed Interest Rate Swaps	Investment Revenue	13,390	Swaps	11,582	326,838
Receive Fixed Interest Rate Swaps	Investment Revenue	(23,879)	Swaps	(14,622)	1,022,204
Rights	Investment Revenue	2,207	Common Stock	26	263
Warrants	Investment Revenue	(7,578)	Common Stock	-	13
		<u>\$ (114,638)</u>		<u>\$ (24,550)</u>	

DERIVATIVES (continued)

List of Derivatives Aggregated by Investment Type – At Fair Value as of June 30, 2022
(in Thousands)

Currency	Changes in Fair Value(4)		Fair Value at June 30,2022		
	Classifications	Amount(1)	Classification	Amount(2)	Notional(3)
Commodity Futures Long	Investment Revenue	\$ 18,151	Futures	\$ -	\$ -
Commodity Futures Short	Investment Revenue	785	Futures	-	-
Credit Default Swaps Bought	Investment Revenue	5	Swaps	-	300
Credit Default Swaps Written	Investment Revenue	(9,428)	Swaps	(467)	359,175
Fixed Income Futures Long	Investment Revenue	(557,552)	Futures	-	1,749,818
Fixed Income Futures Short	Investment Revenue	28,571	Futures	-	(272,300)
Fixed Income Options Bought	Investment Revenue	1,901	Options	3,257	31,100
Fixed Income Options Written	Investment Revenue	(1,334)	Options	(12,244)	(818,049)
Foreign Currency Futures Short	Investment Revenue	2,640	Futures	-	(35,000)
Foreign Currency Options Bought	Investment Revenue	(156)	Options	-	-
Foreign Currency Options Written	Investment Revenue	201	Options	-	-
Futures Options Bought	Investment Revenue	(3)	Options	-	-
Futures Options Written	Investment Revenue	1,312	Options	(429)	(983)
FX Forwards	Investment Revenue	122,738	Long Term Instruments	72,598	11,610,431
Index Futures Long	Investment Revenue	(271,809)	Futures	-	734
Index Futures Short	Investment Revenue	362,283	Futures	-	(587)
Pay Fixed Interest Rate Swaps	Investment Revenue	30,727	Swaps	20,699	242,794
Receive Fixed Interest Rate Swap	Investment Revenue	(35,023)	Swaps	(26,839)	577,120
Rights	Investment Revenue	(1,687)	Common Stock	83	139
Warrants	Investment Revenue	(20,650)	Common Stock	68,080	18,450
		\$ (328,328)		\$ 124,738	

Note: Includes assets invested on behalf of the Mass Transit Administration.

1. Negative values (in brackets) refer to unrealized losses

2. Negative values (in brackets) refer to liabilities included in accounts payable and accrued expenses on the Statement of Fiduciary Net Position

3. Notional may be a dollar amount or size or underlying for futures and options, negative values (in brackets) refer to short positions

4. Changes in fair value excludes futures margin payments

A. Credit Risk

The use of derivatives exposes the System to credit and counterparty risk due to the risk of counterparties failing to meet the terms of the derivative contracts. To minimize its exposure to losses related to credit and counterparty risk, the external investment managers use counterparty collateral in their non-exchange-traded derivative instruments and monitor the credit-worthiness of the counterparties. Netting arrangements are also used when entering into more than one derivative instrument transaction with a counterparty.

The aggregate fair value of derivative instruments with credit exposure at June 30, 2023 and 2022, was \$171,260 and \$429,537 (in thousands), respectively. This represents the maximum loss that would be recognized at the reporting date if all counterparties failed to perform. The maximum loss would, however, be reduced by the counterparty collateral and the liabilities included in netting arrangements with counterparties.

DERIVATIVES (continued)

Counterparty Ratings

The following table lists the counterparty credit ratings of non-exchange traded investment derivative instruments outstanding and maybe subject to loss per the ratings issued by S&P Global (S&P), Moody's and Fitch. The aggregate fair value (in thousands) of investment derivative instruments subject to counterparty credit risk as of June 30, 2023 and 2022:

As of June 30, 2023					
S&P		Moody's		Fitch	
Fair Value	Rating	Fair Value	Rating	Fair Value	Rating
\$ 68,203	AA-	\$ 25	Aa2	\$ 21,677	AA
39,465	A+	21,435	Aa2	32,986	AA-
14,063	A	67,278	Aa3	115,804	A+
41,361	A-	40,456	A1	774	A
8,168	BBB+	774	A2	19	A-
-	NR	41,292	A3	-	BBB+
-		-	NR	-	NR
<u>\$ 171,260</u>	<u>(1)</u>	<u>\$ 171,260</u>	<u>(1)</u>	<u>\$ 171,260</u>	<u>(1)</u>
As of June 30, 2022					
S&P		Moody's		Fitch	
Fair Value	Rating	Fair Value	Rating	Fair Value	Rating
\$ 173,240	AA-	\$ 98,309	Aa2	\$ 98,308	AA
129,262	A+	95,191	Aa3	107,327	AA-
43,619	A	168,777	A1	216,059	A+
69,025	A-	1,653	A2	3,167	A
14,391	BBB+	62,451	A3	1,266	A-
-	NR	3,156	NR	254	BBB+
-		-		3,156	NR
<u>\$ 429,537</u>	<u>(1)</u>	<u>\$ 429,537</u>	<u>(1)</u>	<u>\$ 429,537</u>	<u>(1)</u>

(1) Total Aggregate Fair Value

Risk Concentrations

The following tables list the counterparty risk concentration and credit ratings per ratings of Standard & Poor's (S&P), Moody's and Fitch as of June 30, 2023 and 2022:

Counterparty Name	Percentage of Net Exposure	S&P Rating	Fitch Rating	Moody's Rating
WESTPAC BANKING CORPORATION	24.2%	AA-	A+	Aa3
HSBC BANKPLC	24.1%	A-	A+	A3
ROYAL BANK OF CANADA (UK)	8.6%	AA-	AA-	A1
STATE STREET BANK LONDON	8.2%	A	AA-	A1
JPMORGAN CHASE BANK NA LONDON	8.1%	A+	AA	Aa2
BNP PARIBAS SA	8.0%	A+	A+	Aa3
THE BANK OF NEW YORK MELLON	4.4%	AA-	AA	Aa2
UBS AG	3.7%	A+	A+	Aa3
WELLS FARGO LCH	3.6%	BBB+	A+	A1
CITIBANK N.A.	3.2%	A+	A+	Aa3
TORONTO DOMINION BANK	2.4%	AA-	AA-	A1
WELLS FARGO ICE	0.7%	BBB+	A+	A1
GOLDMAN SACHS ICE	0.5%	BBB+	A	A2
STATE STREET BANK AND TRUST COMPANY	0.1%	AA-	AA	Aa3
MORGAN STANLEY AND CO. INTERNATIONAL PLC	0.0%	A-	A+	A1
JPMORGAN CHASE BANK, N.A.	0.0%	A+	AA	Aa2
BANK OF AMERICA, N.A.	0.0%	A+	AA	Aa1
DEUTSCHE BANK AG	0.0%	A-	A-	A1
JPMORGAN CHASE BANK N.A	0.0%	A+	AA	Aa2
WELLS FARGO CME	0.0%	BBB+	A+	A1

Risk Concentrations (continued)

Counterparty Name	Percentage of Net Exposure	S&P Rating	Fitch Rating	Moody's Rating
THE BANK OF NEW YORK MELLON	19.5%	AA-	AA	Aa2
HSBC BANK PLC	14.5%	A-	A+	A3
STANDARD CHARTERED BANK	13.6%	A+	A+	A1
STATE STREET BANK LONDON	9.9%	A	AA-	A1
BNP PARIBAS SA	9.1%	A+	A+	Aa3
WESTPAC BANKING CORPORATION	9.0%	AA-	A+	Aa3
ROYAL BANK OF CANADA (UK)	6.6%	AA-	AA-	A1
TORONTO DOMINION BANK	4.8%	AA-	AA-	A1
UBS AG	3.4%	A+	AA-	Aa3
JPMORGAN CHASE BANK NA LONDON	3.0%	A+	AA	Aa2
WELLS FARGO LCH	2.2%	BBB+	A+	A1
WELLS FARGO CME	1.0%	BBB+	A+	A1
NOMURA GLOBAL FINANCIAL PRODUCTS INC	0.7%	A-	NR	NR
CITIBANK N.A.	0.7%	A+	A+	Aa3
NORTHERN TRUST COMPANY, THE	0.3%	AA-	AA-	A2
BANK OF AMERICA, N.A.	0.3%	A+	AA	Aa2
CREDIT SUISSE FOB LCH	0.3%	A	A-	A1
MORGAN STANLEY CME	0.3%	A-	A	A1
MORGAN STANLEY AND CO. INTERNATIONAL PLC	0.2%	A-	A	A1
MORGAN STANLEY LCH	0.2%	A-	A	A1
WELLS FARGO ICE	0.2%	BBB+	A+	A1
DEUTSCHE BANK AG	0.1%	A-	BBB+	A2
JPMORGAN CHASE BANK, N.A.	0.1%	A+	AA	Aa2

B. Interest Rate Risk

During fiscal year 2023, the Agency was exposed to interest rate risk. For more details, refer to the Interest Rate Risk Note 3.D. (GASB Statement No. 40).

C. Foreign Currency Risk

The System's derivatives exposed it to foreign currency risk. For more details refer to the Foreign Currency Risk Note 3.F. (GASB Statement No. 40).

5. CONTRIBUTIONS

The State Personnel and Pensions Article requires both active members and their respective employers to make contributions to the System. Rates for required contributions by active members are established by law. Members of the Teachers' and Employees' Retirement Systems are required to contribute 7% or 5% of earnable compensation depending upon the retirement option selected. Members of the State Police and Judges' Retirement Systems are required to contribute 8% and 6% of earnable compensation, respectively, and beginning July 1, 2014, members of the Judges Retirement System are required to make contributions of 8% of earnable compensation. Members of the Teachers' and Employees' Pension System, Alternate Contributory Pension Selection (ACPS), are required to contribute 7% of earnable compensation.

However, members of the Employees' Pension System who are employed by a participating governmental unit that elected to remain in the Contributory Pension System are required to contribute 2% of earnable compensation. The members of the Employees' Pension System who are employed by participating governmental units who elected to remain in the Non-Contributory Pension System are only required to contribute 5% of earnable compensation in excess of the social security taxable wage base.

Contribution rates for employer and other "non-employer" contributing entities are established by annual actuarial valuations using the Individual Entry Age Normal Cost method with projection and other actuarial assumptions adopted by the Board of Trustees. These contribution rates have been established as the rates necessary to fully fund normal costs and amortize the unfunded actuarial accrued liability.

The unfunded actuarial liability was being amortized in distinct layers. The unfunded actuarial accrued liability which existed as of the June 30, 2000, actuarial valuation was being amortized over a 40-year period (as provided by law) from July 1, 1980 and as provided by law, any new unfunded liabilities or surpluses arising during the fiscal year ended June 30, 2001, or any fiscal year thereafter, was being amortized over a 25-year period from the end of the fiscal year in which the liability or surplus arose. However, in the 2014 legislative session, the Legislature changed the method used to fund the System. The unfunded liability for each System is being amortized over a single closed 25-year period.

Members of the State Police Retirement System (SPRS) and Law Enforcement Officers' Pension System (LEOPS) are eligible to participate in a Deferred Retirement Option Program (DROP). For members who enter the DROP on or after July 1, 2011, the member is deemed retired and the retirement allowance is placed in an account earning 4% interest per year, compounded annually. At the end of the DROP period, the lump sum held in the DROP account is paid to the retiree. The SPRS and LEOPS members must end employment and fully retire at the end of the DROP period. The maximum period of participation is 5 years for SPRS and 5 years for LEOPS. The amount of funds held in the DROP as of June 30, 2023 and 2022, was \$34,051,372 and \$31,001,707 respectively.

The State of Maryland (which is also a non-employer contributor to the Teachers' Retirement and Pension Systems and the Judges' Retirement System), the Maryland Automobile Insurance Fund, the Injured Workers' Insurance Fund, and more than 150 participating governmental units make all of the employer and other (non-employer) contributions to the System.

6. REFUNDS

Member contributions plus interest may be refunded to a member who withdraws from the System, or to the designated beneficiary following a member's death. Employer contributions may also be refunded with interest to any participating governmental unit electing to withdraw from the System. For the fiscal years ended June 30, 2023 and 2022 refunds to members and withdrawing employers were \$101,737 and \$91,535 (expressed in thousands), respectively.

7. ACCOUNTS PAYABLE AND ACCRUED EXPENSES

For the fiscal years ended June 30, 2023 and 2022 accounts payable and accrued expenses consisted of the following components (expressed in thousands):

	2023	2022
Administrative expenses	\$ 477	\$ 6,900
Investment management fees	12,906	15,278
Tax and other withholdings	44,414	43,224
Total	\$ 57,797	\$ 65,402

8. NET PENSION LIABILITY

The components of the net pension liability of the participating employers as of June 30, 2023 and 2022, were as follows:
(expressed in thousands)

	2023	2022
Total Pension Liability (TPL)	\$ 87,923,284	\$ 84,319,523
Plan Fiduciary Net Position	64,892,973	64,310,991
Net Pension Liability	<u>\$ 23,030,311</u>	<u>\$ 20,008,532</u>
Ratio - Fiduciary Net Position/TPL	<u>73.81%</u>	<u>76.27%</u>

A. Actuarial Assumptions

Inflation	In the 2023 actuarial valuation, 2.25% general, 2.75% wage. In the 2022 actuarial valuation, 2.25% general, 2.75% wage.
Salary Increases	In the 2023 actuarial valuation, 2.75% to 11.25%. In the 2022 actuarial valuation, 2.75% to 11.25%
Investment Rate of Return	In the 2023 actuarial valuation, 6.80%. In the 2022 actuarial valuation, 6.80%.
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2019 valuation pursuant to the 2018 experience study for the period July 1, 2014 to June 30, 2018.
Mortality	Various versions of the Pub-2010 Mortality Tables for males and females with projected generational mortality improvements based on the MP-2018 fully generational mortality Improvements scale for males and females.

B. Investments

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 were adopted by the Board after considering input from the System's investment consultant(s) and actuary(s).

For each major asset class that is included in the System's target asset allocation as of June 30, 2023 and 2022, these best estimates are summarized in the following table:

Asset Class	2023		Asset Class	2022	
	Target Allocation	Long-Term Expected Real Rate of Return		Target Allocation	Long-Term Expected Real Rate of Return
Public Equity	34.0%	6.9%	Public Equity	34.0%	6.0%
Private Equity	16.0%	8.6%	Private Equity	16.0%	8.4%
Rate Sensitive	20.0%	2.6%	Rate Sensitive	21.0%	1.2%
Credit Opportunity	9.0%	5.6%	Credit Opportunity	8.0%	4.9%
Real Assets	15.0%	5.4%	Real Assets	15.0%	5.2%
Absolute Return	6.0%	4.4%	Absolute Return	6.0%	3.5%
Total	100.0%		Total	100.0%	

The above was the Board of Trustees' adopted asset allocation policy and best estimate of geometric real rates of return for each major asset class as of June 30, 2023.

For the years ended June 30, 2023 and 2022, the annual money-weighted rate of return on pension plan investments, net of the pension plan investment expense, was 3.11% and (2.97)%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

C. Discount Rate

A single discount rate of 6.80% was used to measure the total pension liability as of June 30, 2023 and 2022, respectively. This single discount rate was based on the expected rate of return on pension plan investments of 6.80% as of June 30, 2023 and 2022, respectively. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected 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.

D. Sensitivity of the Net Pension Liability

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 6.80%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher as of June 30, 2023:

(Expressed in thousands)

System	1% Decrease to 5.80%	Discount Rate 6.80%	1% Increase to 7.80%
Teachers	\$ 18,552,312	\$ 11,886,492	\$ 6,366,145
Employees	13,163,272	9,453,027	6,352,447
State Police	1,263,348	888,533	585,112
Judges	177,583	105,462	44,070
LEOPS	992,774	696,797	455,710
Total System Net Pension Liability	\$ 34,149,289	\$ 23,030,311	\$ 13,803,484

The following presents the plan's net pension liability, calculated using a single discount rate of 6.80%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher as of June 30, 2022:

(Expressed in thousands)

System	1% Decrease to 5.80%	Discount Rate 6.80%	1% Increase to 7.80%
Teachers	\$ 16,526,639	\$ 10,109,218	\$ 4,794,807
Employees	12,012,171	8,438,421	5,452,402
State Police	1,139,705	782,804	493,996
Judges	130,464	62,959	5,507
LEOPS	890,475	615,130	390,832
Total System Net Pension Liability	\$ 30,699,454	\$ 20,008,532	\$ 11,137,544



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REQUIRED SUPPLEMENTARY INFORMATION

MARYLAND STATE RETIREMENT
SCHEDULE OF CHANGES IN
for the Fiscal Year Ended
(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
Total pension liability			
Service cost	\$ 1,019,621	\$ 586,870	\$ 48,894
Interest	3,291,757	1,991,421	173,872
Changes of benefit terms	-	-	(2,475)
Difference between expected and actual experience	462,643	399,337	59,413
Changes in assumptions	-	-	-
Benefit payments, including refunds of employee contributions	(2,701,693)	(1,769,402)	(143,691)
Net change in total pension liability	<u>2,072,328</u>	<u>1,208,226</u>	<u>136,013</u>
Total pension liability, beginning of year	<u>49,235,396</u>	<u>29,867,155</u>	<u>2,603,567</u>
Total pension liability, end of year (a)	<u>\$ 51,307,724</u>	<u>\$ 31,075,381</u>	<u>\$ 2,739,580</u>
Plan fiduciary net position			
Contributions - employer	\$ 1,228,568	\$ 985,126	\$ 106,966
Contributions - members	588,395	343,720	10,776
Net investment income	1,204,663	658,279	56,353
Benefit payments, including refunds and administrative expenses	(2,727,551)	(1,788,454)	(144,017)
Net Transfer	<u>979</u>	<u>(5,051)</u>	<u>206</u>
Net Change in Plan Fiduciary Net Position	<u>295,054</u>	<u>193,620</u>	<u>30,284</u>
Plan fiduciary net position - beginning of year	<u>39,126,178</u>	<u>21,428,734</u>	<u>1,820,763</u>
Plan fiduciary net position - end of year (b)	<u>\$ 39,421,232</u>	<u>\$ 21,622,354</u>	<u>\$ 1,851,047</u>
Employer net pension liability (a) - (b)	<u>\$ 11,886,492</u>	<u>\$ 9,453,027</u>	<u>\$ 888,533</u>

AND PENSION SYSTEM
EMPLOYERS' NET PENSION LIABILITY

June 30, 2023

Judges' Retirement System	Law Enforcement Officers' Pension System	Total
\$ 23,026	\$ 60,798	\$ 1,739,209
43,224	132,606	5,632,880
-	(2,634)	(5,109)
21,695	48,593	991,681
-	-	-
<u>(43,076)</u>	<u>(97,038)</u>	<u>(4,754,900)</u>
44,869	142,325	3,603,761
645,502	1,967,903	84,319,523
<u>\$ 690,371</u>	<u>\$ 2,110,228</u>	<u>\$ 87,923,284</u>
\$ 23,675	\$ 94,582	\$ 2,438,917
3,947	16,864	963,702
17,901	43,081	1,980,277
(43,152)	(97,740)	(4,800,914)
<u>(5)</u>	<u>3,871</u>	<u>-</u>
2,366	60,658	581,982
582,543	1,352,773	64,310,991
<u>\$ 584,909</u>	<u>\$ 1,413,431</u>	<u>\$ 64,892,973</u>
<u>\$ 105,462</u>	<u>\$ 696,797</u>	<u>\$ 23,030,311</u>

REQUIRED SUPPLEMENTARY INFORMATION

MARYLAND STATE RETIREMENT
SCHEDULE OF CHANGES IN
for the Fiscal Year Ended
(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
Total pension liability			
Service cost	\$ 964,482	\$ 521,702	\$ 43,951
Interest	3,221,143	1,961,621	169,184
Changes of benefit terms	-	-	-
Difference between expected and actual experience	(549,388)	(357,873)	(6,649)
Changes in assumptions	-	-	-
Benefit payments, including refunds of employee contributions	(2,550,604)	(1,670,739)	(136,375)
Net change in total pension liability	<u>1,085,633</u>	<u>454,711</u>	<u>70,111</u>
Total pension liability, beginning of year	<u>48,149,763</u>	<u>29,412,444</u>	<u>2,533,456</u>
Total pension liability, end of year (a)	<u>\$ 49,235,396</u>	<u>\$ 29,867,155</u>	<u>\$ 2,603,567</u>
Plan fiduciary net position			
Contributions - employer	\$ 1,202,102	\$ 880,672	\$ 95,453
Contributions - members	554,537	311,851	9,843
Net investment income	(1,179,567)	(648,324)	(55,120)
Benefit payments, including refunds and administrative expenses	(2,574,104)	(1,688,310)	(136,676)
Net Transfer	<u>2,431</u>	<u>(4,643)</u>	<u>36</u>
Net Change in Plan Fiduciary Net Position	<u>(1,994,601)</u>	<u>(1,148,754)</u>	<u>(86,464)</u>
Plan fiduciary net position - beginning of year	<u>41,120,779</u>	<u>22,577,488</u>	<u>1,907,227</u>
Plan fiduciary net position - end of year (b)	<u>\$ 39,126,178</u>	<u>\$ 21,428,734</u>	<u>\$ 1,820,763</u>
Employer net pension liability (a) - (b)	<u>\$ 10,109,218</u>	<u>\$ 8,438,421</u>	<u>\$ 782,804</u>

AND PENSION SYSTEM
EMPLOYERS' NET PENSION LIABILITY

June 30, 2022

Judges' Retirement System	Law Enforcement Officers' Pension System	Total
\$ 21,094	\$ 53,741	\$ 1,604,970
42,059	126,915	5,520,922
-	-	-
(5,498)	(7,880)	(927,288)
-	-	-
(39,934)	(88,234)	(4,485,886)
<u>17,721</u>	<u>84,542</u>	<u>1,712,718</u>
627,781	1,883,361	82,606,805
<u>\$ 645,502</u>	<u>\$ 1,967,903</u>	<u>\$ 84,319,523</u>
\$ 22,816	\$ 81,260	\$ 2,282,303
3,643	14,393	894,267
(17,502)	(41,620)	(1,942,133)
(40,004)	(88,852)	(4,527,946)
(71)	2,247	-
<u>(31,118)</u>	<u>(32,572)</u>	<u>(3,293,509)</u>
613,661	1,385,345	67,604,500
<u>\$ 582,543</u>	<u>\$ 1,352,773</u>	<u>\$ 64,310,991</u>
<u>\$ 62,959</u>	<u>\$ 615,130</u>	<u>\$ 20,008,532</u>

REQUIRED SUPPLEMENTARY INFORMATION

MARYLAND STATE RETIREMENT
SCHEDULE OF CHANGES IN
for the Fiscal Year Ended
(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
Total pension liability			
Service cost	\$ 858,844	\$ 467,800	\$ 38,774
Interest	3,270,336	1,996,318	172,521
Changes of benefit terms	-	-	-
Difference between expected and actual experience	(563,443)	(183,991)	(17,273)
Changes in assumptions	2,065,188	1,199,460	96,021
Benefit payments, including refunds of employee contributions	(2,462,312)	(1,600,822)	(135,414)
Net change in total pension liability	<u>3,168,613</u>	<u>1,878,765</u>	<u>154,629</u>
Total pension liability, beginning of year	<u>44,981,150</u>	<u>27,533,679</u>	<u>2,378,827</u>
Total pension liability, end of year (a)	<u>\$ 48,149,763</u>	<u>\$ 29,412,444</u>	<u>\$ 2,533,456</u>
Plan fiduciary net position			
Contributions - employer	\$ 1,153,208	\$ 856,219	\$ 93,651
Contributions - members	531,931	307,067	9,431
Net investment income	8,699,680	4,795,405	403,734
Benefit payments, including refunds and administrative expenses	(2,485,957)	(1,624,910)	(135,711)
Net Transfer	<u>6,907</u>	<u>(7,126)</u>	<u>-</u>
Net Change in Plan Fiduciary Net Position	<u>7,905,769</u>	<u>4,326,655</u>	<u>371,105</u>
Plan fiduciary net position - beginning of year	<u>33,215,011</u>	<u>18,250,832</u>	<u>1,536,121</u>
Plan fiduciary net position - end of year (b)	<u>\$ 41,120,780</u>	<u>\$ 22,577,487</u>	<u>\$ 1,907,226</u>
Employer net pension liability (a) - (b)	<u>\$ 7,028,983</u>	<u>\$ 6,834,957</u>	<u>\$ 626,230</u>

AND PENSION SYSTEM
EMPLOYERS' NET PENSION LIABILITY

June 30, 2021

Judges' Retirement System	Law Enforcement Officers' Pension System	Total
\$ 19,538	\$ 46,320	\$ 1,431,276
42,566	125,229	5,606,970
-	-	-
5,450	(10,113)	(769,370)
13,876	93,808	3,468,353
(37,874)	(81,399)	(4,317,821)
<u>43,556</u>	<u>173,845</u>	<u>5,419,408</u>
584,225	1,709,516	77,187,397
<u>\$ 627,781</u>	<u>\$ 1,883,361</u>	<u>\$ 82,606,805</u>
\$ 21,277	\$ 79,168	\$ 2,203,523
3,595	13,713	865,737
129,884	287,059	14,315,762
(37,944)	(82,040)	(4,366,562)
-	219	-
<u>116,812</u>	<u>298,119</u>	<u>13,018,460</u>
496,848	1,087,225	54,586,037
<u>\$ 613,660</u>	<u>\$ 1,385,344</u>	<u>\$ 67,604,497</u>
<u>\$ 14,121</u>	<u>\$ 498,017</u>	<u>\$ 15,002,308</u>

REQUIRED SUPPLEMENTARY INFORMATION

MARYLAND STATE RETIREMENT
SCHEDULE OF CHANGES IN
for the Fiscal Year Ended
(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
Total pension liability			
Service cost	\$ 848,896	\$ 469,984	\$ 38,359
Interest	3,162,069	1,930,920	165,786
Changes of benefit terms	-	-	(50)
Difference between expected and actual experience	(125,435)	54,646	18,073
Changes in assumptions	-	-	-
Benefit payments, including refunds of employee contributions	(2,393,609)	(1,541,672)	(127,446)
Net change in total pension liability	<u>1,491,921</u>	<u>913,878</u>	<u>94,722</u>
Total pension liability, beginning of year	<u>43,489,231</u>	<u>26,619,801</u>	<u>2,284,105</u>
Total pension liability, end of year (a)	<u>\$ 44,981,152</u>	<u>\$ 27,533,679</u>	<u>\$ 2,378,827</u>
Plan fiduciary net position			
Contributions - employer	\$ 1,170,248	\$ 788,853	\$ 91,390
Contributions - members	499,884	324,162	9,277
Net investment income	1,133,679	627,106	52,800
Benefit payments, including refunds and administrative expenses	(2,416,468)	(1,559,154)	(127,736)
Net Transfer	<u>24,743</u>	<u>(25,535)</u>	<u>62</u>
Net Change in Plan Fiduciary Net Position	<u>412,086</u>	<u>155,432</u>	<u>25,793</u>
Plan fiduciary net position - beginning of year	<u>32,802,925</u>	<u>18,095,400</u>	<u>1,510,328</u>
Plan fiduciary net position - end of year (b)	<u>\$ 33,215,011</u>	<u>\$ 18,250,832</u>	<u>\$ 1,536,121</u>
Employer net pension liability (a) - (b)	<u>\$ 11,766,141</u>	<u>\$ 9,282,847</u>	<u>\$ 842,706</u>

AND PENSION SYSTEM
EMPLOYERS' NET PENSION LIABILITY

June 30, 2020

Judges' Retirement System	Law Enforcement Officers' Pension System	Total
\$ 19,399	\$ 45,684	\$ 1,422,322
41,066	118,154	5,417,995
-	(45)	(95)
(3,166)	11,274	(44,608)
-	-	-
(36,332)	(78,186)	(4,177,245)
<u>20,967</u>	<u>96,881</u>	<u>2,618,369</u>
563,258	1,612,635	74,569,030
<u>\$ 584,225</u>	<u>\$ 1,709,516</u>	<u>\$ 77,187,399</u>
\$ 22,708	\$ 71,070	\$ 2,144,269
3,453	13,522	850,298
17,071	35,985	1,866,641
(36,401)	(78,830)	(4,218,589)
-	729	(1)
<u>6,831</u>	<u>42,476</u>	<u>642,618</u>
490,017	1,044,749	53,943,419
<u>\$ 496,848</u>	<u>\$ 1,087,225</u>	<u>\$ 54,586,037</u>
\$ 87,377	\$ 622,291	\$ 22,601,362
<u>87,377</u>	<u>622,291</u>	<u>22,601,362</u>

REQUIRED SUPPLEMENTARY INFORMATION

MARYLAND STATE RETIREMENT
SCHEDULE OF CHANGES IN
for the Fiscal Year Ended
(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
Total pension liability			
Service cost	\$ 814,019	\$ 451,990	\$ 34,276
Interest	3,143,018	1,864,909	165,837
Changes of benefit terms	-	-	-
Difference between expected and actual experience	(189,803)	(44,635)	(19,980)
Changes in assumptions	(897,464)	283,109	(42,874)
Benefit payments, including refunds of employee contributions	(2,296,744)	(1,465,624)	(122,446)
Net change in total pension liability	<u>573,026</u>	<u>1,089,749</u>	<u>14,813</u>
Total pension liability, beginning of year	<u>42,916,205</u>	<u>25,530,054</u>	<u>2,269,293</u>
Total pension liability, end of year (a)	<u>\$ 43,489,231</u>	<u>\$ 26,619,803</u>	<u>\$ 2,284,106</u>
Plan fiduciary net position			
Contributions - employer	\$ 1,143,584	\$ 737,284	\$ 86,172
Contributions - members	494,698	288,350	8,579
Net investment income	1,999,261	1,103,927	91,778
Benefit payments, including refunds and administrative expenses	(2,318,939)	(1,482,270)	(122,721)
Net Transfer	3,870	(4,830)	(28)
Net Change in Plan Fiduciary Net Position	<u>1,322,474</u>	<u>642,461</u>	<u>63,780</u>
Plan fiduciary net position - beginning of year	<u>31,480,452</u>	<u>17,452,939</u>	<u>1,446,548</u>
Plan fiduciary net position - end of year (b)	<u>\$ 32,802,926</u>	<u>\$ 18,095,400</u>	<u>\$ 1,510,328</u>
Employer net pension liability (a) - (b)	<u>\$ 10,686,305</u>	<u>\$ 8,524,403</u>	<u>\$ 773,778</u>

AND PENSION SYSTEM
EMPLOYERS' NET PENSION LIABILITY

June 30, 2019

Judges' Retirement System	Law Enforcement Officers' Pension System	Total
\$ 19,173	\$ 39,299	\$ 1,358,757
41,302	112,806	5,327,872
-	-	-
(5,570)	8,400	(251,588)
(19,037)	(4,959)	(681,225)
(34,540)	(74,265)	(3,993,619)
<u>1,328</u>	<u>81,281</u>	<u>1,760,197</u>
561,930	1,531,351	72,808,833
<u>\$ 563,258</u>	<u>\$ 1,612,632</u>	<u>\$ 74,569,030</u>
\$ 21,737	\$ 65,314	\$ 2,054,091
3,176	12,488	807,291
29,689	63,554	3,288,209
(34,604)	(74,870)	(4,033,404)
-	988	-
19,998	67,474	2,116,187
470,019	977,275	51,827,233
<u>\$ 490,017</u>	<u>\$ 1,044,749</u>	<u>\$ 53,943,420</u>
<u>\$ 73,241</u>	<u>\$ 567,883</u>	<u>\$ 20,625,610</u>

REQUIRED SUPPLEMENTARY INFORMATION

MARYLAND STATE RETIREMENT
SCHEDULE OF CHANGES IN
for the Fiscal Year Ended
(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
Total pension liability			
Service cost	\$ 791,979	\$ 441,284	\$ 32,285
Interest	3,070,454	1,824,968	161,440
Changes of benefit terms	-	-	(2,167)
Difference between expected and actual experience	(466,863)	(204,581)	1,513
Changes in assumptions	92,669	55,131	2,013
Benefit payments, including refunds of employee contributions	(2,205,310)	(1,381,043)	(122,720)
Net change in total pension liability	<u>1,282,929</u>	<u>735,759</u>	<u>72,364</u>
Total pension liability, beginning of year	<u>41,633,276</u>	<u>24,794,295</u>	<u>2,196,929</u>
Total pension liability, end of year (a)	<u>\$ 42,916,205</u>	<u>\$ 25,530,54</u>	<u>\$ 2,269,293</u>
Plan fiduciary net position			
Contributions - employer	\$ 1,122,986	\$ 707,194	\$ 80,241
Contributions - members	484,923	283,670	8,063
Net investment income	2,364,521	1,318,438	109,405
Benefit payments, including refunds and administrative expenses	(2,223,399)	(1,395,375)	(122,963)
Net Transfer	229	(1,653)	21
Net Change in Plan Fiduciary Net Position	<u>1,749,260</u>	<u>912,274</u>	<u>74,767</u>
Plan fiduciary net position - beginning of year	<u>29,731,192</u>	<u>16,540,665</u>	<u>1,371,781</u>
Plan fiduciary net position - end of year (b)	<u>\$ 31,480,452</u>	<u>\$ 17,452,939</u>	<u>\$ 1,446,548</u>
Employer net pension liability (a) - (b)	<u>\$ 11,435,753</u>	<u>\$ 8,077,115</u>	<u>\$ 822,745</u>

AND PENSION SYSTEM
EMPLOYERS' NET PENSION LIABILITY
 June 30, 2018

Judges' Retirement System	Law Enforcement Officers' Pension System	Total
\$ 18,482	\$ 36,988	\$ 1,321,018
40,740	106,465	5,204,067
-	4,566	2,399
(14,982)	13,780	(671,133)
(139)	4,655	154,329
(32,009)	(71,650)	(3,812,732)
<u>12,092</u>	<u>94,804</u>	<u>2,197,948</u>
549,838	1,436,547	70,610,885
<u>\$ 561,930</u>	<u>\$ 1,531,351</u>	<u>\$ 72,808,833</u>
\$ 22,465	\$ 62,131	\$ 1,995,017
3,071	11,855	791,582
35,195	71,834	3,899,393
(32,063)	(72,143)	(3,845,943)
-	1,403	-
28,668	75,080	2,840,049
441,351	902,195	48,987,184
<u>\$ 470,019</u>	<u>\$ 977,275</u>	<u>\$ 51,827,233</u>
<u>\$ 91,911</u>	<u>\$ 554,076</u>	<u>\$ 20,981,600</u>

REQUIRED SUPPLEMENTARY INFORMATION

MARYLAND STATE RETIREMENT
SCHEDULE OF CHANGES IN
for the Fiscal Year Ended
(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
Total pension liability			
Service cost	\$ 777,084	\$ 444,566	\$ 32,324
Interest	3,010,496	1,806,261	160,396
Difference between expected and actual experience	(644,543)	(545,442)	(45,314)
Changes in assumptions	76,937	47,996	1,438
Benefit payments, including refunds of employee contributions	(2,120,119)	(1,305,891)	(118,833)
Net change in total pension liability	<u>1,099,855</u>	<u>447,490</u>	<u>30,011</u>
Total pension liability, beginning of year	40,533,421	24,346,805	2,166,918
Total pension liability, end of year (a)	<u>\$ 41,633,276</u>	<u>\$ 24,794,295</u>	<u>\$ 2,196,929</u>
Plan fiduciary net position			
Contributions - employer	\$ 1,137,472	\$ 730,506	\$ 83,000
Contributions - members	477,194	282,742	7,996
Net investment income	2,710,602	1,516,095	125,128
Benefit payments, including refunds and administrative expenses	(2,136,132)	(1,319,014)	(118,531)
Net Transfer	<u>(157)</u>	<u>(1,117)</u>	<u>56</u>
Net Change in Plan Fiduciary Net Position	2,188,979	1,209,212	97,649
Plan fiduciary net position - beginning of year	27,542,213	15,331,453	1,274,132
Plan fiduciary net position - end of year (b)	<u>\$ 29,731,192</u>	<u>\$ 16,540,665</u>	<u>\$ 1,371,781</u>
Employer net pension liability (a) - (b)	<u>\$ 11,902,084</u>	<u>\$ 8,253,630</u>	<u>\$ 825,148</u>

AND PENSION SYSTEM
EMPLOYERS' NET PENSION LIABILITY

June 30, 2017

Judges' Retirement System	Law Enforcement Officers' Pension System	Total
\$ 18,225	\$ 36,059	\$ 1,308,258
40,009	102,873	5,120,035
(13,325)	(18,348)	(1,266,972)
(136)	3,940	130,175
(31,253)	(64,468)	(3,640,564)
<u>13,520</u>	<u>60,056</u>	<u>1,650,932</u>
536,318	1,376,491	68,959,953
<u>\$ 549,838</u>	<u>\$ 1,436,547</u>	<u>\$ 70,610,885</u>
\$ 21,861	\$ 60,473	\$ 2,033,312
3,004	11,753	782,689
40,128	81,490	4,473,443
(31,302)	(63,207)	(3,668,186)
(2)	1,220	-
<u>33,689</u>	<u>91,729</u>	<u>3,621,258</u>
407,662	810,466	45,365,926
<u>\$ 441,351</u>	<u>\$ 902,195</u>	<u>\$ 48,987,184</u>
<u>\$ 108,487</u>	<u>\$ 534,352</u>	<u>\$ 21,623,701</u>

REQUIRED SUPPLEMENTARY INFORMATION

MARYLAND STATE RETIREMENT
SCHEDULE OF CHANGES IN
for the Fiscal Year Ended
(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
Total pension liability			
Service cost	\$ 763,578	\$ 439,705	\$ 30,309
Interest	2,914,637	1,737,109	155,993
Changes of benefit terms	-	-	-
Difference between expected and actual experience	(327,577)	16,870	(8,573)
Changes in assumptions	-	-	-
Benefit payments, including refunds of employee contributions	(2,056,256)	(1,255,358)	(121,917)
Net change in total pension liability	<u>1,294,382</u>	<u>938,326</u>	<u>55,812</u>
Total pension liability, beginning of year	<u>39,239,039</u>	<u>23,408,479</u>	<u>2,111,106</u>
Total pension liability, end of year (a)	<u><u>\$ 40,533,421</u></u>	<u><u>\$ 24,346,805</u></u>	<u><u>\$ 2,166,918</u></u>
Plan fiduciary net position			
Contributions - employer	\$ 1,084,049	\$ 640,943	\$ 72,320
Contributions - members	464,470	278,944	7,251
Net investment income	301,774	168,775	13,806
Benefit payments, including refunds and administrative expenses	(2,071,845)	(1,267,809)	(122,123)
Net Transfer	(163)	(191)	41
Net Change in Plan Fiduciary Net Position	<u>(221,715)</u>	<u>(179,338)</u>	<u>(28,705)</u>
Plan fiduciary net position - beginning of year	<u>27,763,928</u>	<u>15,510,791</u>	<u>1,302,837</u>
Plan fiduciary net position - end of year (b)	<u><u>\$ 27,542,213</u></u>	<u><u>\$ 15,331,453</u></u>	<u><u>\$ 1,274,132</u></u>
Employer net pension liability (a) - (b)	<u><u>\$ 12,991,208</u></u>	<u><u>\$ 9,015,352</u></u>	<u><u>\$ 892,786</u></u>

AND PENSION SYSTEM
EMPLOYERS' NET PENSION LIABILITY

June 30, 2016

Judges' Retirement System	Law Enforcement Officers' Pension System	Total
\$ 17,295	\$ 34,001	\$ 1,284,888
37,910	97,371	4,943,020
-	-	-
2,999	4,629	(311,652)
-	-	-
(30,487)	(63,837)	(3,527,855)
<u>27,717</u>	<u>72,164</u>	<u>2,388,401</u>
508,601	1,304,327	66,571,552
<u>\$ 536,318</u>	<u>\$ 1,376,491</u>	<u>\$ 68,959,953</u>
\$ 18,384	\$ 54,959	\$ 1,870,655
2,863	10,886	764,414
4,415	8,761	497,531
(30,532)	(64,205)	(3,556,514)
-	313	-
<u>(4,870)</u>	<u>10,714</u>	<u>(423,914)</u>
412,532	799,752	45,789,840
<u>\$ 407,662</u>	<u>\$ 810,466</u>	<u>\$ 45,365,926</u>
<u>\$ 128,656</u>	<u>\$ 566,025</u>	<u>\$ 23,594,027</u>

REQUIRED SUPPLEMENTARY INFORMATION

MARYLAND STATE RETIREMENT
SCHEDULE OF CHANGES IN
for the Fiscal Year Ended
(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
Total pension liability			
Service cost	\$ 783,603	\$ 461,524	\$ 30,556
Interest	2,811,261	1,663,866	147,839
Changes of benefit terms	-	-	-
Difference between expected and actual experience	(476,190)	(19,591)	(10,512)
Changes in assumptions	753,521	375,148	86,689
Benefit payments, including refunds of employee contributions	(1,958,092)	(1,170,116)	(119,804)
Net change in total pension liability	<u>1,914,103</u>	<u>1,310,831</u>	<u>134,768</u>
Total pension liability, beginning of year	<u>37,324,936</u>	<u>22,097,648</u>	<u>1,976,338</u>
Total pension liability, end of year (a)	<u>\$ 39,239,039</u>	<u>\$ 23,408,479</u>	<u>\$ 2,111,106</u>
Plan fiduciary net position			
Contributions - employer	\$ 1,063,763	\$ 643,219	\$ 76,056
Contributions - members	454,770	280,133	7,205
Net investment income	727,858	405,846	33,035
Benefit payments, including refunds and administrative expenses	(1,973,827)	(1,182,886)	(120,006)
Net Transfer	309	(535)	-
Net Change in Plan Fiduciary Net Position	<u>272,873</u>	<u>145,777</u>	<u>(3,710)</u>
Plan fiduciary net position - beginning of year	<u>27,491,055</u>	<u>15,365,014</u>	<u>1,306,547</u>
Plan fiduciary net position - end of year (b)	<u>\$ 27,763,928</u>	<u>\$ 15,510,791</u>	<u>\$ 1,302,837</u>
Employer net pension liability (a) - (b)	<u>\$ 11,475,111</u>	<u>\$ 7,897,688</u>	<u>\$ 808,269</u>

AND PENSION SYSTEM
EMPLOYERS' NET PENSION LIABILITY

June 30, 2015

<u>Judges' Retirement System</u>	<u>Law Enforcement Officers' Pension System</u>	<u>Total</u>
\$ 16,306	\$ 33,934	\$ 1,325,923
34,735	93,085	4,750,786
-	-	-
(843)	(5,846)	(512,982)
27,072	11,471	1,253,901
(28,899)	(55,884)	(3,332,795)
<u>48,371</u>	<u>76,760</u>	<u>3,484,833</u>
460,230	1,227,567	63,086,719
<u>\$ 508,601</u>	<u>\$ 1,304,327</u>	<u>\$ 66,571,552</u>
\$ 19,028	\$ 56,546	\$ 1,858,612
2,813	10,523	755,444
10,759	20,173	1,197,671
(28,945)	(56,211)	(3,361,875)
(6)	232	-
<u>3,649</u>	<u>31,031</u>	<u>449,852</u>
408,883	768,489	45,339,988
<u>\$ 412,532</u>	<u>\$ 799,752</u>	<u>\$ 45,789,840</u>
\$ 96,069	\$ 504,575	\$ 20,781,712
<u> </u>	<u> </u>	<u> </u>

REQUIRED SUPPLEMENTARY INFORMATION

MARYLAND STATE RETIREMENT
SCHEDULE OF CHANGES IN
for the Fiscal Year Ended
(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
Total pension liability			
Service cost	\$ 796,354	\$ 469,747	\$ 28,508
Interest	2,694,942	1,597,397	141,875
Changes of benefit terms	-	-	-
Difference between expected and actual experience	-	-	-
Changes in assumptions	182,000	86,638	33,418
Benefit payments, including refunds of employee contributions	(1,878,801)	(1,121,293)	(109,964)
Net change in total pension liability	<u>1,794,495</u>	<u>1,032,489</u>	<u>93,837</u>
Total pension liability, beginning of year	<u>35,530,441</u>	<u>21,065,159</u>	<u>1,882,501</u>
Total pension liability, end of year (a)	<u>\$ 37,324,936</u>	<u>\$ 22,097,648</u>	<u>\$ 1,976,338</u>
Plan fiduciary net position			
Contributions - employer	\$ 1,000,193	\$ 592,185	\$ 56,243
Contributions - members	441,559	267,139	6,592
Net investment income	3,458,512	1,940,319	165,097
Benefit payments, including refunds and administrative expenses	(1,878,801)	(1,121,293)	(109,964)
Net Transfer	(33)	(210)	16
Net Change in Plan Fiduciary Net Position	<u>3,021,430</u>	<u>1,678,140</u>	<u>117,984</u>
Plan fiduciary net position - beginning of year	<u>24,469,625</u>	<u>13,686,874</u>	<u>1,188,563</u>
Plan fiduciary net position - end of year (b)	<u>\$ 27,491,055</u>	<u>\$ 15,365,014</u>	<u>\$ 1,306,547</u>
Employer net pension liability (a) - (b)	<u>\$ 9,833,881</u>	<u>\$ 6,732,634</u>	<u>\$ 669,791</u>

AND PENSION SYSTEM
EMPLOYERS' NET PENSION LIABILITY

June 30, 2014

Judges' Retirement System	Law Enforcement Officers' Pension System	Total
\$ 15,309	\$ 31,927	\$ 1,341,845
33,337	87,207	4,554,758
-	-	-
-	-	-
46	18,798	320,900
(27,298)	(53,519)	(3,190,875)
<u>21,394</u>	<u>84,413</u>	<u>3,026,628</u>
438,836	1,143,154	60,060,091
<u>\$ 460,230</u>	<u>\$ 1,227,567</u>	<u>\$ 63,086,719</u>
\$ 21,110	\$ 63,922	\$ 1,733,653
2,566	9,870	727,726
50,173	92,166	5,706,267
(27,298)	(53,519)	(3,190,875)
-	227	-
<u>46,551</u>	<u>112,666</u>	<u>4,976,771</u>
362,332	655,823	40,363,217
<u>\$ 408,883</u>	<u>\$ 768,489</u>	<u>\$ 45,339,988</u>
<u>\$ 51,347</u>	<u>\$ 459,078</u>	<u>\$ 17,746,731</u>

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2023

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Total pension liability	\$ 51,307,724	\$ 31,075,381	\$ 2,739,580	\$ 690,371	\$ 2,110,228	\$ 87,923,284
Plan fiduciary net position	(39,421,232)	(21,622,354)	(1,851,047)	(584,909)	(1,413,431)	(64,892,973)
Employer net pension liability	\$ 11,886,492	\$ 9,453,027	\$ 888,533	\$ 105,462	\$ 696,797	\$ 23,030,311
Plan fiduciary net position as a percentage of the total pension liability	76.83%	69.58%	67.57%	84.72%	66.98%	73.81%
Covered payroll	\$ 8,468,612	\$ 5,475,886	\$ 139,458	\$ 58,696	\$ 241,937	\$ 14,384,589
Employer net pension liability as a percent of covered-employee payroll	140.36%	172.63%	637.13%	179.67%	288.01%	160.10%

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2022

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Total pension liability	\$ 49,235,396	\$ 29,867,155	\$ 2,603,567	\$ 645,502	\$ 1,967,903	\$ 84,319,523
Plan fiduciary net position	(39,126,178)	(21,428,734)	(1,820,763)	(582,543)	(1,352,773)	(64,310,991)
Employer net pension liability	\$ 10,109,218	\$ 8,438,421	\$ 782,804	\$ 62,959	\$ 615,130	\$ 20,008,532
Plan fiduciary net position as a percentage of the total pension liability	79.47%	71.75%	69.93%	90.25%	68.74%	76.27%
Covered payroll	\$ 7,957,775	\$ 4,852,737	\$ 124,367	\$ 53,934	\$ 213,003	\$ 13,201,816
Employer net pension liability as a percent of covered-employee payroll	127.04%	173.89%	629.43%	116.73%	288.79%	151.56%

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2021

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Total pension liability	\$ 48,149,763	\$ 29,412,444	\$ 2,533,456	\$ 627,781	\$ 1,883,361	\$ 82,606,805
Plan fiduciary net position	(41,120,780)	(22,577,487)	(1,907,226)	(613,660)	(1,385,344)	(67,604,497)
Employer net pension liability	\$ 7,028,983	\$ 6,834,957	\$ 626,230	\$ 14,121	\$ 498,017	\$ 15,002,308
Plan fiduciary net position as a percentage of the total pension liability	85.40%	76.76%	75.28%	97.75%	73.56%	81.84%
Covered payroll	\$ 7,688,846	\$ 4,689,819	\$ 119,048	\$ 52,073	\$ 199,460	\$ 12,749,246
Employer net pension liability as a percent of covered-employee payroll	91.42%	145.74%	526.03%	27.12%	249.68%	117.67%

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2020

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Total pension liability	\$ 44,981,152	\$ 27,533,679	\$ 2,378,827	\$ 584,225	\$ 1,709,516	\$ 77,187,399
Plan fiduciary net position	(33,215,011)	(18,250,832)	(1,536,121)	(496,848)	(1,087,225)	(54,586,037)
Employer net pension liability	\$ 11,766,141	\$ 9,282,847	\$ 842,706	\$ 87,377	\$ 622,291	\$ 22,601,362
Plan fiduciary net position as a percentage of the total pension liability	73.84%	66.29%	64.57%	85.04%	63.60%	70.72%
Covered payroll	\$ 7,492,465	\$ 4,646,134	\$ 116,274	\$ 51,882	\$ 194,667	\$ 12,501,422
Employer net pension liability as a percent of covered payroll	157.04%	199.80%	724.76%	168.41%	319.67%	180.79%

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2019

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Total pension liability	\$ 43,489,231	\$ 26,619,803	\$ 2,284,106	\$ 563,258	\$ 1,612,632	\$ 74,569,030
Plan fiduciary net position	(32,802,926)	(18,095,400)	(1,510,328)	(490,017)	(1,044,749)	(53,943,420)
Employer net pension liability	\$ 10,686,305	\$ 8,524,403	\$ 773,778	\$ 73,241	\$ 567,883	\$ 20,625,610
Plan fiduciary net position as a percentage of the total pension liability	75.43%	67.98%	66.12%	87.00%	64.79%	72.34%
Covered payroll	\$ 7,153,063	\$ 4,415,523	\$ 106,978	\$ 48,935	\$ 180,964	\$ 11,905,463
Employer net pension liability as a percent of covered payroll	149.39%	193.06%	723.31%	149.67%	313.81%	173.24%

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2018

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Total pension liability	\$ 42,916,205	\$ 25,530,054	\$ 2,269,293	\$ 561,930	\$ 1,531,351	\$ 72,808,833
Plan fiduciary net position	(31,480,452)	(17,452,939)	(1,446,548)	(470,019)	(977,275)	(51,827,233)
Employer net pension liability	\$ 11,435,753	\$ 8,077,115	\$ 822,745	\$ 91,911	\$ 554,076	\$ 20,981,600
Plan fiduciary net position as a percentage of the total pension liability	73.35%	68.36%	63.74%	83.64%	63.82%	71.18%
Covered payroll	\$ 6,941,097	\$ 4,306,746	\$ 100,325	\$ 47,498	\$ 170,556	\$ 11,566,222
Employer net pension liability as a percent of covered payroll	164.75%	187.55%	820.08%	193.50%	324.86%	181.40%

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2017

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Total pension liability	\$ 41,633,276	\$ 24,794,295	\$ 2,196,929	\$ 549,838	\$ 1,436,547	\$ 70,610,885
Plan fiduciary net position	(29,731,192)	(16,540,665)	(1,371,781)	(441,351)	(902,195)	(48,987,184)
Employer net pension liability	\$ 11,902,084	\$ 8,253,630	\$ 825,148	\$ 108,487	\$ 534,352	\$ 21,623,701
Plan fiduciary net position as a percentage of the total pension liability	71.41%	66.71%	62.44%	80.27%	62.80%	69.38%
Covered payroll	\$ 6,780,838	\$ 4,324,315	\$ 100,384	\$ 46,876	\$ 166,561	\$ 11,418,974
Employer net pension liability as a percent of covered payroll	175.53%	190.87%	821.99%	231.43%	320.81%	189.37%

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2016

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Total pension liability	\$ 40,533,421	\$ 24,346,805	\$ 2,166,918	\$ 536,318	\$ 1,376,491	\$ 68,959,953
Plan fiduciary net position	(27,542,213)	(15,331,453)	(1,274,132)	(407,662)	(810,466)	(45,365,926)
Employer net pension liability	\$ 12,991,208	\$ 9,015,352	\$ 892,786	\$ 128,656	\$ 566,025	\$ 23,594,027
Plan fiduciary net position as a percentage of the total pension liability	67.95%	62.97%	58.80%	76.01%	58.88%	65.79%
Covered payroll	\$ 6,611,038	\$ 4,250,288	\$ 93,491	\$ 44,711	\$ 156,396	\$ 11,155,924
Employer net pension liability as a percent of covered payroll	196.51%	212.11%	954.94%	287.75%	361.92%	211.49%

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2015

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Total pension liability	\$ 39,239,039	\$ 23,408,479	\$ 2,111,106	\$ 508,601	\$ 1,304,327	\$ 66,571,552
Plan fiduciary net position	(27,763,928)	(15,510,791)	(1,302,837)	(412,532)	(799,752)	(45,789,840)
Employer net pension liability	\$ 11,475,111	\$ 7,897,688	\$ 808,269	\$ 96,069	\$ 504,575	\$ 20,781,712
Plan fiduciary net position as a percentage of the total pension liability	70.76%	66.26%	61.71%	81.11%	61.32%	68.78%
Covered payroll	\$ 6,470,706	\$ 4,305,637	\$ 91,050	\$ 44,613	\$ 151,955	\$ 11,063,961
Employer net pension liability as a percent of covered payroll	177.34%	183.43%	887.72%	215.34%	332.06%	187.83%

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2014

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Total pension liability	\$ 37,324,936	\$ 22,097,648	\$ 1,976,338	\$ 460,230	\$ 1,227,567	\$ 63,086,719
Plan fiduciary net position	(27,491,055)	(15,365,014)	(1,306,547)	(408,883)	(768,489)	(45,339,988)
Employer net pension liability	\$ 9,833,881	\$ 6,732,634	\$ 669,791	\$ 51,347	\$ 459,078	\$ 17,746,731
Plan fiduciary net position as a percentage of the total pension liability	73.65%	69.53%	66.11%	88.84%	62.60%	71.87%
Covered payroll	\$ 6,310,253	\$ 4,219,732	\$ 85,660	\$ 42,313	\$ 145,673	\$ 10,803,631
Employer net pension liability as a percent of covered payroll	155.84%	159.55%	781.92%	121.35%	315.14%	164.27%

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2023

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Actuarially determined contribution	\$ 1,228,568	\$ 985,126	\$ 106,966	\$ 23,675	\$ 94,582	\$ 2,438,917
Actual contribution	(1,228,568)	(985,126)	(106,966)	(23,675)	(94,582)	(2,438,917)
Contribution deficiency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 8,468,612	\$ 5,475,886	\$ 139,458	\$ 58,696	\$ 241,937	\$ 14,384,589
Actual contribution as a percent of covered payroll	14.51%	17.99%	76.70%	40.33%	39.09%	16.96%

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2022

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Actuarially determined contribution	\$ 1,202,102	\$ 880,672	\$ 95,453	\$ 22,816	\$ 81,260	\$ 2,282,303
Actual contribution	(1,202,102)	(880,672)	(95,453)	(22,816)	(81,260)	(2,282,303)
Contribution deficiency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 7,957,775	\$ 4,852,737	\$ 124,367	\$ 53,934	\$ 213,003	\$ 13,201,816
Actual contribution as a percent of covered payroll	15.11%	18.15%	76.75%	42.30%	38.15%	17.29%

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2021

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Actuarially determined contribution	\$1,153,208	\$856,219	\$93,651	\$21,277	\$79,168	\$2,203,523
Actual contribution	(1,153,208)	(856,219)	(93,651)	(21,277)	(79,168)	(2,203,523)
Contribution deficiency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 7,688,846	\$ 4,689,819	\$ 119,048	\$ 52,073	\$ 199,460	\$ 12,749,246
Actual contribution as a percent of covered payroll	15.00%	18.26%	78.67%	40.86%	39.69%	17.28%

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2020

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Actuarially determined contribution	\$ 1,170,248	\$ 788,853	\$ 91,390	\$ 22,708	\$ 71,070	\$ 2,144,269
Actual contribution	(1,170,248)	(788,853)	(91,390)	(22,708)	(71,070)	(2,144,269)
Contribution deficiency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 7,492,465	\$ 4,646,134	\$ 116,274	\$ 51,882	\$ 194,667	\$ 12,501,422
Actual contribution as a percent of covered payroll	15.62%	16.98%	78.60%	43.77%	36.51%	17.15%

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2019

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Actuarially determined contribution	\$ 1,143,584	\$ 737,284	\$ 86,172	\$ 21,737	\$ 65,314	\$ 2,054,091
Actual contribution	(1,143,584)	(737,284)	(86,172)	(21,737)	(65,314)	(2,054,091)
Contribution deficiency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 7,153,063	\$ 4,415,523	\$ 106,978	\$ 48,935	\$ 180,964	\$ 11,905,463
Actual contribution as a percent of covered payroll	15.99%	16.70%	80.55%	44.42%	36.09%	17.25%

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2018

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Actuarially determined contribution	\$ 1,122,986	\$ 707,194	\$ 80,241	\$ 22,465	\$ 62,131	\$ 1,995,017
Actual contribution	(1,122,986)	(707,194)	(80,241)	(22,465)	(62,131)	(1,995,017)
Contribution deficiency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 6,941,097	\$ 4,306,746	\$ 100,325	\$ 47,498	\$ 170,556	\$ 11,566,222
Actual contribution as a percent of covered payroll	16.18%	16.42%	79.98%	47.30%	36.43%	17.25%

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2017

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Actuarially determined contribution	\$ 1,137,472	\$ 730,506	\$ 83,000	\$ 21,861	\$ 60,473	\$ 2,033,312
Actual contribution	(1,137,472)	(730,506)	(83,000)	(21,861)	(60,473)	(2,033,312)
Contribution deficiency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered payroll	\$ 6,780,838	\$ 4,324,315	\$ 100,384	\$ 46,876	\$ 166,561	\$ 11,418,974
Actual contribution as a percent of covered payroll	16.77%	16.89%	82.68%	46.64%	36.31%	17.81%

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2016

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Actuarially determined contribution	\$ 1,112,989	\$ 689,431	\$ 72,320	\$ 18,384	\$ 54,959	\$ 1,948,083
Actual contribution	(1,084,049)	(640,943)	(72,320)	(18,384)	(54,959)	(1,870,655)
Contribution deficiency	\$ 28,940	\$ 48,488	\$ -	\$ -	\$ -	\$ 77,428
Covered payroll	\$ 6,611,038	\$ 4,250,288	\$ 93,491	\$ 44,711	\$ 156,396	\$ 11,155,924
Actual contribution as a percent of covered payroll	16.40%	15.08%	77.36%	41.12%	35.14%	16.77%

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2015

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Actuarially determined contribution	\$ 1,189,318	\$ 766,782	\$ 76,056	\$ 19,028	\$ 56,546	\$ 2,107,730
Actual contribution	(1,063,763)	(643,219)	(76,056)	(19,028)	(56,546)	(1,858,612)
Contribution deficiency (excess)	\$ 125,555	\$ 123,563	\$ -	\$ -	\$ -	\$ 249,118
Covered payroll	\$ 6,470,706	\$ 4,305,637	\$ 91,050	\$ 44,613	\$ 151,955	\$ 11,063,961
Actual contribution as a percent of covered payroll	16.44%	14.94%	83.53%	42.65%	37.21%	16.80%

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS AND RELATED RATIOS

for the Fiscal Year Ended June 30, 2014

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System	Judges' Retirement System	Law Enforcement Officers' Pension System	Total
Actuarially determined contribution	\$ 1,358,991	\$ 812,643	\$ 64,325	\$ 21,110	\$ 63,922	\$ 2,320,991
Actual contribution	(1,000,193)	(592,185)	(56,243)	(21,110)	(63,922)	(1,733,653)
Contribution deficiency (excess)	\$ 358,798	\$ 220,458	\$ 8,082	\$ -	\$ -	\$ 587,338
Covered payroll	\$ 6,310,253	\$ 4,219,732	\$ 85,660	\$ 42,313	\$ 145,673	\$ 10,803,631
Actual contribution as a percent of covered payroll	15.85%	14.03%	65.66%	49.89%	43.88%	16.05%

SCHEDULE OF INVESTMENT RETURNS

Fiscal Year Ended	Annual money-weighted rate of return, net of investment expenses
2014	14.38%
2015	2.68%
2016	1.16%
2017	10.02%
2018	8.08%
2019	6.44%
2020	3.50%
2021	26.69%
2022	-2.97%
2023	3.11%

*This disclosure is intended to capture performance net of pension plan investment expense, which has been adjusted for changing amounts actually invested, taking into consideration benefit payments and contributions. Currently, the Agency is experiencing net outflows resulting in contributions being used to pay benefits rather than flowing through invested funds; therefore, there is minimal variation between this schedule and the time-weighted rates of return presented in the Investment Section of this report.

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

1 ACTUARIAL METHODS AND ASSUMPTIONS

A. Funding Method

All six Systems use the individual entry age normal method to determine costs. Under this funding method, a total contribution rate is determined which consists of two elements, the normal cost rate and the Unfunded Actuarial Liability (UAL) rate.

The individual Entry Age Normal cost rate is determined as the value, as of age at entry into the plan, of the member's projected future benefits, and divided by the value, also as of the member's entry age, of the member's expected future salary. For purposes of calculating the normal cost rate, the same benefit accrual rates used to calculate the present value of future benefits are used to calculate the normal cost. The benefit provisions applicable to each member are used in developing his/her individual normal cost rate.

In addition to contributions required to meet the System's normal cost, contributions will be required to fund the System's unfunded actuarial liability. Actuarial liability is defined as the present value of future benefits less the present value of future normal costs. The unfunded actuarial liability for all members is the actuarial liability less the actuarial value of the System's assets. The System's unfunded actuarial liability is funded over a 25-year closed amortization period ending June 30, 2039 (15 years remaining as of the June 30, 2023 valuation date) as a level percentage of payroll.

There is an additional component in the Unfunded Actuarial Accrued Liability amortization contribution rate that accounts for the effects of the lag between the valuation date and when the contribution is made. This calculation assumes the contributions that would be received in fiscal year 2024 are equal to the budgeted contributions developed in the valuation as of June 30, 2022, plus the proportionate share of reinvested savings allocated to each System for fiscal year 2024 under the pension reforms.

A portion of the savings from the 2011 pension reforms passed by the General Assembly are to be reinvested as additional contributions into the Systems. Beginning in fiscal year 2016, \$75 million of additional contributions are to be reinvested each year until the combined System reaches 85% funded.

B. Asset Valuation Method

All six Systems use a method based on the principle that the difference between actual and expected investment returns should be subject to partial recognition to smooth out fluctuations in the total return achieved by the fund from year to year. Under this method, the actuarial value of assets reflects annually one-fifth of the market value gains or losses for the five prior years. The resulting value is restricted to be not less than 80% of market value nor greater than 120% of market value.

C. Actuarial Assumptions

The assumptions used for the actuarial valuation were recommended by the System's independent actuary, based upon periodic analyses of the System's experience, and adopted by the Board of Trustees. The most recent analysis of the System's experience was performed in 2019 and new assumptions were adopted for the June 30, 2019 valuation. A subsequent analysis of the System's economic assumptions was performed in 2021 and the Board adopted new assumptions effective for the June 30, 2021 valuation. Differences between assumed and actual experience (i.e., actuarial gains and losses) are part of the unfunded actuarial liability. The actuarial assumptions used in the actuarial valuation as of June 30, 2023 can be found in Note 8.

OTHER SUPPLEMENTARY INFORMATION

SCHEDULE OF FUNDING PROGRESS

(Expressed in Thousands)

Actuarial Valuation Date June 30,	Actuarial Value of Assets a	Actuarial Accrued Liability (AAL) b	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll c	UAAL as a Percentage of Covered Payroll [(b - a) / c]
2014	\$ 42,996,957	\$ 62,610,194	\$ 19,613,237	68.67%	\$ 10,803,632	182%
2015	46,170,624	66,281,781	20,111,157	69.66%	11,063,961	182%
2016	47,803,679	67,781,924	19,978,245	70.53%	11,155,924	179%
2017	50,250,465	69,986,576	19,736,111	71.80%	11,418,974	173%
2018	52,586,528	72,574,689	19,988,161	72.46%	11,566,220	173%
2019	54,361,969	74,526,000	20,164,031	72.94%	11,905,463	169%
2020	56,246,776	76,471,035	20,224,259	73.55%	12,501,422	162%
2021	62,817,938	81,738,557	18,920,619	76.85%	12,749,247	148%
2022	65,798,923	85,248,064	19,449,141	77.19%	13,201,815	147%
2023	67,985,366	90,319,369	22,334,003	75.27%	14,384,589	155%

DESCRIPTION OF SCHEDULE OF FUNDING PROGRESS

The Schedule of Funding Progress summarizes the actuarial value of the System's assets and actuarial accrued liability as of the June 30, 2023 actuarial valuation date and each of the 10 preceding years. The data presented in the schedule was obtained from the System's independent actuary's annual valuation report for each year presented.

The schedule is presented to provide a consistent basis for measuring the System's annual progress toward funding its actuarial accrued liability in accordance with its actuarial funding method. The primary measure of funding progress is the System's funded ratio (i.e., actuarial value of assets expressed as a percentage of the actuarial accrued liability). An increase in the funded ratio indicates improvement in the System's ability to pay all projected benefits as they become due. The System is fully funded if the funded ratio is greater than or equal to 100 percent. During the year ended June 30, 2023 the System's funded ratio decreased from 77.19% to 75.27%.

The Schedule of Funding Progress also discloses the relationship between the System's covered payroll (i.e., all elements included in compensation paid to active members on which contributions are based) and the unfunded actuarial accrued liability. This relationship, expressed as a ratio, is a measure of the significance of the unfunded actuarial accrued liability relative to the capacity to contribute based on the active participants covered payroll. During the year ended June 30, 2023 the System's ratio of the unfunded actuarial accrued liability to its covered payroll increased from 147% to 155%.

MARYLAND STATE RETIREMENT AND PENSION SYSTEM

SCHEDULE OF ADMINISTRATIVE EXPENSES

for the Fiscal Years Ended June 30, 2023 and 2022

(Expressed in Thousands)

	2023	2022
Personnel services		
Staff salaries	\$13,045	\$18,173
Fringe benefits	6,643	8,227
Total personnel services	<u>19,688</u>	<u>26,400</u>
Professional and contractual services		
Actuarial services	358	364
Legal and financial services	827	522
Consulting services	146	814
Data processing services	4,004	3,829
Other contractual services	16,147	5,362
Total professional and contractual services	<u>21,482</u>	<u>10,891</u>
Miscellaneous		
Communications	800	565
Rent	2,020	2,017
Equipment and supplies	446	219
Other	1,578	1,969
Total miscellaneous	<u>4,844</u>	<u>4,770</u>
Total Administrative Expenses	<u>\$46,014</u>	<u>\$42,061</u>

SCHEDULE OF INVESTMENT EXPENSES

for the Fiscal Years Ended June 30, 2023 and 2022

(Expressed in Thousands)

	Management Fees for 2023	Incentive Fees for 2023	Total	Management Fees for 2022	Incentive Fees for 2022	Total
Investment advisors						
Public equity	\$ 72,314	\$ (2,194)	\$ 70,120	\$ 88,940	\$ 84,688	\$ 173,628
Rate Sensitive	15,528	13,994	29,522	14,210	8,586	22,796
Credit opportunity	24,252	152	24,404	25,102	49	25,151
Real return	17,957	157	18,114	14,931	118	15,049
Absolute return	49,807	43,337	93,144	60,164	70,211	130,375
Commodity	-	537	537	1,272	-	1,272
Multi Asset	1,113	-	1,113	133,844	-	133,844
Private equity	125,807	-	125,807	45,273	8,387	53,660
Real estate	55,067	4,549	59,616	383,736	172,039	555,775
Total investment advisory fees	<u>361,845</u>	<u>60,532</u>	<u>422,377</u>			
Other investment service fees				4,271	-	4,271
Currency overlay	3,195	-	3,195	4,914	-	4,914
Other investment expenses	4,898	-	4,898	9,185	-	9,185
Total other investment service fees	<u>8,093</u>	<u>-</u>	<u>8,093</u>			
Total Investment Expenses	<u>\$ 369,938</u>	<u>\$ 60,532</u>	<u>\$ 430,470</u>	<u>\$ 392,921</u>	<u>\$ 172,039</u>	<u>\$ 564,960</u>

Fund Balance Accounts

As provided by law, all System assets must be credited, according to the purpose for which they are held, to either the Annuity Savings Fund, the Accumulation Fund, or the Expense Fund. These funds are classified as accounts for financial reporting purposes and are further explained as follows:

Annuity Savings Fund

Members' contributions together with interest thereon, at statutory interest rates, are credited to the Annuity Savings Fund. Upon retirement, members' accumulated contributions and interest are transferred from the Annuity Savings Fund to the Accumulation Fund.

Accumulation Fund

Contributions made by employers, other contributions and investment income are credited to the Accumulation Fund. All retirement, disability, and death benefits are paid from this Fund.

Expense Fund

All of the System's administrative and investment management expenses are recorded in the Expense Fund. During the year, the System's investment expenses are covered by funds transferred from the Accumulation Fund, and the System's administrative expenses are covered by administrative fees assessed and collected from each participating employer into the Accumulation Fund and transferred to the Expense Fund to cover annual operating and administrative expenses of the System.

MARYLAND STATE RETIREMENT AND PENSION SYSTEM

SCHEDULE OF FUND BALANCES

for the Fiscal Year Ended June 30, 2023 (with Comparative 2022 Totals)

(Expressed in Thousands)

	Annuity Savings Fund	Accumulation Fund	Expense Fund	Totals	
				2023	2022
Fund Balances, Beginning of Year	<u>\$ 11,406,235</u>	<u>\$ 52,901,928</u>	<u>\$ 2,828</u>	<u>\$ 64,310,991</u>	<u>\$ 67,604,500</u>
Additions					
Net investment income (loss)	-	2,410,747	(430,470)	1,980,277	(1,942,133)
Contributions (Note 5):					
Employers	-	1,669,856	30,458	1,700,314	1,489,076
Members	963,702	-	-	963,702	894,267
State contributions on behalf of local governments	-	738,603	-	738,603	793,227
Contribution interest	-	-	-	-	-
Deductions					
Benefit payments		(4,653,163)	-	(4,653,163)	(4,394,350)
Refunds (Note 6)	(101,737)	-	-	(101,737)	(91,535)
Administrative expenses (Note 2)	-	(14,951)	(31,063)	(46,014)	(42,061)
Transfers					
From the Accumulation Fund to the Annuity Savings Fund for interest credited to members' accounts	556,493	(556,493)	-	-	-
To the Accumulation Fund from the Annuity Savings Fund for contributions of retiring members	(594,452)	594,452	-	-	-
From the Accumulation Fund to the Expense Fund for administrative and investment expenses	-	(430,468)	430,468	-	-
Net changes in fund balances	<u>824,006</u>	<u>(241,417)</u>	<u>(607)</u>	<u>581,982</u>	<u>(3,293,509)</u>
Fund Balances, End of Year	<u>\$ 12,230,241</u>	<u>\$ 52,660,511</u>	<u>\$ 2,221</u>	<u>\$ 64,892,973</u>	<u>\$ 64,310,991</u>

MARYLAND STATE RETIREMENT SCHEDULE OF FIDUCIARY NET

as of June 30, 2023

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
ASSETS			
Cash & cash equivalents (note 3)	\$ 823,956	\$ 461,229	\$ 41,065
Receivables:			
Contributions:			
Employers	17,648	50,592	5,006
Members	300	9,662	420
Accrued investment income	118,789	65,327	5,571
Investment sales proceeds	262,829	144,539	12,327
Due from other systems	82,539	50,790	345
Total receivables	<u>482,105</u>	<u>320,910</u>	<u>23,669</u>
Investments, at fair value (Notes 2 & 3)			
U.S. Government obligations	3,790,449	2,080,389	177,446
Domestic corporate obligations	2,225,610	1,221,527	104,189
International obligations	963,442	528,785	45,102
Domestic stocks	6,300,597	3,458,083	294,957
International stocks	5,807,242	3,187,306	271,860
Mortgages & mortgage related securities	1,006,599	552,472	47,123
Alternative investments	18,684,857	10,255,186	874,711
Collateral for loaned securities	3,452,497	1,898,656	161,923
Total investments	<u>42,231,293</u>	<u>23,182,404</u>	<u>1,977,311</u>
Total assets	<u>43,537,354</u>	<u>23,964,543</u>	<u>2,042,045</u>
LIABILITIES			
Accounts payable & accrued expenses	33,444	20,930	1,620
Investment commitments payable	585,909	322,213	27,479
Obligation for collateral for loaned securities	3,452,497	1,898,656	161,923
Due to other systems	44,273	100,389	(25)
Total liabilities	<u>4,116,123</u>	<u>2,342,188</u>	<u>190,997</u>
Net position restricted for pensions	<u>\$ 39,421,231</u>	<u>\$ 21,622,355</u>	<u>\$ 1,851,048</u>

* Intersystem due from/to have been eliminated in the financial statements

AND PENSION SYSTEM

POSITION BY SYSTEM

Judges' Retirement System	Law Enforcement Officers' Pension System	Subtotal	Eliminations*	Combined Total
<u>\$ 16,136</u>	<u>\$ 30,983</u>	<u>\$ 1,373,369</u>	<u>\$ -</u>	<u>\$ 1,373,369</u>
527	3,740	77,513	-	77,513
5	307	10,694	-	10,694
1,757	4,227	195,671	-	195,671
3,887	9,352	432,934	-	432,934
-	11,042	144,716	(144,716)	-
<u>6,176</u>	<u>28,668</u>	<u>861,528</u>	<u>(144,716)</u>	<u>716,812</u>
55,918	134,468	6,238,670	-	6,238,670
32,833	78,954	3,663,113	-	3,663,113
14,213	34,179	1,585,721	-	1,585,721
92,948	223,516	10,370,101	-	10,370,101
85,670	206,014	9,558,092	-	9,558,092
14,850	35,710	1,656,754	-	1,656,754
275,642	662,856	30,753,252	-	30,753,252
51,062	122,844	5,686,982	-	5,686,982
623,136	1,498,541	69,512,685	-	69,512,685
<u>645,448</u>	<u>1,558,192</u>	<u>71,747,582</u>	<u>(144,716)</u>	<u>71,602,866</u>
734	1,069	57,797	-	57,797
8,666	20,847	965,114	-	965,114
51,062	122,844	5,686,982	-	5,686,982
79	-	144,716	(144,716)	-
<u>60,541</u>	<u>144,760</u>	<u>6,854,609</u>	<u>(144,716)</u>	<u>6,709,893</u>
<u>\$ 584,907</u>	<u>\$ 1,413,432</u>	<u>\$ 64,892,973</u>	<u>\$ -</u>	<u>\$ 64,892,973</u>

**MARYLAND STATE RETIREMENT
SCHEDULE OF CHANGES IN**
for the Fiscal Year Ended

(Expressed in Thousands)

	Teachers' Retirement and Pension Systems	Employees' Retirement and Pension Systems	State Police Retirement System
ADDITIONS			
Contributions			
Employers	\$ 489,965	\$ 985,126	\$ 106,966
Members	588,395	343,720	10,776
State contributions on behalf of local governments	738,603	-	-
Total Contributions	<u>1,816,963</u>	<u>1,328,846</u>	<u>117,742</u>
Investment Income			
Net depreciation in fair value of investments	(298,490)	(169,758)	(13,968)
Interest	349,356	193,189	16,398
Dividends	1,400,806	770,722	65,493
Income Before Securities Lending Activity	<u>1,451,672</u>	<u>794,153</u>	<u>67,923</u>
Gross income from securities lending activity:	137,816	75,836	6,448
Securities lending borrower rebates	(122,717)	(67,529)	(5,742)
Securities lending agent fees	(756)	(415)	(35)
Net income from securities lending activity	<u>14,343</u>	<u>7,892</u>	<u>671</u>
Total Investment Income	<u>1,466,015</u>	<u>802,045</u>	<u>68,594</u>
Less investment expenses:			
Investment advisory fees	(261,351)	(143,768)	(12,241)
Net investment income	<u>1,204,664</u>	<u>658,277</u>	<u>56,353</u>
Transfers from other systems	-	-	-
Total Additions	<u>3,021,627</u>	<u>1,987,123</u>	<u>174,095</u>
DEDUCTIONS			
Benefit payments	2,651,536	1,718,723	143,509
Refunds (Note 6)	50,158	50,678	182
Administrative expenses (Note 2)	25,858	19,052	326
Transfers to other systems	(978)	5,051	(207)
Total Deductions	<u>2,726,574</u>	<u>1,793,504</u>	<u>143,810</u>
Net (decrease) increase in plan assets	<u>295,053</u>	<u>193,619</u>	<u>30,285</u>
Net position restricted for pensions			
Beginning of the fiscal year	39,126,178	21,428,736	1,820,763
End of the Fiscal Year	<u>\$ 39,421,231</u>	<u>\$ 21,622,355</u>	<u>\$ 1,851,048</u>

* Intersystem due from/due to have been eliminated in the financial statements

AND PENSION SYSTEM FIDUCIARY NET POSITION BY SYSTEM

June 30, 2023

Judges' Retirement System	Law Enforcement Officers' Pension System	Total
\$ 23,675	\$ 94,582	\$ 1,700,314
3,947	16,864	963,702
-	-	738,603
<u>27,622</u>	<u>111,446</u>	<u>3,402,619</u>
(4,572)	(9,480)	(496,268)
5,353	12,255	576,551
20,784	49,037	2,306,842
<u>21,565</u>	<u>51,812</u>	<u>2,387,125</u>
2,044	4,848	226,992
(1,820)	(4,319)	(202,127)
(11)	(26)	(1,243)
<u>213</u>	<u>503</u>	<u>23,622</u>
<u>21,778</u>	<u>52,315</u>	<u>2,410,747</u>
(3,878)	(9,232)	(430,470)
<u>17,900</u>	<u>43,083</u>	<u>1,980,277</u>
-	-	-
<u>45,522</u>	<u>154,529</u>	<u>5,382,896</u>
43,076	96,319	4,653,163
-	719	101,737
76	702	46,014
4	(3,870)	-
<u>43,156</u>	<u>93,870</u>	<u>4,800,914</u>
<u>2,366</u>	<u>60,659</u>	<u>581,982</u>
582,541	1,352,773	64,310,991
<u>\$ 584,907</u>	<u>\$ 1,413,432</u>	<u>\$ 64,892,973</u>



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The logo for the SRPS Investment Section is centered on the page. It features the letters "SRPS" in a large, bold, serif font. Below "SRPS" is the text "Investment Section" in a white, italicized serif font. The entire logo is set against a light gray square background that has a subtle, larger-scale version of the "SRPS" text and a decorative pattern of circles and lines.

SRPS
Investment Section

CHIEF INVESTMENT OFFICER'S REPORT

INVESTMENT OVERVIEW

The Maryland State Retirement and Pension System returned 3.14 percent net of fees in fiscal year 2023, relative to the actuarial return target of 6.80 percent, and 2.20 percent for its policy benchmark. Including the payment of benefits, the market value of assets increased by approximately \$573 million, from \$64.6 billion on June 30, 2022 to \$65.2 billion on June 30, 2023.

While negative performance in bonds persisted in fiscal year 2023 as global central banks continued to raise interest rates in response to high inflation, stocks posted strong returns as enthusiasm around generative artificial intelligence gained momentum, particularly in the second half of the fiscal year. The System's public equity portfolio returned 13.8 percent while the bond portfolio achieved -3.7 percent. The fiscal year performance was not evenly distributed across the other asset classes as the System's energy-related investments achieved strong returns, while real estate generated negative performance. The natural resources and infrastructure portfolio produced a return of 8.7 percent for the fiscal year, while real estate was the weakest asset class at -8.4 percent.

The Board's asset allocation policy is designed to achieve the actuarial rate of return over long periods of time by assembling a diversified portfolio of asset classes, each of which may have a large or small, positive or negative return in any given year. By assembling assets that exhibit distinct risk and return characteristics in different market environments, the Board expects more stable investment returns over time than a less diversified portfolio. This lower risk portfolio should result in a larger asset pool for the System's beneficiaries than a more volatile portfolio with the same average return. Understanding the Board's principals of asset allocation is important in evaluating the performance in any one-year period. While the realized return of 3.14 percent for fiscal year 2023 falls short of the Board's long-term expectation for the portfolio, it is within its expected ranges for annual variations.

The System's asset allocation is organized into five broad categories: Growth/Equity, Rate Sensitive, Credit, Real Assets, and Absolute Return. During the fiscal year, the Board approved minor adjustments to the asset allocation that included modest increases to U.S. equity, international equity and credit and corresponding decreases in emerging markets equity and treasury inflation protected securities. These changes are expected to enhance the risk and return profile of the portfolio.

The Growth/Equity portfolio is comprised of public equity and private equity. Within public equity, there are dedicated allocations to U.S., international developed, and emerging markets. The objective of this asset class is to generate high returns associated with the economic growth underlying global economies.

The Rate Sensitive category consists of exposure to core, or investment-grade, bonds. This asset class is designed to provide protection against most downturns in the equity market by offering a reliable income stream through the yield component. This yield also provides some protection against a deflationary environment, characterized by falling interest rates. This asset class includes long-duration U.S. Treasury bonds, Treasury inflation protected securities, corporate bonds and securitized debt.

The purpose of the Credit asset class is to take advantage of the potential higher returns offered by below investment-grade bonds. The return objective is similar to public equity, with a lower risk profile. This category includes high yield bonds, bank loans, emerging markets debt, distressed debt, mezzanine debt, and other credit-focused investments.

Real Assets includes real estate, natural resources and infrastructure investments. A significant portion of the assets in this category provides a regular income stream. Due to the tangible, or real, element of this asset class, it is expected to provide some level of protection against an inflationary environment, as well as additional diversification to the total portfolio.

The objective of the Absolute Return asset class is to achieve a return that falls between the expectations for public equity and bonds, with low correlation to other asset classes. The risk profile of this asset class is expected to be significantly lower than public equity, which should provide protection during periods of stock market decline. Strategies in this asset class include event-driven, global macro, relative value and opportunistic funds.

INVESTMENT POLICY AND OBJECTIVES

The Board of Trustees is charged with the responsibility of managing the assets of the System. In doing so, the Board is required to exercise its fiduciary duties solely in the interest of the participants with the care, skill, and diligence that a prudent person would exercise under similar circumstances. This standard of care encourages diversifying investments across various asset classes.

Investment objectives are designed to support the fulfillment of the Board's mission to optimize risk-adjusted returns to ensure that sufficient assets are available to pay benefits to members and beneficiaries when due. As a long-term investor, the Board understands that short-term market returns will fluctuate.

These investment objectives are implemented in accordance with investment policies developed by the Board. The "prudent person standard", as outlined in both the Maryland Annotated Code and the Board's investment policies, allows the Board to set investment policies and delegate authority

to investment professionals employing active and passive strategies. Firms that have been retained generally have a demonstrated performance record and a clearly defined and consistently applied investment process.

The Board manages the assets for the System with the goal of achieving an annualized investment return that over a long-term time frame: (1) meets or exceeds the investment policy benchmark for the System; (2) in nominal terms, equals or exceeds the actuarial investment return assumption adopted by the Board; and (3) in real terms, exceeds the U.S. inflation rate by at least 3 percent. A more detailed discussion of each of these goals follows below.

1. **Meeting or exceeding the Investment Policy Benchmark for the System.** The Investment Policy Benchmark is calculated by using a weighted average of the Board-established benchmarks for each asset class. This benchmark enables the comparison of the actual performance of the System to a proxy portfolio and provides a measure of the contribution of policy implementation and active management to overall fund returns.
2. **In nominal terms, meeting or exceeding the actuarial investment return assumption of the System.** The Board adopts the actuarial rate of interest, which was set at 6.80 percent for fiscal year 2023. The actuarial investment return assumption functions as an estimate of the long-term rate of growth of the assets for the System. In adopting an actuarial return assumption, the Board anticipates that the investment portfolio will achieve higher or lower returns each year but will trend toward 6.80 percent over time.
3. **In real terms, exceeding the U.S. inflation rate by at least 3 percent.** The inflation related objective compares the investment performance against a rate of inflation measured by the Consumer Price Index (CPI) plus 3 percent. The inflation measure provides a link to the liabilities of the System, which have an embedded sensitivity to changes in the inflation rate.

The Board is also responsible for establishing the asset allocation policy for the System. It does this by weighing three liability-oriented objectives when making asset allocation determinations. These objectives include:

1. achieving and maintaining a fully funded pension plan;
2. minimizing contribution volatility year to year; and
3. realizing surplus assets.

Asset allocation policy targets are determined by recognizing that liabilities (future benefit payments to the participants and beneficiaries of the System) must be paid in full and on time. The mix of asset classes is chosen to provide sufficient growth to meet the long-term return objective of the System, while providing sufficient diversification to moderate the volatility of that return. For example, a portfolio of equities will likely provide the required return over a long time horizon but will subject the market value of the portfolio to unacceptable levels of volatility such that the goals of minimizing contribution volatility and realizing surplus assets would be difficult to achieve. Combining other asset classes with equities will provide differentiated return sources, reduce the volatility of returns and help realize those liability-oriented objectives.

The Board's long-term asset class targets and ranges as of June 30, 2023 are shown below.

ASSET CLASS	LONG-TERM POLICY TARGET RANGE	
Growth/Equity	50%	+/-7%
U.S Equity	17%	
International Developed Equity	11%	
Emerging Markets Equity	6%	
Private Equity	16%	
Rate Sensitive	20%	+/- 5%
Long-term Government Bonds	10%	
Securitized/Corporate Bonds	6%	
TIPS	4%	
Credit	9%	+/- 4%
High Yield Bonds/Bank Loans	8%	
Emerging Market Debt	1%	
Real Assets	15%	+/- 4%
Real Estate	10%	
Natural Resources/Infrastructure	5%	
Absolute Return	6%	+/- 4%
Total Assets	100%	

INVESTMENT PERFORMANCE

Investment performance is calculated using time-weighted rates of total return, including the impact of fees and expenses. Total return includes interest and dividends, as well as capital appreciation.

The investment program realized a return of 3.14 percent, net of all fees, for fiscal year 2023. Annualized returns for the 3-, 5-, 10-, 20- and 25-year periods ending June 30, 2023 were 8.2 percent, 6.9 percent, 7.0 percent, 6.8 percent and 5.6 percent, respectively.

	FY 2023 SRPS Performance	FY 2023 Benchmark Performance	SRPS Exposure June 30, 2023
Public Equity	13.8%		30.2%
Custom Benchmark		13.8%	
U.S. Equity	19.2%		12.3%
Russell 3000		19.0%	
International Equity	16.7%		7.3%
MSCI World ex U.S.		17.4%	
Emerging Markets Equity	3.1%		7.1%
MSCI Emerging Markets		1.8%	
Global Equity	15.1%		3.5%
MSCI AC World Index		16.5%	
Private Equity	0.3%		21.8%
Custom State Street PE		-2.9%	
Rate Sensitive	-3.7%		172%
Custom Benchmark		-3.5%	
BBG U.S. Gov't Long Index		-6.8%	
BBG Securitized		-1.5%	
BBG Corporate		1.6%	
BC U.S. TIPS Index		-1.3%	
Credit/Debt Strategies	6.0%		8.7%
Custom Benchmark		9.0%	
BBG High Yield		9.1%	
S&P LSTA Leveraged Loan		10.7%	
BBG EM Hard Currency Sov		7.7%	
BBG EM USD Corporate		4.2%	
Real Assets	-3.4%		15.4%
Custom Benchmark		-6.7%	
Absolute Return	-1.4%		5.9%
Custom Benchmark		1.4%	
Multi-Asset		2.20%	0.4%
Custom Benchmark	-1.6%		
Cash	5.3%		0.4%
Custom Benchmark		3.8%	
TOTAL FUND	3.1%	2.2%	100%

The allocation as of June 30, 2023 reflects the ranges and transitional targets of the System as described in the previous section.

ECONOMIC AND CAPITAL MARKET OVERVIEW

Investment returns between asset classes varied significantly in fiscal year 2023, with growth-oriented assets like public stocks and credit achieving strong returns, while interest rate sensitive investments like real estate and bonds performed poorly. The Federal Reserve continued to aggressively hike the federal funds rate to get inflation under control and on a path toward the 2% target. During fiscal year 2023, the Fed raised interest rates seven times for an aggregate of 3.5%. These increases were in addition to the three hikes in fiscal year 2022 totaling 1.5%. While inflation, as measured by the Consumer Price Index, has receded from its high of 9.1% in June 2022 to 3.0% as of June 30, 2023, it remains above the Fed's 2% target, making additional hikes a possibility.

Contrary to conventional thinking and historical precedence, the U.S. economy has been resilient in the face of higher interest rates, with real gross domestic product over fiscal year 2023 rising over 2%. This economic growth has been fueled by a persistent fiscal stimulus supporting a robust labor market, healthy wage gains and strong consumer spending. The unemployment rate at the end of the fiscal year was 3.6%, below the 3.8% rate when the Fed began raising rates in March 2022. These factors, in addition to enhanced developments and utilization of generative artificial intelligence, fueled strong stock returns in fiscal year 2023.

This environment of high inflation and rising interest rates is not conducive for generating attractive returns in traditional bonds and other interest rate sensitive sectors like real estate. In addition to higher interest rates, the real estate sector, particularly office properties, is challenged by valuation adjustments as companies require less office space due to the continuation of hybrid work models. Higher rates also present refinancing risk, particularly on highly levered properties, as loans financed at low interest rates several years ago must be refinanced at significantly higher levels. Over the course of the fiscal year, the ten-year Treasury yield climbed from roughly 3.0% to 3.85%, a meaningful increase for borrowers with loans that need to be refinanced.

PUBLIC EQUITIES

As of June 30, 2023, approximately \$19.7 billion was invested in public equities, representing 30.2 percent of total assets. The public equity program consists of four components: U.S. equities, international developed equities, emerging markets equities and global equities.

The Terra Maria program, which seeks to identify promising smaller or developing management firms, is an integral part of the public equities' asset class. As of June 30, 2023, 75 percent of the public market Terra Maria program was invested in equities, and 25% was invested in fixed income strategies. Each of the managers in the Terra Maria program has an active management mandate. A more detailed discussion of the Terra Maria program follows below.

A. U.S. Equities

As of June 30, 2023, approximately \$8.0 billion, or 12.2 percent of total assets, was invested in U.S. public equities. Passively managed U.S. equities totaled \$3.7 billion, while Terra Maria program assets were \$333 million, representing 5.7 percent, and 0.5 percent of total assets, respectively.

U.S. Equity	\$ Millions	% of Total Plan
Passively/Enhanced Managed	\$3,707	5.7%
Actively Managed	\$3,939	6.0%
Terra Maria Program	\$333	0.5%
Total U.S. Equity	\$7,979	12.2%

For fiscal year 2023, U.S. equities returned 19.2 percent, compared to 19.0 percent for its benchmark, the Russell 3000 Index.

B. International Equities

As of June 30, 2023, approximately \$4.8 billion, or 7.3% of total assets, was invested in international equities. Passively managed international equities totaled \$1.7 billion, while Terra Maria assets were \$1.4 billion, representing 2.6%, and 2.2% of total assets, respectively. As more fully described below, in 2009 the System instituted a currency overlay program which is designed to protect the value of some foreign equities in a rising dollar environment.

International Equity	\$ Millions	% of Total Plan
Passively Managed	\$1,715	2.6%
Actively Managed	\$1,621	2.5%
Terra Maria Program	\$1,445	2.2%
Currency Overlay	-\$11.6	0.0%
Total International Equity	\$4,769	7.3%

For fiscal year 2023, international equities, including the impact of the currency overlay program, returned 16.7%, compared to 17.4% for its benchmark, the MSCI World ex-U.S. Index.

C. Emerging Market Equities

As of June 30, 2023, approximately \$4.6 billion, or 7.1% of total assets, was invested in emerging market equities. The portfolio is comprised of actively managed assets.

Emerging Equity	\$ Millions	% of Total Plan
Total Emerging Markets Equity	\$4,625	7.1%

For the fiscal year, the portfolio returned 3.1% compared to 1.8% for the MSCI Emerging Market Index.

D. Global Equities

As of June 30, 2023, approximately \$2.3 billion, or 3.5% of total assets was invested in global equities, which includes both U.S. and foreign stocks. This portfolio is comprised mostly of active mandates.

Global Equity	\$ Millions	% of Total Plan
Passive Management	\$125	0.2%
Actively Managed	\$2,190	3.4%
Currency Overlay	-\$2	0.0%
Total Global Equity	\$2,313	3.5%

For the fiscal year, the portfolio returned 15.1% compared to 16.5% for the MSCI AC World Index.

CURRENCY OVERLAY PROGRAM

The currency overlay program was implemented in May of 2009. An objective of the program is to provide insurance against a strengthening dollar, which could negatively impact returns from foreign currency denominated equities. The manager in this program uses a systematic currency overlay strategy and generally, does not make fundamental currency valuation assessments. The strategy is also dynamic in that the degree to which currency hedging is applied changes depending on currency market conditions. The manager in this program uses low hedge ratios when the dollar is weakening, and high hedge ratios when the dollar is strengthening.

During fiscal year 2023, the currency program generated positive value in the System's foreign equity holdings, as the U.S. dollar strengthened relative to other currencies. The added value of the currency hedging program during the fiscal year was \$12.5 million. Since the inception of the currency hedging program, it has served to reduce volatility and improve the risk/return profile of the System's international and global equity portfolios.

PRIVATE EQUITY

As of June 30, 2023, private equity totaled \$14.2 billion, or 21.8% of total assets. This asset class includes buyouts, growth equity, venture capital, secondaries and funds-of-funds.

In fiscal year 2023, commitments were made to 26 private equity funds and co-investments, totaling \$1.6 billion. Since the inception of the private equity program in fiscal year 2005, \$22.2 billion in commitments have been made to 317 different funds and co-investments. Unfunded commitments totaled \$5.7 billion as of June 30, 2023. Future commitments will follow a pacing model designed to achieve and maintain the target allocation. In fiscal year 2023, the private equity program generated a time-weighted return of 0.3%, compared to -2.86% for its benchmark, the State Street Private Equity Index. This return is net of all fees, expenses and carried interest.

RATE SENSITIVE

As of June 30, 2023, the rate sensitive portfolio represented \$11.2 billion, or 17.1% of total assets. The rate sensitive portfolio returned -3.7% for the year, compared to -3.5% for its blended benchmark: 50% Bloomberg US Government Long Bond Index, 15% Bloomberg US Investment Grade Corporate Index, 15% Bloomberg US Securitized MBS/ABS/CMBS Index, and 20% Bloomberg US Government Inflation Linked Index.

CREDIT/DEBT STRATEGIES

The credit/debt strategies portfolio totaled approximately \$5.7 billion, representing 8.7% of total plan assets as of June 30, 2023. Investments in this asset class are held in both liquid and illiquid structures. Typical asset types in the portfolio include: high yield bonds, bank loans, emerging market debt, and private debt. The portfolio has a blended benchmark of 89 percent U.S. (80% Bloomberg U.S. Corporate High Yield Index, 20% S&P LSTA Leveraged Loan Index), and 11 percent Non-U.S. (50% Bloomberg EM Hard Currency Sovereign Index, 50% Bloomberg EM USD Corporate Index). The portfolio returned 6.0% for the fiscal year, versus 9.0% for its benchmark.

REAL ASSETS

The real assets portfolio totaled approximately \$10.0 billion, representing 15.4% of total assets as of June 30, 2023. The objectives of this asset class are to provide a level of protection against inflation, and to enhance diversification for the total fund. As of June 30, 2023, the largest component of the asset class was real estate, totaling \$6.8 billion, or 10.5% of total assets. The remaining assets consisted of investments associated with natural resources and infrastructure totaling \$3.1 billion or 4.8% of total assets.

The real assets portfolio returned -3.4% for the fiscal year, compared to -6.7% for its blended benchmark, which consists of approximately 68% real estate with the remainder in natural resources and infrastructure. Real estate achieved a -8.4% return, versus the real estate benchmark return of -10.3%. The natural resources and infrastructure portion of the portfolio achieved a return of 8.7%, outperforming its benchmark by 6.5%, as the System's exposure to energy-related investments exceeded the public market benchmarks.

ABSOLUTE RETURN

The absolute return portfolio totaled approximately \$3.8 billion, representing 5.9% of total assets as of June 30, 2023. The portfolio consists of event-driven, global macro, relative value, equity long/short and opportunistic funds. Its goal is to provide diversification for the total plan through its low correlation to the broad financial markets. The absolute return portfolio returned -1.4%, compared to the 1.4% return for its benchmark.

TERRA MARIA PROGRAM

As previously mentioned, the Terra Maria program seeks to identify promising smaller or developing managers. The three public market program managers serve as an extension of staff to source investment managers, perform manager due diligence, monitor managers and prepare manager "hire/fire" and funding recommendations. The managers include Attucks Asset Management, Xponance, Inc., and Leading Edge Investment Advisors.

Terra Maria publicly-traded assets totaled approximately \$2.4 billion, or 3.7 percent of total assets at June 30, 2023. The program returned 10.3% for the fiscal year, underperforming its custom benchmark return of 10.9%. The relative performance results have remained positive since the April 2007 inception of the program. The System also invests in emerging managers in other asset classes. In private equity, the System has committed \$1.63 billion to developing managers that are minority and women-owned firms.

At the end of fiscal year 2023, \$8.5 billion, or 13.1 percent of the System's total assets, were managed by minority and women-owned firms.

INVESTMENT MANAGEMENT FEES

The asset allocation of the System is the primary determinant of returns. The asset allocation is also the primary determinant in the cost of investing the assets. Thirty-two percent of the policy allocation does not have public market benchmarks and therefore does not have a passive option for implementation. These alternative assets such as closed-end limited partnerships used for private equity, infrastructure and some real estate, in addition to open-end partnerships used for real estate and hedge fund strategies are included in the asset allocation with the objective of earning higher returns over time, reducing risk by providing returns that are differentiated from stock and bond returns, or for both reasons.

These alternative assets are typically structured as limited partnerships with embedded profit sharing provisions to motivate the manager to make profitable investments, and to ensure alignment of interests. Carried interest represents the portion of the investment profits that is earned by managers, and is only paid if performance thresholds are achieved. The percentage of profits that is allocated to the manager is substantially lower than the amount received by the System. Because of this disproportionate sharing of profits, the amounts realized by the System far exceed any incentive earned by investment managers. Large amounts of carried interest should be considered a positive result, as this would imply much greater gains to the System. In calendar year 2022, the System realized an estimated \$2,017.4 million in profits from these private alternative investments, while the investment managers, or

general partners, earned roughly \$370.3 million in carried interest incentives.

The Board is mindful of the negative effects fees have on net investment performance and is committed to aggressively negotiating fair and reasonable terms to mitigate the drag on performance, while maintaining exposure to investments that exhibit positive risk and return characteristics in a total portfolio context.

CONCLUSION

The investment environment in fiscal year 2023 reflected a third phase of the pandemic. After the initial decline in the level of economic activity and the value of risky assets, fiscal and monetary stimulus created a growth and inflation pulse that caused the Federal Reserve to aggressively ramp up its interest rate tightening campaign to bring down the COVID-era induced inflation rate. While the impact on fixed income instruments and bond proxies like real estate were predictably negative, growth-oriented investments like publicly-traded equities did not follow the traditional playbook. Fueled by strong economic fundamentals and optimism associated with generative AI, stocks achieved double-digit returns in the face of significantly higher rates. Higher interest rates are painful for fixed income assets during their ascent, but the outlook for future bond returns is positive as maturity proceeds and coupon payments are reinvested at higher yields. Short-term investment returns are unpredictable, and the Board expects periods of underperformance relative to long-term assumptions. The most effective way to manage the unknown and achieve long-term objectives is to maintain a diversified and risk-balanced portfolio that exhibits resiliency against large drawdowns associated with concentrated risk exposures. The Board of Trustees has adopted an asset allocation that is designed to achieve the long-term objectives of the fund through various market environments and stressed economic scenarios.

Respectfully submitted,



Andrew C. Palmer CFA
Chief Investment Officer



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MARYLAND STATE RETIREMENT AND PENSION SYSTEM

INVESTMENT PORTFOLIO SUMMARY

as of June 30, 2023 and 2022

(Expressed in Thousands)

	2023		2022	
	Fair Value	% of Fair Value	Fair Value	% of Fair Value
Rate Sensitive				
Fixed Income	\$ 8,940,923	13.7	\$ 8,447,837	13.1%
Inflation linked bonds	2,300,720	3.5	2,806,918	4.3
(1) Cash (non-manager)	292,387	0.4	912,044	1.4
(2) Net cash & cash equivalents (manager)	(89,805)	(0.1)	117,907	0.2
Total Rate Sensitive	11,444,225	17.5	12,284,706	19.0
Credit				
High Yield Bond/Bank Loans	4,912,470	7.5	4,478,208	6.9
Emerging markets debt	623,306	1.0	483,843	0.7
(2) Net cash & cash equivalents (manager)	156,570	0.2	117,983	0.2
Total Credit	5,692,346	8.7	5,080,034	7.8
Equity				
Domestic stocks	7,811,729	12.0	6,633,901	10.3
Emerging markets stocks	4,564,213	7.0	4,984,522	7.7
Global stocks	2,182,010	3.3	2,161,314	3.3
International stocks	4,649,474	7.1	4,032,252	6.2
(2) Net cash & cash equivalents (manager)	497,236	0.8	613,772	0.9
Total Public Equity	19,704,662	30.2	18,425,762	28.4
Private Equity	14,247,446	21.9	13,881,133	21.5
Total Equity	33,952,108	52.1	32,306,894	49.9
Absolute Return	3,803,238	5.8	4,576,572	7.2
Commodities	106,183	0.2	0	0.0
Real Estate	6,816,799	10.5	7,126,622	11.1
Multi Asset	236,252	0.4	239,978	0.4
Natural Resources & Infrastructure	3,092,767	4.7	2,677,902	4.1
(2) Net cash & cash equivalents (manager)	60,086	0.1	341,366	0.5
Total Portfolio	\$ 65,204,004	100.0	\$ 64,634,074	100.0%

(1) Securities lending collateral payable has been netted against the actual collateral. The amounts net to zero.

(2) Includes investment receivables and payables.

Note: This schedule includes assets invested on behalf of the Maryland Transit Administration.

MARYLAND STATE RETIREMENT AND PENSION SYSTEM

INVESTMENT PORTFOLIOS BY MANAGER

as of June 30, 2023
(Expressed in Thousands)

	Market Value	Investment Advisory Fees		Market Value	Investment Advisory Fees
Public Equity			Fixed Income Manager		
AQR Capital Management	\$ 246,009	\$ 1,728	Credit Suisse Asset Management	\$ 495,617	\$ 1,299
Axiom International Investors	760,812	4,634	Dodge & Cox	409,113	626
Baillie Gifford & Company	1,314,667	5,941	Double Line US Securitized	532,816	731
Brown Capital Management	402,665	2,301	MetLife Investment Management	664,963	1,476
D E Shaw & Company	1,529,857	3,123	Pacific Investment Management Company	1,869,292	2,288
Dimensional Fund Advisors	834,179	1,794	Pine Bridge Investments	839,010	1,180
Durable Capital Partners	666,506	(18,222)(7)	Western Asset Management	1,645,624	2,435
Polunin Capital Management	489,056	3,930	Attucks Asset Management (1)	636,359	1,410
Redwheel	320,670	2,238	Cash & Cash Equitization	292,386	N/A
T. Rowe Price Associates	1,836,214	5,186	Other (2)	197	(17)
Walter Scott & Partners	594,429	2,089	Internally Managed Assets (6)	\$ 6,355,383	0
Westwood Global Investment	845,323	5,059	Total Fixed Income	\$13,740,760	\$ 11,428
Attucks Asset Management (1)	968,546	5,124			
Leading Edge Invest. Advisors (1)	490,017	2,410	Alternative Investment		
Xponance (1)	319,676	2,001	Absolute Return (1)	\$ 3,821,938	\$ 93,884
Marshall Wace	566,715	512	Commodity	105,824	542
Record Currency Management	(13,594)	3,220	Credit/Debt Related/Rate Sensitive (1)	3,395,809	42,926
Other (2)	40,068	4,045	Multi-Asset (3)	236,253	1,121
Internally Managed Assets (6)	5,572,018	0	Private Equity (1)	14,247,446	126,806
Total Public Equity	\$ 17,783,833	\$ 37,113	Public Equity Long/Short (1)	1,920,830	36,784
			Real Assets		
			Harvest Fund Advisors	342,630	2,457
			Tortoise Capital Advisors	134,704	855
			Natural Resources & Infrastructure (1)	972,639	14,625
			Private Real Estate (1)	6,816,870	60,090
			Other (2)	1,297	5,258
			Internally Managed Assets (6)	1,683,171	0
			Total Alternative Investments	\$33,679,411	\$ 385,348
			Total	\$65,204,004 (4)	\$ 433,889 (5)

(1) Sub-managers separately listed on the following pages

(2) Consulting fees and/or investment managers no longer under contract as of 6/30/23

(3) Assets that represent the overall allocation

(4) Includes assets invested on behalf of the Maryland Transit Administration.

(5) Includes management fees allocated to the Maryland Transit Administration.

(6) Funds separately listed on the following pages

(7) Incentive fee credit

Note: Investment Advisory Fees represents management fees invoiced or reported on capital statements.

MARYLAND STATE RETIREMENT AND PENSION SYSTEM

ALTERNATIVE INVESTMENTS RELATIONSHIP LISTING

as of June 30, 2023

Private Equity

1315 Capital	Crescent Capital Partners IV	Landmark Equity Partners XIV	Silver Lake Partners V
1315 Capital II	Crescent Capital Partners V	Landmark Equity Partners XV	Silver Lake Partners VI
1315 Capital III	Crowdstrike Holdings . A	Landmark Equity Partners XVI	Spark Capital Growth Fund IV
Advent International GPE V-D	CVC Capital Partners VII	Lexington Capital PartnersVII	Spark Capital VII
Advent International GPE VI-A	CVC Capital Partners VIII	Lexington Co-Investment Partners IV	TA Associates XI
Advent International GPE VIII B	CVC European Equity Partners V-B	Lexington Co-Investment Partners V	TA Associates XII
Advent International GPE IX	Dover Street VII	Lexington Co-Investment Partners V- Overage	TA Associates XIII
Apax Europe VI-A	Equistone Partners Europe Fund IV	Lexington Middle Market Investors III	TA Associates XIV
Apax Europe VII-A	Equistone Partners Europe Fund V	Lexington Middle Market Investors IV	TDR Capital III
Apax IX	Equistone Partners Europe Fund VI	Lightspeed Opportunity Fund	TDR Capital IV
Apollo Investment Fund VII Eruro Holdings	Everstone Capital Partners II	Lightspeed Opportunity Fund II	Thoma Bravo Fund.XII
Apollo Investment Fund VIII (AIF)	Everstone Capital Partners III	Lightspeed Vent Partners Select V	Thoma Bravo Fund XIII
Apollo Investment Fund IX	Frazier Healthcare Growth Buyout Fund VIII	Lightspeed Vent Partners XIV A	Thoma Bravo Fund XIV
Apollo Investment Fund X	Frazier Healthcare Growth Buyout Fund IX	Lightspeed Vent Partners XIV B	Thoma Bravo Fund XV
Arcadia II Beteiligungen BTGmbH&Co	Frazier Healthcare Growth Buyout Fund X	Littlejohn Fund III	Tiger Iron Old Line Fund
Astorg VII	Frazier Healthcare V	Littlejohn Fund IV	Tiger Iron Old Line Fund II
Audax Private Equity Fund III	Frazier Healthcare VI	Littlejohn Fund V	Tiger Iron Old Line Fund III
Audax Private Equity Fund IV	Frazier Healthcare VII	Littlejohn Fund VI	TPG Partners VI
Audax Private Equity Fund V	Frazier LifeSciences VIII	LLR Equity Partners IV	TPG Partners VII
Audax Private Equity Fund VI	Frazier LifeSciences IX	LLR Equity Partners V	Vista Equity Partners Fund IV
Audax Private Equity Fund VII	Frazier LifeSciences X	LLR Equity Partners VI	Vista Equity Partners Fund V
Audax Private Equity Origins Fund I	Frazier Life Sciences XI	LLR Equity Partners VII	Vista Equity Partners Fund VI
Bain Capital Asia Fund III	Frontier Fund III	Longitude Venture Partners II	Vista Equity Partners Fund VII
Bain Capital Asia Fund IV	Frontier Fund IV	Longitude Venture Partners III	Vista Equity Partners Fund VIII
Bain Capital Asia Fund V	Frontier Fund V	Longitude Venture Partners IV	Vista Foundation Fund II
Bain Capital Europe Fund IV	GGV Capital VII	Madison Dearborn Capital Partners V	Vista Foundation Fund III
Bain Capital Europe Fund V	GGV Capital VII Plus	Madison Dearborn Capital Partners VI	Vista Foundation Fund IV
Bain Capital Europe Fund VI	GGV Capital VIII	Madison Dearborn Capital Partners VII	Vistria Fund I
Bain Capital Fund X	GGV Capital VIII Plus	Madison Dearborn Capital Partners VIII	Vistria Fund II
Bain Capital Fund XI	GGV Discovery II	Maryland Innovation Opportunity Fund I	Vistria Fund III
Bain Capital Fund XII	GGV Discovery III	MBK Partners Fund III	Vistria Fund IV
Bain Capital Fund XIII	Goldman Sachs Vintage Fund V	MBK Partners Fund IV	Vistria Fund V
Bain Capital Life Sciences Fund	Great Hill Equity Partners IV	MBK Partners Fund V	Wind Point Partners VII
Bain Capital LifeSciences Fund II	Great Hill Equity Partners V	MD Asia Investors	Wind Point Partners VIII
Bain Capital Empire Holdings	Great Hill Equity Partners VI	MDAsia Investors II	Wind Point Partners IX
Baring Asia Private Equity Fund VI	Great Hill Equity Partners VII	MD Asia Investors III	Wind Point Partners X
Baring Asia Private Equity Fund VII	Great Hill Equity Partners VIII	MD Asia Investors IV	
Black River Capital Partners Fund (Agr.A)	Green Equity Partners IX	Navis Asia Fund VI	Co-Investments
Blackstone Capital Partners VI	Green Equity Investors VII	New Mainstream Capital Fund II	AI Co-Invest I-A SCSp
Blackstone Capital Partners VII	Green Equity Investors VIII	New Mainstream Capital Fund III	AP IX Connect Co-Invest Holdings
Blue Wolf Capital Fund III	Harbour Vest Partners VI-Partnership Fund	New Mountain Partners III	AP IX Pegasus Co-Invest
Blue Wolf Capital Fund IV	Hellman&Friedman Capital Partners VI	New Mountain Partners IV	AP Windsor Co-Invest
Bridgepoint Europe Fund V	Hellman&Friedman Capital Partners VII	New Mountain Partners V	FP Group Holdings
Bridgepoint Europe Fund VI	Hellman&Friedman Capital Partners VIII	New Mountain Partners VI	BCPE Osprey Investor
Bridgepoint Europe Fund VII	Hellman&Friedman Capital Partners IX	North Sky CleanTech Fund IV	Athena Parent Holdings
Brinson Partnership 2000 Primary Fund	Hellman&Friedman Capital Partners X	Orchid Asia V	FH CSF Holdings
Brinson Partnership 2001 Primary Fund	Hg Co-Investment Fund	Orchid Asia VI	GHP SPV-3
Brinson Partnership 2002 Primary Fund	Hg Genesis 9	Orchid Asia VII	PM Coinvest IX
Brinson Partnership 2002 Secondary Fund	HgCapital 5	Orchid Asia VIII	Jade SA Coinvest
Brinson Partnership 2003 Primary Fund	HgCapital 6A	Pacific Equity Partners V	LJ Avalon Co-Invest
CDH Fund V	HgCapital 7C	Pacific Equity Partners VI	Indigo
ChrysCapital VIII	HgCapital 8A	PAG Asia Capital II	MDCP Co-Investors (Mobiis)
Clayton Dubilier&Rice Fund VIII	Hg Genesis 10 A	PAG Asia Capital III	Silver Lake Strategic Investors VI
Clayton Dubilier&Rice Fund IX	HgCapital Mercury A	Partners Group Emerging 2011	Co-Invest Maximus Aggregator
Clayton Dubilier&Rice Fund X	Hg Saturn 3 A	Partners Group Secondary 2008	TDR Capital Arrow Co-Investment
Clayton Dubilier&Rice Fund XI	Institutional Venture Partners XV	Partners Group Secondary 2011	Project Aine Co-Invest Fund
Clearlake Capital Partners III	Institutional Venture Partners XVI	Partners Group Secondary 2015	Project CS Co-Invest Fund
Clearlake Capital Partners IV	Institutional Venture Partners XVII	Point 406 Ventures 2016 Opportunities Fund	VFF IV Co-Invest 4-A
Clearlake Capital Partners V	Institutional Venture Partners XVII	Point 406 Ventures II	VEPF VII Co-Invest 4-A
Clearlake Capital Partners VI	Co-Investments	Point 406 Ventures III	VEPF VIII Co-Invest 1-A
Clearlake Capital Partners VII	Jade Equity Investors	Point 406 Ventures IV	CTSI Co-Invest Holdings
Coller Capital Partners VI	Jade Equity Investors II	Point 406 Ventures Opportunities Fund II	
Coller Capital Partners VII	Landmark Equity Partners Co-Investment	Roark Capital Partners IV	
Coller Capital Partners VIII	Fund XVI	Roark Capital Partners V	

MARYLAND STATE RETIREMENT AND PENSION SYSTEM

ALTERNATIVE INVESTMENTS RELATIONSHIP LISTING

as of June 30, 2023

(continued)

Private Real Estate

Abacus Multi-Family Partners V	Clarion Lion Property Fund	Lone Star Real Estate Fund II	Tristan Capital-European Special
Abacus Multi-Family Partners VI	Europe Fund III	Lone Star Real Estate Fund III	Opps 3
AEW Partners Fund IX	Federal Capital Partners Fund II	Lone Star Real Estate Fund IV	Tristan Capital-European Special
AEW PIX MM Co-Invest	Federal Capital Partners Fund III	Lone Star Real Estate Fund V	Opps 4
AEW Senior Housing Fund II	FPA Core Plus Fund V	Lone Star Real Estate Fund VI	Tristan Capital-European Special
AEW Senior Housing Fund IV	FPA Core Plus Fund VI	Lubert Adler Real Estate Fund VI	Opps 5
Ares Industrial Real Estate Fund	Frogmore Real Estate Partners II	Lubert Adler Real Estate Fund VI-A	TruAmerica Workforce Housing Fund
Asana Partners Fund III	GI Partners Fund IV	MetLife Core Property Fund	UBS Trumbull Property Fund
Brookfield Strategic Real Estate Partners IV	Heitman America Real Estate Trust	Morgan Stanley Prime Property Fund	Waterton Residential Property Venture
Carmel Partners Investment Fund VII	Heitman Value Partners V	North Haven Real Estate Fund X	XIII
Carmel Partners Investment Fund VIII	HVP V SR Co-Investment	Global	Waterton Residential Property Venture
CBRE Strategic Partners US Value 7	JP Morgan Strategic Property	Rockwood Capital RE Partners Fund	XIV
CBRE US Core Partners	JP Morgan Sunbelt Residential	IX	
Clarion Lion Industrial Trust	Development Fund	Scout Fund II	
	LaSalle Property Fund	Starwood Hospitality Fund II	

Real Return

Alinda Infrastructure Fund II	First Reserve Fund XIII	Natural Gas Partners X	Rhumblin DJ Global Infrastructure
Domain Timber Investments	Global Timber Investors 9	Natural Gas Partners XI	Rhumblin Global Natural Resources
EIF US Power Fund IV	Harvest Fund Advisors	NGP Natural Resources XII	RMS Forest Growth III
Energy and Minerals Group V	IFM Global Infrastructure Fund	NGP Midstream & Resources	Stonepeak Opportunities fund
Energy and Minerals Group	ISQ Global Infra Fund III	Quantum Energy Partners V	Tortoise Capital Advisors, LLC
V-Accordion	MD Global Infrastructure	Quantum Energy Partners VI	White Deer Energy
First Reserve Fund XII	Natural Gas Partners IX	Quantum Energy Partners VII	

Absolute Return

Arctos Sports Partners Fund II	Bridgewater Pure Alpha	John Street Systematic Fund	Pharo Gaia Fund .
Aristeia Partners	Clover Parallel	King Street Capital	PHM IV Co Investment
Aristeia Select Opportunities II	Contrarian Emma 2	King Street Drawdown	SGM Co-Investment Fund
ASP II Opportunities	Empyrean Capital Fund	King Street Overflow	Silver Lake Aine II
Avidity Capital Fund	Exodus Point	Kirkoswald Global Macro Fund	Standard General II
BFAM Asian Opportunities Fund	Fourier Fund	Lone Star Fund XI	TORQ Capital
Brevan Howard FG Macro Fund	HSCM Bermuda Fund	Nephila Palmetto Fund	Voloridge
Brevan Howard Alpha Strategies	Hudson Bay Fund	Petershill IV	Yiheng Capital Partners
Bridgewater All Weather	ILS Property Casualty Fund II	Petershill Private Equity	

FIXED INCOME RELATIONSHIP LISTING

Credit/Debt Related

AG Potomac Fund	Castlake Aviation V Stable Yield	Edelweiss India Special Assets Fund III	Fund
Alchemy Special Opps. Fund II	CB HS Aggregator II	KKR Mezzanine Partners I	Shamrock Capital Content Fund II
Alchemy Special Opps. Fund III	Charlesbank Credit Dislocation	LCM Partners COPS 4	Shamrock Capital Content Fund III
Apollo Credit Opps Fund III	Overage Fund	MD Cumberland Fund	Shamrock CCF II Coinvestment I
Ares Credit Investment Partnership (MD)	Charlesbank Credit Opportunities Fund III	Merit Mezzanine Fund V	Shoreline China Value Fund III
Ares Sports, Media, and Entertainment Finance	Crescent Capital Mezzanine Partners VI	Oaktree European Principal Fund III	SLA Marcus Co-Invest
Berkshire Multifamily Debt III	CVI Chesapeake Credit Opps A Fund	Oaktree Opportunity Fund VIII	TA Subordinated Debt Fund III
CarVal Credit Value Fund A III	CVI Chesapeake Credit Opps B Fund	Oaktree Opportunity Fund VIII B	Taurus Mining Finance II
CarVal Credit Value Fund A IV	EIG Energy Fund XV	Oaktree Principal Fund V	Taurus Mining Royalty Fund
CarVal Credit Value Fund A V	EIG Energy Fund XVI	OMR Sands I	Varde Fund X
CarVal Credit Value Fund A	Falcon Strategic Partners III	Orion Minerals Royalty Fund I	Waterfall Silver Spring Fund
Carval Credit Value II	Falcon Strategic Partners IV	Park Square Capital Partners II	Wayzata Opportunities Fund III
Castle Lake III	FP Credit Partners II	Partners Group European Mezzanine 2008	Whitehorse Liquidity Partners III
Castle Lake IV	GSO Credit Aha Fund II	Peninsula Fund V	Whitehorse Liquidity Partners IV
Castle Lake V	Hayfin Healthcare Opportunities Fund	Perella Weinberg Partners	Whitehorse Liquidity Partners V
Castlake Aviation IV Stable Yield	Hayfin HOF Co-Invest I	Prudential Capital Partners III	Whitehorse Liquidity V Co-Invst
Castlake Aviation IV Stable Yield Opps.	HCRX Holdings	Prudential Capital Partners IV	WH Loch Raven Fund
	Highbridge Convertible Dislocation Fund	Runway Growth Finance	
		Runway Growth Finance Opportunities	

Rate Sensitive

Garda Firvo	Voya MSR Opportunities Fund I
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MARYLAND STATE RETIREMENT AND PENSION SYSTEM

TERRA MARIA PROGRAM

as of June 30, 2023

Terra Maria Program

Attucks Asset Management

Arga Investment Management
 Birch Run Investments
 Cahning Global Advisors
 Garcia Hamilton and Associates
 Globeflex Capital
 Lisanti Capital Growth
 LM Capital Group
 Longfellow Investment Management
 New Century Advisors
 Pacific Ridge Capital Partners
 Paradigm Asset Management Company
 Phocas Financial Corp
 Profit Investment Management
 Promethos Capital
 Pugh Capital Management
 Ramirez Asset Management
 Redwood Investments

Semper Capital Management
 Sky Harbor Capital Management
 Summit Creek Advisors

Xponance

Algert Global
 Arga Investment Management
 Denali Advisors
 EAM Investors
 Lizard Partners

Leading Edge Investment Advisors

Ativo Capital Management
 Frontier Global Partners
 Henry James International Management Inc
 Redwood Investments
 Strategic Global Advisors

Bold denotes Program Manager for the Terra Maria Program

EQUITY RELATIONSHIP LISTING

as of June 30, 2023

Public Equity

Axiom International Investors Emerging Markets
 Baillie Gifford Emerging Markets
 Dimensional Fund Advisors Emerging Markets
 Durable Capital Onshore
 Durable Capital Opportunities

Equity Long/Short

Marshall Wace TOPS China
 Marshall Wace TOPS Emerging Markets
 Marshall Wace Eureka
 Marshall Wace Americas Tops (Long-Only)

Polunin Capital Management
 Redwheel Emerging Markets Equity
 SSGA Emerging Market Index
 T. Rowe Price US Structured Research

INTERNALLY MANAGED ACCOUNTS

as of June 30, 2023

Commodity Structural
 Emerging Markets Structural Overlay/ Tactical
 Global Equity Tactical
 Inflation Sensitive FI Structural
 International Equity Structural/ Tactical
 MD Global Infrastructure

MD IG Corporate Bonds
 MD International ex US Large Cap Equity
 MD International ex US Sci-Beta Value Equity
 MD Long Government Bonds
 MD Securitized Bonds
 MD TIPs

MD US Large Cap Equity
 MD US Small Cap Equity
 Nominal Fixed Income Structural/ Tactical
 US Equity Structural/ Tactical

MARYLAND STATE RETIREMENT AND PENSION SYSTEM

EQUITY COMMISSIONS TO BROKERS for the Fiscal Year Ended June 30, 2023

(Expressed in Thousands)

Brokers (1)	Total Total Shares	Total Total Commission	Average Commission Per Share
CLSA	63,360	\$ 546	\$ 0.86
Instinet	141,635	324	0.23
JP Morgan	97,910	284	0.29
Citigroup Global Markets	41,673	283	0.68
Citibank	56,407	272	0.48
HSBC Securities	68,363	223	0.33
Gldman Sachs	51,657	209	0.40
Merrill Lynch	75,764	171	0.23
Morgan Stanley	33,310	170	0.51
UBS Securities	47,205	134	0.28
Jefferies & Company	17,958	124	0.69
Macquarie Capital	110,756	114	0.10
Other Broker Fees	246,219	1,634	0.66
Total Broker Commissions	1,052,217	\$ 4,488	\$ 0.43

(1) Proceeds from the sale and disbursements for the purchase of securities are reported net of brokers' commissions. As such, brokers' commissions are not included as investment expenses on the Statement of Changes in Fiduciary Net Position. Other broker fees include 110 brokers each receiving less than \$100,000 in total commissions..

For the fiscal year ended June 30, 2023, total broker commissions averaged .43 cents per share.

MARYLAND STATE RETIREMENT AND PENSION SYSTEM

LARGEST STOCK & BOND HOLDINGS AT MARKET

as of June 30, 2023

EQUITY INCOME SECURITIES:	Shares	Fair Market Value
Apple Inc.	1,743,820	\$338,248,765
Microsoft Corporation	849,102	289,153,195
Nvidia Corp.	375,703	158,929,883
Amazon.com Inc.	1,159,830	151,195,439
Cheniere Energy Inc.	745,092	113,522,217
Tesla Inc.	433,512	113,480,436
Energy Transfer LP	8,750,502	111,131,375
Enbridge Inc.	2,930,678	109,054,664
American Tower Corp.	532,565	103,285,656
Vinci SA	812,961	94,352,754
Enterprise Products Partners	3,344,151	88,118,379
Alphabet Inc. Class A	688,774	82,446,248
Mplx Lp	2,351,764	79,818,870
Asml Holding NV	108,349	78,372,432
National Grid Plc	5,667,029	74,965,752

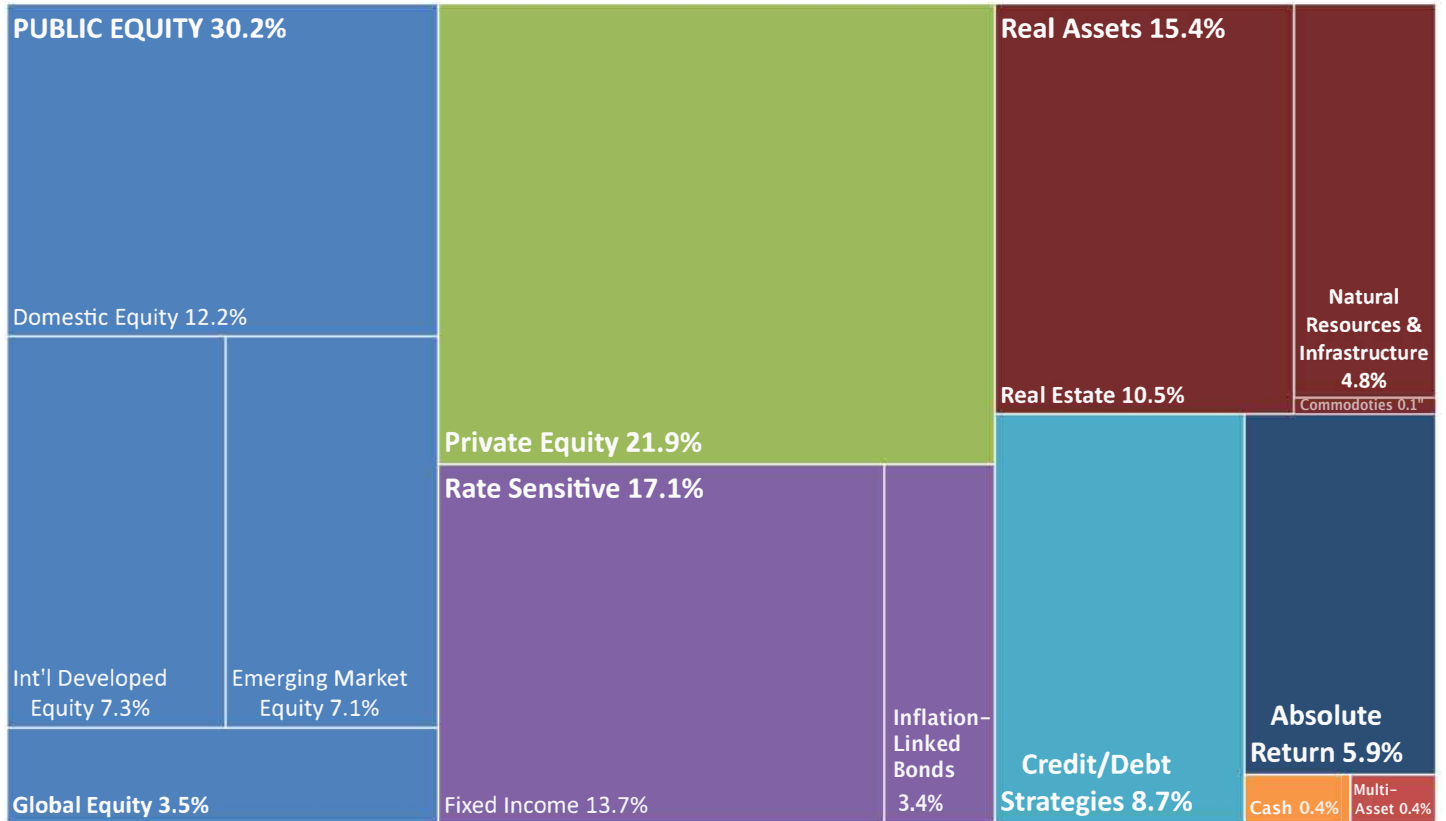
FIXED INCOME SECURITIES:	Par Value	Fair Market Value
United States Treasury Inflation Linked, 0.25% 15 Jan 2025	\$203,613,810	\$195,184,198
United States Treasury Bonds, 2.875% 15 May 2043	212,400,000	177,661,980
United States Treasury Inflation Linked, 3.875% 15 Apr 2029	160,518,480	177,313,529
United States Treasury Bonds, 3% 15 Nov 2044	196,000,000	165,857,160
United States Treasury Inflation Linked, 1.75% 15 Jan 2028	166,498,150	164,548,457
United States Treasury Inflation Linked, 3.625% 15 Apr 2028	150,024,800	161,009,616
United States Treasury Inflation Linked, 2.375% 15 Jan 2025	143,210,790	141,709,941
United States Treasury Bonds, 2.5% 15 Feb 2045	176,620,000	136,742,736
United States Treasury Bonds, 1.875% 15 Feb 2041	160,670,000	116,680,161
United States Treasury Bonds, 3% 15 Aug 2052	135,590,000	115,282,686
United States Treasury Inflation Linked, 0.875% 15 Jan 2029	120,122,000	113,684,662
United States Treasury Inflation Linked, 0.125% 15 Apr 2025	117,426,000	111,703,831
United States Treasury Inflation Linked, 3.375% 15 Apr 2032	97,401,600	110,733,931
United States Treasury Bonds, 2.875% 15 May 2052	131,920,000	109,323,423
United States Treasury Inflation Linked, 0.5% 15 Jan 2028	113,127,800	105,802,775

A complete list of portfolio holdings is available upon request.

MARYLAND STATE RETIREMENT AND PENSION SYSTEM

INVESTMENT PORTFOLIO ALLOCATION

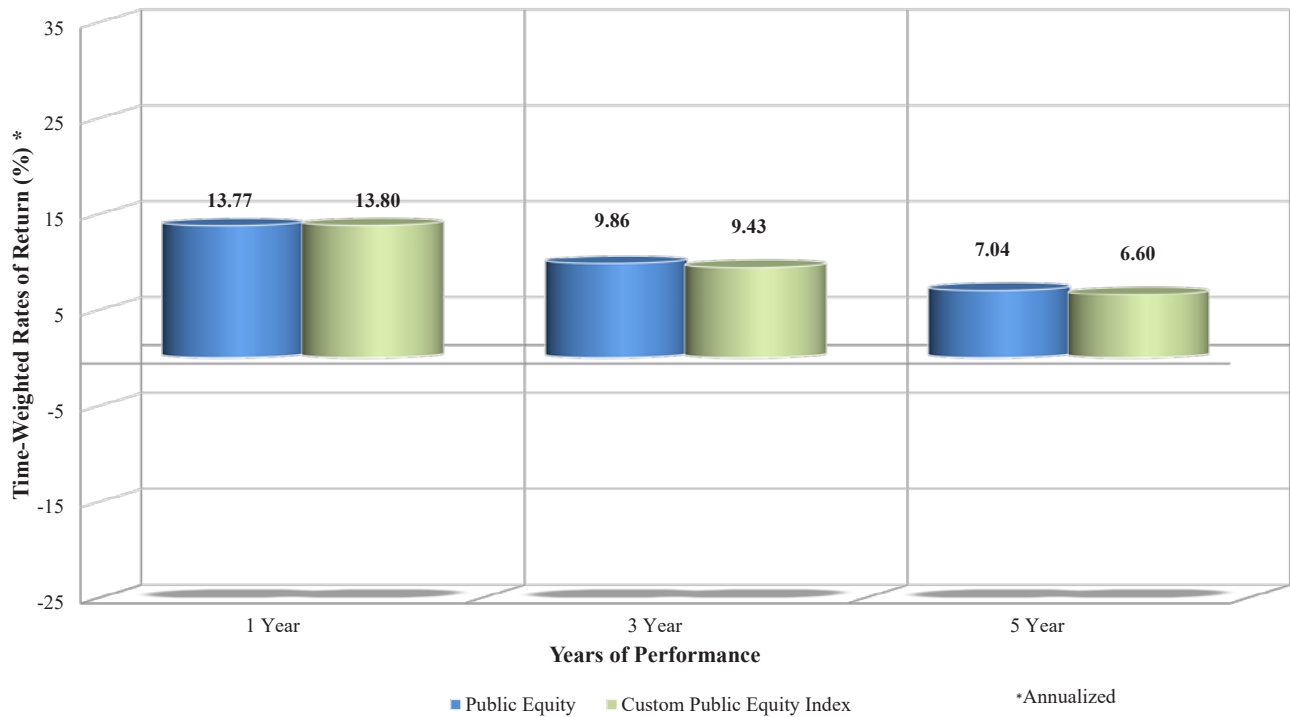
as of June 30, 2023



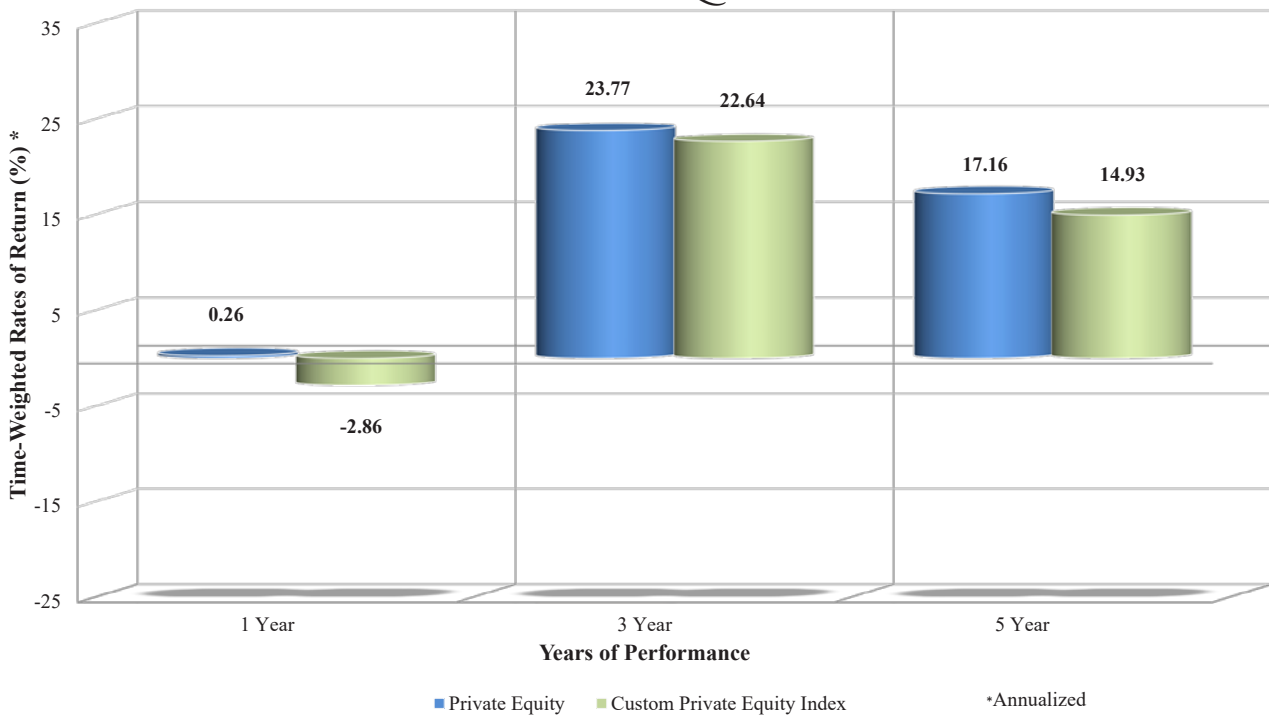
- PUBLIC EQUITY 30.2%
- RATE SENSITIVE 17.1%
- ABSOLUTE RETURN 5.9%
- MULTI-ASSET 0.4%
- CREDIT/DEBT STRATEGIES 8.7%
- REAL ASSETS 15.4%
- PRIVATE EQUITY 21.9%
- CASH 0.4%

MARYLAND STATE RETIREMENT AND PENSION SYSTEM
COMPARATIVE INVESTMENT RETURNS ENDING JUNE 30, 2023

PUBLIC EQUITY

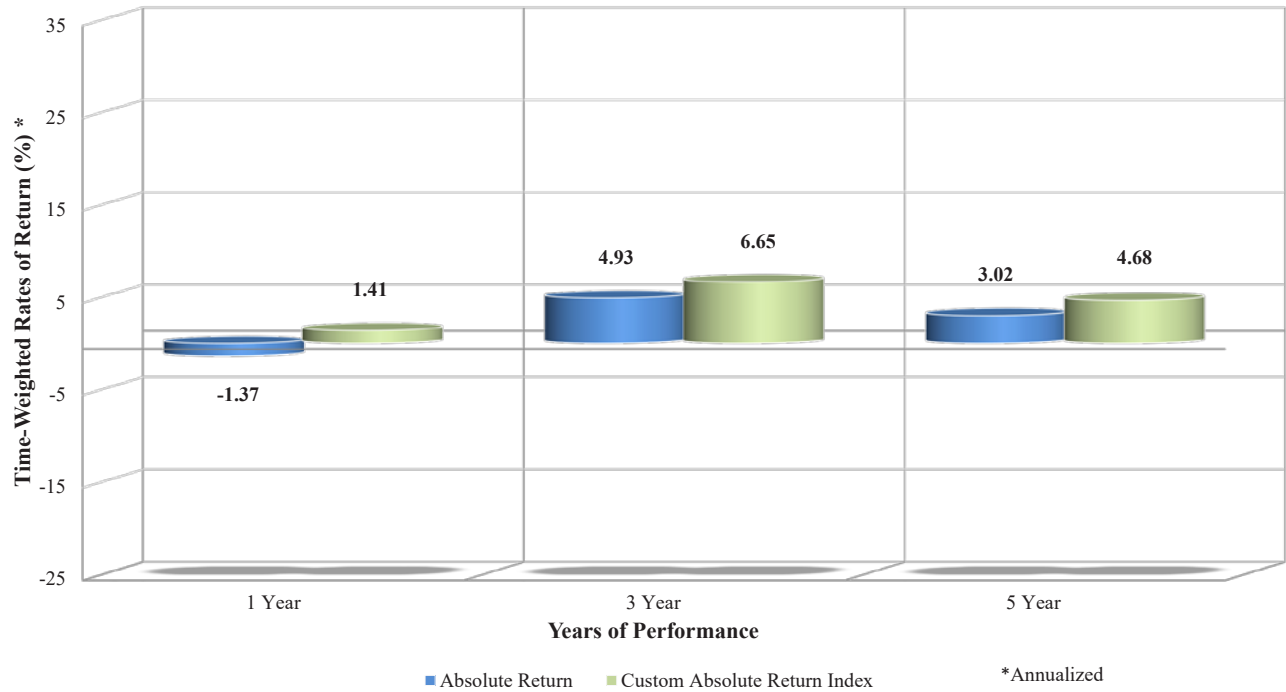


PRIVATE EQUITY

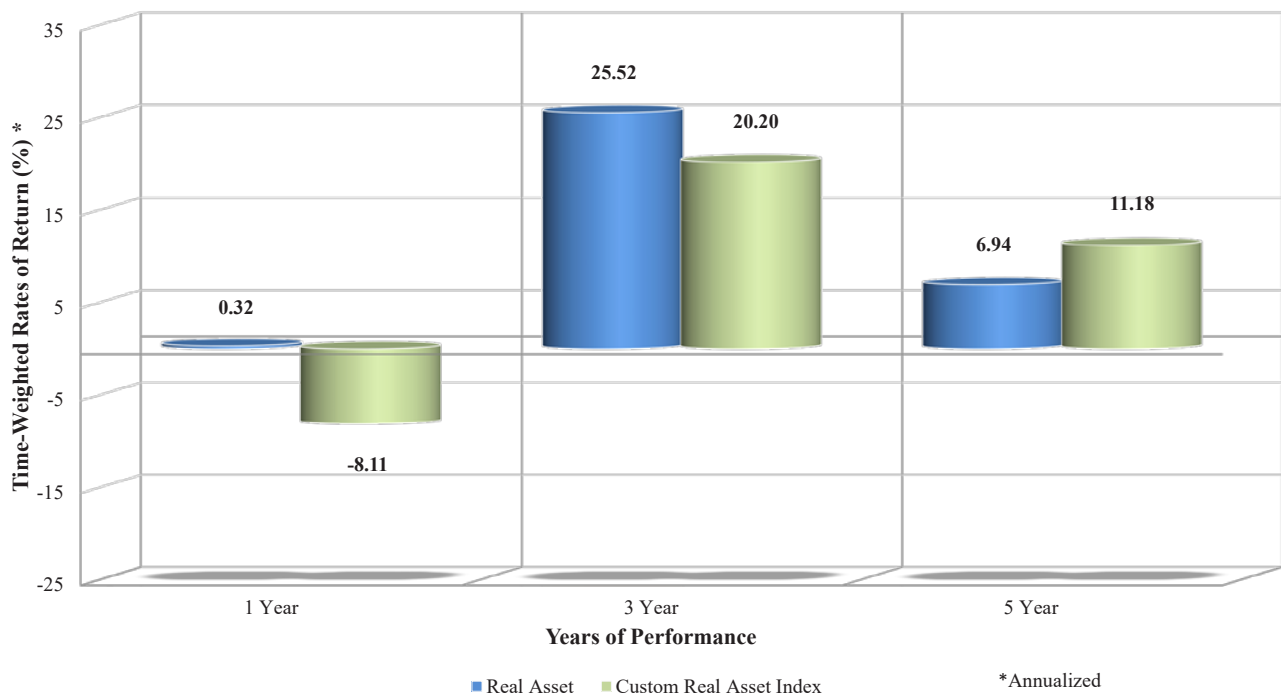


MARYLAND STATE RETIREMENT AND PENSION SYSTEM
COMPARATIVE INVESTMENT RETURNS ENDING JUNE 30, 2023

ABSOLUTE RETURN

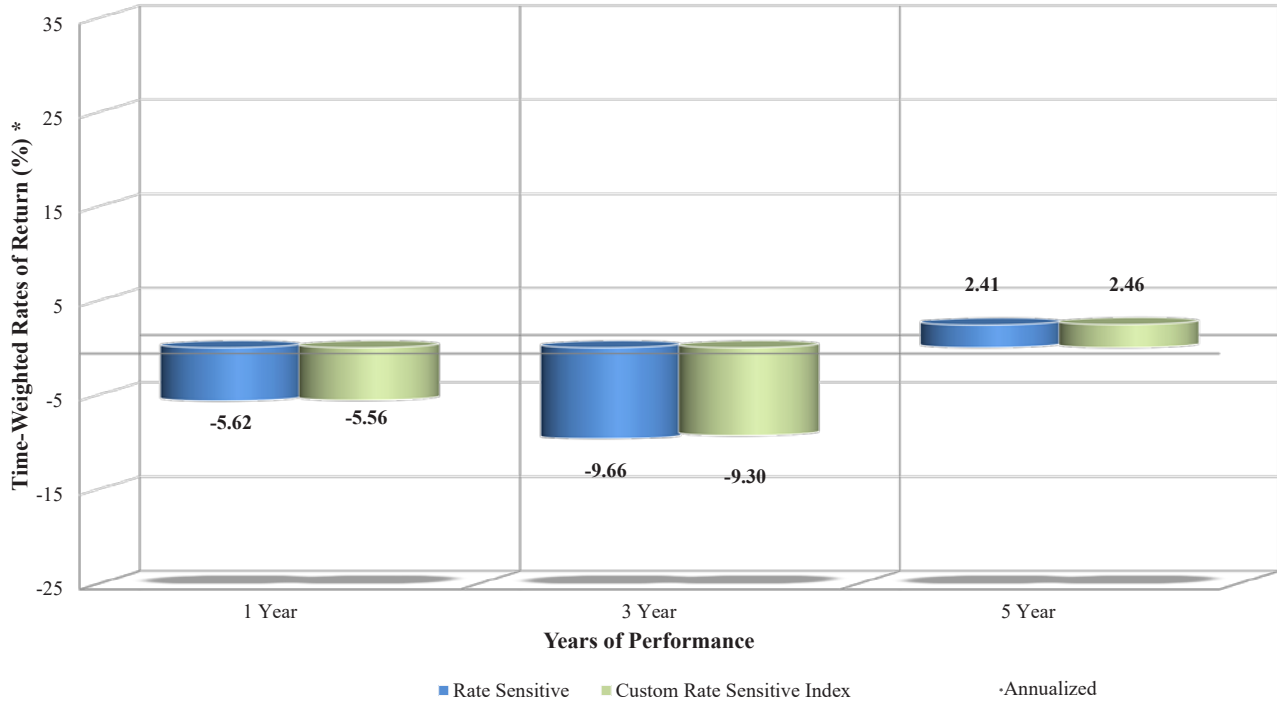


REAL ASSET

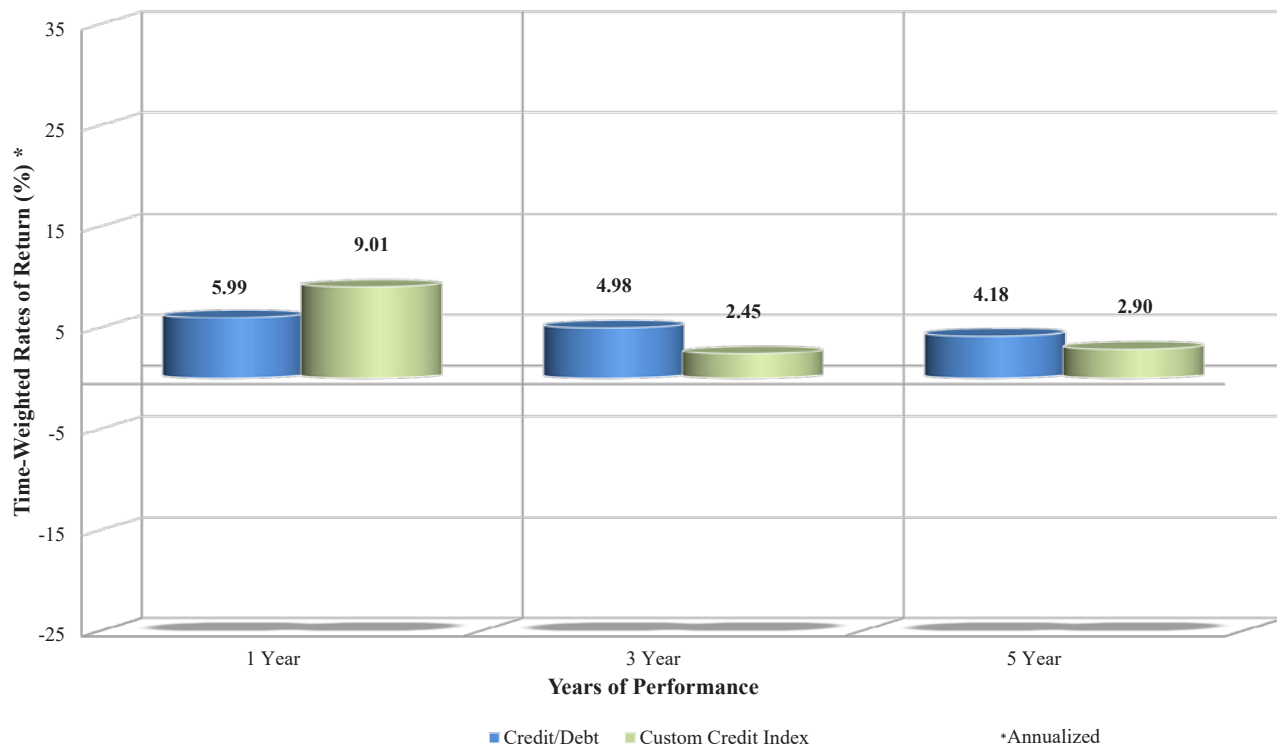


MARYLAND STATE RETIREMENT AND PENSION SYSTEM
COMPARATIVE INVESTMENT RETURNS ENDING JUNE 30, 2023

RATE SENSITIVE

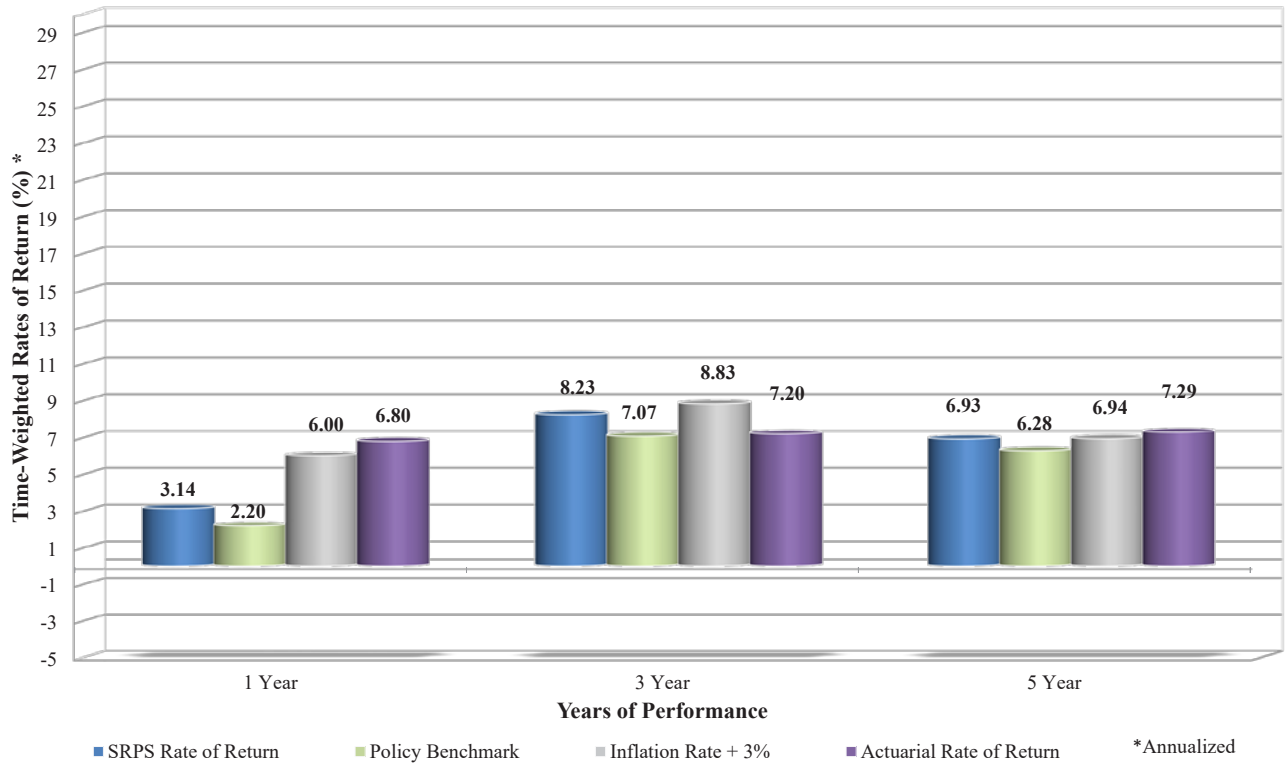


CREDIT / DEBT

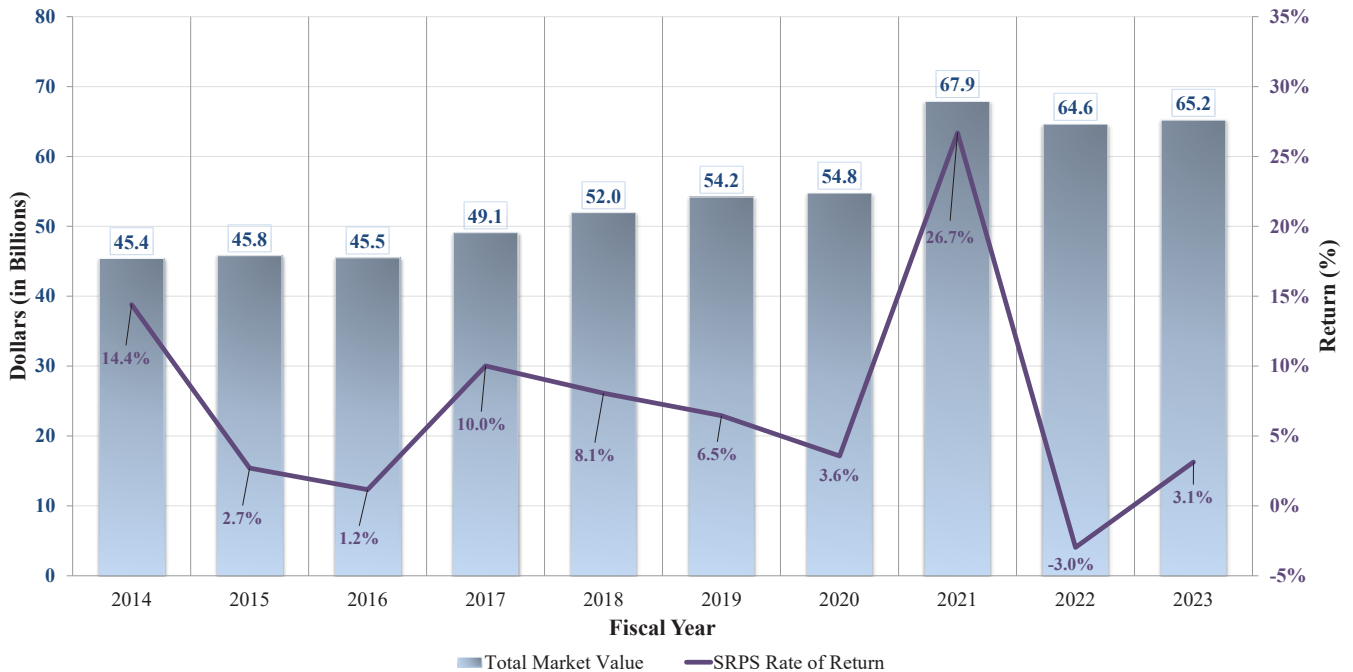


MARYLAND STATE RETIREMENT AND PENSION SYSTEM

TOTAL PLAN



TEN-YEAR HISTORY OF TIME-WEIGHTED ANNUAL RETURNS & GROWTH OF INVESTMENT PORTFOLIO





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The logo for the SRPS Actuarial Section is centered on the page. It features the letters "SRPS" in a large, bold, serif font. Below "SRPS" is the text "Actuarial Section" in a white, italicized serif font. The entire logo is set against a light gray background that contains a faint, stylized graphic of a building or architectural structure with vertical lines and circular elements.

SRPS
Actuarial Section



October 13, 2023

Board of Trustees
Maryland State Retirement and Pension System
120 East Baltimore Street, 16th Floor
Baltimore, MD 21202

Dear Members of the Board:

The results of the **June 30, 2023 annual actuarial valuation** of the Maryland State Retirement and Pension System (“MSRPS”) are presented in this Section.

The purposes of the annual actuarial valuation are as follows:

- Measure the financial position of MSRPS with regard to funding,
- Provide the Board with State and Participating Governmental Unit (“PGU”) contribution rates for certification,
- Determine actuarial and statutory contribution rates with reinvested savings,
- Discuss some of the risks associated with achieving the funding objectives of MSRPS, and
- Analyze the aggregate experience of the State Systems over the past year.

Information required by Statements No. 67 and No. 68 of the Governmental Accounting Standards Board (“GASB”) for fiscal year 2023 is provided in a separate report.

The following schedules in the Actuarial Section, Financial Section, Statistical Section, and Plan Summary Section of the Comprehensive Annual Financial Report were prepared by Gabriel, Roeder, Smith & Company based upon certain information presented in the previously mentioned funding and financial reporting valuation reports:

Actuarial Section

Summary of Valuation Results
Actuary’s Comments
Other Observations
Prior Year Asset Experience
Trends
Summary of Assumptions
Schedules of Active Membership by Plan
Summary of Unfunded Liabilities/Solvency Test
Summary of Retirees and Beneficiaries
Summary of Principal Results

Financial Section

Summary of Membership by System
Schedules of Funding Progress
Net Pension Liability/(Asset)
Key Methods and Assumptions Used in Valuation of Total Pension Liability
Sensitivity of Net Pension Liability/(Asset) to Changes in the Discount Rate
Schedules of Changes in Net Pension Liability/(Asset)
Schedule of Contributions from Employers and Other Contributing Entities

Statistical Section

- Schedule of Benefit Expense by Type
- Average Benefit Payments
- History of Employer Contributions by Plan
- History of Active Membership by Plan
- History of Retirees and Beneficiaries by Plan
- Principal Participating Employees

Plan Summary Section

- Membership Schedules

The individual member data required for the valuations was furnished by the Maryland State Retirement Agency (“MSRA”), together with pertinent data on financial operations (unaudited). The cooperation and collaboration of MSRA staff in furnishing these materials is acknowledged with appreciation. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the MSRA.

Actuarial valuations are based upon assumptions regarding future activity in specific risk areas including the rates of investment return and payroll growth, eligibility for the various classes of benefits, and longevity among retired lives. The Board adopts these assumptions after considering the advice of the actuary and other professionals. The assumptions and methods used for funding and financial reporting purposes are in conformity with the Actuarial Standards of Practice issued by the Actuarial Standards Board. They are also in conformity with the Board’s funding policy.

Each actuarial valuation considers all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed. GRS performed an experience study of MSRPS for the period 2014-2018 after completion of the June 30, 2018 valuation. Assumptions from the experience study including investment return, inflation, COLA increases, mortality rates, retirement rates, withdrawal rates, disability rates, and rates of salary increase were adopted by the Board for first use in the June 30, 2019 valuation. New economic assumptions (investment return, inflation, wage inflation, and COLA increases) were adopted by the Board for the June 30, 2021 valuation. It is our opinion that the actuarial assumptions used for this valuation are reasonable individually and in the aggregate.

Based upon the results of a projection performed in accordance with GASB Statement No. 67 parameters, the Single Discount rate for purpose of discounting pension liabilities for pension financial reporting purpose is 6.80%.

The computed contribution rates may be considered as a minimum contribution rate that complies with the funding policy stated in the Statutes and anticipate reinvested savings. Users of this report should be aware that contributions made at that rate do not guarantee benefit security. Given the importance of benefit security to any retirement system, we suggest that contributions to the System in excess of those presented in this report be considered.

The benefit provisions valued in the actuarial valuation as of June 30, 2023 are the same as the provisions from the last actuarial valuation as of June 30, 2022, with the exception of State Police and LEOPS. Portions of the savings from the 2011 pension reforms passed by the General Assembly are to be reinvested as additional contributions into the Systems. Legislation enacted in 2015 reduced the amount of reinvested savings to \$75 million per year beginning in fiscal year 2016 until the combined funded ratio of the Systems reaches 85% at which point the additional contributions cease.



This valuation assumes the continuing ability of the participating employers to make the contributions necessary to fund this system. A determination regarding whether or not each participating employer is actually able to do so is outside our scope of expertise. Consequently, we did not perform such an analysis.

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The actuary did not perform an analysis of the potential range of such future measurements in this actuarial valuation report.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. We certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with Maryland's Annotated Code and generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice as promulgated by the Actuarial Standards Board. In particular, the assumptions and methods used for funding purposes meet the parameters set by the applicable Actuarial Standards of Practice.

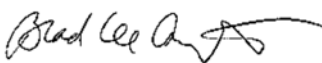
This report should not be relied on for any purpose other than the purposes previously described. Determinations of the financial results associated with benefits described in this report in a manner other than the intended purpose may produce significantly different results.

The signing actuaries are independent of the plan sponsor.

This is one of multiple documents comprising the actuarial report. Other documents comprising the actuarial report include the PowerPoint presentation presented to the Board in October 2023 and separately to the Joint Committee on Pensions in November 2023. Not all of these documents have been issued as of this date.

Brad L. Armstrong, and Jeffrey T. Tebeau are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,
Gabriel, Roeder, Smith & Company



Brad L. Armstrong, ASA, MAAA
Consulting Actuary



Jeffrey T. Tebeau, ASA, EA, MAAA
Consulting Actuary

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INTRODUCTION

The funding valuation report presents the results of the June 30, 2023 annual actuarial valuation of the Maryland State Retirement and Pension System (MSRPS). The purposes of the annual funding valuations are as follows:

- Measure the financial position of MSRPS with regard to funding,
- Provide the Board with State and Participating Governmental Unit (“PGU”) contribution rates for certification,
- Determine actuarial and statutory contribution rates with reinvested savings,
- Discuss some of the risks associated with achieving the funding objectives of MSRPS, and
- Analyze the aggregate experience of the State Systems over the past year.

A summary of the primary funding valuation results as of June 30, 2023 is presented on the following page.

The Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68 valuation report presents the results of the June 30, 2023 annual accounting valuation of the Maryland State Retirement and Pension System (MSRPS). The purpose of the annual accounting valuations is as follows:

- Provide actuarial reporting and disclosure information for the MSRPS and State’s financial report.

The accounting valuation results for the year ended June 30, 2023 are presented in a separate report.

SUMMARY OF VALUATION RESULTS
JUNE 30, 2023
(\$ IN MILLIONS)
(STATE AND MUNICIPAL)

	2023						2022		% Change
	TCS	ECS ¹	State Police	Judges	LEOPS ²	CORS ³	Total	Total	
A. Demographic Information									
1. Active Number Counts	112,773	81,181	1,335	326	2,877	155	198,647	194,210	2.3%
2. Active Payroll	\$ 8,469	\$ 5,466	\$ 139	\$ 59	\$ 242	\$ 10	\$ 14,385	\$ 13,202	9.0%
3. Retired Number Counts	84,177	84,783	2,606	468	2,512	63	174,609	172,235	1.4%
4. Annual Benefits for Retired Members ⁴	\$ 2,727	\$ 1,770	\$ 158	\$ 46	\$ 99	\$ 2	\$ 4,802	\$ 4,517	6.3%
5. Deferred / Inactive Number Counts	23,702	22,968	88	8	313	8	47,087	47,503	-0.9%
6. Total Number Counts	220,652	188,932	4,029	802	5,702	226	420,343	413,948	1.5%
B. Assets									
1. Market Value (MV)	\$ 39,421	\$ 21,581	\$ 1,851	\$ 585	\$ 1,413	\$ 41	\$ 64,893	\$ 64,311	0.9%
2. Rate of Return on MV ⁵							3.11 %	(2.90)%	
3. Actuarial Value (AV)	\$ 41,303	\$ 22,607	\$ 1,939	\$ 613	\$ 1,481	\$ 43	\$ 67,985	\$ 65,799	3.3%
4. Rate of Return on AV							5.51 %	6.97 %	
5. Ratio of AV to MV							104.8%	102.3%	
C. Actuarial Results									
1. Normal Cost as a % of Payroll	11.96%	10.64%	34.86%	39.39%	25.00%	14.13%	12.02%	12.09%	
2. Actuarial Accrued Liability (AAL)									
a. Active	\$ 21,957	\$ 10,979	\$ 709	\$ 210	\$ 754	\$ 26	\$ 34,635	\$ 32,372	7.0%
b. Retired	28,933	19,705	2,175	498	1,382	28	52,720	50,091	5.2%
c. Deferred/Inactive	1,559	1,331	20	7	47	1	2,964	2,786	6.4%
d. Total	\$ 52,448	\$ 32,016	\$ 2,904	\$ 715	\$ 2,183	\$ 55	\$ 90,319	\$ 85,248	5.9%
3. Unfunded AAL (UAAL)	\$ 11,145	\$ 9,409	\$ 965	\$ 102	\$ 702	\$ 12	\$ 22,334	\$ 19,449	14.8%
4. Funded Ratio	78.75 %	70.61 %	66.77 %	85.75 %	67.86 %	78.59 %	75.27 %	77.19 %	
D. Contribution Rates⁶									
	STATE PORTION ONLY								
	FY 2025						FY 2024	FY 2023	
	TCS	ECS	State Police	Judges	LEOPS	Total	Total	Total	
1. Pension Contributions									
a. Employer Normal Cost	4.96%	4.30%	26.98%	32.33%	18.29%	5.27%	5.34%	5.41%	
b. Member Contribution Rate	7.00%	6.74%	7.88%	7.06%	6.92%	6.93%	6.93%	6.93%	
c. UAAL Contribution Rate	11.29%	17.24%	58.53%	14.89%	27.71%	13.88%	12.54%	12.14%	
d. Total	23.25%	28.28%	93.39%	54.28%	52.92%	26.08%	24.81%	24.48%	
2. Total Actuarial Employer Rate (1.a + 1.c)	16.25%	21.54%	85.51%	47.22%	46.00%	19.15%	17.88%	17.55%	
3. Total Employer Budgeted Rate									
a. Employer Budgeted Rate	16.25%	21.54%	85.51%	47.22%	46.00%	19.15%	17.88%	17.55%	
b. Reinvested Savings Rate	0.58%	0.52%	0.72%	0.00%	0.76%	0.59%	0.64%	0.66%	
c. Total Employer Budgeted Rate	16.83%	22.06%	86.23%	47.22%	46.76%	19.74%	18.52%	18.21%	

¹ Includes ECS State, ECS Municipal, and CORS State.

² Includes LEOPS State and LEOPS Municipal.

³ Includes CORS Municipal only.

⁴ Retiree benefit amounts include the cost-of-living adjustment granted July 1, 2023 and July 1, 2022, respectively.

⁵ Actuarial estimation method used is expected to produce results that differ modestly from figures reported by the System.

⁶ Contribution rates shown in the "Total" column are for informational purposes only and are not used for funding purposes.

Totals may not add due to rounding.

ACTUARY'S COMMENTS

For the year ended June 30, 2023, the System's assets earned 3.11% based on our estimate and 3.14% as reported by the System (using a slightly different computation method) on a market value basis and 5.51% on a smoothed or actuarial value basis. The smoothed rate of return was less than the 6.80% assumed rate of investment return for fiscal year 2023. Recognized asset gains from fiscal year 2021 offset recognized asset losses from fiscal years 2019, 2020, 2022, and 2023 in the actuarial value of assets as of June 30, 2023. This resulted in a loss under the asset smoothing method.

UAAL and Actuarial Gain/(Loss) (\$ in Millions)

	Municipal	State	Total SRPS
Unfunded Actuarial Accrued Liability (UAAL) as of June 30, 2022	\$ 1,116	\$ 18,333	\$ 19,449
Expected UAAL as of June 30, 2023 before changes	1,100	17,953	19,053
Changes in benefit provisions	(1)	(4)	(5)
Changes in methods and assumptions	-	-	-
Expected UAAL as of June 30, 2023 after changes	1,099	17,949	19,048
Actual UAAL as of June 30, 2023	1,333	21,001	22,334
Net actuarial gain/(loss)	(234)	(3,052)	(3,286)
Actuarial gain/(loss) by source			
Actuarial investment experience	(74)	(769)	(843)
Actuarial accrued liability experience	(160)	(2,283)	(2,443)

Totals may not add due to rounding.

In relative terms, the overall System funded ratio of actuarial value of assets to liabilities decreased from 77.19% in 2022 to 75.27% this year. If market value of assets were the basis for the measurements, the funded ratio would have decreased from 75.44% to 71.85% funded.

The market value of assets exceeds the retiree liabilities by about 23% in total (or 3% if accumulated member contributions of about \$10.9 billion are netted out), a decrease from 28% last year. This is referred to as a short condition test and is demonstrated in the chart at the bottom of this page. It is looking at the current retiree liabilities as the benefits that will be paid the soonest since these benefits are already in pay status. Active liabilities and deferred vested liabilities do not have associated immediate cash flow requirements. Although the market value of assets exceeds the current retiree liabilities in total, this is not true for all of the systems individually. For State Police, the market value of assets is less than the retiree liabilities.

Summary of Contribution Rates by State System (\$ in Millions)							
	TCS	ECS	State Police	Judges	LEOPS	CORS	Total
Market Value of Assets (MVA)	\$ 39,421	\$ 21,581	\$ 1,851	\$ 585	\$ 1,413	\$ 41	\$ 64,893
Retiree Liability	28,933	19,705	2,175	498	1,382	28	52,720
MVA as % of Retiree Liability	136%	110%	85%	117%	102%	149%	123%
Excluding Member Contributions	112%	92%	80%	110%	91%	128%	103%

In 2023, the General Assembly passed legislation extending the maximum time period members of the State Police Retirement System and LEOPS can participate the Deferred Retirement Option Program (DROP). The legislation increased the DROP participation period from five to seven years, or until reaching 32 years of service. This legislation decreased the actuarial accrued liability by \$2.6 million for State Police, \$1.8 million for LEOPS State and \$1.0 million for LEOPS Municipal. The Employer Contribution Rates decreased by 0.67% for State Police, 0.65% for LEOPS State and 0.25% for LEOPS Municipal.

In addition, the General Assembly passed legislation in 2023 that amends how the unfunded liabilities of the System are amortized. The existing unfunded liability as of June 30, 2023 for each State System will continue to be amortized over a single closed 25-year period beginning July 1, 2014 and ending June 30, 2039 (15 years remaining as of the June 30, 2023 valuation, which determines the fiscal year 2025 contribution). Beginning July 1, 2023 (first affecting the 2024 valuation), any new unfunded liabilities or surpluses that accrued during the preceding fiscal year are amortized over closed periods according to the following guidelines:

- over 15 years for experience gains and losses;
- over 25 years for gains or losses stemming from changes to actuarial assumptions or methods;
- over a period ranging from no less than 10 and no more than 15 years for gains or losses stemming from new legislation (except early retirement incentives); and
- over 5 years for any accrued liability stemming from legislation providing incentives for the early retirement of State employees.

In the 2013 legislative session, the Legislature changed the method used to fund the State Systems of the MSRPS. The unfunded liability for each State System is being amortized over a single closed 25-year period ending June 30, 2029. In addition, the corridor method used by the Teachers' Combined System and the State portion of the Employees' Combined System, which was established in 2001, was being phased-out over a 10-year period. In 2015, the Legislature removed the corridor funding method effective with the June 30, 2015 valuation.

The Teachers' Combined System (TCS) remained out of the corridor since the June 30, 2005 valuation and the State portion of the Employees Combined System (ECS) remained out of the corridor since the June 30, 2004 valuation resulting in contribution rates for TCS and ECS that were less than actuarial rates. With the elimination of the corridor effective with the June 30, 2015 valuation report, TCS and ECS began to contribute based on the actuarially determined rate beginning in fiscal year 2017.

Beginning in fiscal year 2012, employers pay a per-member fee to cover the Retirement Agency's operating expenses (i.e., administrative expenses). The State pays the fee for libraries.

In 2011, the General Assembly enacted pension reforms which were effective July 1, 2011, and affected both current actives and new hires. The member contribution rate was increased for members of the Teachers' Pension System and Employees' Pension System from 5% to 7%. The member contribution rate was increased from 4% to 7% for LEOPS. In addition, the benefit attributable to service on or after July 1, 2011 is subject to cost-of-living adjustments (COLAs) that are based on the increase in the Consumer Price Index and capped at 2.5% or 1.0%. The cap is 2.5% if the market value investment return from the preceding calendar year was higher or lower than the investment return assumption used in the previous valuation (6.80%) and in effect as of December 31 of the preceding fiscal year, and 1.0% otherwise. There were also reforms that affected only those members hired on or after July 1, 2011.

In addition to the benefit provision changes in 2011, a portion of the savings from the pension reforms is to be reinvested in certain State Systems (TCS, ECS, State Police, and LEOPS). Reinvested savings of \$191 million was contributed in fiscal year 2013. Legislation enacted in 2014 changed the amount of reinvested savings from \$300 million each year beginning in fiscal year 2014 to \$100 million each year for fiscal years 2014 and 2015, \$150 million for fiscal year 2016, \$200 million for fiscal year 2017, \$250 million for fiscal year 2018, \$300 million each year beginning in fiscal year 2019 and thereafter. The \$300 million would then continue until the later of the combined funded ratio of the Systems reaching 85%, and the corridor funding method being fully phased-out. Legislation enacted in 2015 further reduced the amount of reinvested savings to \$75 million per year beginning in fiscal year 2016 until the combined funded ratio of the Systems reaches 85% at which point the reinvestment ceases. For fiscal year 2024, the legislature reduced the amount of reinvested savings by \$39.7 million. The allocation of reinvested savings by System is in proportion to the savings from the pension reforms as measured in the actuarial valuation as of June 30, 2011.

The actuarially determined rates are equal to the employer normal cost plus the Unfunded Actuarial Accrued Liability contribution rate. The unfunded actuarial contribution rate is equal to the payment resulting from amortizing the remaining unfunded liability (as of June 30, 2023) as a level percentage of pay over a single 25-year closed period beginning July 1, 2014 and ending June 30, 2039 (15 years remaining as of the June 30, 2023 valuation).

The fiscal year 2025 budgeted rates for TCS, ECS, State Police, and LEOPS are equal to the actuarially determined rate. The budgeted rates with reinvested savings are based on a projection of payroll. It is our understanding that the Retirement Agency will monitor contributions to ensure that the System receives the proper amount of reinvested dollar savings during fiscal year 2025. The fiscal year 2025 budgeted rate for Judges is equal to the actuarially determined contribution rate.

Beginning in fiscal year 2013, local employers contributed toward the normal cost for the Teachers Combined System. The required portion of normal cost contribution amounts for local employers for fiscal years 2013 through 2016 was defined by the Maryland statutes. Beginning in fiscal year 2017, local employers contribute the full normal cost contribution on behalf of their employees.

The schedules required under Government Accounting Standards Board (GASB) Statements No. 67 (beginning with fiscal year 2014) and No. 68 (beginning with fiscal year 2015) are provided in a separate report.

OTHER OBSERVATIONS

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected System Contributions and Funded Status

Given the System's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the System earning 6.80% on the actuarial value of assets), it is expected that:

1. The employer normal cost as a percentage of pay will decrease to the level of the Reformed Benefit Plan's (i.e., plans for members hired after July 1, 2011) normal cost as time passes and the active population is comprised entirely of Reformed Plan members,
2. The unfunded actuarial accrued liabilities will be fully amortized after 15 years (June 30, 2039), and
3. The funded status of the plan will increase gradually towards a 100% funded ratio.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the Actuarial Accrued Liability and the actuarial value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

1. The measurement is inappropriate for assessing the sufficiency of System assets to cover the estimated cost of settling the System's benefit obligations; for example, transferring the liability to an unrelated third party in a free market type transaction.
2. The measurement is dependent upon the actuarial cost method which, in combination with the System's amortization policy, affects the timing and amounts of future contributions. The amounts of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon the actuarial assumptions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. If the funded status were 100%, the System would still require future normal cost contributions (i.e., contributions to cover the cost of the active membership accruing an additional year of service credit).
3. The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.

PRIOR YEAR ASSET EXPERIENCE

Assets (State and Municipal)

Plan assets for this System are measured on both a market value and an actuarial or smoothed value basis. The actuarial smoothing method annually recognizes 20% of the difference between (a) the expected investment return if the market value of assets had earned the assumed rate of 6.80% during FY 2023, and (b) the actual investment return. Bear in mind that the expected return for this purpose is based on the assumed return from the prior year's actuarial valuation. In addition, there is a market value collar that constrains the actuarial value to be within 20% of the market value of assets. In periods of high returns, this method defers the amount of asset gains above the assumed return. Conversely, in periods of returns below the assumed rate, recognition of the losses is deferred. This method limits the effect of temporary asset value fluctuations on contribution rates. The System does not immediately feel the full impact of lower (or higher) costs when asset values fluctuate dramatically.

For the year ended June 30, 2023, the System's assets earned 3.11% based on our estimate and 3.14% as reported by the System (using a slightly different computation method) on a market value basis and 5.51% on an actuarial value basis. The System experienced an investment loss of \$2.3 billion on a market value basis and a loss of \$0.8 billion on an actuarial basis. More detail can be found in Section III. Reconciliations of market value and actuarial value of assets are presented below:

Item (In Millions)	Market Value	Actuarial Value
June 30, 2022 Value	\$ 64,311	\$ 65,799
Employer Contributions	2,439	2,439
Member Contributions	964	964
Benefit Payments and Other Disbursements	(4,801)	(4,801)
Expected Investment Earnings (6.80% in FY2023)	4,326	4,428
Expected Value June 30, 2023	\$ 67,239	\$ 68,828
Investment Gain/(Loss)	(2,346)	(843)
June 30, 2023 Value	\$ 64,893	\$ 67,985

Figures may not add exactly due to rounding

The 2021 valuation recognized 40% of the investment gain from FY 2021 in the determination of the actuarial value of assets rather than the 20% normally recognized. The remaining 60% will be recognized equally over the next four valuations (15% was recognized in 2023).

(STATE AND MUNICIPAL)
TRENDS (STATE AND MUNICIPAL)

One of the best ways to measure or evaluate the financial condition of a pension plan is to examine the historical trends that are evolving. Below are three charts which illustrate trend information from 1999 through the end of 2023, on the System’s assets and liabilities, annual cash flows in and out of the fund, and the State contribution rate. Our comments on each follow.

Chart A:
Assets/Liabilities

Chart A: Assets/Liabilities

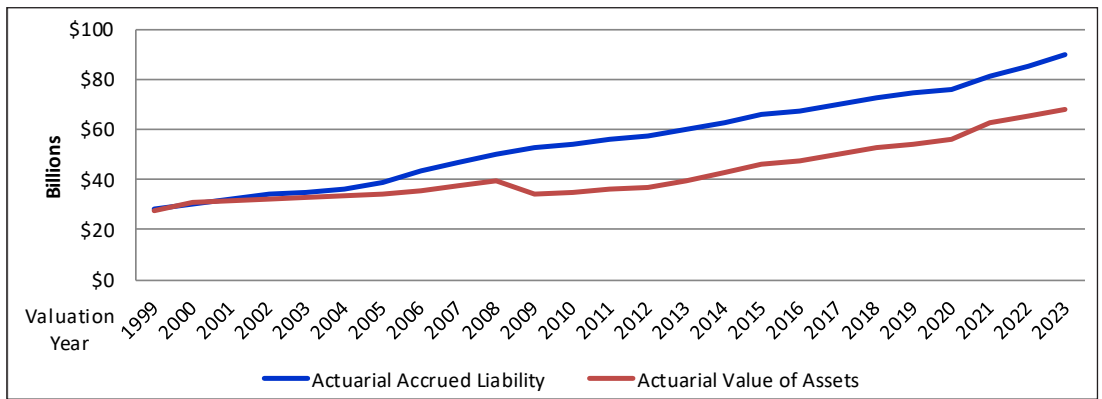


Chart B:
Benefits vs Contributions

Chart B: Benefits vs. Contributions

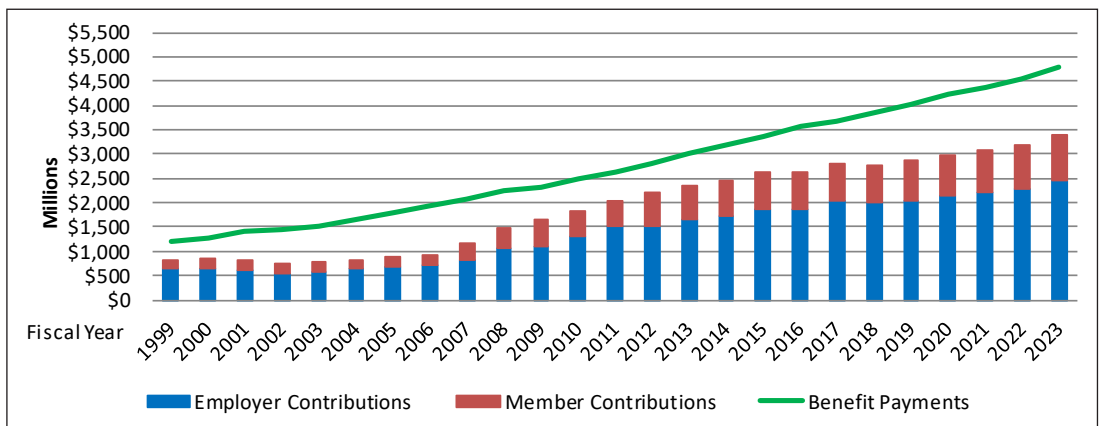
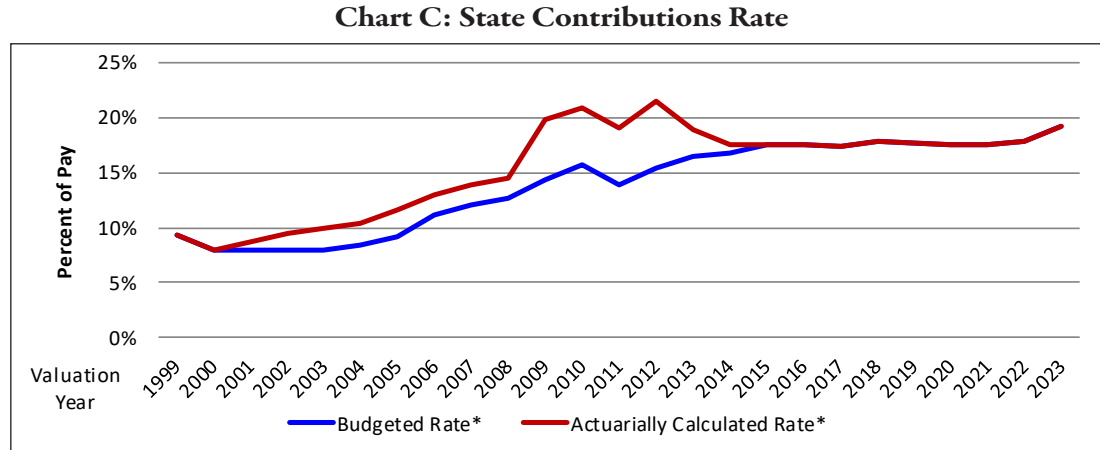


Chart C:
State Contribution
Rate



*Excludes reinvested savings in valuation years 2010. 2010 rates are prior to the 2011 GA Reforms.

Chart A displays a comparison of the actuarial value of assets and the Actuarial Accrued Liability (AAL). The difference between the actuarial value of assets and the AAL is the Unfunded Actuarial Accrued Liability. The Unfunded Actuarial Accrued Liability is about \$22 billion as of June 30, 2023, and increased by about \$2.9 billion since the last valuation as of June 30, 2022. As of June 30, 2023, the actuarial value of assets under the five-year asset smoothing method is 105% of the market value of assets, compared with 102% as of June 30, 2022.

Chart B presents non-investment cash flow trend information that can have investment implications. With the aging and retirements of the baby boom generation, MSRPS has seen increases in payments to retirees. This is expected for mature retirement systems such as MSRPS. Benefit payments, which are the total amount below the green line, exceeds the total contributions, which is the total amount below the top of the red bar. The amount needed to pay the excess of benefit payments over total contributions comes from either investment return or liquidation of current assets. If the difference between the total benefit payments and total contributions increases, a larger portion of investment return will be needed to pay benefits and may require a change in asset allocation. The corridor method increased the extent of negative cash flows. The corridor

funding method was eliminated first effective with the June 30, 2015 valuation. The budgeted rates have been equal to the actuarial rates since fiscal year 2017.

Finally, Chart C looks at the composite actuarially determined and budgeted State contribution rates. The budgeted contribution rates by System determine the fiscal year State appropriation. It shows how the rate has increased since the year 2000, after years of sustained investment gains in the 1990s. Effective with the 2001 valuation, the State appropriations were performed under a corridor funding method for the two largest plans, TCS and ECS. The appropriation remained essentially level for a few years before increasing with the 2004 valuation. Legislation enacted in 2015 removed the corridor funding method for TCS and ECS beginning with the valuation as of June 30, 2015. The budgeted rate is now equal to the actuarial rate for TCS and ECS.

Chart C further illustrates that the corridor method consistently acted to reduce the State’s contributions calculated in valuations between 2001 and 2015.

SUMMARY OF UNFUNDED ACTUARIAL
(STATE AND

Valuation Date June 30,	Actuarial Liabilities For			Total Liabilities	Actuarial Value of Assets
	Active Member Contributions	Retirees, Term Vested and Inactives	Active Members Employer Fin. Portion		
2014	\$ 5,369,806,786	\$ 37,679,277,545	\$ 19,561,109,243	\$ 62,610,193,574	\$ 42,996,956,526
2015	5,908,597,531	40,321,760,550	20,051,422,798	66,281,780,879	46,170,624,066
2016	6,437,712,138	41,640,894,712	19,703,317,255	67,781,924,105	47,803,679,296
2017	7,023,662,251	43,117,075,812	19,845,837,454	69,986,575,517	50,250,464,717
2018	7,557,858,673	45,341,184,229	19,675,645,860	72,574,688,762	52,586,527,740
2019	8,142,516,497	46,654,221,664	19,729,262,120	74,526,000,281	54,361,969,141
2020	8,770,367,300	47,732,961,164	19,967,706,953	76,471,035,417	56,246,893,989
2021	9,460,950,720	50,302,226,715	21,975,379,589	81,738,557,024	62,817,937,925
2022	10,012,448,913	52,876,516,715	22,359,098,000	85,248,063,628	65,798,923,071
2023	10,651,550,595	55,684,454,730	23,983,363,675	90,319,369,000	67,985,366,365

SUMMARY OF RETIREES AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS
(STATE AND MUNICIPAL)

Fiscal Year Ended	Added to Rolls		Removed from Rolls		Rolls-End of Year		% Increase in Annual Allowances	Average Annual Allowance
	Number	Annual Allowance	Number	Annual Allowances	Number	Annual Allowances		
2014	7,698	\$ 217,542,920	2,736	\$ 58,512,733	142,887	\$ 3,147,652,663	5.32%	\$ 22,029
2015	8,459	239,724,802	3,496	64,129,306	147,850	3,323,248,158	5.58%	22,477
2016	8,243	201,205,015	3,527	75,486,723	152,566	3,448,966,450	3.87%	22,606
2017	7,384	211,608,686	3,584	73,321,980	156,366	3,587,253,156	4.01%	22,941
2018	8,105	268,295,042	4,097	64,344,782	160,374	3,791,203,416	5.69%	23,640
2019	7,484	260,126,211	2,966	69,487,028	164,892	3,981,842,599	5.03%	24,148
2020	7,150	262,737,304	4,398	103,943,419	167,644	4,140,636,484	3.99%	24,699
2021	6,813	234,688,805	5,089	111,489,084	169,368	4,263,836,205	2.98%	25,175
2022	7,700	365,253,216	4,833	112,312,265	172,235	4,516,777,156	5.93%	26,225
2023	7,123	410,007,580	4,749	124,948,682	174,609	4,801,836,054	6.31%	27,501

Notes: Members added to rolls were estimated based on a retirement date/change date after June 30, 2023.

Annual allowances added to rolls include COLA increases for continuing members.

COLA increases were estimated based on the benefits for the continuing members.

LIABILITIES / SOLVENCY TEST
MUNICIPAL)

Ratio of Assets to Actuarial Liabilities			Funded Ratio (Assets/Liab. Coverage)	Unfunded Actuarial Accrued Liability (UAAL)	Covered Payroll	UAAL as % of Covered Payroll
Active Member Contributions	Retirees Term Vested and Inactives	Active Members Employer Fin. Portion				
100.00%	99.86%	0.00%	68.67%	\$ 19,613,237,049	\$ 10,803,632,045	182%
100.00%	99.85%	0.00%	69.66%	20,111,156,814	11,063,961,664	182%
100.00%	99.34%	0.00%	70.53%	19,978,224,809	11,155,923,517	179%
100.00%	100.00%	0.55%	71.80%	19,736,110,801	11,418,973,317	173%
100.00%	99.31%	0.00%	72.46%	19,988,161,021	11,566,219,797	173%
100.00%	99.07%	0.00%	72.94%	20,164,031,140	11,905,463,225	169%
100.00%	99.46%	0.00%	73.55%	20,224,141,428	12,501,422,207	162%
100.00%	100.00%	13.90%	76.85%	18,920,619,099	12,749,246,637	148%
100.00%	100.00%	13.01%	77.19%	19,449,140,557	13,201,815,232	147%
100.00%	100.00%	6.88%	75.27%	22,334,002,635	14,384,588,957	155%

MARYLAND STATE RETIREMENT
ACCOUNTING STATEMENT
AS OF
(STATE AND

	Teachers' Combined System	Employees' Combined System
1. Actuarial Accrued Liability:		
a. Employee Contributions	\$ 6,909,250,838	\$ 3,428,554,846
b. Retirees, Term. Vesteds & Inactives	30,491,649,919	21,036,022,782
c. Active Members	15,047,252,959	7,550,932,954
2. Total Actuarial Accrued Liability (1(a) + 1(b) + 1(c))	\$52,448,153,716	\$32,015,510,582
3. Actuarial Value of Assets	41,303,062,250	22,606,668,114
4. Unfunded Actuarial Accrued Liability: (2-3)	\$11,145,091,466	\$ 9,408,842,468
5. Funded Ratio	78.75%	70.61%
6. Annual Payroll	\$ 8,468,611,549	\$ 5,465,772,792
7. UAAL as % of Payroll	132%	172%

AND PENSION SYSTEM
INFORMATION
JUNE 30, 2023
MUNICIPAL)

State Police	Judges	LEOPS	CORS	Total MSRPS
\$ 116,072,957	\$ 38,616,053	\$ 153,292,126	\$ 5,763,775	\$ 10,651,550,595
2,195,113,867	504,920,530	1,428,377,262	28,370,372	55,684,454,732
592,644,990	171,117,499	600,997,513	20,417,760	23,983,363,675
<u>\$2,903,831,814</u>	<u>\$714,654,082</u>	<u>\$2,182,666,901</u>	<u>\$54,551,907</u>	<u>\$90,319,369,002</u>
<u>1,938,797,497</u>	<u>612,814,007</u>	<u>1,481,154,062</u>	<u>42,870,436</u>	<u>67,985,366,365</u>
\$ 965,034,317	\$101,840,075	\$701,512,839	\$ 11,681,471	\$22,334,002,637
66.77%	85.75%	67.86%	78.59%	75.27%
\$ 139,457,997	\$ 58,695,840	\$241,937,328	\$ 10,113,451	\$14,384,588,957
692%	174%	290%	116%	155%

REPORT OF THE ACTUARY ON THE VALUATION OF THE
TEACHERS' COMBINED SYSTEM OF THE STATE OF MARYLAND
Summary of Principal Plan Results

	Actuarial Valuation Performed		% Change
	June 30, 2023 (for FY2025)	June 30, 2022 (for FY2024)	
A. Demographic Information			
Active Number Count	112,773	110,980	1.6%
Retired Member and Beneficiary Count	84,177	82,884	1.6%
Vested Former Member Count	23,702	23,612	0.4%
Total Number Count	<u>220,652</u>	<u>217,476</u>	1.5%
Active Payroll	\$8,468,611,549	\$7,957,774,653	6.4%
Annual Benefits for Retired Members	\$2,727,122,841	\$2,566,454,913	6.3%
B. Actuarial Results			
Actuarial Accrued Liability	\$52,448,153,716	\$49,668,582,290	5.6%
Actuarial Value of Assets	<u>41,303,062,250</u>	<u>40,034,479,746</u>	3.2%
Unfunded Actuarial Accrued Liability (UAAL)	\$11,145,091,466	\$9,634,102,544	15.7%
Funded Ratio	78.75%	80.60%	
C. Contribution Rates			
Employer Normal Cost Rate	4.96%	5.04%	
UAAL Amortization Rate	11.29%	9.82%	
Total Actuarial Employer Contribution Rate	<u>16.25%</u>	<u>14.86%</u>	

REPORT OF THE ACTUARY ON THE VALUATION OF THE
EMPLOYEES' COMBINED SYSTEM OF THE STATE OF MARYLAND
(STATE AND MUNICIPAL)

Summary of Principal Plan Results

	Actuarial Valuation Performed		% Change
	June 30, 2023 (for FY2025)	June 30, 2022 (for FY2024)	
A. Demographic Information			
Active Number Count	81,181	78,696	3.2%
Retired Member and Beneficiary Count	84,783	83,845	1.1%
Vested Former Member Count	22,968	23,492	-2.2%
Total Number Count	188,932	186,033	1.6%
Active Payroll	\$5,465,772,792	\$4,844,757,859	12.8%
Annual Benefits for Retired Members	\$1,769,707,983	\$1,668,048,689	6.1%
B. Actuarial Results (State and Municipal)			
Actuarial Accrued Liability	\$32,015,510,582	\$30,195,039,804	6.0%
Actuarial Value of Assets	22,606,668,114	21,877,387,493	3.3%
Unfunded Actuarial Accrued Liability (UAAL)	\$9,408,842,468	\$8,317,652,311	13.1%
Funded Ratio	70.61%	72.45%	
C. Contribution Rates (State Portion Only)			
Employer Normal Cost Rate	4.36%	4.41%	
UAAL Amortization Rate	16.77%	16.27%	
Total Actuarial Employer Contribution Rate	21.13%	20.68%	

REPORT OF THE ACTUARY ON THE VALUATION OF THE
STATE POLICE RETIREMENT SYSTEM OF THE STATE OF MARYLAND

Summary of Principal Plan Results

	June 30, 2023 (for FY2025)	June 30, 2022 (for FY2024)	% Change
A. Demographic Information			
Active Number Count	1,335	1,356	-1.5%
Retired Member and Beneficiary Count	2,606	2,597	0.3%
Vested Former Member Count	<u>88</u>	<u>86</u>	2.3%
Total Number Count	4,029	4,039	-0.2%
Active Payroll	\$139,457,997	\$124,367,251	12.1%
Annual Benefits for Retired Members	\$157,847,047	\$145,716,052	8.3%
B. Actuarial Results			
Actuarial Accrued Liability	\$2,903,831,814	\$2,659,197,326	9.2%
Actuarial Value of Assets	<u>1,938,797,497</u>	<u>1,862,898,695</u>	4.1%
Unfunded Actuarial Accrued Liability (UAAL)	\$965,034,317	\$796,298,631	21.2%
Funded Ratio	66.77%	70.05%	
C. Contribution Rates			
Employer Normal Cost Rate	26.98%	27.18%	
UAAL Amortization Rate	<u>58.53%</u>	<u>51.50%</u>	
Total Actuarial Employer Contribution Rate	85.51%	78.68%	

REPORT OF THE ACTUARY ON THE VALUATION OF THE
PENSION PLAN OF JUDGES AND THEIR SURVIVING SPOUSES

Summary of Principal Plan Results

	June 30, 2023 (for FY2025)	June 30, 2022 (for FY2024)	% Change
A. Demographic Information			
Active Number Count	326	317	2.8%
Retired Member and Beneficiary Count	468	463	1.1%
Vested Former Member Count	8	10	-20.0%
Total Number Count	802	790	1.5%
Active Payroll	\$58,695,840	\$53,934,013	8.8%
Annual Benefits for Retired Members	\$45,729,800	\$42,928,915	6.5%
B. Actuarial Results			
Actuarial Accrued Liability	\$665,815,462	\$622,633,243	6.9%
Actuarial Value of Assets	595,968,442	570,319,231	4.5%
Unfunded Actuarial Accrued Liability (UAAL)	\$69,847,020	\$52,314,012	33.5%
Funded Ratio	89.51%	91.60%	
C. Contribution Rates			
Employer Normal Cost Rate	32.37%	32.42%	
UAAL Amortization Rate	10.63%	7.60%	
Total Actuarial Employer Contribution Rate	43.00%	40.02%	

REPORT OF THE ACTUARY ON THE VALUATION OF THE
LAW ENFORCEMENT OFFICERS' PENSION SYSTEM OF THE STATE OF MARYLAND
(STATE AND MUNICIPAL)

Summary of Principal Plan Results

	June 30, 2023 (for FY2025)	June 30, 2022 (for FY2024)	% Change
A. Demographic Information			
Active Number Count	2,877	2,736	5.2%
Retired Member and Beneficiary Count	2,512	2,393	5.0%
Vested Former Member Count	<u>313</u>	<u>295</u>	6.1%
Total Number Count	5,702	5,424	5.1%
Active Payroll	\$241,937,328	\$213,002,711	13.6%
Annual Benefits for Retired Members	\$99,483,793	\$92,085,278	8.0%
B. Actuarial Results (State and Municipal)			
Actuarial Accrued Liability	\$2,182,666,901	\$2,013,402,208	8.4%
Actuarial Value of Assets	<u>1,481,154,062</u>	<u>1,387,387,178</u>	6.8%
Unfunded Actuarial Accrued Liability (UAAL)	\$701,512,839	\$626,015,030	12.1%
Funded Ratio	67.86%	68.91%	
C. Contribution Rates (State Portion Only)			
Employer Normal Cost Rate	18.29%	18.39%	
UAAL Amortization Rate	<u>27.71%</u>	<u>27.50%</u>	
Total Actuarial Employer Contribution Rate	46.00%	45.89%	

REPORT OF THE ACTUARY ON THE VALUATION OF THE
CORRECTIONAL OFFICERS' RETIREMENT SYSTEM OF THE STATE OF MARYLAND
(MUNICIPAL)

Summary of Principal Plan Results

	June 30, 2023 (for FY2025)	June 30, 2022 (for FY2024)	% Change
A. Demographic Information			
Active Number Count	155	125	24.0%
Retired Member and Beneficiary Count	63	53	18.9%
Vested Former Member Count	8	8	0.0%
Total Number Count	226	186	21.5%
Active Payroll	\$10,113,451	\$7,978,745	26.8%
Annual Benefits for Retired Members	\$1,944,590	\$1,543,309	26.0%
B. Actuarial Results			
Actuarial Accrued Liability	\$54,551,907	\$46,026,538	18.5%
Actuarial Value of Assets	42,870,436	40,801,518	5.1%
Unfunded Actuarial Accrued Liability (UAAL)	\$11,681,471	\$5,225,020	123.6%
Funded Ratio	78.59%	88.65%	

SCHEDULE OF ACTIVE MEMBERSHIP VALUATION DATA BY PLAN

Teachers' Retirement				
Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2014	1,276	\$ 116,356,416	\$ 91,188	2.36 %
2015	986	91,396,562	92,694	1.65
2016	724	68,494,031	94,605	2.06
2017	537	51,836,368	96,530	2.03
2018	418	41,497,070	99,275	2.84
2019	334	33,972,615	101,714	2.46
2020	261	27,675,932	106,038	4.25
2021	199	21,792,460	109,510	3.27
2022	150	17,154,423	114,363	4.43
2023	112	13,928,467	124,361	8.74

Teachers' Pension				
Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2014	103,194	\$ 6,193,896,978	\$ 60,022	1.76 %
2015	104,540	6,379,309,714	61,023	1.67
2016	104,823	6,542,543,808	62,415	2.28
2017	105,765	6,729,001,984	63,622	1.93
2018	106,428	6,899,599,531	64,829	1.90
2019	107,448	7,119,090,819	66,256	2.20
2020	109,336	7,464,789,165	68,274	3.05
2021	109,759	7,667,053,899	69,854	2.31
2022	110,830	7,940,620,230	71,647	2.57
2023	111,792	8,454,683,082	75,629	5.56

Employees' Retirement (State and Municipal)				
Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2014	8,741	\$ 423,960,682	\$ 48,503	4.40 %
2015	8,566	429,223,262	50,108	3.31
2016	7,923	395,490,050	49,917	-0.38
2017	7,632	389,389,294	51,021	2.21
2018	7,725	397,640,605	51,475	0.89
2019	8,119	419,453,514	51,663	0.37
2020	8,032	434,681,795	54,119	4.75
2021	7,968	436,295,102	54,756	1.18
2022	7,777	450,844,451	57,972	5.87
2023	7,762	518,552,837	66,807	15.24

SCHEDULE OF ACTIVE MEMBERSHIP VALUATION DATA BY PLAN
(continued)

Employees' Pension
(State and Municipal)

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2014	76,084	\$ 3,791,019,971	\$ 49,827	4.39 %
2015	75,228	3,871,524,469	51,464	3.29
2016	74,702	3,849,843,225	51,536	0.14
2017	74,455	3,929,663,604	52,779	2.41
2018	73,483	3,903,606,885	53,123	0.65
2019	73,098	3,990,487,247	54,591	2.77
2020	73,624	4,203,514,950	57,094	4.59
2021	71,886	4,245,570,424	59,060	3.44
2022	70,919	4,393,913,408	61,957	4.91
2023	72,293	4,947,219,955	68,433	10.45

Judges' Retirement

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2014	301	\$ 42,313,395	\$ 140,576	1.21 %
2015	307	44,612,624	145,318	3.37
2016	298	44,711,221	150,038	3.25
2017	312	46,875,642	150,242	0.14
2018	316	47,498,152	150,311	0.05
2019	315	48,934,800	155,349	3.35
2020	324	51,882,186	160,130	3.08
2021	315	52,073,208	165,312	3.24
2022	317	53,934,013	170,139	2.92
2023	326	58,695,840	180,049	5.82

State Police Retirement

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2014	1,351	\$ 85,660,006	\$ 63,405	4.82 %
2015	1,394	91,049,875	65,316	3.01
2016	1,402	93,490,648	66,684	2.09
2017	1,371	100,384,047	73,220	9.80
2018	1,347	100,324,842	74,480	1.72
2019	1,364	106,977,874	78,430	5.30
2020	1,391	116,274,059	83,590	6.58
2021	1,353	119,048,457	87,989	5.26
2022	1,356	124,367,251	91,716	4.24
2023	1,333	139,457,997	104,620	14.07

SCHEDULE OF ACTIVE MEMBERSHIP VALUATION DATA BY PLAN
(continued)

Law Enforcement Officers' Pension
(STATE AND MUNICIPAL)

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2014	2,484	\$ 145,672,538	\$ 58,644	2.58 %
2015	2,488	151,955,067	61,075	4.15
2016	2,529	156,396,298	61,841	1.25
2017	2,574	166,560,857	64,709	4.64
2018	2,617	170,555,081	65,172	0.72
2019	2,683	180,963,077	67,448	3.49
2020	2,748	194,666,790	70,839	5.03
2021	2,697	199,460,447	73,956	4.40
2022	2,736	213,002,711	77,852	5.27
2023	2,874	241,937,328	84,181	8.13

Correctional Officers' Retirement System
(MUNICIPAL)

Valuation Date As of June 30,	Number	Annual Payroll	Annual Average Pay	% Increase Avg. Pay
2014	91	\$ 4,752,059	\$ 52,220	1.16 %
2015	91	4,890,091	53,737	2.90
2016	93	4,954,236	53,271	-0.87
2017	96	5,261,521	54,808	2.88
2018	97	5,497,631	56,677	3.41
2019	97	5,583,279	57,560	1.56
2020	135	7,937,330	58,795	2.15
2021	134	7,952,640	59,348	0.94
2022	125	7,978,745	63,830	7.55
2023	155	10,113,451	65,248	2.22

The logo for the SRPS Statistical Section is centered on the page. It features the acronym "SRPS" in a large, bold, serif font. Below the acronym, the words "Statistical Section" are written in a white, elegant, cursive script. The entire logo is set against a light gray rectangular background that has a subtle, larger-scale version of the "SRPS" acronym and "Statistical Section" text overlaid on it.

SRPS
Statistical Section

STATISTICAL SECTION OVERVIEW

The Maryland State Retirement and Pension System (MSRPS) has implemented GASB Statement 44, Economic Condition Reporting: The Statistical Section. This statement establishes standardized reporting requirements relative to the supplementary information provided in this section in an effort to improve the understandability and usefulness of the information presented. GASB Statement 44 further states that the purpose of the Statistical Section is to provide historical perspective, context, and detail to assist readers in using the information in the financial statements and the notes to the financial statements to better understand and assess the System's overall economic condition. The schedules within the Statistical Section are classified into the following four categories: Financial Trends, Revenue Capacity, Demographic and Economic Information, and Operating Information.

The schedules beginning on page 135 show financial trend information to assist users in understanding and assessing how the MSRPS's financial position has changed over the past 10 years. The financial trend schedules presented are:

- Changes in Plan Net Position
- Benefits Expense by Type
- Refund Expense by Type

The schedules beginning on page 136 show demographic and economic information and operating information. The demographic and economic information is intended to assist users in understanding the environment in which MSRPS operates. The operating information is intended to provide contextual information about MSRPS's operations to assist readers in using financial statement information. The demographic and economic information and the operating information presented include:

- Schedule of Average Benefit Payments
- History of Funding Progress
- Contribution Rates by Plan
- Schedule of Retired Members by Type
- Schedule of Active Membership by Plan
- Schedule of Retirees and Beneficiaries by Plan
- Revenues by Source and Expenses by Type
- Revenues vs. Expenses
- Principal Participating Employers

TEN-YEAR HISTORY OF CHANGES IN PLAN NET POSITION

for the Years Ended June 30,
(Expressed in thousands)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Additions										
Employer contributions	\$ 1,733,653	\$ 1,858,612	\$ 1,870,655	\$ 2,036,596	\$ 1,995,017	\$ 2,054,091	\$ 2,144,270	\$ 2,203,524	\$ 2,282,303	\$ 2,438,917
Members contributions	727,726	755,444	764,414	782,686	791,583	807,291	850,298	865,738	894,267	963,702
Net Investment income	5,706,267	1,197,671	497,531	4,473,443	3,899,393	3,288,209	1,866,639	14,315,762	-1,942,133	1,980,277
Total Additions	<u>8,167,646</u>	<u>3,811,727</u>	<u>3,132,600</u>	<u>7,292,725</u>	<u>6,685,993</u>	<u>6,149,591</u>	<u>4,861,207</u>	<u>17,385,024</u>	<u>1,234,437</u>	<u>5,382,896</u>
Deductions										
Benefit payments	3,121,823	3,284,550	3,469,493	3,577,123	3,744,132	3,926,220	4,108,492	4,233,047	4,394,350	4,653,163
Refunds	42,922	48,245	58,362	63,441	68,600	67,400	68,752	64,774	91,535	101,737
Administrative expenses	26,130	29,080	28,659	30,904	33,211	39,784	41,346	48,740	42,061	46,014
Total Deductions	<u>3,190,875</u>	<u>3,361,875</u>	<u>3,556,514</u>	<u>3,671,468</u>	<u>3,845,943</u>	<u>4,033,404</u>	<u>4,218,590</u>	<u>4,366,561</u>	<u>4,527,946</u>	<u>4,800,914</u>
Changes in Plan Net Positions	<u>\$ 4,976,771</u>	<u>\$ 449,852</u>	<u>\$ (423,914)</u>	<u>\$ 3,621,257</u>	<u>\$ 2,840,050</u>	<u>\$ 2,116,187</u>	<u>\$ 642,617</u>	<u>\$13,018,463</u>	<u>\$ (3,293,509)</u>	<u>\$ 581,982</u>

SCHEDULE OF BENEFIT EXPENSE BY TYPE

(Expressed In Thousands)

Fiscal Year	Death In Service							Total
	Age & Service Benefits		Pre-Retirement Benefits	Disability Benefits			Survivors	
	Retirees	Survivors		Retirees				
			Accidental	Ordinary				
2014	\$ 2,633,852	\$ 124,807	\$ 20,514	\$ 120,829	\$ 202,147	\$ 19,672	\$ 3,121,823	
2015	2,777,136	130,215	21,005	124,090	211,373	20,731	3,284,550	
2016	2,937,077	138,467	21,592	128,518	221,849	21,990	3,469,493	
2017	3,028,182	145,322	21,522	130,309	229,143	22,644	3,577,122	
2018	3,175,588	152,066	21,655	133,671	237,539	23,612	3,744,132	
2019	3,334,495	161,203	21,720	138,313	245,429	25,059	3,926,220	
2020	3,496,003	171,010	22,494	141,504	250,956	26,526	4,108,492	
2021	3,622,725	180,283	23,242	144,625	254,621	27,551	4,253,047	
2022	3,748,807	191,749	24,944	146,436	253,859	28,555	4,394,350	
2023	3,974,624	209,238	26,003	153,156	259,732	30,410	4,653,163	

SCHEDULE OF REFUND EXPENSE BY TYPE

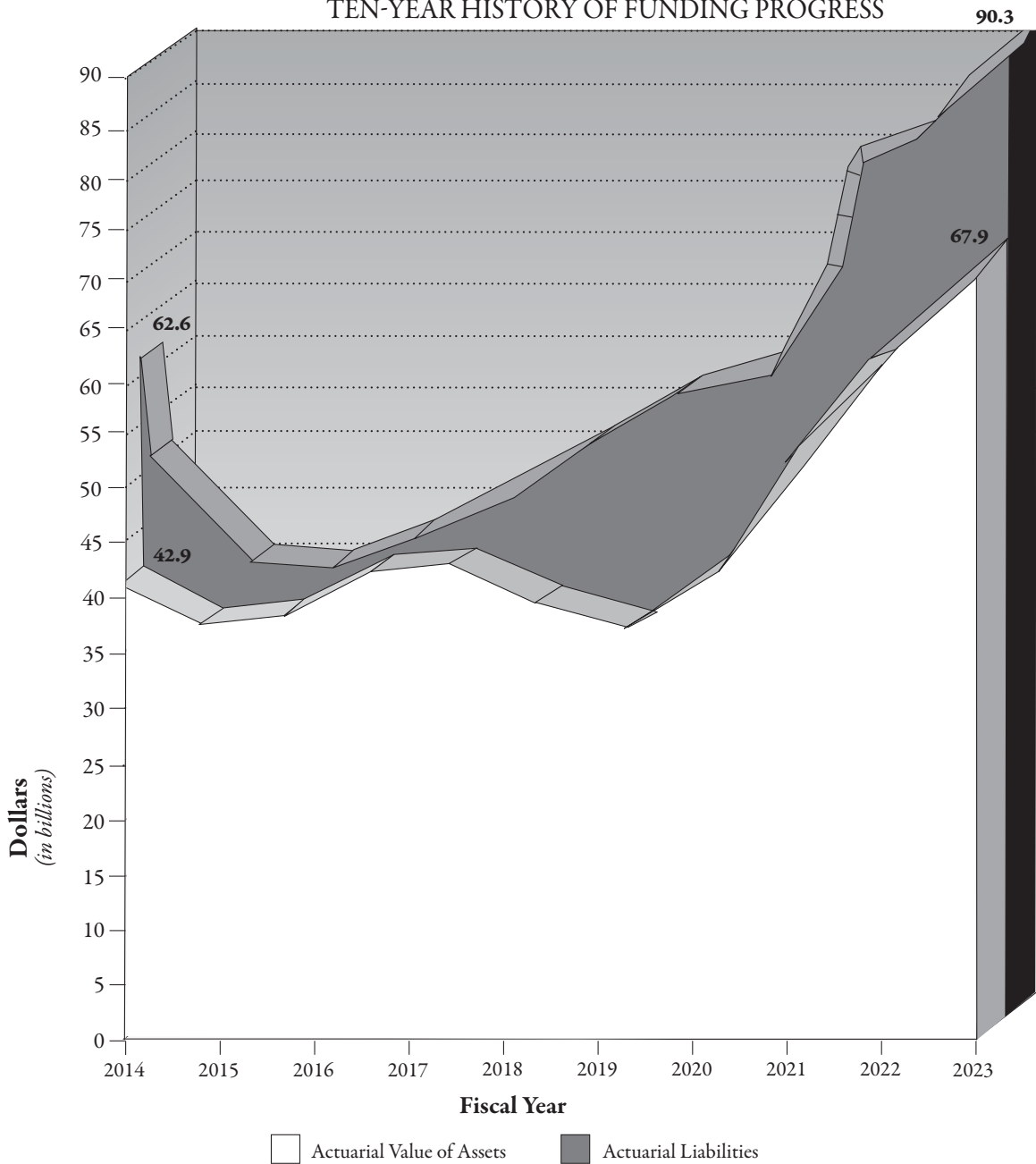
(Expressed in thousands)

Fiscal Year	Separation	Death	Misc.	Total
2014	\$ 36,835	\$ 5,955	\$ 132	\$ 42,922
2015	40,966	7,126	153	48,245
2016	51,372	6,869	120	58,362
2017	54,671	8,538	238	63,441
2018	59,108	9,315	177	68,600
2019	58,848	8,394	158	67,400
2020	59,871	8,804	77	68,752
2021	53,004	11,665	105	64,774
2022	74,654	16,753	128	91,535
2023	88,143	13,493	101	101,737

MARYLAND STATE RETIREMENT AND PENSION SYSTEM
TEN YEAR HISTORY OF AVERAGE BENEFIT PAYMENTS

	Years Credited Service						
	0 - 5	5 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30+
Period 7/1/2013 to 6/30/2014							
Average monthly benefit	\$ 405	\$ 472	\$ 832	\$ 1,324	\$ 1,794	\$ 2,234	\$ 3,383
Monthly final average salary	\$ 2,475	\$ 3,508	\$ 4,064	\$ 4,699	\$ 5,222	\$ 5,673	\$ 6,380
Number of retired members	218	918	873	964	910	938	2,304
Period 7/1/2014 to 6/30/2015							
Average monthly benefit	\$ 454	\$ 459	\$ 888	\$ 1,304	\$ 1,804	\$ 2,275	\$ 3,246
Monthly final average salary	\$ 2,338	\$ 3,515	\$ 4,139	\$ 4,679	\$ 5,124	\$ 5,571	\$ 6,134
Number of retired members	201	911	972	1,089	968	1,042	2,621
Period 7/1/2015 to 6/30/2016							
Average monthly benefit	\$ 501	\$ 472	\$ 869	\$ 1,367	\$ 1,901	\$ 2,366	\$ 3,377
Monthly final average salary	\$ 2,371	\$ 3,407	\$ 4,128	\$ 4,773	\$ 5,427	\$ 5,786	\$ 6,425
Number of retired members	219	918	934	1,118	953	1,016	2,423
Period 7/1/2016 to 6/30/2017							
Average monthly benefit	\$ 576	\$ 509	\$ 864	\$ 1,400	\$ 1,943	\$ 2,454	\$ 3,479
Monthly final average salary	\$ 2,199	\$ 3,626	\$ 4,110	\$ 4,865	\$ 5,389	\$ 5,855	\$ 6,563
Number of retired members	138	748	873	1,028	964	863	2,060
Period 7/1/2017 to 6/30/2018							
Average monthly benefit	\$ 279	\$ 520	\$ 938	\$ 1,476	\$ 1,982	\$ 2,626	\$ 3,526
Monthly final average salary	\$ 3,012	\$ 3,482	\$ 4,290	\$ 4,934	\$ 5,457	\$ 6,046	\$ 6,584
Number of retired members	87	704	925	1,200	1,084	964	2,428
Period 7/1/2018 to 6/30/2019							
Average monthly benefit	\$ 311	\$ 508	\$ 950	\$ 1,510	\$ 2,028	\$ 2,678	\$ 3,597
Monthly final average salary	\$ 3,082	\$ 3,360	\$ 4,243	\$ 4,916	\$ 5,460	\$ 6,034	\$ 6,580
Number of retired members	109	816	956	1,213	1,086	967	2,439
Period 7/1/2019 to 6/30/2020							
Average monthly benefit	\$ 487	\$ 512	\$ 940	\$ 1,549	\$ 2,049	\$ 2,819	\$ 3,639
Monthly final average salary	\$ 3,400	\$ 3,639	\$ 4,441	\$ 5,170	\$ 5,651	\$ 6,431	\$ 6,800
Number of retired members	42	531	830	1,023	962	840	2,151
Period 7/1/2020 to 6/30/2021							
Average monthly benefit	\$ 604	\$ 489	\$ 947	\$ 1,521	\$ 2,099	\$ 3,005	\$ 3,772
Monthly final average salary	\$ 3,856	\$ 3,660	\$ 4,428	\$ 5,181	\$ 5,699	\$ 6,626	\$ 6,987
Number of retired members	45	410	845	976	995	823	1,901
Period 7/1/2021 to 6/30/2022							
Average monthly benefit	\$ 632	\$ 567	\$ 1,031	\$ 1,591	\$ 2,162	\$ 3,039	\$ 3,954
Monthly final average salary	\$ 3,992	\$ 3,667	\$ 4,625	\$ 5,345	\$ 5,795	\$ 6,711	\$ 7,239
Number of retired members	61	480	890	1,181	1,226	900	2,066
Period 7/1/2022 to 6/30/2023							
Average monthly benefit	\$ 494	\$ 522	\$ 1,026	\$ 1,623	\$ 2,238	\$ 3,177	\$ 4,237
Monthly final average salary	\$3,373	\$ 3,916	\$ 4,851	\$ 5,473	\$ 6,000	\$ 6,962	\$ 7,697
Number of retired members	31	489	784	1,056	1,152	851	1,922

TEN-YEAR HISTORY OF FUNDING PROGRESS



TEN-YEAR HISTORY OF EMPLOYER CONTRIBUTION RATES BY PLAN

Fiscal Year	State						Participating Governmental Units (PGU)		
	Combined State Rate	Teachers' Combined Rate	Employees' Combined Rate	Judges' Retirement	State Police Retirement	Law Enforcement Officers' Pension	Law Enforcement Officers' Pension	Employees' Combined Rate	Correctional Officers' Retirement
2014	15.43%	14.71%	14.05%	50.92%	66.71%	52.47%	31.76%	6.47%	9.41%
2015	16.41	15.47	15.53	42.74	83.06	41.37	30.45	6.20	11.43
2016	16.83	15.71	16.38	40.70	78.91	39.77	31.94	5.00	10.43
2017	17.58	15.79	18.28	46.56	81.40	39.60	31.18	4.64	9.81
2018	17.60	15.71	18.56	46.45	80.29	39.69	30.75	5.03	9.53
2019	17.42	15.43	18.58	44.53	78.41	39.78	31.43	5.47	9.85
2020	17.82	15.59	19.56	44.44	79.58	41.37	32.22	5.85	10.26
2021	17.85	14.96	20.71	40.27	78.09	42.96	34.93	6.71	9.67
2022	17.50	14.67	20.50	41.92	75.30	42.28	34.21	7.04	11.06
2023	17.55	14.65	20.68	40.02	76.45	44.73	36.20	7.40	12.19

Does not include reduction of \$120 Million in contributions for State Systems due to 2011 General Assembly reforms.

SCHEDULE OF RETIRED MEMBERS BY TYPE
as of June 30, 2023

Amount of Monthly Benefit	Number of Retirees	Type of Retirement						
		NR (1) & ER(2)	SP(3)	SPD(4)	ADR(5)	ODR(6)	SPDR(7)	MAX
1- 300	17,676	16,357	923	12	2	196	186	10,129
301- 600	15,564	13,304	1,097	30	3	784	346	7,849
601- 900	13,559	11,057	967	81	15	1,109	330	6,261
901- 1,200	12,997	10,205	932	79	40	1,456	285	5,823
1,201- 1,500	11,890	9,456	847	80	105	1,177	225	5,052
1,501- 1,800	11,561	9,062	874	84	224	1,125	192	4,569
1,801- 2,100	10,892	8,725	670	64	252	1,055	126	4,195
2,101- 2,400	9,921	8,043	607	66	293	835	77	3,709
2,401- 2,700	9,511	7,817	485	49	356	753	51	3,658
2,701- 3,000	8,401	6,950	400	61	355	593	42	3,214
Over 3,000	52,637	46,136	1,856	297	2,070	2,135	143	22,496
	<u>174,609</u>	<u>147,112</u>	<u>9,658</u>	<u>903</u>	<u>3,715</u>	<u>11,218</u>	<u>2,003</u>	<u>76,955</u>

Type of Retirement:

- 1 – Normal retirement for age and service
- 2 – Early retirement
- 3 – Survivor payment – normal or early retirement
- 4 – Survivor payment – death in service
- 5 – Accidental disability retirement
- 6 – Ordinary disability retirement
- 7 – Survivor payment – disability retirement

OF RETIREMENT AND OPTION SELECTED

#Option Selected						
Opt. 1	Opt. 2	Opt. 3	Opt. 4	Opt. 5	Opt. 6	Opt. 7
3,292	1,759	671	669	701	449	6
2,441	1,821	1,111	857	759	722	4
1,868	1,660	1,192	1,042	677	856	3
1,479	1,591	1,322	1,141	644	994	3
1,352	1,533	1,238	1,093	712	908	2
1,222	1,774	1,241	1,062	758	933	2
1,294	1,553	1,145	1,114	694	895	2
1,121	1,477	1,066	1,031	602	911	4
1,067	1,402	1,005	951	577	850	1
897	1,204	884	947	508	745	2
<u>4,442</u>	<u>6,835</u>	<u>5,413</u>	<u>6,972</u>	<u>2,257</u>	<u>4,194</u>	<u>28</u>
<u>20,475</u>	<u>22,609</u>	<u>16,288</u>	<u>16,879</u>	<u>8,889</u>	<u>12,457</u>	<u>57</u>

Option Selected:

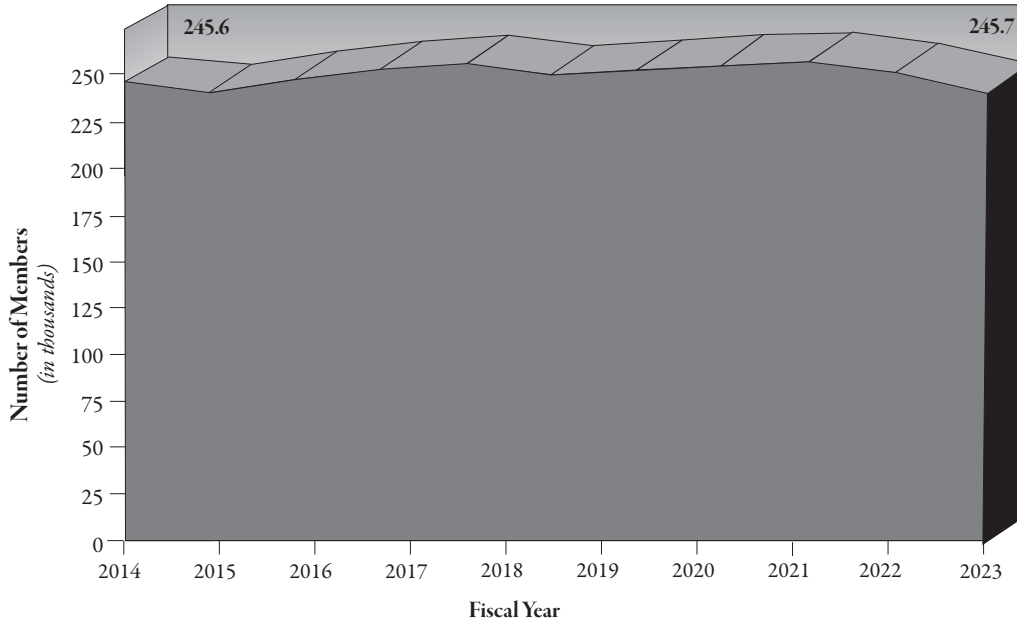
- Basic – The standard benefit if no option is selected. Generally, at retiree’s death, all payments cease. However, the basic allowance for the State Police, Law Enforcement Offices (LEOPS), Judges and Legislators provides a continuing benefit for spouses or children under 18.
- Opt. 1 – Guarantees return of the present value of the retirement benefit less the total payments already paid to the member.
- Opt. 2 – Guarantees the same payment to the designated beneficiaries for their lifetime.
- Opt. 3 – Guarantees one half the member’s payment to the designated beneficiaries for their lifetime.
- Opt. 4 – Guarantees return of the member’s accumulated contributions and interest less the member’s accumulated reserves already paid.
- Opt. 5 – Guarantees the same payment to the designated beneficiaries for their lifetime, unless the beneficiaries predecease the respective members. Allowance then increases to the basic.
- Opt. 6 – Guarantees one half the member’s payment to the designated beneficiaries for their lifetime, unless the beneficiaries predecease the respective members. Allowance then increases to the basic.
- Opt. 7 – Special option calculation performed by actuary.

TEN-YEAR HISTORY OF ACTIVE MEMBERSHIP BY PLAN

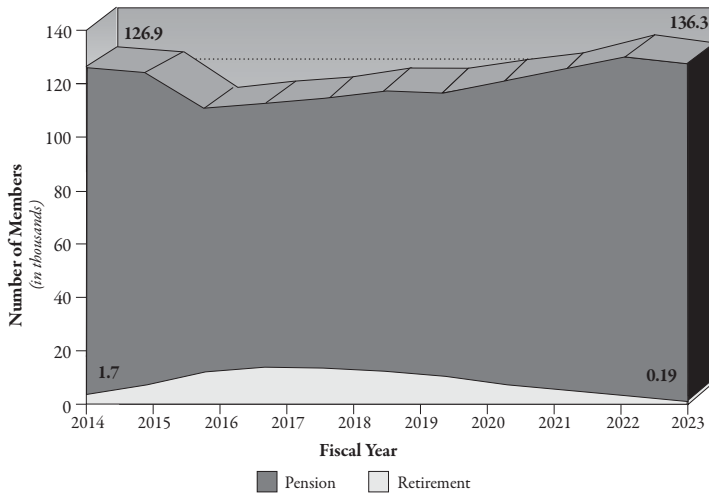
Fiscal Year	Total	Teachers' Retirement	Teachers' Pension	Employees' Retirement*	Employees' Pension	Judges' Retirement	State Police Retirement	Law Enforcement Officers' Pension	Local Correctional Officers' Retirement
2014	245,655	1,718	126,972	9,572	102,791	309	1,433	2,767	93
2015	246,369	1,372	128,695	9,370	102,270	315	1,475	2,781	91
2016	246,062	1,051	129,794	8,749	101,760	305	1,486	2,823	94
2017	246,370	805	130,990	8,409	101,415	321	1,461	2,869	100
2018	244,732	617	131,417	8,481	99,425	325	1,446	2,922	99
2019	243,704	487	131,769	8,887	97,691	323	1,453	2,994	100
2020	244,753	380	133,243	8,782	97,343	332	1,478	3,054	141
2021	242,362	300	133,391	8,750	95,029	322	1,439	2,990	141
2022	241,713	235	134,357	8,527	93,661	327	1,442	3,031	133
2023	245,734	188	136,287	8,872	95,272	334	1,423	3,190	163

Note: Includes vested former members. *Includes members of the Maryland General Assembly and State correctional officers.

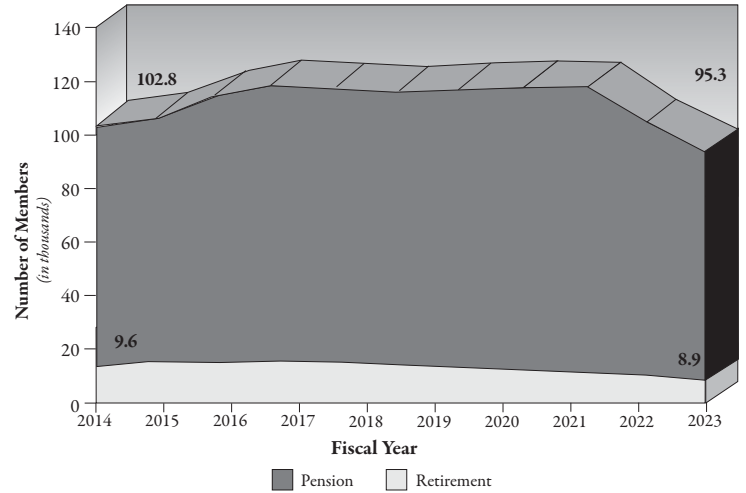
TOTAL SYSTEM ACTIVE MEMBERSHIP



ACTIVE MEMBERSHIP IN TEACHERS' PLANS



ACTIVE MEMBERSHIP IN EMPLOYEES' PLANS

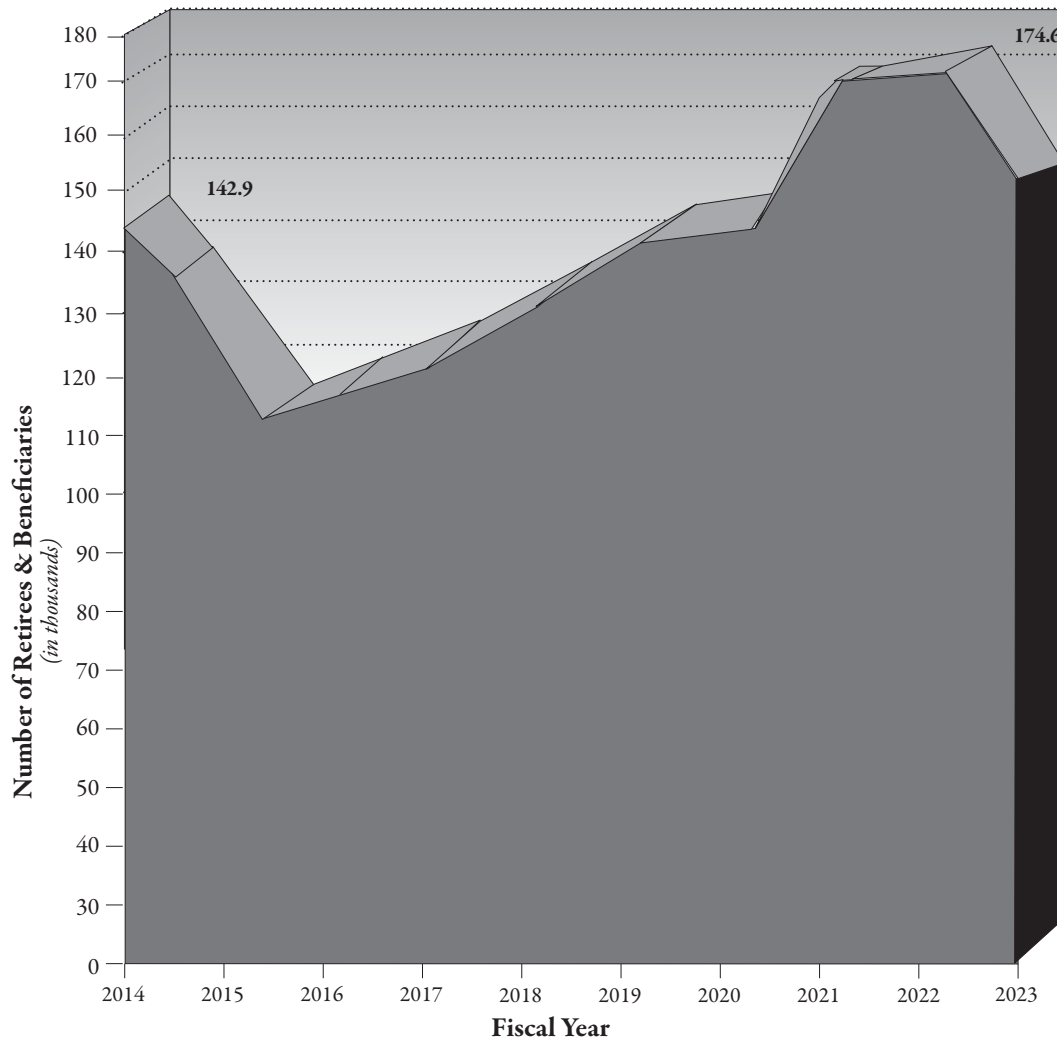


TEN-YEAR HISTORY OF RETIREES AND BENEFICIARIES BY PLAN

Fiscal Year	Total	Teachers' Retirement	Teachers' Pension	Employees' Retirement*	Employees' Pension	Judges' Retirement	State Police Retirement	Law Enforcement Officers' Pension	Correctional Officers' Retirement System
2014	142,887	28,762	40,167	22,013	47,446	395	2,468	1,613	23
2015	147,850	28,131	43,045	21,571	50,460	397	2,508	1,711	27
2016	152,566	27,552	46,030	21,172	53,039	407	2,536	1,801	29
2017	156,366	26,762	48,747	20,734	55,206	417	2,572	1,896	32
2018	160,374	25,764	51,437	20,340	57,947	421	2,477	1,954	34
2019	164,892	24,822	54,329	19,955	60,757	431	2,505	2,053	40
2020	167,644	23,858	56,581	19,464	62,583	441	2,517	2,153	47
2021	169,368	22,790	58,725	18,832	63,705	442	2,559	2,264	51
2022	172,235	21,904	60,980	18,382	65,463	463	2,597	2,393	53
2023	174,609	20,960	63,217	17,994	66,789	468	2,606	2,512	63

* Includes members of the Maryland General Assembly and correctional officers.

TOTAL SYSTEM RETIREES AND BENEFICIARIES



TEN-YEAR HISTORY OF REVENUES BY SOURCE AND EXPENSES BY TYPE
(Expressed in Thousands)

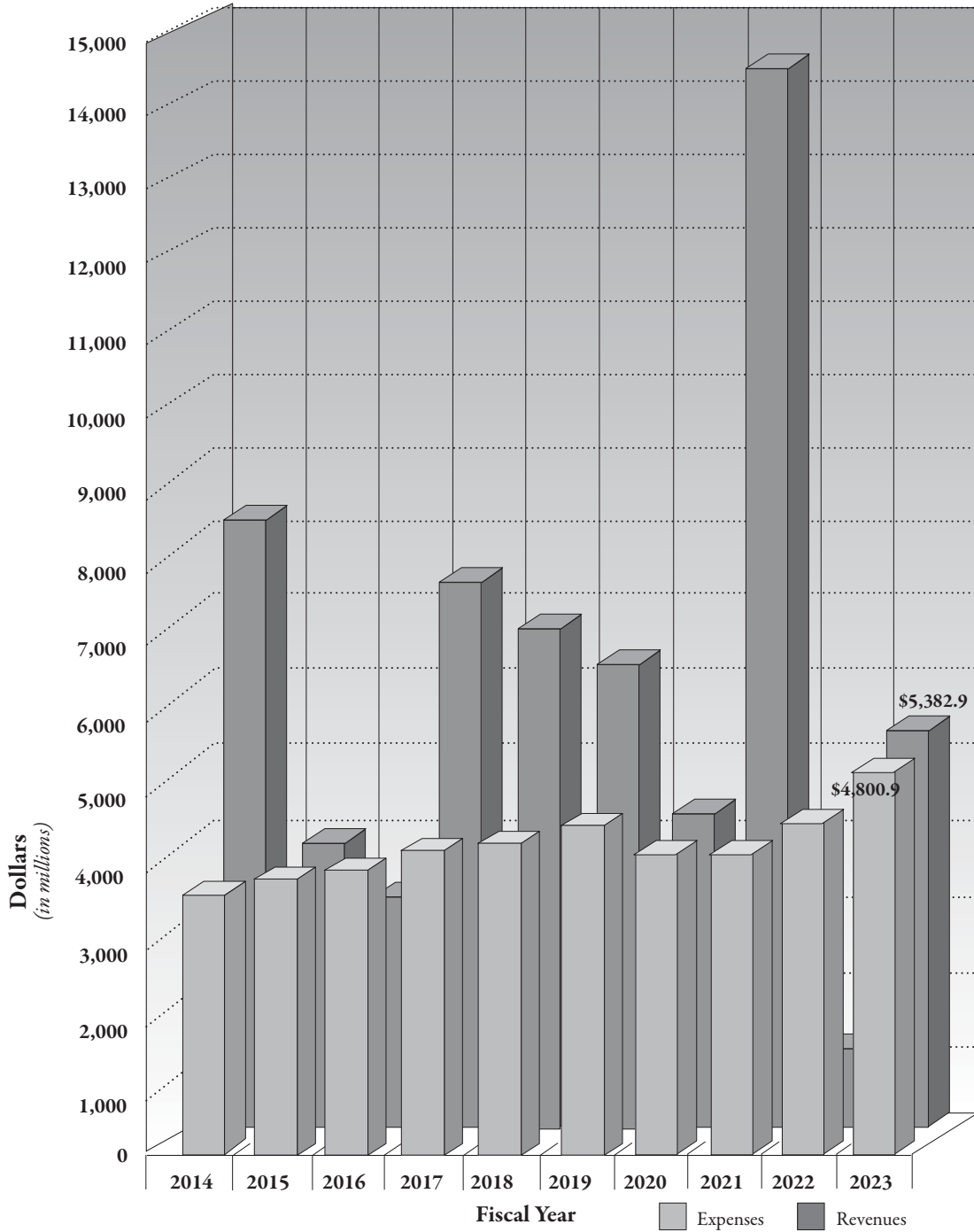
REVENUES

Fiscal Year	Members' Contributions	Employers' and Other Contributions	Annual Covered Payroll	Employers' and Other Contributions as a Percent of Covered Payroll	Net Investment Income/Loss	Total Revenues
2014	\$ 727,726	\$ 1,733,653	\$ 10,803,631	16.05 %	\$ 5,706,267	\$ 8,167,646
2015	755,444	1,858,612	11,063,961	16.80	1,197,671	3,811,727
2016	764,414	1,870,655	11,155,924	16.77	497,531	3,132,600
2017	782,686	2,036,596	11,418,973	17.83	4,473,443	7,292,725
2018	791,583	1,995,017	11,566,220	17.24	3,899,393	6,685,993
2019	807,291	2,054,091	11,905,463	17.25	3,288,209	6,149,591
2020	850,298	2,144,270	12,501,422	17.15	1,866,639	4,861,207
2021	865,738	2,203,524	12,749,247	17.28	14,315,762	17,385,024
2022	894,267	2,282,303	13,201,816	17.29	(1,942,133)	1,234,437
2023	963,702	2,438,917	14,384,589	16.96	1,980,277	5,382,896

EXPENSES

Fiscal Year	Benefits	Administrative Expenses	Refunds	Total
2014	\$ 3,121,823	\$ 26,130	\$ 42,922	\$ 3,190,875
2015	3,284,550	29,080	48,245	3,361,875
2016	3,469,493	28,659	58,362	3,556,514
2017	3,577,123	30,904	63,441	3,671,468
2018	3,744,132	33,211	68,600	3,845,943
2019	3,926,220	39,784	67,400	4,033,404
2020	4,108,492	41,346	68,752	4,218,590
2021	4,253,047	48,740	64,774	4,366,561
2022	4,394,350	42,061	91,535	4,527,946
2023	4,653,163	46,014	101,737	4,800,914

TEN-YEAR HISTORY OF REVENUES VS. EXPENSES



PRINCIPAL PARTICIPATING EMPLOYERS
CURRENT YEAR AND TEN YEARS AGO

	2023			2013		
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
Participating Government						
State of Maryland	367,223	1	87%	334,363	1	87%
All other (Participating Municipalities)	53,120	2	13%	47,924	2	13%
Total System	420,343			382,287		

Governmental Units Participating in the Systems

as of June 30, 2023

Allegany Community College	Elkton, Town of	Prince Georges County Board of Education
Allegany County Board of Education	Emmitsburg, Town of	Prince Georges County Crossing Guards
Allegany County Government	Federalsburg, Town of	Prince Georges County Government
Allegany County Library	Frederick County Board of Education	Prince Georges County Memorial Library
Allegany County Transit Authority	Frostburg, City of	Princess Anne, Town of
Annapolis, City of	Fruitland, City of	Queen Anne's County Board of Education
Anne Arundel Community College	Garrett County Board of Education	Queen Anne's County Government
Anne Arundel County Board of Education	Garrett County/Western Maryland Health	Queenstown, Town of
Baltimore Metropolitan Council	Planning Council	Ridgely, Town of
Berlin, Town of	Garrett County Community Action Committee	Rockhall, Town of
Berwyn Heights, Town of	Garrett County Roads Board	Salisbury, City of
Bladensburg, Town of	Greenbelt, City of	Shore Up!
Bowie, City of	Greensboro, Town of	Snow Hill, Town of
Brentwood, Town of	Hagerstown, City of	Somerset County Board of Education
Brunswick, City of	Hagerstown Community College	Somerset County Government
Calvert County Board of Education	Hampstead, Town of	Somerset County Economic Development
Cambridge, City of	Harford County Board of Education	Commission
Cambridge Housing Authority	Harford County Community College	Somerset County Sanitary District, Inc.
Caroline County Board of Education	Harford County Government	Southern MD Tri-County Community Action
Caroline County Sheriff Deputies	Harford County Library	Committee
Carroll County Board of Education	Harford County Liquor Board	St. Mary's County Board of Education
Carroll County Public Library	Howard Community College	St. Mary's County Government
Carroll Soil Conservation District	Howard County Board of Education	St. Mary's County Housing Authority
Catoctin & Frederick County Soil Conservation	Howard County Community Action Committee	St. Mary's County Metropolitan Commission
District	Hurlock, Town of	St. Michaels, Town of
Cecil County Board of Education	Hyattsville, City of	Sykesville, Town of
Cecil County Government	Kent County Board of Education	Takoma Park, City of
Cecil County Library	Kent County Government	Talbot County Board of Education
Centreville, Town of	Kent Soil And Water Conservation District	Talbot County Government
Chesapeake Bay Commission	Landover Hills, Town of	Taneytown, Town of
Chestertown, Town of	LaPlata, Town of	Thurmont, City of
Cheverly, Town of	Manchester, Town of	Tri-County Council For Lower Eastern Shore
College of Southern Maryland	Maryland Health & Higher Educational Facilities	Tri-County Council For Western Maryland
College Park, City of	Authority	University Park, Town of
Crisfield, City of	Middletown, Town of	Upper Marlboro, Town of
Crisfield Housing Authority	Montgomery College	Walkersville, Town of
Cumberland, City of	Morningside, Town of	Washington County Board of Education
Cumberland, City of -Police Department	Mount Airy, Town of	Washington County Liquor Board
Denton, Town of	Mount Rainier, City of	Washington County Library
District Heights, City of	New Carrollton, City of	Westminster, City of
Dorchester County Board of Education	North Beach, Town of	Worcester County Board of Education
Dorchester County Government	Northeast Maryland Waste Disposal Authority	Worcester County Government
Dorchester County Roads Board	Oakland, Town of	Worcester County Liquor Control Board
Dorchester County Sanitary Commission	Oxford, Town of	Wor-Wic Community College
Eastern Shore Regional Library	Pocomoke, City of	
Edmonston, Town of	Preston, Town of	
	Prince Georges Community College	

***Withdrawn Governmental Units**

Anne Arundel County Economic Opportunity
Commission
Housing Authority of Cumberland

**List reflects withdrawn governmental units with a
withdrawal liability balance.*

A large, semi-transparent graphic in the center of the page. It features the letters 'SRPS' in a large, serif font at the top. Below the letters is a stylized, symmetrical design consisting of a horizontal bar with several circular shapes hanging from it, resembling a decorative element or a stylized 'S'.

SRPS

Plan Summary

This guide provides a general summary of certain features of the Maryland State Retirement and Pension System (“MS-RPS”). The MSRPS is governed by law, including Division II of the State Personnel and Pensions Article of the Annotated Code of Maryland, and Title 22 of the Code of Maryland Regulations. If there is a conflict between the law and this guide, the law prevails.

CITATIONS

All citations “SPP” are to the State Personnel and Pensions Article of the Annotated Code of Maryland.

TEACHERS’ RETIREMENT SYSTEM

A COMPOSITE PICTURE

	2023	2022
Total Membership		
Active Vested	112	150
Active Non-Vested	0	0
Vested Former Members	76	85
Retired Members	20,960	21,904
Active Members		
Number	112	150
Average Age	73.1	71.7
Average Years of Service	47.1	45.9
Average Annual Salary	\$124,361	\$118,704
Retirees & Beneficiaries		
Number	20,960	21,904
Average Age	80.4	79.8
Average Monthly Benefit	\$ 4,044	\$ 3,741

1. Membership

System closed to new members hired on or after January 1, 1980. Members on December 31, 1979 continue to be members unless they elected to transfer into the Teachers’ Pension System (established January 1, 1980) prior to January 1, 2005.

Membership generally includes any teacher, helping teacher, principal, supervisor, superintendent, attendance officer or clerk employed in public day school within the State of Maryland, or supported and controlled by the State; any librarian or clerical employee of a library established or operated under the Education Article; any professional or clerical employee of a community college established or operated under the Education Article; or staff employee of the University System of Maryland, Morgan State University or St. Mary’s College who is a member as of January 1, 1998.

2. Member Contributions

Retirement System members participate under one of three elections (effective July 1, 1984):

- Plan A: Generally 7% of earnable compensation to maintain all benefits, including unlimited compounded cost-of-living adjustments.
- Plan B: Generally 5% of earnable compensation to maintain all benefits, except the compounded cost-of-living adjustments which are capped at 5%.
- Plan C: 5% of earnable compensation as determined under the employee contribution for the Teachers’ Pension System (Plan C provides a two-part benefit based on benefits of the Teachers’ Retirement System and the Teachers’ Pension System).

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 60.

4. Normal Service Retirement Allowance

Eligibility: 30 years of eligibility service or attainment of age 60.

Allowance: 1/55th of average final compensation for the three highest years as a member for each year of creditable service. Creditable service is based on a full normal working time for teachers – 10 months equals one year.

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Teachers’ Retirement System; for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Teachers’ Pension System.

5. Early Retirement Allowance

Eligibility: 25 years of eligibility service and less than 60 years old.

Allowance: Service Retirement allowance reduced by 0.5% for each month that date of retirement precedes the earlier of age 60 or the date the member would have completed 30 years of eligibility service (maximum reduction of 30%).

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Teachers' Retirement System (maximum reduction of 30%); for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Teachers' Pension System for each month retirement occurs prior to age 62 (maximum reduction of 42%).

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is permanent.

Allowance: The benefit is $1/55^{\text{th}}$ of average final compensation for the three highest years as a member for each year of creditable service. The minimum benefit is 25% of average final compensation; the maximum benefit can be no greater than $1/55^{\text{th}}$ of average final compensation for each year of creditable service the member would have accrued if employment continued to age 60.

Plan C: The benefit is the greater of the Teachers' Retirement System allowance noted above, or the ordinary disability benefit of the Teachers' Pension System.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty at a definite time and place without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest years as a member, plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation, including any annuitized accumulated contributions.

7. Death Benefits

Ordinary Death Benefit For Active Member With Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit

Benefit: Return of accumulated contributions

Ordinary Death Benefit For Active Member With One Or More Years of Service

Eligibility: One or more years of eligibility service and not eligible for a special death benefit

Benefit:

Members who at the time of death are younger than age 55 or have less than 15 years of service.

One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

Members who at the time of death are eligible to retire and are age 55 or older with at least 15 years of service.

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's

designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

Special Death Benefit For Active Member

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest years as a member payable to a surviving spouse, decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

Death Benefit For Vested Former Member

If member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

Allowance: Vested allowance payable at normal retirement age, provided member does not withdraw accumulated contributions.

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

9. Cost of Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1 for all allowances which have been in payment for one year.

- Selection A (Additional Member Contributions): Uncapped and compounded.
- Selection B (Limited COLA): Capped at 5% and compounded.
- Selection C (Combination Formula): For creditable service on or after the effective date of Selection C, generally, with limited exceptions, COLA is capped at 3% and compounded. For creditable service before the effective date of Selection C, COLA is calculated based on the applicable component (A or B) to which the member was subject prior to electing Section C.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

Basic service allowance is a single life annuity.

Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.

Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.

Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of

living adjustments for retirees before July 1, 2017.

- Option 5: 100% “pop-up” joint and survivor annuity, which pays the designated beneficiary 100% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree’s spouse or disabled child.
- Option 6: 50% “pop-up” joint and survivor annuity, which pays the designated beneficiary 50% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

11. Reduction for Benefits Payable under

Workers’ Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers’ compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers’ compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Teachers’ Retirement System retirees receiving

an accidental disability payment are subject to an offset if they are getting a workers’ compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers’ compensation payments are subject to an offset by the Workers’ Compensation Commission if a recipient is receiving an ordinary disability payment from the Teachers’ Retirement System for the same injury or illness. Any offset taken for an accidental disability from the Teachers’ Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree’s employer by the Workers’ Compensation Commission.

TEACHERS’ PENSION SYSTEM

A COMPOSITE PICTURE

	2023	2022
Total Membership		
Active Vested	60,185	60,079
Active Non-Vested	52,476	50,751
Vested Former Members	23,626	23,527
Retired Members	63,217	60,980
Active Members		
Number	112,661	110,830
Average Age	45.3	45.2
Average Years of Service	12.0	12.1
Average Annual Salary	\$ 75,156	\$ 71,828
Retirees & Beneficiaries		
Number	63,217	60,980
Average Age	72.7	72.3
Average Monthly Benefit	\$ 2,254	\$ 2,164

1. Membership

Membership is generally a condition of employment for those teachers, faculty members, and educational employees, specified in SPP § 23-206 of the Annotated Code of Maryland, hired on or after January 1, 1980. Certain eligible higher education employees may elect to join an optional defined contribution retirement program provided by the State, known as the Optional Retirement Program (ORP). The ORP is separate and

distinctive from the supplemental program administered by the Maryland Supplemental Retirement Plan.

All individuals who are members of the Teacher's Pension System on or before June 30, 2011, participate in the Alternate Contributory Pension Selection (ACPS) except for the members who transferred from the Teachers' Retirement System after April 1, 1998 or former vested members who terminated employment prior to July 1, 1998.

All individuals who enroll in the Teachers' Pension System on or after July 1, 2011, participate in the Reformed Contributory Pension Benefit (RCPB).

2. Member Contributions

Members of both the ACPS and the RCPB are required to make contributions of 7% of earnable compensation.

Contributions earn interest at 5% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

For members of the Alternate Contributory Pension Selection, normal retirement age is age 62.

For members of the Reformed Contributory Pension Benefit, normal retirement age is age 65.

4. Normal Service Retirement Allowance

ACPS Eligibility 30 years of eligibility service or attainment of one of the following:

- Age 62 with five years of eligibility service.
- Age 63 with four years of eligibility service.
- Age 64 with three years of eligibility service.
- Age 65 and older with two years of eligibility service.

ACPS Allowance The greater of (i) or (ii), plus (iii), as described below:

- (i) 1.2% of average final compensation for the three highest consecutive years as a member for each year of creditable service on or before June 30, 1998;
- (ii) 0.8% of average final compensation for the three highest consecutive years as a member up to the

Social Security Integration Level (SSIL) plus 1.5% of average final compensation over the integration level for each year of creditable service on or before June 30, 1998;

- (iii) the number of years of the member's creditable service on or after July 1, 1998 multiplied by 1.8% of the member's average final compensation for the three highest consecutive years as a member.

RCPB Eligibility: Combined age and eligibility service of at least 90 years or age 65 after 10 years of eligibility service.

RCPB Allowance: 1.5% of average final compensation for the five highest consecutive years as a member for each year of creditable service on or after July 1, 2011.

The SSIL is the average of all Social Security Wage Bases over the 35 calendar years prior to your retirement.

Note: Members who transferred into the Teachers' Pension System, on or after April 1, 1998, receive benefits based on the provisions of the NCPS (refer to page 149) in effect as of January 1, 1980, except for COLA benefits.

5. Early Retirement Allowance

ACPS Eligibility: Age 55 with at least 15 years of eligibility service.

ACPS Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 62 (maximum reduction of 42%).

RCPB Eligibility: Age 60 with at least 15 years of eligibility service.

RCPB Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 65 (maximum reduction of 30%).

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the

member's position, and that incapacity is likely to be permanent.

Allowance: The benefit is the service retirement allowance computed on the basis that service continues until normal retirement age. If disability occurs after age 62 (age 65 for RCPB), the benefit is based on creditable service at time of retirement.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest consecutive years (five highest for RCPB) as a member plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation including any annuitized accumulated contributions.

7. Death Benefits

Ordinary Death Benefit For Active Member With Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.

Benefit: Return of accumulated contributions

Ordinary Death Benefit For Active Member With One Or More Years of Service

Eligibility: One or more years of eligibility service and not eligible for a special death benefit

Benefit:

Members who at the time of death are not members of the Reformed Contributory Pension Benefit, are younger than age 55 and have less than 15 years of service or are members of the Reformed Contributory Pension Benefit, are younger than age 60 and have less than 15 years of service. One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

Members who at the time of death: (1) are eligible to retire; (2) have accrued at least 25 years of eligibility service; (3) are not members of the Reformed Contributory Pension Benefit and are age 55 or older with at least 15 years of service; or (4) are members of the Reformed Contributory Pension Benefit and are age 60 or older with at least 15 years of service.

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

Special Death Benefit For Active Member

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest consecutive years as a member, except for member's participating in the RCPB component for which the average final compensation is the five highest consecutive years as a member, payable to a surviving spouse, decedent's children or dependent parents. Accumulated contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

Death Benefit For Vested Former Member

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

ACPS Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

ACPS Allowance: Accrued retirement allowance payable at age 62 provided member does not withdraw accumulated contributions. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 55, reduced by 0.5% for each month that benefit commencement date precedes age 62 (maximum reduction of 42%.)

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

RCPB Eligibility: 10 years of eligibility service and separation from employment other than by death or retirement

RCPB Allowance: Accrued retirement allowance payable at age 65 provided member does not withdraw accumulated contributions. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 60, reduced by 0.5% for each month that benefit commencement date precedes age 65 (maximum reduction of 30%.)

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

9. Cost of Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Effective July 1, 1998, and for an allowance based on creditable service before July 1, 2011, the adjustment is capped at a maximum of 3% compounded and is applied to all allowances which have been in payment for one year. For an allowance based on creditable service earned on

or after July 1, 2011, the COLA adjustment is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

Any adjustments are effective July 1.

10. Optional Forms of Payment

Basic service allowance is a single life annuity.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments

attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.

- Option 5: 100% “pop-up” joint and survivor annuity, which pays the designated beneficiary 100% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree’s spouse or disabled child.
- Option 6: 50% “pop-up” joint and survivor annuity, which pays the designated beneficiary 50% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

11. Reduction for Benefits Payable under Workers’ Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers’ compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers’ compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits

are paid. Teachers’ Pension System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers’ compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers’ compensation payments are subject to an offset by the Workers’ Compensation Commission if a recipient is receiving an ordinary disability payment from the Teachers’ Pension System for the same injury or illness. Any offset taken for an accidental disability from the Teachers’ Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree’s employer by the Workers’ Compensation Commission.

EMPLOYEE’S RETIREMENT SYSTEM

A COMPOSITE PICTURE		
	2023	2022
Total Membership		
Active Vested	4,830	4,616
Active Non-Vested	3,294	3,161
Vested Former Members	753	750
Retired Members	17,994	18,382
Active Members		
Number	8,124	7,777
Average Age	46.1	46.0
Average Years of Service	13.2	13.0
Average Annual Salary	\$ 64,165	\$ 56,616
Retirees & Beneficiaries		
Number	17,994	18,382
Average Age	73.6	73.6
Average Monthly Benefit	\$ 2,475	\$ 2,303

1. Membership

System closed to new members hired on or after January 1, 1980. Members on December 31, 1979 continue to be members unless they elected to transfer into the Employees’ Pension System (established January 1, 1980) prior to January 1, 2005.

Membership generally includes employees of the State and other eligible participating employers.

2. Member Contributions

- Plan A: Generally, 7% of earnable compensation to maintain all benefits, including unlimited compounded cost-of-living adjustments.
- Plan B: Generally, 5% of earnable compensation to maintain all benefits, except the compounded cost-of-living adjustments which are capped at 5%.
- Plan C: Provides a two-part benefit based on benefits of the Employees' Retirement System and the Employees' Pension System. Employee contributions, if any, are based on participation of the employer in the applicable component of the Employees' Pension System. (refer to summary of Employees' Pension System).

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 60.

4. Normal Service Retirement Allowance

Eligibility: 30 years of eligibility service or attainment of age 60.

Allowance: 1/55th of average final compensation for the three highest years as a member for each year of creditable service.

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Employees' Retirement System; for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Employees' Pension System under which the employer and member participates.

5. Early Retirement Allowance

Eligibility: 25 years of eligibility service and less than 60 years old.

Allowance: Service retirement allowance reduced by 0.5% for each month that date of retirement precedes the earlier of age 60 or the date the member would have completed 30 years of eligibility service (maximum reduction of 30%).

Plan C: For creditable service before election date, the amount determined by the service retirement formula for Employees' Retirement System with a maximum reduction of 30%; for creditable service after election date, the amount determined by the service retirement formula for the applicable component of the Employees' Pension System under which the employer participates with a 0.5% reduction for each month retirement occurs prior to age 62 (maximum reduction of 42%).

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is permanent.

Allowance: The benefit is 1/55th of average final compensation for the three highest years as a member for each year of creditable service. The minimum benefit is 25% of average final compensation; the maximum benefit can be no greater than 1/55th of average final compensation for each year of creditable service the member would have accrued if employment continued to age 60.

Plan C: The benefit is the greater of the Employees' Retirement System allowance noted above, or the ordinary disability benefit of the Employees' Pension System.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty at a definite time and place without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest years as a member, plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation, including any annuitized accumulated contributions.

7. Death Benefits

Ordinary Death Benefit For Active Member With Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.

Benefit: Return of accumulated contributions

Ordinary Death Benefit For Active Member With One or More Years of Service

Eligibility: One or more years of eligibility service and not eligible for a special death benefit.

Benefit:

Members who at the time of death are younger than age 55 or have less than 15 years of service.

One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

Members who at the time of death are eligible to retire and are age 55 or older with at least 15 years of service.

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

Special Death Benefit For Active Member

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest years as a member payable to a surviving spouse, decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

Death Benefit For Vested Former Member

If member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

Allowance: Vested allowance payable at normal retirement age, provided member does not withdraw accumulated member contributions.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1 for all allowances which have been in payment for one year.

- Selection A (Additional Member Contributions): Uncapped and compounded.
- Selection B (Limited COLA): Capped at 5% and compounded.
- Selection C (Combination Formula): For creditable service on or after the effective date of Selection C, generally, with limited exceptions, COLA is capped at 3% and compounded. For creditable service before the effective date of Selection C, COLA is calculated based on the applicable component (A or B) to which the member was subject prior to electing Selection C.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

Basic service allowance is a single life annuity.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

11. Reduction for Benefits Payable Under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Employees' Retirement System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Employees' Retirement System for the same injury or illness. Any offset taken for an accidental disability from the Employees' Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

CORRECTIONAL OFFICERS' RETIREMENT SYSTEM

COMPOSITE THAT INCLUDES STATE & MUNICIPAL

	2023	2022
Total Membership		
Active Vested	4,702	4,465
Active Non-Vested	3,270	3,099
Vested Former Members	636	637
Retired Members	7,023	6,756
Active Members		
Number	7,972	7,564
Average Age	45.1	44.8
Average Years of Service	12.6	12.4
Average Annual Salary	\$ 64,132	\$ 57,342
Retirees & Beneficiaries		
Number	7,023	6,756
Average Age	63.7	63.3
Average Monthly Benefit	\$ 2,237	\$ 2,099

1. Membership

Membership is generally a condition of employment for correctional officers serving in the first six job classifications, individuals serving as a security chief, a facility administrator, and assistant warden or a warden, maximum security attendants at Clifton T. Perkins Hospital Center, and employees of the State as provided in SPP § 25-201. This includes participating governmental units who elect to have their detention center officers participate in the Correctional Officers' Retirement System.

2. Member Contributions

Members are required to make contributions of 5% of earnable compensation.

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 55 for service retirement, age 60 for disability retirement.

4. Normal Service Retirement Allowance

Eligibility: For individuals who are members on or before June 30, 2011, either age 55 with at least 5 years of eligibility service credit or 20 years of eligibility service, regardless of age. For individuals who are members on or after July 1, 2011, either age 55 with at least 10 years of eligibility service credit, or 20 years of eligibility service, regardless of age.

Allowance: For individuals who are members on or before June 30, 2011, 1/55th of average final compensation for the three highest years as a member for each year of creditable service. For individuals who are members on or after July 1, 2011, 1/55th of average final compensation for the five highest years as a member for each year of creditable service.

5. Early Retirement Allowance

Not applicable to the Correctional Officers' Retirement System, except for certain Baltimore City Jail employees who may retire with 10 years of creditable service., as specified in SPP § 25-401.1.

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is likely to be permanent.

Allowance: The benefit is 1/55th of the average final compensation for the three highest years as a member (five highest for members enrolled on or after July 1, 2011). The minimum benefit is 25% of average final compensation; the maximum benefit can be no greater than 1/55th of average final compensation for each year of creditable service the member would have accrued if employment continued to age 60.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty at a definite time and place without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest years as a member (five highest for members enrolled on or after July 1, 2011), plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation, including any annuitized accumulated contributions.

7. Death Benefits

Ordinary Death Benefit For Active Member With Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.

Benefit: Return of accumulated contributions

Ordinary Death Benefit For Active Members With One Or More Years of Service

Eligibility: One or more years of eligibility service and not eligible for a special death benefit.

Benefit:

Members who at the time of death are younger than age 55 or have less than 15 years of service

One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

Members who at the time of death are eligible to retire and are age 55 or older with at least 15 years of service

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child past age 26 as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse

or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

Special Death Benefit for Active Member

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest years as a member payable to a surviving spouse, the decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

Death Benefit For Vested Former Member

If member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

Eligibility: For individuals who are members on or before June 30, 2011, five years of eligibility service. For individuals who become member on or after July 1, 2011, 10 years of eligibility service. Member must also be separated from employment other than by death or retirement.

Allowance: Service retirement allowance payable at age 55 provided the member does not withdraw the member's accumulated contributions.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1 for all allowances which have been in payment for one year.

Uncapped compounded COLAs are applied to all benefits attributable to creditable service earned on or before June 30, 2011.

For an allowance based on creditable service earned on or after July 1, 2011, the COLA is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

Basic service allowance is a single life annuity.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.

Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.

Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

11. Reduction for Benefits Payable Under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compen-

sation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Correctional Officers' Retirement System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Correctional Officers' Retirement System for the same injury or illness. Any offset taken for an accidental disability from the Correctional Officers' Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

2. Member Contributions

Members are required to contribute 7% of annual salary up to 22 years and three months of creditable service.

Interest earned on all employee contributions is 4% per year, compounded annually, until retirement or withdrawal of accumulated contributions.

3. Normal Retirement Age

For members who have creditable service prior to January 14, 2015, normal retirement age is age 60.

For members who do not have creditable service prior to January 14, 2015, normal retirement age is age 62.

4. Service Retirement Allowance

Eligibility: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, age 60 with eight years of creditable service. For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, age 62 with eight years of creditable service.

Allowance: 3% of salary of an active legislator for each year of service, multiplied by the number of years of creditable service. The maximum benefit available for a member is 66.67% of salary payable to an active legislator.

5. Reduced Service Retirement Allowance

Eligibility: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, age 50 with eight years of creditable service. For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, age 55 with eight years of creditable service.

Allowance: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, a service retirement allowance computed as of early retirement date, reduced by 0.5% for each month under age 60 (maximum reduction of 60%). For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, a service retirement allowance computed as of early retirement date, reduced by 0.5% for each month under age 62 (maximum reduction of 42%).

LEGISLATIVE PENSION PLAN

A COMPOSITE PICTURE

	2023	2022
Total Membership		
Active Vested	82	68
Active Non-Vested	104	121
Vested Former Members	53	39
Retired Members	327	311
Active Members		
Number	186	189
Average Age	53.1	55.1
Average Years of Service	7.3	9.0
Average Annual Salary	\$ 52,465	\$ 49,877
Retirees & Beneficiaries		
Number	327	311
Average Age	76.5	76.6
Average Monthly Benefit	\$ 1,594	\$ 1,524

1. Membership

Membership is generally a condition of employment for members of the Maryland General Assembly during the 2019-2022 term of office.

6. Disability Retirement Allowance

Eligibility: Eight years of creditable service, regardless of age, and certification of the medical board designated by the Board of Trustees that the member is mentally or physically incapacitated from further performance of duty as a legislator, and that incapacity is likely to be permanent.

Allowance: Service retirement allowance, regardless of age.

7. Death Benefits

Death Of A Member With At Least Eight Years Of Creditable Service

Eligibility: At least eight years of creditable service.

Beneficiary: Payment of the benefit shall be made to the member's surviving spouse. If there is no surviving spouse at the time of the member's death, the benefit shall be prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If any child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment will be made to the member's designated beneficiary.

Benefit: The member's beneficiary (surviving spouse, children, or designated beneficiary) may elect to receive: (1) a return of the member's accumulated contributions plus the member's annual salary, if any, at the time of death; or (2) an annuity equal to 50% of the retirement allowance that would have been paid at the member's death, regardless of the member's age. The surviving spouse or children will begin receiving the death benefit at the time of the member's death. A designated beneficiary who elects to receive the annuity may not begin receiving the benefit until the beneficiary reaches age 60, if the deceased member had creditable service in the Legislative Pension Plan before January 14, 2015, or age 62, if the deceased member did not have creditable service before January 14, 2015. The designated beneficiary may elect to begin receiving a reduced annuity at age 50, if the deceased member had creditable service before January 14, 2015, or age 55 if the deceased member did not have creditable service before January 14, 2015.

Death Of A Member With Less Than Eight Years Of Creditable Service

Eligibility: A member currently serving in the legislature with less than eight years of creditable service

Beneficiary: Payment of the benefit shall be made to the member's surviving spouse. If there is no surviving spouse at the time of the member's death, the benefit shall be prorated equally among the eligible children. A child is eligible for a prorated share if the child is under age 26 or the child is disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment will be made to the member's designated beneficiary. If a member designates more than one beneficiary, the benefit shall be prorated equally among each beneficiary.

Benefit: A lump-sum benefit equal to the member's accumulated contributions plus the member's annual salary at the time of death.

Death Of A Member With No Beneficiary

On death of a member who is not survived by a spouse, children, or designated beneficiary, the Board of Trustees shall pay the member's accumulated contributions to the estate of the member.

Death Of Retiree

Upon the death of a retiree, a survivor allowance equal to 50% of the retiree's retirement allowance is payable to the retiree's surviving spouse for the spouse's life. If the retiree has no surviving spouse and the retiree has creditable service before January 14, 2015, the full survivor allowance is payable to the designated beneficiary for life beginning at age 60 or an optional reduced survivor allowance is payable to the designated beneficiary for life beginning at age 50. If the retiree has no surviving spouse and the retiree has no creditable service before January 14, 2015, the full survivor allowance is payable to the designated beneficiary for life beginning at age 62 or an optional reduced survivor allowance is payable to the designated beneficiary for life beginning at age 55.

8. Vested Allowance

Eligibility: Eight years of creditable service and separation from employment other than by death or retirement.

Allowance: For individuals who have creditable service in the Legislative Pension Plan before January 14, 2015, a

service retirement allowance payable at age 60, provided the member has not withdrawn the member's accumulated contributions. For individuals who have no creditable service in the Legislative Pension Plan before January 14, 2015, a service retirement allowance payable at age 62, provided the member has not withdrawn the member's accumulated contributions.

9. Cost-of-Living Adjustments

Generally, allowances are recalculated each time the salary for a sitting legislator increases.

10. Optional Forms of Payment

Basic Allowance: Normal service allowance with a 50% joint and survivor annuity to the retiree's surviving spouse. If there is no surviving spouse, to the retiree's designated beneficiary. A surviving spouse will begin receiving the death benefit at the time of the retiree's death. A designated beneficiary may not begin receiving the benefit until the beneficiary reaches age 60, if the deceased retiree had creditable service in the Legislative Pension Plan before January 14, 2015, or age 62, if the deceased retiree did not have creditable service before January 14, 2015. The designated beneficiary may elect to begin receiving a reduced annuity at age 50, if the deceased retiree had creditable service before January 14, 2015, or age 55 if the deceased retiree did not have creditable service before January 14, 2015.

Option 1: 100% joint and survivor annuity. If, at the time of retirement the member is married and elects to receive Option 1, the member's spouse must be the designated beneficiary. The designated beneficiary may not be more than 10 years younger than the member unless the beneficiary is the member's spouse or disabled child.

EMPLOYEES' PENSION SYSTEM

A COMPOSITE PICTURE

	2023	2022
Total Membership		
Active Vested	33,206	33,742
Active Non-Vested	39,851	37,177
Vested Former Members	22,215	22,742
Retired Members	66,789	65,463
Active Members		
Number	73,057	70,919
Average Age	48.6	48.9
Average Years of Service	10.9	11.4
Average Annual Salary	\$ 67,828	\$ 60,925
Retirees & Beneficiaries		
Number	66,789	65,463
Average Age	72.1	71.7
Average Monthly Benefit	\$ 1,541	\$ 1,477

1. Membership

Membership is generally a condition of employment for all regular employees of the State of Maryland hired on or after January 1, 1980, excluding those eligible for the Teachers' Retirement System, Teachers' Pension System, State Police Retirement System, certain judges, correctional officers, Law Enforcement Officers Pension System, and members of the General Assembly. Certain governmental units also have elected to participate in the System.

There are four plans under the Employees' Pension System.

- **Noncontributory Pension System (NCPS)** - The original pension system established on January 1, 1980 that only applies to certain participating governmental units that did not elect to participate in the Contributory Pension System, Alternate Contributory Pension Selection, or Reformed Contributory Pension Benefit.
- **Employees' Contributory Pension System (ECPS)** - The ECPS established July 1, 1998 that only applies to certain participating governmental units that elected the ECPS but did not elect to participate in the Alternate Contributory Pension Selection, or Reformed Contributory Pension Benefit.
- **Alternate Contributory Pension Selection (ACPS)**

applies to all State employees and employees of participating governmental units that are members of the ACPS on or before June 30, 2011.

- Reformed Contributory Pension Benefit (**RCPB**)
 - Applies to all State employees and, employees of participating governmental units enrolling in the Employees’ Pension System on or after July 1, 2011. It does not apply to employees of participating governmental units that did not elect to participate in the ACPS or RCPB.

2. Member Contributions

NCPS:	Members are only required to make contributions of 5% on earnable compensation that exceeds the Social Security Taxable Wage Base.
ECPS:	Members are required to make contributions of 2% of earnable compensation.
ACPS:	Members are required to make contributions of 7% of earnable compensation.
RCPB:	Members are required to make contributions of 7% of earnable compensation.

Contributions earn interest at 5% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

For members of the Non-Contributory, Contributory, or Alternate Contributory Pension Selection, normal retirement age is age 62.

For members of the Reformed Contributory Pension Benefit, normal retirement age is age 65.

4. Normal Service Retirement Allowance

NCPS, ECPS, and ACPS Eligibility 30 years of eligibility service or attainment of one of the following:

- Age 62 with five years of eligibility service
- Age 63 with four years of eligibility service
- Age 64 with three years of eligibility service
- Age 65 or older with two years of eligibility service

NCPS Allowance:

0.8% of average final compensation up to the Social Security Integration Level (SSIL) for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service;

ECPS Allowance: The greater of (i) or (ii), plus (iii), as described below:

- (i) 1.2% of average final compensation for the three highest consecutive years as a member for each year of creditable service on or before June 30, 1998;
- (ii) 0.8% of average final compensation up to the SSIL for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service on or before June 30, 1998;
- (iii) 1.4% of average final compensation for the three highest consecutive years as a member for each year of creditable service after June 30, 1998.

ACPS Allowance: The greater of (i) or (ii), plus (iii), as described below:

- (i) 1.2% of average final compensation for the three highest consecutive years as a member for each year of creditable service on or before June 30, 1998;
- (ii) 0.8% of average final compensation up to the SSIL for the three highest consecutive years as a member plus 1.5% of average final compensation over the SSIL for each year of creditable service on or before June 30, 1998;
- (iii) 1.8% of average final compensation for the three highest consecutive years as a member for each year of creditable service after June 30, 1998.

RCPB Eligibility Combined age and eligibility service of at least 90 years or age 65 with 10 or more years of eligibility service.

RCPB Allowance: 1.5% of average final compensation for the five highest consecutive years as a member for each year of creditable service on or after July 1, 2011.

SSIL is the average of all Social Security Wage Bases over the 35 calendar years prior to your retirement.

Note: Members who transferred into the Employees' Pension System, on or after April 1, 1998, receive benefits based on the provisions of the NCPS as in effect on January 1, 1980 except for COLA benefits.

5. Early Retirement Allowance

NCPS, ECPS, and ACPS Eligibility: Age 55 and at least 15 years of eligibility service.

NCPS, ECPS, and ACPS Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 62 (maximum reduction is 42%).

RCPB Eligibility: Age 60 with at least 15 years of eligibility service.

RCPB Allowance: Service retirement allowance computed as of early retirement date, reduced by 0.5% for each month that early retirement date precedes age 65 (maximum reduction is 30%).

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is likely to be permanent.

Allowance: The benefit is the service retirement allowance computed on the basis that service continues until normal retirement age. If disability occurs on or after age 62 (age 65 for RCPB), the benefit is based on creditable service at time of retirement.

Accidental

Eligibility: Certification of the medical board designated by the Board of Trustees that member is totally and permanently incapacitated from the performance of the normal duties of the member's position as the natural and proximate result of an accident that occurred in the actual performance of duty without willful negligence by the member.

Allowance: The benefit is 66.67% of average final compensation for the three highest consecutive years (five highest for RCPB) as a member, plus the annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation including any annuitized accumulated contributions.

7. Death Benefits

Ordinary Death Benefit For Active Member With Less Than One Year of Service

Eligibility: Less than one year of eligibility service and not eligible for a special death benefit.

Benefit: Return of accumulated contributions

Ordinary Death Benefit For Active Member With One Or More Years of Service

Eligibility: One or more years of eligibility service and not eligible for a special death benefit.

Benefit:

Members who at the time of death are not members of the Reformed Contributory Pension Benefit, are younger than age 55, and have less than 15 years of service or are members of the Reformed Contributory Pension Benefit, are younger than age 60, and have less than 15 years of service. One-time lump sum payment of member's annual earnable compensation at time of death plus accumulated contributions to the member's designated beneficiary.

Members who at the time of death: (1) are eligible to retire; (2) have accrued at least 25 years of eligibility service; (3) are not members of the Reformed Contributory Pension Benefit and are age 55 or older with at least 15 years of service; or (4) are members of the Reformed Contributory Pension Benefit and are age 60 or older with at least 15 years of service.

The surviving spouse of a deceased member may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of death plus the member's accumulated contributions; or (2) a monthly allowance under Option 2 (100% survivor benefit). In cases where a deceased member is not survived by a spouse, the decedent's children may elect to receive: (1) a one-time lump sum payment of the member's annual earnable compensation at the time of

death plus the member's accumulated contributions; or (2) an allowance equal to 50% of the basic allowance that would have been paid to the deceased member, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. If any child is disabled, the benefit will continue for that child as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, the member's designated beneficiary shall receive a one-time lump sum payment consisting of the member's accumulated contributions and the member's annual compensation at the time of death.

Special Death Benefit For Active Member

Eligibility: Death arising out of or in the course of the actual performance of duty without willful negligence by the member.

Benefit: 66.67% of average final compensation for the three highest consecutive years as a member, except for member's participating in the RCPB component for which the average final compensation is the five highest consecutive years as a member, payable to a surviving spouse, the decedent's children or dependent parents. Accumulated member contributions are paid to the designated beneficiary. Children of deceased members receiving a special death benefit will continue to receive this benefit, prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. The annuity shall be reallocated among the remaining eligible children. Disabled children receiving a special death benefit may receive a special death benefit as long as they remain disabled, regardless of age.

Death Benefit For Vested Former Member

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

NCPs, ECPS, and ACPS Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

NCPs, ECPS, and ACPS Allowance: Accrued retirement allowance payable at age 62. A member who has

completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 55, reduced by 0.5% for each month that benefit commencement date precedes age 62 (maximum reduction of 42%).

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

RCPB Eligibility: 10 years of eligibility service and separation from employment other than by death or retirement.

RCPB Allowance: Accrued retirement allowance payable at age 65 provided member does not withdraw accumulated contributions. A member who has completed 15 years of eligibility service may begin to receive benefit payments at any time on or after attainment of age 60, reduced by 0.5% for each month that benefit commencement date precedes age 65 (maximum reduction of 30%).

If member dies before payment of the vested allowance starts, only accumulated member contributions are returned.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Generally, effective July 1, 1998, and for an allowance based on creditable service earned before July 1, 2011, the adjustment is capped at a maximum of 3% compounded and is applied to all allowances which have been in payment for one year.

Generally, for an allowance based on creditable service earned on or after July 1, 2011, the COLA is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

For certain individuals, such as employees of a participating governmental unit that has not elected the contributory pension benefit or the Alternate Contributory Pension Selection for its members, or their surviving beneficiaries, the allowance is subject to a simple COLA capped at 3%.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

Basic service allowance is in a single life annuity.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the

retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

- Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

Vested former members who are eligible to receive a vested allowance of less than \$50 a month may elect to receive a lump-sum payment equal to the present value in lieu of a monthly benefit.

11. Reduction for Benefits Payable Under

Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Employees' Pension System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment

from the Employees' Pension System for the same injury or illness. Any offset taken for an accidental disability from the Employees' Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

STATE POLICE RETIREMENT SYSTEM

A COMPOSITE PICTURE

	2023	2022
Total Membership		
Active Vested	809	765
Active Non-Vested	526	591
Vested Former Members	88	86
Retired Members	2,606	2,597
Active Members		
Number	1,335	1,356
Average Age	36.8	36.4
Average Years of Service	12.6	12.1
Average Annual Salary	\$ 104,522	\$ 90,363
Retirees & Beneficiaries		
Number	2,606	2,597
Average Age	66.1	65.6
Average Monthly Benefit	\$ 5,048	\$ 4,676

1. Membership

Membership is a condition of employment for all officers of the Maryland State Police.

2. Member Contributions

Members are required to contribute 8% of earnable compensation. Beginning July 1, 2020, no member contributions are required after 28 years of service.

Contributions earn interest at 4% per year, compounded annually, until retirement, withdrawal of the accumulated contributions, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 50.

4. Normal Service Retirement Allowance

Eligibility: For individuals who are members on or before June 30, 2011, 22 years of eligibility service or attainment of age 50. For individuals who become members on or after July 1, 2011, 25 years of eligibility service or attainment of age 50. Retirement at age 60 is mandatory for all but the Secretary of State Police.

Allowance: For individuals who are members on or before June 30, 2011, 2.55% of average final compensation for the three highest years as a member. For individuals who become members on or after July 1, 2011, 2.55% of average final compensation for the five highest years as a member. Maximum benefit is 71.4% of average final compensation.

5. Early Retirement Allowance

Not applicable to the State Police Retirement System.

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is mentally or physically incapacitated from the performance of the normal duties of the member's position, and that incapacity is likely to be permanent.

Allowance: The allowance is the greater of a normal service retirement allowance (as described above) or 35% of the member's average final compensation.

Special (Accidental)

Eligibility: Total and permanent incapacity for duty as certified by the medical board arising out of or in the course of the actual performance of duty without willful negligence by the member.

Allowance: For members who are under normal retirement age, the benefit is the lesser of either the member's average final compensation, or the sum of 66.67% of the member's average final compensation and an annuity that is actuarially equivalent to the member's accumulated contributions. Members who are at least normal retirement age are entitled either to the benefit as calculated for members under normal retirement age, or a normal service retirement allowance, whichever is greater.

7. Death Benefits

Normal Death Benefit – Return of Accumulated Contributions

Eligibility: Death while employed as a member and less than one year of eligibility service. A normal death benefit may be not paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

Normal Death Benefit – Return of Accumulated Contributions and Annual Earnable Compensation

Eligibility: Death while employed as a member and at least one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated contributions and an amount equal to the member's annual earnable compensation at the time of death to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

Special Death Benefit For Death While Employed And Not In Performance Of Duty

Eligibility: Death while employed as a member, without member's willful negligence, and not in the performance of duty. Member has more than two years of eligibility service. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 50% of the member's average final compensation.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 50% of the member's average final compensation shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 50% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a

deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

Special Death Benefit For Death In The Performance Of Duty

Eligibility: Death while employed as a member, without member's willful negligence, and in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 66.67% of the member's average final compensation.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 66.67% of the member's average final compensation shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 66.67% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

Waiver of Special Death Benefit

Before the payment of any special death benefit is made under this section, if all individuals eligible for a special death benefit elect to waive the payment of the special death benefit, a normal death benefit is paid to the member's designated beneficiary, or otherwise to the member's estate.

Death Benefit For Vested Former Member

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

Eligibility: For individuals who became members on or before June 30, 2011, five years of eligibility service

and separation from employment other than by death or retirement. For individuals who become members on or after July 1, 2011, 10 years of eligibility service and separation from employment other than by death or retirement.

Allowance: Service retirement allowance payable at normal retirement age, provided the member does not withdraw the member's accumulated contributions.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1, for all allowances which have been in payment for one year.

Uncapped compounded COLAs are applied to all benefits attributable to creditable service earned on or before June 30, 2011.

For an allowance based on creditable service earned on or after July 1, 2011, the COLA adjustment is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

Retirees and beneficiaries receiving a retirement allowance on or before June 30, 1999, who receive an annual adjustment to their benefit ranging from \$1,200 to \$2,100 receive separate COLAs on this adjustment commencing effective July 1, 2000.

10. Optional Forms of Payment

If, at the time of death, the retiree is married, the retiree's spouse is entitled to receive a survivor benefit consisting

of 80% of the retiree's retirement allowance. If there is no surviving spouse or upon the death of the surviving spouse, payment of the survivor benefit is divided equally among any children of the deceased retiree under the age of 18 years, until each child dies or becomes age 18. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. If there is no spouse at time of retirement, member may select an optional allowance.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary 100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

- Option 6: 50% “pop-up” joint and survivor annuity, which pays the designated beneficiary 50% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

11. Reduction for Benefits Payable Under

Workers’ Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers’ compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers’ compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. State Police Retirement System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers’ compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers’ compensation payments are subject to an offset by the Workers’ Compensation Commission if a recipient is receiving an ordinary disability payment from the State Police Retirement System for the same injury or illness. Any offset taken for an accidental disability from the State Police Retirement System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree’s employer by the Workers’ Compensation Commission.

12. Deferred Retirement Option Program (DROP)

Eligibility: Members who joined the State Police Retirement System on or before June 30, 2011 are eligible to participate in the DROP if they are less than 60 years old and have at least 22 but less than 30 years of eligibility service. Members who join the State Police System on or after July 1, 2011 are eligible to participate in the DROP if they are less than 60 years old and have at least 25 but less than 30 years of eligibility service.

Participation: An eligible member may participate in the DROP for the lesser of 5 years, the difference between 30 years and the member’s creditable service, the difference between 60 years and the member’s age on date of election to participate, or a term selected by the member. Participation also ends if the participant dies, is terminated from employment, accepts a special disability retirement allowance, or submits a binding letter of resignation or notice of intent to terminate employment. Members who participate in the DROP are retired and cease making member contributions, and cease accruing service credit and additional benefits.

Allowance: For members who entered the DROP on or before June 30, 2011, the service retirement allowance, with COLAs, is credited to an account earning interest at the rate of 6% per year, compounded monthly. For members who enter DROP on or after July 1, 2011, the service retirement allowance, with COLAs, is credited to an account earning interest at the rate of 4% per year, compounded annually. When the DROP period ends, members terminate employment and begin receiving their monthly allowance plus the lump sum payment from their DROP account. During the DROP period, members remain eligible for Special Disability benefits if incapacitated while in DROP.

JUDGES' RETIREMENT SYSTEM

A COMPOSITE PICTURE

	2023	2022
Total Membership		
Active Vested	220	209
Active Non-Vested	106	108
Vested Former Members	8	10
Retired Members	468	463
Active Members		
Number	326	317
Average Age	57.4	57.3
Average Years of Service	8.0	8.0
Average Annual Salary	\$ 180,049	\$ 169,921
Retirees & Beneficiaries		
Number	468	463
Average Age	78.1	77.9
Average Monthly Benefit	\$ 8,143	\$ 7,727

1. Membership

Membership is a condition of employment for a judge of the Court of Appeals, Court of Special Appeals, Circuit Court, or District Court of Maryland and members of the State Workers' Compensation Commission. Membership ends if the member is separated from employment for more than four years, withdraws the member's accumulated contributions, retires, or dies.

2. Member Contributions

Members are required to make contributions of 8% of salary until they have completed 16 years of service as a member.

Contributions earn interest at 4% per year, compounded annually, until retirement or withdrawal of accumulated contributions. Non-vested members who became members of the Judges' Retirement System on or after July 1, 2012 shall not receive interest after membership ends.

3. Normal Retirement Age

Normal retirement age is age 60.

4. Retirement Allowance

Eligibility: An individual who is a member of the Judges' Retirement System before July 1, 2012 is entitled to a retirement allowance: (1) on termination of service if the member is at least age 60; (2) on resignation for disability and recommendation of the medical board, (3) when retired by order of the Court of Appeals, or (4) at the age of 60 years. An individual who becomes a member of the Judges' Retirement System on or after July 1, 2012 is entitled to a retirement allowance: (1) on termination of service if the member is at least 60 and has at least 5 years of eligibility service; (2) on resignation for disability and recommendation of the medical board, (3) when retired by order of the Court of Appeals if the member has at least 5 years of eligibility service; (4) at the mandatory retirement age required by the Maryland Constitution with less than five years of service, if the member has eligibility service equal to the mandatory retirement age minus the member's age when the member joined the Judges' Retirement System; or (5) at the age of 60, if the former member's termination of service occurred earlier and the former member had at least five years of eligibility service when the former member terminated service.

Allowance: Generally, the retirement allowance equals 66.67% of salary payable in that fiscal year to member holding same level of judicial position that retiree held on termination of service. For members with less than 16 years of service credit, the benefit is reduced based on the ratio of years of service credit to 16.

5. Early Retirement Allowance

Not applicable to the Judges' Retirement System.

6. Disability Retirement Allowance

Eligibility: Certification of the medical board designated by the Board of Trustees that member is incapacitated for the performance of duty, and that incapacity is likely to be permanent.

Allowance: A retirement allowance payable immediately. However, if a judge has at least three years of service credit as a member, the allowance will be at least .333% of the judge's salary at the time of retirement.

7. Death Benefits

Monthly Allowance

Eligibility: Death of a judge or former judge at any age, leaving a surviving spouse or children under the age of 26, or a child who is disabled, regardless of age.

Allowance: 50% of the pension that would have been payable to the judge or former judge as of the date of death, as if the judge or former judge was eligible to receive a retirement allowance, is payable to surviving spouse. If there is no spouse, payment is divided equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age.

Lump Sum

On death of a member who is not survived by a spouse or children, the Board of Trustees shall pay the member's accumulated contributions and an amount equal to the member's annual salary at time of death to the member's designated beneficiary. If the member has designated more than one beneficiary, this lump-sum death benefit shall be divided equally among the beneficiaries. If a member's service is terminated by death and the member leaves no spouse, child under the age of 18 years, or designated beneficiary, the member's accumulated contributions shall be paid to the member's estate.

8. Vested Allowance

Eligibility: Individuals who became members before July 1, 2012, are eligible once they have both separated from service and reached age 60 years. Individuals who become members on or after July 1, 2012, are eligible once they have separated from service, reached age 60 years, and earned five years of eligibility service. Also eligible are individuals who became members on or after July 1, 2012 who are required to retire due to mandatory retirement and have less than 5 years of service at that time, if they have an amount of eligibility service equal to constitutional mandatory retirement age minus the member's age when the individuals first become members of the System.

Allowance: Same as allowance payable at age 60.

In lieu of a deferred vested allowance pension, a former judge may elect to withdraw accumulated contributions following the judge's termination of service.

9. Cost-of-Living Adjustments (COLA)

Generally, allowances are recalculated each time the salary for a sitting judge from the Court from which the judge retired increases.

NOTE: Magistrates who retire from the Judges' Retirement System receive COLA allowances equal to the percentage increase in salary provided to judges of the Circuit Court.

10. Optional Forms of Payment

For survivor allowance payable to a member's surviving spouse, children under age 26, or disabled children, see Death Benefits section above. A judge or former judge, who at the time of retirement, does not have a spouse or child under the age of 18 years, may elect one of the following optional forms of payment:

- Option 1: Lump-sum equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.

Option 5: 100% “pop-up” joint and survivor annuity, which pays the designated beneficiary 100% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree’s spouse or disabled child.

Option 6: 50% “pop-up” joint and survivor annuity, which pays the designated beneficiary 50% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree.

A retiree who has elected one of these optional forms of allowance may not change the designated beneficiary.

LAW ENFORCEMENT OFFICERS’ PENSION SYSTEM

A COMPOSITE PICTURE

	20223	2022
Total Membership		
Active Vested	1,398	1,357
Active Non-Vested	1,479	1,379
Vested Former Members	313	295
Retired Members	2,512	2,393
Active Members		
Number	2,877	2,736
Average Age	40.7	40.9
Average Years of Service	10.5	10.7
Average Annual Salary	\$ 84,105	\$ 75,601
Retirees & Beneficiaries		
Number	2,512	2,393
Average Age	63.1	62.5
Average Monthly Benefit	\$ 3,300	\$ 3,207

A. PENSION PROVISIONS

1. Membership

Membership generally is a condition of employment for all law enforcement officers who are employees of the State as provided in SPP § 26-201, or whose employers are participating governmental units who elect to have their law enforcement officers or firefighters/paramedics participate in the Law Enforcement Officers’ Pension System.

2. Member Contributions

Members are required to contribute 7% of earnable compensation. Beginning July 1, 2020, no member contributions are required after 32 years and six months of service.

Contributions earn interest at 5% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 50.

4. Normal Service Retirement Allowance

Eligibility: 25 years of eligibility service or attainment of age 50.

Allowance: For individuals who became members on or before June 30, 2011, 2.0% of average final compensation for the three highest consecutive years as a member. For individuals who became members on or after July 1, 2011, 2.0% of average compensation for the five highest consecutive years as a member. For members who retired before July 1, 2018, the maximum benefit was 60% of average final compensation. For members who retire on or after July 1, 2018, the maximum benefit is 65% of average final compensation.

5. Early Retirement Allowance

Not applicable to the Law Enforcement Officers’ Retirement System.

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certifi-

cation of the medical board designated by the Board of Trustees that member is incapacitated for the performance of duty, and that incapacity is likely to be permanent.

Allowance: Service retirement allowance computed on the basis that service continues until age 50 without any change in rate of earnable compensation. If disability occurs after age 50, the benefit is based on creditable service at time of retirement.

Accidental

Eligibility: Total and permanent incapacity for duty as certified by the medical board arising out of or in the course of the actual performance of duty, without willful negligence.

Allowance: The benefit is 66.7% of average final compensation plus an annuity provided by accumulated member contributions. The maximum benefit cannot be greater than the average final compensation.

7. Death Benefits

Normal Death Benefit – Return of Accumulated Contributions

Eligibility: Death while employed as a member and less than one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

Normal Death Benefit – Return of Accumulated Contributions and Annual Earnable Compensation

Eligibility: Death while employed as a member and at least one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions and an amount equal to the member's annual earnable compensation at the time of death to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

Special Death Benefit For Death While Employed And Not In Performance Of Duty

Eligibility: Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 50% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

Special Death Benefit For Death In The Performance Of Duty

Eligibility: Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 66.67% of the member's average final compensation.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 66.67% of the member's average final compensation be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 66.67% of average

final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

Waiver of Special Death Benefit

Before the payment of any special death benefit is made under this section, if all individuals eligible for a special death benefit elect to waive the payment of the special death benefit, a normal death benefit is paid to the member's designated beneficiary, or otherwise to the member's estate.

Death Benefit For Vested Former Member

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

Eligibility: For individuals who are members on or before June 30, 2011, five years of eligibility service. For individuals who become members on or after July 1, 2011, 10 years of eligibility service.

Allowance: Accrued retirement allowance payable at age 50 if the member does not withdraw the member's accumulated member contributions.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1, for allowances which have been in payment for one year. Effective July 1, 2000, for an allowance based on creditable service earned before July 1, 2011, the adjustment is capped at a maximum 3% compounded and is applied to all allowances which have been in payment for one year.

For an allowance based on creditable service earned on or after July 1, 2011, the COLA adjustment is capped at 2.5% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was greater than or equal to the assumed

rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year. The adjustment is capped at 1% if, for the calendar year ending December 31 in the previous fiscal year, the several systems' total investment performance was less than the assumed rate of investment return established by the Board of Trustees and in effect as of December 31 of the preceding fiscal year.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

If, at the time of death, the retiree is married, the retiree's spouse is entitled to receive a survivor benefit consisting of 50% of the retiree's basic allowance. If there is no surviving spouse or upon the death of the surviving spouse, payment of the survivor benefit is divided equally among any children of the deceased retiree under the age of 26 years, until each child dies or becomes age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. If there is no spouse at time of retirement, member may select an optional allowance.

Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.

Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.

- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% “pop-up” joint and survivor annuity, which pays the designated beneficiary 100% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree’s spouse or disabled child.
- Option 6: 50% “pop-up” joint and survivor annuity, which pays the designated beneficiary 50% of the retiree’s reduced allowance after the retiree’s death or returns the retiree’s benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

11. Reduction for Benefits Payable under Workers’ Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers’ compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers’ compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Law Enforcement Officers’ Pension System retirees receiving an accidental disability pay-

ment are subject to an offset if they are getting a workers’ compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers’ compensation payments are subject to an offset by the Workers’ Compensation Commission if a recipient is receiving an ordinary disability payment from the Law Enforcement Officers’ Pension System for the same injury or illness. Any offset taken for an accidental disability from the Law Enforcement Officers’ Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree’s employer by the Workers’ Compensation Commission.

12. Deferred Retirement Option Plan (DROP)

Eligibility: Members are eligible to participate in the DROP if they have at least 25 and less than 30 years of creditable service.

Participation: An eligible member may participate in the DROP for the lesser of 5 years, the difference between 30 years and the member’s creditable service, or a term selected by the member. Participation also ends if the participant dies, is terminated from employment, accepts an accidental disability retirement allowance, or submits a binding letter of resignation or notice of intent to terminate employment. Members who participate in the DROP are retired and cease making member contributions, and cease accruing service credit and additional benefits.

Allowance: For members who entered the DROP on or before June 30, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 6% per year, compounded monthly. For members who enter DROP on or after July 1, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 4% per year, compounded annually. When the DROP period ends, members terminate employment and begin receiving their monthly allowance plus the lump sum payment from their DROP account. During the DROP period, members remain eligible for accidental disability benefits if incapacitated while in DROP.

B. Members Transferring from the Employees' Retirement System¹

1. Membership

The retirement tier was closed to new participants effective January 1, 2005.

2. Member Contributions

Members who transferred from Employees' Retirement System (Plan A) are required to contribute 7% of earnable compensation. Members who transferred from the Employees' Retirement System (Plan B) contribute 5% of earnable compensation.

Contributions earn interest at 4% per year, compounded annually, until retirement, withdrawal of accumulated contributions, death, or the end of membership for former members who are not entitled to receive a vested allowance.

3. Normal Retirement Age

Normal retirement age is age 50.

4. Normal Service Retirement Allowance

Eligibility: 25 years of eligibility service or attainment of age 50.

Allowance: 2.3% of average final compensation for the three highest years as a member for each of the first 30 years of creditable service, plus 1.0% of average final compensation for each additional year.

5. Early Retirement Allowance

Not applicable to this System.

6. Disability Retirement Allowance

Ordinary

Eligibility: Five years of eligibility service and certification of the medical board designated by the Board of Trustees that member is incapacitated for the performance of duty, and that incapacity is likely to be permanent.

Allowance: The greater of normal service retirement allowance or 25% of average final compensation.

Accidental

Eligibility: Total and permanent incapacity for duty as certified by the medical board arising out of or in the course of the actual performance of duty, without willful negligence.

Allowance: The benefit is 66.7% of average final compensation plus an annuity that is the actuarial equivalent of accumulated contributions. The maximum benefit cannot be greater than the average final compensation.

7. Death Benefits

Normal Death Benefit – Return of Accumulated Contributions

Eligibility: Death while employed as a member and less than one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

Normal Death Benefit – Return of Accumulated Contributions and Annual Earnable Compensation

Eligibility: Death while employed as a member and at least one year of eligibility service. A normal death benefit may not be paid if a special death benefit is paid for that death.

Benefit: Lump sum payment of member's accumulated member contributions and an amount equal to the member's annual earnable compensation at the time of death to the member's designated beneficiary or, if there is no designated beneficiary, to the member's estate.

¹ This section B outlines the provisions applicable to members of LEOPS who transferred from the Employees' Retirement System before January 1, 2005 and were subject to Selection A or Selection B and did not elect to participate in the contributory law enforcement officers' modified benefit.

Special Death Benefit For Death While Employed And Not In Performance Of Duty

Eligibility: Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions plus an allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 50% of the ordinary disability allowance the member would have received at the time of the member's death shall be made to the surviving spouse; however, if there is no surviving spouse or spouse dies before youngest child reaches age 26, 50% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

Special Death Benefit For Death In The Performance Of Duty

Eligibility: Death while employed as a member, without the member's willful negligence, and not in the performance of duty. The member is survived by a spouse, a child under the age of 26, a disabled child, or a dependent parent.

Benefit: Accumulated member contributions paid plus an allowance equal to 66.67% of the member's average final compensation.

Beneficiary: Payment of the member's accumulated member contributions shall be paid to the member's designated beneficiary, or otherwise to the member's estate. An allowance equal to 66.67% of the member's average final compensation be made to the surviving spouse; however, if there is no surviving spouse or spouse dies

before youngest child reaches age 26, 66.67% of average final compensation continues prorated equally among the eligible children. A child is eligible for a prorated share of the annuity until reaching age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. In cases where a deceased member is not survived by a spouse or children, payment is made to dependent parents. If none of the above conditions is met, the normal death benefit is paid to the designated beneficiary.

Waiver of Special Death Benefit

Before the payment of any special death benefit is made under this section, if all individuals eligible for a special death benefit elect to waive the payment of the special death benefit, a normal death benefit is paid to the member's designated beneficiary, or otherwise to the member's estate.

Death Benefit For Vested Former Member

If a member is not active, but is eligible for a vested allowance, the member's designated beneficiary or estate is eligible to receive only accumulated member contributions at time of death.

8. Vested Allowance

Eligibility: Five years of eligibility service and separation from employment other than by death or retirement.

Allowance: Service retirement allowance payable at normal retirement age if the member does not withdraw the member's accumulated member contributions.

9. Cost-of-Living Adjustments (COLA)

Retirement allowances may be adjusted each year based on the Consumer Price Index (CPI). Any COLAs are effective July 1, for all allowances which have been in payment for one year.

For an allowance for members that elected Selection A (contributing 7% of earnable compensation), uncapped COLA is compounded annually. For an allowance for members that elected Selection B (contributing 5% of earnable compensation), the COLA is capped at a maximum 5% compounded annually.

In years in which COLAs would be less than zero due to a decline in the CPI, retirement allowances will not be adjusted. COLAs in succeeding years are adjusted until

the difference between the negative COLA that would have applied and the zero COLA is fully recovered.

10. Optional Forms of Payment

If, at the time of death, the retiree is married, the retiree's spouse if entitled to receive a survivor benefit consisting of 50% of the retiree's basic allowance. If there is no surviving spouse or upon the death of the surviving spouse, payment of the survivor benefit is divided equally among any children of the deceased retiree under the age of 26 years, until each child dies or becomes age 26. If the child is disabled, the benefit will continue as long as the child remains disabled, regardless of age. If there is no spouse at time of retirement, member may select an optional allowance.

- Option 1: Lump-sum refund equal to excess of present value of basic retirement allowance at date of retirement minus total amount of payments made to date of death excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 2: 100% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 100% of the retiree's reduced allowance for the life of the designated beneficiary. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.
- Option 3: 50% joint and survivor annuity, which pays the retiree's surviving designated beneficiary 50% of the retiree's reduced allowance for the life of the designated beneficiary.
- Option 4: Lump-sum refund equal to value of accumulated member contributions minus total portion of monthly payments attributed to member contributions made to date of death, excluding any cost of living adjustments for retirees before July 1, 2017.
- Option 5: 100% "pop-up" joint and survivor annuity, which pays the designated beneficiary

100% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree. The designated beneficiary cannot be more than 10 years younger than the retiree unless the beneficiary is the retiree's spouse or disabled child.

- Option 6: 50% "pop-up" joint and survivor annuity, which pays the designated beneficiary 50% of the retiree's reduced allowance after the retiree's death or returns the retiree's benefit to the unreduced basic allowance if beneficiary predeceases retiree.

Retirees who have selected Options 2, 3, 5, or 6 and change their designated beneficiary after they retire, will have their retirement allowance re-calculated to reflect the age of the new designated beneficiary. Retirees who elect to change their beneficiary under Options 2, 3, 5, and 6, may rescind their request to change their designated beneficiary before the second monthly allowance is paid. Retirees who rescind the change of beneficiary, will have their benefit payment amount for the next payment restored to the amount paid before the change in beneficiary was made.

11. Reduction for Benefits Payable under Workers' Compensation

Disability retirement allowances, excluding annuity reserves, are reduced for workers' compensation benefits paid or payable after retirement from injury occurring during employment by the State if the workers' compensation benefits are for the same injury for which disability retirement was granted and are paid or payable for the same period of time for which the retirement benefits are paid. Law Enforcement Officers' Pension System retirees receiving an accidental disability payment are subject to an offset if they are getting a workers' compensation payment for the same injury or illness, subject to specified limits. Offsets do not include any calculation of cost-of-living benefits that are paid on the original benefit amount. Conversely, workers' compensation payments are subject to an offset by the Workers' Compensation Commission if a recipient is receiving an ordinary disability payment from the Law Enforcement Officers' Pension System for the same injury or illness. Any offset taken for an accidental disability from

the Law Enforcement Officers' Pension System will be adjusted if the retiree was originally awarded an ordinary disability retirement benefit that was later converted to an accidental disability benefit. The adjusted offset shall reflect any offset awarded to the retiree's employer by the Workers' Compensation Commission.

12. Deferred Retirement Option Program (DROP)

Eligibility: Members are eligible to participate in the DROP if they have at least 25 and less than 30 years of creditable service.

Participation: An eligible member may participate in the DROP for the lesser of 5 years, the difference between 30 years and the member's creditable service, or a term selected by the member. Participation also ends if the participant dies, is terminated from employment, accepts an accidental disability retirement allowance, or submits a binding letter of resignation or notice of intent to terminate employment. Members who participate in the DROP are retired and cease making member contributions, and cease accruing service credit and additional benefits.

Allowance: For members who entered the DROP on or before June 30, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 6% per year, compounded monthly. For members who enter DROP on or after July 1, 2011, the service retirement allowance, with annual COLAs, is credited to an account earning interest at the rate of 4% per year, compounded annually. When the DROP period ends, members terminate employment and begin receiving their monthly allowance plus the lump sum payment from their DROP account. During the DROP period, members remain eligible for Accidental Disability benefits if incapacitated while in DROP.

