



The following document was not prepared by the Office of the State Auditor, but was prepared by and submitted to the Office of the State Auditor by a private CPA firm. The document was placed on this web page as it was submitted. The Office of the State Auditor assumes no responsibility for its content or for any errors located in the document. Any questions of accuracy or authenticity concerning this document should be submitted to the CPA firm that prepared the document. The name and address of the CPA firm appears in the document.





## 2022 ANNUAL COMPREHENSIVE FINANCIAL REPORT

A Component Unit of the State of Mississippi | Fiscal Year Ended June 30





# 2022 Annual Comprehensive Financial Report

A Component Unit of the State of Mississippi  
Fiscal Year Ended June 30

PREPARED BY:

The Office of Administrative Services  
Public Employees' Retirement System of Mississippi

PERS Building  
429 Mississippi Street  
Jackson, MS  
39201-1005



This page intentionally left blank.

# Introduction

## Introduction



# Table of Contents

## INTRODUCTION

07	Letter of Transmittal
11	Organizational Chart
12	Board of Trustees
14	Outside Professional Services
15	Certificate of Achievement for Excellence in Financial Reporting
16	Public Pension Coordinating Council – Public Pension Standards Award

## FINANCIAL

### *Basic Financial Statements:*

17	Independent Auditor's Report
20	Management's Discussion & Analysis [unaudited]
28	Statement of Fiduciary Net Position
29	Statement of Changes in Fiduciary Net Position
30	Notes to Basic Financial Statements

### *Required Supplementary Information:*

51	Schedule of Changes in the Net Pension Liability & Related Ratios
54	Schedule of Employer Contributions – Last 10 Fiscal Years
55	Schedule of Investment Returns – Last 10 Fiscal Years
55	Schedule of Proportionate Share of the Net OPEB Liability
55	Schedule of Employer Contributions for OPEB – Last 10 Fiscal Years
56	Notes to Required Supplementary Schedules

### *Supplementary Information:*

59	Schedule 1 – Administrative Expenses & Depreciation
60	Schedule 2 – Investment Managers' Fees, Investment Global Out-of-Pocket Fees, & Professional Service Fees
61	Schedule 3 – Net Position Restricted for Pension Benefits – MRS Plans

## INVESTMENT

### *Defined Benefit Plans:*

63	Chief Investment Officer Report
65	Investment Consultant Report
66	Report on Investments
73	Asset Allocation, Target Asset Allocation
73	Performance Summary
74	Ten-Year Total Pension Investment Rates of Return
75	Net Investment Income by Source – Last 10 Fiscal Years
76	Investment Summary
77	Non-US Investments by Country
78	Equity Portfolio Summary
78	Equity Portfolio by Industry Type
78	Ten Largest Equity Holdings
78	Private Equity Portfolio Summary
78	Private Equity Portfolio by Strategy
78	Private Equity Portfolio by Industry Type
79	Bond Portfolio Summary
79	Corporate Bond Investments by Industry Type
79	Ten Largest Long-Term Corporate Bond Holdings
80	Real Estate Investment Portfolio Summary
80	Portfolio Distribution by Property Type
80	Ten Largest REIT Holdings
80	Portfolio Distribution by Geographic Location
81	Portfolio Detail Illustrated by Investment Manager
83	Investment Fees & Commissions
83	Brokerage Commissions Paid

## ACTUARIAL

85	Actuary's Certification Letter - PERS
87	Actuary's Certification Letter - MHSPRS
89	Actuary's Certification Letter - SLRP
91	Actuary's Certification Letter - MRS
93	Summary of Actuarial Assumptions & Methods
94	Statement of Actuarial Assumptions & Methods - PERS
96	Statement of Actuarial Assumptions & Methods - MHSPRS
98	Statement of Actuarial Assumptions & Methods – SLRP
100	Statement of Actuarial Assumptions & Methods – MRS
101	Summary of Main System Provisions as Interpreted for Valuation Purposes - PERS
106	Summary of Main System Provisions as Interpreted for Valuation Purposes - MHSPRS
110	Summary of Main System Provisions as Interpreted for Valuation Purposes - SLRP
114	Summary of Main System Provisions as Interpreted for Valuation Purposes - MRS
117	Changes in Plan Provisions
117	Asset Valuation & Funding Progress
119	Schedules of Funding Progress – Last 10 Fiscal Years
120	Solvency Tests
121	Analysis of Financial Experience
122	Schedule of Active Member Valuation Data
123	Schedule of Retirants Added to & Removed from Rolls – Last 10 Fiscal Years

## STATISTICAL

125	Statistical Report
126	Changes in Net Position – Last 10 Fiscal Years
130	Benefit & Refund Payments by Type – Last 10 Fiscal Years
134	Average Benefit Payments
138	Retired Members by Type of Benefit
141	Analysis of Employer & Member Contributions
142	Total Active Members by Attained Age & Years of Service
144	System Benefit Payments by County
145	Ten Largest Participating Employers
146	Public Agencies Covered by State Retirement Annuity



Providing Benefits for Life

Board of Trustees  
Public Employees' Retirement System  
429 Mississippi Street  
Jackson, MS 39201-1005

December 20, 2022

Dear Board Members:

It is my pleasure to present the 2022 *Annual Comprehensive Financial Report* (ACFR) of the Public Employees' Retirement System. We take our role to heart as a fiduciary for this System and remain vigilant and resourceful in honoring the commitment to our membership. I join with the PERS team as we dedicate ourselves to serving our teachers, law enforcement officers, healthcare workers, and many other public servants who make up the membership of our System.

This ACFR is a presentation of the financial results of the System as of June 30, 2022. We believe this information is useful for transparency and perspective over the long term. We trust you and other members will find this ACFR helpful in understanding your retirement system.

#### PROFILE OF THE SYSTEM

The System was established to provide retirement benefits for all state and public education employees, officers of the Mississippi Highway Safety Patrol, elected members of the State Legislature, the President of the Senate, and other public employees of participating employers. Plans administered by the System include: The Public Employees' Retirement System of Mississippi (PERS), which was established by legislation in 1952; the Mississippi Highway Safety Patrol Retirement System (MHSPRS), established in 1958; the Supplemental Legislative Retirement Plan (SLRP), established in 1989; and the Municipal Retirement Systems (MRS), which came under the System's administration in 1987. As of June 30, 2022, the System's defined benefit plans served a total of 353,006 members, including 116,921 retirees and beneficiaries. There are 878 participating employers from across the state. Primary sources of funding for the System include employer contributions, member contributions, and investment income. Retirement benefits paid during the fiscal year totaled \$3.2 billion. Employers contributed \$1.2 billion during the fiscal year, while members of the System contributed a total of \$618 million. As of June 30, 2022, net position restricted for pension benefits totaled \$31.3 billion.

H. Ray Higgins, Jr.  
*Executive Director*

*Board of Trustees:*

Bill Benson  
*County Employees,  
Chair*

Kimberly Hanna  
*Municipal Employees,  
Vice Chair*

Kelly Breland  
*State Employees*

George Dale  
*Retirees*

Chris Howard  
*State Employees*

Chris Graham  
*Gubernatorial  
Appointee*

Randy D. McCoy  
*Retirees*

David McRae  
*State Treasurer*

Brian Rutledge  
*Institutions of  
Higher Learning  
Employees*

Jay Smith  
*Public Schools  
Community/Jr. Colleges*

Public Employees' Retirement System of Mississippi

429 Mississippi Street, Jackson, MS 39201-1005 601.359.3589 800.444.PERS [www.pers.ms.gov](http://www.pers.ms.gov)

The System is administered by a 10-member Board of Trustees that includes: The State Treasurer; one gubernatorial appointee who is a member of PERS; two state employees; two PERS retirees; and one representative each from public schools and community colleges, state universities, municipalities, and counties. Apart from the State Treasurer and the gubernatorial appointee, all members are elected to staggered six-year terms by the constituents they represent. The Board of Trustees is responsible for the general administration and proper operation of the System. The Executive Director is designated by the Board to lead and conduct all business for the System. The Public Employees' Retirement System of Mississippi operates under legislative mandate with respect to administrative budgets, human resources, and purchasing guidelines. The System is considered a blended component unit of the State of Mississippi for financial reporting purposes and, as such, the financial statements contained in this report are included in the State of Mississippi's Annual Comprehensive Financial Report.

Annual budgets are legally adopted for the administrative expenditure portion of the System's operations and are funded by earnings of the System. A budget request is approved by the Board of Trustees and submitted to the State Legislature, which legally enacts the budget in the form of an appropriation bill during the subsequent legislative session. Changes may be made in budget categories, consistent with legislative authority. A more detailed discussion of the budgetary process is presented in the Financial Section of this ACFR on page 34.

## FINANCIAL INFORMATION

Our staff issues an ACFR within six months of the close of each fiscal year. The report contains basic financial statements presented in conformity with generally accepted accounting principles and audited in accordance with generally accepted auditing standards, as well as standards applicable to financial audits contained in government auditing standards. The 2022 independent audit was conducted by Eide Bailly LLP, a firm of licensed certified public accountants. The Independent Auditors' Report is presented in the Financial Section on pages 17 through 19.

This ACFR consists of management's representations concerning the finances of the System. Consequently, management assumes full responsibility for the completeness and reliability of all information presented in this report. A framework of internal controls is designed to establish reasonable assurance that assets are safeguarded, transactions are accurately executed, and financial statements are fairly presented in accordance with generally accepted accounting principles. The concept of reasonable assurance recognizes that the cost of a control should not appreciably exceed the benefits likely to be derived and that the analysis of costs and benefits requires estimates and professional judgments by management. The System maintains written policies and procedures and an internal audit function. The internal audit department makes recommendations for improvements in controls and operating efficiency. Management's Discussion and Analysis (MD&A) immediately follows the Independent Auditors' Report and provides a narrative introduction, overview, and analysis of the basic financial statements. MD&A complements, and should be read in conjunction with, this letter of transmittal.

## INVESTMENT INFORMATION

The Board of Trustees continues to focus on an investing approach that emphasizes a diversified portfolio of securities invested over a long-time horizon, which moderates the effects of a changing economic environment. The portfolio is broadly diversified among cash equivalents, equities, debt securities, real estate, and private equity with additional variation through domestic and international investing. Our asset allocation policy is tactically balanced to provide an expected level of return while minimizing risk, which over time will fund the liabilities of the System, given an adequate contribution rate expressed as a percent of payroll. This year the System posted a gross rate of return on investments of negative 8.54 percent as measured on June 30, 2022.



Callan LLC is employed by the Board of Trustees as the System's investment consultant. Services include calculating investment returns for both the total fund and for each of the investment managers retained to invest the System's assets. All returns are calculated using a time-weighted rate of return methodology based on portfolio fair values determined by the System's custodial bank. Additional information regarding the System's investment holdings and performance may be found in the Financial and Investment Sections of this report.

## FUNDING INFORMATION

PERS continues to operate under the funding policy initially adopted in June 2018. The goals of the funding policy include an increasing funded ratio over the projection period, with an ultimate goal of 100% funding and contribution stability as a percent of payroll.

The information in this year's ACFR is based on the actuarial valuation reports as of June 30, 2021, which were presented to and approved by the PERS Board in December 2021. The PERS valuation was based on certain changes in assumptions, as approved by the Board in August 2021, including but not limited to a decrease in the assumed investment rate of return from 7.75 percent to 7.55 percent and a change to recently published mortality tables that more closely match the System's experience. After incorporating the 2021 investment return, which is smoothed over 5 years, and the actuarial assumption changes, the funded ratio increased from 60.5 percent to 61.3 percent. More detail specific to the PERS plan and funding, as well as for MHSPRS, SLRP, and MRS, is provided in the footnotes to the financial statements and in the actuarial sections of this report.

## 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 System for its comprehensive annual financial report for the fiscal year ended June 30, 2021. The Certificate of Achievement is a prestigious national award, recognizing conformance with the highest standards for preparation of state and local government financial reports.

To be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized annual comprehensive financial report with contents that conform to program standards. Such financial reports must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of only one year. The System has received a Certificate of Achievement for the last 35 consecutive years. We believe our current report continues to conform to the Certificate of Achievement Program's requirements, and we are submitting it to GFOA for evaluation.

The Public Employees' Retirement System of Mississippi's submission of a Popular Annual Financial Report to the GFOA resulted in an Award for Outstanding Achievement in Popular Annual Financial Reporting for the fiscal year ended June 30, 2021. To receive an Award for Outstanding Achievement in Popular Annual Financial Reporting, a government unit must publish a popular annual financial report with contents that conform to program standards of creativity, presentation, understandability, and reader appeal. An Award for Outstanding Achievement in Popular Annual Financial Reporting is valid for a period of one year. The Public Employees' Retirement System of Mississippi has received a Popular Award certificate for the last 18 consecutive fiscal years. We believe our current report continues to conform to the Popular Annual Financial Reporting requirements, and we are submitting it to GFOA for consideration this year.

The Public Employees' Retirement System received the Public Pension Coordinating Council's (PPCC) Public Pension Standards 2022 Award in recognition of meeting professional standards for plan design and administration. The PPCC is a national confederation of state retirement associations whose standards are widely recognized benchmarks for public pension systems in the areas of plan design, funding, actuarial, and financial audits, as well as member communications.

## CONCLUSION

This report is a product of the combined efforts of the System's staff and advisors functioning under your leadership and is intended to provide extensive and reliable information as a basis for making management decisions, determining compliance with legal provisions, and determining responsible stewardship for the assets contributed by the System's members and employers. This report is available to the Governor, members of the Mississippi Legislature, State Auditor, and all member agencies via our website, [www.pers.ms.gov](http://www.pers.ms.gov). These agencies form the link between the System and its members, whose cooperation contributes significantly to our success. I hope all stakeholders of the System will find this report informative and useful.

My deepest thanks go to you, our team of staff professionals, the advisors, and others who have worked so diligently as we partner together in the enduring commitment to serve the members and retirees of the Public Employees' Retirement System.

I remain humbled and honored to serve as your Executive Director and I look forward to working together in the future as we continue to move the System forward.

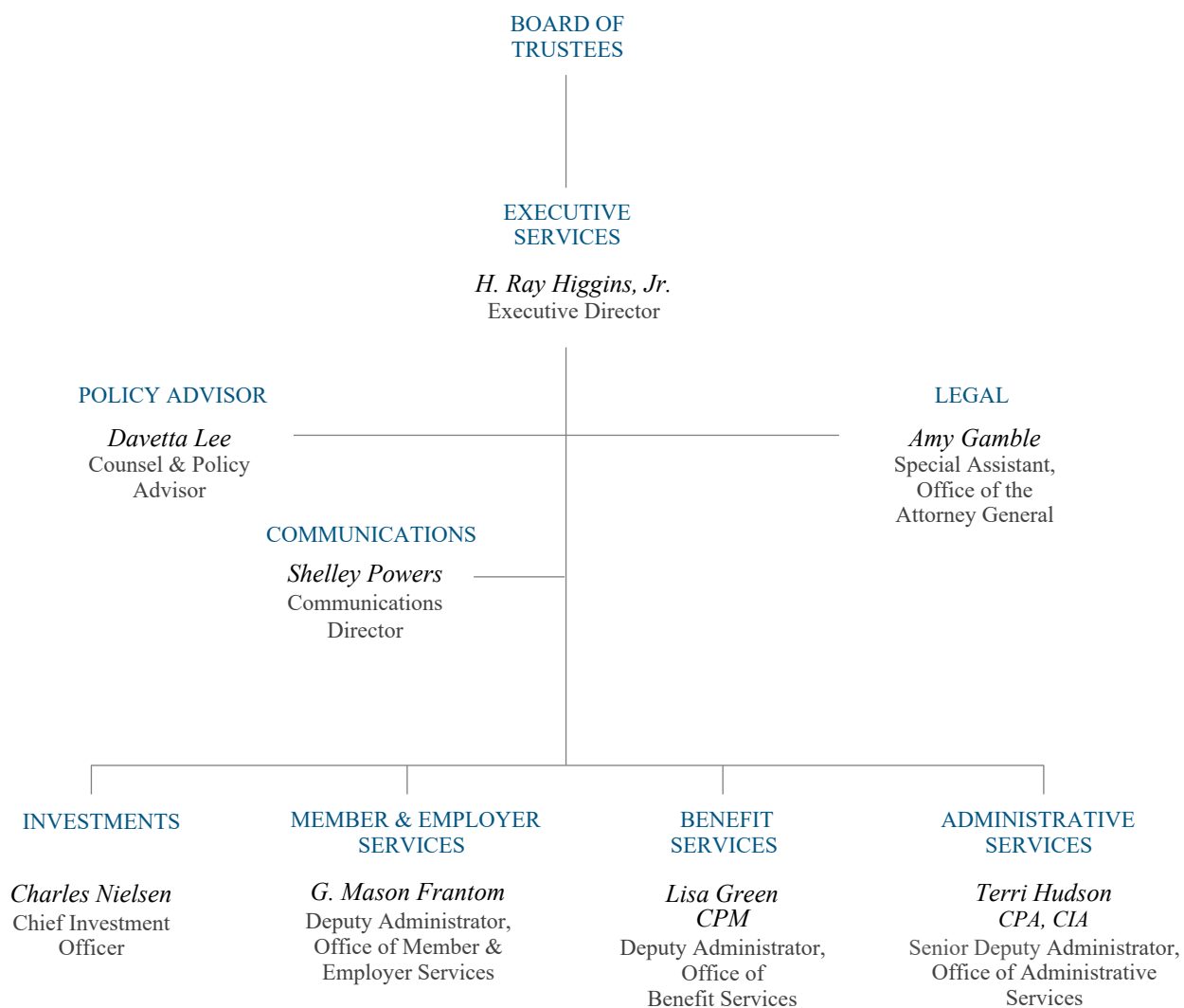
Respectfully submitted,



H. Ray Higgins, Jr.  
Executive Director



## Organizational Chart



## 2022 Board of Trustees

The Board of Trustees of the Public Employees' Retirement System of Mississippi (PERS) is responsible for designating the System's executive director and for establishing the policies for administration of the trust. The Board also works to carry out the intent and purposes of the state Legislature by establishing rules and regulations for the administration of PERS and the transaction of its business.

**CHAIR** Randy McCoy, Ed.D. *Elected by Retirees*

Term of Service: July 2019 - June 2025

**VICE CHAIR** Bill Benson *Elected by County Employees*

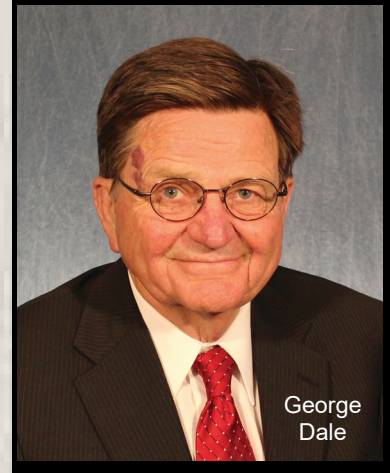
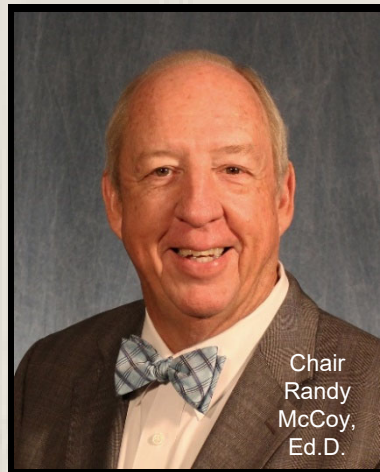
Term of Service: January 2022 - December 2027

**Kelly Breland** *Elected by State Employees*

Term of Service: January 2019 - December 2024

**George Dale** *Elected by Retirees*

Term of Service: May 2017 - April 2023





**Chris Graham** *Gubernatorial Appointee*  
Term of Service: April 2021 – April 2024

**Kimberly Hanna** *Elected by Municipal Employees*  
Term of Service: January 2021 - December 2026

**Chris Howard** *Elected by State Employees*  
Term of Service: July 2020 - June 2026

**David McRae** *State Treasurer*  
Term of Service: January 2020 – January 2024

**Brian Rutledge, Ph.D.** *Elected by Institutions of Higher Learning Employees*  
Term of Service: January 2017 - December 2022

**Jay Smith, Ph.D.** *Elected by Public School and Community/Junior College Employees*  
Term of Service: May 2022 - April 2028



## Outside Professional Services

### ACTUARY

Cavanaugh Macdonald Consulting, LLC

### AUDITOR

Eide Bailly LLP

### INVESTMENT FUNDS CUSTODIAN

Bank of New York Mellon

### INVESTMENT MANAGEMENT CONSULTANT

Callan LLC

### INVESTMENT MANAGERS

#### EQUITY MANAGERS

Acadian Asset Management, LLC  
Arrowstreet Capital, LP  
Artisan Partners, LP  
Baillie Gifford & Company  
Dimensional Fund Advisors, Inc.  
Eagle Capital Management, LLC  
Epoch Investment Partners, Inc.  
Fisher Investments  
Harding Loevner, LP  
Lazard Asset Management, LLC  
Marathon Asset Management, LLP  
Mondrian Investment Partners, Limited  
Northern Trust Investments, Inc.  
Principal Global Investors, LLC  
Riverbridge Partners, LLC  
Wellington Management Company, LLP

#### DEBT MANAGERS

AllianceBernstein, LP  
Loomis Sayles & Company, LP  
Manulife Asset Management, LLC  
Northern Trust Investments, Inc.  
Pacific Investment Management Company  
Prudential Financial, Inc.  
Wellington Management Company, LLP

#### PRIVATE EQUITY MANAGERS

GCM Grosvenor Diversified Partners, LP  
Pathway Capital Management, LLC

### REAL ESTATE MANAGERS

AEW Capital Management, LP  
Angelo, Gordon & Company  
CenterSquare Investment Management  
Cohen & Steers Capital Management, Inc.  
Heitman, LLC  
Invesco, LP  
J.P. Morgan Investment Management, Inc.  
Manulife Investment Management  
Principal Global Investors, LLC  
T.A. Associates Realty  
UBS Realty Investors, LLC  
Westbrook Partners

### LEGAL COUNSEL

Office of the Attorney General  
Amy Gamble, Special Assistant

Ice Miller  
Chapman & Cutler, LLP

*Additional information on investment professional fees can be found on pages 60 and 82.  
Information on commissions is also found on page 82.*



Government Finance Officers Association

Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting

Presented to

**Public Employees' Retirement System of Mississippi**

For its Annual Comprehensive  
Financial Report  
For the Fiscal Year Ended

June 30, 2021

*Christopher P. Morrell*

Executive Director/CEO



Public Pension Coordinating Council

***Public Pension Standards Award  
For Funding and Administration  
2022***

Presented to

**Public Employees' Retirement System of Mississippi**

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'.

Alan H. Winkle  
Program Administrator





Financial

Financial



## **Independent Auditor's Report**

To the Board of Trustees  
Public Employees' Retirement System of Mississippi  
Jackson, Mississippi

### **Report on the Audit of the Financial Statements**

#### ***Opinion***

We have audited the financial statements of the Public Employees' Retirement System of Mississippi (the System) as of and for the year ended June 30, 2022, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

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

#### ***Basis for Opinion***

We conducted our audit 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 (*Government Auditing Standards*). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the System and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit 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.

What inspires you, inspires us. | [eidebailly.com](http://eidebailly.com)

877 W. Main St., Ste. 800 | Boise, ID 83702-5858 | T 208.344.7150 | F 208.344.7435 | EOE

### ***Auditor's Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our 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.

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

### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 20-26 and the required supplementary information on pages 51-58 be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.



### ***Supplementary Information***

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the System's basic financial statements. The additional supplementary information including the Schedule of Administrative Expenses and Depreciation, Schedule of Investment Managers' Fees, Investment Global Out-of-Pocket-Fees, and Professional Service Fees, and Schedule of Net Position Restricted for Benefits – MRS Plans (Supplementary Information) is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the accompanying financial information listed as supplemental schedules are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

### ***Other Information***

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

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

### ***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated December 1, 2022 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.



Boise, Idaho  
December 1, 2022

## Management's Discussion & Analysis

[unaudited]

This section presents management's discussion and analysis of the Public Employees' Retirement System of Mississippi's (System) financial position and performance for the year ended June 30, 2022. This section is presented as a narrative overview and analysis in conjunction with the Letter of Transmittal included in the Introductory Section, the financial statements, and other information presented in the Financial Section of this *Annual Comprehensive Financial Report*.

The System is responsible for administering retirement benefits for all state and public education employees, sworn officers of the Mississippi Highway Safety Patrol, other public employees whose employers have elected to participate, and elected members of the State Legislature, as well as the President of the Senate. The System is comprised of four defined benefit pension plans: the Public Employees' Retirement System of Mississippi (PERS), the Mississippi Highway Safety Patrol Retirement System (MHSPRS), the Supplemental Legislative Retirement Plan (SLRP), and the Municipal Retirement Systems (MRS). Throughout this discussion and analysis, units of measure (i.e., billions, millions, and thousands) are approximate, being rounded up or down to the nearest tenth of the respective unit value.

The System also oversees two other plans: the Mississippi Government Employees' Deferred Compensation Plan & Trust (MDC) which is a voluntary supplemental retirement savings plan, and the Optional Retirement Plan (ORP), which is offered as an alternative to PERS to certain employees of the state's institutions of higher learning. As explained in Note 1 to the basic financial statements, MDC and ORP are not part of the System's reporting entity.

### Overview of the Financial Statements

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

1. Basic financial statements;
2. Notes to the basic financial statements;
3. Required supplementary information; and
4. Other supplementary schedules.

Collectively, this information presents the net position restricted for pension benefits for each of the funds administered by the System as of June 30, 2022. This financial information also summarizes changes in net position restricted for pension benefits for the year then ended. The information in each of these components is briefly summarized as follows:

### 1. BASIC FINANCIAL STATEMENTS

The June 30, 2022, financial statements are presented for the fiduciary funds administered by the System. Fiduciary funds are used to account for resources held for the benefit of parties outside of the System. Fiduciary funds include the PERS, MHSPRS, SLRP, and MRS pension trust funds. A Statement of Fiduciary Net Position and a Statement of Changes in Fiduciary Net Position are presented for the fiduciary funds as of and for the year ended June 30, 2022. These financial statements reflect the resources available to pay benefits to members, including retirees and beneficiaries, as of year end, as well as the changes in those resources during the year.

### 2. NOTES TO THE BASIC FINANCIAL STATEMENTS

The notes to the financial statements provide additional information essential to a full understanding of the data provided in the basic financial statements. Information in the notes to the basic financial statements is described as follows:

- » Note 1 provides a general description of the System, as well as a concise description of each of the funds administered by the System. Information regarding employer and member participation in the pension plans administered by the System also is provided.
- » Note 2 provides a summary of significant accounting policies, including the basis of accounting, management's use of estimates, and other significant accounting policies.
- » Note 3 describes investments, including investing authority and policies, fair value measurement, investment risk discussion, and additional information about cash, derivatives, and securities lending.

- » Note 4 provides a summary of the capital assets of the System, including depreciation and net holding amounts.
- » Note 5 provides information about the net pension liability of employers in the defined benefit plans administered by the System.
- » Note 6 provides information about contributions to the defined benefit plans administered by the System.
- » Note 7 provides information about System employees as members of PERS.
- » Note 8 provides information about postemployment benefits other than pensions.

### 3. REQUIRED SUPPLEMENTARY INFORMATION

The required supplementary information consists of this management's discussion and analysis, schedules of changes in the net pension liability and related ratios, schedule of employer contributions, schedule of investment returns, and related notes concerning accounting and financial reporting information for the defined benefit pension plans administered by the System. Also included are the schedule of proportionate share of the net Other Post Employee Benefits (OPEB) liability and the schedule of employer contributions for OPEB and related notes.

### 4. OTHER SUPPLEMENTARY SCHEDULES

Other schedules include detailed information on administrative expenses incurred by the System, investment and other professional service expenses incurred, as well as the net positions for the individual municipal retirement plans.

## Financial Highlights

The combined net position of all the defined benefit plans administered by the System decreased by \$4.5 billion, or 12.6 percent. This decrease was primarily the result of the fiscal year 2022 investment performance.

The defined benefit plan's 2022 rate of return on investments was (8.54) percent, compared to the prior fiscal year's 32.71 percent rate of return. Domestic, global, and international equity portfolios returned (14.29) percent, (18.73) percent, and (22.24) percent, respectively, while the return on fixed income debt securities was (11.49) percent. The rate of return on real estate investments was 22.82 percent, and the rate of return on the private equity portfolio was 26.03 percent.

The PERS, MHSPRS, and SLRP defined benefit plans administered by the System had a Net Pension Liability of \$20.6 billion, \$177.0 million, and \$5.0 million, respectively. The ratios of fiduciary net position to total pension liability were 59.9 percent, 69.6 percent, and 80.8 percent, respectively.



Fiduciary Net Position—Defined Benefit Plans  
As of June 30, 2022 & June 30, 2021

[in thousands]

	PERS		MHSPRS		SLRP	
	2022	2021	2022	2021	2022	2021
<i>Assets:</i>						
Cash, Cash equivalents, & Receivables	\$1,897,729	\$1,679,249	\$23,521	\$19,526	\$1,141	\$938
Investments at Fair Value	30,427,376	34,626,926	402,148	458,941	20,014	22,734
Invested Securities Lending Collateral	2,154,687	2,743,675	28,478	36,364	1,417	1,801
Capital Assets	12,975	13,169	-	-	-	-
<b>Total Assets</b>	<b>34,492,767</b>	<b>39,063,019</b>	<b>454,147</b>	<b>514,831</b>	<b>22,572</b>	<b>25,473</b>
<b>Deferred Outflows of Resources</b>	<b>181</b>	<b>219</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<i>Liabilities:</i>						
Investment Accounts & Other Payables	1,544,480	1,123,565	20,266	14,759	1,014	734
Securities Lending Liability	2,157,042	2,722,859	28,509	36,088	1,419	1,788
<b>Total Liabilities</b>	<b>3,701,522</b>	<b>3,846,424</b>	<b>48,775</b>	<b>50,847</b>	<b>2,433</b>	<b>2,522</b>
<b>Deferred Inflows of Resources</b>	<b>310</b>	<b>217</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net Position Restricted for Pension Benefits</b>	<b>\$30,791,116</b>	<b>\$35,216,597</b>	<b>\$405,372</b>	<b>\$463,984</b>	<b>\$20,139</b>	<b>\$22,951</b>

	MRS		Total Defined Benefit Pension Plan		Total Percent Change
	2022	2021	2022	2021	
<i>Assets:</i>					
Cash, Cash equivalents, & Receivables	\$7,736	\$7,806	\$1,930,127	\$1,707,519	13.04%
Investments at Fair Value	130,540	156,734	30,980,078	35,265,335	(12.15)
Invested Securities Lending Collateral	9,244	12,419	2,193,826	2,794,259	(21.49)
Capital Assets	-	-	12,975	13,169	(1.47)
<b>Total Assets</b>	<b>147,520</b>	<b>176,959</b>	<b>35,117,006</b>	<b>39,780,282</b>	<b>(11.72)</b>
<b>Deferred Outflows of Resources</b>	<b>-</b>	<b>-</b>	<b>181</b>	<b>219</b>	<b>(17.35)</b>
<i>Liabilities:</i>					
Investment Accounts & Other Payables	6,589	5,062	1,572,349	1,144,120	37.43
Securities Lending Liability	9,254	12,325	2,196,224	2,773,060	(20.80)
<b>Total Liabilities</b>	<b>15,843</b>	<b>17,387</b>	<b>3,768,573</b>	<b>3,917,180</b>	<b>(3.79)</b>
<b>Deferred Inflows of Resources</b>	<b>-</b>	<b>-</b>	<b>310</b>	<b>217</b>	<b>42.86</b>
<b>Net Position Restricted for Pension Benefits</b>	<b>\$131,677</b>	<b>\$159,572</b>	<b>\$31,348,304</b>	<b>\$35,863,104</b>	<b>(12.59)%</b>

Changes in Fiduciary Net Position—Defined Benefit Plans  
For the Years Ended June 30, 2022 & June 30, 2021

[in thousands]

	PERS		MHSPRS		SLRP	
	2022	2021	2022	2021	2022	2021
<i>Additions:</i>						
Contributions	\$1,826,425	\$1,764,555	\$21,832	\$21,941	\$852	\$849
Investment Income/(Loss)	(2,980,325)	8,736,632	(39,468)	115,761	(1,964)	5,732
Other Additions	10	6	-	-	-	-
<b>Total Additions/(Losses):</b>	<b>(1,153,890)</b>	<b>10,501,193</b>	<b>(17,636)</b>	<b>137,702</b>	<b>(1,112)</b>	<b>6,581</b>
<i>Deductions:</i>						
Pension Benefits	3,134,859	2,995,255	40,522	37,433	1,687	1,608
Refunds to Terminated Employees	120,807	101,044	135	67	-	5
Administrative Expenses	15,925	15,691	319	320	13	12
<b>Total Deductions</b>	<b>3,271,591</b>	<b>3,111,990</b>	<b>40,976</b>	<b>37,820</b>	<b>1,700</b>	<b>1,625</b>
<b>Net Increase/(Decrease)</b>	<b>(4,425,481)</b>	<b>7,389,203</b>	<b>(58,612)</b>	<b>99,882</b>	<b>(2,812)</b>	<b>4,956</b>
<b>Net Position, Beginning of Year</b>	<b>35,216,597</b>	<b>27,827,394</b>	<b>463,984</b>	<b>364,102</b>	<b>22,951</b>	<b>17,995</b>
<b>Net Positions Restricted for Pension Benefits</b>	<b>\$30,791,116</b>	<b>\$35,216,597</b>	<b>\$405,372</b>	<b>\$463,984</b>	<b>\$20,139</b>	<b>\$22,951</b>

	MRS		Total Defined Benefit Pension Plan		Total Percent Change
	2022	2021	2022	2021	
<i>Additions:</i>					
Contributions	\$15,741	\$14,907	\$1,864,850	\$1,802,252	3.47%
Investment Income/(Loss)	(12,812)	39,519	(3,034,569)	8,897,644	(134.11)
Other Additions	-	-	10	6	66.67
<b>Total Additions/(Losses):</b>	<b>2,929</b>	<b>54,426</b>	<b>(1,169,709)</b>	<b>10,699,902</b>	<b>(110.93)</b>
<i>Deductions:</i>					
Pension Benefits	30,509	31,336	3,207,577	3,065,632	4.63
Refunds to Terminated Employees	-	-	120,942	101,116	19.61
Administrative Expenses	315	299	16,572	16,322	1.53
<b>Total Deductions</b>	<b>30,824</b>	<b>31,635</b>	<b>3,345,091</b>	<b>3,183,070</b>	<b>5.09</b>
<b>Net Increase/(Decrease)</b>	<b>(27,895)</b>	<b>22,791</b>	<b>(4,514,800)</b>	<b>7,516,832</b>	<b>(160.06)%</b>
<b>Net Position, Beginning of Year</b>	<b>159,572</b>	<b>136,781</b>	<b>35,863,104</b>	<b>28,346,272</b>	<b>26.52 %</b>
<b>Net Positions Restricted for Pension Benefits</b>	<b>\$131,677</b>	<b>\$159,572</b>	<b>\$31,348,304</b>	<b>\$35,863,104</b>	<b>(12.59)%</b>

## *Analysis of Individual Systems*

### **PUBLIC EMPLOYEES' RETIREMENT SYSTEM**

PERS is a defined benefit cost-sharing plan that provides retirement benefits to all eligible state of Mississippi public employees, public education employees, other public employees whose employers have elected to participate, elected members of the state Legislature, and President of the Senate. Benefits of the plan are funded by member and employer contributions and earnings on investments. Net position restricted for pension benefits at June 30, 2022, amounted to \$30.8 billion, a decrease of \$4.4 billion or 12.5 percent compared to the prior fiscal year end.

Additions to PERS' net position include employer and member contributions of \$1.8 billion and a net investment loss of \$3.0 billion. While contributions were consistent with the prior year, net investment income decreased by \$11.7 billion due to market performance.

Deductions from PERS' net position restricted for pension benefits include retirement and beneficiary benefits, refunds to terminated employees, and administrative expenses. For the 2022 fiscal year, benefit payments amounted to \$3.1 billion, an increase of \$140 million or 4.7 percent over the prior fiscal year. The increase is due to an increase in the number of benefit recipients, higher initial benefits to new retirees, and increased cost-of-living adjustments. This increase in benefit payments is consistent with recent trends. The cost of administering the System for fiscal year 2022, including depreciation expense, amounted to \$15.9 million for an increase compared to the prior fiscal year of \$234 thousand. Administrative expenses accounted for 0.49 percent of total deductions.

At June 30, 2022, PERS employers' total pension liability was \$51.4 billion. The plan fiduciary net position was \$30.8 billion, resulting in a net pension liability of \$20.6 billion. The plan fiduciary net position as a percentage of the total pension liability decreased from 70.4 percent to 59.9 percent as a result of investment performance using Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans*, measurements.

### **MISSISSIPPI HIGHWAY SAFETY PATROL RETIREMENT SYSTEM**

MHSPRS provides retirement benefits to sworn officers of the Mississippi Highway Safety Patrol. Benefits of the plan are funded by member and employer contributions and by earnings on investments. MHSPRS' net position restricted for pension benefits at June 30, 2022, amounted to \$405.0 million, a decrease of \$58.6 million or 12.6 percent compared to the prior fiscal year end.

Additions to MHSPRS' net position restricted for pension benefits include employer and member contributions and investment income. For the 2022 fiscal year, employer and member contributions combined were \$21.8 million, a decrease of \$109.0 thousand. Motor vehicle fees of \$3.1 million and driver's license reinstatement fees of \$436.0 thousand were included in 2022 employer contributions. For the fiscal year ended June 30, 2022, there was a net investment loss of \$39.5 million, a decrease in investment earnings of \$155.2 million from the prior year due to market performance.

Deductions from MHSPRS' net position restricted for pension benefits primarily include retirement and beneficiary benefits. For the 2022 fiscal year, benefit payments amounted to \$40.5 million, an increase of \$3.0 million or 8.3 percent over the prior fiscal year. For the 2022 fiscal year, MHSPRS transferred \$319 thousand to PERS to offset the cost of administration.

At June 30, 2022, MHSPRS employers' total pension liability was \$581.9 million. The plan fiduciary net position was \$405.4 million, resulting in a net pension liability of \$176.5 million. The plan fiduciary net position as a percentage of the total pension liability was 69.7 percent using GASB Statement No. 67 measurements.

### **SUPPLEMENTAL LEGISLATIVE RETIREMENT PLAN**

SLRP provides supplemental retirement benefits to all elected members of the state Legislature and President of the Senate. Benefits of the plan are funded by member and employer contributions and by earnings on investments. The plan's net position restricted for pension benefits at June 30, 2022, amounted to \$20.1 million, a decrease of \$2.8 million or 12.3 percent from the prior fiscal year.

Additions to SLRP's net position restricted for pension benefits include employer and member contributions and investment income. For the 2022 fiscal year, employer and member contributions were \$852.0 thousand, an increase of \$3.0 thousand or .35 percent from those of the prior fiscal year. SLRP had net investment loss for the 2022 fiscal year of \$2.0 million for a decrease of \$7.7 million from the prior year, due to market performance.

Deductions from SLRP's net position restricted for pension benefits primarily include retirement and beneficiary benefits. For the 2022 fiscal year, benefit payments amounted to \$1.7 million. For the 2022 fiscal year, SLRP transferred \$13.0 thousand to PERS to offset the cost of administration.

At June 30, 2022, the SLRP employers' total pension liability was \$24.9 million. The plan fiduciary net position was \$20.1 million, resulting in a net pension liability of \$4.8 million. The plan fiduciary net position as a percentage of the total pension liability was 80.8 percent using GASB Statement No. 67 measurements.

### MUNICIPAL RETIREMENT SYSTEMS

Two municipal retirement plans, and 17 fire and police disability and relief plans comprise MRS. All plans are closed to new members and all active employees were retired as of June 30, 2020. The separate plans provide retirement benefits to municipal employees, fire fighters, and police officers. Financial positions of the MRS plans are aggregated for financial reporting purposes. Individual plan information is included with the specific municipality's annual financial report. Benefits of MRS are funded by employer contributions and by earnings on investments. The aggregated plan's net position restricted for pension benefits at June 30, 2022, amounted to \$131.7 million, a decrease of \$27.9 million or 17.5 percent from \$159.6 million for the prior fiscal year.

Additions to the MRS net position restricted for pension benefits consist of employer contributions and investment income. For the 2022 fiscal year, employer contributions of \$15.7 million were \$834 thousand or 5.6 percent more than contributions of \$14.9 million received the prior fiscal year. MRS employer contributions are funded through taxes levied on assessed properties. The number of retirees will continue to decline and lead to lower contributions and benefits in future years. MRS recognized net investment loss of \$12.8 million for the 2022 fiscal year due to market performance compared with net investment income of \$39.5 million for the prior fiscal year.

Deductions from MRS' net position restricted for pension benefits include retirement and beneficiary benefits and administrative fees. For the 2022 fiscal year, benefit payments amounted to \$30.5 million, a decrease of \$827 thousand and 2.6 percent from the prior fiscal year. For the 2022 fiscal year, MRS transferred \$315.0 thousand to PERS to offset the cost of administration, compared to \$299.0 thousand transferred for the prior fiscal year.

Under the provisions of GASB Statement No. 67, agent multiple employer plans such as MRS apply the measurements and recognition of net pension liability at the individual plan level for each municipal and fire and police retirement plan administered. Therefore, aggregate information for MRS related to the net pension liability has not been presented.

## *Financial Analysis of the Systems: Defined Benefit Plans*

### INVESTMENTS

The investment assets of the defined benefit plans administered by the System are combined in a commingled investment pool as authorized by state statute. Each plan owns an equity position in the pool and receives a proportionate investment allocation of income or loss from the pool in accordance with its respective ownership percentage. Therefore, the rate of return on investments is approximately the same for each of the plans. In the following pages of the financial section, each plan's allocated share of the total investment pool is shown in the Statement of Fiduciary Net Position. Investment gains or losses are reported in the Statement of Changes in Fiduciary Net Position.

### TOTAL SYSTEM INVESTMENTS

At June 30, 2022 the System's total investments, before securities lending activities, approximated \$31.0 billion, a decrease of \$4.3 billion from the prior fiscal year. The combined investment portfolio experienced a return of (8.54) percent compared with a median large public benchmark return of (5.64) percent. The Investment Section includes comparisons of the System's investment results to benchmarks over time.

### SHORT-TERM SECURITIES

At June 30, 2022, the System held \$729.1 million in short-term investments, an increase of \$144.6 million from the prior year holdings. Short-term investments returned 0.31 percent for the year.

### EQUITY SECURITIES

At June 30, 2022, the System held \$16.5 billion in domestic, global, and international equity securities, a decrease of \$5.1 billion over the prior fiscal year. Domestic and global equity securities had returns of (14.29) percent and (18.73) percent, respectively. The System's custom benchmark return for domestic equity securities was (13.67) percent while the global securities custom benchmark posted a return of (16.52) percent. International equity securities returned (22.24) percent while the return for the international custom benchmark was (20.49) percent.

### DEBT SECURITIES

At June 30, 2022, the System held \$6.2 billion in debt securities, a decrease of \$200.0 million from the prior fiscal year. Debt securities returned (11.49) percent compared with the System's custom benchmark return of (11.09) percent.

### REAL ESTATE

The real estate asset class includes investments through limited partnerships in core commingled funds, value-added funds, and timber. The System also invests in Real Estate Investment Trusts (REITs), which are exchange-traded securities that provide indirect exposure to real estate properties and real estate management companies. At June 30, 2022, combined holdings totaled \$3.5 billion, an increase of \$425.3 million from the prior fiscal year. The System experienced a return of 22.82 percent on total real estate holdings compared to the benchmark return of 21.45 percent.

### PRIVATE EQUITY

The private equity asset class, totaling 4.0 billion, posted a return of 26.03 percent. Private equities are investments in operating companies, typically accessed through limited partnerships, that provide a differentiated return stream and diversification. This asset class is generally managed for long-term gains, where returns and asset value take time to develop. The System's benchmark return was (7.04) percent.

### SECURITIES LENDING

The System earns additional income by lending investment securities to broker-dealers. This is done on a pooled basis by the System's custodial bank, Bank of New York Mellon (BNYM). The broker-dealers provide collateral to BNYM for the temporary use of the borrowed securities. BNYM invests cash collateral in debt securities to earn interest. For the 2022 fiscal year, net securities lending income to the System amounted to \$3.9 million, a decrease of \$6.8 million from the prior fiscal year.

### REQUESTS FOR INFORMATION

This financial report is designed to provide a general overview of the finances of the System. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Public Employees' Retirement System of Mississippi Accounting Department  
429 Mississippi Street  
Jackson, MS 39201-1005

This page intentionally left blank

Statement of Fiduciary Net Position  
As of June 30, 2022

[in thousands]

	PERS	MHSPRS	SLRP	MRS	Total Defined Benefit Pension Plans
<b>ASSETS</b>					
Cash & Cash Equivalents	\$1,081,491	\$13,335	\$664	\$4,328	\$1,099,818
<i>Receivables:</i>					
Employer	60,193	612	-	300	61,105
Member	30,995	-	-	-	30,995
Investment Sales & Other	616,790	8,152	406	2,646	627,994
Interest & Dividends	107,577	1,422	71	462	109,532
Other Receivables	683	-	-	-	683
<b>Total Receivables</b>	<b>816,238</b>	<b>10,186</b>	<b>477</b>	<b>3,408</b>	<b>830,309</b>
<i>Investments, at Fair Value:</i>					
Short-term Investments	716,093	9,464	471	3,072	729,100
Long-term Debt Securities	6,124,136	80,941	4,028	26,274	6,235,379
Equity Securities	16,190,958	213,990	10,650	69,463	16,485,061
Private Equity	3,940,182	52,076	2,592	16,904	4,011,754
Real Estate Investments	3,456,007	45,677	2,273	14,827	3,518,784
<b>Total Investments before Lending Activities</b>	<b>30,427,376</b>	<b>402,148</b>	<b>20,014</b>	<b>130,540</b>	<b>30,980,078</b>
<i>Securities Lending:</i>					
Short-term Investments	1,709,443	22,593	1,124	7,334	1,740,494
Long-term Debt Securities	445,244	5,885	293	1,910	453,332
<b>Total Securities Lending</b>	<b>2,154,687</b>	<b>28,478</b>	<b>1,417</b>	<b>9,244</b>	<b>2,193,826</b>
<b>Total Investments</b>	<b>32,582,063</b>	<b>430,626</b>	<b>21,431</b>	<b>139,784</b>	<b>33,173,904</b>
Capital Assets, at Cost, Net of Accumulated Depreciation	12,975	-	-	-	12,975
<b>Total Assets</b>	<b>34,492,767</b>	<b>454,147</b>	<b>22,572</b>	<b>147,520</b>	<b>35,117,006</b>
<b>DEFERRED OUTFLOWS OF RESOURCES</b>					
Postemployment Benefits	181	-	-	-	181
<b>LIABILITIES</b>					
Investment Purchases & Other	1,532,074	20,249	1,008	6,573	1,559,904
Accounts Payable & Accrued Expenses	11,358	17	6	16	11,397
Obligations Under Securities Lending	2,157,042	28,509	1,419	9,254	2,196,224
Lease Obligation Payable	200	-	-	-	200
Net Other Postemployment Benefits	848	-	-	-	848
<b>Total Liabilities</b>	<b>3,701,522</b>	<b>48,775</b>	<b>2,433</b>	<b>15,843</b>	<b>3,768,573</b>
<b>DEFERRED INFLOWS OF RESOURCES</b>					
Other Postemployment Benefits	310	-	-	-	310
<b>NET POSITION RESTRICTED FOR PENSION BENEFITS</b>	<b>\$30,791,116</b>	<b>\$405,372</b>	<b>\$20,139</b>	<b>\$131,677</b>	<b>\$31,348,304</b>

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



Statement of Changes in Fiduciary Net Position  
For the Year Ended June 30, 2022

[in thousands]

	PERS	MHSPRS	SLRP	MRS	Total Defined Benefit Pension Plans
<b>ADDITIONS</b>					
<i>Contributions:</i>					
Employer	\$1,211,004	\$19,476	\$607	\$15,741	\$1,246,828
Member	615,421	2,356	245	-	618,022
<b>Total Contributions</b>	<b>1,826,425</b>	<b>21,832</b>	<b>852</b>	<b>15,741</b>	<b>1,864,850</b>
<i>Net Investment Income/(Loss):</i>					
Net Depreciation in Fair Value	(3,510,730)	(46,400)	(2,309)	(15,062)	(3,574,501)
Interest & Dividends	631,094	8,262	411	2,682	642,449
<b>Total Before Lending Activities</b>	<b>(2,879,636)</b>	<b>(38,138)</b>	<b>(1,898)</b>	<b>(12,380)</b>	<b>(2,932,052)</b>
<i>Securities Lending:</i>					
Net Depreciation in Fair Value	(1,690)	(22)	(1)	(7)	(1,720)
Interest	8,771	116	6	38	8,931
Program Fees	(3,212)	(42)	(2)	(14)	(3,270)
<b>Net Income from Securities Lending</b>	<b>3,869</b>	<b>52</b>	<b>3</b>	<b>17</b>	<b>3,941</b>
Managers' Fees & Trading Costs	(104,558)	(1,382)	(69)	(449)	(106,458)
<b>Net Investment Income/(Loss)</b>	<b>(2,980,325)</b>	<b>(39,468)</b>	<b>(1,964)</b>	<b>(12,812)</b>	<b>(3,034,569)</b>
Other Additions	10	-	-	-	10
<b>Total Additions/(Losses)</b>	<b>(1,153,890)</b>	<b>(17,636)</b>	<b>(1,112)</b>	<b>2,929</b>	<b>(1,169,709)</b>
<b>DEDUCTIONS</b>					
Pension Benefits	3,134,859	40,522	1,687	30,509	3,207,577
Refunds to Terminated Employees	120,807	135	-	-	120,942
<b>Totals</b>	<b>3,255,666</b>	<b>40,657</b>	<b>1,687</b>	<b>30,509</b>	<b>3,328,519</b>
Administrative Expense	15,925	319	13	315	16,572
<b>Total Deductions</b>	<b>3,271,591</b>	<b>40,976</b>	<b>1,700</b>	<b>30,824</b>	<b>3,345,091</b>
<b>Net Decrease</b>	<b>(4,425,481)</b>	<b>(58,612)</b>	<b>(2,812)</b>	<b>(27,895)</b>	<b>(4,514,800)</b>
<b>NET POSITION RESTRICTED FOR PENSION BENEFITS</b>					
<b>Beginning</b>	<b>35,216,597</b>	<b>463,984</b>	<b>22,951</b>	<b>159,572</b>	<b>35,863,104</b>
<b>Ending</b>	<b>\$30,791,116</b>	<b>\$405,372</b>	<b>\$20,139</b>	<b>\$131,677</b>	<b>\$31,348,304</b>

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

## Notes to Basic Financial Statements

June 30, 2022

### Note 1: Plan Description

#### GENERAL

The System is the administrator of four defined benefit trust funds as listed below. Although each of the defined benefit pension trust funds is a legally separate plan, the funds are included in the System's reporting entity due to their financial relationships and because the governing boards are substantially identical.

Plan Name	Type of Plan
PERS	Cost-sharing multiple-employer defined benefit pension plan
MHSPRS	Single-employer defined benefit pension plan
SLRP	Single-employer defined benefit pension plan
MRS *	Agent multiple-employer defined benefit pension plan

\* Closed to New Members

The System's purpose is to provide pension benefits for all state and public education employees, sworn officers of the Mississippi Highway Safety Patrol, other public employees whose employers have elected to participate in the System, and elected members of the state Legislature and the President of the Senate. The System is administered by a ten-member Board of Trustees (Board) that includes the state Treasurer; one gubernatorial appointee who is a member of PERS; two state employees; two PERS retirees; and one representative each from public schools and community colleges, state universities, municipalities, and counties. With the exception of the state Treasurer and the gubernatorial appointee, all members are elected to staggered six-year terms by the constituents they represent.

The System also oversees the MDC and the ORP; however, these plans are not part of the System's reporting entity. The System has contracted with a third-party to administer the MDC plan. MDC is a savings plan organized in accordance with IRC § 457 and is established or may be amended under Miss. Code Ann. § 25-14-1 et seq. Eligible participants are any persons – whether appointed, elected, or under contract - providing services for the state, state agencies, counties, municipalities or other political subdivisions for which compensation is paid. The plan permits participants to defer a portion of their income. Membership of ORP is composed of eligible teachers and administrators of institutions of higher learning appointed or employed on or after July 1, 1990, who elect to participate in ORP and reject membership in PERS. Title 25, Article 11 of the Mississippi Code states that the Board of the System will provide for administration of the ORP program. MDC and ORP participants direct the investment of their funds among investment managers and vendors. Benefits payable to participants of MDC and ORP are not obligations of the state of Mississippi. Such benefits and other rights of participants or their beneficiaries are the liability of the managers and vendors and are governed solely by the terms of the agreements issued by them. Financial information and activity associated with these plans have been appropriately excluded from this report.

## MEMBERSHIP AND BENEFIT PROVISIONS

**PERS** - Membership in PERS is a condition of employment granted upon hiring for qualifying employees and officials of the state of Mississippi (the State), state universities, community and junior colleges and teachers and employees of the public-school districts. For those persons employed by political subdivisions and instrumentalities of the State, membership is contingent upon approval of the entity's participation in PERS by the Board. If approved, membership for the entity's employees is a condition of employment and eligibility is granted to those who qualify upon hiring. Members and employers are statutorily required to contribute certain percentages of salaries and wages as specified by the Board. A member who terminates employment from all covered employers and who is not eligible to receive monthly retirement benefits may request a full refund of his or her accumulated member contributions plus interest. Upon withdrawal of contributions, a member forfeits service credit represented by those contributions.

Participating members who are vested and retire at or after age 60 or those who retire regardless of age with at least 30 years of creditable service (25 years of creditable service for employees who became members of PERS before July 1, 2011) are entitled, upon application, to an annual retirement allowance payable monthly for life in an amount equal to 2.0 percent of their average compensation for each year of creditable service up to and including 30 years (25 years for those who became members of PERS before July 1, 2011), plus 2.5 percent for each additional year of creditable service. For those who became members on or after July 1, 2011, there is an actuarial reduction in the benefit for each year of creditable service below 30 years or the number of years in age that the member is below 65, whichever is less. Average compensation is the average of the employee's earnings during the four highest compensated years of creditable service. A member may elect a reduced retirement allowance payable for life with the provision that, after death, a beneficiary receives benefits for life or for a specified number of years. Benefits vest upon completion of eight years of membership service (four years of membership service for those who became members of PERS before July 1, 2007). PERS also provides certain death and disability benefits. In the event of death prior to retirement of any member whose spouse and/or children are not entitled to a retirement allowance, the deceased member's accumulated contributions and interest are paid to the designated beneficiary.

A Cost-of-Living Adjustment (COLA) payment is made to eligible retirees and beneficiaries. The COLA is equal to 3.0 percent of the annual retirement allowance for each full fiscal year of retirement up to the year in which the retired member reaches age 60 (55 for those who became members of PERS before July 1, 2011), with 3.0 percent compounded for each fiscal year thereafter. For the year ended June 30, 2022, the total COLA payments for PERS were \$849,803,000.

Plan provisions and the Board's authority to determine contribution rates are established by Miss. Code Ann. § 25-11-1 et seq., (1972, as amended) and may be amended only by the Mississippi Legislature.

**MHSPRS** - Membership in MHSPRS is a condition of employment granted upon hiring for all officers of the Mississippi Highway Safety Patrol who have completed a course of instruction in an authorized highway patrol training school on general law enforcement and who serve as sworn officers of the highway patrol in the enforcement of the laws of the State. Members and employers are statutorily required to contribute certain percentages of salaries and wages as specified by the Administrative Board of MHSPRS. Participating members who withdraw from service at or after age 55 with at least five years of membership service, or after reaching age 45 with at least 20 years of creditable service, or with 25 years of service at any age, are entitled, upon application, to an annual retirement allowance payable monthly for life in an amount equal to 2.5 percent of average compensation during the four highest consecutive years of earnings, with an actuarial reduction in the benefit for each year below age 55 or for each year under 25 years of service, whichever is less. MHSPRS also provides certain death and disability benefits. In the event of death prior to retirement of any member whose spouse and/or children are not entitled to a retirement allowance, the deceased member's accumulated contributions and interest are paid to the designated beneficiary. A member who terminates employment from the highway patrol and who is not eligible to receive monthly retirement benefits may request a full refund of his or her accumulated employee contributions plus interest. Upon withdrawal of contributions, a member forfeits service credit represented by those contributions.

A COLA payment is made to eligible retirees and beneficiaries. The COLA is equal to 3.0 percent of the annual retirement allowance for each full fiscal year of retirement up to the year in which the retired member reaches age 60, with 3.0 percent compounded for each fiscal year thereafter. For the year ended June 30, 2022, the total COLA payments for MHSPRS were \$11,901,000.

Plan provisions and the Administrative Board's authority to determine contribution rates for MHSPRS are established by Miss. Code Ann. § 25-13-1 et seq., (1972, as amended) and may be amended only by the Mississippi Legislature.

**SLRP** - Membership in SLRP is composed of all elected members of the state Legislature and the President of the Senate. This plan is designed to supplement the provisions of PERS. Members and employers are statutorily required to contribute certain percentages of salaries and wages as specified by the Board.

The retirement allowance is 50.0 percent of an amount equal to the retirement allowance payable by PERS, determined by creditable service as an elected senator or representative in the state Legislature or as President of the Senate. Benefits vest upon completion of the requisite number of membership service years in PERS. SLRP also provides certain death and disability benefits. In the event of death prior to retirement of any member whose spouse and/or children are not entitled to a retirement allowance, the deceased member's accumulated contributions and interest are paid to the designated beneficiary. A member who terminates legislative employment and who is not eligible to receive monthly retirement benefits may request a full refund of his or her accumulated employee contributions plus interest. Upon withdrawal of contributions, a member forfeits service credit represented by those contributions.

Retirees and beneficiaries of SLRP may receive COLAs calculated identically to PERS retirees and beneficiaries. For the year ended June 30, 2022, the total COLAs for SLRP were \$433,000.

Plan provisions and the Board's authority to determine contribution rates for SLRP are established by Miss. Code Ann. § 25-11-301 et seq., (1972, as amended) and may be amended only by the Mississippi Legislature.

**MRS** - Membership in the two general municipal employee plans and the 17 fire and police disability and relief systems under MRS was granted to all municipal employees, fire fighters and police officers who were not already members of PERS and who were hired prior to July 1, 1976. Two fire and police plans elected to extend the eligibility period for membership to July 1, 1987. All MRS plans were closed to new members by July 1, 1987.

Eligible employees hired after July 1, 1987, automatically become members of PERS. Members covered by MRS were required to contribute varying amounts of their salary, depending on the actuarial soundness of their respective plans. Each employer contributes the remaining amounts necessary to finance participation of its own employees in MRS.

Regardless of age, participating employees who retired with at least 20 years of membership service are entitled to an annual retirement allowance payable monthly for life in an amount equal to 50.0 percent of their average monthly compensation and to an additional 1.7 percent for each year of creditable service beyond 20 years, not to exceed 66.67 percent of average monthly compensation, except as may otherwise be provided through local and private legislation. Average monthly compensation for the MRS plans is the monthly average for the last six months of service. Certain participating employers provide a minimum monthly retirement allowance.

The retirees and beneficiaries of MRS plans with provisions for COLAs who are receiving a retirement allowance on July 1 of each fiscal year may be entitled to a COLA. This payment is equal to the annual percentage change of the Consumer Price Index (CPI) but not to exceed 2.5 percent of the annual retirement allowance for each full fiscal year of retirement. Certain MRS plans may adopt a COLA other than one linked to the change in the CPI. These additional payments will be made only when funded by the employers. For the year ended June 30, 2022, the total COLAs for MRS plans were \$5,297,000.

Plan provisions are established by Miss. Code Ann. § 21-29-1 et seq., Articles 1, 3, 5 and 7, (1972, as amended) and annual local and private legislation. Statutes may be amended only by the Mississippi Legislature.

## Summary of Participating Employers and Members

	PERS	MHSPRS	SLRP	MRS	TOTAL
<i>Employers:</i>					
State Agencies	106	1	1	-	108
State Universities	9	-	-	-	9
Public Schools	140	-	-	-	140
Community/Junior Colleges	15	-	-	-	15
Counties	82	-	-	-	82
Municipalities	242	-	-	17	259
Other Political Subdivisions	265	-	-	-	265
<b>Total Employers</b>	<b>859</b>	<b>1</b>	<b>1</b>	<b>17</b>	<b>878</b>
<i>Members:</i>					
Active Vested	74,747	320	121	-	75,188
Active Non-vested	69,669	158	53	-	69,880
<b>Total Active Members</b>	<b>144,416</b>	<b>478</b>	<b>174</b>	<b>-</b>	<b>145,068</b>
Inactive Vested	16,856	42	37	-	16,935
Inactive Non-vested	74,034	24	24	-	74,082
<b>Total Inactive Members</b>	<b>90,890</b>	<b>66</b>	<b>61</b>	<b>-</b>	<b>91,017</b>
Retirees & Beneficiaries	114,462	785	230	1,444	116,921
<b>Total Retired/Inactive Members</b>	<b>205,352</b>	<b>851</b>	<b>291</b>	<b>1,444</b>	<b>207,938</b>
<b>Total Members</b>	<b>349,768</b>	<b>1,329</b>	<b>465</b>	<b>1,444</b>	<b>353,006</b>
<i>Active Members by Employer:</i>					
State Agencies	24,466	478	174	-	25,118
State Universities	16,774	-	-	-	16,774
Public Schools	60,787	-	-	-	60,787
Community/Junior Colleges	5,761	-	-	-	5,761
Counties	14,486	-	-	-	14,486
Municipalities	15,404	-	-	-	15,404
Other Political Subdivisions	6,738	-	-	-	6,738
<b>Total Active Members</b>	<b>144,416</b>	<b>478</b>	<b>174</b>	<b>-</b>	<b>145,068</b>

### Note 2: Summary of Significant Accounting Policies

#### FINANCIAL REPORTING ENTITY

The System is considered a blended component unit of the state of Mississippi reporting entity in accordance with Governmental Accounting Standards Board (GASB) requirements. Public employees of the state and its political subdivisions are provided pension benefits by the System and administration expenses of the System are subject to legislative budget controls.

## BASIS OF ACCOUNTING

PERS, MHSPRS, MRS and SLRP use the accrual basis of accounting and the economic resources measurement focus as contained in generally accepted accounting principles established by the GASB (GAAP). Member and employer contributions are recognized as revenue when due pursuant to legal requirements; investment income is recognized when earned. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Other expenses are recognized when incurred.

## INVESTMENTS

Investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Corporate bonds are valued based on yields currently available on comparable securities from issuers of similar credit ratings. Mortgage securities are valued on the basis of future principal and interest payments and are discounted at prevailing interest rates for similar instruments. Short-term investments are reported at fair value when published prices are available or at cost plus accrued interest, which approximates fair value. The fair value of commingled real estate funds is based on independent appraisals, while REITS traded on a national or international exchange are valued at the last reported sales price at current exchange rates. For individual investments where no readily ascertainable fair value exists, the System, in consultation with its investment advisors and custodial bank, has determined the fair values based on cash flows and prices for similar investments. Security transactions are accounted for on a trade-date basis.

## CAPITAL ASSETS

Capital assets used for administering the plans are carried at historical cost. Depreciation is provided using the straight-line method. The System's policy is to capitalize all acquisitions of furniture and equipment with a unit cost of \$5,000 or more and software with a cost of \$1,000,000 or more. The following schedule summarizes estimated useful lives by asset classification:

Asset Classification	Estimated Useful Life
Building	40 Years
Improvements	20 Years
Furniture & Equipment	5-15 Years
Computer Equipment	3 Years
Vehicles	3-10 Years
Software	5 Years

Equipment leases with aggregate payments over the life of the contract in excess of \$100,000 are capitalized as a right-to-use asset. The asset is amortized over the life of the lease.

## ACCUMULATED PERSONAL LEAVE AND MAJOR MEDICAL LEAVE

Miss. Code Ann. § 25-3-97, (1972, as amended) authorizes a lump sum payment for a maximum of 30 days of accrued personal leave upon termination of employment. No payment is authorized for accrued major medical leave unless the employee presents medical evidence that his or her physical condition is such that he or she no longer has the capacity to work in state government. Accumulated personal leave (including fringe benefits) of employees directly related to the administration of the System is paid from the pension trust funds and is accrued in the financial statements when earned, up to a maximum of 30 days per employee. The System does not accrue accumulated major medical leave since it is not probable that the compensation will be paid and since the leave vests only upon termination for medical disability.

## USE OF ESTIMATES IN THE PREPARATION OF FINANCIAL STATEMENTS

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and the reported amounts of additions to and deductions from net position. Actual results could differ from those estimates.

## NEW ACCOUNTING PRONOUNCEMENTS

PERS has implemented GASB Statement No. 87, *Leases*, resulting in the capitalization of leases in excess of \$100,000 as a right-to-use asset and a lease liability for the present value of the lease payments. The asset and liability are reported on the Statement of Fiduciary Net Position.

## OTHER POSTEMPLOYMENT BENEFITS (OPEB)

The net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB and OPEB expense have been measured using the same basis as the State Life and Health Insurance Plan's fiduciary net position. For the purposes of determining the OPEB fiduciary net position, benefit payments are recognized when due and payable in accordance with benefit terms. The OPEB Plan reports investments at fair value.

## ANNUAL BUDGET

Annual budgets are legally adopted for the administrative expenditure portion of the System's operations and are funded by earnings of the System. A budget request is approved by the Board and submitted to the state Legislature, which legally enacts the budget in the form of an appropriation bill during the subsequent legislative session. Changes may be made in budget categories consistent with legislative authority.

### *Note 3: Cash, Cash Equivalents, and Investments*

#### **CASH AND CASH EQUIVALENTS**

For cash deposits and cash equivalents, custodial credit risk is the risk that, in the event of a bank failure, the government's deposits may not be returned to it. Miss. Code Ann. § 25-11-121 (1972, as amended) provides that funds may be deposited in any institution insured by the Federal Deposit Insurance Corporation (FDIC) that maintains a facility that takes deposits in the State or in a custodial bank. As of June 30, 2022, deposits totaling \$251,966,000 were covered by FDIC.

The System's Board of Trustees determines the degree of collateralization necessary for both foreign and domestic demand deposits in addition to that which is guaranteed by FDIC. Deposits of the System must, where possible, be safeguarded and guaranteed by the posting of bonds, notes, and other securities as collateral by the depository. Where possible, the types of collateral securing deposits are limited to securities in which the System itself may invest. The Board has formally adopted a short-term investment policy that requires the fair value of securities guaranteeing deposits be equal to 100.0 percent of the funds on deposit at all times.

At June 30, 2022, the System's custodial bank held \$847,852,000 in cash equivalents in the highly liquid BNYM Government Short-Term Investment Fund (GSTIF). GSTIF is a custodial bank-sponsored commingled fund invested in short-term domestic government securities and repurchase agreements. Cash equivalents are created through daily sweeps of excess cash held in investment manager accounts and the internally managed administrative account used by the System to maintain appropriate liquidity for meeting short-term cash obligations.

#### **INVESTMENTS**

Investment assets for all systems are pooled and invested in equity securities, debt securities, real estate, and private equity. These investments are accounted for as part of the PERS pension trust fund and then allocated to MHSPRS, MRS, and SLRP based on their proportionate share.

For the fiscal year ending June 30, 2022, the annual money-weighted rate of return on the System's investments was (8.56) percent. A money-weighted rate of return expresses investment performance, net of investment expense, and considers the effect of timing of transactions that increase the amount of pension plan investments, such as contributions, and those that decrease the amount of pension plan investments, such as benefit payments.

**Investment Policies** – As stated in Miss. Code Ann. § 25-11-121, (1972, as amended) the System is authorized to invest in the following:

- » Corporate bonds and taxable municipal bonds, corporate short-term obligations of corporations or of wholly owned subsidiaries of corporations, whose short-term obligations are rated A-2 or better by S&P, rated P-2 or better by Moody's Investment Service, F-2 or better by Fitch Ratings, Ltd., or the equivalent of these ratings if assigned by another United States Securities and Exchange Commission designated Nationally Recognized Statistical Rating Organization;
- » Agency and nonagency residential and commercial mortgage-backed securities and collateralized mortgage obligations;
- » Asset-backed securities;
- » Bank loans;
- » Convertible bonds;
- » Bonds of the Tennessee Valley Authority;
- » Bonds, notes, certificates and other valid obligations of the United States and other valid obligations of any federal instrumentality that issues securities under authority of an act of Congress and are exempt from registration with the Securities and Exchange Commission;
- » Bonds, notes, debentures, and other securities issued by any federal instrumentality and fully guaranteed by the United States;
- » Interest-bearing revenue bonds or notes that are general obligations of any state in the United States or of any city or county therein;



- » Bonds of established non-United States companies and foreign government securities. The Board may take requisite action to effectuate or hedge transactions or invest in currency through foreign or domestic banks, including the purchase and sale, transfer, exchange, or otherwise disposal of, and generally deal in foreign exchange through the use of foreign currency, interbank forward contracts, futures contracts, options contracts, swaps and other related derivative instruments, notwithstanding any other provisions of the statute to the contrary;
- » Shares of stocks, common and/or preferred, of corporations created by or existing under the laws of the United States or any state, district or territory thereof and shares of stocks, common and/or preferred, and convertible securities of non-United States companies; provided: (1) the maximum investments in stocks shall not exceed 80 percent of the total book value of the total investment fund of the System; (2) the stock of such corporation shall be listed on a national stock exchange or be traded in the over-the-counter market; (3) the outstanding shares of such corporation shall have a total market value of not less than \$50,000,000; (4) the amount of investment in any one corporation shall not exceed 3 percent of the book value of the assets of the System; and (5) the shares of any one corporation owned by the system shall not exceed 5 percent of that corporation's outstanding stock. The Board may take requisite action utilizing foreign currency as an investment vehicle, or to effectuate or hedge transactions for shares of stocks and convertible securities of non-United States companies through foreign or domestic banks, including the purchase and sale, transfer, exchange, or otherwise disposal of, and generally deal in foreign exchange through the use of foreign currency, interbank forward contracts, futures contracts, options contracts, swaps and other related derivative instruments, notwithstanding any other provisions of this article to the contrary;
- » Covered call and put options on securities traded on one or more of the regulated exchanges;
- » Pooled or commingled funds managed by a corporate trustee or by a Securities and Exchange Commission registered investment advisory firm retained as an investment manager by the Board, and shares of investment companies and unit investment trusts registered under the Investment Company Act of 1940, where such pooled or commingled funds or shares are comprised of common or preferred stocks, bonds, money market instruments or other investments authorized under this section. Such investment in commingled funds or shares shall be held in trust; provided that the total book value of investments under this paragraph shall at no time exceed 5 percent of the total book value of all investments of the system. Any investment manager approved by the Board shall invest such commingled funds or shares as a fiduciary; and
- » Pooled or commingled real estate funds or real estate securities managed by a corporate trustee or by a Securities and Exchange Commission registered investment advisory firm retained as an investment manager by the Board. Such investment in commingled funds or shares shall be held in trust; provided that the total book value of investments under this paragraph shall at no time exceed 10 percent of the total book value of all investments of the System. Any investment manager approved by the Board shall invest such commingled funds or shares as a fiduciary. The 10 percent limitation in this paragraph shall not be subject to the 5 percent limitation in the previous paragraph;
- » Types of investments not specifically authorized by this subsection if the investments are in the form of a separate account managed by a Securities and Exchange Commission registered investment advisory firm retained as an investment manager by the Board, or a limited partnership or commingled fund approved by the Board provided that the total book value of investments under this paragraph shall at no time exceed 10 percent of the total book value of all investments of the System. Any person or entity who exercises any discretionary authority or discretionary control respecting management of the separate account, limited partnership or commingled fund, or who exercises any authority or control respecting management or disposition of the assets of the separate account, limited partnership or commingled fund, shall exercise such authority or control as a fiduciary.

The statute requires that investments of the System be managed solely for the interest of the System with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent investor 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 sums, including diversifying the investments of the System so as to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so.

The PERS Board has adopted a policy that further restricts all short-term investments to be of corporations with long-term debt rated A or better by S&P or Moody's.

In accordance with the System's investment policy, the System's investment consultant conducts periodic asset allocation studies that include consideration of projected future liabilities of the System, expected risk, return and correlations for various asset classes and the System's statutory investment restrictions. An asset allocation study is performed every five years, or more frequently should significant liability changes occur. A strategic long-term asset allocation is adopted by the Board in conjunction with the study. The Investment Committee of the Board evaluates the actual investment allocation quarterly and may propose periodic adjustments to the System's strategic long-term asset allocation based on the investment consultant's recommendations, market conditions, and internal investment analysis.

The following table shows the Board approved asset allocation policy applicable for fiscal year 2022:

Asset Class	Target Allocation
Domestic Equities	27.0%
International Equities	22.0
Global Equities	12.0
<b>Total Equities</b>	<b>61.0%</b>
Debt Securities	20.0
Real Estate	10.0
Private Equity	8.0
Cash & Equivalents	1.0

**Fair Value Measurements** – Fair value is the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date. The System categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on valuation inputs. Highest priority is given to unadjusted quoted prices in active markets and relies on observable inputs when available. The lowest level results from unobservable inputs. The three levels of the fair value hierarchy are as follows:

- » Level 1 – Unadjusted quoted prices for identical instruments traded on an active exchange;
- » Level 2 – Quoted prices in active markets for similar instruments, quoted prices for identical or similar instruments in markets not active, and model-derived valuations in which all significant inputs are observable; and
- » Level 3 – Valuations derived from valuation techniques in which significant inputs are unobservable.

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The System's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset.

The System's equity and debt securities in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Included in Level 1 equities are real estate investment trusts (REITs), exchange-traded securities that provide indirect exposure to real estate properties and real estate management companies.

Securities classified in Level 2 of the fair value hierarchy are valued using a proprietary pricing source. The primary proprietary source uses continuous evaluations throughout the trading day based on factors such as dealer quotes and trades, trade execution data and transaction reporting services. Market sources, relative credit information, observed market movements and sector news are integrated and incorporated into evaluation pricing applications and models.

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 a proprietary model that monitors structured product markets, interest rate movements, new issue information and other pertinent data. Evaluations of tranches (non-volatile and volatile) are based on market modeling, trading, and pricing conventions. New issue features are analyzed on data such as pricing speed, spread, and volatility. Information is also solicited from outside sources including secondary dealers, portfolio managers, and research analysts.

The System has the following fair value measurements as of June 30, 2022 [in thousands]:

	Amounts	Level 1	Level 2	Level 3
<i>Equity Securities:</i>				
Basic Materials	\$706,081	\$706,081	\$-	\$-
Communications	1,908,003	1,908,003	-	-
Consumer, Cyclical	1,620,622	1,620,402	220	-
Consumer, Non-Cyclical	3,480,367	3,480,367	-	-
Diversified	20,021	20,021	-	-
Energy	896,004	896,004	-	-
Financial	3,358,773	3,358,773	-	-
Industrial	1,789,592	1,789,592	-	-
Technology	2,737,887	2,737,887	-	-
Utilities	393,991	393,991	-	-
<b>Total Equity Securities</b>	<b>16,911,341</b>	<b>16,911,121</b>	<b>220</b>	<b>-</b>
<i>Debt Securities:</i>				
Commercial Paper	1,397,082	-	1,397,082	-
Repurchase Agreements	542,569	-	542,569	-
US Government Agency Obligations	49,638	-	49,638	-
US Treasury Obligations	1,306,942	1,306,942	-	-
Collateralized Mortgage Obligations	548,293	-	544,355	3,938
Domestic Corporate Bonds	1,523,073	-	1,467,212	55,861
Non-Domestic Corporate Bonds	839,541	-	839,541	-
Mortgage Pass-Throughs	969,330	-	969,330	-
State & Local Obligations	38,486	-	38,486	-
Asset-Backed Securities	324,136	-	324,136	-
Yankee/Global Bonds	54,830	-	54,830	-
Sovereign Governments Debt	1,119,851	-	1,119,851	-
<b>Total Debt Securities</b>	<b>8,713,771</b>	<b>1,306,942</b>	<b>7,347,030</b>	<b>59,799</b>
<b>Total Investments by Fair Value Level</b>	<b>\$25,625,112</b>	<b>\$18,218,063</b>	<b>\$7,347,250</b>	<b>\$59,799</b>
<i>Investments Measured at NAV:</i>				
Total Real Estate*	3,092,504	* REITS, exchange traded investments, are reported in equity securities for this presentation, REITS totaled \$426.3 million.		
Private Equity Funds	4,011,754			
<b>Total Investments Measured at NAV</b>	<b>7,104,258</b>	** Total investments do not include the \$2.2 billion of Obligations under Securities Lending.		
<b>Total Investments Measured at Fair Value</b>	<b>32,729,370</b>			
International Currency	444,534			
<b>Total Investments**</b>	<b>\$33,173,904</b>			
<i>Investments Derivative Instruments:</i>				
Foreign Exchange Contracts (Liabilities)	1,258,211			
<b>Total Investment Derivative Instruments</b>	<b>\$1,258,211</b>			

As of June 30, 2022, the System had real estate and private equity investments legally structured as limited partnerships. The System was one of the limited partners within each fund, with the investment managers serving as the general partners.

Real estate funds include open-end and closed-end limited partnerships that invest primarily in domestic commercial real estate. The fair values of these commingled investment funds are calculated using the net asset value (NAV) per share and the number of shares owned by the System. Fair values of the underlying properties are based on the most recent independent appraisal values. Valuations are conducted at least annually by independent appraisal firms who are members of the Appraisal Institute. The governing document for each open-end real estate fund provides investors the ability to request the redemption of all or part of their investment.

A redemption request is funded by the sale of underlying real estate investments held by the open-end fund. Closed-end real estate funds have a finite life and do not contain provisions for limited partner redemptions on demand. Typically, real estate investments must be made within the first three to four years of the partnership's lifespan and liquidated by the end of the 10th year. As underlying real estate investments are sold over the life of the closed-end fund, pro-rata distributions of the proceeds are made to each partner.

The System's private equity investments consist of two fund-of-funds limited partnerships that invest in multiple private equity funds. Private equity funds invest primarily in non-public companies whose prices are not quoted on an exchange, are typically illiquid in nature, and cannot be redeemed on demand. It is probable that the private equity underlying investments will be sold at an amount different from the NAV per share of the System's ownership interest in partner's capital. Fair values of underlying investments have been determined using recent observable transaction information for similar investments and non-binding bids received from potential buyers of the investments of each partnership. The System's ownership agreements allow pro-rata distributions from liquidation of the assets. Based on the terms of each limited partnership, all partnership assets should be liquidated over the 10- to-12-year life of the partnerships. Each private equity fund's general partner has full discretion for the disposition of each partnership investment, including determining the most appropriate timing for the sale, determining the best exit strategy, identifying buyers and approving sale transactions of partnership investments.

Investments Measured at NAV [in thousands]:

	Fair Value	Unfunded Commitments	Redemption Eligibility	Redemption Notice Period
<i>Real Estate Funds:</i>				
Core – Open End	\$2,495,423	\$-	Quarterly	45-90 Days
Value Added – Closed End	521,755	313,061	N/A	N/A
Timber	75,326	-	N/A	N/A
<b>Total Real Estate</b>	<b>3,092,504</b>	<b>313,061</b>		
<i>Private Equity Funds:</i>				
Diversified	4,011,754	1,463,618	N/A	N/A
<b>Total Private Equity</b>	<b>4,011,754</b>	<b>1,463,618</b>		
<b>Total Investments Measured at NAV</b>	<b>\$7,104,258</b>	<b>\$1,776,679</b>		

*The average life of a fund is ten to twelve years.*

**Investment Commitments** - As part of the limited partnership agreements, the System agrees to potentially invest up to the committed amounts during the stated fund investment period.

As of June 30, 2022, the System had the following investment commitments [in thousands]:

	Committed Capital	Capital Contributed Net of Recallable Distributions & Released Commitments	Unfunded Commitments
Real Estate	\$1,275,000	\$961,939	\$313,061
Private Equity	5,170,000	3,706,382	1,463,618
<b>Totals</b>	<b>\$6,445,000</b>	<b>\$4,668,321</b>	<b>\$1,776,679</b>

**Credit Risk** - Credit risk is the risk that an issuer or other counterparty will not fulfill its obligation to the holder of the investment. The System follows the statute as previously discussed as its policy for limiting exposure to credit risk. The System's exposure to credit risk as of June 30, 2022, was as follows [in thousands]:

Investment Type	Quality Ratings at Fair Value					
	Aaa/AAA	Aa/AA	A/A	Baa/BBB	Ba/BB	B/B
Asset-Backed Securities	\$209,372	\$23,895	\$44,215	\$38,933	\$187	\$301
Collateralized Mortgage Obligations	367,789	77,915	20,421	30,012	14,337	2,645
Commercial Paper	-	825,874	571,208	-	-	-
Corporate Bonds	81,364	238,110	647,037	939,197	333,470	104,249
Mortgage Pass-Throughs	-	917,062	-	-	-	-
Repurchase Agreements	46,900	238,200	157,051	-	-	-
Sovereign Governments Debt	256,297	132,875	262,590	151,111	151,547	68,590
State & Local Obligations	4,079	17,599	14,160	2,648	-	-
US Government Agency Obligations	-	49,638	-	-	-	-
Yankee/Global Bonds	21,546	14,005	4,010	15,269	-	-
<b>Totals *</b>	<b>\$987,347</b>	<b>\$2,535,173</b>	<b>\$1,720,692</b>	<b>\$1,177,170</b>	<b>\$499,541</b>	<b>\$175,785</b>

Investment Type	Caa/CCC	Ca/CC	C/C	D/D	NR**	Total
Asset-Backed Securities	\$2,890	\$2	\$10	\$766	\$3,565	\$324,136
Collateralized Mortgage Obligations	2,702	613	-	-	31,859	548,293
Commercial Paper	-	-	-	-	-	1,397,082
Corporate Bonds	14,042	155	78	297	4,615	2,362,614
Mortgage Pass-Throughs	-	-	-	-	-	917,062
Repurchase Agreements	-	-	-	-	100,417	542,568
Sovereign Governments Debt	25,222	407	642	4,630	65,941	1,119,852
State & Local Obligations	-	-	-	-	-	38,486
US Government Agency Obligations	-	-	-	-	-	49,638
Yankee/Global Bonds	-	-	-	-	-	54,830
<b>Totals *</b>	<b>\$44,856</b>	<b>\$1,177</b>	<b>\$730</b>	<b>\$5,693</b>	<b>\$206,397</b>	<b>\$7,354,561</b>

\*In accordance with GASB guidelines, totals exclude US Treasury obligations and GNMA mortgage pass-throughs due to their explicit guarantee by the US Government.

Short-term US Treasury Obligations	\$48,250
US Treasury Obligations	1,258,692
GNMA Mortgage Pass-Throughs	52,268
<b>Total</b>	<b>\$1,359,210</b>

\*\*Not publicly rated.

**Custodial Credit Risk** - Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty, the pension trust fund will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the government, and are held by either (a) the counterparty or (b) the counterparty's trust department or agent but not in the government's name. Miss. Code Ann. § 25-11-121, (1972, as amended) requires that all investments be clearly marked as to ownership, and to the extent possible, shall be registered in the name of the System.

On June 30, 2022, \$2.6 billion in securities purchased and lent, held in the name of the lending agent, were exposed to custodial credit risk while counterparty risk was mitigated by the cash and security collateral received.

	Fair Value (in thousands)
Securities Purchased with Cash Collateral	\$2,193,826
Securities Lent for Non-Cash Collateral	380,076
<b>Total Subject to Custodial Credit Risk</b>	<b>\$2,573,902</b>

**Interest Rate Risk** - Interest rate risk is the risk that changes in interest rates on securities will adversely affect the fair value of an investment. As of June 30, 2022, the System had the following debt security investments and maturities:

	Fair Value [in thousands]	Investment Maturities [in years]			
		Less Than 1	1-5	6-10	More Than 10
Asset-Backed Securities	\$324,136	\$125,463	\$87,374	\$32,429	\$78,870
Collateralized Mortgage Obligations	548,293	286,722	5,124	12,545	243,902
Commercial Paper	1,397,082	1,397,082	-	-	-
Corporate Bonds	2,362,614	366,457	899,775	532,457	563,925
Mortgage Pass-Throughs	969,330	4	2,480	4,229	962,617
Repurchase Agreements	542,568	542,568	-	-	-
Sovereign Governments Debt	1,119,852	35,149	458,517	346,837	279,349
State & Local Obligations	38,486	502	6,942	6,824	24,218
US Government Agency Obligations	49,638	-	38,570	2,141	8,927
US Treasury Obligations	1,306,942	67,849	423,213	332,540	483,340
Yankee/Global Bonds	54,830	10,126	30,793	9,707	4,204
<b>Totals</b>	<b>\$8,713,771</b>	<b>\$2,831,922</b>	<b>\$1,952,788</b>	<b>\$1,279,709</b>	<b>\$2,649,352</b>

The System's investment policy does not limit investment maturities as a means of managing its exposure to potential fair value losses arising from future changes in interest rates. Market or interest rate risk is the greatest risk faced by an investor in the debt securities market. The price of a debt security typically moves in the opposite direction of the change in interest rates. Asset-backed securities, collateralized mortgage obligations, and mortgage pass-throughs are examples of investments whose fair values may be highly sensitive to interest rate changes. These securities are reported at fair value in the Statement of Fiduciary Net Position.

Asset-backed securities (ABS) are bonds or notes backed by loan paper or accounts receivable and are originated by banks, credit card companies, or other credit providers. The originator of the loan or accounts receivable paper sells it to a specially created trust, which repackages it as securities. Asset-backed securities have been structured as pass-throughs and as structures with multiple bond classes. Of the \$324.1 million in ABS that the System held as of June 30, 2022, \$21.0 million are highly sensitive to changes in interest rates. System policy prohibits ABS with leveraged structures or residual interests.

Collateralized mortgage obligations (CMOs) are bonds collateralized by whole-loan mortgages, mortgage pass-through securities, or stripped mortgage-backed securities. Income is derived from payments and prepayments of principal and interest generated from collateral mortgages. Cash flows are distributed to different investment classes or tranches in accordance with the CMO's established payment order. Some CMO tranches have more stable cash flows relative to changes in interest rates while others are significantly more sensitive to interest rate fluctuations. In a declining interest rate environment, some CMOs may be subject to a reduction in interest payments as a result of prepayments of mortgages that make up the collateral pool. A reduction in interest payments causes a decline in cash flows and a decline in the fair value of the CMO security. Rising interest rates may cause an increase in interest payments and an increase in the fair value of the security. As of June 30, 2022, the System held \$548.3 million in CMOs and of this amount, \$78.2 million were in tranches highly sensitive to future changes in interest rates. CMOs include Interest-Only (IO) and Principal-Only (PO) strips, which are mortgage obligations separated into their interest and principal components. During periods of declining interest rates, these securities are highly sensitive to prepayments by mortgagors. As of June 30, 2022, the System held only IO strips valued at \$15.7 million. The System's derivatives policy limits IO and PO strips to 3.0 percent of the investment portfolio and prohibits CMO residuals.

As of June 30, 2022, the System had invested \$969.3 million 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 and subject to prepayment risk.



**Foreign Currency Risk** - Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. The System's asset allocation policy does not limit foreign currency-denominated investments of the System. The Investment Committee of the Board evaluates the actual investment asset allocation quarterly, in accordance with its target asset allocation policy. Based on current market conditions, the Board adjusts the allocation as necessary.

The System's exposure to foreign currency risk at June 30, 2022, was as follows [in thousands]:

<i>Currency</i>	Cash & Equivalents	Equities & REITS	Debt Securities	Total Fair Value	Percent
Argentina Peso	\$817	\$-	\$-	\$817	0.01%
Australian Dollar	(67,614)	285,118	78,636	296,140	4.57
Brazil Real	8,342	125,179	-	133,521	2.06
Canadian Dollar	(49,454)	407,911	39,520	397,977	6.14
Chilean Peso	(4,460)	544	-	(3,916)	(0.06)
Chinese Yuan Renminbi	(21,308)	134,572	21,765	135,029	2.08
Colombian Peso	(27)	125	-	98	-
Czech Koruna	9	1,979	-	1,988	0.03
Danish Krone	(21,026)	137,515	24,405	140,894	2.17
Egyptian Pound	12	123	-	135	-
Euro Currency Unit	(396,766)	1,303,935	413,731	1,320,900	20.37
Hong Kong Dollar	899	612,306	-	613,205	9.45
Hungarian Forint	(1,337)	11,999	1,203	11,865	0.18
Indian Rupee	13,658	132,613	-	146,271	2.26
Indonesian Rupiah	1,639	62,290	5,022	68,951	1.06
Israel Shekel	(3,699)	23,313	3,407	23,021	0.35
Japanese Yen	(98,417)	1,025,738	110,664	1,037,985	16.01
Kuwaiti Dinar	21	1,349	-	1,370	0.02
Malaysian Ringgit	(2,659)	5,555	2,372	5,268	0.08
Mexican New Peso	(6,326)	57,725	23,793	75,192	1.16
New Taiwan Dollar	133	232,984	-	233,117	3.59
New Zealand Dollar	(30,481)	4,594	17,961	(7,926)	(0.12)
Norwegian Krone	7,958	51,993	-	59,951	0.92
Pakistan Rupee	3	1,555	-	1,558	0.02
Peruvian Nuevo Sol	(7,550)	-	7,589	39	-
Philippines Peso	16	979	-	995	0.02
Polish Zloty	(12,620)	15,554	-	2,934	0.05
Pound Sterling	(71,769)	670,525	66,117	664,873	10.25
Qatari Riyal	1,690	7,305	-	8,995	0.14
Russian Ruble	130	3,783	-	3,913	0.06
Saudi Arabia Riyal	1,889	32,626	-	34,515	0.53
Singapore Dollar	(3,676)	79,973	10,348	86,645	1.34
South African Rand	1,712	81,026	430	83,168	1.28
South Korean Won	(23,166)	280,593	30,254	287,681	4.44
Swedish Krona	12,744	182,680	-	195,424	3.01
Swiss Franc	4,972	349,004	7,332	361,308	5.57
Thailand Baht	(3,351)	32,358	3,008	32,015	0.49
Turkish Lira	218	11,230	-	11,448	0.18
UAE Dirham	75	4,110	-	4,185	0.06
Uruguayan Peso	-	-	14,750	14,750	0.23
Total	(\$768,769)	\$6,372,761	\$882,307	\$6,486,299	100.00%

**Derivative Instruments** - At June 30, 2022, the System held derivative instruments for currency conversions related to pending foreign exchange contracts. The System's derivatives policy limits foreign currency forwards to no more than 100.0 percent of the amount needed to settle pending trades.

At June 30, 2022, the counterparties of the foreign currency forwards primarily had short-term credit ratings of A as rated by the nationally recognized statistical rating organizations. The System's general policy requires that the counterparty has a long-term credit rating of A or better and a short-term credit rating of A-1/P-1, at a minimum. More specifically, the policy requires that all over-the-counter derivatives be rated AA or better by the nationally recognized statistical rating organizations.

The foreign currency forwards are presented in the foreign currency risk table.

The following table presents the investment derivative instruments outstanding at June 30, 2022 [in thousands]:

	Changes in Fair Value			Fair Value at June 30, 2022	
	Notional Units	Classification	Amount	Classification	Amount
Currency					
Australian Dollar	\$(100,104)	Investment Income	\$3,236	Investment	\$(3,236)
Brazilian Real	43,399	Investment Income	(390)	Investment	390
Canadian Dollar	(66,911)	Investment Income	949	Investment	(949)
Chilean Peso	(4,217,551)	Investment Income	336	Investment	(336)
Chinese Yuan Renminbi	(144,200)	Investment Income	427	Investment	(427)
Colombian Peso	(153,699)	Investment Income	357	Investment	(357)
Danish Krone	(198,530)	Investment Income	1,997	Investment	(1,997)
Euro Currency Unit	(392,169)	Investment Income	9,099	Investment	(9,099)
Hong Kong Dollar	(1,696)	Investment Income	-	Investment	-
Hungarian Forint	(511,652)	Investment Income	114	Investment	(114)
Indian Rupee	507,360	Investment Income	(45)	Investment	45
Indonesian Rupiah	(18,127,350)	Investment Income	(446)	Investment	446
Israel Shekel	(73,828)	Investment Income	1,723	Investment	(1,723)
Japanese Yen	(16,596,608)	Investment Income	8,364	Investment	(8,364)
Malaysian Ringgit	(12,148)	Investment Income	44	Investment	(44)
Mexican Peso	(128,206)	Investment Income	149	Investment	(149)
New Zealand Dollar	(49,125)	Investment Income	1,108	Investment	(1,108)
New Taiwan Dollar	(921)	Investment Income	(137)	Investment	137
Norwegian Krone	78,607	Investment Income	(371)	Investment	371
Peruvian Sol	(28,980)	Investment Income	(194)	Investment	194
Polish Zloty	(56,893)	Investment Income	(42)	Investment	42
Pound Sterling	(103,212)	Investment Income	2,489	Investment	(2,489)
Singapore Dollar	(6,204)	Investment Income	(279)	Investment	279
South African Rand	27,191	Investment Income	231	Investment	(231)
South Korean Won	(30,726,574)	Investment Income	358	Investment	(358)
Swedish Krona	127,795	Investment Income	(134)	Investment	134
Swiss Franc	(5,435)	Investment Income	(393)	Investment	393
Thailand Baht	(115,300)	Investment Income	44	Investment	(44)
TBA Securities					
U.S. Dollar	\$381,798	Investment Income	\$1,248	Debt Securities	\$369,544

**Securities Lending Transactions** - The Board has authorized the System to participate in a securities lending program. The System has contracted with its custodian to lend all long-term securities to authorized broker-dealers subject to the receipt of acceptable collateral. The types of securities on loan at June 30, 2022, were short-term and long-term US government and agency obligations, corporate bonds, REITs, and domestic and international equities. The contractual agreement with the custodian provides indemnification in the event the borrower fails to return the securities lent or fails to pay the System income distributions by the securities' issuers while the securities are on loan.

Collateral may be in the form of either cash or other securities. All cash collateral is to be in US dollars. For cash collateralized loans, in the case of loaned securities denominated in US dollars or whose primary trading market is located in the US, or sovereign debt issued by foreign governments denominated in US dollars, the amount of cash collateral required is 102.0 percent of the fair value of the loaned securities. In the case of loan securities which are not denominated in US dollars or whose primary trading market is not located in the US, the cash collateral required is 105.0 percent of the fair value of loaned securities. Higher values may be applicable dependent on the jurisdiction in which such loaned securities are customarily traded.

Loans of securities for non-cash collateral denominated in US dollars or whose primary trading market is located in the US require 102.0 percent collateral from the borrowers. In the case of loaned securities which are not denominated in US dollars or whose primary trading market is not located in the US, 105.0 percent collateral is required. The System cannot pledge, lend, or sell the securities received as collateral unless the borrower defaults. Securities non-cash collateral as of June 30, 2022, includes debt securities in accordance with current guidelines. Authorized non-cash securities collateral includes "US Collateral" or "Foreign Collateral", as defined in Sections V(e) and (f) of US Department of Labor Prohibited Transaction Exemption 2006-16. As with cash collateral, the borrower must provide additional collateral to correct any deficiency. Securities held as collateral and the corresponding obligation to return the collateral to the borrower are netted in obligations under securities lending on the Statement of Fiduciary Net Position.

The custodian, as agent for the System, is authorized to reinvest cash collateral received in any investment instrument allowed by the securities lending agreement. The maturities of the loans of securities generally do not match the maturities of the investments purchased with cash collateral. All securities loans can be terminated on demand by either the System or the borrower. At June 30, 2022, the average term of these loans was one day. At June 30, 2022, cash collateral was invested in commercial paper, repurchase agreements, corporate bonds, and asset-backed securities. The weighted average effective duration and weighted average maturity of cash collateral investments were 2 days.

The following table presents the fair values of the securities on loan and the value of the collateral pledges at June 30, 2022 [in thousands]:

	Fair Value Securities Lent*	Collateral Received
<i>Lent for Cash Collateral:</i>		
Equity Securities	\$1,133,236	\$1,220,621
Debt Securities	913,351	931,841
REITS	42,259	43,762
<b>Subtotal</b>	<b>2,088,846</b>	<b>2,196,224</b>
<i>Lent for Non-Cash Collateral:</i>		
Equity Securities	161,176	172,420
Debt Securities	214,595	222,802
REITS	4,305	4,704
<b>Subtotal</b>	<b>380,076</b>	<b>399,926</b>
<b>Total Securities Lent</b>	<b>\$2,468,922</b>	<b>\$2,596,150</b>

*\* The fair values of the underlying securities loaned for cash and the collateral for the securities include accrued income and expenses.*

The fair value of securities purchased with cash collateral as of June 30, 2022, are presented by type below [in thousands]:

Securities Purchased with Cash Collateral	Fair Value
Commercial Paper	\$1,397,083
Repurchase Agreements	325,412
Corporate Bonds	390,420
Asset-Backed Securities	80,911
<b>Total</b>	<b>\$2,193,826</b>

The following table details the net income from securities lending for the year ended June 30, 2022 [in thousands]:

	PERS	MHSPRS	SLRP	MRS	TOTAL
Change in Fair Value	(\$1,690)	(\$22)	(\$1)	(\$7)	(\$1,720)
Interest Income	8,771	116	6	38	8,931
<b>Income From Securities Lending</b>	<b>7,081</b>	<b>94</b>	<b>5</b>	<b>31</b>	<b>7,211</b>
<i>Less:</i>					
Interest Expense	1,216	16	1	5	1,238
Bank Fees	1,996	26	1	9	2,032
<b>Expenses From Securities Lending</b>	<b>3,212</b>	<b>42</b>	<b>2</b>	<b>14</b>	<b>3,270</b>
<b>Net Income From Securities Lending</b>	<b>\$3,869</b>	<b>\$52</b>	<b>\$3</b>	<b>\$17</b>	<b>\$3,941</b>

At June 30, 2022, securities lending total assets with related accrued interest are \$2,196,042,000, and total liabilities with accrued expenses are \$2,198,103,000. The difference of (\$2,061,000) is due to the collateral investment fund's change in fair value, agent lender fees, and earnings receivable until the final distribution takes place the following month.

**Commission Recapture Program** - The Board has authorized the System to participate in a commission recapture program. This program allows the System to recapture a portion of the commissions paid to broker-dealers with which the System has entered into an agreement. Recaptures for the fiscal year ended June 30, 2022, were \$107,000.

#### Note 4: Capital Assets

The following table shows amounts for capital assets as of June 30, 2022 [in thousands]:

Description	Amount
Land	\$508
Building	18,817
Furniture & Equipment	2,262
Right-to-Use Asset	233
Software	20,417
Construction in Progress	1,209
<b>Total Capital Assets</b>	<b>43,446</b>
<i>Less Accumulated Depreciation:</i>	
Building	7,993
Furniture & Equipment	2,026
Right-to-Use Asset	35
Software	20,417
<b>Total Accumulated Depreciation</b>	<b>30,471</b>
<b>Net Capital Assets</b>	<b>\$12,975</b>

Effective October 1, 2021, PERS entered into an agreement to lease equipment for a period of 60 months. The intangible right-to-use asset and related liability are recorded under GASB Statement No. 87, *Leases*, based on the present value of the future lease payments. The discount rate used to calculate the present value was 3.815 percent, the average rate of the State's outstanding general obligation bonds during fiscal year 2022. At inception of the lease PERS recognized a right-to-use asset and associated lease liability of \$233,000.

During fiscal year 2022, PERS recorded \$35,000 in amortization expense, \$6,000 in interest expense, and a \$33,000 reduction in the lease payable. Remaining obligations associated with this lease are as follows:

Year Ended June 30	Principal	Interest
2023	\$44	\$7
2024	46	5
2025	48	3
2026	50	2
2027	12	-
<b>Total Lease Obligation Payable</b>	<b>\$200</b>	<b>\$17</b>

#### Note 5: Net Pension Liability of Employers

The following tables present the components of the liability of the employers, or net pension liability, to plan members for benefits provided through the System's cost-sharing and single employer defined benefit pension plans at June 30, 2022 [in thousands].

	PERS	MHSPRS	SLRP
Total Pension Liability	\$51,374,754	\$581,925	\$24,913
<i>Less:</i> Plan Fiduciary Net Position	30,791,116	405,372	20,139
Plan Net Pension Liability	20,583,638	176,553	4,774
Ratio of Fiduciary Net Position to Total Pension Liability	59.93%	69.66%	80.84%

## SIGNIFICANT ASSUMPTIONS AND OTHER INPUTS

An actuarial survey of the mortality, service, withdrawals, compensation experience of members, and valuation of assets and liabilities is performed annually to determine the actuarial soundness of the System. To validate that the assumptions recommended by the actuary are, in aggregate, reasonably related to actual experience, the System requests the actuary to conduct an experience investigation every other year.

The total pension liability was determined by an actuarial valuation as of June 30, 2021, which was based on the results of an actuarial experience study for the four-year period ending June 30, 2020. The June 30, 2021 total pension liability was then rolled forward to the June 30, 2022 measurement date. Actuarial assumptions based on the actuarial experience study for the four-year period ending June 30, 2020 were adopted by the Board in August 2021 and incorporated in the calculation of the total pension liability as of June 30, 2022. The roll forward techniques are applied to the liabilities before and after the assumption changes then compared as of June 30, 2022, to reflect the assumption gain and loss for the year. The following actuarial assumptions apply to all periods included in the measurement.

	PERS	MHSPRS	SLRP
Investment Rate of Return*	7.55%	7.55%	7.55%
Inflation	2.40%	2.40%	2.40%
Salary Increases	2.65 -17.90%	3.00-8.56%	2.65%

\* Including inflation and net of pension plan investment expense.

Assumptions for post-retirement mortality are based on the PubS.H-2010(B) Retiree Table. Male rates are adjusted by 95.0 percent for ages less than 60 then scaled up to 110.0 percent for ages 61 to 75 and 101.0 percent for ages above 75. Females are adjusted by 84.0 percent for ages less than 72 then scaled up to 100.0 percent for ages above 76. The PubG.H-2010 Disabled Retiree Table is used for disabled retirees, adjusted to 134.0 percent of male rates and 121.0 percent of female rates for all ages. The PubS.H-2010(B) Contingent Annuitant Table is used for contingent annuitants, adjusted to 97.0 percent of male rates and 110.0 percent of female rates for all ages. The projection scale MP-2020 is used to project future improvements in life expectancy generationally.

The long-term expected rate of return on the PERS, MHSPRS and SLRP investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected nominal returns, net of the plans' investment expense, and the assumed rate of inflation) were 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 rate of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Domestic Equity	27.0%	4.35%
International Equity	22.0	4.25
Global Equity	12.0	4.55
Debt Securities	20.0	(0.50)
Real Estate	10.0	3.50
Private Equity	8.0	5.75
Cash Equivalents	1.0	(1.05)
<b>Total</b>	<b>100.0%</b>	<b>N/A</b>

## DISCOUNT RATE

The discount rate used to measure the total pension liabilities for PERS, MHSPRS and SLRP was 7.55 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at current contribution rates and that employer contributions for PERS, MHSPRS and SLRP will be made at rates set in accordance with the Board's Funding Policy. Based on those assumptions, each 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 investments was applied to all periods of projected benefit payments to determine each plan's total pension liability.



### SENSITIVITY OF THE NET PENSION LIABILITY TO CHANGES IN THE DISCOUNT RATE

The following table presents the net pension liability of PERS, MHSPRS and SLRP, calculated using the discount rate of 7.55 percent, as well as what the plans' net pension liability (asset) would be if it were calculated using a discount rate that is one percentage point lower (6.55 percent) or one percentage point higher (8.55 percent) than the current rate [in thousands]:

	1% Decrease (6.55%)	Current Discount Rate (7.55%)	1% Increase (8.55%)
PERS	\$26,863,751	\$20,583,638	\$15,406,006
MHSPRS	\$247,433	\$176,553	\$117,847
SLRP	\$7,204	\$4,774	\$2,693

### Note 6: Contribution Requirements

Policies for PERS, MHSPRS, and SLRP provide for employer and member contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are adequate to accumulate sufficient assets to pay benefits when due. Contribution rates for PERS, MHSPRS, and SLRP are established in accordance with actuarial contribution requirements determined through actuarial valuations and adopted by the Board with respect to PERS and SLRP or the MHSPRS Administrative Board. Required contribution rates are expressed as a level percentage of covered payroll and are actuarially determined using an individual entry age normal actuarial method.

Contribution policies for MRS provide for a property tax to be levied within each municipality. An actuarial valuation is performed annually, as of June 30, to determine the necessary rates. Mississippi statutes limit any increase in the property tax levy for employer pension contributions to one-half mill per year. All members of the MRS plan have retired, therefore there are no member contributions to the plan.

### CONTRIBUTION RATES

	Contribution Rates as a Percentage of Covered Payroll	
	Member	Employer
PERS	9.00%	17.40%
MHSPRS	7.25%	49.08%
SLRP	3.00%	7.40%
MRS	-%	0.93-5.38 mills*

\* Based on assessed property values.

Employer contributions for MHSPRS are augmented by certain additional fees, estimated to be \$3,700,000 annually.. These amounts vary based on the level of activity. The amount collected for the year ending June 30, 2022, was \$3,065,000 for motor vehicle fees and \$436,000 for driver's license reinstatement fees.

Administration of the System is financed from investment earnings. In addition, employers of MHSPRS, SLRP, and MRS contribute an administrative fee to the System equal to 2.0 percent of the plan's respective employer contributions. As of June 30, 2022, administrative fees were \$319,000 from MHSPRS, \$13,000 from SLRP, and \$315,000 from MRS. ORP contributes administrative fees of 2.6 percent of covered wages for a total of \$12,169,000.

Member contributions and accumulated interest are credited to the annuity savings reserve account. Upon retirement, the balance in the member's account is transferred to the annuity reserve account. The employer's accumulation reserve is the account to which contributions made by employers and investment income are credited, and from which employer-provided benefits under the plan are paid.

### Note 7: Retirement Plan of System Employees

PERS employees are members of the System. Salaries and wages for PERS employees for the year ended June 30, 2022, were \$7,598,000, including employer contributions to the system of \$1,324,000. Contributions made were 100.0 percent of required contributions. PERS contributions represent less than 1.0 percent of total contributions required for all participating employers.

## Note 8: Other Postemployment Benefits

### PLAN DESCRIPTION

The State and School Employees' Health Insurance Management Board administers the state's self-insured medical plan and life insurance program established by Miss. Code Ann. § 25-15-3 (1972, as amended), which may be amended only by the state Legislature. State law mandates that all state, public education, library, junior and community college, and retiring employees be offered health and life benefit coverage through the State and School Employees' Life and Health Insurance Plan (Plan).

### BENEFITS PROVIDED

The Plan provides other postemployment benefits (OPEB) as a cost-sharing multiple-employer defined benefit OPEB plan. Benefits of the Plan consist of an implicit rate subsidy, which is essentially the difference between the average cost of providing healthcare benefits to retirees under age 65 and the average cost of providing healthcare benefits to all participants when premiums paid by retirees are not age-adjusted.

The Plan offers a base option and a select option for health benefits for non-Medicare participants. The Plan includes a separate level for Medicare eligible retirees, Medicare eligible surviving spouses, and Medicare eligible dependents of retirees and surviving spouses.

### CONTRIBUTIONS

Employees' premiums are funded primarily by their employers. Retirees must pay their own premiums, as do active employees for spouse and dependent medical coverage. Pursuant to the authority granted by Mississippi statute, the Plan's Management Board has the authority to establish and change premium rates for the participants, employers, and the other contributing parties. If it is determined actuarially that premiums paid by participating retirees adversely affect the overall cost of the Plan to the State, a premium surcharge may be imposed on participating retired employees under the age of Medicare eligibility. For those initially employed on or after January 1, 2006, a premium surcharge may be imposed in an amount determined actuarially to cover the full cost of insurance, while the surcharge for those employed before that date may not exceed 15%.

### OPEB LIABILITY, OPEB EXPENSE, DEFERRED OUTFLOWS OF RESOURCES RELATED TO OPEB, AND DEFERRED INFLOWS OF RESOURCES RELATED TO OPEB

At June 30, 2022, the System reported a liability of \$848,000 for its proportionate share of the net OPEB liability. The liability was measured as of June 30, 2021, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of that date. The System's portion of the OPEB liability was based on a projection of the long-term share of contributions to the OPEB plan relative to the projected contributions of all participating employers, actuarially determined. At the measurement date, the System's proportion was 0.13 percent, which is consistent with the prior year.

For the year ended June 30, 2022, the System recognized a OPEB expense of \$(63,000). At June 30, 2022, the System reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources [in thousands]:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference Between Expected and Actual Experience	\$ 1	\$265
Changes in Proportion	17	16
Changes in Assumptions	137	29
Contributions Subsequent to the Measurement Date	26	-
<b>Total</b>	<b>\$181</b>	<b>\$310</b>

Contributions subsequent to the measurement date of \$26,000 will be recognized as a reduction of the net OPEB liability in the year ended June 30, 2023. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense (expense offset) as follows [in thousands]:

Year Ended June 30	Net Outflows & Inflows of Resources
2022	\$ (38)
2023	(35)
2024	(26)
2025	(33)
2026	(23)
<b>Total</b>	<b>\$(155)</b>

## ACTUARIAL ASSUMPTIONS

The collective total OPEB liability was determined by an actuarial valuation as of June 30, 2021, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation Rate	2.40%
Salary Increases, Including Wage Inflation	2.65% - 17.90%
Cost Method:	Entry age
Municipal bond index rate: Measurement Date	2.13%
Prior Measurement Date	2.19%
Year FNP is projected to be depleted: Measurement Date	2021
Prior Measurement Date	2020
Single Equivalent Interest Rate*: Measurement Date	2.13%
Prior Measurement Date	2.19%
Health Care Cost Trends, Pre-Medicare Claims:	6.50% for 2022 decreasing to an ultimate rate of 4.5% by 2030

\* Including inflation and net of pension plan investment expense.

Mortality rates for service retirees were based on the PubS.H-2010(B) Retiree Table with male rates adjusted to 95.0 percent of male rates up to age 60, 110.0 percent for ages 61 to 75, and 101.0 percent for ages above 77, and female rates adjusted to 84.0 percent of the female rates up to age 72. Mortality rates for disability retirees were based on the PubG.H-2010 Disabled Table adjusted 134.0 percent for males and 121.0 percent for females. Mortality rates for Contingent Annuitants were based on the PubS.H-2010(B) Contingent Annuitant Table, adjusted 97.0 percent for males and 110.0 percent for females. Projection scale MP-2020 will be used to project future improvements in life expectancy generationally.

The demographic actuarial assumptions used in the June 30, 2021 valuation were based on the results of the last actuarial experience study dated April 20, 2021. The remaining actuarial assumptions (e.g., initial per capita costs, healthcare cost trends, rate of plan participation, rates of plan election, etc.) used in the June 30, 2021 valuation were based on a review of recent plan experience done concurrently with the June 30, 2021 valuation.

## CHANGES IN ACTUARIAL ASSUMPTIONS & METHODS

The discount rate was changed from 2.19 percent to 2.13 percent for the current measurement date.

### DISCOUNT RATE

The discount rate used to measure the total OPEB liability was 2.13 percent. As of June 30, 2022, the balance of the trust is \$1,044,000 with a long-term rate of return of 4.5 percent. The discount rate determination uses a municipal bond rate to the extent the trust is projected to run out of money before all benefits are paid. The balance of the trust is projected to be depleted immediately, therefore the rate used for the single equivalent interest rate is equal to the monthly average of the Bond Buyers General Obligation 20-year Municipal Bond Index Rate.

### SENSITIVITY OF SYSTEM'S PROPORTIONATE SHARE OF THE COLLECTIVE OPEB LIABILITY TO CHANGES IN THE DISCOUNT RATE

The following table presents the System's proportionate share of the net OPEB liability using the discount rate of 2.13 percent, as well as what the System's proportionate share of the net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (1.13 percent) or one percentage point higher (3.13 percent) than the current rate [in thousands].

	1% Decrease (1.13%)	Current Discount (2.13%)	1% Increase (3.13%)
System Proportionate Share of Net OPEB Liability	\$939	\$848	\$771

### SENSITIVITY OF SYSTEM'S PROPORTIONATE SHARE OF THE COLLECTIVE OPEB LIABILITY TO CHANGES IN THE HEALTHCARE COST TREND RATE

The following table presents the System's proportionate share of the net OPEB liability using the healthcare trend rate of 6.50 percent decreasing to 4.50 percent by 2030, as well as what the System's proportionate share of the net OPEB liability would be if it were calculated using a healthcare trend that is one percentage point lower (5.50 percent decreasing to 3.50 percent) or one percentage point higher (7.50 percent decreasing to 5.50 percent) than the current rate [in thousands].

	1% Decrease (5.50% Decreasing to 3.5%)	Current Discount Rate (6.50% Decreasing to 4.5%)	1% Increase (7.50% Decreasing to 5.5%)
System Proportionate Share of Net OPEB Liability	\$785	\$848	\$919

The audited financial report for the Plan can be found at [knowyourbenefits.dfa.ms.gov](https://knowyourbenefits.dfa.ms.gov).

## Required Supplementary Information

June 30, 2022

### Schedule of Changes in the Net Pension Liability & Related Ratios Year Ended June 30, 2022

[in thousands] [unaudited]

Changes in the Net Pension Liability	PERS								
	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Pension Liability:</b>									
Service Cost	\$758,601	\$719,623	\$712,354	\$696,445	\$702,559	\$754,552	\$734,545	\$673,626	\$681,778
Interest	3,651,875	3,536,951	3,433,801	3,330,054	3,239,471	3,154,382	3,032,131	2,867,679	2,754,573
Difference Between Actual & Expected Experience	222,910	181,270	224,426	-	21,361	(172,476)	413,494	325,351	257,464
Assumption Changes	-	1,469,257	-	231,354	-	24,141	(66,606)	1,821,236	-
Benefit Payments	(3,134,859)	(2,995,255)	(2,878,073)	(2,747,397)	(2,609,415)	(2,477,914)	(2,367,709)	(2,219,240)	(2,099,843)
Refunds to Terminated Employees	(120,807)	(101,044)	(104,851)	(108,042)	(124,306)	(113,707)	(112,926)	(119,356)	(121,532)
<b>Net Change in Total Pension Liability</b>	<b>1,377,720</b>	<b>2,810,802</b>	<b>1,387,657</b>	<b>1,402,414</b>	<b>1,229,670</b>	<b>1,168,978</b>	<b>1,632,929</b>	<b>3,349,296</b>	<b>1,472,440</b>
<b>Total Pension Liability - Beginning</b>	<b>49,997,034</b>	<b>47,186,232</b>	<b>45,798,575</b>	<b>44,396,161</b>	<b>43,166,491</b>	<b>41,997,513</b>	<b>40,364,584</b>	<b>37,015,288</b>	<b>35,542,848</b>
<b>Total Pension Liability - Ending (A)</b>	<b>\$51,374,754</b>	<b>\$49,997,034</b>	<b>\$47,186,232</b>	<b>\$45,798,575</b>	<b>\$44,396,161</b>	<b>\$43,166,491</b>	<b>\$41,997,513</b>	<b>\$40,364,584</b>	<b>\$37,015,288</b>
<b>Plan Fiduciary Net Position:</b>									
Contributions - Employer	\$1,211,004	\$1,169,679	\$1,171,805	\$1,038,108	\$1,018,163	\$1,019,084	\$1,021,261	\$996,478	\$969,674
Contributions - Member	615,421	594,876	594,711	580,941	570,807	570,066	572,574	557,909	549,528
Net Investment Income/(Loss)	(2,980,325)	8,736,632	856,935	1,701,321	2,385,913	3,436,144	130,900	827,666	3,905,728
Pension Benefits	(3,134,859)	(2,995,255)	(2,878,073)	(2,747,397)	(2,609,415)	(2,477,914)	(2,367,709)	(2,219,240)	(2,099,843)
Refunds to Terminated Employees	(120,807)	(101,044)	(104,851)	(108,042)	(124,306)	(113,707)	(112,926)	(119,356)	(121,532)
Administrative Expenses	(15,925)	(15,691)	(19,757)	(16,905)	(16,264)	(17,056)	(15,166)	(13,523)	(12,837)
Other	10	6	22	(4,614)	(4,805)	(8,536)	(474)	(497)	(510)
<b>Net Change in Fiduciary Net Position</b>	<b>(4,425,481)</b>	<b>7,389,203</b>	<b>(379,208)</b>	<b>443,412</b>	<b>1,220,093</b>	<b>2,408,081</b>	<b>(771,540)</b>	<b>29,437</b>	<b>3,190,208</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>35,216,597</b>	<b>27,827,394</b>	<b>28,206,602</b>	<b>27,763,190</b>	<b>26,543,097</b>	<b>24,135,016</b>	<b>24,906,556</b>	<b>24,877,119</b>	<b>21,686,911</b>
<b>Plan Fiduciary Net Position - Ending (B)</b>	<b>30,791,116</b>	<b>35,216,597</b>	<b>27,827,394</b>	<b>28,206,602</b>	<b>27,763,190</b>	<b>26,543,097</b>	<b>24,135,016</b>	<b>24,906,556</b>	<b>24,877,119</b>
<b>Net Pension Liability - Ending (A-B)</b>	<b>\$20,583,638</b>	<b>\$14,780,437</b>	<b>\$19,358,838</b>	<b>\$17,591,973</b>	<b>\$16,632,971</b>	<b>\$16,623,394</b>	<b>\$17,862,497</b>	<b>\$15,458,028</b>	<b>\$12,138,169</b>
<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>	<b>59.93%</b>	<b>70.44%</b>	<b>58.97%</b>	<b>61.59%</b>	<b>62.54%</b>	<b>61.49%</b>	<b>57.47%</b>	<b>61.70%</b>	<b>67.21%</b>
<b>Covered Payroll</b>	<b>\$6,454,276</b>	<b>\$6,246,077</b>	<b>\$6,287,441</b>	<b>\$6,144,916</b>	<b>\$5,999,231</b>	<b>\$6,038,229</b>	<b>\$6,022,533</b>	<b>\$5,904,827</b>	<b>\$5,834,687</b>
<b>Net Pension Liability as a Percentage of Covered Payroll</b>	<b>318.91%</b>	<b>236.64%</b>	<b>307.90%</b>	<b>286.29%</b>	<b>277.25%</b>	<b>275.30%</b>	<b>296.59%</b>	<b>261.79%</b>	<b>208.03%</b>

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available. See notes to Required Supplementary Information.

Schedule of Changes in the Net Pension Liability & Related Ratios  
Year Ended June 30, 2022

[in thousands] [unaudited]

Changes in the Net Pension Liability	MHSPRS								
	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Pension Liability:</b>									
Service Cost	\$7,711	\$8,235	\$8,104	\$7,372	\$7,205	\$7,328	\$6,858	\$6,361	\$6,461
Interest	41,965	41,571	40,624	39,532	37,338	37,086	35,869	34,503	33,396
Difference Between Actual & Expected Experience	(3,244)	7,018	(7)	-	17,311	(5,780)	3,536	1,013	2,652
Assumption Changes	-	1,677	-	2,286	-	(3,598)	-	19,176	-
Benefit Payments	(40,522)	(37,433)	(35,455)	(34,671)	(32,315)	(31,001)	(29,913)	(28,909)	(28,220)
Refunds to Terminated Employees	(135)	(67)	(48)	(16)	(103)	(144)	(52)	(163)	(42)
<b>Net Change in Total Pension Liability</b>	<b>5,775</b>	<b>21,001</b>	<b>13,218</b>	<b>14,503</b>	<b>29,436</b>	<b>3,891</b>	<b>16,298</b>	<b>31,981</b>	<b>14,247</b>
<b>Total Pension Liability - Beginning</b>	<b>576,150</b>	<b>555,149</b>	<b>541,931</b>	<b>527,428</b>	<b>497,992</b>	<b>494,101</b>	<b>477,803</b>	<b>445,822</b>	<b>431,575</b>
<b>Total Pension Liability - Ending (A)</b>	<b>\$581,925</b>	<b>\$576,150</b>	<b>\$555,149</b>	<b>\$541,931</b>	<b>\$527,428</b>	<b>\$497,992</b>	<b>\$494,101</b>	<b>\$477,803</b>	<b>\$445,822</b>
<b>Plan Fiduciary Net Position:</b>									
Contributions - Employer	\$19,476	\$19,563	\$20,144	\$19,375	\$15,128	\$14,809	\$14,755	\$13,695	\$13,500
Contributions - Member	2,356	2,378	2,428	2,340	2,271	2,147	2,128	1,938	1,963
Net Investment Income/(Loss)	(39,468)	115,761	11,196	25,280	27,719	44,499	1,704	10,812	51,575
Pension Benefits	(40,522)	(37,433)	(35,455)	(34,671)	(32,315)	(31,001)	(29,913)	(28,909)	(28,220)
Refunds to Terminated Employees	(135)	(67)	(48)	(16)	(103)	(144)	(52)	(163)	(42)
Administrative Expenses	(319)	(320)	(328)	(312)	(250)	(203)	(217)	(198)	(200)
Other	-	-	-	-	-	-	-	-	-
<b>Net Change in Fiduciary Net Position</b>	<b>(58,612)</b>	<b>99,882</b>	<b>(2,063)</b>	<b>11,996</b>	<b>12,450</b>	<b>30,107</b>	<b>(11,595)</b>	<b>(2,825)</b>	<b>38,576</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>463,984</b>	<b>364,102</b>	<b>366,165</b>	<b>354,169</b>	<b>341,719</b>	<b>311,612</b>	<b>323,207</b>	<b>326,032</b>	<b>287,456</b>
<b>Plan Fiduciary Net Position - Ending (B)</b>	<b>405,372</b>	<b>463,984</b>	<b>364,102</b>	<b>366,165</b>	<b>354,169</b>	<b>341,719</b>	<b>311,612</b>	<b>323,207</b>	<b>326,032</b>
<b>Net Pension Liability - Ending (A-B)</b>	<b>\$176,553</b>	<b>\$112,166</b>	<b>\$191,047</b>	<b>\$175,766</b>	<b>\$173,259</b>	<b>\$156,273</b>	<b>\$182,489</b>	<b>\$154,596</b>	<b>\$119,790</b>
<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>	<b>69.66%</b>	<b>80.53%</b>	<b>65.59%</b>	<b>67.57%</b>	<b>67.15%</b>	<b>68.62%</b>	<b>63.07%</b>	<b>67.64%</b>	<b>73.13%</b>
<b>Covered Payroll</b>	<b>\$30,895</b>	<b>\$29,780</b>	<b>\$32,346</b>	<b>\$31,811</b>	<b>\$29,555</b>	<b>\$28,845</b>	<b>\$27,380</b>	<b>\$25,505</b>	<b>\$25,554</b>
<b>Net Pension Liability as a Percentage of Covered Payroll</b>	<b>571.46%</b>	<b>376.65%</b>	<b>590.64%</b>	<b>552.53%</b>	<b>586.23%</b>	<b>541.77%</b>	<b>666.50%</b>	<b>606.14%</b>	<b>468.77%</b>

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available. See notes to Required Supplementary Information.

Schedule of Changes in the Net Pension Liability & Related Ratios  
Year Ended June 30, 2022

[in thousands] [unaudited]

Changes in the Net Pension Liability	SLRP								
	2022	2021	2020	2019	2018	2017	2016	2015	2014
<b>Total Pension Liability:</b>									
Service Cost	\$714	\$594	\$589	\$590	\$431	\$433	\$420	\$406	\$404
Interest	1,693	1,673	1,638	1,595	1,557	1,593	1,586	1,569	1,549
Difference Between Actual & Expected Experience	920	(133)	(37)	-	(58)	(204)	(468)	(333)	(453)
Assumption Changes	-	364	-	31	-	(868)	(6)	588	-
Benefit Payments	(1,687)	(1,608)	(1,857)	(1,442)	(1,410)	(1,397)	(1,454)	(1,220)	(1,216)
Refunds to Terminated Employees	-	(5)	(20)	-	(18)	(17)	(32)	(37)	(22)
<b>Net Change in Total Pension Liability</b>	<b>1,640</b>	<b>885</b>	<b>313</b>	<b>774</b>	<b>502</b>	<b>(460)</b>	<b>46</b>	<b>973</b>	<b>262</b>
<b>Total Pension Liability - Beginning</b>	<b>23,273</b>	<b>22,388</b>	<b>22,075</b>	<b>21,301</b>	<b>20,799</b>	<b>21,259</b>	<b>21,213</b>	<b>20,240</b>	<b>19,978</b>
<b>Total Pension Liability - Ending (A)</b>	<b>\$24,913</b>	<b>\$23,273</b>	<b>\$22,388</b>	<b>\$22,075</b>	<b>\$21,301</b>	<b>\$20,799</b>	<b>\$21,259</b>	<b>\$21,213</b>	<b>\$20,240</b>
<b>Plan Fiduciary Net Position:</b>									
Contributions - Employer	\$607	\$604	\$512	\$525	\$513	\$522	\$514	\$511	\$514
Contributions - Member	245	245	207	214	207	212	208	207	208
Net Investment Income/(Loss)	(1,964)	5,732	554	1,287	1,412	2,264	86	552	2,605
Pension Benefits	(1,687)	(1,608)	(1,857)	(1,442)	(1,410)	(1,397)	(1,454)	(1,220)	(1,216)
Refunds to Terminated Employees	-	(5)	(20)	-	(18)	(17)	(32)	(37)	(22)
Administrative Expenses	(13)	(12)	(10)	(11)	(10)	(10)	(10)	(10)	(10)
Other	-	-	-	-	-	-	-	-	-
<b>Net Change in Fiduciary Net Position</b>	<b>(2,812)</b>	<b>4,956</b>	<b>(614)</b>	<b>573</b>	<b>694</b>	<b>1,574</b>	<b>(688)</b>	<b>3</b>	<b>2,079</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>22,951</b>	<b>17,995</b>	<b>18,609</b>	<b>18,036</b>	<b>17,342</b>	<b>15,768</b>	<b>16,456</b>	<b>16,453</b>	<b>14,374</b>
<b>Plan Fiduciary Net Position - Ending (B)</b>	<b>20,139</b>	<b>22,951</b>	<b>17,995</b>	<b>18,609</b>	<b>18,036</b>	<b>17,342</b>	<b>15,768</b>	<b>16,456</b>	<b>16,453</b>
<b>Net Pension Liability - Ending (A-B)</b>	<b>\$4,774</b>	<b>\$322</b>	<b>\$4,393</b>	<b>\$3,466</b>	<b>\$3,265</b>	<b>\$3,457</b>	<b>\$5,491</b>	<b>\$4,757</b>	<b>\$3,787</b>
<b>Plan Fiduciary Net Position as a Percentage of the Total Pension Liability</b>	<b>80.84%</b>	<b>98.62%</b>	<b>80.38%</b>	<b>84.30%</b>	<b>84.67%</b>	<b>83.38%</b>	<b>74.17%</b>	<b>77.58%</b>	<b>81.29%</b>
<b>Covered Payroll</b>	<b>\$8,180</b>	<b>\$8,030</b>	<b>\$6,891</b>	<b>\$6,937</b>	<b>\$6,833</b>	<b>\$6,928</b>	<b>\$6,862</b>	<b>\$6,861</b>	<b>\$6,918</b>
<b>Net Pension Liability as a Percentage of Covered Payroll</b>	<b>58.35%</b>	<b>4.01%</b>	<b>63.75%</b>	<b>49.96%</b>	<b>47.78%</b>	<b>49.90%</b>	<b>80.02%</b>	<b>69.33%</b>	<b>54.74%</b>

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available. See notes to Required Supplementary Information.



## Schedule of Employer Contributions

### Last 10 Fiscal Years

[in thousands] [unaudited]

	2022	2021	2020	2019	2018
<i>Public Employees' Retirement System</i>					
Actuarially Determined Employer Contribution	\$1,257,938	\$1,184,881	\$1,107,847*	\$967,824	\$944,879
Actual Employer Contribution	1,211,004	1,169,679	1,171,805	1,038,108	1,018,163
Annual Contribution Deficiency (Excess)	46,934	15,202	(63,958)	(70,284)	(73,284)
Covered Payroll	6,454,276	6,246,077	6,287,441	6,144,916	5,999,231
Actual Contributions as a Percentage of Covered Payroll	18.76%	18.73%	18.64%	16.89%	16.97%
<i>MS Highway Safety Patrol Retirement System</i>					
Contractually Required Employer Contribution	\$18,663	\$18,160	\$19,594	\$19,383	\$14,430
Actual Employer Contribution	19,476	19,563	20,144	19,375	15,128
Annual Contribution Deficiency (Excess)	(813)	(1,403)	(550)	8	(698)
Covered Payroll	30,895	29,780	32,346	31,811	29,555
Actual Contributions as a Percentage of Covered Payroll	63.04%	65.69%	62.28%	60.91%	51.19%
<i>Supplemental Legislative Retirement System</i>					
Contractually Required Employer Contribution	\$605	\$594	\$510	\$513	\$506
Actual Employer Contribution	607	604	512	525	513
Annual Contribution Deficiency (Excess)	(2)	(10)	(2)	(12)	(7)
Covered Payroll	8,180	8,030	6,891	6,937	6,833
Actual Contributions as a Percentage of Covered Payroll	7.42%	7.52%	7.43%	7.57%	7.51%
	2017	2016	2015	2014	2013
<i>Public Employees' Retirement System</i>					
Contractually Required Employer Contribution	\$ 951,021	\$948,549	\$930,010	\$921,872	\$835,321
Actual Employer Contribution	1,019,084	1,021,261	996,478	969,674	881,847
Annual Contribution Deficiency (Excess)	(68,063)	(72,712)	(66,468)	(47,802)	(46,526)
Covered Payroll	6,038,229	6,022,533	5,904,827	5,834,687	5,823,578
Actual Contributions as a Percentage of Covered Payroll	16.88%	16.96%	16.88%	16.62%	15.14%
<i>MS Highway Safety Patrol Retirement System</i>					
Contractually Required Employer Contribution	\$14,431	\$14,025	\$13,226	\$13,595	\$13,098
Actual Employer Contribution	14,809	14,755	13,695	13,500	13,366
Annual Contribution Deficiency (Excess)	(378)	(730)	(469)	95	(268)
Covered Payroll	28,845	27,380	25,505	25,554	25,816
Actual Contributions as a Percentage of Covered Payroll	51.34%	53.89%	53.70%	52.83%	51.77%
<i>Supplemental Legislative Retirement System</i>					
Contractually Required Employer Contribution	\$513	\$508	\$508	\$519	\$509
Actual Employer Contribution	522	514	511	514	503
Annual Contribution Deficiency (Excess)	(9)	(6)	(3)	5	6
Covered Payroll	6,928	6,862	6,861	6,918	6,695
Actual Contributions as a Percentage of Covered Payroll	7.53%	7.49%	7.45%	7.43%	7.51%

\*Beginning with fiscal year 2020 reporting, PERS calculation of Employer Contributions changed from Contractually Required to Actuarially Determined.

There are no nonemployer contributing entities in the plan reporting entity. See notes to Required Supplementary Information.

## Schedule of Investment Returns

Last 10 Fiscal Years

[unaudited]

	2022	2021	2020	2019	2018	2017	2016	2015	2014
Annual Money-weighted Rate of Return, Net of Investment Expense	(8.56)%	32.35%	3.06%	6.27%	9.17%	14.53%	0.69%	3.05%	18.37%

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available. See notes to Required Supplementary Information.*

## Schedule of Proportionate Share of the Net OPEB Liability

[in thousands] [unaudited]

	2022	2021	2020	2019	2018
<i>State Life &amp; Health Insurance OPEB Plan</i>					
System's Proportion of the Net OPEB Liability	0.13%	0.13%	0.13%	0.13%	0.13%
System's Proportionate Share of the Net OPEB Liability	\$848	\$1,042	\$1,130	\$1,013	\$1,031
System's Covered-Employee Payroll*	\$6,487	\$7,295	\$7,648	\$7,431	\$6,810
System's Proportionate Share of the Net OPEB Liability as a Percentage of its Covered-Employee Payroll	13.07%	14.28%	14.77%	13.63%	15.14%
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	0.16%	0.13%	0.13%	0.13%	-%

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available. See notes to Required Supplementary Information.*

## Schedule of Employer Contributions for OPEB

[in thousands] [unaudited]

	2022	2021	2020	2019	2018
<i>State Life &amp; Health Insurance OPEB Plan</i>					
Actuarially Required Contribution	\$26	\$30	\$41	\$45	\$44
Contributions in Relation to Contractually Required Contribution	\$26	\$30	\$41	\$45	\$44
Contribution Deficiency (Excess)	-	-	-	-	-
System's Covered-Employee Payroll*	\$6,565	\$6,487	\$7,295	\$7,648	\$7,431
Actual Contributions as a Percentage of Covered-Employee Payroll	0.40%	0.46%	0.56%	0.59%	0.59%

*Schedule is intended to show information for 10 years. Additional years will be displayed as they become available. See notes to Required Supplementary Information.*

\* The OPEB plan is not based on a measure of pay.

## Notes to Required Supplementary Schedules

June 30, 2022

### *Note 1: Schedule of Changes in the Net Pension Liability & Related Ratios*

The total pension liabilities presented in these schedules were provided by the System's actuarial consultants, Cavanaugh Macdonald Consulting, LLC. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position for PERS, MHSPRS and SLRP.

Plan requirements may be affected by changes in actuarial assumptions, benefit provisions, actuarial funding methods, or other significant factors.

#### ACTUARIAL ASSUMPTIONS

The total pension liability for the year ended June 30, 2022, is based on the June 30, 2021 actuarial valuation, rolled forward to the June 30, 2022 measurement date. Roll forward procedures include incorporating changes in assumptions from the experience study for the four-year period ended June 30, 2020 and the revised investment rate of return in the calculation of the total pension liability. The assumptions and methods used for the actuarial valuation were recommended by the actuary and adopted by the board.

#### Changes in assumptions

- » The investment rate of return was reduced from 8.00 percent to 7.75 percent in fiscal year 2015, and to 7.55 in fiscal year 2021.
- » Price inflation was reduced from 3.50 percent to 3.00 percent in fiscal year 2015, 2.75 percent in 2019, and to 2.40 percent in 2021.
- » The wage inflation assumption was reduced from 3.75 percent to 3.25 percent in fiscal year 2017, 3.00 percent in 2019, and to 2.65 percent in fiscal year 2021.
- » The percentage of active member disabilities assumed to be in the line of duty was increased in 2017 from 6.00 percent to 7.00 percent. The assumed rate was increased again in 2019 to 9.00 percent and to 12.00 percent in 2021.
- » The percentage of active member deaths assumed to be in the line of duty was decreased in 2021 from 6.00 percent to 4.00 percent.
- » Administrative expenses were increased from 0.25 to 0.28 percent of payroll in fiscal year 2021.
- » Assumed rates of salary increase were adjusted in 2015, 2017, 2019 and 2021 to more closely reflect actual and anticipated experience.
- » The assumed rate of interest credited to employee contributions was changed from 3.50 percent to 2.00 percent in 2016.
- » Withdrawal rates, pre-retirement mortality rates, disability rates, and service retirement rates were adjusted to more closely reflect actual experience in 2015, 2017, 2019, and 2021.
- » In 2015, the mortality table for retired life mortality was changed from the RP-2000 Mortality Table to the RP-2014 Healthy Annuitant Blue Collar Table projected to 2016 using Scale BB.

In 2017 the expectation of retired life mortality was changed to the RP-2014 Healthy Annuitant Blue Collar Mortality Table projected with Scale BB to 2022.

In 2019, the expectation of retired life mortality was changed to the PubS.H-2010(B) Retiree Table with male rates adjusted to 112.0 percent of male rates from ages 18 to 75 scaled down to 105.0 percent for ages 80 to 119, and female rates adjusted to 85.0 percent of the female rates from ages 18 to 65 scaled up to 102.0 percent for ages 75 to 119. Projection scale MP-2018 will be used to project future improvements in life expectancy generationally.

In 2021, the adjustments to the PubS.H-2010(B) Retiree Table were changed for males to 95.0 percent of male rates up to age 60, 110.0 percent for ages 61 to 75, and scaled up to 101.0 percent for ages above 77. Adjustments for females were changed to 84.0 percent of female rates up to age 72 scaled up to 100.0 percent for ages above 76. Projection scale MP-2020 will be used to project future improvements in life expectancy generationally. Additionally, an allowance was added for contingent annuitants using the same table adjusted for males to 97.0 percent and females to 110.0 percent for all ages.

- » The expectation of disabled mortality was changed from the RP-2000 Disabled Mortality Table to the RP-2014 Disabled Retiree Table in 2015. Small adjustments were also made to the mortality table in 2017. In 2019 the expectation of disabled mortality was changed to the PubT.H-2010 Disabled Retiree Table for disabled retirees, with male rates adjusted to 137.0 percent and female rates adjusted to 115.0 percent. Projection scale MP-2018 will be used to project future improvements in life expectancy generationally. The expectation of disabled mortality was changed to PubG.H-2010 Disabled Table for disabled retirees with males adjusted to 134.0 percent of males rates and females adjusted to 121.0 percent of female rates with projection scale MP-2020 used to project future improvements in life expectancy generationally.

#### CHANGES IN BENEFIT PROVISIONS

In fiscal year 2016, the interest rate on employee contributions was changed to the money market rate as published by the Wall Street Journal on December 31 of each preceding year with a minimum rate of 1.0 percent and a maximum rate of 5.0 percent.

## Notes to Required Supplementary Schedules

June 30, 2022

### Note 2: Schedule of Employer Contributions

The required employer contributions and amount of those contributions actually made are presented in this 10-year schedule.

#### » PERS

In fiscal year 2014, the Board implemented a revised funding policy aimed at stabilizing the employer contribution rate, which was set at 15.75 percent. At its June 26, 2018 meeting, the Board voted to increase the employer contribution rate from 15.75 percent to 17.40 percent effective July 1, 2019.

#### » MHSPRS

Effective July 1, 2018, the employer contribution rate was increased by the MHSPRS Administrative Board from 37.00 percent to 49.08 percent. Motor vehicle and driver's license reinstatement fees augment employer contributions. The amount of fees vary each year depending on activity, with \$3.5 million collected for fiscal year 2022.

#### » SLRP

The employer contribution rate is 7.40 percent. The employee contribution rate has remained at 3.00 percent since plan inception. SLRP is a small plan with a relatively fixed number of members.

The information presented in the required supplementary schedules was used in the actuarial valuation for purposes of determining the required employer contribution rates. The employer contribution rates were calculated as of June 30, 2020, two years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine contribution rates reported in the schedule:

	PERS	MHSPR	SLRP
Actuarial Cost Method	Entry age	Entry age	Entry age
Amortization Method	Level percentage of payroll, closed	Level percentage of payroll, open	Level percentage of payroll, open
Remaining Amortization Period	27.7 years	21.7 years	27.7 years
Asset Valuation Method	5-year Smoothed Fair Value	5-year Smoothed Fair Value	5-year Smoothed Fair Value
<i>Actuarial Assumptions:</i>			
Investment Rate of Return*	7.75%	7.75%	7.75%
Salary Increase	3.00-18.25%	3.00-8.56%	3.00%
Inflation	2.75%	2.75%	2.75%

\* Including inflation and net of pension plan investment expense.

### Note 3: Investment Returns

#### SCHEDULE OF INVESTMENT RETURNS

The annual money-weighted rate of return on investments is calculated as the internal rate of return on plan investments, net of plan investment expense. A money-weighted rate of return expresses investment performance, net of plan investment expense, adjusted for the changing amounts actually invested. The investment assets of the defined benefit plans administered by the System are combined in a comingled investment pool. Each plan owns an equity position in the pool in accordance with its ownership percentage. The annual money-weighted rate of return is, therefore, approximately the same for PERS, MHSPRS, SLRP, and MRS.

### Note 4: Net OPEB Liability

#### SCHEDULE OF PROPORTIONATE SHARE OF THE NET OPEB LIABILITY

This schedule presents historical trend information about the System's proportionate share of the net OPEB liability for its employees who participate in the Plan. The net OPEB liability is measured as the total OPEB liability less the amount of fiduciary net position of the Plan. Only five fiscal years information is available; therefore, trend information will be accumulated to display a ten-year presentation.

#### SCHEDULE OF EMPLOYER CONTRIBUTIONS FOR OPEB

The required contributions and percentage of those contributions actually made are presented in the schedule. Only five fiscal years information is available; therefore, trend information will be accumulated to display a ten-year presentation.

#### CHANGES IN ACTUARIAL ASSUMPTIONS AND METHODS:

The discount rate was changed from 3.56 percent to 3.89 percent in 2018, to 3.50 percent in 2019, and to 2.19 percent in 2020.

#### CHANGES IN BENEFIT TERMS:

Changes to benefit terms since the prior measurement date impacted the total OPEB liability. The schedule of monthly retiree contributions was increased as of January 1, 2021. In addition, the deductibles and coinsurance maximums were increased for the Select coverage and coinsurance maximums were increased for the Base coverage beginning January 1, 2021.

#### METHODS & ASSUMPTIONS USED IN CALCULATIONS OF ACTUARIALLY DETERMINED CONTRIBUTIONS:

The actuarially determined contribution rates, as a percentage of payroll, used to determine the actuarially determined contribution amounts in the schedule of employer contributions are calculated as of the most recent valuation date. The following actuarial methods and assumptions (from the June 30, 2019 actuarial valuation) were used to determine contribution rates reported in that schedule for the year ending June 30, 2020:

Actuarial Cost Method	Entry age
Amortization Method	Level dollar
Amortization Period	30 years, open
Asset Valuation Method	Fair value of assets
Inflation	2.75%
Salary Increases, Including Wage Inflation	3.00% to 18.25%
Initial health care cost trend rates: Medicare Supplement Claims – Pre Medicare	7.00%
Ultimate health care cost trend rates: Medicare Supplement Claims – Pre Medicare	4.75%
Year of ultimate trend rates: Medicare Supplement Claims – Pre Medicare	2028
Investment rate of return*	2.19%

\* Including inflation and net of pension plan investment expense.

Schedule 1  
Schedule of Administrative Expenses & Depreciation  
For the Year Ended June 30, 2022

[in thousands]

Administrative Expense	Amount
<i>Personal Services:</i>	
Salaries & Wages	\$7,598
Employee Benefits	2,604
Employee Travel	32
<b>Total Personal Services</b>	<b>10,234</b>
<i>Contractual Services:</i>	
Employee Training	25
Communications, Transportation, & Utilities	218
Rentals	62
Repair & Maintenance	194
Professional Services (See Schedule 2)	1,524
Other Fees & Services	575
Memberships, Subscriptions, & Insurance	176
Data Processing	2,657
<b>Bank Charges</b>	<b>150</b>
<b>Total Contractual Services</b>	<b>5,581</b>
<i>Commodities:</i>	
Printing & Office Supplies	181
Equipment & Repair Parts	53
Other Supplies & Materials	11
<b>Total Commodities</b>	<b>245</b>
<i>Depreciation:</i>	
Building	376
Furniture & Equipment	101
Software	35
<b>Total Depreciation</b>	<b>512</b>
<b>Total Administrative Expenses &amp; Depreciation</b>	<b>\$16,572</b>



**Schedule 2**  
**Schedule of Investment Managers' Fees, Investment Global Out-of-Pocket Fees &**  
**Professional Service Fees**  
**For the Year Ended June 30, 2022**

[in thousands]

	Amount
<i>Investment Managers' Fees:</i>	
Acadian Asset Management, LLC	\$3,805
AEW Capital Management, LP - Fund VII	122
AEW Capital Management, LP - Fund VIII	191
AEW Capital Management, LP - Fund IX	600
AllianceBernstein, LP	1,977
Angelo Gordon & Company - Fund III	64
Angelo Gordon & Company - Fund IV	528
Angelo Gordon & Company - Fund X	1,108
Arrowstreet Capital, LP	4,133
Artisan Partners, LP - MC Equity	2,382
Baillie Gifford & Company	3,002
CenterSquare Investment Management	1,031
Cohen & Steers Capital Management, Inc.	1,429
Dimensional Fund Advisors, Inc.	1,258
Eagle Capital Management, LLC	5,755
Epoch Investment Partners, Inc.	4,513
Fisher Investments	4,027
Hancock Natural Resource Group, Inc.	781
Harding Loevner, LP	3,976
Heitman, LLC - Fund III	1
Heitman, LLC - Fund IV	301
Heitman, LLC - Fund V	88
Invesco, LP - Fund IV	149
Invesco, LP - Fund V	722
J.P. Morgan Investment Management, Inc.	3,769
Lazard Asset Management, LLC	2,293
Loomis Sayles & Company, LP	2,068
Manulife Asset Management, LLC	1,051
Marathon Asset Management, LLP	4,980
Mondrian Investment Partners Limited	2,476
Northern Trust Investments, Inc. - BB.AGG	123
Northern Trust Investments, Inc. - EAFE	187
Northern Trust Investments, Inc. - Global Equity Index	342
Northern Trust Investments, Inc. - MSCI World Ex-US	33
Northern Trust Investments, Inc. - Russell MC	27
Northern Trust Investments, Inc. - S&P 500	272
Pacific Investment Management Company - Domestic Fixed Income	1,011
Pacific Investment Management Company - Global Fixed Income	2,008

	Amount
<i>Investment Managers' Fees:</i>	
Principal Global Investors, LLC - SC Equity	\$1,660
Principal Global Investors, LLC - Real Estate	7,372
Prudential Investment Management, Inc.	1,575
Riverbridge Partners, LLC	2,511
T.A. Associates Realty - Fund X	13
T.A. Associates Realty - Fund XI	542
T.A. Associates Realty - Fund XII	941
UBS Realty Investors, LLC - Core Real Estate	1,545
UBS Realty Investors, LLC - Value Added Real Estate	1,995
Wellington Management Company, LLP - Emerging Markets Debt	3,100
Wellington Management Company, LLP - MC Equity	2,543
Wellington Management Company, LLP - SC Equity	2,313
Westbrook Partners - Fund X	270
Westbrook Partners - Fund XI	2,138
Private Equity Managers: GCM Grosvenor Diversified Partners, LP & Pathway Capital Management, LLC	14,685
<b>Total Investment Managers' Fees</b>	<b>\$105,786</b>
Bank of New York Mellon - Global Out-of-Pocket Fees	672
<b>Total Investment Managers' Fees &amp; Global Out-of-Pocket Fees*</b>	<b>\$106,458</b>

*Securities Lending Fees:*

**Bank of New York Mellon** **\$1,238**

*Professional Service Fees:*

Actuary - Cavanaugh MacDonald Consulting, LLC	\$274
Audit - Eide Bailly, LLP	217
Investment Management Consultant - Callan LLC; FactSet Research Systems, Inc.; & KlarifyFX, Inc.	656
Legal - Outside - Chapman & Cutler, LLP; Ice Miller, LLP	95
Medical Fees - Clinics Labs	140
Accounting Consultants - ANM Consulting LLC; Harper, Rains and Knight, LLC	142
<b>Total Professional Service Fees</b>	<b>\$1,524</b>

\* Fees are subject to estimation.

Schedule 3  
Schedule of Net Position Restricted for  
Pension Benefits – MRS Plans  
June 30, 2022

[in thousands]

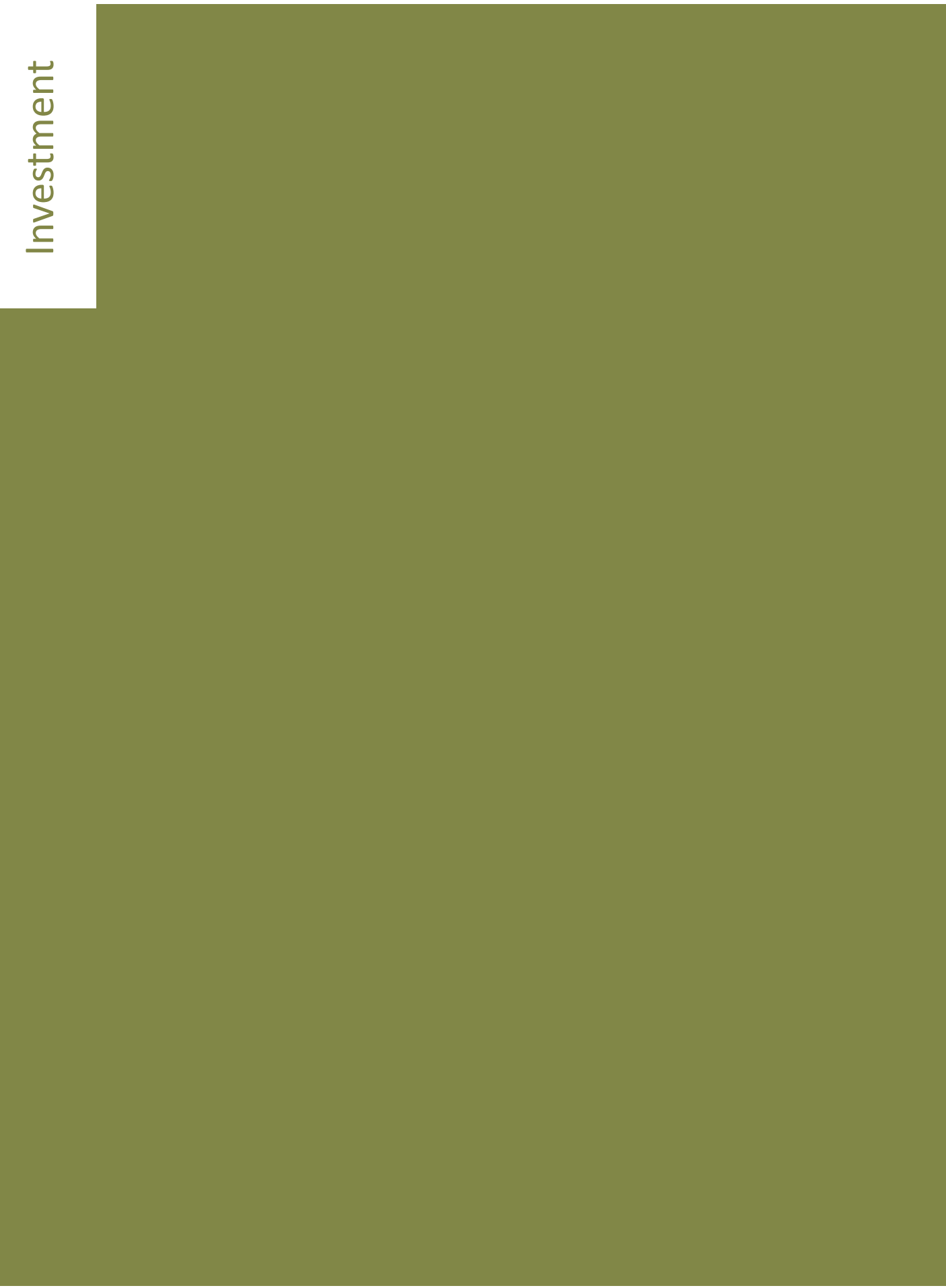
	<u>Amounts</u>
Biloxi Municipal	\$1,632
Biloxi Fire & Police	6,468
Clarksdale Fire & Police	965
Clinton Fire & Police	8,623
Columbus Fire & Police	1,275
Greenville Fire & Police	2,354
Greenwood Fire & Police	2,395
Gulfport Fire & Police	8,361
Hattiesburg Fire & Police	17,754
Jackson Fire & Police	44,142
Laurel Fire & Police	4,681
McComb Fire & Police	860
Meridian Municipal	3,140
Meridian Fire & Police	8,057
Natchez Fire & Police	1,459
Pascagoula Fire & Police	6,695
Tupelo Fire & Police	4,411
Vicksburg Fire & Police	8,161
Yazoo City Fire & Police	244
<b>Total Net Position Restricted for Pension Benefits – MRS Plans</b>	<b>\$131,677</b>

This page intentionally left blank



Investment

Investment





Providing Benefits for Life

September 27, 2022

Dear Members,

Fiscal year 2022 was a year that started out with Markets appearing to be range bound and weary on the back of a delta variant resurgence, China's growth struggles, supply chain gridlocks, inflation, and monetary and fiscal policy uncertainties. The fiscal year ended with one of the worst six-month periods in over 40 years, however, as war entered the global equation at the end of February and with it a set of new economic implications which necessitated a change of outlook.

**Investment Results:**

- For the year ending June 30, 2022, the portfolio returned -8.54%, outperforming the System's policy benchmark return of -10.94%;
- Longer term, the portfolio had 3-, 5-, and 10-year returns of 7.85%, 7.97% and 9.02%, respectively;
- The 1-year return of -8.54% was in the 78<sup>th</sup> percentile of the System's peer group comprised of public pension plans with assets greater than \$10 billion;
- Assets of the System totaled \$31.2 billion as of June 30;
- The System ranked as the 70<sup>th</sup> largest pension and retirement savings plan in the country

As of June 30, 2022, the System's portfolio asset allocation was in line with its strategic target allocation. Overweight allocations to Private Equity (+4.9%), Real Estate (+2.2%), and Fixed Income (+0.3%) were offset by underweight allocations to the other asset classes.

**FY2022 Financial Market Highlights:**

Fiscal year 2022 started off its first quarter with the S&P 500 hitting new all-time highs as the markets started to look beyond COVID-19 and instead concentrated on the positives of a seemingly strong economic recovery, ongoing support from the Federal Reserve, and good corporate earnings. During the final few weeks of the quarter, volatility did pick up as new economic data started showing signs that maybe the tides were changing. Weaker job gains, slower output growth strangled by supply chain issues, a drop in income growth, signs of waning consumer sentiment, and spiking inflation stirred even more anxiety. Even though the Federal Open Market Committee (FOMC) was suggesting that inflation would settle close to 2.5-3% and no rate changes would be needed until sometime in calendar year 2023, the markets did not quite buy it and pulled down sharply reminding investors that market returns are choppy.

The following quarter ending December 31, 2021, the markets shrugged inflation worries after being told it was transitory (but now the Federal Reserve started to talk about rate increases for 2022), that supply chains would untangle, labor markets would slowly equilibrate, supply and demand would line up the economy's production function, and consumer demand would normalize. All of this, along with many US companies posting strong earnings and market analysts expecting only a moderate slowdown in 2022, resulted in the US benchmark, the S&P 500, having a banner year with the index rising 28.7% (the third consecutive calendar year of double-digit returns), bond yields remaining low (by historical standards), and some of the largest gains ever coming from both real estate and private equity.



The second half of the fiscal year is one for the ages. Capital markets abhor uncertainty, and there is no greater human-generated uncertainty than war. The Russian invasion of Ukraine upended expectations for an orderly slowdown in economic growth from the surge in 2021, with annual CPI inflation coming in higher than expected (8.6% actual vs 8.3% consensus). This exposed a broadening of price pressures, while the annual inflation in energy increased even more and was a main contributor to the increase in CPI. This latest inflation report reaffirmed that aggressive monetary policy tightening remained the only way forward; Federal Reserve chair Jerome Powell reluctantly said as much in press remarks following the FOMC's June 2022 meeting. It was then that the Fed agreed to increase the key Fed rate by 75 basis points, the largest increase since 1994, with further hikes expected. By the end of the Fiscal Year, global equity markets posted one of the worst six-month periods in over 40 years, with the MSCI World Index dropping 21.2% and the S&P 500 down 20.6%. Fixed income markets did not miss the selloff, not offering any relief, as the normal negative correlation between equities and bonds did not hold over this period. The Bloomberg Barclays Global Aggregate Bond Index lost 13.9% and US 10-year Treasuries saw yields jump from 1.5% in December to 3% at the end of June.

Not everything was bad however, private real estate and private equity delivered. Core real estate delivered robust returns, with strong fundamentals in the Industrial and Multifamily sectors; the NFI-ODCE Index (value-weighted, net of fees) gained 12.0% and private equity returned 8.82% as measured by the Callan Alternative Inv DB Index.

While the System's investments did not produce a positive absolute return, it did produce positive relative results compared to the System's benchmark by 2.4%. This outcome is the payoff of diversifying the portfolio's allocation into more nontraditional asset classes and serves to reaffirm how important it is to continue diversifying into these different sources of returns to lower our exposure to the more volatile public markets.

Stock prices historically go up, but this past year has reminded us that markets are no stranger to volatility, or immune to bear markets or recessions. Knowing this, PERS continues to position the portfolio to achieve long-term goals and to stay focused on ensuring that the allocation of assets maintains the highest quality of risk adjusted returns and reasonable fees.

Respectfully,

  
Charles R. Nielsen III  
Chief Investment Officer

September 28, 2022

## Members of the Board:

Callan LLC is pleased to present the Public Employees' Retirement System of Mississippi (PERS) results for the fiscal year ended June 30, 2022. During the fiscal year, investors faced a number of challenges: the war in Ukraine, persistent and widespread inflation, significant increases in interest rates, a stubborn virus, and escalating concerns over a slowing global economy.

Global bond and stock markets declined, with the S&P 500 Index officially in a bear market, defined as down 20% from the most recent peak. In mid-June, the probability of recession (conventionally defined as two consecutive quarters of negative GDP growth) increased dramatically. The primary culprits were seen as inflation and the Fed's weapon of choice to fight it: higher interest rates. Further, a "stagflation" scenario, which describes a period of slow growth and high inflation, became an increasing source of concern.

Despite negative absolute performance, PERS fared well relative to its policy benchmark, in part driven by the System's investments in private market strategies (e.g., private real estate and private equity).

Highlights within the capital markets for the trailing 12 months include the following:

- Domestic equity markets sank on concerns over rising rates and slowing growth, particularly moving into the second half of the fiscal year. The Russell 3000 Index, an index of domestic stocks covering all capitalizations, declined -13.9%.
- International equity markets suffered in the last year. The MSCI All Country World Index ex U.S. (ACWI ex U.S. IMI), a broad index of stocks outside the U.S. that includes developed and emerging market countries, returned -19.9%. International equity markets faced additional pressure as the U.S. dollar strengthened against other major currencies given its global dominance and perceived safety.
- U.S. fixed income markets were hit hard as well as rates rose sharply. The Fed embarked on a path of hiking policy rates and reducing its balance sheet which resulted in an inverted yield curve and the worst six-month return for the Bloomberg U.S. Aggregate Index to close out the fiscal year. Over the course of the full fiscal year, the Aggregate Index returned -10.3%. Global markets performed only modestly better, with the Bloomberg Global Bond Index (hedged) down -8.9%.
- Private real estate was a bright spot among the capital markets, generating a return of 21.5% as measured by the NCREIF Property Index. In contrast, publicly traded real estate (REITs) mirrored the performance of the declining public equity markets and generated a -12.8% return as measured by the EPRA/NAREIT Developed REIT Index.

For the fiscal year ended June 30, 2022, the System's investments produced a return of -8.5% versus -10.9% for the policy benchmark. Assets stood at \$31.2 billion at the end of the fiscal period, down from \$35.6 billion at the beginning of the period.

Over the trailing five- and ten-year periods, PERS exceeded its benchmark with annualized returns of 8.0% and 9.0%, respectively. Long-term returns remain very competitive against the policy benchmark and large public retirement systems.

The System recently completed a comprehensive global equity structure review, approved new targets to private credit and infrastructure within the strategic asset allocation policy, and is embarking on an evaluation of the public fixed income allocation.

The Public Employees' Retirement System of Mississippi (PERS) maintains an appropriately diversified investment approach, designed to maximize return with an acceptable risk level. Callan supports the System's ongoing efforts to enhance the investment program and its continued due diligence activities.

Sincerely,



John P. Jackson, CFA  
Senior Vice President  
Callan LLC



Alexander W. Ford  
Vice President  
Callan LLC

## Defined Benefit Plans — Report on Investments

### Fiscal Year 2022

---

The System is committed to ensuring secure retirement benefits are available for its current and future retirees through the prudent investment of its assets.

The Board is responsible for directing the investment program in accordance with the laws of the State. As fiduciaries, the Board relies on the following principles to guide them in making investment-related decisions.

Facing each year's unique investment challenges and opportunities, the Board and investment staff remain clearly focused on the fundamental principle that investing for the future of our membership is a long-term commitment, and the prudent management of the System's assets demands constant attention and specialized expertise. The Board is committed to maintaining a well-diversified portfolio designed to minimize risks and maximize returns over the long term. The goal of the investment program is to ensure adequate funding is available to meet all current and future pension obligations.

#### *Investment Policy Summary*

### INVESTMENT OBJECTIVES

The primary objective of the investment program is to ensure that the System meets its financial responsibility to provide stable benefits for its members. As such, the investment program strives to:

- » achieve a long-term annual rate of return that meets or exceeds actuarial assumed rate of return on investments;
- » protect the investment portfolio from severe extended declines in asset value during periods of adverse market conditions by prudent diversification of assets;
- » provide adequate liquidity to meet all benefit payments and other cash requirements; and
- » maintain a total portfolio risk profile that is controlled through diversification by asset class, investment approach, and by individual investments within each asset class.

### INVESTMENT CONSTRAINTS

- » Laws and Regulations - The specific types of investments in which the System is authorized to invest are enumerated in Section 25-11-121 of the Mississippi Code, Annotated (1972, as amended).
- » Time Horizon - Acknowledging the impact of annual investment returns on the actuarial evaluation, the System views the appropriate investment time horizon for a public pension plan to be thirty (30) years.
- » Liquidity Requirements - Annual liquidity requirements must be considered when designing the portfolio structure.

### RISK CONTROLS

The System's greatest risk is that plan assets will not support liabilities over the long term. To help mitigate this concern and evaluate the funded status of the System, the Board conducts annual actuarial valuations and projection reports, as well as periodic experience studies. Additionally, at least every five years, an independent external audit of the actuary is conducted to ensure the assumptions and calculation methods used are appropriate for properly computing the liabilities of the System.

### STRATEGIC OBJECTIVE

The Board's strategic investment objectives are to maximize total return on assets, preserve principal, and to attain competitive investment results. By achieving the strategic objectives, the Board seeks to be able to provide adequate benefits and maintain stable contribution rates.

### IMPLEMENTATION

The strategic asset allocation is the primary tool for reaching the investment objectives. The asset allocation decision is based on an evaluation of both expected returns and risk levels for the allowable asset classes. In making the asset allocation decision, the Board must strike a balance between the desired level of risk and return. The result of the asset allocation decision should be a well-diversified portfolio that reflects both the Board's desired level of return and the Board's risk tolerance level for the portfolio.

## REBALANCING

The Board's investment policy includes a provision for rebalancing the asset allocation any time the current allocation is not in alignment with the long-term target. The investment staff is responsible for implementing the rebalancing activity as contained in the policy.

## ROLES AND RESPONSIBILITIES

### *Board of Trustees*

The Systems' investment activities are governed by the ten-member Board of Trustees who are responsible for directing the investment program in accordance with the laws of the State. As fiduciaries of a pension fund, the board members rely heavily on internal staff, consultants, actuaries, and other contracted service providers to assist them in this process.

The Board is responsible for:

- » approval of long-term risk tolerance and asset allocation decisions;
- » approval of all formal investment policies;
- » approval of the investment structure within the asset allocation policy structure;
- » retention and termination of external managers, consultants, and custodial banks; and
- » periodically approving the System's Investment Policy Statement.

Information and recommendations related to investment program activities and policies are provided to the Board by the investment staff and consultant to aid the decision-making process.

### *Executive Director*

The Board employs the Executive Director who is responsible for, among other duties, broad oversight of the investment function, including ensuring the System has in place the appropriate resources, training opportunities, and compensation structures to attract and retain a competent and qualified investment staff.

### *Investment Staff*

The Chief Investment Officer (CIO), as head of the investment staff, is charged with maintaining the integrity of the investment program. This responsibility includes working directly with the Executive Director and Board on the development of investment policy, asset allocation decisions, portfolio structure, investment manager/consultant selection and termination, and custodian selection. The CIO is charged with providing advice and recommendations on all investment related matters and to make all necessary information available to the Executive Director and Board to assist them in making prudent investment decisions.

The investment staff discharges their duties solely in the interest of the members and benefit recipients of the System. These duties include implementation of and adherence to the Board's investment policies. Primary responsibilities are:

- » monitoring investment managers' compliance with the guidelines established in their Investment Management Agreements (IMA);
- » meeting and/or communicating with external managers regularly to review investment strategies and results;
- » managing the short-term account assets to ensure monthly benefit payrolls are funded;
- » recommending investment program enhancements; and
- » implementing the adopted rebalancing policy.

### *Investment Consultant*

The investment consultant is charged with assisting the investment staff in providing advice and recommendations to the Executive Director and Board on all investment matters and to discharge their investment duties solely in the interest of the System's members and benefit recipients, assisting in the System's prudent management and oversight of investments.

The consultant attends all investment related meetings of the Board and provides an independent perspective on investment goals, structure, performance, and managers. The consultant reviews asset allocation, manager structure and performance, and makes recommendations to the Board as appropriate. The consultant assists in the manager search process and in keeping the Board informed as to changes within the pension and investment communities that could affect the System.

#### *Investment Managers*

External investment managers are retained for their skill and expertise within a specialized part of the System's portfolio. Investment managers are charged with managing the assets in compliance with the policies, guidelines, and objectives included in their IMAs with the System.

Investment managers construct and manage investment portfolios, which are consistent with the investment philosophy and disciplines for which they were hired. All investment managers provide periodic reporting as directed by the investment staff.

Each investment manager acts as a fiduciary to the System. Further, each manager is responsible for achieving best execution in all trades including foreign exchange transactions. Trades must meet the test of best execution as defined under Section 28(e) of the Securities and Exchange Act of 1934.

#### *Custodial Bank*

The custodial bank is responsible for settling all security trades as authorized by the investment managers. The custodial bank maintains accurate records of all transactions related to investment activity and serves as trustee of all assets within its control. It is responsible for capturing and recording all monies due to the System from investment activities and investment income. The custodial bank also is responsible for all securities lending activities, income collection, and record keeping.

### PORTFOLIO REVIEW AND EVALUATION

Periodically, the Board reviews and evaluates reports on the investment performance of the System's portfolio. These reviews also include the performance of each investment manager portfolio and at the total fund level. Performance reports are generated by the investment consultant and include performance data, asset allocation, and peer group comparison information. The Board places greater emphasis on long-term rather than short-term results.

The Board recognizes that though its investments are subject to short-term volatility, it is critical that a long-term investment focus be maintained. This prevents ad hoc revisions to its philosophy and policies in reaction to either speculation or short-term market fluctuations.

To maintain this long-term view, the Board utilizes the following formal review schedule:

<u>Formal Review Agenda Item</u>	<u>Review Schedule</u>
Total Fund Performance	Quarterly
Broad Asset Allocation	At least every five years
Manager Structure	At least every three years
Investment Policy	Periodically

#### *Standard of Care*

The standard of care which governs members of the Board is the prudent person standard. This standard requires fiduciaries to discharge their duties solely in the interests of participants and their beneficiaries with such care, skill, prudence, and diligence as a person acting in like circumstances would exercise in the conduct of an enterprise of similar character and with similar aims.

#### *Ethics and Conflicts of Interest*

As it pertains to ethics and conflicts of interest, it is understood that:

- » all Board members are fund fiduciaries with a duty of loyalty and responsibility to observe the exclusive benefit rule;
- » all members of the Board, Executive Director, and investment staff will disclose any conflict of interest related to investments;
- » all investment managers, consultants, and custodial banks shall be required to disclose all third-party relationships, which in any way involve payment of fees, shared fees, or any "soft dollar" exchanges not otherwise disclosed; and
- » upon request, each investment manager and consultant will disclose its ethics policy to the Board.

### *Investment Management Fees*

Investment management fees are closely monitored by the investment staff for reasonableness. Comparative fee information is obtained from various sources including the investment consultant and other annual fee surveys in which the System participates. Fees paid to each external investment management firm are presented to the Board periodically.

### *Proxy Voting*

The Board charges its investment managers with the responsibility of voting proxies on the System's behalf and in its best interest. It is the intent of the Board to have proxies voted in a manner solely to protect the interest of its participants. As a rule, proxies should be voted in such a manner as to avoid activity which would:

- » be detrimental to the long-term interests of the System's holdings;
- » excessively insulate present management from take-over or stockholder rejection;
- » reduce investment liquidity; and
- » reduce shareholder interests.

Proxies are to be voted and submitted in adequate time for the proxy to be received by the appropriate corporate official. A record of the proxy voting positions taken by each investment manager should be reported to the investment staff by the 30th calendar day following the end of each quarter.

### *Securities Lending*

Lending securities to qualified borrowers enables the System to realize incremental income on assets currently in the portfolio. This represents an opportunity to increase the return on the fund by reinvesting the income generated.

The custodial bank, as lending agent for the System, is responsible for the lending and cash collateral reinvestment activities. All loans will have an initial collateral margin of 102.00 percent for loaned securities denominated in US dollars or whose primary trading market is located in the US, or sovereign debt issued by foreign governments denominated in US dollars and 105.00 percent for loaned securities which are not in denominations of US dollars or whose primary trading market is not located in the US, with the potential of higher values dependent on the jurisdiction in which such loaned securities are customarily traded.

### *Manager Watch List or Termination Guidelines*

Managers may be placed on a Watch List for either qualitative or quantitative factors.

Qualitative Factors - Qualitative factors that may be grounds for being placed on a Watch List or terminated include, but are not limited to the following:

- » violation of investment guidelines;
- » deviation from stated investment style;
- » turnover of key personnel;
- » change in ownership;
- » litigation; and
- » failure to disclose significant information including potential conflicts of interest, regulatory agency investigations and/or sanctions, and any other such pertinent occurrences.

The Board can place a manager on the Watch List at any time based on qualitative factors. Watch List status, based on qualitative factors, mandates closer monitoring of the manager's organization. The Board will notify the manager of its decision to place the firm on a Watch List. At the end of six months the Board will reevaluate and decide what action, if any, to take.

### *Quantitative Factors*

Quantitative factors pertain primarily to performance. The performance of the Plan's investment managers is reviewed by the Board on a continuing basis. Below are some of the factors to be considered in determining the appropriateness of placing an investment manager on a Watch List.

<u>Performance Test</u>	<u>Benchmark</u>	<u>Fail Criteria</u>
Test 1 – Performance relative to market index, for 4 consecutive quarters of rolling 3-year period returns	Annualized performance relative to the agreed upon market index or appropriate benchmark	Managers fail if they underperform their index or benchmark over 4 quarters of rolling 3-year periods
Test 2 – Performance relative to a peer group for 4 consecutive quarters of rolling 3-year period returns	Performance compared to that of an appropriate peer group	Managers fail if their performance is below the 50th percentile over 4 quarters of rolling 3-year periods



The Board will notify a manager of its decision to place them on a Watch List. The investment manager will be informed that failure to show steady improvement in performance could result in termination or a reduction of the assets managed for the System. The Board, at its discretion, can place an investment manager on a Watch List, or terminate an investment manager at any time with a 30-day notice.

#### Strategic Asset Allocation Policy

The primary method utilized in achieving the investment return objectives is the allocation of assets. The Board adopts an asset allocation policy as the framework to ensure the assets are invested in a prudently managed and well diversified portfolio designed to meet the established return targets. The strategic target allocation below is intended to accomplish the Board's objectives over time. In addition to the target allocations, the Board has established target ranges for each asset class. These ranges provide the Board and staff the latitude to exercise management discretion in a tactical manner as appropriate.

Strategic Asset Allocation	Targets	Rebalancing Ranges
Equity Securities	61%	±5%
Debt Securities	20%	±5%
Real Estate	10%	±5%
Private Equity	8%	±5%
Cash Equivalents	1%*	±1%

\* Cash equivalents will consist of the assets in the short-term account used for benefit payments. Target may exceed the max when necessary to meet the current obligations of the system for a period of ninety (90) days as enumerated in Section 25-11-121 of the Mississippi Code, Annotated (1972, as amended).

The current long-term performance measurement for each asset class is as follows:

Asset Class	Benchmark
Public Equities	MSCI ACWI IMI Index
Private Equity	S&P 500 Index + 3%
Fixed Income	Bloomberg Barclays US Aggregate Index
Real Estate	NCREIF Property Index
Cash Equivalents	30-day U.S. T-bills
Total Fund Policy	27.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 20.0% Bloomberg Aggregate, 12.0% MSCI ACWI IMI, 10.0%NCREIF Total Index, 8.0% S&P 500 Index +3.0% and 1.0% FTSE 1 Mo T-Bill.

#### Investment Summary

As of June 30, 2022, the System's portfolio value as reported by the investment consultant totaled \$31.2 billion. This represents a decrease of approximately \$4.4 billion compared to fiscal year 2021. As is common in mature pension plans, the System's annual distributions again surpassed contributions made by employees and employers. For fiscal year 2022, contributions totaled \$1.9 billion, while the System paid out approximately \$3.3 billion to members and beneficiaries.

#### ASSET ALLOCATION

One of the most important decisions made by the Board is that of determining the long-term asset allocation policy for the investment portfolio. The System's investment consultant conducts periodic asset/liability allocation studies that include consideration of projected future liabilities, expected risk, return, correlations for various asset classes, and the System's statutory investment restrictions. The strategic asset allocation targets for fiscal year 2022 consist of 61.00 percent for equity securities, a 20.00 percent target allocation for debt investments, and a 1.00 percent allocation to cash equivalents. Real estate investments are targeted at 10.00 percent, while the target allocation for private equity is 8.00 percent.

The asset allocation at year end, excluding investments purchased with securities lending cash collateral, was in line with its strategic target allocation. Overweight allocations to Private Equity (+4.9%), Real Estate (+2.2%), and Fixed Income (+0.3%) were offset by underweight allocations to the other asset classes.



It is important to note that the asset allocation decision for a public pension system is unique to the individual plan and is based on that plan's specific liability requirements, as well as any statutory investment restrictions under which the investment program must operate. As a result, the System's allocation could be somewhat different than that of other public pension plans. From time to time, these differences can result in significant differences in investment returns.

## SECURITIES LENDING

The System's securities lending program is managed by its custodial bank, BNY Mellon. This program generates ancillary income by lending securities from the System's portfolio to securities dealers in return for a premium payment on loans collateralized by securities and earnings generated by the investment of cash collateral. All loans are secured by the receipt of collateral valued at 102.00 or 105.00 percent of the value of the loaned security. In fiscal year 2022, the securities lending program generated approximately \$7.0 million\* in additional revenue for the investment program.

\* \$7.0 million were the earnings distributed for the fiscal year; \$3.9 million was the reported net income as required by Governmental Accounting Standards Board Statement No. 28.

## Portfolio Performance

*All returns for periods greater than one year are annualized.*

Callan LLC is employed by the Board of Trustees as the System's investment consultant. Their services include calculating investment returns both for the total fund and for each of the investment managers retained to invest the System's assets. All returns are calculated by Callan using a time-weighted rate of return methodology based on portfolio fair values determined by the System's custodial bank.

The combined investment portfolio experienced a gross return of negative 8.54 percent which outperformed the System's customized Target Policy benchmark's negative 10.94 percent return by 2.40 percent and ranked in the 78th percentile of the funds in the Callan Public Very Large Defined Benefit (DB) universe. The System's three-year total return of 7.85 percent beat the peer-universe median return of 7.27 percent, and the five-year return of 7.97 percent outpaced its policy benchmark of 7.64 percent, placing in the top half, respectively, in the peer universe. For the 10 years ended June 30, 2022, the portfolio returned 9.02 percent, outperforming the Target Policy benchmark return of 8.11 percent, performing better than 84 percent of the System's peers.

The System's portfolio structure is designed to achieve success over the long term. Challenges are always present, whether they come in the form of pandemics or inflation, and the effects they have on the global financial markets are seldom the same. This underlines the value of the System's Asset Allocation Policy, as evidenced by the very competitive longer-term results of 6.98 and 7.95 percent for the 25-year and 30-year returns, respectively.

## PUBLIC EQUITY PORTFOLIO

Globally, fiscal year 2022 equity markets saw tremendous declines. Broad market benchmarks like the Russell 3000, the MSCI All Country World Index ex US - Investable Markets Index (MSCI ACWI ex US - IMI), and MSCI Emerging Markets Indices posted losses of 13.87, 19.86, and 25.28 percent, respectively. The System's domestic equity portfolio returned a negative 14.29 percent for the fiscal year, ranking PERS in the 62nd percentile of the Callan Public Plan domestic equity universe. The international equity portfolio returns of negative 22.24 percent, placing it in the 80th percentile of the Callan Public Plan international equity universe for the year. The System's global equities portfolio posted returns of negative 18.73 percent, placing it in the 66th percentile of the Callan Public Plan global equity universe for the year.

Combining all segments of the public equity portfolio, the program returned negative 18.07 percent for the fiscal year underperforming the negative 16.52 percent return of the MSCI ACWI - IMI. The total public equity portfolio returns for the three-year period ended June 30 was 6.02 percent, and the five-year return was 6.93 percent. These gains exceeded the MSCI ACWI - IMI returns of 5.98 and 6.70 percent for the three-year and five-year periods, respectively. For the 10 years ended June 30, the public equity portfolio's return of 9.43 percent also exceeded the index return of 8.71 percent.

As of June 30, the System had allocated 24.28 percent of the total portfolio to domestic equities, 19.19 percent to international markets, and 10.42 percent to global equities. Within the domestic equity portfolio 70.47 percent was invested in large-capitalization (cap), 17.46 percent in mid-cap, and 12.07 percent in small-cap securities.

The total public equity was divided into approximately 54.00 percent active and 46.00 percent passive management.

## DEBT PORTFOLIO

At the close of the year, the fixed income portfolio included both active and passive core US portfolios, core-plus strategies (incorporates some high-yield debt, non-US debt, and US core debt exposures), global bond portfolios, and a dedicated emerging market debt portfolio.

The total fixed income portfolio's negative 11.49 percent return for the year underperformed the Bloomberg Barclays Aggregate Index performance of negative 10.29 percent. For the three-year and five-year periods ended June 30, fixed income returns were negative 0.73 and positive 1.38 percent, respectively, topping the Index's negative 0.93 and positive 0.88 percent returns for the same periods. The ten-year performance for the fixed income portfolio was 2.48 percent, while the Index returned 1.54 percent.

The System ended the year with 20.29 percent of the total portfolio invested in fixed income securities. The debt portfolio allocations consisted of 30.03 percent in both active and passive core US mandates, 34.86 percent core-plus, and 25.68 percent hedged global bond strategies. The remaining 9.43 percent was invested in emerging market debt.

## REAL ESTATE PORTFOLIO

On June 30, the real estate investment program consisted of private investments in core, core plus, and value-added real estate funds, timber, as well as public REITs. The total real estate portfolio returned 22.82 percent for the fiscal year, exceeding its custom benchmark return of 21.45 percent by 1.37 percent. The longer-term three-year return of 12.18 percent exceeded the benchmark return of 10.22 percent by 1.96 percent. The five-year and ten-year portfolio returns of 10.52 and 10.76 percent also topped the benchmark's 8.86 and 9.61 percent respective returns.

The core and core plus real estate portfolio returned 27.17 percent for the year, thereby underperforming the benchmark NFI-ODCE Equal Weighted Net Index return of 28.90 percent. Core and core plus real estate has realized a three-year return of 10.93 percent, while the Index returned 12.28 percent for the same period. The five-year and ten-year portfolio returns of 9.14 and 10.17 also slightly trailed the benchmark's 10.07 and 10.45 percent respective returns.

The System's value-added real estate portfolio consisting of 18 limited partnerships continued to post strong returns with a 32.05 percent return for the year to beat the benchmark NCREIF Total Index return of 21.45 percent. For longer periods the program's returns posted three-year, five-year, and ten-year gains of 19.45, 17.35, 15.95 percent, respectively. For the same periods, the Index had returns of 10.22, 8.86, and 9.67 percent. These returns place PERS' value-added real estate portfolio performance in the top decile among peers over the last 1-, 3-, 5-, and 10-year periods.

The System's timber portfolio, comprised of both US and non-US timber investments, returned 22.11 percent for the fiscal year. NCREIF Timberland Index returns for the same period were 12.01 percent. Longer term, with the help of a near term recovery in Timber, the portfolio's three-year, five-year, and ten-year return of 16.87, 12.96, and 11.28 percent significantly exceeded the respective 5.03, 4.32, and 5.73 percent returns of the NCREIF Timberlands Index.

The public REIT portfolio, comprised of both US and non-US REIT investments, returned negative 8.31 percent for the fiscal year and 4.57 percent for three-year period ending June 30, outperforming both relative benchmarks. The custom REIT portfolio benchmark returned negative 12.24 and 1.90 percent for the same periods. The five-year return of 6.41 percent outpaced the 5.04 percent return of the benchmark. Additionally, the portfolio's ten-year return of 7.80 percent outpaced the benchmark return of 6.94 percent.

## PRIVATE EQUITY PORTFOLIO

The System's private equity program consists of seven separate fund-of-funds limited partnership commitment series investing in buyouts, venture capital/growth, and special situation opportunities. On a time-weighted basis, the System's private equity investments returned an impressive 26.03 percent for the fiscal year, greatly outperforming the negative 7.04 percent return of the benchmark (S&P 500 Index plus 3.00 percent) and outperforming 81 percent of the Callan Alternative Investments Defined Benefit Peer Group. The private equity program saw returns of 27.43, 22.90, and 18.96 percent for the three-year, five-year, and ten-year periods, respectively, while the benchmark returns were 14.33, 14.92, and 16.49\* percent for the same periods. Additionally, the portfolio ranked in the top decile among peers for the 3-, 5-, and 10-year time periods.

*\* Prior to 2013 the private equity benchmark was the S&P 500 Index plus 5 percent.*

## SHORT-TERM PORTFOLIO

Cash flows generated by employee and employer contributions to the System and from ancillary income-generating activities, including securities lending and the System's commission recapture program, are invested by the System's investment staff. These assets are used to fund monthly benefits, refunds, and annual Cost-of-Living-Adjustment (COLA) payments. As interest rates at the short end of the yield curve remained low throughout the fiscal year, the return on the short-term investment program was 0.31 percent. The cash portion of the accounts managed by external investment managers is invested in interest-earning cash equivalents. All short-term investments are made in accordance with state law and policies set by the Board.

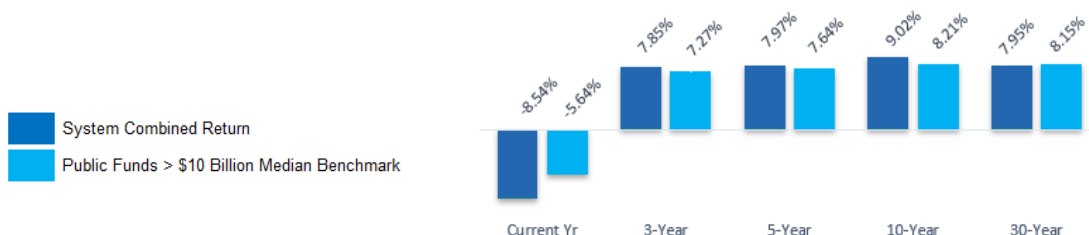
**Defined Benefit Plans**  
For Fiscal Year Ended June 30, 2022

	Asset Allocation at Fair Value	Long-Term Target Asset Allocation
Equity Securities	53.9%	61.0%
Debt Securities	20.3	20.0
Real Estate	12.2	10.0
Private Equity	12.9	8.0
Cash & Equivalents	0.7	1.0

**Defined Benefit Plans:**  
Performance Summary  
For Fiscal Year Ended June 30, 2022

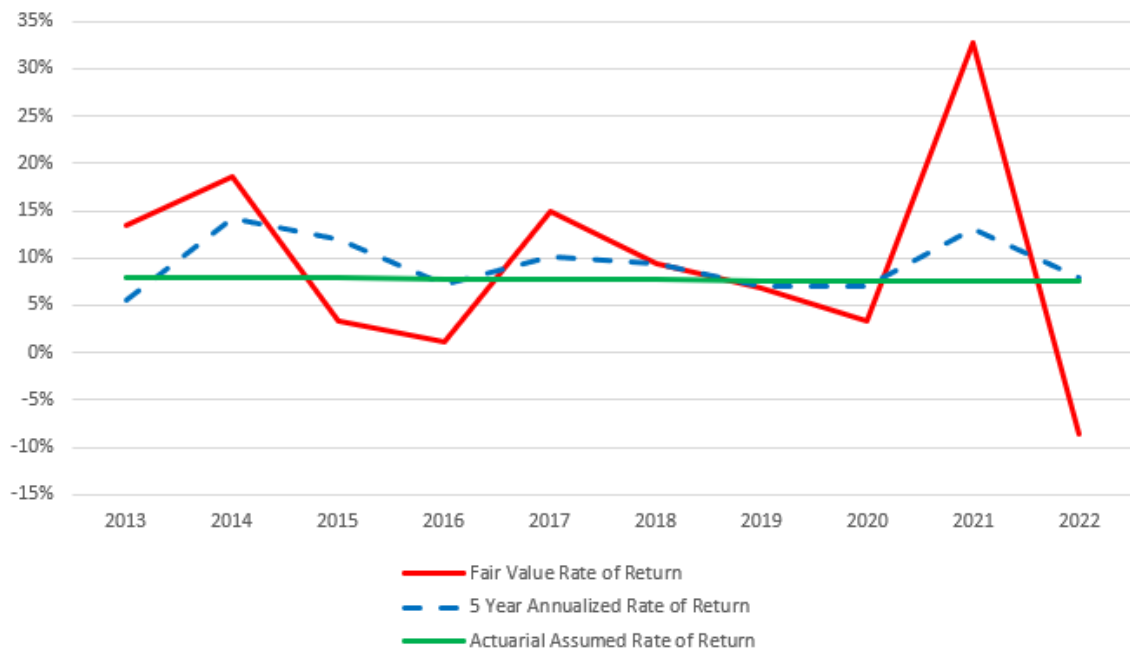
	Annualized				
	Current	3-year	5-year	10-year	30-year
<i>Total Fund:</i>					
System Combined Return*	(8.54)%	7.85%	7.97%	9.02%	7.95%
Public Funds Policy Benchmark	(10.94)	5.98	6.73	8.11	7.64
Public Funds > \$10 Billion Median Benchmark	(5.64)	7.27	7.64	8.21	8.15
<i>Total Equity Securities:</i>					
Total Equity Managers Composite*	(18.07)	6.02	6.93	9.43	-
MSCI ACWI IMI Benchmark	(16.52)	5.98	6.70	8.71	-
Total Equity Custom Benchmark	(16.54)	6.04	6.89	9.16	-
<i>Domestic Equity:</i>					
Domestic Equity Managers Composite*	(14.29)	9.57	10.38	12.29	9.87
Russell 3000 Index	(13.87)	9.77	10.60	12.57	9.84
Domestic Equity Custom Benchmark	(13.67)	9.16	9.98	12.24	9.45
<i>International Equity Securities:</i>					
International Equity Managers Composite*	(22.24)	2.06	2.74	5.50	-
International Equity Benchmark	(19.86)	1.55	2.50	4.98	5.55
International Equity Custom Benchmark	(20.49)	1.37	2.26	5.03	6.45
<i>Global Equity Securities:</i>					
Global Equity Managers Composite*	(18.73)	5.19	6.87	9.39	-
Global Equity Benchmark	(16.52)	5.98	6.70	8.63	-
<i>Debt Securities:</i>					
Debt Securities Managers Composite*	(11.49)	(0.73)	1.38	2.48	5.43
Bloomberg Aggregate	(10.29)	(0.93)	0.88	1.54	4.81
Fixed Income Custom Benchmark	(11.09)	(1.35)	0.79	1.71	-
<i>Real Estate:</i>					
Commingled Funds and REITS Composite*	22.82	12.18	10.52	10.76	-
Real Estate Benchmark	21.45	10.22	8.86	9.61	-
<i>Private Equity:</i>					
Private Equity Composite*	26.03	27.43	22.90	18.96	-
Private Equity Benchmark	(7.04)	14.33	14.92	16.49	-

\* Calculations for the System are prepared using a time-weighted rate of return methodology based upon fair values.



Defined Benefit Plans:  
Total Pension Investment Rates of Return  
Last 10 Fiscal Years  
[in thousands]

Fiscal Year	Investments Before Lending Activities	Fair Value Rates of Return	Five-Year Rates of Return	Actuarial Assumed Rates of Return
2013	\$ 21,947,427	13.37%	5.62%	8.00%
2014	24,600,195	18.58	14.11	8.00
2015	24,735,121	3.40	11.89	8.00
2016	23,938,414	1.15	7.18	7.75
2017	26,592,048	14.96	10.08	7.75
2018	28,280,303	9.48	9.32	7.75
2019	28,226,443	6.87	7.06	7.75
2020	27,956,585	3.35	7.05	7.75
2021	35,265,335	32.71	13.03	7.55
2022	30,980,078	(8.54)	7.97	7.55



Defined Benefit Plans:  
Net Investment Income by Source  
Last 10 Fiscal Years

[in thousands]

Fiscal Year	Bond Interest Income	Dividend Income	Short-term Income	Realized Gain on Investments	Appreciation (Depreciation) in Fair Value of Investments
2013	\$184,775	\$339,386	\$12,390	\$920,422	\$1,198,511
2014	176,286	392,423	8,627	1,264,402	2,213,619
2015	183,456	365,567	8,045	1,450,502	(1,087,742)
2016	177,516	346,655	14,723	574,260	(909,931)
2017	173,692	351,444	14,411	1,136,714	1,900,834
2018	181,409	368,696	19,638	1,907,081	38,573
2019	195,358	380,435	29,032	957,634	260,730
2020	185,298	356,415	19,798	921,453	(525,979)
2021	170,610	355,288	8,714	2,954,584	5,508,267
2022	187,209	446,840	8,400	1,794,709	(5,369,210)

Fiscal Year	Net Income from Securities Lending	Total Income/(Loss)	Manager* and Trading Fees	Net Income from Investments
2013	\$14,645	\$2,670,129	\$(50,210)	\$2,619,919
2014	16,453	4,071,810	(83,449)	3,988,361
2015	13,778	933,606	(88,884)	844,722
2016	19,429	222,652	(89,116)	133,536
2017	22,333	3,599,428	(95,916)	3,503,512
2018	17,151	2,532,548	(105,462)	2,427,086
2019	15,535	1,838,724	(104,675)	1,734,049
2020	15,438	972,423	(99,541)	872,882
2021	10,665	9,008,128	(110,484)	8,897,644
2022	3,941	(2,928,111)	(106,458)	(3,034,569)

\* Manager fees are subject to estimation.

Defined Benefit Plans:  
Investment Summary  
For the Year Ended June 30, 2022

[in thousands]

	July 1, 2021 Beginning Fair Value *	Purchases	Sales & Maturities	Increase (Decrease) in Fair Value	June 30, 2022 Ending Fair Value **	Percent of Total Fair Value
Equities	\$21,585,571	\$7,526,109	\$7,339,327	\$(5,287,292)	\$16,485,061	49.70%
Long-term Debt Securities	6,980,387	9,232,941	8,627,689	(896,928)	6,688,711	20.16
Private Equity	3,567,438	619,358	491,403	316,361	4,011,754	12.09
Real Estate	3,093,473	501,130	570,780	494,961	3,518,784	10.61
Short-term Investments	2,832,725	57,635,124	58,002,391	4,136	2,469,594	7.44
<b>Totals</b>	<b>\$38,059,594</b>	<b>\$75,514,662</b>	<b>\$75,031,590</b>	<b>\$(5,368,762)</b>	<b>\$33,173,904</b>	<b>100.00%</b>

\* Includes investment securities on loan to broker-dealers with a fair value of \$2,971,246. It also includes the securities purchased with the cash collateral received in the lending program with a fair value of \$2,794,259. As of June 30, 2021, 7.81 percent of the total fair value of investments were on loan to broker-dealers. To arrive at the beginning net asset value of investments of \$35.6 billion, the fair value total must be reduced by \$2.5 billion, which represents the fair value of cash, sweep investments, accrued interest and dividends, net receivables and payables for pending trades, and the securities lending obligations.

\*\* Includes investment securities on loan to broker-dealers with a fair value of \$2,468,922. It also includes the securities purchased with the cash collateral received in the lending program with a fair value of \$2,193,826. As of June 30, 2022, 7.44 percent of the total fair value of investments were on loan to broker-dealers. To arrive at the ending net asset value of investments of \$31.2 billion, the fair value total must be reduced by \$2.0 billion, which represents the fair value of cash, sweep Investments, accrued interest and dividends, net receivables and payables for pending trades, and the securities lending obligations.

Defined Benefit Plans:  
Non-US Investments by Country  
Fair Value at June 30, 2022

Angola	0.11%	Greece	0.07%	Oman	0.25%
Argentina	0.07%	Guatemala	0.02%	Pakistan	0.07%
Armenia	0.01%	Guernsey CI	0.03%	Panama	0.17%
Australia	6.10%	Hong Kong	1.91%	Paraguay	0.05%
Austria	0.34%	Hungary	0.32%	Peru	0.27%
Azerbaijan	0.19%	Iceland	0.04%	Philippines	0.05%
Bahrain	0.02%	India	1.77%	Poland	0.17%
Belgium	0.29%	Indonesia	0.97%	Portugal	0.33%
Benin	0.02%	Ireland	2.71%	Puerto Rico	0.05%
Bermuda	0.61%	Isle of Man	0.03%	Qatar	0.34%
Brazil	1.98%	Israel	1.00%	Romania	0.17%
British Virgin Islands	0.08%	Italy	0.99%	Russia	0.57%
Canada	8.15%	Jamaica	0.02%	Saudi Arabia	0.63%
Cayman Islands	1.56%	Japan	11.44%	Senegal	0.03%
Chile	0.43%	Jersey CI	0.24%	Serbia	0.07%
China	5.26%	Jordan	0.04%	Singapore	1.86%
Colombia	0.26%	Kazakhstan	0.03%	South Africa	0.88%
Costa Rica	0.07%	Kuwait	0.01%	South Korea	2.96%
Cote d'Ivoire	0.09%	Liberia	0.02%	Spain	0.93%
Croatia	0.21%	Luxembourg	0.75%	Sri Lanka	0.04%
Curacao	0.17%	Macau	0.03%	Supranational Geographic Focus	0.37%
Czech Republic	0.02%	Macedonia	0.04%	Sweden	3.07%
Denmark	1.74%	Malaysia	0.12%	Switzerland	4.64%
Dominican Republic	0.25%	Marshall Islands	0.03%	Taiwan	2.68%
Ecuador	0.03%	Mauritius	0.04%	Thailand	0.46%
Egypt	0.19%	Mexico	1.33%	Turkey	0.20%
El Salvador	0.02%	Mongolia	0.03%	Ukraine	0.08%
Finland	0.32%	Morocco	0.09%	United Arab Emirates	0.22%
France	4.19%	Netherlands	3.31%	United Kingdom	9.05%
Gabon	0.08%	New Zealand	0.32%	Uruguay	0.14%
Germany	7.06%	Nigeria	0.01%	Uzbekistan	0.01%
Ghana	0.03%	Norway	0.84%	Venezuela	0.01%



Defined Benefit Plans:  
Equity Portfolio

Equity Portfolio Summary

Total Equity  
Securities:  
\$16,485,060,342

Total Number of Shares  
of Equity Securities Held:  
6,332,515,974

Total Number of Issues of  
Equity Securities Held:  
6,837

Equity Portfolio by Industry Type  
Fair Value at June 30, 2022

Industry	Percent
Basic Industries	4.28%
Communications	11.57
Consumer Cyclical	9.82
Consumer Non-Cyclical	21.12
Diversified	0.12
Energy	5.45
Financial Services	17.79
Industrial	10.85
Technology	16.61
Utilities	2.39
<b>Totals</b>	<b>100.00%</b>

Ten Largest Equity Holdings

	Shares	Fair Value
Microsoft Corporation	1,697,737	\$436,029,794
Apple, Inc.	2,904,898	397,157,655
Amazon.com, Inc.	2,022,634	214,823,957
Alphabet Inc-Class C	85,169	186,302,929
UnitedHealth Group, Inc.	350,103	179,823,404
Alphabet Inc-Class A	66,975	145,955,939
Meta Platforms, Inc.	673,546	108,609,293
Taiwan Semiconductor Manufacturing Co.	6,700,115	107,261,328
Berkshire Hathaway, Inc.	339,901	92,799,771
Tesla, Inc.	131,735	88,712,984
<b>Totals</b>	<b>14,972,813</b>	<b>\$1,957,477,054</b>

A complete list of portfolio holdings is available  
upon written request.

Defined Benefit Plans:  
Private Equity Portfolio

Private Equity Portfolio Summary

Total Private Equity Investments:  
\$4,011,753,936

Private Equity Portfolio by Industry Type  
Fair Value at June 30, 2022

Private Equity Portfolio By Strategy  
June 30, 2022

Strategy	Percent
Buyouts	65.56%
Special Situations	19.05
Venture Capital	15.39
<b>Total</b>	<b>100.00%</b>

Industry	Percent
Technology	42.23%
Health Care	13.88
Consumer Discretionary	13.67
Financial	9.87
Industrials	9.39
Materials	3.14
Consumer Staples	1.85
Communication Services	1.82
Energy	1.72
Other/Miscellaneous	1.02
Real Estate	0.97
Utilities	0.44
<b>Totals</b>	<b>100.00%</b>

Defined Benefit Plans:  
Bond Portfolio

Bond Portfolio Summary

Total Bond Investments:  
\$6,688,710,566

Total Par of Bond  
Investments Held:  
142,108,618,033

Total Number  
of Bond Issues Held:  
6,309

Corporate Bond Investments by Industry Type  
Fair Value at June 30, 2022

Industry	Percent
Communications	5.89%
Consumer	17.89
Energy	8.78
Financial	45.64
Industrial	10.72
Technology	3.84
Utilities	7.00
Miscellaneous	0.24
<b>Totals</b>	<b>100.00%</b>

*\*Includes investments purchased with cash collateral received in the securities lending program.*

Ten Largest Long-term Corporate Bond Holdings

	PAR	Fair Value
Loomis Sayles Senior Loan Fund	55,861,510	\$55,861,510
Massachusetts Mutual Life Insurance Company.	42,720,000	42,630,329
Toyota Motor Credit Corporation	41,900,000	41,746,461
UBS AG London	40,700,000	40,548,596
Met Tower Global Funding	31,000,000	30,972,650
Caterpillar Financial Services	28,930,000	28,634,745
Toyota Motor Credit Corporation	25,500,000	25,392,352
Caterpillar Financial Services	25,000,000	24,950,250
New York Life Global Funding	24,400,000	24,320,966
Bank America NA/Charlotte NC	22,275,000	22,275,066
<b>Totals</b>	<b>338,286,510</b>	<b>\$337,332,925</b>

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

Defined Benefit Plans:  
Real Estate Investment Portfolio

Real Estate Investment Portfolio Summary

Total Real Estate Investments: \$3,518,784,126	Total Number of Shares* of Real Estate Investments Held: 660,231,084	Total Number of Issues of REITs Held: 123
---	--	---

\* Includes units of commingled funds and shares of REITs.

Portfolio Distribution by Property Type  
Fair Value at June 30, 2022

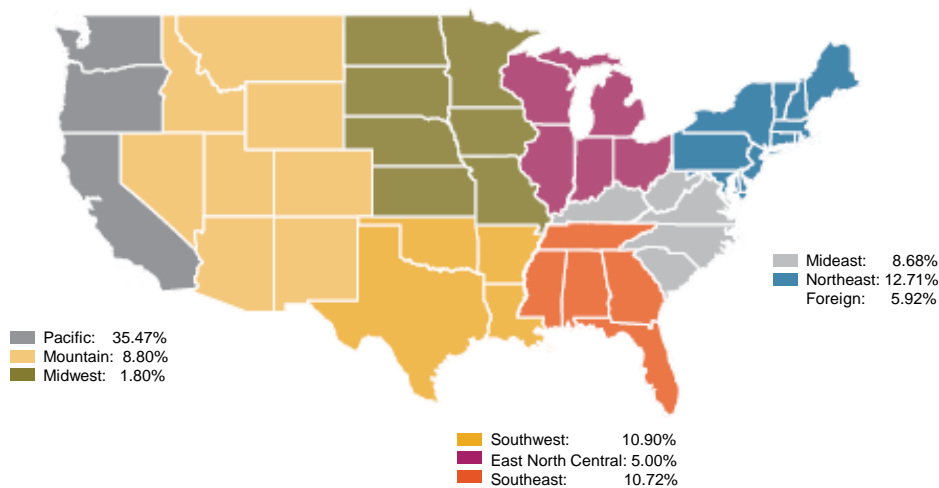
Property Type	Fair Value
Apartments	24.49%
Health Care	1.37
Hotels	1.02
Industrial	28.52
Office	19.32
Residential	5.51
Retail	9.89
Self-Storage	2.68
Timber	2.14
Other	5.06
<b>Totals</b>	<b>100.00%</b>

Ten Largest REIT Holdings

	Shares	Fair Value
Prologis, Inc.	230,539	\$27,122,913
Public Storage	65,591	20,508,338
Digital Realty Trust, Inc.	137,728	17,881,226
Equinix, Inc.	26,877	17,658,727
Invitation Homes, Inc.	493,014	17,541,438
Realty Income Corp.	210,482	14,367,475
Welltower, Inc.	173,711	14,305,101
Sun Communities, Inc.	78,988	12,587,528
UDR, Inc.	270,099	12,435,358
Simon Property Group, Inc.	130,019	12,341,403
<b>Totals</b>	<b>1,817,048</b>	<b>\$166,749,507</b>

A complete list of portfolio holdings is available upon written request

Real Estate Portfolio Distribution By Geographic Location  
Fair Value at June 30, 2022



Defined Benefit Plans:  
Portfolio Detail Illustrated by Investment Manager  
At June 30, 2022

Investment Manager	Fund Type	Date Initiated	Fair Value Percent of Total Portfolio*
<i>Equity Securities:</i>			
Northern Trust Investments, Inc.	Passive Large Cap (S&P 500 Index)	July 1985	15.05%
Northern Trust Investments, Inc.	MSCI World Ex-US	April 2022	6.03
Epoch Investment Partners, Inc.	Global	February 2012	2.88
Acadian Asset Management, LLC	Global	July 2005	2.83
Arrowstreet Capital, LP	ACWI Ex-US	June 2013	2.76
Harding Loevner, LP	Global	February 2012	2.53
Marathon Asset Management, LLP	ACWI Ex-US	May 2016	2.38
Northern Trust Investments, Inc.	ACWI-IMI-Global (Index)	January 2021	2.26
Eagle Capital Management, LLC	Large Cap	January 2005	2.23
Lazard Asset Management., LLC	Emerging Markets	April 1998	2.11
Baillie Gifford & Company	ACWI Ex-US	August 2014	2.04
Fisher Investments	Emerging Markets	April 2016	1.92
Wellington Management Company, LLP	Domestic Mid Cap Value	October 2001	1.58
Northern Trust Investments, Inc.	Passive Mid Cap (Russell Index)	May 2019	1.50
Artisan Partners, LP	Domestic Mid Cap Growth	September 2002	1.19
Dimensional Fund Advisors, Inc.	Small Cap Value	July 2002	1.08
Wellington Management Company, LLP	Domestic Small Cap Core	July 2002	1.05
Principal Global Investors, LLC	International Small Cap	September 2018	1.02
Mondrian Investment Partners Limited	International Small Cap	May 2011	0.95
Riverbridge Partners, LLC	Small Cap Growth	November 2013	0.84
Northern Trust Investments, Inc.	EAFE (Index)	December 2017	0.01
<b>Subtotal</b>			<b>54.24%</b>
<i>Debt Securities:</i>			
Loomis Sayles & Company, LP	Core Plus	August 2009	3.58%
Prudential Financial, Inc.	Core Plus	January 2012	3.52
Pacific Investment Management Company	Global	February 2013	2.64
AllianceBernstein, LP	Global	February 2013	2.60
Manulife Asset Management, LLC	Domestic Core	March 2017	2.19
Pacific Investment Management Company	Domestic Core	August 1983	2.09
Wellington Management Company, LLP	Emerging Market	May 2010	1.90
Northern Trust Investments, Inc.	Passive Domestic Core (BB Agg Index)	December 2017	1.85
<b>Subtotal</b>			<b>20.37%</b>

\* Includes cash and cash equivalents.

Defined Benefit Plans:  
Portfolio Detail Illustrated by Investment Manager  
[continued]

Investment Manager	Fund Type	Date Initiated	Fair Value Percent of Total Portfolio*
<i>Real Estate:</i>			
Principal Global Investors, LLC	Core	June 2003	3.74%
J.P. Morgan Investment Management, Inc.	Core	July 2012	1.84
UBS Realty Investors, LLC	TPF Core	June 2003	1.64
UBS Realty Investors, LLC	TPG Core Plus	January 2011	1.21%
CenterSquare Investment Management	Domestic REITs	June 2017	0.73%
Cohen & Steers Capital Management, Inc.	Global REITs	October 2010	0.66
T.A. Associates Realty	Fund XII – value added	March 2020	0.40
Manulife Investment Management	Timber	March 2008	0.31%
T.A. Associates Realty	Fund XI – value added	April 2016	0.27
Invesco, LP	Fund V – value added	February 2019	0.26
Angelo Gordon & Company	Fund X – value added	July 2018	0.24%
Angelo Gordon & Company	Fund IV – value added	August 2015	0.20%
Heitman, LLC	Fund IV – value added	September 2017	0.18
AEW Capital Management, LP	Fund IX – value added	April 2020	0.12
AEW Capital Management, LP	Fund VIII – value added	July 2016	0.11%
Westbrook Partners	Fund XI – value added	March 2021	0.10%
Angelo Gordon & Company	Fund III – value added	January 2012	0.09%
T.A. Associates Realty	Fund X – value added	January 2013	0.09%
Westbrook Partners	Fund X – value added	March 2016	0.07%
Heitman, LLC	Fund V – value added	December 2020	0.06
AEW Capital Management, LP	Fund VII – value added	June 2013	0.02
Invesco, LP	Fund IV – value added	April 2015	0.02
			%
<b>Subtotal</b>			<b>12.36%</b>
<i>Private Equity:</i>			
Pathway Capital Management, LLC	Series 2016 Diversified	July 2016	4.24%
Pathway Capital Management, LLC	Series 2013 Diversified	April 2013	3.06%
GCM Grosvenor Diversified Partners, LP	Series 2014 Diversified	February 2014	2.37%
Pathway Capital Management, LLC	Series 2008 Diversified	December 2008	1.28
GCM Grosvenor Diversified Partners, LP	Series 2018 Diversified	July 2018	1.01
GCM Grosvenor Diversified Partners, LP	Series 2009 Diversified	June 2009	0.70
Pathway Capital Management, LLC	Series 2021 Diversified	May 2021	0.37%
<b>Subtotal</b>			<b>13.03%</b>
<b>Total</b>			<b>100.00%</b>

\* Includes cash and cash equivalents.

Note: AEW Capital Management, LP Fund VI; Angelo Gordon & Company Fund II; Blackrock Institutional Trust EAFE; Heitman III; Longview Partners; Northern Trust Transition GIEq; and Pyramis Global Advisors are not shown due to small residual balances.

In addition to the cash equivalent portfolio managed in-house, 33 firms managed 63 different investment portfolios for the System at year end.

Defined Benefit Plans:  
Investment Fees & Commissions  
For the Year Ended June 30, 2022

	Assets Under Management	Fees*
<i>Investment Managers:</i>		
Equity Securities	\$16,748,465,314	\$52,487,760
Debt Securities	6,288,511,821	12,913,633
Real Estate	3,812,159,226	25,698,280
Private Equity	4,020,261,721	14,685,161
<b>Totals</b>	<b>\$30,869,398,082</b>	<b>\$105,784,834</b>
<i>Other Investment Service Fees:</i>		
Securities Lending Agent/Cash Management Fees	\$1,237,763	
Investment Consultant Fees	656,516	
Custodial & Global Out-of-Pocket Expenses	672,020	
<b>Totals</b>	<b>\$2,566,299</b>	

\* Management fees are subject to estimation.

Defined Benefit Plans:  
Brokerage Commissions Paid\*  
For the Year Ended June 30, 2022

	Number of Shares Traded	Commissions	Commissions Per Share
<i>Brokerage Firm, Including Subsidiaries:</i>			
Merrill Lynch & Company	85,921,949	\$394,011	\$0.005
J.P. Morgan Securities	133,274,507	372,830	0.003
UBS AG	101,993,897	366,621	0.004
Morgan Stanley & Company	88,385,014	365,563	0.004
Goldman Sachs & Company	57,273,215	353,445	0.006
Jefferies & Company, Inc.	37,534,546	243,302	0.006
Citigroup, Inc.	133,158,155	229,576	0.002
Crédit Lyonnais SA	77,170,545	217,772	0.003
Sanford C. Bernstein Company, LLC	11,676,835	197,026	0.017
Credit Suisse	54,405,176	179,482	0.003
HSBC Securities, Inc.	140,990,323	162,353	0.001
Instinet, Inc.	71,799,588	140,579	0.002
Macquarie Securities	40,005,201	133,631	0.003
Barclays Capital	22,442,274	132,866	0.006
Bank of New York Mellon	12,920,408	101,867	0.008
Liquidnet, Inc.	5,029,636	86,283	0.017
BNP Paribas, SA	16,644,321	78,769	0.005
Daiwa Securities Group	3,411,646	69,240	0.020
Cowen & Company	3,594,876	61,257	0.017
Capital Institutional Services, Inc.	1,964,978	58,100	0.030
Robert W. Baird & Company	1,371,743	52,802	0.038
Royal Bank of Canada	90,228,199	51,776	0.001
Others (less than \$60,000)	8,612,340,302	723,798	0.000
Commission Recapture Income	n/a	(107,028)	-
<b>Totals</b>	<b>9,803,537,334</b>	<b>\$4,665,921</b>	<b>\$0.000</b>

\* Approximate figures provided by Bank of New York Mellon.

This page intentionally left blank





Actuarial

Actuarial



**Cavanaugh Macdonald**  
CONSULTING, LLC  
*The experience and dedication you deserve*

November 1, 2022

Board of Trustees  
Public Employees' Retirement System  
of Mississippi  
429 Mississippi Street  
Jackson, MS 39201-1005

Dear Board Members:

The basic financial objective of the Public Employees' Retirement System of Mississippi (PERS) is to establish and receive contributions which:

- (1) When expressed in terms of the percents of active member payroll will remain approximately level from generation to generation of Mississippi citizens, and which
- (2) When combined with present assets and future investment return will be sufficient to meet the present and future financial obligations of PERS.

In addition, PERS maintains a funding policy that was revised in 2019. In order to meet the objectives listed above, the System will strive to meet the following funding goals:

- (1) To maintain an increasing trend in the funded ratio over the projection period with an ultimate goal of being approximately 100% funded;
- (2) Require clear reporting and risk analysis of metrics used by the actuary;
- (3) Provide contribution stability as a percentage of payroll.

In order to measure progress toward this fundamental objective and funding policy, PERS has an annual actuarial valuation performed. The valuation (i) measures present financial position, and (ii) establishes contribution requirements that provide for the current cost and level percent of payroll amortization of unfunded actuarial accrued liability over a reasonable period. The Board adopted a new funding policy which sets the funding goals, objectives, and metrics for possible changes in the contribution rate for future valuations. The funding policy also establishes a methodology to reduce the long-term investment return assumption to a rate recommended by the actuary by using investment gains in future valuations.

The latest completed actuarial valuation was based upon data and assumptions as of June 30, 2021. This valuation indicates that the current contribution rates of 17.40% of payroll for employers and 9.00% of payroll for active members, for benefits then in effect, meet the basic financial objective and the goals of the funding policy as listed above. There are 145,673 active members as of June 30, 2021.

The total pension liabilities for the Governmental Accounting Standards Board Statement No. 67 (GASB 67) are based on the June 30, 2021 actuarial valuation and are rolled forward using actuarial techniques to the measurement date of June 30, 2022.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144  
Phone (678) 388-1700 • Fax (678) 388-1730  
[www.CavMacConsulting.com](http://www.CavMacConsulting.com)  
Offices in Kennesaw, GA • Bellevue, NE



Board of Trustees  
November 1, 2022  
Page 2

The actuarial valuation is based upon financial and participant data, which is prepared by the retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death, and disability among PERS members and their beneficiaries. The data are reviewed by us for internal and year to year consistency as well as general reasonableness prior to its use in the actuarial valuation. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Trustees and were based upon actual experience of PERS during the years 2016 to 2020. Assets are valued according to a market related method that recognizes 20% of the previously unrecognized and unanticipated gains and losses. The actuarial cost method used in valuation and financial disclosure reports is the Entry Age Normal cost method. The Entry Age Normal cost method is the most, commonly used cost method by public plans, and it develops a normal cost rate that tends to be stable and less volatile. The assumptions and methods utilized in this valuation and disclosure reports, in our opinion, are consistent and meet the parameters established by the Actuarial Standards of Practice.

The current benefit structure is outlined in the Actuarial Section. There were no changes in the benefit structure since the last valuation.

The following supporting schedules in the Actuarial Section are prepared by Cavanaugh Macdonald Consulting, LLC:

- Summary of Actuarial Assumptions & Methods
- Summary of Main System Provisions as Interpreted for Valuation Purposes
- Valuation Assets & Funding Progress
- Schedules of Funding Progress – Last 10 Fiscal Years
- Solvency Tests
- Analysis of Financial Experience
- Schedule of Active Member Valuation Data
- Schedule of Retirants Added to and Removed from Rolls

We also provided the Schedule of Changes in Net Pension Liability and related ratios, as well as the Schedule of Employer Contributions in the Financial Section.

Based upon the valuation results, annual projection forecasting and the presumption that future contributions will be made at the necessary level to ensure adequate funding and to meet accounting standards, it is our opinion that the Public Employees' Retirement System of Mississippi continues in sound condition in accordance with the actuarial principles of level percent of payroll financing.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Edward J. Koebel'.

Edward J. Koebel, FCA, EA, MAAA  
Chief Executive Officer





## Cavanaugh Macdonald CONSULTING, LLC

*The experience and dedication you deserve*

November 1, 2022

Board of Trustees  
Public Employees' Retirement System  
of Mississippi  
429 Mississippi Street  
Jackson, MS 39201-1005

Dear Board Members:

The basic financial objective of the Mississippi Highway Safety Patrol Retirement System (HSPRS) is to establish and receive contributions which:

- (1) When expressed in terms of the percents of active member payroll will remain approximately level from generation to generation of Mississippi citizens, and which
- (2) When combined with present assets and future investment return will be sufficient to meet the present and future financial obligations of HSPRS.

In addition, HSPRS maintains a funding policy that was revised in 2012. In order to meet the objectives listed above, the System will strive to meet the following funding goals:

- (1) To maintain an increasing ratio of system assets to accrued liabilities and reach an 80 percent minimum funded ratio in 2042;
- (2) To maintain adequate asset levels to finance the benefits promised to members;
- (3) To develop a pattern of stable contribution rates when expressed as a percentage of member payroll as measured by valuations prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board, with a minimum employer contribution equal to the normal cost determined under the Entry Age Normal funding method.

In order to measure progress toward this fundamental objective, HSPRS has an annual actuarial valuation performed. The valuation (i) measures present financial position, and (ii) establishes contribution requirements that provide for the current cost and level percent of payroll amortization of unfunded actuarial accrued liability over a reasonable period.

The latest completed actuarial valuation was based upon data and assumptions as of June 30, 2021. This valuation indicates that contribution rates of 49.08% of payroll for employers and 7.25% of payroll for active members, along with anticipated contributions as provided by Senate Bill No. 2659 (effective July 1, 2004) and House Bill No. 1015 (effective July 1, 2013), for benefits then in effect, meet the basic financial objective and the goals of the funding policy as listed above. There are 478 active members as of June 30, 2021.

The total pension liabilities for the Governmental Accounting Standards Board Statement No. 67 (GASB 67) are based on the June 30, 2021 actuarial valuation and are rolled forward using actuarial techniques to the measurement date of June 30, 2022.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144  
Phone (678) 388-1700 • Fax (678) 388-1730  
[www.CavMacConsulting.com](http://www.CavMacConsulting.com)  
Offices in Kennesaw, GA • Bellevue, NE



Board of Trustees  
November 1, 2022  
Page 2

The actuarial valuation is based upon financial and participant data, which is prepared by the retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death, and disability among HSPRS members and their beneficiaries. The data are reviewed by us for internal and year to year consistency as well as general reasonableness prior to its use in the actuarial valuation. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Trustees and were based upon actual experience of HSPRS during the years 2016 to 2020. Assets are valued according to a market related method that recognizes 20% of the previously unrecognized and unanticipated gains and losses. The actuarial cost method used in valuation and financial disclosure reports is the Entry Age Normal cost method. The Entry Age Normal cost method is the most, commonly used cost method by public plans, and it develops a normal cost rate that tends to be stable and less volatile. The assumptions and methods utilized in this valuation and disclosure reports, in our opinion, are consistent and meet the parameters established by the Actuarial Standards of Practice.

The current benefit structure is outlined in the Actuarial Section. There were no changes in the benefit structure since the last valuation.

The following supporting schedules in the Actuarial Section are prepared by Cavanaugh Macdonald Consulting, LLC:

- Summary of Actuarial Assumptions & Methods
- Summary of Main System Provisions as Interpreted for Valuation Purposes
- Valuation Assets & Funding Progress
- Schedules of Funding Progress – Last 10 Fiscal Years
- Solvency Tests
- Analysis of Financial Experience
- Schedule of Active Member Valuation Data
- Schedule of Retirants Added to and Removed from Rolls

We also provided the Schedule of Changes in Net Pension Liability and related ratios, as well as the Schedule of Employer Contributions in the Financial Section.

Based upon the valuation results, annual projection forecasting and the presumption that future contributions will be made at the necessary level to ensure adequate funding and to meet accounting standards, it is our opinion that the Mississippi Highway Safety Patrol Retirement System continues in sound condition in accordance with the actuarial principles of level percent of payroll financing.

Respectfully submitted,

Edward J. Koebel, FCA, EA, MAAA  
Chief Executive Officer





**Cavanaugh Macdonald**  
CONSULTING, LLC

*The experience and dedication you deserve*

November 1, 2022

Board of Trustees  
Public Employees' Retirement System  
of Mississippi  
429 Mississippi Street  
Jackson, MS 39201-1005

Dear Board Members:

The basic financial objective of the Mississippi Supplemental Legislative Retirement Plan (SLRP) is to establish and receive contributions which:

- (1) When expressed in terms of the percents of active member payroll will remain approximately level from generation to generation of Mississippi citizens, and which
- (2) When combined with present assets and future investment return will be sufficient to meet the present and future financial obligations of SLRP.

In addition, SLRP maintains a funding policy that was revised in 2012. In order to meet the objectives listed above, the System will strive to meet the following funding goals:

- (1) To maintain an increasing ratio of system assets to accrued liabilities and reach an 80 percent minimum funded ratio in 2042;
- (2) To maintain adequate asset levels to finance the benefits promised to members;
- (3) To develop a pattern of stable contribution rates when expressed as a percentage of member payroll as measured by valuations prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board, with a minimum employer contribution equal to the normal cost determined under the Entry Age Normal funding method.

In order to measure progress toward this fundamental objective and funding policy, SLRP has an annual actuarial valuation performed. The valuation (i) measures present financial position, and (ii) establishes contribution rates that provide for the current cost and level percent of payroll amortization of unfunded actuarial accrued liability over a reasonable period.

The latest completed actuarial valuation was based upon data and assumptions as of June 30, 2021. This valuation indicates that contribution rates of 7.40% of payroll for employers and 3.00% of payroll for active members, for benefits then in effect, meet the basic financial objective and the goals of the funding policy as listed above. There are 173 active members as of June 30, 2021.

The total pension liabilities for the Governmental Accounting Standards Board Statement No. 67 (GASB 67) are based on the June 30, 2021 actuarial valuation and are rolled forward using actuarial techniques to the measurement date of June 30, 2022.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144  
Phone (678) 388-1700 • Fax (678) 388-1730  
[www.CavMacConsulting.com](http://www.CavMacConsulting.com)  
Offices in Kennesaw, GA • Bellevue, NE





Board of Trustees  
November 1, 2022  
Page 2

The actuarial valuation is based upon financial and participant data, which is prepared by the retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death, and disability among SLRP members and their beneficiaries. The data are reviewed by us for internal and year to year consistency as well as general reasonableness prior to its use in the actuarial valuation. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Trustees and were based upon actual experience of SLRP during the years 2016 to 2020. Assets are valued according to a market related method that recognizes 20% of the previously unrecognized and unanticipated gains and losses. The actuarial cost method used in valuation and financial disclosure reports is the Entry Age Normal cost method. The Entry Age Normal cost method is the most, commonly used cost method by public plans, and it develops a normal cost rate that tends to be stable and less volatile. The assumptions and methods utilized in this valuation and disclosure reports, in our opinion, are consistent and meet the parameters established by the Actuarial Standards of Practice.

The current benefit structure is outlined in the Actuarial Section. There were no changes in the benefit structure since the last valuation.

The following supporting schedules in the Actuarial Section are prepared by Cavanaugh Macdonald Consulting, LLC:

- Summary of Actuarial Assumptions & Methods
- Summary of Main System Provisions as Interpreted for Valuation Purposes
- Valuation Assets & Funding Progress
- Schedules of Funding Progress – Last 10 Fiscal Years
- Solvency Tests
- Analysis of Financial Experience
- Schedule of Active Member Valuation Data
- Schedule of Retirants Added to and Removed from Rolls

We also provided the Schedule of Changes in Net Pension Liability and related ratios, as well as the Schedule of Employer Contributions in the Financial Section.

Based upon the valuation results, annual projection forecasting and the presumption that future contributions will be made at the necessary level to ensure adequate funding and to meet accounting standards, it is our opinion that the Mississippi Supplemental Legislative Retirement Plan continues in sound condition in accordance with the actuarial principles of level percent of payroll financing.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Edward J. Koebel'.

Edward J. Koebel, FCA, EA, MAAA  
Chief Executive Officer



**Cavanaugh Macdonald**  
CONSULTING, LLC  
*The experience and dedication you deserve*

November 1, 2022

Board of Trustees  
Public Employees' Retirement System  
of Mississippi  
429 Mississippi Street  
Jackson, MS 39201-1005

Dear Board Members:

The basic financial objective of the Municipal Retirement System of Mississippi (MRS) is to establish and receive contributions (expressed as a tax on assessed property valuations) which:

- (1) Will be in amounts sufficient, but not more than necessary, to maintain the actuarially soundness of the Funds for all future years (the tax may be increased but not by more than one-half mill per year), and which
- (2) When combined with present assets and future investment return will be sufficient to meet the present and future financial obligations of MRS.

In addition, MRS maintains a funding policy that was revised in 2011. In this funding policy, contributions are extended past 2020 and an employer contribution rate, expressed as a millage rate tax applied to assessed property values, is established beginning in the 2011-2012 fiscal year that will generate an ultimate reserve level equal to a reasonable percentage (initially 100% - 150%) of the next year's projected benefit payment. At that point, employer contributions will be set equal to the fiscal year's projected benefit payments and adjusted as necessary to maintain the assets at the established reserve level.

In order to measure progress toward this fundamental objective, MRS has an annual actuarial valuation performed. The valuation (i) measures present financial position, and (ii) establishes contribution rates that provide for the amortization of unfunded total actuarial liabilities over a closed period.

The latest completed actuarial valuations were based upon data and assumptions as of June 30, 2021. These valuations indicate that the current contribution rates, for benefits then in effect, meet the basic financial objective. There were no remaining active members as of June 30, 2021.

The total pension liabilities for the Governmental Accounting Standards Board Statement No. 68 (GASB 68) are based on the June 30, 2021 actuarial valuation and are rolled forward using actuarial techniques to the measurement date of June 30, 2022.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144  
Phone (678) 388-1700 • Fax (678) 388-1730  
[www.CavMacConsulting.com](http://www.CavMacConsulting.com)  
Offices in Kennesaw, GA • Bellevue, NE



Board of Trustees  
November 1, 2022  
Page 2

The actuarial valuation is based upon financial and participant data, which is prepared by the retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death, and disability among MRS members and their beneficiaries. The data are reviewed by us for internal and year to year consistency as well as general reasonableness prior to its use in the actuarial valuation. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Trustees and were based upon actual experience of MRS during the years 2016 to 2020. Assets are valued according to a market related method that recognizes 20% of the previously unrecognized and unanticipated gains and losses. The actuarial cost method used in valuation and financial disclosure reports is the Entry Age Normal cost method. The Entry Age Normal cost method is the most commonly used cost method by public plans, and it develops a normal cost rate that tends to be stable and less volatile. The assumptions and methods utilized in this valuation and disclosure reports, in our opinion, are consistent and meet the parameters established by the Actuarial Standards of Practice.

The current benefit structure is outlined in the Actuarial Section.

The following supporting schedules in the Actuarial Section are prepared by Cavanaugh Macdonald Consulting, LLC:

- Summary of Actuarial Assumptions & Methods
- Summary of Main System Provisions as Interpreted for Valuation Purposes
- Valuation Assets & Funding Progress
- Schedules of Funding Progress – Last 10 Fiscal Years
- Solvency Tests
- Analysis of Financial Experience
- Schedule of Retirants Added to and Removed from Rolls

We also provide the Schedule of Changes in Net Pension Liability and related ratios, as well as the Schedule of Employer Contributions in the Financial Section.

Based upon the valuation results annual projection forecasting and the presumption that future contributions will be made at the necessary level to ensure adequate funding and to meet accounting standards, it is our opinion that the Municipal Retirement Systems of Mississippi continue in sound condition in accordance with the actuarial principles and requirements of State law.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Edward J. Koebel'.

Edward J. Koebel, FCA, EA, MAAA  
Chief Executive Officer



## Summary of Actuarial Assumptions & Methods

This section presents actuarial information for each of the four defined benefit plans on a funding basis. A description of the plans can be found in Note 1 of the Financial Section. The PERS Board of Trustees and the MHSPRS Administrative Board are responsible for establishing and maintaining the funding policies. All plans use the Entry Age Actuarial Cost Method for both funding and financial reporting purposes. This continues a long-standing practice for all plans and provides a point of consistency between the funding provisions and the GASB 67 requirements.

Actuarial valuations are performed annually to measure the funding progress of the plans and the total pension liabilities used for accounting purposes. Total pension liabilities are based on the June 30, 2021 valuation rolled forward to the June 30, 2022 measurement date. The net pension liability is equal to the rolled forward total pension liability less the plan's fiduciary net position as of the measurement date.

To validate that the assumptions used to determine the total pension liability are reasonably related to experience, the System requests the actuary to conduct an experience investigation every other year on a rolling four-year period. The investigation considers mortality, retirement, withdrawals and compensation of members, and economic forecasts for inflation and investment rate of return. June 30, 2021 actuarial valuations were prepared using actuarial assumptions adopted by the Board in August 2021 based on the experience investigation for the four-year period ending June 30, 2020.

Significant methods and assumptions used in the valuations as of the June 30, 2021 valuation date were as follows:

	PERS	MHSPRS	SLRP	MRS
<i>Actuarial Methods:</i>				
Actuarial cost Method	Entry age	Entry age	Entry age	Entry age
Amortization Method	Level percent open	Level percent open	Level percent open	Level dollar closed
Remaining Amortization Period	50.9 years	21.0 years	25.1 years	13.0 years
Asset Valuation Method	5-year Smoothed Fair Value	5-year Smoothed Fair Value	5-year Smoothed Fair Value	5-year Smoothed Fair Value
<i>Actuarial Assumptions:</i>				
Investment Rate of Return	7.55%	7.55%	7.55%	7.55%
Salary Increase	2.65-17.90%	3.00-8.56%	2.65%	****
Increase in Benefits after Retirement	3.00%*	3.00%**	3.00%*	Various***

\* Calculated 3.0 percent simple interest to age 55, or to age 60 if hired after June 30, 2011, compounded each year thereafter.

\*\* Calculated 3.0 percent simple interest to age 60, compounded each year thereafter.

\*\*\* Varies depending on municipality.

\*\*\*\* All MRS active employees were retired as of June 30, 2020.

## Public Employees' Retirement System of Mississippi: Statement of Actuarial Assumptions & Methods

Assumptions used in the June 30, 2021 actuarial valuation were adopted by the Board when the *Experience Investigation for the Four-Year Period Ending June 30, 2020*, was adopted August 24, 2021. Following are the assumptions adopted by the Board for this program.

**INTEREST RATE:** 7.55 percent per annum, compounded annually (net of investment expense only). The expected return on assets consists of 2.40 percent price inflation and 5.15 percent real rate of return.

**SALARY INCREASES:** Representative values of the assumed annual rates of salary increases are as follows:

Service	Annual Rates of Salary Increases		
	Merit & Seniority	Base (Economy)	Increase Next Year
0	15.25%	2.65%	17.90%
1	5.25	2.65	7.90
2	2.75	2.65	5.40
3	1.75	2.65	4.40
4	1.25	2.65	3.90
5-7	0.75	2.65	3.40
8-27	0.25	2.65	2.90
28 & over	-	2.65	2.65

**ADMINISTRATIVE EXPENSES:** 0.28 percent of payroll.

**TIMING OF DECREMENTS AND PAY INCREASES:** Middle of year.

**DEATH AFTER RETIREMENT:** The table for post-retirement mortality used in evaluating allowances to be paid is the PubS.H-2010(B) Retiree Table with males adjusted by 95.0 percent for ages less than 60 then scaled up to 110.0 percent for ages 61 to 75 and 101.0 percent for ages above 77. Females are adjusted by 84.0 percent for ages less than 72 then scaled up to 100.0 percent for ages above 76. The PubS.H-2010(B) Contingent Annuitant Table is used for contingent annuitants with the following adjustments: 97.0 percent of male rates at all ages and 110.0 percent of female rates at all ages. The PubG.H-2010 Disabled Retiree Table is used for disabled retirees with the following adjustments: 134.0 percent of male rates at all ages and 121.0 percent of female rates at all ages. The projection scale MP-2020 is used to project future improvements in life expectancy generationally.

**MARRIAGE ASSUMPTION:** 85.0 percent married with the husband three years older than wife.

**UNUSED SICK LEAVE:** 0.5 years at retirement.

**MILITARY SERVICE:** 0.25 years at retirement.

**DEFERRED VESTED:** Benefits are assumed to commence at age 60 for Tiers 1, 2, and 3 and at age 65 for Tier 4.

**ASSUMED INTEREST RATE ON EMPLOYEE CONTRIBUTIONS:** 2.0 percent.

**ASSET VALUATION METHOD:** Fair value five-year smoothing is the method used for asset valuation. The actuarial value of assets recognizes a portion of the difference between the fair value of assets and the expected fair value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20.0 percent of the difference between fair value and expected fair value.

**VALUATION METHOD:** The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability, or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (7.55 percent for the June 30, 2021 valuation). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of PERS are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution.

Under the entry age normal cost method, the actuarial present value of each member's projected benefits is allocated on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial liability.

The unfunded actuarial liability represents the difference between the actuarial liability and the actuarial value of assets as of the valuation date. The unfunded actuarial liability is calculated each year and reflects experience gains/losses. The accrued liability contribution amortizes the balance of the unfunded actuarial accrued liability over a period of years from the valuation date.

**SEPARATIONS FROM ACTIVE SERVICE:** Representative values of the assumed annual rates of separation from active service are as follows:

Age	Annual Rates of			
	Death*		Disability	
	Male	Female	Male	Female
20	0.0483%	0.0126%	0.006%	0.006%
25	0.0567	0.0189	0.011	0.011
30	0.0630	0.0259	0.016	0.016
35	0.0714	0.0350	0.020	0.020
40	0.0893	0.0483	0.090	0.050
45	0.1218	0.0665	0.170	0.100
50	0.1764	0.0917	0.260	0.170
55	0.2594	0.1274	0.370	0.290
60	0.3980	0.1757	0.310	0.250
65	0.6353	0.2429	0.280	0.220
70	1.1655	0.4739	0.200	0.150
75	2.1389	0.9247	0.200	0.150
79	3.4755	1.5785	0.200	0.150

\*Adjusted Base Rates

Age	Annual Rates of Withdrawals											
	Years of Service											
	0		5		10		15		20		24	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
20	40.00%	45.00%	13.00%	14.00%								
25	34.50	37.00	13.00	12.50	9.00%	9.00%						
30	34.00	35.00	12.00	12.50	6.50	6.50	5.00%	5.00%				
35	33.75	30.00	12.00	12.50	6.50	6.25	4.00	4.25	4.00%	3.50%		
40	33.50	28.00	9.50	9.50	6.00	6.00	4.00	4.25	4.00	3.50	4.00%	3.50%
45	32.00	27.50	9.50	9.50	5.50	5.75	4.00	4.25	4.00	3.50	4.00	3.50
50	28.00	27.50	9.50	9.50	5.50	5.75	4.00	4.25	4.00	3.50	4.00	3.50
55	25.00	25.00	9.50	9.50	5.50	5.75	4.00	4.25	4.00	3.50	4.00	3.50
60	25.00	25.00	9.50	9.50	5.50	5.75	4.00	4.25	4.00	3.50	4.00	3.50

Age	Annual Rates of Service Retirements			
	Male		Female	
	Under 25 Years of Service*	25 Years of Service & Over*	Under 25 Years of Service*	25 Years of Service & Over*
45	-%	25.00%	-%	21.00%
50	-	19.00	-	14.50
55	-	18.00	-	19.75
60	11.25	19.00	13.25	21.50
62	21.00	29.00	18.75	34.00
65	25.50	32.00	30.00	42.25
70	19.50	26.00	23.00	30.00
75	22.00	24.00	21.50	25.00
80	100.00	100.00	100.00	100.00

\* For Tier 4 members, 30 years of service.

## Mississippi Highway Safety Patrol Retirement System: Statement of Actuarial Assumptions & Methods

Assumptions used in the June 30, 2021 actuarial valuation were adopted by the MHSPRS Advisory Board when the *Experience Investigation for the Four-Year Period Ending June 30, 2020*, was adopted August 24, 2021. Following are the assumptions adopted by the PERS Board for this program.

**INTEREST RATE:** 7.55 percent per annum, compounded annually (net of investment expenses only). The expected return on assets consists of 2.40 percent price inflation and 5.15 percent real rate of return.

**SALARY INCREASES:** Representative values of the assumed annual rates of salary increases are as follows:

Age	Annual Rates of		
	Merit & Seniority	Base (Economy)	Increase Next Year
20	5.91%	2.65%	8.56%
25	2.66	2.65	5.31
30	1.84	2.65	4.49
35	1.84	2.65	4.49
40	1.84	2.65	4.49
45	1.35	2.65	4.00
50	0.85	2.65	3.50
55	0.85	2.65	3.50
60	0.35	2.65	3.00

**ADMINISTRATIVE EXPENSES:** 0.28 percent of payroll.

**TIMING OF DECREMENT AND PAY INCREASES:** Middle of year.

**ASSUMED INTEREST RATE ON EMPLOYEE CONTRIBUTIONS:** 2.0 percent.

**DEATH AFTER RETIREMENT:** The table for post-retirement mortality used in evaluating allowances to be paid is the PubS.H-2010(B) Retiree Table with males adjusted by 95.0 percent for ages less than 60 then scaled up to 110.0 percent for ages 61 to 75 and 101.0 percent for ages above 77. Females are adjusted by 84.0 percent for ages less than 72 then scaled up to 100.0 percent for ages above 76. The PubS.H-2010(B) Contingent Annuitant Table is used for contingent annuitants with the following adjustments: 97.0 percent of male rates at all ages and 110.0 percent of female rates at all ages. The PubG.H-2010 Disabled Retiree Table is used for disabled retirees with the following adjustments: 134.0 percent of male rates at all ages and 121.0 percent of female rates at all ages. The projection scale MP-2020 is used to project future improvements in life expectancy generationally.

**MARRIAGE ASSUMPTION:** 100.0 percent married with the husband three years older than wife.

**ASSET VALUATION METHOD:** Fair value five-year smoothing is the method used for asset valuation. The actuarial value of assets recognizes a portion of the difference between the fair value of assets and the expected fair value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20.0 percent of the difference between fair value and expected fair value.

**VALUATION METHOD:** The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability, or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (7.55 percent for the June 30, 2021 valuation). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of MHSPRS are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution.



Under the entry age normal cost method, the actuarial present value of each member's projected benefits is allocated on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial liability. The unfunded actuarial liability represents the difference between the actuarial liability and the actuarial value of assets as of the valuation date. The unfunded actuarial liability is calculated each year and reflects experience gains/losses. The accrued liability contribution amortizes the balance of the unfunded actuarial accrued liability over a period of years from the valuation date.

**SEPARATIONS FROM ACTIVE SERVICE:** Representative values of the assumed annual rates of separation from active service are as follows:

Age	Annual Rates of							Service Retirement *
	Withdrawal		Death		Disability			
	Less than 20 years of Service	20 or more Years of Service	Males	Females	Non-Duty	Duty	Service	
25	7.00%		0.06%	0.02%	0.04%	-%	5	7.50%
30	4.00		0.06	0.03	0.05	0.01	10	7.50
35	2.75	1.38	0.07	0.04	0.06	0.02	15	7.50
40	2.00	1.00	0.09	0.05	0.08	0.02	20	7.50
45	2.00	1.00	0.12	0.07	0.11	0.02	25	20.00
50	2.00	1.00	0.18	0.09	0.19	0.02	30	15.00
55	-	-	0.26	0.13	0.34	0.01	35	35.00
60	-	-	0.40	0.18	0.58	-	40+	100.00

\* The annual rate of service retirement is 100.0 percent at age 63.

*It is assumed that a member will be granted one and three-quarter years of service credit for unused leave at termination of employment.*

*In addition, it is assumed that, on average, one quarter year of service credit for peace-time military service will be granted to each member.*

## Supplemental Legislative Retirement Plan: Statement of Actuarial Assumptions & Methods

Assumptions used in the June 30, 2021 actuarial valuation were adopted by the PERS Board of Trustees when the *Experience Investigation for the Four-Year Period Ending June 30, 2020*, was adopted August 24, 2021. Following are the assumptions adopted by the PERS Board for this program.

**INTEREST RATE:** 7.55 percent per annum, compounded annually (net of investment expenses only). The expected return on assets consists of 2.40 percent price inflation and 5.15 percent rate of return.

**PAYROLL GROWTH:** 2.65 percent per annum, compounded annually.

**ADMINISTRATIVE EXPENSES:** 0.28 percent of payroll.

**TIMING OF DECREMENTS AND PAY INCREASES:** Middle of year.

**DEATH AFTER RETIREMENT:** The table for post-retirement mortality used in evaluating allowances to be paid is the PubS.H-2010(B) Retiree Table with males adjusted by 95.0 percent for ages less than 60 then scaled up to 110.0 percent for ages 61 to 75 and 101.0 percent for ages above 77. Females are adjusted by 84.0 percent for ages less than 72 then scaled up to 100.0 percent for ages above 76. The PubS.H-2010(B) Contingent Annuitant Table is used for contingent annuitants with the following adjustments: 97.0 percent of male rates at all ages and 110.0 percent of female rates at all ages. The PubG.H-2010 Disabled Retiree Table is used for disabled retirees with the following adjustments: 134.0 percent of male rates at all ages and 121.0 percent of female rates at all ages. The projection scale MP-2020 is used to project future improvements in life expectancy generationally.

**MARRIAGE ASSUMPTION:** 85.0 percent married with the husband three years older than the wife.

**ASSUMED INTEREST RATE ON EMPLOYEE CONTRIBUTIONS:** 2.0 percent.

**ASSET VALUATION METHOD:** Fair value five-year smoothing is the method used for asset valuation. The actuarial value of assets recognizes a portion of the difference between the fair value of assets and the expected fair value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20.0 percent of the difference between fair value and expected fair value.

**VALUATION METHOD:** The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability, or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (7.55 percent for the June 30, 2021 valuation). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.

The employer contributions required to support the benefits of SLRP are determined following a level funding approach and consist of a normal contribution and an accrued liability contribution.

Under the entry age normal cost method, the actuarial present value of each member's projected benefits is allocated on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial liability. The unfunded actuarial liability represents the difference between the actuarial liability and the actuarial value of assets as of the valuation date. The unfunded actuarial liability is calculated each year and reflects experience gains/losses. The accrued liability contribution amortizes the balance of the unfunded actuarial accrued liability over a period of years from the valuation date.

**SEPARATIONS FROM ACTIVE SERVICE:** Representative values of the assumed rates of separation from active service are as follows:

Age	Annual Rates of		
	Death		Disability*
	Male	Female	
20	0.05%	0.01%	0.04%
25	0.06	0.02	0.05
30	0.06	0.03	0.07
35	0.07	0.04	0.11
40	0.09	0.05	0.17
45	0.12	0.07	0.23
50	0.18	0.09	0.30
55	0.26	0.13	0.35
60	0.40	0.18	0.40
65	0.64	0.24	-
70	1.17	0.47	-
75	2.14	0.92	-

*\* 93.0 percent are presumed to be non-duty related, and 7.0 percent are assumed to be duty related.*

**WITHDRAWAL:** 15.0 percent in an election year, 2.0 in a non-election year.

**SERVICE RETIREMENT:** 30.0 percent in an election year, 2.5 percent in a non-election year. All members are assumed to retire no later than age 80. It is assumed that a member will be granted 2.5 years of service credit for unused leave at termination of employment.

## Municipal Retirement Systems: Statement of Actuarial Assumptions & Methods

---

Assumptions used in the June 30, 2021 actuarial valuation were adopted by the PERS Board of Trustees when the *Experience Investigation for the Four-Year Period Ending June 30, 2020*, was adopted on August 24, 2021. Following are the assumptions adopted by the PERS Board for this program.

**INTEREST RATE:** 7.55 percent per annum, compounded annually (net after investment expenses) for prior funding policy rate determination and GASB disclosure. For current funding policy rate determination, 6.05 percent per annum, compounded annually (net after investment expenses).

**DEATH AFTER RETIREMENT:** The table for post-retirement mortality used in evaluating allowances to be paid is the PubS.H-2010(B) Retiree Table with males adjusted by 95.0 percent for ages less than 60 then scaled up to 110.0 percent for ages 61 to 75 and 101.0 percent for ages above 77. Females are adjusted by 84.0 percent for ages less than 72 then scaled up to 100.0 percent for ages above 76. The PubS.H-2010(B) Contingent Annuitant Table is used for contingent annuitants with the following adjustments: 97.0 percent of male rates at all ages and 110.0 percent of female rates at all ages. The PubG.H-2010 Disabled Retiree Table is used for disabled retirees with the following adjustments: 134.0 percent of male rates at all ages and 121.0 percent of female rates at all ages. The projection scale MP-2020 is used to project future improvements in life expectancy generationally.

**MARRIAGE ASSUMPTION:** 85.0 percent married with the husband three years older than the wife.

**VALUATION METHOD:** Unfunded employer liabilities are based on no assumed growth in assessed property values, certified municipal millage rates and 6.05% assumed investment return.

**ASSESSED PROPERTY VALUE RATE OF INCREASE:** No increase, assessed value will remain level over time (used in determining the millage rate under both the prior and current funding policy).

**ASSET VALUATION METHOD:** Fair value five-year smoothing is the method used for asset valuation. The actuarial value of assets recognizes a portion of the difference between the fair value of assets and the expected fair value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20.0 percent of the difference between fair value and expected fair value. Actuarial assets were allocated to individual cities in the same proportion that their fair value of assets was to the total fair value of assets for all cities.

## Public Employees' Retirement System: Summary of Main System Provisions as Interpreted for Valuation Purposes

### SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

The following summary presents the main benefit and contribution provisions of the plan in effect June 30, 2021, as interpreted in preparing the actuarial valuation and as of June 30, 2022, in determining the rollforward of the total pension liability to the measurement date. As used in the summary, "average compensation" means the average annual covered earnings of an employee during the four highest years of service.

To determine the member's four highest years, PERS considers these scenarios:

- » Four highest fiscal years of earned compensation;
- » Four highest calendar years of earned compensation;
- » Combination of the four highest fiscal and calendar years of earned compensation that do not overlap; or
- » Final 48 months of earned compensation prior to termination of employment.

"Covered earnings" means gross salary not in excess of the maximum amount on which contributions were required. "Fiscal year" means a year commencing July 1 and ending June 30. "Credited service" means service while a contributing member plus additional service as described below. "Unused sick and vacation leave" means service credit is provided at no charge to members for unused sick and vacation time that has accrued at the time of retirement. A payment of up to 240 hours leave may be used in the average compensation definition. "Additional service" means additional service credit may be granted for service prior to February 1, 1953, active-duty military service, out-of-state service, professional leave, and non-covered and retroactive service.

The maximum covered earnings and associated contribution rates for employers and members covering the last 10 years are as follows:

Fiscal Date From	Fiscal Date To	Employer Rate	Member Rate	Maximum Covered Earnings
7/1/2010	12/31/2011	12.00%	9.00%	\$245,000
1/1/2012	6/30/2012	12.93	9.00	245,000
7/1/2012	6/30/2013	14.26	9.00	250,000
7/1/2013	6/30/2014	15.75	9.00	255,000
7/1/2014	6/30/2015	15.75	9.00	260,000
7/1/2015	6/30/2017	15.75	9.00	265,000
7/1/2017	6/30/2018	15.75	9.00	270,000
7/1/2018	6/30/2019	15.75	9.00	275,000
7/1/2019	6/30/2020	17.40	9.00	280,000
7/1/2020	6/30/2021	17.40	9.00	285,000
7/1/2021	6/30/2022	17.40	9.00	290,000

## Benefits

### SUPERANNUATION RETIREMENT

#### Condition for Retirement

- a) A retirement allowance is paid upon the request of any member who retires and has attained age 60 and completed at least eight years\* of membership service. A retirement allowance may also be paid upon the completion of 25 years of creditable service for members hired prior to July 1, 2011, or upon the completion of 30 years of creditable service for members hired on or after July 1, 2011.
- b) Any member who withdraws from service prior to his or her attainment of age 60 and who has completed at least eight years\* of membership service is entitled to receive, in lieu of a refund of his or her accumulated contributions, a retirement allowance commencing at age 60.

*\*Four years for those who entered the System before July 1, 2007.*

#### Amount of Allowance

The annual retirement allowance payable to a member who retires is equal to:

1. A member's annuity which is the actuarial equivalent of the member's accumulated contributions at the time of his or her retirement, plus
2. For a member hired prior to July 1, 2011, an employer's annuity which, together with the member's annuity, is equal to 2.0 percent of his or her average compensation for each of the first 25 years of creditable service plus 2.5 percent for each year of creditable service over 25 years.
3. For a member hired on or after July 1, 2011, an employer's annuity which, together with the member's annuity, is equal to 2.0 percent of his or her average compensation for each of the first 30 years of creditable service plus 2.5 percent for each year of creditable service over 30 years. An actuarial reduction will be made for each year of creditable service below 30 or for each year of age below 65, whichever is less.

For members hired prior to July 1, 2011, the minimum allowance is \$120 for each year of creditable service.

### EARLY RETIREMENT

#### Condition for Retirement

For members hired on or after July 1, 2011, an actuarially reduced retirement allowance is paid upon the request of any member who retires with less than 30 years of creditable service.

#### Amount of Allowance

The annual actuarially reduced retirement allowance is equal to the benefit in the previous section but reduced for each year of creditable service below 30 or for each year in age below age 65, whichever is less.

### DISABILITY RETIREMENT

#### Condition for Retirement

A retirement allowance is paid to a member who is totally and permanently disabled, as determined by the Board of Trustees, and who has accumulated eight or more years\* of membership service.

*\*Four years for those who entered the System before July 1, 2007.*

#### Amount of Allowance

For those who were active members prior to July 1, 1992, and did not elect the benefit structure outlined below, the annual disability retirement allowance payable is equal to a superannuation retirement allowance if the member has attained age 60; otherwise it is equal to a superannuation retirement allowance calculated as follows:

1. A member's annuity equal to the actuarial equivalent of his or her accumulated contributions at the time of retirement, plus
2. An employer's annuity equal to the amount that would have been payable had the member continued in service to age 60.

For those who became active members after June 30, 1992, and for those who were active members prior to July 1, 1992, who so elected, the following benefits are payable:

1. A temporary allowance equal to the greater of (a) 40.0 percent of average compensation plus 10.0 percent for each dependent child up to a maximum of two, or (b) the member's accrued allowance. This temporary allowance is paid for a period of time based on the member's age at disability, as follows:

Age At Disability	Duration
60 & earlier	to age 65
61	to age 66
62	to age 66
63	to age 67
64	to age 67
65	to age 68
66	to age 68
67	to age 69
68	to age 70
69 & later	one year

For members hired prior to July 1, 2011, the minimum allowance is \$120 per year of creditable service.

2. A deferred allowance commencing when the temporary allowance ceases equal to the greater of (a) the allowance the member would have received based on service to the termination age of the temporary allowance, but not more than 40.0 percent of average compensation, or (b) the member's accrued allowance.

For members hired prior to July 1, 2011, the minimum allowance is \$120 per year of creditable service.

Effective July 1, 2004, a temporary benefit can be paid out of a member's accumulated contribution balance while the member is awaiting a determination for eligibility for disability benefits. Future disability payments, if any, would be offset by advanced payments made from the member's accumulated contributions.

**ACCIDENTAL DISABILITY RETIREMENT**

*Condition for Retirement*

A retirement allowance is paid to a member who is totally and permanently disabled in the line of performance of duty.

*Amount of Allowance*

The annual accidental disability retirement allowance is equal to the allowance payable on disability retirement but not less than 50.0 percent of average compensation. There is no minimum benefit.

**ACCIDENTAL DEATH BENEFIT**

*Condition for Benefit*

A retirement allowance is paid to a spouse and/or dependent children upon the death of an active member in the line of performance of duty.

*Amount of Allowance*

The annual retirement allowance is equal to 50.0 percent of average compensation payable to the spouse and 25.0 percent of average compensation payable to one dependent child or 50.0 percent to two or more children until age 19 (23 if a full-time student). There is no minimum benefit.



## ORDINARY DEATH BENEFIT

### *Condition for Benefit*

Upon the death of a member who has completed at least eight years\* of membership service, a benefit is payable (in lieu of a refund of the member's accumulated contributions) to his or her spouse, if said spouse has been married to the member for not less than one year.

\* Four years for those who entered the System before July 1, 2007.

### *Amount of Allowance*

The annual retirement allowance payable to the lawful spouse of a vested member who dies is equal to the greater of:

1. The allowance that would have been payable had the member retired and elected Option 2, reduced by an actuarially determined factor based on the number of years the member lacked in qualifying for unreduced retirement benefits, or
2. A lifetime benefit equal to 20.0 percent of the deceased member's average compensation, but not less than \$50 per month.

In addition, a benefit is payable to dependent children until age 19 (23 if a full-time student). The benefit is equal to the greater of 10.0 percent of average compensation or \$50 per month for each dependent child up to three.

## RETURN OF CONTRIBUTIONS

Upon the withdrawal of a member without a retirement benefit, his or her contributions are returned to him or her, together with accumulated regular interest thereon.

Upon the death of a member before retirement, his or her contributions, together with the full accumulated regular interest thereon, are paid to his or her designated beneficiary, if any, otherwise, to his or her estate provided no other survivor benefits are payable.

Effective July 1, 2016, the interest rate on employee contributions shall be calculated based on the money market rate as published by *The Wall Street Journal* on December 31 of each preceding year with a minimum rate of 1.0 percent and a maximum rate of 5.0 percent.

## NORMAL FORM OF BENEFIT

The normal form of benefit (modified cash refund) is an allowance payable during the life of the member with the provision that upon his or her death the excess of his or her total contributions at the time of retirement over the total retirement annuity paid to him or her will be paid to his or her designated beneficiary.

## OPTIONAL BENEFITS

Upon retirement, if they do not select the normal form of benefit, a member may elect to receive his or her allowance in one of the following forms, which are computed to be actuarially equivalent to the applicable retirement allowance.

- Option 1. Reduced allowance with the provision that if the pensioner dies before he or she receives the value of his or her annuity as it was at the time of retirement, the balance shall be paid to his or her beneficiary.
- Option 2. Upon his or her death, his or her reduced retirement allowance shall be continued throughout the life of, and paid to, his or her beneficiary.
- Option 3. Upon his or her death, 50.0 percent of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary and the other 50.0 percent of his or her reduced retirement allowance to some other designated beneficiary.
- Option 4. Upon his or her death, 75.0 percent of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.
- Option 4A. Upon his or her death, 50.0 percent of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.
- Option 4B. A reduced retirement allowance shall be continued throughout the life of the pensioner, but with the further guarantee of payment to the pensioner or his or her beneficiary for a specified number of years certain.
- Option 4C. A member may elect any option with the added provision that he or she shall receive, so far as possible, the same total amount annually (considering both PERS and Social Security benefits) before and after the earliest age at which the member becomes eligible for a Social Security benefit. This option was only available to those who retired prior to July 1, 2004.

A member who elects Option 2, Option 4, or Option 4A at retirement may revert to the normal form of benefit if the designated beneficiary predeceases the retired member or if the retired member divorces the designated beneficiary. A member who elects the normal form of benefit or Option 1 at retirement may select Option 2, Option 4, or Option 4A to provide beneficiary protection to a new spouse if married after retirement.

A member hired prior to July 1, 2011, and who has at least 28 years of creditable service\* or a member hired on or after July 1, 2011, who has at least 33 years of creditable service may select the Partial-Lump-Sum Option (PLSO) at retirement. Under this option, the retiree has the option of taking a partial-lump-sum distribution equal to 12, 24, or 36 times the base maximum monthly benefit. With each lump-sum amount, the base maximum monthly benefit will be actuarially reduced. A member selecting the PLSO may also select any of the regular options except Option 1, the prorated single-life annuity, and Option 4C, the Social Security- leveling provision. The benefit is then calculated using the new reduced maximum benefit as a starting point in applying the appropriate option factors for the reduction.

*\* Or at least age 63 with four years of membership service for those who entered the System before July 1, 2007.*

## POST-RETIREMENT ADJUSTMENTS IN ALLOWANCES

The allowances of retired members are adjusted annually by an amount equal to:

- a) 3.0 percent of the annual retirement allowance for each full fiscal year of retirement prior to the year in which the member reaches age 55\*, plus
- b.) 3.0 percent compounded for each year thereafter beginning with the fiscal year in which the member turns age 55\*.

*\* Age 60 for members hired on or after July 1, 2011.*

A prorated portion of the annual adjustment will be paid to the member, beneficiary, or estate of any member or beneficiary who is receiving the annual adjustment in a lump sum, but whose benefits are terminated between July 1 and December 1.

## CONTRIBUTIONS

Members contribute 9.0 percent of compensation. The Board sets employer contribution rates for PERS, as per Mississippi statute. The adequacy of these rates is checked annually by actuarial valuation. Refer to Note 6 of the basic financial statements for additional information.

## Mississippi Highway Safety Patrol Retirement System: Summary of Main System Provisions as Interpreted for Valuation Purposes

### SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

The following summary presents the main benefit and contribution provisions of the plan in effect June 30, 2021, as interpreted in preparing the actuarial valuation and as of June 30, 2022, in determining the rollforward of the total pension liability as of the measurement date. As used in the summary, "average compensation" means the average annual covered earnings of an employee during the four highest consecutive years of service. "Covered earnings" means gross salary not in excess of the maximum amount on which contributions were required. "Fiscal year" means a year commencing on July 1 and ending June 30. "Credited service" means service while a contributing member plus additional service as described below. "Unused sick and vacation leave" means service credit is provided at no charge to members for unused sick and vacation time that has accrued at the time of retirement. A payment of up to 240 hours leave may be used in the average compensation definition. "Additional service" means additional service credit may be granted for service prior to July 1, 1958, active-duty military service, and retroactive service.

The maximum covered earnings and associated contribution rates for employers and members covering the last 10 years are as follows:

Date From	Date To	Employer Rate	Member Rate	Maximum Covered Earnings*
7/1/2008	12/31/2011	30.30%	7.25%	\$ -
1/1/2012	6/30/2012	35.21	7.25	-
7/1/2012	6/30/2018	37.00	7.25	-
7/1/2018	6/30/2021	49.08	7.25	-

\* Maximum covered earnings equal wages paid, not to exceed wages paid to the Commissioner of the Department of Public Safety (currently \$175,665).

Effective July 1, 2021, additional contributions from Senate Bill No. 2659 and House Bill No. 1015 are estimated to be \$3,700,000 combined.

### Benefits

#### SUPERANNUATION RETIREMENT

##### Condition for Retirement

- A retirement allowance is payable to any member who retires and has attained age 55 and completed at least five years of membership service, or has attained age 45 and completed at least 20 years of creditable service, or has completed 25 years of creditable service regardless of age.
- Any member who withdraws from service prior to his or her attainment of age 55 but after having completed five or more years of creditable service is entitled to receive, in lieu of a refund of his or her accumulated contributions, a retirement allowance commencing at age 55.

##### Amount of Allowance

The annual retirement allowance payable to a retired member is equal to:

- A member's annuity which is the actuarial equivalent of the member's accumulated contributions at the time of his or her retirement; plus
- An employer's annuity which, together with the member's annuity, is equal to 2.5 percent of his or her average compensation for each year of membership service; plus
- A prior service annuity equal to 2.5 percent of average compensation for each year of prior service.

The aggregate amounts of (2) and (3) above shall not exceed 100.0 percent of average compensation, regardless of service, for retirements on or after January 1, 2000, and shall not exceed 85.0 percent for retirements prior to January 1, 2000.

The minimum allowance for both service and disability retirement is based on the following table for each year of creditable service, reduced if necessary, as indicated below.

Years of Service	Monthly Benefit
Less than 10	\$250
10-15	300
15 or more	500

The annual retirement allowance payable to a member who retires under condition (a) above prior to age 55 is computed in accordance with the above formula except that the employer's annuity and prior service annuity are reduced by 3.0 percent for each year of age below age 55, or 3.0 percent for each year of service below 25 years of creditable service, whichever is less.

#### DISABILITY RETIREMENT

Non-duty related disability benefits are available to vested members under the age of 55. Vested members age 55 or older are not eligible for disability benefits but may apply for service retirement benefits. For purposes of disability benefits, average annual compensation is calculated using the last two years of salary before retirement.

If a member becomes permanently disabled due to sickness or injury caused or sustained as a direct result of duty, he or she may be eligible for duty-related disability retirement. He or she is covered for this benefit from the first day of employment if he or she has not reached age 55, regardless of his or her years of service. Duty-related disability retirement benefits are calculated at either 50.0 percent of average compensation of the last two years of salary before retirement (this portion is not taxable) or the non-duty-related disability retirement amount, whichever provides the higher benefit.

#### DEATH PRIOR TO RETIREMENT

If a member is vested, the spouse and dependent children may be eligible to receive certain statutory benefits. Claims for non-duty-related death benefits are calculated at 2.5 percent of average compensation for each year of service credit, as calculated under Option 9, Maximum Benefit. Under this option, 50.0 percent of the accrued benefit is payable to the spouse until death, with 25.0 percent of the accrued benefit payable to one dependent child and 50.0 percent of the accrued benefit payable for two or more dependent children (under age 19 and never married or under age 23 if a full-time student and never married). Upon application and approval by the Medical Board, benefits to a physically or mentally disabled child may continue as long as the disability exists.

Coverage for duty-related death benefits begins on the first day of employment and is available to the spouse and dependent children regardless of the member's vesting status. If the member is vested, the spouse and dependent children may be eligible to receive benefits under either non-duty or duty-related death benefit provisions, whichever provided the higher benefit.

Claims for duty-related death benefits are calculated at 50.0 percent of average compensation, payable to the spouse until death, with 25.0 percent of average compensation payable to one dependent child and 50.0 percent of average compensation payable for two or more dependent children (under age 19 and never married or under age 23 if a full-time student and never married). Upon application and approval by the Medical Board, benefits to a physically or mentally disabled child may continue as long as the disability exists.

#### DEATH AFTER RETIREMENT

Upon the death of a highway patrol officer who has retired for service or disability and who has not elected any other optional form of benefit, his widow or her widower is eligible for a benefit equal to 50.0 percent of his or her retirement allowance and each child (but not more than two) who has not attained age 19 (23 if a full-time student) is eligible for a benefit equal to 25.0 percent of his or her retirement allowance. The benefit to the widow or widower is payable for life and to children until they attain age 19 (23 if a full-time student) or for life if they are totally and permanently disabled.

#### REFUND OF CONTRIBUTIONS

Upon a member's termination of employment for any reason before retirement, his or her accumulated contributions, together with regular interest thereon, are refunded. Upon the death of a member who is not eligible for any other death benefit, his or her accumulated contributions, together with regular interest thereon, are paid to his or her beneficiary.

Effective July 1, 2016, the interest rate on employee contributions shall be calculated based on the money market rate as published by *The Wall Street Journal* on December 31 of each preceding year with a minimum rate of 1.0 percent and a maximum rate of 5.0 percent.

## NORMAL FORM OF BENEFIT

The normal form of benefit is an allowance payable during the life of the member. Upon death the benefits described above are payable.

## OPTIONAL BENEFITS

A member upon retirement may elect to receive his or her allowance in one of the following forms, which are computed to be actuarially equivalent to the applicable retirement allowance.

- Option 1. Reduced allowance with the provision that, if the pensioner dies before he or she receives the value of his or her annuity as it was at the time of retirement, the balance shall be paid to his or her beneficiary.
- Option 2. Upon his or her death, his or her reduced retirement allowance shall be continued throughout the life of, and paid to, his or her beneficiary.
- Option 3. Upon his or her death, 50.0 percent of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary and the other 50.0 percent of his or her reduced retirement allowance to some other designated beneficiary.
- Option 4. Upon his or her death, 75.0 percent of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.
- Option 4A. Upon his or her death, 50.0 percent of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.
- Option 4B. A reduced retirement allowance shall be continued throughout the life of the pensioner, but with the further guarantee of payment to the pensioner or his or her beneficiary for a specified number of years certain.
- Option 4C. A member may elect any option with the added provision that he or she shall receive, so far as possible, the same total amount annually (considering both MHSPRS and Social Security benefits) before and after the earliest age at which the member becomes eligible for a Social Security benefit. This option was only available to those who retired prior to July 1, 2004.
- Option 9. Upon his or her death, the spouse will receive 50.0 percent of the benefit the member was receiving for life. Each dependent child (under age 19 and never married or under age 23 if a full-time student and never married) will receive 25.0 percent of the benefit the member was receiving with a maximum of 50.0 percent for the support and care of two or more children. Any contribution and interest remaining after the member's death and after all monthly benefits due to the spouse and children have been paid will be refunded to designated beneficiaries. If the member marries after retirement while receiving benefits under this option, he or she may apply to Pop-Down to Option 2 to provide 100.0 percent beneficiary protection to the new spouse, or Pop-Down to Option 4 or Option 4A for other beneficiary protections for the new spouse. PLSO is available with this option, if eligible.

A member who elects Option 2, Option 4, or Option 4A at retirement may revert to the normal form of benefit if the designated beneficiary predeceases the retired member or if the retired member divorces the designated beneficiary. A member who elects the normal form of benefit or Option 1 at retirement may select Option 2, Option 4, or Option 4A to provide beneficiary protection to a new spouse if married after retirement.

A member who qualifies for an unreduced retirement allowance may select the PLSO at retirement. Under this option, the retiree has the option of taking a partial-lump-sum distribution equal to 12, 24, or 36 times the base maximum monthly benefit. With each lump-sum amount, the base maximum monthly benefit will be actuarially reduced. A member selecting this option may also select any of the regular options except Option 1, the prorated single-life annuity, and Option 4C, the Social Security-leveling provision. The benefit is then calculated using the new reduced maximum benefit as a starting point in applying the appropriate option factors for the reduction.

## POST-RETIREMENT ADJUSTMENTS IN ALLOWANCES

The allowances of retired members are adjusted annually by an amount equal to:

- a) 3.0 percent of the annual retirement allowance for each full fiscal year of retirement prior to the year in which the member reaches age 60\*, plus
- b) 3.0 percent compounded for each year thereafter beginning with the fiscal year in which the member turns age 60\*.

A prorated portion of the annual adjustment will be paid to the member, beneficiary, or estate of any member or beneficiary who is receiving the annual adjustment in a lump sum, but whose benefits are terminated between July 1 and December 1.

Those members who retired on or before July 1, 1999, received an ad hoc benefit increase in the amount of \$3.50 per month for each full fiscal year of retirement through June 30, 1999, plus \$1 per month for each year of credited service. The benefits were increased July 1, 1999.

*\* This age will be reduced in five phases to age 55 if the actuary certifies that reducing the age will not result in the amortization period of the unfunded accrued liability exceeding 20 years.*

## CONTRIBUTIONS

Members contribute 7.25 percent of compensation and the employer contributes 49.08 percent of compensation. Funds from SB2659 and HB1015 are also provided.

## Supplemental Legislative Retirement Plan: Summary of Main System Provisions as Interpreted for Valuation Purposes

### SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

The following summary presents the main benefit and contribution provisions of the plan in effect June 30, 2021, as interpreted in preparing the actuarial valuation and as of June 30, 2022, in determining the rollforward of the total pension liability to the measurement date. As used in the summary, "average compensation" means the average annual covered earnings of an employee during the four highest years of service.

To determine the member's four highest years, PERS considers these scenarios:

- » Four highest fiscal years of earned compensation;
- » Four highest calendar years of earned compensation;
- » Combination of four highest fiscal and calendar years of earned compensation that do not overlap; or
- » Final 48 months of earned compensation prior to termination of employment.

"Covered earnings" means gross salary not in excess of the maximum amount on which contributions were required. "Fiscal year" means a year commencing July 1 and ending June 30. "Eligibility service" means service while a contributing member of PERS plus additional service as described below. "Credited Service" means service while a contributing member of SLRP plus additional service as described below. "Unused sick and vacation leave" means service credit is provided at no charge to members for unused sick and vacation time that has accrued at the time of retirement. A payment of up to 240 hours of leave may be used in the average compensation definition. "Additional service" means additional service credit may be granted for service prior to July 1, 1989, including active-duty military service. "Attribution" means a period for the normal cost is based on entry into PERS even for members who first participated in SLRP at a later age than PERS.

The maximum covered earnings and associated contribution rates for employers and members covering the last 10 years are as follows:

Date From	Date To	Employer Rate	Member Rate	Maximum Covered Earnings
7/1/2009	12/31/2011	6.65%	3.00%	\$245,000
1/1/2012	6/30/2012	7.40	3.00	245,000
7/1/2012	6/30/2013	7.40	3.00	250,000
7/1/2013	6/30/2014	7.40	3.00	255,000
7/1/2014	6/30/2015	7.40	3.00	260,000
7/1/2015	6/30/2017	7.40	3.00	265,000
7/1/2017	6/30/2018	7.40	3.00	270,000
7/1/2018	6/30/2019	7.40	3.00	275,000
7/1/2019	6/30/2020	7.40	3.00	280,000
7/1/2020	6/30/2021	7.40	3.00	285,000
7/1/2021	6/30/2022	7.40	3.00	290,000

### Benefits

#### SUPERANNUATION RETIREMENT

##### *Condition for Retirement*

- a) A retirement allowance is paid upon the request of any member who retires and has attained age 60 and completed at least eight years\* of membership service under PERS. A retirement allowance may also be paid upon the completion of at least 25 years of creditable service under PERS for members hired prior to July 1, 2011, or upon the completion of 30 years of creditable service for members hired on or after July 1, 2011.



- b) Any member who withdraws from service prior to his or her attainment of age 60 and who has completed at least eight years\* of membership service under PERS is entitled to receive (in lieu of a refund of his or her accumulated contributions) a retirement allowance commencing at age 60.

*\*Four years for those who entered the System before July 1, 2007.*

#### *Amount of Allowance*

The annual retirement allowance payable to a member who retires under condition a) above is equal to:

1. A member's annuity which is the actuarial equivalent of his or her accumulated contributions at the time of his or her retirement, plus
2. An employer's annuity which, together with the member's annuity, is equal to 1.0 percent of his or her average compensation for each of the first 25 years of creditable service plus 1.25 percent for each year of creditable service over 25 years.

The minimum allowance is \$60 per year of creditable service.

### **DISABILITY RETIREMENT**

#### *Condition for Retirement*

A retirement allowance is paid to a member who is totally and permanently disabled, as determined by the Board and has accumulated eight or more years\* of membership service.

*\* Four years for those who entered the System before July 1, 2007.*

#### *Amount of Allowance*

For those who were active members prior to July 1, 1992, and did not elect the benefit structure outlined below, the annual disability retirement allowance payable is equal to a superannuation retirement allowance if the member has attained age 60, otherwise it is equal to a superannuation retirement allowance calculated as follows:

1. A member's annuity equal to the actuarial equivalent of his or her accumulated contributions at the time of retirement, plus
2. An employer's annuity equal to the amount that would have been payable had the member continued in service to age 60.

For those who became active members after June 30, 1992, and for those who were active members prior to July 1, 1992, who so elected, the following benefits are payable:

1. A temporary allowance equal to the greater of (a) 20.0 percent of average compensation plus 5.0 percent for each dependent child up to a maximum of two, or (b) the member's accrued allowance. This temporary allowance is paid for a period of time based on the member's age at disability, as follows:

Age At Disability	Duration
60 & earlier	to age 65
61	to age 66
62	to age 66
63	to age 67
64	to age 67
65	to age 68
66	to age 68
67	to age 69
68	to age 70
69 & later	one year

*The minimum allowance is \$60 per year of service credit.*

2. A deferred allowance commencing when the temporary allowance ceases equal to the greater of
  - (a) the allowance the member would have received based on service to the termination age of the temporary allowance, but not more than 20.0 percent of average compensation, or
  - (b) the member's accrued allowance.

The minimum allowance is \$60 per year of service credit.

Effective July 1, 2004, a temporary benefit can be paid out of a member's accumulated contribution balance while the member is awaiting a determination for eligibility for disability benefits. Future disability payments, if any, would be offset by advanced payments made from the member's accumulated contributions.

## ACCIDENTAL DISABILITY RETIREMENT

### *Condition for Retirement*

A retirement allowance is paid to a member who is totally and permanently disabled in the performance of duty.

### *Amount of Allowance*

The annual accidental disability retirement allowance is equal to the allowance payable on disability retirement but not less than 25.0 percent of average compensation. There is no minimum benefit.

## ACCIDENTAL DEATH BENEFIT

### *Condition for Benefit*

A retirement allowance is paid to a spouse and/or dependent children upon the death of an active member in the line of performance of duty.

### *Amount of Allowance*

The annual retirement allowance is equal to 25.0 percent of average compensation payable to the spouse and 12.5 percent of average compensation payable to one dependent child or 25.0 percent to two or more children until age 19 (23 if a full-time student). There is no minimum benefit.

## ORDINARY DEATH BENEFIT

### *Condition for Benefit*

Upon the death of a member who has completed at least eight years\* of membership service, a benefit is payable (in lieu of a refund of the member's accumulated contributions) to his or her spouse, if said spouse has been married to the member for not less than one year.

\* Four years for those who entered the System before July 1, 2007.

### *Amount of Allowance*

The annual retirement allowance payable to the lawful spouse of a vested member who dies is equal to the greater of:

1. The allowance that would have been payable had the member retired and elected Option 2, reduced by an actuarially determined factor based on the number of years the member lacked in qualifying for unreduced benefits, or
2. A lifetime benefit equal to 20.0 percent of the deceased member's average compensation, but not less than \$25 per month.

In addition, a benefit is payable to dependent children until age 19 (23 if a full-time student). The benefit is equal to the greater of 5.0 percent of average compensation or \$25 per month for each dependent child up to three.

## RETURN OF CONTRIBUTIONS

Upon the withdrawal of a member without a retirement benefit, his or her contributions are returned to him or her, together with accumulated regular interest thereon.

Upon the death of a member before retirement, his or her contributions, together with the full accumulated regular interest thereon, are paid to his or her designated beneficiary, if any, otherwise, to his or her estate provided no other survivor benefits are payable.

Effective July 1, 2016, the interest rate on employee contributions shall be calculated based on the money market rate as published by *The Wall Street Journal* on December 31 of each preceding year with a minimum rate of 1.0 percent and a maximum rate of 5.0 percent.

## NORMAL FORM OF BENEFIT

The normal form of benefit is an allowance payable during the life of the member with the provision that, upon his or her death, the excess of his or her total contributions at the time of retirement over the total retirement annuity paid to him or her will be paid to his or her designated beneficiary.

## OPTIONAL BENEFIT

Upon retirement, if they do not select the normal form of benefit, a member may elect to receive his or her allowance in one of the following forms, which are computed to be actuarially equivalent to the applicable retirement allowance.

- Option 1. Reduced allowance with the provision that if the pensioner dies before he or she receives the value of the member's annuity as it was at the time of retirement, the balance shall be paid to his or her beneficiary.
- Option 2. Upon his or her death, his or her reduced retirement allowance shall be continued throughout the life of, and paid to, his or her beneficiary.
- Option 3. Upon his or her death, 50.0 percent of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary and the other 50.0 percent of his or her reduced retirement allowance to some other designated beneficiary.
- Option 4. Upon his or her death, 75.0 percent of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.
- Option 4A. Upon his or her death, 50.0 percent of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.
- Option 4B. A reduced retirement allowance shall be continued throughout the life of the pensioner, but with the further guarantee of payment to the pensioner, or his or her beneficiary for a specified number of years certain.
- Option 4C. A member may elect any option with the added provision that the member shall receive, so far as possible, the same total amount annually (considering both SLRP and Social Security benefits) before and after the earliest age at which the member becomes eligible for a Social Security benefit. This option was only available to those who retired prior to July 1, 2004.

A member who elects Option 2, Option 4, or Option 4A at retirement may revert to the normal form of benefit if the designated beneficiary predeceases the retired member or if the member divorces the designated beneficiary.

A member who elects the normal form of benefit or Option 1 at retirement may select Option 2, Option 4, or Option 4A to provide beneficiary protection to a new spouse if married at retirement.

A member who has at least 28 years of creditable service\* under PERS may select a PLSO at retirement. Under this option, the retiree has the option of taking a partial- lump-sum distribution equal to 12, 24, or 36 times the base maximum monthly benefit. With each lump-sum amount, the base maximum monthly benefit will be actuarially reduced. A member selecting the PLSO may also select any of the regular options except Option 1, the prorated single-life annuity, and Option 4C, the Social Security-leveling provision. The benefit is then calculated using the new reduced maximum benefit as a starting point in applying the appropriate option factors for the reduction.

*\*Or at least age 63 with four years of membership service for those who entered PERS before July 1, 2007.*

## POST-RETIREMENT ADJUSTMENTS IN ALLOWANCES

The allowances of retired members are adjusted annually by an amount equal to:

- a) 3.0 percent of the annual retirement allowance for each full fiscal year of retirement prior to the year in which the member reaches age 55, plus
- b) 3.0 percent compounded for each year thereafter beginning with the fiscal year in which the member turns age 55.

A prorated portion of the annual adjustment will be paid to the member, beneficiary, or estate of any member or beneficiary who is receiving the annual adjustment in a lump sum, but whose benefits are terminated between July 1 and December 1.

## CONTRIBUTIONS

Members currently contribute 3.0 percent of covered earnings. The employer contributes 7.4 percent of covered earnings.

## Municipal Retirement Systems: Summary of Main System Provisions as Interpreted for Valuation Purposes

### SUMMARY OF BENEFIT PROVISIONS EVALUATED

The following summary presents the main provisions of the plans in effect June 30, 2021, as interpreted in preparing the actuarial valuation. As used in the summary, "average compensation" means the average compensation of a member during the six-month period prior to receipt of an allowance.

#### *Benefits*

#### SERVICE RETIREMENT

##### *Condition for Retirement*

A retirement allowance is payable to any member who retires and has completed at least 20 years of creditable service, regardless of age.

Any general employee member who has attained age 70 and any firefighter or police officer who has attained age 65 shall be retired forthwith.

##### *Amount of Allowance*

The annual retirement allowance payable to a retired member is equal to:

1. 50.0 percent of average compensation, plus
2. 1.7 percent of average compensation for each year of credited service over 20.

The aggregate amount of (1) and (2) above shall not exceed 66.67 percent (87.0 percent for the city of Clinton) of average compensation, regardless of service.

#### DISABILITY RETIREMENT

##### *Condition for Retirement*

A retirement allowance is payable to any member who is not eligible for a service retirement benefit but who becomes totally and permanently disabled, either physically or mentally, regardless of creditable service, if the disability is due to causes in the performance of duty. If the disability is not due to causes in the performance of duty, the member must have completed at least five years of creditable service to be eligible for retirement.

##### *Amount of Allowance*

The annual disability retirement allowance payable is equal to 50.0 percent of his or her salary at the time of retirement, if the disability is due to causes in the performance of duty.

If the disability is not due to causes in the performance of duty, the allowance is equal to 2.5 percent times credited service, not in excess of 20, times his or her salary at the time of retirement for firefighters and police officers, and average compensation for general employees.

#### DEATH BENEFIT

##### *Condition for Benefits*

A benefit is payable upon the death of a member under the following conditions:

- a) The member has retired;
- b) The member is eligible to retire;
- c) The death is in the line of duty; or
- d) The death is not in the line of duty but occurs after the member has five years of credited service.

The benefit is payable to the surviving spouse until remarriage and to children under age 18, to dependent children through age 23 when full-time students, and to dependent children of any age if handicapped. For the cities of Clarksdale, Columbus, Gulfport, Hattiesburg, Jackson, McComb, Meridian, Vicksburg, and Yazoo City, benefits payable to spouses do not cease upon remarriage.

### Amount of Benefits

The annual benefit payable, under all conditions in the case of firefighters and police officers and under other than condition (c) in the case of general employees is equal to 2.5 percent of average compensation for each year of credited service up to 20 and 1.7 percent of average compensation for each year over 20, with a maximum benefit of 66.67 percent (87.0 percent for the city of Clinton) of average compensation.

For general employee members under condition (c), the annual benefit payable is equal to 50.0 percent of salary at the time of death.

### MINIMUM ALLOWANCES

The minimum monthly allowance paid to members from the following municipalities, for all retirement and death benefits, are:

Biloxi	\$600
Columbus	500
Gulfport	500
Hattiesburg	750
Jackson	500
Meridian	600
Tupelo	750
Vicksburg	1,515

### POST-RETIREMENT ADJUSTMENTS IN ALLOWANCES

The allowances of certain retired members are adjusted annually by a COLA on the basis of the annual percentage change in each fiscal year of the Consumer Price Index.

Those cities' adjustments are limited as follows:

- Biloxi: 3.0 percent per year for each full fiscal year of retirement after June 30, 2000, for all retirees and beneficiaries with the COLA being compounded beginning with the state fiscal year in which the retired member turns age 55. This is in addition to the previously granted maximum of 3.0 percent per year (not to exceed 9.0 percent) for all members who retired on or before December 31, 1995.
- Clarksdale: Maximum of 2.5 percent per year for all retirees and beneficiaries
- Clinton: Maximum of 2.5 percent per year (not to exceed 10.0 percent) for service retirements only.
- Columbus: Maximum of 2.5 percent per year (not to exceed 25.0 percent) for all retirees and beneficiaries.
- Greenville: Maximum of 2.5 percent per year (not to exceed 25.0 percent) for all retirees and beneficiaries.
- Gulfport: Maximum of 3.0 percent per year (not to exceed 27.0 percent) for each fiscal year of retirement after June 30, 2002, for all retirees and beneficiaries. This is in addition to the previously granted COLA of 2.0 percent per year (not to exceed 6.0 percent) for those retiring before July 1, 2001. All Gulfport retirees and beneficiaries who were receiving a retirement allowance as of June 30, 2002, were granted a monthly ad hoc benefit increase of \$2 per month for each year of service plus \$2 per month for each full fiscal year retired.
- Hattiesburg: 2.5 percent per year for all retirees and beneficiaries (not to exceed 32.0 percent).
- Jackson: Maximum aggregate increase of 19.5 percent for service and disability retirements only.
- Laurel: 2.0 percent per year, compounded annually (maximum of three years) for each fiscal year of retirement after June 30, 2002, for all retirees and beneficiaries. COLA increases begin at the later of age 60 or after one full fiscal year of retirement.
- McComb: Maximum of 2.5 percent per year for all retirees and beneficiaries (not to exceed 10.0 percent).
- Meridian: All Meridian retirees and beneficiaries who were receiving a retirement allowance as of June 30, 1999, were granted a 3.9 percent ad hoc benefit increase.
- Pascagoula: Maximum of 2.5 percent per year for all retirees and beneficiaries (not to exceed 15.0 percent).

Tupelo: All Tupelo retirees and beneficiaries received an increase of 5.0 percent in allowances effective December 1, 1991. Additionally, ad hoc increases were granted as follows, provided the member had been retired for at least one full fiscal year.

09/30/1995	3.00%
09/30/1997	3.00
09/30/1998	3.00
09/30/1999	2.00
09/30/2000	3.00
09/30/2001	2.34
09/30/2010	2.00
09/30/2014	2.00
09/30/2015	3.00
09/30/2016	3.00
09/30/2017	2.00
09/30/2018	3.00
09/30/2019	3.00
09/30/2020	1.00

Vicksburg: 3.0 percent per year for all retirees and beneficiaries.

Yazoo City: Maximum of 2.5 percent per year (not to exceed 25.0 percent) for all retirees and beneficiaries.

Post-retirement adjustments are included in System liabilities for future increases for the cities of Biloxi, Clinton, Columbus, Greenville, Gulfport, Hattiesburg, Jackson, Laurel, McComb, Pascagoula, Vicksburg, and Yazoo City.

## CONTRIBUTIONS

Funding policies established by Mississippi statutes provide the rates of employer contributions for MRS. The adequacy of these rates are checked annually by actuarial valuation. The following table provides a comparison of employer required contributions to actual contributions received for MRS [dollars in thousands]:

Fiscal Year 7/1 - 6/30	Valuation Date 6/30	Annual Required Contribution (A)	Actual Contribution* (B)	Difference (B-A)	Percentage Contributed
2012-13	2012	19,512	20,017	505	102.60
2013-14	2013	19,344	20,395	1,051	105.40
2014-15	2014	18,338	19,346	1,008	105.50
2015-16	2015	18,034	18,542	508	102.80
2016-17	2016	17,694	17,731	37	100.20
2017-18	2017	17,393	17,610	217	101.20
2018-19	2018	16,695	17,114	449	102.50
2019-20	2019	16,778	16,614	164	99.0
2020-21	2020	17,118	-	-	N/A
2021-22	2021	16,557	-	-	N/A

\* Actual contribution information not yet available for the most recent two years.

## Changes in Plan Provisions

The Mississippi Legislature ended its 2022 legislative session with no changes to the Mississippi Code of 1972 plan provisions of the Public Employees' Retirement System of Mississippi.

## Asset Valuation & Funding Progress

### ACTUARIAL ASSET VALUATION

As of June 30, 2022, valuation assets and funding progress of the System are based on the June 30, 2021 actuarial valuation. Funding of the actuarial accrued liability is intended to help users assess each plan's funding status on a going-concern basis and assess progress being made in accumulating sufficient assets to pay benefits when due. Actuarial values of assets for PERS, MHSPRS, SLRP, and MRS are based on a smoothed fair-value basis that recognizes 20.0 percent of the unrecognized and unanticipated gains and losses. The actuarial valuation of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are recognized in equal increments over a five-year period beginning with the current year.

The following table presents the actuarial change in asset valuation for the year ended June 30, 2021 [in thousands]:

	PERS	MHSPRS	SLRP	MRS	TOTAL
Asset Valuation as of June 30, 2020	<b>\$28,629,205</b>	<b>\$373,511</b>	<b>\$18,472</b>	<b>\$140,731</b>	<b>\$29,161,919</b>
Contributions & Other Revenue	1,764,555	21,940	849	14,907	1,802,251
Benefit Payments	(3,096,299)	(37,499)	(1,614)	(31,336)	(3,166,748)
Administrative Expenses	(15,691)	(320)	(12)	(299)	(16,322)
<b>Net</b>	<b>27,281,770</b>	<b>357,632</b>	<b>17,695</b>	<b>124,003</b>	<b>27,781,100</b>
Expected Total Investment Return for 2021 (7.75%) *	2,104,410	27,603	1,365	9,952	2,143,330
5-year smoothing of gains and losses	1,382,071	18,513	920	6,303	1,407,807
<b>Asset Valuation as of June 30, 2021</b>	<b>\$30,768,251</b>	<b>\$403,748</b>	<b>\$19,980</b>	<b>\$140,258</b>	<b>\$31,332,237</b>

\* Net of investment expenses.



## REMAINING AMORTIZATION PERIOD

The components of the change in the computed unfunded actuarial accrued liability amortization period are presented in the following table. The plans that comprise MRS are closed and have a funding policy that provides for property tax to be sufficiently levied within limits established by Mississippi statutes to provide for a declining amortization period for each municipality.

Actual remaining amortization periods as of June 30, 2021 were as follows:

	PERS	MHSPRS	SLRP
Previously Reported Period	37.1 years	21.7 years	27.7 years
<i>Change Due To:</i>			
Normal Amortization	(1.0)	(1.0)	(1.0)
Actuarial Experience	(2.5)	(0.7)	(6.0)
Assumption Method Changes	17.1	1.0	5.1
Plan Amendments	-	-	-
Additional Assumed Contributions	-	-	-
Contribution Experience	0.2	-	(0.7)
Computed Period	50.9 years	21.0 years	25.1 years

For PERS, the primary reason for the increase in the amortization period was due to the change in assumptions from the recommendations of the experience study for the four-year period ending June 30, 2020, especially the decrease in the wage inflation assumption. There were also losses due to aggregate demographic experience. These losses were somewhat offset by the gain due to investment earnings on an actuarial value of assets basis being better than expected (12.47 percent vs. 7.75 percent).

The amortization period for MHSPRS decreased due to the actual experience of the plan during the year, including investment earnings on the actuarial value of assets basis being better than expected. This was offset by the change in assumptions from the recommendations of the experience study for the four-year period ending June 30, 2020.

For SLRP, the primary reason for the decrease in the amortization period is the economic and demographic experience of the System, offset by the actuarial assumption changes.

## Schedules of Funding Progress

### Last 10 Fiscal Years

[in thousands]

Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (AAL) Entry Age (B)	Unfunded AAL (UAAL) (B-A)	Percent Funded (A/B)	Annual Covered Payroll (C)	UAAL as a Percentage of Covered Payroll ((B-A)/C)
<b>PERS</b>						
6/30/12	\$19,992,797	\$34,492,873	\$14,500,076	58.00%	\$5,857,789	247.50%
6/30/13	20,490,555	35,542,848	15,052,293	57.70	5,823,578	258.50
6/30/14	22,569,940	37,015,288	14,445,348	61.00	5,834,687	247.60
6/30/15	24,387,161	40,364,584	15,977,423	60.40	5,904,827	270.60
6/30/16	25,185,078	41,997,513	16,812,435	60.00	6,022,533	279.20
6/30/17	26,364,446	43,166,491	16,802,045	61.10	6,038,229	278.30
6/30/18	27,455,702	44,396,161	16,940,459	61.80	5,999,231	282.40
6/30/19	28,024,611	46,006,859	17,982,248	60.90	6,144,916	292.60
6/30/20	28,629,205	47,354,464	18,725,259	60.50	6,287,441	297.80
6/30/21	30,768,251	50,204,296	19,436,045	61.30	6,246,077	311.20
<b>MHSPRS</b>						
6/30/12	\$268,424	\$421,415	\$152,991	63.70%	\$25,670	596.00%
6/30/13	271,097	431,575	160,478	62.80	25,816	621.60
6/30/14	295,298	445,822	150,524	66.20	25,554	589.00
6/30/15	316,149	477,803	161,654	66.20	25,505	633.80
6/30/16	324,894	494,101	169,207	65.80	27,380	618.00
6/30/17	339,114	497,992	158,878	68.10	28,845	550.80
6/30/18	352,415	527,428	175,013	66.80	29,555	592.20
6/30/19	362,591	541,925	179,334	66.90	31,811	563.70
6/30/20	373,511	561,662	188,151	66.50	32,346	581.70
6/30/21	403,748	573,134	169,386	70.40	29,780	568.80
<b>SLRP</b>						
6/30/12	\$13,268	\$19,537	\$6,269	67.90%	\$6,872	91.20%
6/30/13	13,554	19,978	6,424	67.80	6,695	96.00
6/30/14	14,899	20,240	5,341	73.60	6,918	77.20
6/30/15	16,098	21,213	5,115	75.90	6,861	74.60
6/30/16	16,447	21,259	4,812	77.40	6,862	70.10
6/30/17	17,208	21,849	4,641	78.80	6,928	67.00
6/30/18	17,945	22,319	4,374	80.40	6,833	64.00
6/30/19	18,428	22,934	4,506	80.40	6,937	65.00
6/30/20	18,472	23,485	5,013	78.70	6,891	72.70
6/30/21	19,980	25,402	5,422	78.70	8,030	67.50
<b>MRS</b>						
9/30/12	\$155,484	\$356,571	\$201,087	43.60%	\$1,131	17,779.60%
6/30/13*	153,241	349,588	196,347	43.80	794	24,728.80
6/30/14	157,970	340,385	182,415	46.40	727	25,091.50
6/30/15	162,616	341,525	178,909	47.60	579	30,899.70
6/30/16	159,160	330,663	171,503	48.10	419	40,931.50
6/30/17	157,674	321,747	164,073	49.00	321	51,113.10
6/30/18	154,749	307,457	152,708	50.30	200	76,354.00
6/30/19	147,671	296,006	148,335	49.90	95	156,142.10
6/30/20	140,731	286,436	145,705	49.10	-	N/A
6/30/21	140,258	274,426	134,168	51.10	-	N/A

\* Municipal Retirement Systems' plan year changed from September 30 to June 30, beginning in fiscal year 2013.

## Solvency Tests

(in thousands)

	Actuarial Accrued Liabilities for:				Portions of Accrued Liabilities Covered by Assets		
	(1) Accumulated Employee Contributions Including Allocated Investment Earnings	(2) Retirees & Beneficiaries Currently Receiving Benefits	(3) Active & Inactive Members Employer-Financed Portion	Net Position Available for Benefits	(1)	(2)	(3)
<b>PERS</b>							
6/30/12	\$4,463,252	\$19,547,367	\$10,482,254	\$19,992,797	100.00%	79.40%	-%
6/30/13	5,053,888	20,789,551	9,699,409	20,490,555	100.00	74.30	-
6/30/14	5,277,944	22,033,588	9,703,756	22,569,940	100.00	78.50	-
6/30/15	5,379,226	24,012,624	10,972,734	24,387,161	100.00	79.20	-
6/30/16	5,468,859	25,390,774	11,137,880	25,185,078	100.00	77.70	-
6/30/17	5,534,403	26,686,958	10,945,130	26,364,446	100.00	78.10	-
6/30/18	5,570,524	27,874,365	10,951,272	27,455,702	100.00	78.50	-
6/30/19	5,626,602	29,109,623	11,270,634	28,024,611	100.00	76.90	-
6/30/20	5,710,182	30,220,083	11,424,199	28,629,205	100.00	75.80	-
6/30/21	5,728,172	31,821,655	12,654,469	30,768,251	100.00	78.70	-
<b>MHSPRS</b>							
6/30/12	\$20,760	\$300,753	\$99,902	\$268,424	100.00%	82.30%	-%
6/30/13	23,706	306,273	101,596	271,097	100.00	80.80	-
6/30/14	24,411	317,825	103,586	295,298	100.00	85.20	-
6/30/15	24,827	338,459	114,517	316,149	100.00	86.10	-
6/30/16	25,791	343,635	124,675	324,894	100.00	87.00	-
6/30/17	26,922	349,850	121,220	339,114	100.00	89.20	-
6/30/18	27,581	358,342	141,505	352,415	100.00	90.60	-
6/30/19	27,244	372,526	142,155	362,591	100.00	90.00	-
6/30/20	26,382	389,269	146,011	373,511	100.00	89.20	-
6/30/21	24,844	417,468	130,822	403,748	100.00	90.80	-
<b>SLRP</b>							
6/30/12	\$2,105	\$11,428	\$6,004	\$13,268	100.00%	97.70%	-%
6/30/13	2,416	11,909	5,652	13,554	100.00	93.50	-
6/30/14	2,638	11,920	5,682	14,899	100.00	100.00	6.00
6/30/15	2,862	12,329	6,023	16,098	100.00	100.00	15.10
6/30/16	2,485	13,758	5,016	16,447	100.00	100.00	4.10
6/30/17	2,636	13,799	5,414	17,208	100.00	100.00	14.30
6/30/18	2,693	13,840	5,786	17,945	100.00	100.00	24.40
6/30/19	2,701	14,282	5,951	18,428	100.00	100.00	24.30
6/30/20	2,145	16,356	4,984	18,472	100.00	99.80	-
6/30/21	2,331	16,275	6,796	19,980	100.00	100.00	20.20
<b>MRS</b>							
9/30/12	\$1,957	\$348,121	\$6,493	\$155,484	100.00%	44.10%	-%
* 6/30/13	1,483	343,770	4,335	153,241	100.00	44.10	-
6/30/14	1,342	334,937	4,106	157,970	100.00	46.80	-
6/30/15	1,101	337,039	3,385	162,616	100.00	47.90	-
6/30/16	867	327,525	2,271	159,160	100.00	48.30	-
6/30/17	667	319,346	1,734	157,674	100.00	49.20	-
6/30/18	442	305,791	1,223	154,749	100.00	50.50	-
6/30/19	220	295,261	525	147,671	100.00	49.90	-
**6/30/20	-	-	-	-	100.00	-	-
**6/30/21	-	-	-	-	-	-	-

\* Municipal Retirement Systems' plan year changed from September 30 to June 30, beginning in fiscal year 2013.

\*\*The solvency test indicates the coverage of current assets to the different categories of the actuarial accrued liability. First, coverage is applied to accumulated employee contributions with interest for active employees, then to pension obligations for retirees and beneficiaries, and lastly to the employer financed position of active and inactive member benefits. As the Plan only has retired members remaining, all assets are committed to pension obligations for retirees and beneficiaries. Every year, the actuaries calculate millage rates that are applied to assessed property values for each of the Muni plans that are sufficient to maintain an asset reserve of approximately 100% to 150% of their upcoming year's projected benefit payouts.

Analysis of Financial Experience  
Gains & Losses in Accrued Liabilities Resulting from Differences Between  
Assumed Experience & Actual Experience  
For The Year Ended June 30, 2021

[in thousands]

Type of Activity	Gain (Loss) for Year			
	PERS	MHSPRS	SLRP	MRS
<b>Age &amp; Service Retirements:</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$12,400.0	\$307.9	\$10.3	\$ -
<b>Disability Retirements:</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	1,400.0	29.2	12.8	-
<b>Death-in-service Benefits:</b> If survivor claims are less than assumed, there is a gain. If more claims, a loss.	(1,500.0)	295.3	10.6	-
<b>Withdrawal from Employment:</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(213,500.0)	(706.1)	(186.5)	-
<b>Pay Increase:</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	50,400.0	2,569.0	(846.9)	-
<b>New Members:</b> Additional unfunded accrued liability will produce a loss.	(63,800.0)	(16.3)	(65.1)	-
<b>Investment Income:</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	1,319,900.0	17,784.2	884.0	5,984.8
<b>Death after retirement:</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	72,900.0	2,322.4	63.1	3,928.4
<b>Other:</b> Miscellaneous gains & losses, data adjustments, timing of financial transactions, etc.	(146,100.0)	(1,247.6)	25.4	(5,183.7)
<b>Gain (or Loss) During Year from Financial Experience</b>	1,032,100.0	21,338.0	(92.3)	4,729.5
<b>Non-recurring Items:</b> Adjustments for plan amendments, software changes, assumption changes, or method changes.	(1,405,000.0)	(2,545.6)	(364.7)	2,937.1
<b>Composite Gain (or Loss) during Year</b>	\$(372,900.0)	\$18,792.4	\$(457.0)	\$7,666.6

## Schedule of Active Member Valuation Data

Valuation Date	Active Members				
	Number of Employers	Number of Employees	Annual Payroll	Annual Average Pay	Increase in Average Pay
<b>PERS</b>					
6/30/12	870	162,311	\$5,857,789,376	\$36,090	2.60 %
6/30/13	873	161,744	5,823,577,978	36,005	(0.20)
6/30/14	871	161,360	5,834,686,655	36,159	0.40
6/30/15	868	157,215	5,904,827,181	37,559	3.90
6/30/16	862	154,104	6,022,532,933	39,081	4.10
6/30/17	861	152,382	6,038,228,708	39,626	1.40
6/30/18	858	150,687	5,999,230,701	39,813	0.50
6/30/19	854	150,651	6,144,915,630	40,789	2.50
6/30/20	853	149,855	6,287,441,467	41,957	2.90
6/30/21	855	145,673	6,246,076,841	42,877	2.20
<b>MHSPRS</b>					
6/30/12	1	547	\$25,670,030	\$46,929	(2.80)%
6/30/13	1	520	25,815,787	49,646	5.80
6/30/14	1	495	25,553,765	51,624	4.00
6/30/15	1	518	25,504,676	49,237	(4.60)
6/30/16	1	484	27,380,162	56,571	14.90
6/30/17	1	470	28,845,478	61,373	8.50
6/30/18	1	511	29,555,411	57,838	(5.80)
6/30/19	1	522	31,811,231	60,941	5.40
6/30/20	1	511	32,345,730	63,299	3.90
6/30/21	1	478	29,780,428	62,302	(1.60)
<b>SLRP</b>					
6/30/12	5	175	\$6,871,757	\$39,267	0.30 %
6/30/13	5	175	6,695,359	38,259	(2.60)
6/30/14	5	175	6,917,939	39,531	3.30
6/30/15	5	174	6,861,166	39,432	(0.30)
6/30/16	5	171	6,862,262	40,130	1.80
6/30/17	5	174	6,928,085	39,817	(0.80)
6/30/18	5	174	6,832,961	39,270	(1.40)
6/30/19	5	170	6,937,075	40,806	3.90
6/30/20	5	171	6,890,817	40,297	(1.20)
6/30/21	5	173	8,029,670	46,414	15.2
<b>MRS</b>					
9/30/12	17	21	\$1,131,252	\$53,869	(0.70)%
* 6/30/13	17	16	793,841	49,615	(7.90)
6/30/14	17	14	727,347	51,953	4.70
6/30/15	17	11	579,267	52,661	1.40
6/30/16	17	8	419,000	52,375	(0.50)
6/30/17	17	6	321,243	53,541	2.20
6/30/18	17	4	199,742	49,936	(6.70)
6/30/19	17	2	94,871	47,436	(5.00)
6/30/20	17	-	-	-	N/A
6/30/21	17	-	-	-	N/A

\* Municipal Retirement Systems' plan year changed from September 30 to June 30, beginning in fiscal year 2013.

Schedule of Retirants Added to & Removed from Rolls  
Last Ten Fiscal Years

	Added		Removed		Increase Due to Annual COLA	Rolls at End of Year		Increase in Annual Allowances	Average Annual Allowances
	Number	Annual Allowances	Number	Annual Allowances		Number	Annual Allowances		
PERS									
6/30/12	6,569	\$125,378,708	(2,855)	\$(45,787,704)	\$45,202,325	86,829	\$1,752,606,759	7.67 %	\$20,185
6/30/13	6,276	120,592,399	(2,891)	(47,237,330)	48,758,557	90,214	1,874,720,385	6.97	20,781
6/30/14	6,159	120,190,296	(2,869)	(48,955,768)	52,368,041	93,504	1,998,322,954	6.59	21,372
6/30/15	5,907	117,113,206	(3,073)	(55,158,128)	56,044,620	96,338	2,116,322,652	5.90	21,968
6/30/16	6,548	132,970,248	(3,403)	(59,603,335)	59,355,139	99,483	2,249,044,704	6.27	22,607
6/30/17	6,219	123,938,697	(3,442)	(62,470,173)	64,233,789	102,260	2,374,747,017	5.59	23,223
6/30/18	5,985	121,870,115	(3,272)	(64,186,324)	68,319,584	104,973	2,500,750,392	5.31	23,823
6/30/19	6,101	129,095,132	(3,230)	(67,416,138)	72,575,289	107,844	2,635,004,675	5.37	24,433
6/30/20	5,645	121,134,338	(3,608)	(76,727,172)	76,182,083	109,881	2,755,593,924	4.58	25,078
6/30/21	6,502	133,897,944	(4,225)	(93,663,207)	79,655,197	112,158	2,875,483,858	4.35	25,638
MHSPRS									
6/30/12	31	\$1,157,796	(22)	\$(574,614)	\$609,050	713	\$25,167,940	4.97 %	\$35,299
6/30/13	23	642,344	(23)	(596,871)	622,206	713	25,835,619	2.65	36,235
6/30/14	28	1,113,236	(21)	(661,028)	678,533	720	26,966,360	4.38	37,453
6/30/15	22	890,167	(18)	(480,408)	700,417	724	28,076,536	4.12	38,780
6/30/16	26	833,870	(26)	(830,278)	701,887	724	28,782,015	2.51	39,754
6/30/17	22	717,225	(20)	(694,187)	758,789	726	29,563,842	2.72	40,722
6/30/18	17	787,728	(18)	(494,512)	757,399	725	30,614,457	3.55	42,227
6/30/19	28	1,186,864	(19)	(812,457)	826,033	734	31,814,897	3.92	43,345
6/30/20	21	1,202,084	(15)	(613,918)	941,045	740	33,344,108	4.81	45,060
6/30/21	39	2,196,435	(18)	(1,029,029)	932,376	761	35,443,890	6.30	46,575
SLRP									
6/30/12	33	\$230,576	(7)	\$(31,217)	\$23,377	173	\$1,046,672	27.03 %	\$6,050
6/30/13	20	77,003	(5)	(26,497)	24,226	188	1,121,404	7.14	5,965
6/30/14	6	32,688	(7)	(44,780)	30,165	187	1,139,477	1.61	6,093
6/30/15	8	58,303	(10)	(95,910)	31,718	185	1,133,588	(0.52)	6,128
6/30/16	28	177,207	(6)	(57,546)	24,514	207	1,277,763	12.72	6,173
6/30/17	6	31,300	(8)	(64,321)	34,729	205	1,279,471	0.13	6,241
6/30/18	6	34,983	(4)	(42,480)	32,574	207	1,304,548	1.96	6,302
6/30/19	11	72,406	(3)	(43,651)	39,575	215	1,372,878	5.24	6,385
6/30/20	25	216,379	(5)	(64,124)	40,523	235	1,565,656	14.04	6,662
6/30/21	3	14,393	(5)	(26,951)	43,712	233	1,596,810	1.99	6,853
MRS									
6/30/12	46	792,381	(86)	\$(1,233,853)	\$187,499	1,978	\$35,097,293	(0.72)%	\$17,443
6/30/13	40	896,085	(77)	(1,083,209)	195,722	1,941	35,105,891	0.02	18,086
6/30/14	29	485,121	(80)	(1,041,083)	173,544	1,890	34,723,473	(1.09)	18,372
6/30/15	40	731,337	(81)	(1,119,680)	143,234	1,849	34,478,364	(0.71)	18,647
6/30/16	46	842,966	(97)	(1,365,194)	132,268	1,798	34,088,404	(1.13)	18,959
6/30/17	34	712,490	(78)	(1,174,872)	125,506	1,754	33,751,528	(0.99)	19,243
6/30/18	36	674,428	(96)	(1,530,600)	102,334	1,694	32,997,690	(2.23)	19,479
6/30/19	37	736,820	(97)	(1,441,224)	130,022	1,634	32,423,308	(1.74)	19,843
6/30/20	34	654,407	(83)	(1,386,860)	128,512	1,585	31,819,367	(1.86)	20,075
6/30/21	34	633,039	(109)	(1,724,751)	117,892	1,510	30,845,547	(3.06)	20,428

This page intentionally left blank





Statistical

Statistical

## Statistical Report

The objective of the statistical section is to provide additional historical perspective, context, and details to assist readers in understanding and using the information in the financial statements and required supplementary information. Statistical data for each plan is obtained from the System's internal resources and the actuarial valuation (the most recent being as of June 30, 2021). As of June 30, 2022, the System had no outstanding debt.

### *Financial Trends*

#### 126 Changes in Net Position – Last 10 Fiscal Years

The schedule of changes in net position contains historical information related to the System's revenues (in the form of contributions and investment earnings), deductions (primarily retirement annuities), changes in net position, and ending net position restricted for benefits.

Increases to net position of the System's plans are from the excess of investment earnings and contributions over deductions. Over the last 10 years, investment income has fluctuated with the economy, with net investment earnings/losses ranging from a \$8.9 billion gain in 2021 to a loss of \$3 billion in 2022. Employer contribution rates are set by the Board based on recommendations from the actuaries. Employee contribution rates can only be changed by the state Legislature. The increase in contributions over time is attributable to contribution rate increases, as well as wage increases over the 10-year period.

Retirement annuities account for approximately 96-percent of the total deductions for the System and have increased steadily over the 10-year period. The drivers of this increase include an increase in the number of retirees, a higher average compensation on which annuities for new retirees are computed, and the 3-percent compounded annual cost-of-living adjustment for retirees of the PERS, MHSPRS, and SLRP plans.

### *Operating Information*

- 130 Benefit & Refund Payments by Type
- 134 Average Benefit Payments
- 138 Retired Members by Type of Benefit
- 141 Analysis of Employer & Member Contributions

These schedules provide information on retiree benefits and refunds as presented in the most recent actuarial valuation. Retiree information includes total number and dollar amount by type of retirement (service, disability, and survivor), as well as average monthly benefit based on years of service and retirement option selected by retirees. Additionally, a summary of employer by type and the associated employer and member contribution amounts is provided for the current and prior year.

### *Demographic & Economic Information*

- 142 Total Active Members by Attained Age & Years of Service
- 144 System Benefit Payments by County
- 145 Ten Largest Participating Employers
- 146 Public Agencies Covered by State Retirement Annuity

The schedules of active members by age and years of service summarize relevant details about the composition of each plan's membership as reported in the actuarial valuation. Members are grouped by age to show the length of service and associated payroll totals. The schedule of benefit payments by county provides the location of benefit recipients with their associated annuity payments and accordingly, the economic contribution to areas within the state of Mississippi and beyond. The ten largest participating employers schedule shows those employers with the most covered employees in PERS, a multi-employer plan.

## Changes in Net Position

### Last 10 Fiscal Years

[in thousands]

#### Public Employees' Retirement System of Mississippi

Fiscal Year	Member Contributions			Employer Contributions		Net Investment Income/(Loss)	Other Revenues	Total Additions
	Beginning Net Position	Amount	Percent*	Amount	Percent			
2013	\$19,781,387	\$547,792	9.00%	\$881,847	14.26%	\$2,564,097	\$691	\$3,994,427
2014	21,686,911	549,528	9.00	969,674	15.75	3,905,728	885	5,425,815
2015	24,877,119	557,909	9.00	996,478	15.75	827,666	670	2,382,723
2016	24,906,556	572,574	9.00	1,021,261	15.75	130,900	633	1,725,368
2017	24,135,016	570,066	9.00	1,019,084	15.75	3,436,144	604	5,025,898
2018	26,543,097	570,807	9.00	1,018,163	15.75	2,385,913	51	3,974,934
2019	27,763,190	580,941	9.00	1,038,108	15.75	1,701,321	38	3,320,408
2020	28,206,602	594,711	9.00	1,171,805	17.40	856,935	22	2,623,473
2021	27,827,394	594,876	9.00	1,169,679	17.40	8,736,632	6	10,501,193
2022	35,216,597	615,421	9.00	1,211,004	17.40	(2,980,325)	10	(1,153,890)

Fiscal Year	Pension Benefits	Refunds	Administrative Expenses	Total Deductions	Changes in Net Position	Ending Net Position
2013	\$1,965,660	\$108,365	\$14,878	\$2,088,903	1,905,524	\$21,686,911
2014	2,099,843	121,532	14,232	2,235,607	3,190,208	24,877,119
2015	2,219,240	119,356	14,690	2,353,286	29,437	24,906,556
2016	2,367,709	112,926	16,273	2,496,908	(771,540)	24,135,016
2017	2,477,914	113,707	26,196	2,617,817	2,408,081	26,543,097
2018	2,609,415	124,306	21,120	2,754,841	1,220,093	27,763,190
2019	2,747,397	108,042	21,557	2,876,996	443,412	28,206,602
2020	2,878,073	104,851	19,757	3,002,681	(379,208)	27,827,394
2021	2,995,255	101,044	15,691	3,111,990	7,389,203	35,216,597
2022	3,134,859	120,807	15,925	3,271,591	(4,425,481)	30,791,116

## Changes in Net Position

### Last 10 Fiscal Years

[in thousands]

#### Mississippi Highway Safety Patrol Retirement System

Fiscal Year	Beginning Net Position	Member Contributions		Employer Contributions		Net Investment Income/(Loss)	Other Revenues**	Total Additions
		Amount	Percent*	Amount*	Percent			
2013	\$265,232	\$1,951	7.25%	\$9,952	37.00%	\$34,270	\$3,414	\$49,587
2014	287,456	1,963	7.25	13,500	37.00	51,575	-	67,038
2015	326,032	1,938	7.25	13,695	37.00	10,812	-	26,445
2016	323,207	2,128	7.25	14,755	37.00	1,704	-	18,587
2017	311,612	2,147	7.25	14,809	37.00	44,499	-	61,455
2018	341,719	2,271	7.25	15,128	37.00	30,855	-	48,254
2019	357,305	2,340	7.25	19,375	49.08	22,144	-	43,859
2020	366,165	2,428	7.25	20,144	49.08	11,196	-	33,768
2021	364,102	2,378	7.25	19,563	49.08	115,761	-	137,702
2022	463,984	2,356	7.25	19,476	49.08	(39,468)	-	(17,636)

Fiscal Year	Pension Benefits	Refunds	Administrative Expenses	Total Deductions	Changes in Net Position	Ending Net Position
2013	\$27,052	\$112	\$199	\$27,363	\$22,224	\$287,456
2014	28,220	42	200	28,462	38,576	326,032
2015	28,909	163	198	29,270	(2,825)	323,207
2016	29,913	52	217	30,182	(11,595)	311,612
2017	31,001	144	203	31,348	30,107	341,719
2018	32,315	103	250	32,668	15,586	357,305
2019	34,671	16	312	34,999	8,860	366,165
2020	35,455	48	328	35,831	(2,063)	364,102
2021	37,433	67	320	37,820	99,882	463,984
2022	40,522	135	319	40,976	(58,612)	405,372

\* Additional contributions for MHSPRS, from House Bill No. 1015, were previously shown in Other Revenues and Transfers. Beginning with fiscal year 2014, these fees are reported in Employer Contributions.

**Changes in Net Position**  
**Last 10 Fiscal Years**  
[in thousands]

*Supplemental Legislative Retirement Plan*

Fiscal Year	Beginning Net Position	Member Contributions		Employer Contributions		Net Investment Income/(Loss)	Other Revenues	Total Additions
		Amount	Percent*	Amount	Percent			
2013	\$13,169	\$204	3.00%	\$503	7.40%	\$1,715	\$-	\$2,422
2014	14,374	208	3.00	514	7.40	2,605	-	3,327
2015	16,453	207	3.00	511	7.40	552	-	1,270
2016	16,456	208	3.00	514	7.40	86	-	808
2017	15,768	212	3.00	522	7.40	2,264	-	2,998
2018	17,342	207	3.00	513	7.40	1,412	-	2,132
2019	18,036	214	3.00	525	7.40	1,287	-	2,026
2020	18,609	207	3.00	512	7.40	554	-	1,273
2021	17,995	245	3.00	604	7.40	5,732	-	6,581
2022	22,951	245	3.00	607	7.40	(1,964)	-	(1,112)

Fiscal Year	Pension Benefits	Refunds	Administrative Expenses	Total Deductions	Changes in Net Position	Ending Net Position
2013	\$1,182	\$25	\$10	\$1,217	\$1,205	\$14,374
2014	1,216	22	10	1,248	2,079	16,453
2015	1,220	37	10	1,267	3	16,456
2016	1,454	32	10	1,496	(688)	15,768
2017	1,397	17	10	1,424	1,574	17,342
2018	1,410	18	10	1,438	694	18,036
2019	1,442	-	11	1,453	573	18,609
2020	1,857	20	10	1,887	(614)	17,995
2021	1,608	5	12	1,625	4,956	22,951
2022	1,687	-	13	1,700	(2,812)	20,139

## Changes in Net Position Last 10 Fiscal Years

[in thousands]

### Municipal Retirement Systems

Fiscal Year	Beginning Net Position	Member Contributions		Employer Contributions		Net Investment Income/(Loss)	Other Revenues	Total Additions
		Amount	Percent*	Amount	Percent*			
2013	\$160,688	\$100	**	\$21,718	**	\$19,837	\$-	\$41,655
2014	166,648	78	**	20,337	**	28,453	-	48,868
2015	180,092	45	**	19,344	**	5,692	-	25,081
2016	169,986	53	**	18,542	**	846	-	19,441
2017	154,627	31	**	17,732	**	20,605	-	38,368
2018	158,570	25	**	17,610	**	13,066	-	30,701
2019	155,314	15	**	17,114	**	9,297	-	26,426
2020	148,463	8	**	16,614	**	4,197	-	20,819
2021	136,781	-	**	14,907	**	39,519	-	54,426
2022	159,572	-	**	15,741	**	(12,812)	-	2,929

Fiscal Year	Pension Benefits	Refunds	Administrative Expenses	Total Deductions	Changes in Net Position	Ending Net Position
2013	\$35,227	\$34	\$434	\$35,695	\$5,960	\$166,648
2014	35,014	3	407	35,424	13,444	180,092
2015	34,799	1	387	35,187	(10,106)	169,986
2016	34,429	-	371	34,800	(15,359)	154,627
2017	34,070	-	355	34,425	3,943	158,570
2018	33,604	-	353	33,957	(3,256)	155,314
2019	32,935	-	342	33,277	(6,851)	148,463
2020	32,170	-	331	32,501	(11,682)	136,781
2021	31,336	-	299	31,635	22,791	159,572
2022	30,509	-	315	30,824	(27,895)	131,677

\* Percentage of annual covered payroll.

\*\* Employee and employer rates vary among the 19 systems that comprise the Municipal Retirement Systems.



Benefit & Refund Payments by Type:  
Public Employees' Retirement System of Mississippi  
Last 10 Fiscal Years

*Number of Participants by Type of Benefit*

Fiscal Year	Service	Disability	Survivor	Total	Refunds	
					Terminated	Deaths*
2012	70,843	5,845	10,141	86,829	18,053	-
2013	73,830	6,030	10,354	90,214	19,920	-
2014	76,665	6,229	10,610	93,504	20,700	-
2015	79,156	6,352	10,830	96,338	19,479	-
2016	82,145	6,430	10,908	99,483	13,026	449
2017	84,825	6,485	10,950	102,260	13,003	633
2018	87,277	6,506	11,190	104,973	12,407	454
2019	89,811	6,514	11,519	107,844	12,502	416
2020	91,642	6,471	11,768	109,881	10,101	423
2021	93,630	6,394	12,134	112,158	9,150	611

*Total Payments by Type of Benefit*  
[in thousands]

Fiscal Year	Service	Disability	Survivor	Total	Refunds	
					Terminated	Deaths*
2012	1,707,922	115,042	39,862	1,862,826	93,379	-
2013	1,804,812	120,342	40,506	1,965,660	108,365	-
2014	1,930,284	127,537	42,022	2,099,843	121,532	-
2015	2,042,728	133,454	43,058	2,219,240	119,356	-
2016	2,182,627	140,619	44,464	2,367,710	106,644	6,282
2017	2,289,330	143,292	45,292	2,477,914	108,652	5,055
2018	2,415,631	146,835	46,949	2,609,415	118,638	5,668
2019	2,548,245	150,741	48,411	2,747,397	103,716	4,326
2020	2,411,483	128,432	215,679	2,755,594	99,218	5,633
2021	2,517,981	129,746	227,757	2,875,484	91,774	9,270

\* Information unavailable prior to 2016.

Benefit & Refund Payments by Type:  
Mississippi Highway Safety Patrol Retirement System  
Last 10 Fiscal Years

*Number of Participants by Type of Benefit*

Fiscal Year	Service	Disability	Survivor	Total	Refunds	
					Terminated	Deaths*
2012	510	19	184	713	7	-
2013	510	19	184	713	9	-
2014	516	17	187	720	9	-
2015	525	17	182	724	13	-
2016	526	17	181	724	3	1
2017	528	16	182	726	7	-
2018	534	17	174	725	6	-
2019	544	17	173	734	1	-
2020	556	16	168	740	3	1
2021	575	13	173	761	3	1

*Total Payments by Type of Benefit*  
[in thousands]

Fiscal Year	Service	Disability	Survivor	Total	Refunds	
					Terminated	Deaths*
2012	25,337	516	1,073	26,926	24	-
2013	25,476	522	1,054	27,052	112	-
2014	26,595	526	1,099	28,220	42	-
2015	27,295	501	1,113	28,909	163	-
2016	29,153	509	249	29,911	42	10
2017	30,175	518	308	31,001	144	-
2018	31,455	554	306	32,315	103	-
2019	33,757	583	331	34,671	16	-
2020	28,639	421	4,284	33,344	42	6
2021	30,667	339	4,438	35,444	42	24

\* Information unavailable prior to 2016.

Benefit & Refund Payments by Type:  
Supplemental Legislative Retirement Plan  
Last 10 Fiscal Years

*Number of Participants by Type of Benefit*

Fiscal Year	Service	Disability	Survivor	Total	Refunds	
					Terminated	Deaths*
2012	143	2	28	173	8	-
2013	150	2	36	188	4	-
2014	149	2	36	187	5	-
2015	145	2	38	185	7	-
2016	167	2	38	207	2	1
2017	168	1	36	205	1	1
2018	168	1	38	207	2	1
2019	173	1	41	215	-	-
2020	191	1	43	235	3	-
2021	186	1	46	233	1	-

*Total Payments by Type of Benefit*  
[in thousands]

Fiscal Year	Service	Disability	Survivor	Total	Refunds	
					Terminated	Deaths*
2012	1,184	16	68	1,268	25	-
2013	1,104	13	65	1,182	25	-
2014	1,123	13	80	1,216	22	-
2015	1,126	13	81	1,220	37	-
2016	1,341	15	97	1,453	9	22
2017	1,314	11	72	1,397	12	5
2018	1,332	10	68	1,410	13	5
2019	1,361	11	70	1,442	-	-
2020	1,252	8	305	1,566	19	-
2021	1,242	9	346	1,597	6	-

\* Information unavailable prior to 2016.

Benefit & Refund Payments by Type:  
Municipal Retirement Systems  
Last 10 Fiscal Years

Number of Participants by Type of Benefit

Fiscal Year	Service	Disability	Survivor	Total	Refunds	
					Terminated	Deaths****
2012*	1,302	75	601	1,978	-	-
2013**	1,260	71	610	1,941	4	-
2014**	1,216	70	604	1,890	7	-
2015**	1,170	66	613	1,849	1	-
2016**	1,110	64	624	1,798	-	-
2017**	1,070	59	625	1,754	-	-
2018**	1,014	57	623	1,694	-	-
2019**	974	51	609	1,634	-	-
2020**	923	46	616	1,585	-	-
2021**	870	38	602	1,510	-	-

Total Payments by Type of Benefit \*\*\*  
[in thousands]

Fiscal Year	Service	Disability	Survivor	Total	Refunds	
					Terminated	Deaths****
2012*	26,056	850	8,190	35,096	-	-
2013**	25,787	817	8,623	35,227	34	-
2014**	25,382	816	8,816	35,014	3	-
2015**	24,824	761	9,214	34,799	1	-
2016**	24,085	744	9,600	34,429	-	-
2017**	23,456	688	9,926	34,070	-	-
2018**	22,807	657	10,140	33,604	-	-
2019**	22,093	612	10,230	32,935	-	-
2020**	20,885	557	10,377	31,819	-	-
2021**	19,954	479	10,413	30,846	-	-

\* Valuation Information furnished for MRS is as of September 30.

\*\* Valuation information furnished for MRS is as of June 30, due to plan year change.

\*\*\* Individual MRS COLA increases are paid if funding is available.

\*\*\*\* Information unavailable prior to 2016.

Average Benefit Payments:  
Public Employees' Retirement System of Mississippi

Retirement Effective Dates: July 1, 2011 to June 30, 2021	Years Credited Service							
	0-9	10-14	15-19	20-24	25	26-29	30	31+
<b>2012</b>								
Average Monthly Benefit	\$437	\$656	\$984	\$1,325	\$1,823	\$1,957	\$2,283	\$2,938
Average Final Salary	\$29,120	\$32,872	\$37,561	\$40,246	\$46,050	\$47,965	\$51,720	\$56,263
Number of Active Retirants	1,007	867	779	736	501	1,138	260	1,281
<b>2013</b>								
Average Monthly Benefit	\$442	\$695	\$964	\$1,422	\$1,925	\$2,017	\$2,188	\$2,931
Average Final Salary	\$30,487	\$34,404	\$36,876	\$41,550	\$47,768	\$48,862	\$49,470	\$56,341
Number of Active Retirants	915	901	740	758	496	1,121	224	1,121
<b>2014</b>								
Average Monthly Benefit	\$465	\$712	\$999	\$1,384	\$1,871	\$1,993	\$2,283	\$2,954
Average Final Salary	\$31,044	\$35,356	\$37,962	\$40,947	\$47,490	\$48,732	\$51,456	\$57,022
Number of Active Retirants	751	945	815	663	505	1,146	232	1,102
<b>2015</b>								
Average Monthly Benefit	\$458	\$688	\$977	\$1,346	\$1,834	\$1,989	\$2,217	\$2,899
Average Final Salary	\$29,781	\$33,585	\$37,938	\$40,770	\$46,461	\$48,614	\$50,908	\$57,019
Number of Active Retirants	599	898	774	693	494	1,072	230	1,147
<b>2016</b>								
Average Monthly Benefit	\$512	\$701	\$1,054	\$1,638	\$1,879	\$2,118	\$2,400	\$3,196
Average Final Salary	\$31,771	\$34,459	\$39,422	\$45,571	\$46,533	\$50,536	\$52,472	\$59,306
Number of Active Retirants	751	997	874	1,048	402	1,204	234	1,038
<b>2017</b>								
Average Monthly Benefit	\$476	\$727	\$1,013	\$1,656	\$1,948	\$2,106	\$2,446	\$3,093
Average Final Salary	\$31,990	\$37,033	\$39,332	\$47,400	\$49,568	\$50,461	\$55,156	\$59,849
Number of Active Retirants	732	938	859	1,014	369	1,174	190	943
<b>2018</b>								
Average Monthly Benefit	\$485	\$722	\$1,057	\$1,767	\$2,024	\$2,174	\$2,534	\$3,179
Average Final Salary	\$32,660	\$37,608	\$39,878	\$49,009	\$52,289	\$52,205	\$57,261	\$60,427
Number of Active Retirants	672	933	849	1,047	348	1,080	192	864
<b>2019</b>								
Average Monthly Benefit	\$476	\$730	\$1,156	\$1,852	\$2,091	\$2,316	\$2,469	\$3,356
Average Final Salary	\$33,243	\$36,871	\$42,708	\$51,686	\$52,874	\$55,298	\$55,458	\$65,639
Number of Active Retirants	730	930	870	1,127	359	1,062	204	819
<b>2020</b>								
Average Monthly Benefit	\$495	\$780	\$1,218	\$1,881	\$1,995	\$2,307	\$2,635	\$3,166
Average Final Salary	\$34,969	\$38,904	\$45,180	\$52,942	\$51,515	\$56,787	\$60,150	\$61,884
Number of Active Retirants	641	844	787	1,037	339	1,062	192	838
<b>2021</b>								
Average Monthly Benefit	\$484	\$798	\$1,171	\$1,724	\$2,081	\$2,203	\$2,731	\$3,198
Average Final Salary	\$34,676	\$39,370	\$43,511	\$49,033	\$52,995	\$54,445	\$62,496	\$62,914
Number of Active Retirants	775	1,026	971	1,186	365	1,098	200	881

Average Benefit Payments:  
Mississippi Highway Safety Patrol Retirement System

Retirement Effective Dates: July 1, 2011 to June 30, 2021	Years Credited Service							
	0-9	10-14	15-19	20-24	25	26-29	30	31+
<b>2012</b>								
Average Monthly Benefit	\$1,649	\$-	\$2,341	\$982	\$1,569	\$2,268	\$4,335	\$3,799
Average Final Salary	\$39,568	\$-	\$58,021	\$39,971	\$28,717	\$46,824	\$71,048	\$62,979
Number of Active Retirants	1	-	1	1	1	10	5	12
<b>2013</b>								
Average Monthly Benefit	\$662	\$710	\$-	\$1,173	\$1,696	\$2,860	\$-	\$3,270
Average Final Salary	\$21,844	\$36,998	\$-	\$31,852	\$28,673	\$54,158	\$-	\$54,646
Number of Active Retirants	1	2	-	3	2	11	-	4
<b>2014</b>								
Average Monthly Benefit	\$-	\$-	\$402	\$2,013	\$-	\$2,756	\$3,899	\$4,528
Average Final Salary	\$-	\$-	\$15,019	\$54,344	\$-	\$51,233	\$69,760	\$68,011
Number of Active Retirants	-	-	1	5	-	8	5	9
<b>2015</b>								
Average Monthly Benefit	\$-	\$-	\$1,831	\$1,719	\$1,978	\$4,054	\$-	\$4,758
Average Final Salary	\$-	\$-	\$45,652	\$30,832	\$36,845	\$51,500	\$-	\$67,378
Number of Active Retirants	-	-	3	3	2	10	-	4
<b>2016</b>								
Average Monthly Benefit	\$315	\$-	\$-	\$2,078	\$-	\$3,013	\$1,729	\$5,059
Average Final Salary	\$53,306	\$-	\$-	\$45,948	\$-	\$37,841	\$50,692	\$51,223
Number of Active Retirants	3	-	-	6	-	13	1	3
<b>2017</b>								
Average Monthly Benefit	\$338	\$996	\$556	\$2,928	\$1,186	\$2,670	\$4,606	\$3,493
Average Final Salary	\$19,660	\$45,533	\$22,016	\$67,683	\$28,912	\$54,518	\$72,101	\$47,950
Number of Active Retirants	1	1	1	6	2	6	4	1
<b>2018</b>								
Average Monthly Benefit	\$-	\$1,307	\$2,491	\$3,100	\$-	\$3,562	\$4,826	\$5,101
Average Final Salary	\$-	\$31,380	\$68,832	\$60,334	\$-	\$68,126	\$77,928	\$75,940
Number of Active Retirants	-	1	2	4	-	1	2	7
<b>2019</b>								
Average Monthly Benefit	\$-	\$455	\$2,112	\$3,375	\$3,943	\$4,902	\$5,824	\$5,690
Average Final Salary	\$-	\$56,574	\$53,477	\$77,544	\$75,696	\$84,403	\$93,541	\$82,712
Number of Active Retirants	-	3	6	9	1	1	1	7
<b>2020</b>								
Average Monthly Benefit	\$-	\$2,247	\$2,673	\$3,797	\$3,751	\$-	\$-	\$6,127
Average Final Salary	\$-	\$70,328	\$72,280	\$73,365	\$72,571	\$-	\$-	\$91,720
Number of Active Retirants	-	1	1	5	4	-	-	10
<b>2021</b>								
Average Monthly Benefit	\$-	\$2,073	\$2,071	\$3,751	\$5,042	\$4,935	\$4,757	\$6,336
Average Final Salary	\$-	\$63,446	\$85,505	\$46,027	\$61,918	\$70,663	\$24,044	\$59,803
Number of Active Retirants	-	1	2	10	3	12	3	8

Average Benefit Payments:  
Supplemental Legislative Retirement Plan

Retirement Effective Dates: July 1, 2011 to June 30, 2021	Years Credited Service							
	0-9	10-14	15-19	20-24	25	26-29	30	31+
<b>2012</b>								
Average Monthly Benefit	\$194	\$405	\$430	\$676	\$-	\$731	\$-	\$1,237
Average Final Salary	\$33,827	\$43,765	\$36,045	\$38,901	\$-	\$38,645	\$-	\$57,276
Number of Active Retirants	10	6	3	4	-	3	-	7
<b>2013</b>								
Average Monthly Benefit	\$168	\$183	\$463	\$550	\$-	\$731	\$-	\$-
Average Final Salary	\$27,925	\$29,576	\$36,140	\$39,581	\$-	\$38,727	\$-	\$-
Number of Active Retirants	6	7	1	4	-	2	-	-
<b>2014</b>								
Average Monthly Benefit	\$-	\$345	\$491	\$473	\$-	\$580	\$-	\$-
Average Final Salary	\$-	\$34,404	\$34,871	\$39,301	\$-	\$43,165	\$-	\$-
Number of Active Retirants	-	2	2	1	-	1	-	-
<b>2015</b>								
Average Monthly Benefit	\$164	\$740	\$721	\$-	\$579	\$-	\$-	\$1,032
Average Final Salary	\$18,636	\$68,228	\$37,912	\$-	\$34,791	\$-	\$-	\$42,949
Number of Active Retirants	2	2	2	-	1	-	-	1
<b>2016</b>								
Average Monthly Benefit	\$250	\$350	\$487	\$654	\$522	\$-	\$-	\$1,200
Average Final Salary	\$36,600	\$39,878	\$35,211	\$39,774	\$41,482	\$-	\$-	\$42,238
Number of Active Retirants	6	6	4	7	2	-	-	3
<b>2017</b>								
Average Monthly Benefit	\$181	\$-	\$609	\$452	\$732	\$-	\$-	\$-
Average Final Salary	\$29,821	\$-	\$37,791	\$28,378	\$40,932	\$-	\$-	\$-
Number of Active Retirants	2	-	1	2	1	-	-	-
<b>2018</b>								
Average Monthly Benefit	\$33	\$-	\$538	\$513	\$-	\$-	\$-	\$1,285
Average Final Salary	\$20,840	\$-	\$40,101	\$41,549	\$-	\$-	\$-	\$41,618
Number of Active Retirants	2	-	1	2	-	-	-	1
<b>2019</b>								
Average Monthly Benefit	\$169	\$373	\$637	\$742	\$-	\$739	\$-	\$960
Average Final Salary	\$24,873	\$42,782	\$42,043	\$42,480	\$-	\$40,655	\$-	\$44,126
Number of Active Retirants	3	2	1	2	-	1	-	2
<b>2020</b>								
Average Monthly Benefit	\$245	\$334	\$551	\$799	\$-	\$969	\$-	\$713
Average Final Salary	\$36,523	\$40,009	\$32,107	\$39,044	\$-	\$34,675	\$-	\$42,095
Number of Active Retirants	3	2	5	7	-	4	-	3
<b>2021</b>								
Average Monthly Benefit	\$192	\$-	\$-	\$-	\$-	\$815	\$-	\$-
Average Final Salary	\$32,589	\$-	\$-	\$-	\$-	\$44,865	\$-	\$-
Number of Active Retirants	2	-	-	-	-	1	-	-



Average Benefit Payments:  
Municipal Retirement Systems

Retirement Effective Dates: July 1, 2011 to June 30, 2020**	Years Credited Service			
	25	26-29	30	31+
<b>2012*</b>				
Average Monthly Benefit	\$-	\$-	\$-	\$3,423
Average Final Salary	\$-	\$-	\$-	\$61,607
Number of Active Retirants	-	-	-	4
<b>2013*</b>				
Average Monthly Benefit	\$-	\$3,490	\$-	\$4,379
Average Final Salary	\$-	\$63,310	\$-	\$72,947
Number of Active Retirants	-	1	-	4
<b>2014</b>				
Average Monthly Benefit	\$-	\$-	\$-	\$2,778
Average Final Salary	\$-	\$-	\$-	\$47,160
Number of Active Retirants	-	-	-	2
<b>2015</b>				
Average Monthly Benefit	\$-	\$-	\$2,898	\$2,912
Average Final Salary	\$-	\$-	\$51,253	\$56,520
Number of Active Retirants	-	-	1	2
<b>2016</b>				
Average Monthly Benefit	\$-	\$-	\$-	\$3,479
Average Final Salary	\$-	\$-	\$-	\$44,155
Number of Active Retirants	-	-	-	3
<b>2017</b>				
Average Monthly Benefit	\$-	\$-	\$-	\$2,424
Average Final Salary	\$-	\$-	\$-	\$43,631
Number of Active Retirants	-	-	-	2
<b>2018</b>				
Average Monthly Benefit	\$-	\$-	\$-	\$3,738
Average Final Salary	\$-	\$-	\$-	\$67,277
Number of Active Retirants	-	-	-	2
<b>2019</b>				
Average Monthly Benefit	\$-	\$-	\$-	\$3,427
Average Final Salary	\$-	\$-	\$-	\$53,998
Number of Active Retirants	-	-	-	2
<b>2020</b>				
Average Monthly Benefit	\$-	\$-	\$-	\$3,024
Average Final Salary	\$-	\$-	\$-	\$47,435
Number of Active Retirants	-	-	-	2

\* Valuation information is as of October 1 to September 30, due to plan year change.  
 \*\* All active employees were retired as of June 30, 2020.

Retired Members by Type of Benefit  
June 30, 2021

Public Employees' Retirement System of Mississippi

Amount of Monthly Benefit *	Option Selected **					
	Life	Opt. 1	Opt. 2	Opt. 3	Opt. 4	Opt. 4A
\$1 - 500	15,646	670	2,610	197	177	430
501 - 1,000	15,553	673	2,932	209	271	898
1,001 - 1,500	12,712	638	3,049	223	328	1,107
1,501 - 2,000	10,335	458	2,713	150	369	1,203
2,001 - 2,500	7,573	301	2,066	103	273	1,156
2,501 - 3,000	4,619	170	1,209	44	200	702
3,001 - 3,500	2,894	108	788	26	131	481
3,501 - 4,000	1,597	58	439	14	59	261
4,001 - 4,500	935	28	304	6	56	217
4,501 - 5,000	510	12	162	4	27	117
Over 5,000	966	22	452	8	102	292
<b>Totals</b>	<b>73,340</b>	<b>3,138</b>	<b>16,724</b>	<b>984</b>	<b>1,993</b>	<b>6,864</b>

Amount of Monthly Benefit *	Opt. 4B	Opt. 4C***	Opt. 5	PLSO	PLSO	PLSO
				1 YR.***	2 YR.***	3 YR.***
\$1 - 500	1,853	147	31	584	480	2,187
501 - 1,000	1,577	702	55	905	651	2,144
1,001 - 1,500	1,470	866	54	888	768	3,046
1,501 - 2,000	1,344	390	24	788	828	3,601
2,001 - 2,500	1,051	107	17	830	705	2,965
2,501 - 3,000	670	41	13	600	458	1,697
3,001 - 3,500	401	16	7	475	338	939
3,501 - 4,000	207	8	-	272	178	452
4,001 - 4,500	128	3	-	165	109	312
4,501 - 5,000	65	2	-	83	45	163
Over 5,000	148	2	-	165	87	309
<b>Totals</b>	<b>8,914</b>	<b>2,284</b>	<b>201</b>	<b>5,755</b>	<b>4,647</b>	<b>17,815</b>

\* Excluding Cost-of-Living Adjustment

\*\* Option Selected:

Life – return of contributions;

Opt. 1 – return of member's annuity;

Opt. 2 – 100.0 percent survivorship;

Opt. 3 – 50.0 percent / 50.0 percent dual survivorship;

Opt. 4 – 75.0 percent survivorship;

Opt. 4A – 50.0 percent survivorship;

Opt. 4B – years certain and life;

Opt. 4C – Social Security leveling;

Opt. 5 – pop up;

PLSO – Partial-Lump-Sum Option.

\*\*\* Included in other options.

Retired Members by Type of Benefit  
June 30, 2021

Mississippi Highway Safety Patrol Retirement System

Amount of Monthly Benefit *	Option Selected **					
	Life	Opt. 1	Opt. 2	Opt. 3	Opt. 4	Opt. 4A
\$1 - 500	25	-	1	-	-	-
501 - 1,000	77	-	1	1	-	-
1,001 - 1,500	39	-	3	-	-	-
1,501 - 2,000	21	-	8	2	-	1
2,001 - 2,500	11	-	8	-	-	1
2,501 - 3,000	8	-	9	1	-	2
3,001 - 3,500	13	1	10	-	-	-
3,501 - 4,000	4	-	1	1	-	3
4,001 - 4,500	1	1	4	-	-	1
4,501 - 5,000	-	-	1	-	-	-
Over 5,000	1	-	1	-	-	-
<b>Totals</b>	<b>200</b>	<b>2</b>	<b>47</b>	<b>5</b>	<b>-</b>	<b>8</b>

Amount of Monthly Benefit *	Opt. 4B	Opt. 4C***	Opt. 9	PLSO		
				1 YR.***	2 YR.***	3 YR.***
\$1 - 500	-	-	3	-	-	-
501 - 1,000	2	1	8	-	1	1
1,001 - 1,500	1	3	21	2	-	6
1,501 - 2,000	2	3	62	1	1	9
2,001 - 2,500	2	1	80	10	3	14
2,501 - 3,000	3	2	69	5	5	34
3,001 - 3,500	1	-	72	8	5	33
3,501 - 4,000	2	-	46	8	4	19
4,001 - 4,500	2	-	38	4	6	14
4,501 - 5,000	-	-	22	4	-	10
Over 5,000	-	-	63	6	8	16
<b>Totals</b>	<b>15</b>	<b>10</b>	<b>484</b>	<b>48</b>	<b>33</b>	<b>156</b>

\* Excluding Cost-of-Living Adjustment

\*\* Option Selected:

Life – return of contributions;

Opt. 1 – return of member's annuity;

Opt. 2 – 100.0 percent survivorship;

Opt. 3 – 50.0 percent / 50.0 percent dual survivorship;

Opt. 4 – 75.0 percent survivorship;

Opt. 4A – 50.0 percent survivorship;

Opt. 4B – years certain and life;

Opt. 4C – Social Security leveling;

Opt. 9 – maximum benefit with pop-down provision;

PLSO – Partial-Lump-Sum Option.

\*\*\* Included in other options.

Retired Members by Type of Benefit  
June 30, 2021

Supplemental Legislative Retirement Plan

Amount of Monthly Benefit *	Option Selected **					
	Life	Opt. 1	Opt. 2	Opt. 3	Opt. 4	Opt. 4A
\$1 - 100	6	-	6	-	-	-
101 - 200	14	1	16	-	1	-
201 - 300	15	1	14	2	1	3
301 - 400	24	1	11	-	-	3
401 - 500	13	1	8	2	-	1
501 - 600	5	-	4	3	-	1
601 - 700	9	-	8	-	-	1
701 - 800	5	-	5	-	1	-
801 - 900	5	-	2	-	1	1
901 - 1,000	2	1	3	-	-	-
Over 1,000	6	-	2	-	1	1
<b>Totals</b>	<b>104</b>	<b>5</b>	<b>79</b>	<b>7</b>	<b>5</b>	<b>11</b>

Amount of Monthly Benefit *	Opt. 4B	Opt. 4C***	Opt. 5	PLSO		
				1 YR.***	2 YR.***	3 YR.***
\$1 - 100	3	1	-	-	-	1
101 - 200	1	-	-	-	-	5
201 - 300	2	-	-	1	-	2
301 - 400	7	-	-	2	-	8
401 - 500	3	-	-	1	2	6
501 - 600	2	-	-	-	1	6
601 - 700	1	-	-	-	2	2
701 - 800	-	-	-	1	1	2
801 - 900	-	-	-	-	-	3
901 - 1,000	2	-	-	-	1	2
Over 1,000	1	-	-	2	1	3
<b>Totals</b>	<b>22</b>	<b>1</b>	<b>-</b>	<b>7</b>	<b>8</b>	<b>40</b>

\* Excluding Cost-of-Living Adjustment

\*\* Option Selected:

Life – return of contributions;

Opt. 1 – return of member's annuity;

Opt. 2 – 100.0 percent survivorship;

Opt. 3 – 50.0 percent / 50.0 percent dual survivorship;

Opt. 4 – 75.0 percent survivorship;

Opt. 4A – 50.0 percent survivorship;

Opt. 4B – years certain and life;

Opt. 4C – Social Security leveling;

Opt. 5 – pop up;

PLSO – Partial-Lump-Sum Option.

\*\*\* Included in other options.

Analysis of Employer & Member Contributions  
Public Employees' Retirement System of Mississippi  
For Fiscal Years Ended June 30, 2022 & 2021

[contributions in thousands]

	Employer		Member		Total Contributions	Percent
	Units	Contributions	Number	Contributions		
2022						
State Agencies	106	\$201,764	24,466	\$103,416	\$305,180	16.71%
State Universities	9	186,639	16,774	95,669	282,308	15.46
Public Schools	140	475,637	60,787	243,281	718,918	39.36
Community/Junior Colleges	15	55,476	5,761	28,330	83,806	4.59
Counties	82	108,665	14,486	54,972	163,637	8.96
Municipalities	242	114,491	15,404	58,751	173,242	9.49
Others	265	68,332	6,738	31,002	99,334	5.43
Totals	859	\$1,211,004	144,416	\$615,421	\$1,826,425	100.00%
2021						
State Agencies	103	\$199,835	25,325	\$102,508	\$302,343	17.13%
State Universities	9	182,069	17,114	93,362	275,431	15.61
Public Schools	140	450,939	60,108	231,095	682,034	38.65
Community/Junior Colleges	15	54,745	5,959	27,947	82,692	4.69
Counties	82	98,074	14,620	49,666	147,740	8.37
Municipalities	242	109,497	15,471	56,210	165,707	9.39
Others	264	74,520	7,076	34,088	108,608	6.16
Totals	855	\$1,169,679	145,673	\$594,876	\$1,764,555	100.00%

Note: Above table excludes MHSPRS, SLRP, and MRS contributions. Classification amounts are established at the time entities join PERS. Classification amounts may differ from those identified through other sources.

Total Active Members by Attained Age & Years of Service:  
Public Employees' Retirement System of Mississippi  
June 30, 2021

Attained Age	Active Member Years of Service							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	Numbers	Valuation Payroll
Under 20	310	-	-	-	-	-	-	310	\$6,278,043
20-24	5,820	43	-	-	-	-	-	5,863	173,390,605
25-29	10,691	2,521	19	-	-	-	-	13,231	475,376,639
30-34	7,138	6,709	1,667	37	-	-	-	15,551	623,502,766
35-39	5,856	4,740	5,351	1,799	48	-	-	17,794	777,301,457
40-44	5,143	4,049	3,825	5,002	1,661	23	-	19,703	919,367,298
45-49	4,420	3,566	3,239	3,368	4,161	1,061	16	19,831	942,376,731
50-54	4,078	3,185	2,907	2,972	3,125	2,245	475	18,987	873,035,281
55-59	3,323	2,873	2,507	2,642	2,685	1,576	1,038	16,644	719,883,032
60-64	2,164	2,232	1,787	1,698	1,698	1,066	959	11,604	487,902,990
65-69	858	937	649	545	436	302	371	4,098	168,508,362
70 & Over	480	401	333	287	227	120	209	2,057	79,153,637
<b>Totals</b>	<b>50,281</b>	<b>31,256</b>	<b>22,284</b>	<b>18,350</b>	<b>14,041</b>	<b>6,393</b>	<b>3,068</b>	<b>145,673</b>	<b>\$6,246,076,841</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 45.1 years  
Service: 10.5 years  
Entry Age: 35 years  
Annual Pay: \$42,877

Total Active Members by Attained Age & Years of Service:  
Mississippi Highway Safety Patrol Retirement System  
June 30, 2021

Attained Age	Active Member Years of Service							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	Numbers	Valuation Payroll
Under 25	10	-	-	-	-	-	-	10	\$465,512
25-29	49	1	-	-	-	-	-	50	2,352,030
30-34	34	31	2	-	-	-	-	67	3,316,098
35-39	11	28	23	10	-	-	-	72	4,247,379
40-44	11	15	27	26	10	-	-	89	5,519,493
45-49	7	2	26	16	41	3	-	95	6,575,785
50-54	3	2	9	6	29	18	2	69	5,165,762
55-59	-	-	2	1	5	9	4	21	1,777,165
60-64	-	-	-	-	2	2	1	5	361,204
65 & Over	-	-	-	-	-	-	-	-	-
<b>Totals</b>	<b>125</b>	<b>79</b>	<b>89</b>	<b>59</b>	<b>87</b>	<b>32</b>	<b>7</b>	<b>478</b>	<b>\$29,780,428</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 41.7 years  
Service: 12.8 years  
Annual Pay: \$62,302

Total Active Members by Attained Age & Years of Service:  
Supplemental Legislative Retirement Plan  
June 30, 2021

Attained Age	Active Member Years of Service							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	Numbers	Valuation Payroll
Under 25	-	-	-	-	-	-	-	-	\$-
25-29	2	1	-	-	-	-	-	3	136,908
30-34	3	2	-	-	-	-	-	5	225,152
35-39	4	2	-	-	-	-	-	6	264,676
40-44	14	8	2	1	-	-	-	25	1,103,895
45-49	7	9	1	2	1	-	-	20	927,326
50-54	5	16	4	-	-	-	-	25	1,140,852
55-59	9	15	2	2	2	-	-	30	1,442,726
60-64	5	7	3	3	1	2	-	21	980,825
65-69	2	5	1	2	-	2	2	14	648,981
70 & Over	3	3	6	2	-	6	4	24	1,158,329
<b>Totals</b>	<b>54</b>	<b>68</b>	<b>19</b>	<b>12</b>	<b>4</b>	<b>10</b>	<b>6</b>	<b>173</b>	<b>\$8,029,670</b>

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 55.6 years  
Benefit Service: 9.7 years  
Eligibility Service: 14.8 years  
Annual Pay: \$46,414



## System Benefit Payments by County

June 30, 2022

[amounts paid in thousands]

County	Number of Payments	Amount Paid	County	Number of Payments	Amount Paid
Adams	1,390	\$34,045	Lowndes	1,808	\$47,970
Alcorn	1,432	37,391	Madison	4,707	163,890
Amite	426	9,380	Marion	854	21,747
Attala	900	22,474	Marshall	798	18,178
Benton	237	5,397	Monroe	1,245	32,146
Bolivar	1,631	42,747	Montgomery	589	15,637
Calhoun	522	12,556	Neshoba	1,001	24,839
Carroll	525	12,558	Newton	919	22,643
Chickasaw	639	15,584	Noxubee	354	8,544
Choctaw	393	9,828	Oktibbeha	2,615	99,489
Claiborne	381	10,287	Panola	1,311	32,334
Clarke	692	14,374	Pearl River	1,454	33,374
Clay	698	19,402	Perry	491	10,353
Coahoma	984	28,386	Pike	1,402	36,202
Copiah	1,124	28,853	Pontotoc	894	24,042
Covington	771	19,087	Prentiss	898	23,720
Desoto	2,147	52,468	Quitman	263	6,482
Forrest	3,634	107,394	Rankin	6,907	205,301
Franklin	357	8,522	Scott	899	21,829
George	757	17,024	Sharkey	228	6,085
Greene	403	8,961	Simpson	1,226	30,526
Grenada	899	23,403	Smith	592	13,638
Hancock	1,116	27,067	Stone	855	21,035
Harrison	5,568	151,121	Sunflower	975	24,224
Hinds	10,849	317,641	Tallahatchie	497	12,114
Holmes	752	18,236	Tate	941	24,074
Humphreys	301	7,858	Tippah	887	21,048
Issaquena	32	601	Tishomingo	648	14,937
Itawamba	984	25,309	Tunica	299	6,739
Jackson	4,217	109,418	Union	987	25,913
Jasper	679	14,529	Walthall	451	10,576
Jefferson	431	11,273	Warren	1,522	42,804
Jefferson Davis	431	8,981	Washington	1,751	45,174
Jones	2,907	71,364	Wayne	644	14,923
Kemper	378	9,380	Webster	675	18,118
Lafayette	2,525	89,369	Wilkinson	324	7,725
Lamar	1,474	36,099	Winston	780	22,001
Lauderdale	2,983	75,304	Yalobusha	727	17,900
Lawrence	580	13,191	Yazoo	882	22,358
Leake	781	18,561	<b>Mississippi</b>	<b>108,354</b>	<b>\$2,938,768</b>
Lee	2,755	78,168	<b>Out-of-Country</b>	34	829
Leflore	1,208	33,430	<b>Out-of-State</b>	11,410	267,980
Lincoln	1,161	31,115	<b>Total</b>	<b>119,798</b>	<b>\$3,207,577</b>

## Ten Largest Participating Employers

Participating Employer	2022			2013		
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
<i>Public Employees' Retirement System</i>						
University Medical Center	7,036	1	4.87%	7,239	1	4.31%
Desoto County Board of Education	4,166	2	2.88	3,868	3	2.30
Mississippi State University	3,705	3	2.57	3,804	4	2.27
Jackson Municipal Separate Schools	3,217	4	2.23	4,496	2	2.68
Mississippi Department of Human Services	2,929	5	2.03	3,508	5	2.09
Mississippi Department of Transportation	2,562	6	1.77	3,410	6	2.03
Rankin County Board of Education	2,387	7	1.65	2,374	9	1.41
University of Mississippi	2,140	8	1.48	1,997	-	1.19
Harrison County Board of Education	1,868	9	1.29	1,692	-	1.01
Madison County Board of Education	1,681	10	1.16	1,434	-	0.85
All Other	112,725	-	78.07	134,162	-	79.86
<b>Totals (859 Employers)</b>	<b>144,416</b>	<b>-</b>	<b>100.00%</b>	<b>167,984</b>	<b>-</b>	<b>100.00%</b>

## Public Agencies Covered by State Retirement Annuity

### *Participating Employers Covered by Law*

State Agencies  
State Universities  
Community/Junior Colleges  
Public School Districts

### *Participating Employers Covered by Separate Agreement*

Counties

### *Local Governmental Entities Covered by Separate Agreement*

#### *Municipalities*

Aberdeen	Crenshaw	Itta Bena	Nettleton	Shaw
Ackerman	Crosby	Iuka	New Albany	Shelby
Algoma	Crystal Springs	Jackson	New Augusta	Sherman
Amory	Decatur	Jonestown	New Hebron	Shubuta
Anguilla	De Kalb	Jumpertown	Newton	Shuqualak
Arcola	D'lo	Kilmichael	North Carrollton	Silver City
Artesia	Derma	Kosciusko	Noxapater	Sledge
Ashland	D'Iberville	Lake	Ocean Springs	Smithville
Baldwyn	Drew	Lambert	Okolona	Soso
Bassfield	Duck Hill	Laurel	Olive Branch	Southaven
Batesville	Durant	Leakesville	Osyka	Starkville
Bay Springs	Ecru	Leland	Oxford	State Line
Bay St. Louis	Edwards	Lena	Pascagoula	Stonewall
Beaumont	Ellisville	Lexington	Pass Christian	Sturgis
Belmont	Enterprise	Liberty	Pearl	Summit
Belzoni	Ethel	Long Beach	Pelahatchie	Sumner
Benoit	Eupora	Louin	Petal	Sumrall
Bentonla	Falkner	Louise	Philadelphia	Sunflower
Biloxi	Farmington	Louisville	Picayune	Tailorsville
Blue Mountain	Flora	Lucedale	Plantersville	Tchula
Booneville	Florence	Lula	Polkville	Terry
Boyle	Flowood	Lumberton	Pontotoc	Tishomingo
Brandon	Forest	Lyon	Poplarville	Tremont
Brookhaven	French Camp	Maben	Port Gibson	Tunica
Brooksville	Fulton	Macon	Potts Camp	Tupelo
Bruce	Gautier	Madison	Prentiss	Tutwiler
Bude	Gloster	Magee	Puckett	Tylertown
Burnsville	Gluckstadt	Magnolia	Purvis	Union
Byhalia	Golden	Mantachie	Quitman	Vaiden
Byram	Goodman	Marietta	Raleigh	Vardaman
Caledonia	Greenville	Marion	Raymond	Verona
Calhoun City	Greenwood	Marks	Renova	Vicksburg
Canton	Grenada	Mathiston	Richland	Walnut
Carthage	Gulfport	Mayersville	Richton	Walnut Grove
Cary	Guntown	McComb	Ridgeland	Walthall
Centerville	Hatley	McLain	Rienzi	Water Valley
Charleston	Hattiesburg	Meadville	Ripley	Waveland
Chunky	Hazlehurst	Mendenhall	Rolling Fork	Waynesboro
Clarksdale	Heidelberg	Meridian	Rosedale	Weir
Cleveland	Hernando	Merigold	Roxie	Wesson
Clinton	Hickory	Metcalfe	Ruleville	West
Coffeetille	Hickory Flat	Mize	Saltillo	West Point
Coldwater	Hollandale	Monticello	Sallis	Wiggins
Collins	Holly Springs	Moorhead	Sandersville	Winona
Columbia	Horn Lake	Morton	Sardis	Woodland
Columbus	Houlka	Moss Point	Sebastopol	Woodville
Como	Houston	Mount Olive	Seminary	Yazoo City
Corinth	Indianola	Myrtle	Senatobia	
Crawford	Inverness	Natchez	Shannon	

**Public Agencies Covered by State Retirement Annuity**  
(continued)

*Juristic Entities*

Adams County Airport Commission  
Adams County Soil & Water Conservation District  
Bogue Philia Drainage District  
Bolivar County Soil & Water Conservation District  
Booneville Gas & Water System  
Brookhaven Park & Recreation  
Caledonia Natural Gas District  
Calhoun County Soil & Water Conservation District  
Canton Convention & Visitors Bureau  
Canton Municipal Utilities  
Canton Redevelopment Authority  
Chickasawhay Natural Gas District  
Choctaw County Economic Development District  
Claiborne County Human Resource Agency  
Clarksdale Park Commission  
Clarksdale Public Utilities  
Cleary Water, Sewer & Fire District  
Coahoma County Soil & Water Conservation District  
Coast Coliseum & Convention Center  
Columbus Light & Water Department  
Copolah County Human Resource Agency  
Corinth-Alcorn Airport Board  
Corinth-Alcorn Convention & Agriculture Exposition Center  
Corinth-Alcorn County Recreation Commission  
Corinth City Water Department  
Covington County Soil & Water Conservation District  
Culkin Water District  
Delta Blues Museum  
Desoto County Convention & Visitors Bureau  
Desoto County Soil & Water Conservation District  
Diamondhead Fire Protection District  
East Leflore County Water & Sewer District  
Economic Development of Jones County  
Emergency Management District  
Forrest County Soil & Water Conservation District  
George County Soil & Water Conservation District  
Glendale Utility District  
Golden Triangle Cooperative Service District  
Golden Triangle Regional Airport  
Golden Triangle Regional Solid Waste Management Authority  
Greenville Port Commission  
Greenwood Tourism Commission  
Greenwood Utilities Commission  
Grenada County Civil Defense  
Grenada County Soil & Water Conservation District  
Gulf Park Estates St. Andrew Fire Protection District  
Gulf Regional Planning Commission  
Gulfport-Biloxi Regional Airport Authority  
Hancock County Human Resource Agency  
Hancock County Planning Commission  
Hancock County Port & Harbor Commission  
Hancock County Soil Conservation District  
Hancock County Utility Authority  
Hancock County Water & Sewer District  
Harrison County Development Commission  
Harrison County Soil & Water Conservation District

Harrison County Utility Authority  
Hattiesburg Tourism Commission  
Hinds County Soil & Water Conservation District  
Holly Springs Utility Department  
Holmes County Soil & Water Conservation District  
Itawamba County Soil & Water Conservation District  
Jackson Convention & Visitors Bureau dba Visit Jackson  
Jackson County Emergency Communications District  
Jackson County Port Authority  
Jackson County Utility Authority  
Jackson Municipal Airport Authority  
Kiln Water & Fire District  
Kosciusko Water & Light Department  
Lafayette County Soil & Water Conservation District  
Lamar County Soil & Water Conservation District  
Lauderdale County Emergency Medical Service District  
Lauderdale County Soil & Water Conservation District  
Laurel Airport Authority  
Lee County Soil & Water Conservation District  
Levee Commission Yazoo MS Delta  
Levee Commissioners  
Louisville Electric System  
Louisville Water System  
Macon Electric & Water Department  
Madison County Economic Development Authority  
Madison County Nursing Home  
Madison County Soil & Water Conservation District  
Marion County Soil & Water Conservation District  
Mental Health & Retardation, Region III (NE MS)  
Mental Health & Retardation, Region IV (Corinth)  
Mental Health & Retardation, Region VI (Greenwood)  
Mental Health & Retardation, Region VIII (Brandon)  
Mental Health & Retardation, Region X (Weems)  
Mental Health & Retardation, Region XI (SW MS)  
Mental Health & Retardation, Region XIV (Singing River)  
Meridian Airport Authority  
Mid-Mississippi Development District  
Mississippi Gulf Coast Regional Convention & Visitors Bureau  
Municipal Energy Agency of Mississippi  
Natchez-Adams County Port Commission  
Natchez Convention Promotion Commission  
Natchez City of Waterworks  
Neshoba County Soil Conservation District  
New Albany Electric Department  
Newton County Soil Conservation District  
Northeast Mississippi Natural Gas District  
Northeast Mississippi Regional Water Supply District  
NRoute Transit Commission  
Okolona Electric Department  
Oxford Electric Department  
Oxford Tourism Council  
Panola County Soil & Water Conservation District  
Pearl River County Soil & Water Conservation District  
Philadelphia-Neshoba County Park Commission  
Pike County Soil Conservation District  
Pine Belt Region Solid Waste Management Authority

**Public Agencies Covered by State Retirement Annuity**  
(continued)

*Juristic Entities (continued)*

Prentiss County Soil & Water Conservation District	Tupelo Airport Authority
Rankin County Human Resource Agency	Tupelo Coliseum Comm District
Rankin-Hinds Pearl River Flood	Tupelo Water & Light Department
Reservoir Fire Protection District	Union County Soil & Water Conservation District
Ridgeland Tourism Commission	Vicksburg Bridge Commission
Rosedale-Bolivar County Port Commission	Vicksburg Convention & Visitors Bureau
Runnelstown Utility District	Walthall County Soil & Water Conservation District
Scenic Rivers Development Alliance	Warren County Soil & Water Conservation District
Sebastopol Natural Gas District	Wayne County Economic Development District
Simpson County Parks & Recreation	Wayne County Soil & Water Conservation District
South Madison County Fire Protection District	West Jackson County Utility District
South Mississippi Fair Commission	West Point Electric System
Starkville Electric Department	West Point Water Department
Stone County Soil & Water Conservation District	West Rankin Utility Authority
Stone County Utility Authority	Winston County Economic Development
Sunflower County Soil & Water Conservation District	Winston County Soil & Water Conservation District
Tallahatchie County Soil & Water Conservation District	Yalobusha Water & Sewer District
Tennessee-Tombigbee Waterway Development Authority	Yazoo City Public Service Commission
Tunica County Airport Commission	Yazoo County Convention & Visitors Bureau
Tunica County Healthcare	Yazoo County Soil & Water Conservation District
Tunica County Tourism Commission	Yazoo-Mississippi Delta Joint Water Management District
	Yazoo Recreation Commission

*Housing Authorities*

Attala County	Hattiesburg	MS Reg. V-Newton	Shelby
Baldwyn	Hazlehurst	MS Reg. VI-Jackson	South Delta Region
Bay Waveland	Holly Springs	MS Reg. VII-McComb	Starkville
Biloxi	Itta Bena	MS Reg. VIII-Gulfport	Summit
Booneville	Iuka	Mound Bayou	Tupelo
Canton	Jackson	Natchez	Vicksburg
Clarksdale	Laurel	Oxford	Water Valley
Columbus	Louisville	Picayune	Waynesboro
Corinth	McComb	Pontotoc	West Point
Forest	Meridian	Sardis	Winona
Greenwood	MS Reg. IV-Columbus	Senatobia	Yazoo City

*Local Hospitals*

Claiborne County Medical Center	Jefferson County	South Sunflower County
Field Memorial Community	Magnolia Regional Health Center	Tippah County
Franklin County Memorial	North Sunflower Medical Center	

*Local Libraries*

Amory Municipal	Harrison County	Neshoba County Public
Benton County	Hattiesburg-Petal-Forrest County	Northeast Regional
Bolivar County	Humphreys County	Noxubee County
Carnegie Public	Jackson-George Regional	Oktibbeha County
Carroll County	Jackson-Hinds	Pearl River County
Central Mississippi Regional	Jennie Stephens Smith	Pike-Amite-Walthall County
Choctaw County	Judge George Armstrong	Pine Forest Regional
Columbus-Lowndes Public	Kemper-Newton County Regional	Sharkey-Issaquena County
Copiah-Jefferson Regional	Lamar County	South Mississippi Regional
Covington County	Laurel-Jones County	Sunflower County
Dixie Regional	Lee-Itawamba County	Tallahatchie County
East Mississippi Regional	Lincoln-Lawrence-Franklin Madison	Tombigbee Regional
Elizabeth Jones	County-Canton Public Marks-	Washington County
Evans Memorial	Quitman County	Waynesboro-Wayne County
First Regional	Marshall County	Wilkinson County
Greenwood-Leflore Public	Meridian-Lauderdale County	Yalobusha County
Hancock County	Mid-Mississippi Regional	Yazoo Library Association
Harriette Person Memorial		



## **PUBLIC EMPLOYEES' RETIREMENT SYSTEM OF MISSISSIPPI**

429 Mississippi Street | Jackson, MS | 39201-1005

**[WWW.PERS.MS.GOV](http://WWW.PERS.MS.GOV)**