A Living and Lasting Legacy

PERS of MISSISSIPPI

2019 COMPREHENSIVE ANNUAL FINANCIAL REPORT

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

2019 Comprehensive Annual 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

PERS
of MISSISSIPPI

PASSING THE TORCH

Every day in Mississippi, retiring public workers pass the torch to newer generations to carry on the legacy of dedication to the state's people.

The Public Employees' Retirement System of Mississippi (PERS) understands the importance of legacy, especially one meant to continue living on for and through the people it serves.

Since established in 1952, PERS has built a history of performance and purpose. We have served and provided benefits for generations of members. We are sustained by unity, sharing risks and funding responsibility among members, retirees, employers, and the state as a whole. And, since day one, we have been forward facing, lighting the path for those we serve and for those who will follow.

This vigilance to keep the fires burning on providing benefits for life to Mississippi's retired public workers means PERS will also continue to serve the state as an economic driver through retiree spending, as a recruitment tool for a quality public workforce, and in helping our retirees maintain financial self-sufficiency as they grow older.

We are grateful, honored, and proud to carry this torch for Mississippi and to ensure this living and lasting legacy continues for decades to come.

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Providing Benefits for Life

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

December 17, 2019

Dear Board Members:

It is my pleasure to present the 2019 *Comprehensive Annual Financial Report* (CAFR) of the Public Employees' Retirement System (PERS). 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 the many others who make up the membership of our System.

This CAFR is a presentation of the financial results of the System as of June 30, 2019. We believe this information is useful for transparency and perspective over the long term. We trust you and other members will find this CAFR 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, 2019, the System's defined benefit plans served a total of 225,477 members and 110,437 retirees and beneficiaries. There are 873 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 $2.8 billion. Employers contributed $1.1 billion during the fiscal year, while members of the System contributed a total of $584 million. As of June 30, 2019, net position restricted for pension benefits totaled $28.7 billion.

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

Public Employees' Retirement System of Mississippi
429 Mississippi Street, Jackson, MS 39201-1005 601.359.3589 800.444.PERS www.pers.ms.gov

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 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 Comprehensive Annual 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, with approval of the Mississippi Department of Finance and Administration. A more detailed discussion of the budgetary process is presented in the Financial section of this CAFR on page 34.

FINANCIAL INFORMATION

Our staff issues a CAFR 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 2019 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 CAFR 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 Department that provides reports to the Board of Trustees. The Internal Audit Department makes recommendations for improvements in controls and operating efficiency. Management's Discussion and Analysis (MD&A) immediately follows the Independent Auditor's 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. The System's asset allocation policy is tactically balanced to provide an expected level of return while incurring minimal 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 6.87 percent rate of return on investments measured on June 30, 2019.

Callan LLC is employed by the Board of Trustees as the System's investment consultant. Services include working with PERS on selection and monitoring performance results of portfolio managers in accordance with the System's investment policy. Services also 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 policy is based on a signal light approach with green signifying the metric passes; yellow identifying the metric passes, but a negative experience could lead to concern; and red, the metric fails. Funded ratio, cash flow as a percentage of assets, and the actuarially determined contribution ratio (ADC/FCR) are metrics used within the policy.

Based on the actuarial experience study for the four years ending June 30, 2018, received in the spring of 2019, the Board approved changes to certain actuarial assumptions for use in the annual valuation. While discussed more thoroughly in the Actuarial section of the CAFR, those changes include, but are not limited to, a change to recently published mortality tables that more closely match the System's experience and a change in the inflation rate from 3.0 percent to 2.75 percent.

Also, beginning with the year ending June 30, 2019, the valuation report will be finalized and approved by the Board at the December Board meeting. As a result, total pension liabilities for accounting purposes will be based on the prior actuarial valuation (June 30, 2018), which is rolled forward to the measurement date of June 30, 2019. 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.

MAJOR INITIATIVES

In fiscal year 2020, the System is undertaking a benchmarking initiative in the areas of investment management and system administration. This effort will require significant data analysis to determine certain operating and performance metrics that will then be benchmarked against those of other public pension funds of similar size. The end result will be either confirmation of operating processes associated costs or identification of areas in need of additional resources or improvement.

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, 2018. 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 comprehensive annual 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 32 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, 2018. 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 16 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 2019 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.

The Public Employees' Retirement System received the Certificate of Transparency Award from the National Conference on Public Employee Retirement Systems (NCPERS). This certificate was awarded in recognition of the System's participation in the NCPERS Retirement Systems Study, which seeks to further open disclosure of data collection and encourage the public's understanding of retirement systems.

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 their 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. 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 in our enduring commitment to serve the members and retirees of the Public Employees' Retirement System. I am humbled and honored to serve as your executive director, and I look forward to working together in the future.

Respectfully submitted,

H. Ray Higgins, Jr.
Executive Director

Organizational Chart

BOARD OF TRUSTEES

EXECUTIVE SERVICES

H. Ray Higgins, Jr.
Executive Director

POLICY ADVISOR

Davetta Lee
Council & Policy Advisor

LEGAL

Martin Millette
Special Assistant, Office of the Attorney General

COMMUNICATIONS

Shelley Powers
Communications Director

INVESTMENTS

Andrew T. Hoeniges
CFA
Interim-Chief Investment Officer

MEMBER & EMPLOYER SERVICES

Kenny Grissett
CIA, CIDA, CGAP
Deputy Administrator, Office of Member & Employer Services

BENEFIT SERVICES

Shirley Sessoms
CPM
Deputy Administrator, Office of Benefit Services

ADMINISTRATIVE SERVICES

Terri Hudson
CPA, CIA
Deputy Administrator, Office of Administrative Services

2019 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.

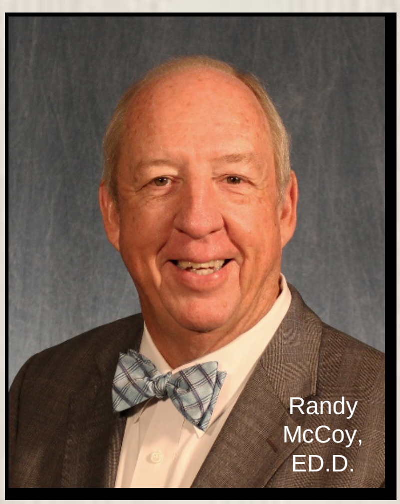
CHAIR Kelly Breland *Elected by State Employees*
Term of Service: January 2019 - December 2024

VICE CHAIR Brian Rutledge *Elected by Institutions of Higher Learning Employees*
Term of Service: January 2016 - December 2022

Bill Benson *Elected by County Employees*
Term of Service: January 2016 - December 2021

Edward Lee Childress, ED.D. *Elected by Public School and Community/Junior College Employees*
Term of Service: May 2016 - April 2022

2019 Board of Trustees (continued)



Outside Professional Services

ACTUARY
Cavanaugh Macdonald Consulting, LLC

AUDITOR
Eide Bailly LLP

CUSTODIAN INVESTMENT FUNDS
Bank of New York Mellon

FUNDS EVALUATION SERVICES & ASSET ALLOCATION/INVESTMENT POLICY STUDY
Callan Associates, Inc.

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
Longview Partners Ltd.
Marathon Asset Management, LLP
Mellon Investments Corporation
Mondrian Investment Partners, Inc.
Northern Trust Global Investment
Principal Global Investors
Riverbridge Partners, LLC
Wedgewood Partners, Inc.
Wellington Management Company, LLP

DEBT MANAGERS
AllianceBernstein, LP
Loomis Sayles & Company, LP
Northern Trust Global Investment
Manulife Asset Management
Pacific Investment Management Company
Prudential Investment Management, Inc.
Wellington Management Company, LLP

PRIVATE EQUITY MANAGERS
GCM Grosvenor Diversified Partners, LP
Pathway Capital Management, PL

REAL ESTATE MANAGERS
AEW Capital Management, LP
Angelo, Gordon & Company
CenterSquare Investment Management
Cohen & Steers Capital Management, Inc.
Hancock Natural Resource Group
Heitman, LLC
Invesco
J.P. Morgan Investment Management, Inc.
Principal Global Investors, LLC
T.A. Associates Realty
UBS Realty Investors, LLC
Westbrook Partners

LEGAL COUNSEL
Office of the Attorney General
Martin Millette, Special Assistant

Additional information on the above-mentioned 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 Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2018

Christopher P. Morrill

Executive Director/CEO

Public Pension Coordinating Council

Public Pension Standards Award
For Funding and Administration
2019

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)

Alan H. Winkle

Alan H. Winkle Program
Administrator

LEGACY

Mississippi's public workforce leaves a lasting legacy at retirement

Financial

EideBailly.

CPAs & BUSINESS ADVISORS

Independent Auditor's Report

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

Report on the Financial Statements
We have audited the accompanying financial statements of the Public Employees' Retirement System of Mississippi (the System), which comprise the statement of fiduciary net position as of June 30, 2019, and the related statement of changes in fiduciary net position, for the year then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements
Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes 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.

Auditor's Responsibility
Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements 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 entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective statement of the fiduciary net position of the Public Employees' Retirement System of Mississippi, as of June 30, 2019, and the respective statement of changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Correction of Error

As discussed in Note 9 to the financial statements, certain errors resulting in understatements of amounts previously reported for net investment income and ending net position as of June 30, 2018, were discovered by management of the System during the current year. Accordingly, the System has restated the previously reported net position to account for this error. Our opinion is not modified with respect to this matter.

Other Matters

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, 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.

Other 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 as a whole. The introductory, investment, actuarial, statistical and supplementary information are presented for purposes of additional analysis and are not a required part of the financial statements.

The additional supplementary information accompanying financial information including the Schedule of Administrative Expenses and Depreciation, Schedule of Managers' Fees, Investment Global Out-of-Pocket Fees, and Professional Service Fees, Schedule of Investments Due to MRS from PERS and Schedule of Statement of Changes in Assets and Liabilities – Agency Fund are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such 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.

The introductory, investment, actuarial and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 27, 2019, 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. That report will be issued separately under its own cover. 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 System's internal control over financial reporting and compliance.

Eide Bailly LLP

Boise, Idaho
November 27, 2019

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, 2019. 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 *Comprehensive Annual 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 five funds, including four defined benefit pension plans: the Public Employees' Retirement System of Mississippi (PERS), the Mississippi Highway Safety Patrol Retirement System (MHSPRS), the Municipal Retirement Systems (MRS) and the Supplemental Legislative Retirement Plan (SLRP). The remaining fund is the Flexible Benefits Cafeteria Plan (FBCP), an agency fund. The System's funds are defined as pension (and other employee benefit) trust funds, which are fiduciary in nature. 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, 2019. 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, 2019, 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, MRS and SLRP pension trust funds, as well as an agency fund, the FBCP. 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, 2019. 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 for each fund type, 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 regarding GASB Statement 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*.
- Note 9 provides information about the restatement of beginning net position restricted for pension benefits.

3. REQUIRED SUPPLEMENTARY INFORMATION

The required supplementary information consists of the schedule of changes in the net pension liability and related ratios, schedules of employer contributions, the 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 schedules of proportionate share of the net OPEB liability and 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 balances due to individual municipal retirement plans. Also included is the statement of changes for the FBCP.

Financial Highlights

The combined net position of the defined benefit plans administered by the System increased by $446.0 million, or 1.6 percent. This increase was primarily the result of investment performance for 2019.

The 2019 rate of return on investments for the defined benefit plans was 6.87 percent, compared with fiscal year 2018's rate of return of 9.48 percent. Domestic, international, and global equity portfolios returned 8.5 percent, 1.0 percent, and 5.7 percent for the year, respectively, while the return on debt securities was 8.7 percent. The rate of return on real estate investments was 7.2 percent, and the return on the private equity portfolio was 16.1 percent.

The PERS, MHSPRS and SLRP defined benefit plans administered by the System had a Net Pension Liability of $17.6 billion, $175.8 million and $3.5 million, respectively. The ratio of fiduciary net position to total pension liability was 61.6 percent, 67.6 percent and 84.3 percent, respectively.

Net Position—Defined Benefit Plans
June 30, 2019

(in thousands)

	PERS		MHSPRS		MRS	
Assets:	2019	2018	2019	2018	2019	2018
Cash, Cash Equivalents, & Receivables	$1,927,378	$1,344,483	$24,091	$19,244	$10,109	$8,483
Investments at Fair Value	27,701,428	27,752,380	360,717	355,406	145,948	154,394
Invested Securities Lending Collateral	3,353,600	3,467,997	43,669	40,382	17,669	17,542
Capital Assets	18,146	22,455	-	-	-	-
Total Assets	**33,000,552**	**32,587,315**	**428,477**	**415,032**	**173,726**	**$180,419**
Deferred Outflows of Resources	**55**	-	-	-	-	-
Liabilities:						
Investment Accounts & Other Payables	$1,441,842	$1,428,953	$18,662	$18,194	$7,602	$7,931
Securities Lending Liability	3,352,088	3,395,172	43,650	39,533	17,661	17,174
Total Liabilities	**4,793,930**	**4,824,125**	**62,312**	**57,727**	**25,263**	**25,105**
Deferred Inflows of Resources	**75**	-	-	-	-	-
Restricted for Pension Benefits	**$28,206,602**	**$27,763,190**	**$366,165**	**$357,305**	**$148,463**	**$155,314**

	SLRP		Total Defined Benefit Pension Plans		Total Percent Change
Assets:	2019	2018	2019	2018	
Cash, Cash Equivalents, & Receivables	$1,209	$798	$1,962,787	$1,373,008	42.96%
Investments at Fair Value	18,350	18,123	28,226,443	28,280,303	(0.19)
Invested Securities Lending Collateral	2,222	2,059	3,417,160	3,527,980	(3.14)
Capital Assets	-	-	18,146	22,455	(19.19)
Total Assets	**21,781**	**20,980**	**33,624,536**	**33,203,746**	**1.27**
Deferred Outflows of Resources	-	-	**55**	-	-
Liabilities:					
Investment Accounts & Other Payables	951	928	$1,469,057	$1,456,006	0.90
Securities Lending Liability	2,221	2,016	3,415,620	3,453,895	(1.11)
Total Liabilities	**3,172**	**2,944**	**4,884,677**	**4,909,901**	**(0.51)**
Deferred Inflows of Resources	-	-	**75**	-	-
Restricted for Pension Benefits	**$18,609**	**$18,036**	**$28,739,839**	**$28,293,845**	**1.58%**

Changes in Net Position—Defined Benefit Plans
June 30, 2019

(in thousands)

	PERS		MHSPRS		MRS	
	2019	2018	2019	2018	2019	2018
Additions:						
Contributions	$1,619,049	$1,588,970	$21,715	$17,399	$17,129	$17,635
Investment Income	1,701,321	2,385,913	22,144	30,855	9,297	13,066
Other Additions	38	51	-	-	-	-
Total Additions:	**3,320,408**	**3,974,934**	**43,859**	**48,254**	**26,426**	**30,701**
Deductions:						
Pension Benefits	2,747,397	2,609,415	34,671	32,315	32,935	33,604
Refunds to Terminated Employees	108,042	124,306	16	103	-	-
Administrative Expenses	21,557	21,120	312	250	342	353
Total Deductions	**2,876,996**	**2,754,841**	**34,999**	**32,668**	**33,277**	**33,957**
Increase/(Decrease) in Net Position	**$443,412**	**$1,220,093**	**$8,860**	**$15,586**	**$(6,851)**	**$(3,256)**

	SLRP		Total Defined Benefit Pension Plans		Total Percent Change
	2019	2018	2019	2018	
Additions:					
Contributions	$739	$720	$1,658,632	$1,624,724	2.09%
Investment Income	1,287	1,412	1,734,049	2,431,246	(28.68)
Other Additions	-	-	38	51	(25.49)
Total Additions:	**2,026**	**2,132**	**3,392,719**	**4,056,021**	**(16.35)**
Deductions:					
Pension Benefits	1,442	1,410	$2,816,445	$2,676,744	5.22
Refunds to Terminated Employees	-	18	108,058	124,427	(13.16)
Administrative Expenses	11	10	22,222	21,733	2.25
Total Deductions	**1,453**	**1,438**	**2,946,725**	**2,822,904**	**4.39**
Increase/(Decrease) in Net Position	**$573**	**$694**	**$445,994**	**$1,233,117**	**(63.83)%**

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 by earnings on investments. Net position restricted for pension benefits at June 30, 2019, amounted to $28.2 billion, an increase of $443 million (1.6 percent) compared to June 30, 2018.

Additions to PERS' net position restricted for benefits include employer and member contributions and investment income. For the 2019 fiscal year, employer and member contributions were $1.6 billion and were consistent with the prior year. PERS recognized net investment income of $1.7 billion for the 2019 fiscal year, compared with net investment income of $2.4 billion for the 2018 fiscal year.

Deductions from PERS' net position restricted for pension benefits primarily include retirement and beneficiary benefits, as well as administrative expenses. For the 2019 fiscal year, benefit payments amounted to $2.7 billion, an increase of $138 million (5.3 percent) over the 2018 fiscal year. The increase in benefit payments was due to an increase in the number of benefit recipients. For the cost of administering the System for fiscal year 2019, which includes depreciation and OPEB expense, PERS' portion amounted to $21.6 million, an increase of $437 thousand.

At June 30, 2019, PERS employers' total pension liability was $45.8 billion. The plan fiduciary net position was $28.2 billion, resulting in a net pension liability of $17.6 billion. The plan fiduciary net position as a percentage of the total pension liability was 61.6 percent 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, 2019, amounted to $366.2 million, an increase of $8.9 million (2.5 percent) from $357.3 million at June 30, 2018.

Additions to MHSPRS' net position restricted for pension benefits include employer and member contributions and investment income. For the 2019 fiscal year, employer and member contributions were $21.7 million, an increase of $4.3 million, (24.8 percent) over 2018. This increase in contributions is primarily due to an increase in employer contribution rate to 49.08 percent from 37.0 percent beginning July 1, 2018. Motor vehicle fees of $3.1 million and driver's license reinstatement fees of $708 thousand were added to 2019 employer contributions. MHSPRS recognized net investment income of $22.1 million for the 2019 fiscal year compared with net investment income of $30.9 million for 2018.

Deductions from MHSPRS' net position restricted for pension benefits primarily include retirement and beneficiary benefits and administrative fees. For the 2019 fiscal year, benefit payments amounted to $34.7 million, an increase of $2.4 million (7.3 percent) over the 2018 fiscal year. Although the number of retirees remained relatively constant, some newly retired members had higher benefits than those who were deceased during the period. For the 2019 fiscal year, MHSPRS transferred $312 thousand to PERS to offset the cost of administration, an increase of $62 thousand (24.8 percent) over 2018.

At June 30, 2019, MHSPRS employers' total pension liability was $541.9 million. The plan fiduciary net position was $366.2 million, resulting in a net pension liability of $175.7 million. The plan fiduciary net position as a percentage of the total pension liability was 67.6 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 of which are closed to new members. Seventeen of these separate plans provide retirement benefits to municipal employees, fire fighters and police officers who were not already members of PERS and who were hired prior to July 1, 1976. Membership in the other two plans was extended until July 1, 1987. All active employees have retired from 17 of the municipal plans. The financial positions of MRS plans have been 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 and member contributions by earnings on investments. The aggregated plan's net position restricted for pension benefits at June 30, 2019, amounted to $148.5 million, a decrease of $6.9 million (4.4 percent) from $155.3 million at June 30, 2018.

Additions to MRS' net position restricted for pension benefits consist of employer and member contributions and investment income. For the 2019 fiscal year, employer and member contributions of $17.1 million were $506 thousand (2.9 percent) less than contributions of $17.6 million received in fiscal year 2018. MRS employer contributions are funded through taxes levied on assessed properties. In a closed plan, the number of active members decreases as they retire and the number of retirees decreases due to mortality. These factors lead to both lower total contributions and lower total benefits. MRS recognized net investment income of $9.3 million for the 2019 fiscal year compared with net investment income of $13.1 million for the 2018 fiscal year.

Deductions from MRS' net position restricted for pension benefits include retirement and beneficiary benefits and administrative fees. For the 2019 fiscal year, benefit payments amounted to $32.9 million, a decrease of $669 thousand (2.0 percent) from the 2018 fiscal year. For the 2019 fiscal year, MRS transferred $342 thousand to PERS to offset the cost of administration, compared to $353 thousand transferred for fiscal year 2018.

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.

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, 2019, amounted to $18.6 million, an increase of $573 thousand (3.2 percent) from June 30, 2018.

Additions to SLRP's net position restricted for pension benefits include employer and member contributions and investment income. For the 2019 fiscal year, employer and member contributions were $739 thousand, an increase of $19 thousand (2.6 percent) from those of fiscal year 2018. SLRP recognized net investment income of $1.3 million for the 2019 fiscal year, compared with a net investment income of $1.4 million for the 2018 fiscal year.

Deductions from SLRP's net position restricted for pension benefits primarily include retirement and beneficiary benefits, as well as administrative fees. For the 2019 fiscal year, benefit payments amounted to $1.4 million and were consistent with the prior year. For the 2019 fiscal year, SLRP transferred $11 thousand to PERS to offset the cost of administration, compared to $10 thousand transferred for fiscal year 2018.

At June 30, 2019, the SLRP employers' total pension liability was $22.1 million. The plan fiduciary net position was $18.6 million, resulting in a net pension liability of $3.5 million. The plan fiduciary net position as a percentage of the total pension liability was 84.3 percent using GASB Statement No. 67 measurements.

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. Each plan's allocated share of each type of investment in the 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. Therefore, the rate of return on investments is approximately the same for each of the plans.

TOTAL SYSTEM INVESTMENTS

At June 30, 2019, the System's total investments, before securities lending activities, approximated $28.2 billion, a decrease of $54 million from fiscal year 2018. The combined investment portfolio experienced a return of 6.87 percent compared with a median large public plan, which is Callan Associates Public Funds > $10 billion median, return of 6.6 percent. Investment results over time compared with the System's benchmarks are presented on page 73 in the Investment Section.

SHORT-TERM SECURITIES

At June 30, 2019, the System held $414 million in short-term investments, which is a decrease of $446 million from 2018 holdings. Short-term investments returned 2.1 percent for the year.

EQUITY SECURITIES

At June 30, 2019, the System held $17.0 billion in domestic, international and global equity securities, an increase of $54 million from fiscal year 2018. Domestic, international and global equity securities had returns of 8.5 percent, 1.0 percent and 5.7 percent, respectively. The System's custom benchmark return for domestic equity securities was 7.8 percent, while the international securities custom benchmark returned 1.4 percent. The global securities custom benchmark used by the System posted a return of 4.6 percent.

DEBT SECURITIES

At June 30, 2019, the System held $5.6 billion in debt securities, approximately the same as fiscal year 2018. Debt securities returned 8.7 percent compared with the System's custom benchmark return of 8.3 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, 2019, combined holdings totaled $2.9 billion, an increase of $64 million over 2018. The System experienced a return of 7.2 percent on total real estate holdings and exceeded the benchmark return of 6.5 percent for the year ended June 30, 2019.

PRIVATE EQUITY

The private equity asset class, totaling $2.3 billion, posted a return of 16.1 percent. Private equities are investments in operating companies, typically accessed through limited partnerships, which 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 13.7 percent. The System began investing in private equities in fiscal year 2008.

SECURITIES LENDING

The System earns additional investment 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 and generally use the borrowed securities to cover short sales and failed trades for their clients. BNYM invests cash collateral in debt securities to earn interest. For the 2019 fiscal year, net securities lending income to the System amounted to $15.5 million, a decrease of $1.6 million from fiscal year 2018.

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

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Statement of Fiduciary Net Position
For the Year ended June 30, 2019

[in thousands]

ASSETS	PERS	MHSPRS	MRS	SLRP	Total Defined Benefit Pension Plan	Agency Funds	Total
Cash & Cash Equivalents	$768,839	$10,001	$4,046	$509	$783,395	$22	$783,417
Receivables:							
Employer	65,127	336	486	-	65,949	-	65,949
Member	36,490	-	1	-	36,491	-	36,491
Investment Sales & Other	952,710	12,406	5,019	631	970,766	-	970,766
Interest & Dividends	103,520	1,348	545	69	105,482	-	105,482
Other Receivables	692	-	12	-	704	-	704
Total Receivables	**1,158,539**	**14,090**	**6,063**	**700**	**1,179,392**	**-**	**1,179,392**
Investments, at Fair Value:							
Short-term Investments	405,863	5,285	2,138	269	413,555	-	413,555
Long-term Debt Securities	5,517,893	71,852	29,071	3,655	5,622,471	-	5,622,471
Equity Securities	16,658,341	216,918	87,767	11,035	16,974,061	-	16,974,061
Private Equity	2,280,045	29,690	12,013	1,510	2,323,258	-	2,323,258
Real Estate Investments	2,839,286	36,972	14,959	1,881	2,893,098	-	2,893,098
Total Investments before Lending Activities	**27,701,428**	**360,717**	**145,948**	**18,350**	**28,226,443**	**-**	**28,226,443**
Securities Lending:							
Short-term Investments	989,884	12,890	5,215	656	1,008,645	-	1,008,645
Long-term Debt Securities	2,363,716	30,779	12,454	1,566	2,408,515	-	2,408,515
Total Securities Lending	**3,353,600**	**43,669**	**17,669**	**2,222**	**3,417,160**	**-**	**3,417,160**
Total Investments	**31,055,028**	**404,386**	**163,617**	**20,572**	**31,643,603**	**-**	**31,643,603**
Capital Assets, at Cost, Net of Accumulated Depreciation	18,146	-	-	-	18,146	-	18,146
Total Assets	**33,000,552**	**428,477**	**173,726**	**21,781**	**33,624,536**	**22**	**33,624,558**
DEFERRED OUTFLOWS OF RESOURCES							
Postemployment Benefits	55	-	-	-	55	-	55
LIABILITIES							
Investment Purchases and Other	1,431,425	18,540	7,552	945	1,458,462	-	1,458,462
Accounts Payable & Accrued Expenses	9,404	122	50	6	9,582	15	9,597
Obligations Under Securities Lending	3,352,088	43,650	17,661	2,221	3,415,620	-	3,415,620
Net Other Postemployment Benefits	1,013	-	-	-	1,013	-	1,013
Funds Held for Others	-	-	-	-	-	7	7
Total Liabilities	**4,793,930**	**62,312**	**25,263**	**3,172**	**4,884,677**	**22**	**4,884,699**
DEFERRED INFLOWS OF RESOURCES							
Other Postemployment Benefits	75	-	-	-	75	-	75
NET POSITION RESTRICTED FOR PENSION BENEFITS	**$28,206,602**	**$366,165**	**$148,463**	**$18,609**	**$28,739,839**	**$-**	**$28,739,839**

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, 2019

[in thousands]

	PERS	MHSPRS	MRS	SLRP	Total Defined Benefit Pension Plans
ADDITIONS					
Contributions:					
Employer	$1,038,108	$19,375	$17,114	$525	$1,075,122
Member	580,941	2,340	15	214	583,510
Total Contributions	**1,619,049**	**21,715**	**17,129**	**739**	**1,658,632**
Net Investment Income:					
Net Appreciation in Fair Value	1,195,051	15,793	6,613	907	1,218,364
Interest & Dividends	593,477	7,678	3,224	446	604,825
Total Before Lending Activities	**1,788,528**	**23,471**	**9,837**	**1,353**	**1,823,189**
Securities Lending:					
Net Depreciation in Fair Value	(374)	(5)	(2)	-	(381)
Interest	91,860	1,200	503	70	93,633
Program Fees	(76,246)	(995)	(418)	(58)	(77,717)
Net Income From Securities Lending	**15,240**	**200**	**83**	**12**	**15,535**
Managers' Fees & Trading Costs	(102,447)	(1,527)	(623)	(78)	(104,675)
Net Investment Income	**1,701,321**	**22,144**	**9,297**	**1,287**	**1,734,049**
Other Additions	38	-	-	-	38
Total Additions	**3,320,408**	**43,859**	**26,426**	**2,026**	**3,392,719**
DEDUCTIONS					
Pension Benefits	2,747,397	34,671	32,935	1,442	2,816,445
Refunds to Terminated Employees	108,042	16	-	-	108,058
Totals	**2,855,439**	**34,687**	**32,935**	**1,442**	**2,924,503**
Administrative Expenses	21,557	312	342	11	22,222
Total Deductions	**2,876,996**	**34,999**	**33,277**	**1,453**	**2,946,725**
Net Increase/(Decrease)	**443,412**	**8,860**	**(6,851)**	**573**	**445,994**
NET POSITION RESTRICTED FOR PENSION BENEFITS					
Beginning, as Restated	**27,763,190**	**357,305**	**155,314**	**18,036**	**28,293,845**
Ending	**$28,206,602**	**$366,165**	**$148,463**	**$18,609**	**$28,739,839**

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

Note 1: Plan Description

GENERAL

The System is the administrator of four defined benefit trust funds and one agency fund, 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
MRS*	Agent multiple-employer defined benefit pension plan
SLRP	Single-employer defined benefit pension plan
FBCP	Agency

** 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 is considered a component unit of the state of Mississippi reporting entity in accordance with Governmental Accounting Standards Board (GASB) Statement No. 14, *The Financial Reporting Entity,* as amended by GASB Statements No. 39 and No. 61.

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 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.

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 with 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, 2019, the total COLA payments for PERS were $699,947,000.

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, 2019, the total COLA payments for MHSPRS were $10,504,000.

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.

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 are 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 retire 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. Benefits vest upon reaching 20 years of membership service. MRS plans also provide certain death and disability benefits. Members who terminate employment from all covered employers and are not eligible to receive monthly retirement benefits may request a full refund of employee contributions. Members covered by MRS do not receive interest on their accumulated contributions. Upon withdrawal of contributions, a member forfeits service credit represented by those contributions.

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, 2019, the total COLAs for MRS plans were $5,500,000.

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.

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, 2019, the total COLAs for SLRP were $337,000.

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.

FBCP - Miss. Code Ann. § 25-17-3 (1972, as amended) authorizes any state agency to adopt a benefit plan that meets the requirements of a cafeteria plan as defined in § 1-25 et seq. of the Internal Revenue Code of 1954, and regulations thereunder, for the benefit of eligible employees and their dependents. The FBCP was established as an agency fund to account for transactions related to those employees of the System who participate in the cafeteria plan.

Summary of Participating Employers and Members

	PERS	MHSPRS*	MRS	SLRP**	TOTAL
Employers:					
State Agencies	105	1	-	1	107
State Universities	9	-	-	-	9
Public Schools	140	-	-	-	140
Community/Junior Colleges	15	-	-	-	15
Counties	82	-	-	-	82
Municipalities	242	-	17	-	259
Other Political Subdivisions	261	-	-	-	261
Total Employers	**854**	**1**	**17**	**1**	**873**
Members:					
Active Vested	77,505	374	2	108	77,989
Active Non-vested	73,146	148	-	62	73,356
Total Active Members	**150,651**	**522**	**2**	**170**	**151,345**
Inactive Vested	16,386	44	-	35	16,465
Inactive Non-vested	57,631	17	-	19	57,667
Total Inactive Members	**74,017**	**61**	**-**	**54**	**74,132**
Retirees & Beneficiaries	107,844	734	1,644	215	110,437
Total Retired/Inactive Members	**181,861**	**795**	**1,644**	**269**	**184,569**
Total Members	**332,512**	**1,317**	**1,646**	**439**	**335,914**
Active Members by Employer:					
State Agencies	27,259	522	-	170	27,951
State Universities	17,878	-	-	-	17,878
Public Schools	60,792	-	-	-	60,792
Community/Junior Colleges	6,117	-	-	-	6,117
Counties	13,765	-	-	-	13,765
Municipalities	16,115	-	2	-	16,117
Other Political Subdivisions	8,725	-	-	-	8,725
Total Active Members	**150,651**	**522**	**2**	**170**	**151,345**

** MHSPRS has two reporting entities.*

*** SLRP has five reporting entities.*

Note 2: Summary of Significant Accounting Policies

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

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 US 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.

OTHER POSTEMPLOYMENT BENEFITS (OPEB)

During the fiscal year ended June 30, 2019, PERS implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other than Pensions.* 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. The System's operating budget request for the upcoming fiscal year is prepared in conjunction with a review of the strategic long-range plan. 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, with approval of the Mississippi Department of Finance and Administration.

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, 2019, deposits in commercial cash management accounts in the State totaled $2,510,000, which were covered by FDIC.

The Board 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, 2019, the System's custodial bank held $780,885,000 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 US 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, 2019, the annual money-weighted rate of return on the System's investments was 6.27 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 which 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 three 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 five 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;

- » 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 2019:

Asset Class	Target Allocation
Domestic Equities	27.0%
International Equities	22.0
Global Equities	12.0
Total of All Equities	61.0%
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, 2019 [in thousands]:

	Amounts	Level 1	Level 2	Level 3
Equity Securities:				
Basic Materials	$660,186	$660,186	$-	$-
Communications	2,189,275	2,189,275	-	-
Consumer, Cyclical	1,665,308	1,665,308	-	-
Consumer, Non-cyclical	3,561,729	3,561,729	-	-
Diversified	40,215	40,215	-	-
Energy	799,534	799,534	-	-
Financial	3,833,986	3,833,986	-	-
Industrial	2,044,508	2,044,508	-	-
Technology	2,158,968	2,158,968	-	-
Utilities	388,464	388,464	-	-
Total Equity Securities	**17,342,173**	**17,342,173**	**-**	**-**
Debt Securities:				
Commercial Paper	202,959	-	202,959	-
Repurchase Agreements	764,731	-	764,731	-
US Government Agency Obligations	46,433	-	46,429	4
US Treasury Obligations	1,052,691	1,052,691	-	-
Collateralized Mortgage Obligations	640,331	-	630,650	9,681
Domestic Corporate Bonds	1,852,253	1,951	1,811,659	38,643
Non-Domestic Corporate Bonds	1,279,926	722	1,279,204	-
Mortgage Pass-throughs	770,335	-	770,335	-
State & Local Obligations	26,564	-	26,564	-
Asset-backed Securities	1,336,481	-	1,336,481	-
Yankee/Global Bonds	39,021	-	39,021	-
Sovereign Governments Debt	1,142,784	-	1,142,784	-
Total Debt Securities	**9,154,509**	**1,055,364**	**8,050,817**	**48,328**
Total Investments by Fair Value Level	**$26,496,682**	**$18,397,537**	**$8,050,817**	**$48,328**
Investments Measured at NAV:				
Total Real Estate*	2,524,986			
Private Equity Funds	2,323,258			
Total Investments Measured at NAV	**4,848,244**			
Total Investments Measured at Fair Value	**31,344,926**			
International Currency	298,677			
Total Investments**	**$31,643,603**			
Investments Derivative Instruments:				
Foreign Exchange Contracts (Liabilities)	1,022,494			
Total Investment Derivative Instruments	**$1,022,494**			

** REITS, exchange traded investments, are reported in equity securities for this presentation, REITS totaled $368.1 million.*

*** Total investments do not include obligations under securities lending totaling $3.4 million.*

As of June 30, 2019, 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.

Investment Measured at NAV [in thousands]:

	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Real Estate Funds:				
Core - Open End	$2,117,334	$-	Quarterly	45-90 days
Value Added - Closed End	316,435	420,646	N/A	10-12 years
Timber	91,217	-	Various*	Various*
Total Real Estate	2,524,986	420,646		
Private Equity Funds:				
Diversified	2,323,258	1,856,561	10-12 years	N/A
Total Private Equity	**2,323,258**	**1,856,561**		
Total Investments Measured at NAV	**$4,848,244**	**$2,277,207**		

** Based on partnership agreement terms.*

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, 2019, the System had the following outstanding investment commitments [in thousands]:

	Committed Capital	Capital Contributed Net of Recallable Distributions and Released Commitments	Unfunded Commitments
Real Estate	$1,100,000	$679,354	$420,646
Private Equity	4,450,000	2,593,439	1,856,561
Totals	**$5,550,000**	$3,272,793	**$2,277,207**

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, 2019, was as follows [in thousands]:

Investment Type	Aaa/AAA	Aa/AA	A/A	Baa/BBB	Ba/BB	B/B
Asset-Backed Securities	$1,211,561	$27,809	$38,711	$23,008	$5,077	$5,688
Collateralized Mortgage Obligations	309,957	217,836	24,804	24,190	15,482	4,554
Commercial Paper	-	167,950	35,009	-	-	-
Corporate Bonds	49,758	849,555	1,024,427	846,173	276,589	60,865
Mortgage Pass-Throughs	198	688,367	-	-	-	-
Repurchase Agreements	-	549,010	90,400	-	-	-
Sovereign Governments Debt	98,952	133,751	251,263	234,969	114,514	221,893
State & Local Obligations	695	15,166	6,630	3,114	209	-
US Government Agency Obligations	738	45,695	-	-	-	-
Yankee/Global Bonds	22,154	5,725	3,433	7,709	-	-
Totals*	**$1,694,013**	**$2,700,864**	**$1,474,677**	**$1,139,163**	**$411,871**	**$293,000**

Investment Type	Caa/CCC	Ca/CC	C/C	D/D	NR**	Total
Asset-Backed Securities	$1,258	$3	$15	$-	$23,351	$1,336,481
Collateralized Mortgage Obligations	4,892	224	-	-	38,392	640,331
Commercial Paper	-	-	-	-	-	202,959
Corporate Bonds	11,127	-	71	1,753	11,861	3,132,179
Mortgage Pass-Throughs	-	-	-	-	-	688,565
Repurchase Agreements	-	-	-	-	125,321	764,731
Sovereign Governments Debt	12,933	-	-	2,203	72,306	1,142,784
State & Local Obligations	-	-	-	-	750	26,564
US Government Agency Obligations	-	-	-	-	-	46,433
Yankee/Global Bonds	-	-	-	-	-	39,021
Totals*	**$30,210**	**$227**	**$86**	**$3,956**	**$271,981**	**$8,020,048**

**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	*$81,242*
US Treasury obligations	*971,449*
GNMA mortgage pass-throughs	*81,770*
TOTAL	*$1,134,461*

***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.

At June 30, 2019, $1.0 billion of securities on loan for non-cash collateral, which were held in the name of the lending agent, were exposed to custodial credit risk. Counterparty risk is mitigated by the cash and security collateral received.

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, 2019, the System had the following debt security investments and maturities:

Investment Type	Fair Value (in thousands)	Investment Maturities (in years)			
		Less Than 1	1-5	6-10	More Than 10
Asset-Backed Securities	$1, 336,481	$1,159,957	$89,782	$34,248	$52,494
Collateralized Mortgage Obligations	640,331	278,833	13,955	25,001	322,542
Commercial Paper	202,959	202,959	-	-	-
Corporate Bonds	3,132,179	725,994	1,604,616	429,410	372,159
Mortgage Pass-Throughs	770,335	-	2,995	15,072	752,268
Repurchase Agreements	764,731	764,731	-	-	-
Sovereign Governments Debt	1,142,784	13,492	310,475	487,031	331,786
State & Local Obligations	26,564	-	3,246	986	22,332
US Government Agency Obligations	46,433	31,460	3,266	440	11,267
US Treasury Obligations	1,052,691	94,584	316,108	291,130	350,869
Yankee/Global Bonds	39,021	-	24,065	7,026	7,930
Totals	**$9,154,509**	**$3,272,010**	**$2,368,508**	**$1,290,344**	**$2,223,647**

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 $1.3 billion in ABS that the System held at fiscal year end, $17.3 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, thus, a decline in the fair value of the CMO security. Rising interest rates may cause an increase in interest payments and, thus, an increase in the fair value of the security. The System held $640.3 million in CMOs at fiscal year end. Of this amount, $224.8 million were tranches that are highly sensitive to future changes in interest rates. CMO residuals are prohibited under the System's derivatives policy.

At June 30, 2019, the System had invested $770.3 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 in which the borrowers have the option of prepaying.

Interest-Only (IO) and Principal-Only (PO) strips are transactions that involve the separation of the interest and principal components of a security. They are highly sensitive to prepayments by mortgagors, which may result from a decline in interest rates. The System held IO strips valued at $33.5 million at fiscal year-end. The System's derivatives policy limits IO and PO strips to 3.0 percent of the investment portfolio.

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, 2019, was as follows (in thousands):

Currency	Cash & Equivalents	Equities & REITS	Debt Securities	Total Fair Value	Percent
Argentina Peso	$(212)	$-	$1,256	$1,044	0.02%
Australian Dollar	(6,331)	286,435	10,428	290,532	4.65
Brazil Real	5,126	116,905	2,664	124,695	2.00
Canadian Dollar	(41,659)	208,146	41,434	207,921	3.33
Chilean Peso	1,500	5,441	-	6,941	0.11
Chinese Yuan Renminbi	(8,654)	45,275	8,784	45,405	0.73
Colombian Peso	3,509	590	-	4,099	0.07
Czech Koruna	23	4,152	-	4,175	0.07
Danish Krone	(15,522)	102,220	18,460	105,158	1.69
Euro Currency Unit	(389,492)	1,489,635	366,283	1,466,426	23.51
Hong Kong Dollar	(8,401)	543,085	-	534,684	8.57
Hungarian Forint	(1,899)	19,095	1,968	19,164	0.31
Indian Rupee	145	125,509	-	125,654	2.01
Indonesian Rupiah	4,658	55,623	6,194	66,475	1.07
Israeli Shekel	(12,201)	25,081	5,575	18,455	0.30
Japanese Yen	(138,100)	1,072,601	151,161	1,085,662	17.40
Kenyan Shilling	-	1,111	-	1,111	0.02
Malaysian Ringgit	(11,584)	24,064	15,303	27,783	0.45
Mexican New Peso	(1,322)	53,255	15,851	67,784	1.09
New Taiwan Dollar	173	122,282	-	122,455	1.96
New Zealand Dollar	(1,351)	21,275	1,737	21,661	0.35
Norwegian Krone	1,570	29,859	-	31,429	0.50
Pakistan Rupee	-	4,225	-	4,225	0.07
Peruvian Nuevo Sol	(425)	-	6,008	5,583	0.09
Philippines Peso	3	7,480	-	7,483	0.12
Polish Zloty	13,371	21,261	1,394	36,026	0.58
Pound Sterling	(75,507)	800,549	79,038	804,080	12.89
Qatari Riyal	-	1,900	-	1,900	0.03
Romanian Leu	(22)	-	-	(22)	-
Russian Ruble (New)	10,825	374	8,248	19,447	0.31
Singapore Dollar	(10,427)	85,607	-	75,180	1.21
South African Rand	(2,499)	100,021	7,615	105,137	1.69
South Korean Won	8,966	256,507	-	265,473	4.25
Swedish Krona	(11,349)	139,896	14,823	143,370	2.30
Swiss Franc	6,556	303,772	-	310,328	4.97
Thailand Baht	12	49,920	-	49,932	0.80
Turkish Lira	-	25,992	-	25,992	0.42
UAE Dirham	22	1,510	-	1,532	0.02
Uruguayan Peso	-	-	2,760	2,760	0.04
Total	**$(680,498)**	**$6,150,653**	**$766,984**	**$6,237,139**	**100.00%**

Derivative Instruments - As of June 30, 2019, 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, 2019, 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 as of June 30, 2019 (in thousands):

		Changes in Fair Value		Fair Value at June 30, 2019	
Currency	Notional Units	Classification	Amount	Classification	Amount
Argentina Peso	$(11,447)	Investment Income	$-	Investment	$-
Australian Dollar	(9,750)	Investment Income	(125)	Investment	125
Brazil Real	21,110	Investment Income	(370)	Investment	370
Canadian Dollar	(54,924)	Investment Income	(1,366)	Investment	1,366
Chilean Peso	1,017,838	Investment Income	34	Investment	(34)
Chinese Yuan Renminbi	(60,986)	Investment Income	18	Investment	(18)
Colombian Peso	11,322,991	Investment Income	160	Investment	(160)
Czech Koruna	53	Investment Income	(52)	Investment	52
Danish Krone	(120,995)	Investment Income	1	Investment	(1)
Euro Currency Unit	(347,209)	Investment Income	(4,551)	Investment	4,551
Hong Kong Dollar	(73,654)	Investment Income	(14)	Investment	14
Hungarian Forint	(546,429)	Investment Income	(70)	Investment	70
Indian Rupee	3,510	Investment Income	173	Investment	(173)
Indonesian Rupiah	66,225,631	Investment Income	63	Investment	(63)
Israeli Shekel	(43,648)	Investment Income	22	Investment	(22)
Japanese Yen	(15,667,776)	Investment Income	466	Investment	(466)
Malaysian Ringgit	(50,008)	Investment Income	23	Investment	(23)
Mexican Peso	(27,396)	Investment Income	(55)	Investment	55
New Taiwan Dollar	(111)	Investment Income	(241)	Investment	241
New Zealand Dollar	(2,155)	Investment Income	43	Investment	(43)
Norwegian Krone	10,472	Investment Income	23	Investment	(23)
Peruvian Sol	(1,522)	Investment Income	(5)	Investment	5
Polish Zloty	46,542	Investment Income	64	Investment	(64)
Pound Sterling	(60,427)	Investment Income	(292)	Investment	292
Romanian Leu	(93)	Investment Income	28	Investment	(28)
Russian Ruble	668,149	Investment Income	318	Investment	(318)
Singapore Dollar	(18,764)	Investment Income	(128)	Investment	128
South African Rand	(45,563)	Investment Income	14	Investment	(14)
South Korean Won	8,383,039	Investment Income	(31)	Investment	31
Swedish Krona	(292,664)	Investment Income	(753)	Investment	753
Swiss Franc	(3,427)	Investment Income	35	Investment	(35)

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, 2019, are 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. For cash collateralized loans, borrowers are required to provide collateral amounts of 102.00 percent on domestic securities and international securities denominated in the same currency of the loaned security. International securities denominated in a currency other than the currency of the loaned security require 105.00 percent collateral. In the event the collateral falls below 100.00 percent on domestic securities, 102.00 on international same-currency, or 105.00 percent on cross-currency transactions, the borrower is required to provide additional collateral by the end of the next business day.

Loans of securities for non-cash collateral require 110.0 percent collateral from the borrowers. The System cannot pledge, lend, or sell the securities received as collateral unless the borrower defaults. Authorized non-cash securities collateral includes US and non-US government debt obligations and securities, supranational debt obligations, domestic and non-domestic equity securities listed on specified indices, domestic and non-domestic corporate bonds and convertible securities. Securities non-cash collateral as of June 30, 2019 was in equities. 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 Net Position.

The custodian, as agent for the System, is authorized to reinvest cash collateral received in any investment instrument allowed by these 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. The average term of these loans was four days at June 30, 2019. At June 30, 2019, 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 24 days.

The following table presents the fair values of the securities on loan and the value of the collateral pledges at June 30, 2019 (in thousands):

	Fair Value Securities Lent*	Collateral Received
Lent for Cash Collateral:		
Equity Securities	$2,397,793	$2,432,509
Debt Securities	899.830	917.989
REITS	63,870	65,122
Subtotal	**3,361,493**	**3,415,620**
Lent for Non-Cash Collateral:		
Equity Securities	$857,389	$959,932
Debt Securities	143,544	157,916
REITS	17,982	19,736
Subtotal	**1,018,915**	**1,137,584**
Total Securities Lent	**$4,380,408**	**$4,553,204**

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

The fair value of securities purchased with cash collateral as of June 30, 2019, are presented by type below [in thousands]:

Securities Purchased with Cash Collateral	Fair Value
Commercial Paper	$202,959
Repurchase Agreements	764,783
Corporate Bonds	1,396,545
Asset-Backed Securities	1,052,873
Subtotal	**$3,417,160**

The following table details the net income from securities lending for the year ended June 30, 2019 (in thousands):

	PERS	MHSPRS	MRS	SLRP	TOTAL
Change in Fair Value	$(374)	$(5)	$(2)	$-	$(381)
Interest Income	91,860	1,200	503	70	93,633
Income From Securities Lending	**91,486**	**1,207**	**489**	**70**	**93,252**
Less:					
Interest Expense	73,433	812	341	56	74,642
Bank Fees	2,813	183	77	2	3,075
Expenses From Securities Lending	**76,246**	**995**	**418**	**58**	**77,717**
Net Income From Securities Lending	**$15,240**	**$200**	**$83**	**$12**	**$15,535**

At June 30, 2019, securities lending total assets with related accrued interest are $3,424,975,000, and total liabilities with accrued expenses are $3,422,596,000. The difference of $2,379,000 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, 2019, were $139,000.

Note 4: Capital Assets

The following table shows amounts for capital assets as of June 30, 2019 (in thousands):

Description	Amount
Land	$508
Building	18,817
Furniture & Equipment	2,848
Software	20,417
Construction In Progress	1,209
Total Capital Assets	43,799
Less Accumulated Depreciation:	
Building	6,977
Furniture & Equipment	2,462
Software	16,214
Total Accumulated Depreciation	25,653
Net Capital Assets	$18,146

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, 2019 (in thousands).

	PERS	MHSPRS	SLRP
Total Pension Liability	$45,798,575	$541,931	$22,075
Less: Plan Fiduciary Net Position	28,206,602	366,165	18,609
Plan Net Pension Liability	17,591,973	175,766	3,466
Ratio of Fiduciary Net Position to Total Pension Liability	61.59%	67.57%	84.30%

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. As such, the total pension liability was determined by an actuarial valuation as of June 30, 2018. An expected total pension liability is determined as of the measurement date of June 30, 2019 using standard roll forward techniques. The roll forward techniques are applied to the liabilities before and after the assumption changes then compared as of June 30, 2019 to reflect the assumption gain and loss for the year. Subsequent to the June 30, 2018 valuation, the Board adopted new actuarial assumptions based on the experience investigation for the four-year period ending June 30, 2018. The experience report is dated April 2, 2019. The following actuarial assumptions applied to all periods included in the measurement.

	PERS	MHSPRS	SLRP
Investment Rate of Return*	7.75%	7.75%	7.75%
Price Inflation	2.75%	2.75%	2.75%
Salary Increases	3.00-18.25%	3.00-8.56%	3.00%
Most Recent Experience Study	6/30/18	6/30/18	6/30/18

**Net of investment expense, including inflation*

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	27.00%	4.90%
International Equity	22.00	4.75
Global Equity	12.00	5.00
Debt Securities	20.00	1.50
Real Estate	10.00	4.00
Private Equity	8.00	6.25
Cash Equivalents	1.00	0.25
Total	**100.00%**	**N/A**

DISCOUNT RATE

The discount rate used to measure the total pension liabilities for PERS, MHSPRS and SLRP was 7.75 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 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 7.75 percent, as well as what the plans' net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.75 percent) or one percentage point higher (8.75 percent) than the current rate (in thousands):

Net Pension Liability	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
PERS	$23,125,258	$17,591,973	$13,024,743
MHSPRS	$243,539	$175,766	$119,822
SLRP	$5,652	$3,466	$1,595

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 and deductions from salaries of members at rates sufficient to make the plans actuarially sound. 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. Given this constraint on employer contribution increases and depending upon future experience, one or more of the closed plans under MRS will possibly be exhausted at some point in the future. Such an event would lead to at least a temporary reduction in benefits paid until the affected plan's cash flow position improved. Members covered by MRS are required to contribute varying amounts of their salary, depending on the actuarial soundness of their respective plans.

CONTRIBUTION RATES

	Contribution Rates as a Percentage of Covered Payroll	
	Member	Employer
PERS	9.00%	15.75%
MHSPRS	7.25%	49.08%
MRS	7.00-10.00%	0.80-5.82 mills*
SLRP	3.00%	7.40%

** Based on assessed property values.*

Employer contributions for MHSPRS are augmented by certain additional fees. These amounts vary annually based on the level of activity. The actuarially determined contributions for MHSPRS include estimated additional fees of $3,500,000. The amount collected for the year ending June 30, 2019, was $3,062,000 for motor vehicle fees and $708,000 for driver's license reinstatement fees.

Administration of the System is financed from investment earnings. In addition, employers of MHSPRS, MRS and SLRP contribute an administrative fee to the System equal to 2.0 percent of the plan's respective employer contributions. As of June 30, 2019, administrative fees were $312,000 from MHSPRS, $342,000 from MRS and $11,000 from SLRP. ORP contributes administrative fees of 2.6 percent of covered wages for a total of $11,330,000.

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, 2019 were $7,672,000. PERS contributions to the system for the years ended June 30, 2019, 2018 and 2017 were $1,207,000, $1,159,000 and $1,143,000, respectively. 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, AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES RELATED TO OPEB

At June 30, 2019, the System reported a liability of $1,013,000 for its proportionate share of the net OPEB liability. The liability was measured as of June 30, 2018, 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.

For the year ended June 30, 2019, the System recognized OPEB expense of $1,033,000. At June 30, 2019, 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	$2	$-
Changes in Proportion	8	3
Changes in Assumptions	-	72
Contributions Subsequent to the Measurement Date	45	-
Total	$55	$75

Contributions subsequent to the measurement date of $45,000 will be recognized as a reduction of the net OPEB liability in the year ended June 30, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows [in thousands]:

Year Ended June 30	Net Outflows & Inflows of Resources
2020	$(13)
2021	(13)
2022	(13)
2023	(13)
2024	(11)
Thereafter	(2)
Total	$(65)

ACTUARIAL ASSUMPTIONS

The collective total OPEB liability was determined by an actuarial valuation as of June 30, 2018, using the following actuarial assumptions, applied to all periods included in the measurement:

Valuation Date	June 30, 2018
Measurement Date	June 30, 2018
Actuarial Assumptions:	
Cost Method	Entry age normal
Inflation Rate	3%
Salary Increases, Including Wage Inflation	3.25-18.50%
Long-Term Investment Rate of Return	4.50%
Healthcare Cost Trends	7.25% for 2018 decreasing to an ultimate rate of 4.75% by 2028

Both pre-retirement and post-retirement mortality rates were based on the RP 2014 Healthy Annuitant Blue Collar Table projected with Scale BB to 2022, male rates set forward one year and adjusted by 106 percent for males at all ages, and females adjusted to 90 percent for ages less than 76, 95 percent for age 76, 105 percent for age 78 and 110 percent for ages 79 and greater. Post-disability mortality rates were based on the RP 2014 Disabled Retiree Mortality Table set forward four years for males and three years for females.

The demographic actuarial assumptions used in the June 30, 2018 valuation were based on the results of the last actuarial experience study dated April 18, 2017. 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, 2018 valuation were based on a review of recent plan experience done concurrently with the June 30, 2018 valuation.

CHANGES IN ACTUARIAL ASSUMPTIONS & METHODS

The discount rate was changed from 3.56 percent to 3.89 percent for the current measurement date.

DISCOUNT RATE

The discount rate used to measure the total OPEB liability was 3.89 percent. The discount rate determination was based on an average of the Bond Buyer General Obligation 20-year Municipal Bond Index Rates during the month of June published at the end of each week by the Bond Buyer. Since the trust was set up as of June 28, 2018, with an initial contribution of $1,000,000, the Plan was projected to be depleted immediately, in 2018.

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 3.89 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 (2.89 percent) or one percentage point higher (4.89 percent) than the current rate [in thousands].

	1% Decrease (2.89%)	Current Discount (3.89%)	1% Increase (4.89%)
System Proportionate Share of Net OPEB Liability	$1,123	$1,013	$919

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 7.25 percent decreasing to 4.75 percent by 2028, 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 (6.25 percent decreasing to 3.75 percent) or one percentage point higher (8.25 percent decreasing to 5.75 percent) than the current rate [in thousands].

	1% Decrease (6.25% Decreasing to 3.75%)	Current Discount Rate (7.25% Decreasing to 4.75%)	1% Increase (8.25% Decreasing to 5.75%)
System Proportionate Share of Net OPEB Liability	$938	$1,013	$1,098

The audited financial report for the Plan can be found at knowyourbenefits.dfa/ms.gov.

Note 9: Restatement of Net Position Restricted for Pension Benefits

During fiscal year 2019, the System identified items that were reported incorrectly in the MHSPRS and MRS fund's financial statements for the year ended June 30, 2018. Net investment income amounts were understated for MHSPRS and MRS, which resulted in an understatement of ending net position for June 30, 2018. The effect of the correction of the error on net position restricted for pension benefits is summarized as follows [in thousands]:

	June 30, 2018 Net Position Restricted for Pension Benefits as Previously Reported	Prior Period Adjustment	June 30, 2018 Net position Restricted for Pension Benefits as Restated
MHSPRS	$354,169	$3,136	$357,305
MRS	154,290	1,024	155,314

Schedule of Changes in the Net Pension Liability & Related Ratios
Year Ended June 30, 2019

[in thousands] [unaudited]

	PERS					
Changes in the Net Pension Liability	2019	2018	2017	2016	2015	2014
Total Pension Liability:						
Service Cost	$696,445	$702,559	$754,552	$734,545	$673,626	$681,778
Interest	3,330,054	3,239,471	3,154,382	3,032,131	2,867,679	2,754,573
Difference Between Actual and Expected Experience	-	21,361	(172,476)	413,494	325,351	257,464
Assumption Changes	231,354	-	24,141	(66,606)	1,821,236	-
Benefit Payments	(2,747,397)	(2,609,415)	(2,477,914)	(2,367,709)	(2,219,240)	(2,099,843)
Refunds to Terminated Employees	(108,042)	(124,306)	(113,707)	(112,926)	(119,356)	(121,532)
Net Change in Total Pension Liability	**1,402,414**	**1,229,670**	**1,168,978**	**1,632,929**	**3,349,296**	**1,472,440**
Total Pension Liability - Beginning	**44,396,161**	**43,166,491**	**41,997,513**	**40,364,584**	**37,015,288**	**35,542,848**
Total Pension Liability - Ending (A)	**$45,798,575**	**$44,396,161**	**$43,166,491**	**$41,997,513**	**$40,364,584**	**$37,015,288**
Plan Fiduciary Net Position:						
Contributions - Employer	$1,038,108	$1,018,163	$1,019,084	$1,021,261	$996,478	$969,674
Contributions - Member	580,941	570,807	570,066	572,574	557,909	549,528
Net Investment Income	1,701,321	2,385,913	3,436,144	130,900	827,666	3,905,728
Pension Benefits	(2,747,397)	(2,609,415)	(2,477,914)	(2,367,709)	(2,219,240)	(2,099,843)
Refunds to Terminated Employees	(108,042)	(124,306)	(113,707)	(112,926)	(119,356)	(121,532)
Administrative Expenses	(16,905)	(16,264)	(17,056)	(15,166)	(13,523)	(12,837)
Other	(4,614)	(4,805)	(8,536)	(474)	(497)	(510)
Net Change in Fiduciary Net Position	**443,412**	**1,220,093**	**2,408,081**	**(771,540)**	**29,437**	**3,190,208**
Plan Fiduciary Net Position - Beginning	**27,763,190**	**26,543,097**	**24,135,016**	**24,906,556**	**24,877,119**	**21,686,911**
Plan Fiduciary Net Position - Ending (B)	**28,206,602**	**27,763,190**	**26,543,097**	**24,135,016**	**24,906,556**	**24,877,119**
Net Pension Liability - Ending (A-B)	**$17,591,973**	**$16,632,971**	**$16,623,394**	**$17,862,497**	**$15,458,028**	**$12,138,169**
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	**61.59%**	**62.54%**	**61.49%**	**57.47%**	**61.70%**	**67.21%**
Covered Payroll	**$6,144,916**	**$5,999,231**	**$6,038,229**	**$6,022,533**	**$5,904,827**	**$5,834,687**
Net Pension Liability as a Percentage of Covered Payroll	**286.29%**	**277.25%**	**275.30%**	**296.59%**	**261.79%**	**208.03%**

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, 2019

[in thousands] [unaudited]

	MHSPRS					
Changes in the Net Pension Liability	2019	2018	2017	2016	2015	2014
Total Pension Liability:						
Service Cost	$7,372	$7,205	$7,328	$6,858	$6,361	$6,461
Interest	39,532	37,338	37,086	35,869	34,503	33,396
Difference Between Actual and Expected Experience	-	17,311	(5,780)	3,536	1,013	2,652
Assumption Changes	2,286	-	(3,598)	-	19,176	-
Benefit Payments	(34,671)	(32,315)	(31,001)	(29,913)	(28,909)	(28,220)
Refunds to Terminated Employees	(16)	(103)	(144)	(52)	(163)	(42)
Net Change In Total Pension Liability	**14,503**	**29,436**	**3,891**	**16,298**	**31,981**	**14,247**
Total Pension Liability - Beginning	**527,428**	**497,992**	**494,101**	**477,803**	**445,822**	**431,575**
Total Pension Liability - Ending (A)	**$541,931**	**$527,428**	**$497,992**	**$494,101**	**$477,803**	**$445,822**
Plan Fiduciary Net Position:						
Contributions - Employer	$19,375	$15,128	$14,809	$14,755	$13,695	$13,500
Contributions - Member	2,340	2,271	2,147	2,128	1,938	1,963
Net Investment Income	22,144	30,855	44,499	1,704	10,812	51,575
Pension Benefits	(34,671)	(32,315)	(31,001)	(29,913)	(28,909)	(28,220)
Refunds to Terminated Employees	(16)	(103)	(144)	(52)	(163)	(42)
Administrative Expenses	(312)	(250)	(203)	(217)	(198)	(200)
Other	-	-	-	-	-	-
Net Change in Fiduciary Net Position	**8,860**	**15,586**	**30,107**	**(11,595)**	**(2,825)**	**38,576**
Plan Fiduciary Net Position - Beginning	**357,305**	**341,719**	**311,612**	**323,207**	**326,032**	**287,456**
Plan Fiduciary Net Position - Ending (B)	**366,165**	**357,305**	**341,719**	**311,612**	**323,207**	**326,032**
Net Pension Liability - Ending (A-B)	**$175,766**	**$170,123**	**$156,273**	**$182,489**	**$154,596**	**$119,790**
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	**67.57%**	**67.74%**	**68.62%**	**63.07%**	**67.64%**	**73.13%**
Covered Payroll	**$31,811**	**$29,555**	**$28,845**	**$27,380**	**$25,505**	**$25,554**
Net Pension Liability as a Percentage of Covered Payroll	**552.53%**	**575.61%**	**541.77%**	**666.50%**	**606.14%**	**468.77%**

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, 2019

[in thousands] [unaudited]

Changes in The Net Pension Liability	SLRP 2019	2018	2017	2016	2015	2014
Total Pension Liability:						
Service Cost	$590	$431	$433	$420	$406	$404
Interest	1,595	1,557	1,593	1,586	1,569	1,549
Difference Between Actual and Expected Experience	-	(58)	(204)	(468)	(333)	(453)
Assumption Changes	31	-	(868)	(6)	588	-
Benefit Payments	(1,442)	(1,410)	(1,397)	(1,454)	(1,220)	(1,216)
Refunds to Terminated Employees	-	(18)	(17)	(32)	(37)	(22)
Net Change in Total Pension Liability	**774**	**502**	**(460)**	**46**	**973**	**262**
Total Pension Liability - Beginning	**21,301**	**20,799**	**21,259**	**21,213**	**20,240**	**19,978**
Total Pension Liability - Ending (A)	**$22,075**	**$21,301**	**$20,799**	**$21,259**	**$21,213**	**$20,240**
Plan Fiduciary Net Position:						
Contributions - Employer	$525	$513	$522	$514	$511	$514
Contributions - Member	214	207	212	208	207	208
Net Investment Income	1,287	1,412	2,264	86	552	2,605
Pension Benefits	(1,442)	(1,410)	(1,397)	(1,454)	(1,220)	(1,216)
Refunds to Terminated Employees	-	(18)	(17)	(32)	(37)	(22)
Administrative Expenses	(11)	(10)	(10)	(10)	(10)	(10)
Other	-	-	-	-	-	-
Net Change in Fiduciary Net Position	**573**	**694**	**1,574**	**(688)**	**3**	**2,079**
Plan Fiduciary Net Position - Beginning	**18,036**	**17,342**	**15,768**	**16,456**	**16,453**	**14,374**
Plan Fiduciary Net Position - Ending (B)	**18,609**	**18,036**	**17,342**	**15,768**	**16,456**	**16,453**
Net Pension Liability - Ending (A-B)	**$3,466**	**$3,265**	**$3,457**	**$5,491**	**$4,757**	**$3,787**
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	**84.30%**	**84.67%**	**83.38%**	**74.17%**	**77.58%**	**81.29%**
Covered Payroll	**$6,937**	**$6,833**	**$6,928**	**$6,862**	**$6,861**	**$6,918**
Net Pension Liability as a Percentage of Covered Payroll	**49.96%**	**47.78%**	**49.90%**	**80.02%**	**69.33%**	**54.74%**

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]

	2019	2018	2017	2016	2015
Public Employees' Retirement System					
Contractually Required Employer Contribution	$967,824	$944,879	$951,021	$948,549	$930,010
Actual Employer Contribution	1,038,108	1,018,163	1,019,084	1,021,261	996,478
Annual Contribution Deficiency (Excess)	(70,284)	(73,284)	(68,063)	(72,712)	(66,468)
Covered Payroll	6,144,916	5,999,231	6,038,229	6,022,533	5,904,827
Actual Contributions as a Percentage of Covered Payroll	16.89%	16.97%	16.88%	16.96%	16.88%
Mississippi Highway Safety Patrol Retirement System					
Contractually Required Employer Contribution	$19,383	$14,430	$14,431	$14,025	$13,226
Actual Employer Contribution	19,375	15,128	14,809	14,755	13,695
Annual Contribution Deficiency (Excess)	8	(698)	(378)	(730)	(469)
Covered Payroll	31,811	29,555	28,845	27,380	25,505
Actual Contributions as a Percentage of Covered Payroll	60.91%	51.19%	51.34%	53.89%	53.70%
Supplemental Legislative Retirement System					
Contractually Required Employer Contribution	$507	$506	$513	$508	$508
Actual Employer Contribution	525	513	522	514	511
Annual Contribution Deficiency (Excess)	(18)	(7)	(9)	(6)	(3)
Covered Payroll	6,937	6,833	6,928	6,862	6,861
Actual Contributions as a Percentage of Covered Payroll	7.57%	7.51%	7.53%	7.49%	7.45%

	2014	2013	2012	2011	2010
Public Employees' Retirement System					
Contractually Required Employer Contribution	$921,872	$835,321	$735,022	$687,016	$699,824
Actual Employer Contribution	969,674	881,847	768,914	723,836	731,544
Annual Contribution Deficiency (Excess)	(47,802)	(46,526)	(33,892)	(36,820)	(31,720)
Covered Payroll	5,834,687	5,823,578	5,857,789	5,684,624	5,763,556
Actual Contributions as a Percentage of Covered Payroll	16.62%	15.14%	13.13%	12.73%	12.69%
Mississippi Highway Safety Patrol Retirement System					
Contractually Required Employer Contribution	$13,595	$13,098	$12,257	$11,385	$11,096
Actual Employer Contribution	13,500	13,366	12,044	11,494	12,598
Annual Contribution Deficiency (Excess)	95	(268)	213	(109)	(1,502)
Covered Payroll	25,554	25,816	25,670	24,872	26,353
Actual Contributions as a Percentage of Covered Payroll	52.83%	51.77%	46.92%	46.21%	47.80%
Supplemental Legislative Retirement System					
Contractually Required Employer Contribution	$519	$509	$504	$464	$452
Actual Employer Contribution	514	503	490	457	446
Annual Contribution Deficiency (Excess)	5	6	14	7	6
Covered Payroll	6,918	6,695	6,872	6,810	6,605
Actual Contributions as a Percentage of Covered Payroll	7.43%	7.51%	7.13%	6.71%	6.75%

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]

	2019	2018	2017	2016	2015	2014
Annual Money-weighted Rate of Return, Net of Investment Expense	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]

State Life and Health Insurance OPEB Plan	2019	2018
System's Proportion of the Net OPEB Liability	0.13%	0.13%
System's Proportionate Share of the Net OPEB Liability	$1,013	$1,031
System's Covered Employee Payroll	$7,648	$7,431
System's Proportionate Share of the Net OPEB Liability as a Percentage of its Covered-Employee Payroll	13.25%	13.87%
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	0.13%	0.00%

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]

State Life and Health Insurance OPEB Plan	2019	2018
Actuarily Required Contribution	$45	$44
Contributions in Relation to Contractually Required Contribution	$45	$44
Contribution Deficiency (Excess)	-	-
System's Covered-Employee Payroll	$7,648	$7,431
Actual Contributions as a Percentage of Covered-Employee Payroll	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.

Note 1: Net Pension Liability

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.

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. Along with this increase, the Board revised its funding policy described in greater detail in Note 6 of the Financial Section.

» 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 $3.8 million collected for fiscal year 2019. An actuarial contribution deficiency occurred for fiscal year 2012 due to a revision of the employer contribution rate. The change took place January 1, 2012, bringing the contribution rate from 30.30 percent to 35.21 percent and causing a deficiency of $213 thousand in actual contributions compared with the contractually required employer contribution. In 2014, a deficiency occurred due to actual contributions of motor vehicle fees, which amounted to $2.6 million, being lower than anticipated while estimated contributions were $3.6 million. From 2015 forward, employer contributions have been in excess of contractually required contributions.

» SLRP

The employer contribution rate is 6.65 percent. The employee contribution rate has remained at 3.00 percent since plan inception. An excess of actual employer contributions over contractually required contributions has existed since 2015. SLRP is a small plan with a relatively fixed number of members.

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 and SLRP.

ACTUARIAL ASSUMPTIONS

The information presented in the required supplementary schedules was used in the actuarial valuation for purposes of determining the contractually required employer contribution rates. The assumptions and methods used for the June 30, 2018, actuarial valuation were recommended by the actuary and adopted by the Board.

EFFECTS OF CURRENT YEAR CHANGES IN PLAN REQUIREMENTS

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

The following amendments were incorporated into the actuarial valuations of PERS, MHSPRS and SLRP:

a) The expectation of retired life mortality was changed to the PubS.H-2010(B) Retiree Table with the following adjustments:
   1. For males, 112.0 percent of male rates from ages 18 to 75 scaled down to 105.0 percent for ages 80 to 119.
   2. For females, 85.0 percent of the female rates from ages 18 to 65 scaled up to 102.0 percent for ages 75 to 119.
   3. Projection scale MP-2018 will be used to project future improvements in life expectancy generationally.
b) The expectation of disabled mortality was changed to PubT.H-2010 Disabled Retiree Table for disabled retirees with the following adjustments:
   1. For males, 137.0 percent of male rates at all ages.
   2. For females, 115.0 percent of female rates at all ages.
   3. Projection scale MP-2018 will be used to project future improvements in life expectancy generationally.
c) The price inflation assumption was reduced from 3.0 percent to 2.75 percent.
d) The wage inflation assumption was reduced from 3.25 percent to 3.0 percent.
e) Withdrawal rates, pre-retirement mortality rates and service retirement rates were also adjusted to more closely reflect actual experience.
f) The percentage of active member disabilities assumed to be in the line of duty was increased from 7.0 percent to 9.0 percent.

The contractually required employer contribution rates in the Schedules of Employer Contributions are calculated as of June 30, 2017, 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 that schedule:

	PERS	MHSPR	SLRP
Actuarial Cost Method	Entry age	Entry age	Entry age
Amortization Method	Level percentage of payroll, open	Level percentage of payroll, open	Level percentage of payroll, open
Remaining Amortization Period	38.4 years	37.6 years	21.6 years
Asset Valuation Method	5-year Smoothed Market	5-year Smoothed Market	5-year Smoothed Market
Actuarial Assumptions:			
Investment Rate of Return*	7.75%	7.75%	7.75%
Salary Increase	3.25-18.50%	3.25-8.81%	3.75%
Price Inflation	3.00%	3.00%	3.00%

Note 2: 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. Information related to previous years is not 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. Information related to previous years is not available; therefore, trend information will be accumulated to display a ten-year presentation.

CHANGES IN ACTUARIAL ASSUMPTIONS AND METHODS:

The single equivalent interest rate was changed from 3.56 percent for the prior measurement date to 3.89 percent for the current measurement date.

CHANGES IN BENEFIT TERMS

Amounts reported for fiscal year 2019 reflect no changes in benefit terms.

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, 2017 actuarial valuation) were used to determine contribution rates reported in that schedule for the year ending June 30, 2018:

Actuarial Cost Method	Entry age
Amortization Method	Level dollar
Amortization Period	30 years, open
Asset Valuation Method	Market value of assets
Price Inflation	3.00%
Salary Increases, Including Wage Inflation	3.25% to 18.50%
Initial health care cost trend rates: Medicare Supplement Claims – Pre Medicare	7.75%
Ultimate health care cost trend rates: Medicare Supplement Claims – Pre Medicare	5.00%
Year of ultimate trend rates: Medicare Supplement Claims – Pre Medicare	2023
Long-term investment rate of return, net of pension plan investment expense, including price inflation	3.56%

Schedule 1

Schedule of Administrative Expenses and Depreciation

For the Year Ended June 30, 2019

[in thousands]

Administrative Expense	Amount
Personal Services:	
Salaries & Wages	$7,672
Employee Benefits	3,488
Employee Travel	82
Total Personal Services	**11,242**
Contractual Services:	
Employee Training	66
Communications, Transportation, & Utilities	664
Rentals	153
Repair & Maintenance	222
Professional Services (See Schedule 2)	1,754
Other Fees & Services	144
Memberships, Subscriptions, & Insurance	133
Data Processing	2,480
Bank Charges	158
Total Contractual Services	**5,774**
Commodities:	
Printing & Office Supplies	184
Equipment & Repair Parts	352
Other Supplies & Materials	18
Total Commodities	**554**
Depreciation:	
Building	378
Furniture & Equipment	247
Software	4,027
Total Depreciation	**4,652**
Total Administrative Expenses & Depreciation	**$22,222**

Schedule 2
Schedule of Investment Managers' Fees, Investment Global Out-of-pocket Fees and Professional Service Fees
For the Year Ended June 30, 2019

[in thousands]

	Amount
Investment Managers' Fees:	
Acadian Asset Management LLC	$3,160
AEW Capital Management, LP – Fund VI	181
AEW Capital Management, LP – Fund VII	203
AEW Capital Management, LP – Fund VIII	400
AllianceBernstein L.P.	1,646
Angelo Gordon & Co. – Fund II	2
Angelo Gordon & Co. – Fund III	147
Angelo Gordon & Co. – Fund IV	568
Angelo Gordon & Co. – Fund X	465
ArrowStreet Capital, LP	3,187
Artisan Partners LP – Mid Cap Equity	2,300
Baillie Gifford & Co.	2,620
CenterSquare Investment Management	780
Cohen & Steers Capital Management, Inc.	1,189
Dimensional Fund Advisors, Inc. – Small Cap Equity	1,253
Eagle Capital Management LLC	6,375
Epoch Investment Partners, Inc.	4,221
Fidelity Institutional Asset Management LLC	576
Fisher Investments	3,521
Hancock Natural Resource Group	1,120
Harding Loevner LP	3,452
Heitman LLC – Fund III	264
Heitman LLC – Fund IV	98
Invesco LLC – Fund IV	492
Invesco LLC – Fund V	188
J.P. Morgan Investment Management, Inc.	5,101
Lazard Asset Management	2,042
Longview Partners Limited	4,185
Loomis Sayles & Co., LP	1,780
Manulife Asset Management	855
Marathon Asset Management LLP	3,669
Mellon Investments Corporation	1,989
Mondrian Investment Partners, Inc.	2,114
The Northern Trust Co. – BB.AGG	110
The Northern Trust Co. - EAFE	199
The Northern Trust Co. – Russell 1000	39

	Amount
Investment Managers' Fees:	
The Northern Trust Company – Russell Mid Cap	$2
The Northern Trust Company – S&P 500	162
Pacific Investment Management Co. – Domestic Debt	864
Pacific Investment Management Co. – Global Debt	1,704
Principal Global Investors – Small Cap Equity	922
Principal Global Investors LLC – Real Estate	6,152
Prudential Investment Management, Inc.	1,392
Riverbridge Partners, LLC	2,416
T.A. Associates Realty – Fund X	762
T.A. Associates Realty – Fund XI	1,421
UBS Realty Investors, LLC – Core Real Estate	2,659
UBS Realty Investors, LLC – Value Added Real Estate	2,061
Wedgewood Partners, Inc.	1,980
Wellington Management Company, LLP – Emerging Markets Debt	2,605
Wellington Management Company, LLP – Mid Cap Equity	1,992
Wellington Management Company, LLP – Small Mid Cap	2,290
Westbrook Partners – Fund X	436
Private Equity Managers: GCM Grosvenor & Pathway Capital Management	13,781
Total Investment Managers' Fees*	$104,092
Bank of New York Mellon - Custodial & Global Out-Of-Pocket Fees	583
Total Investment Managers Fees and Custodial & Global Out-of-Pocket Fees*	$104,675
Securities Lending Fees:	
Bank of New York Mellon	$2,874
Professional Service Fees:	
Actuary-Cavanaugh MacDonald Consulting, LLC	$297
Audit-Eide Bailly LLC; Gabriel Roeder Smith & Co.	176
Accounting Consultants – TFVS LLC	186
Engineering Services – Engineering Resource Group	25
Graphic Design – Communication Arts	30
Investment Management Consultant – Callan Associates, Inc., FactSet Research Systems, Inc., & KlarityFX	649
Legal-Outside - Chapman & Cutler, LLP; ICE Miller, LLP	148
Medical Fees – Clinics Labs	200
Voting Services – Election America	43
Total Professional Service Fees	$1,754

Fees are subject to estimation.

Schedule 3
Schedule of Investments Due to MRS from PERS
June 30, 2019

[in thousands]

	Amount
Due To MRS:	
Biloxi Municipal	$7,126
Biloxi Fire & Police	1,577
Clarksdale Fire & Police	1,279
Clinton Fire & Police	8,924
Columbus Fire & Police	986
Greenville Fire & Police	2,805
Greenwood Fire & Police	2,816
Gulfport Fire & Police	9,031
Hattiesburg Fire & Police	20,521
Jackson Fire & Police	51,318
Laurel Fire & Police	4,304
McComb Fire & Police	964
Meridian Municipal	3,191
Meridian Fire & Police	9,364
Natchez Fire & Police	1,842
Pascagoula Fire & Police	7,392
Tupelo Fire & Police	5,230
Vicksburg Fire & Police	9,416
Yazoo City Fire & Police	377
Total Investment Due To MRS	**$148,463**

Excludes certain accrued amounts.

Schedule 4
Statement of Changes in Assets and Liabilities – Agency Fund
For the Year Ended June 30, 2019

[in thousands]

Flexible Benefits Cafeteria Plan	Balance June 30, 2018	Additions	Deductions	Balance June 30, 2019
Assets				
Cash	$23	$52	$53	$22
Total Assets	**$23**	**$52**	**$53**	**$22**
Liabilities				
Accounts Payable	$15	$-	$-	$15
Funds Held For Others	8	52	53	7
Total Liabilities	**$23**	**$52**	**$53**	**$22**

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GENERATIONAL

PERS spans generations in membership and benefits provided

Investment

PERS
of MISSISSIPPI

Providing Benefits for Life

November 18, 2019

Dear Members,

I would like to take this opportunity to deliver FY 2019 investment results and provide a brief overview of the events and activities that influenced financial markets throughout the year.

Investment Results:

- For the year ending June 30, 2019, the portfolio returned 6.67%, trailing the System's 7.75% return target;
- Longer term, the portfolio had 3-, 5-, and 10-year returns of 10.38%, 7.06% and 10.53%, respectively;
- The 1-year return of 6.67% exceeded the returns of 62% of the System's peer group comprised of public pension plans with assets greater than $10 billion;
- Assets of the System totaled $28.6 billion as of June 30;
- The System ranked as the 70th largest pension and retirement savings plan in the country; and
- FY 2019 investment fees and expenses paid totaled 0.365% of assets, which equates to $0.365 paid for every $100 of assets managed. The 1-year return net of fees was 6.47%.

As of June 30, 2019, the System's portfolio was positioned to match its strategic target asset allocation of 61% U.S and non-US public equities, 8% private equity, 20% fixed income, 10% real estate, and 1% dedicated cash equivalent investments.

FY2019 Financial Market Highlights:

As we moved into the new fiscal year, economic reports were coming in mixed for most economies outside the US, but the US economy had been operating in that "Goldilocks Zone" (robust economic growth but moderate inflation), with the job market and investments showing robust gains and GDP growing well over 3%. The above, combined with the announcement of the successful conclusion to a framework for moving forward with replacing the North American Free Trade Agreement (NAFTA) with the United States–Mexico–Canada Agreement or USMCA, lowered the fear of there being an all-out global trade war. This sustained confidence that all was not just well, but great, and that this economic expansion and bull market still had enough energy to keep going, pushed the US equity markets higher. Later in the quarter, against this "Goldilocks" backdrop, investors started growing increasingly concerned that the expansion could be getting long in the tooth, and that both the economy and the stock market were nearing their peaks. This concern, mixed with the Federal Reserve tightening monetary policy for the third time in 2018 and for the eighth time since late 2015, allowed a decline in confidence to creep in.

Conviction in the strength of the global economy faded suddenly in October 2018. International markets had already been struggling for most of 2018, raising concerns over a Chinese trade war and bolstering fears that continued US interest rate increases would slow growth both here and abroad, leading to sharp declines in commodity prices, widening interest rate spreads, and an appreciation of the US dollar. As a result, the S&P 500 finished FY 2019 2nd quarter with a 13.52% decline.

Public Employees' Retirement System of Mississippi
429 Mississippi Street, Jackson, MS 39201-1005   601.359.3589   800.444.PERS   www.pers.ms.gov

Even with the dramatic loss in conviction, data on US economic growth remained largely solid. The year ending with GDP of 3.0% for fiscal year 2018, the US economy added over 2.5 million new jobs and the unemployment rate fell to a generational low of 3.7% in September. With the realization that the economy was indeed showing resilience, the Fed pressed "pause" on tightening during the third quarter of FY 2019 and consumer balance sheets remained healthy. Workers were getting real wage increases with paychecks growing at a year-over-year pace of 3.4 percent (all against a backdrop of controlled inflation). A surge in durable goods orders reported in March and strong exports ushered in a reversal of the FY 2019 2nd quarter market slump. With the stock market slump reversed, credit spreads having narrowed, and the potential for the yield curve to steepen, the S&P 500 returned 13.65% and international markets, as measured by the MSCI ACWI ex U.S. index, returned 10.31%.

The end of fiscal year 2019 marked the 10-year anniversary of the end of the Great Recession. This economic cycle is now officially the longest in US history, surpassing the previous which lasted from March 1991 to March 2001. The final quarter of the year did see economic growth weaken, which did reignite the fears of recession. GDP for the quarter came in at 2.1%, lower than the previous quarter but still ahead of expectations. Most of the weakening was in manufacturing, while the consumer and service sectors globally and in the US remained steady. Overall, economic news during the quarter remained mostly positive and giving the markets a boost to close positive for the year. Fed Chairman Powell gave the following three reasons for a "mid-cycle adjustment to policy" (otherwise known as a rate cut):

(1) to insure against downside risks from slowing global growth and trade tensions;
(2) to mitigate the effects those factors are already having on the US outlook, even if they haven't shown up in the data; and
(3) to enable a faster return to the Federal Reserve's 2% inflation target.

While the System's investments have posted strong returns over recent fiscal years, the investment environment ahead will be likely to remain a difficult one in which to achieve such levels of performance. Considering this, the focus remains on evaluating how best to position the portfolio to successfully overcome the investment challenges ahead. Together with the PERS Board of Trustees, the Investments Staff and I will continue to work diligently to ensure the assets of the System are managed in a prudent manner to assure the portfolio achieves its target return over the long term. You can be confident that the effect of the investment results on the financial stability of the System is at the forefront of every decision made with respect to the System's assets.

To quote Harry Markowitz (Nobel Laureate and Father of Modern Portfolio Theory), "In choosing a portfolio, investors should seek broad diversification. Further, they should understand that markets inevitably fluctuate and their portfolio should be such that they are willing to ride out the bad as well as the good times." So, as we reflect on the year's results, it's good to remind ourselves that we are positioned to achieve long term goals and that's the reason we should spend most of our time thinking in those terms.

Respectfully,

Charles R. Nielsen III
Interim Chief Investment Officer

Callan

Callan LLC
120 North LaSalle Street
Suite 2400
Chicago, IL 60602

Main 312.346.3536
Fax 312.346.5364

www.callan.com

November 15, 2019

Members of the Board:

Callan LLC is pleased to present the Public Employees' Retirement System of Mississippi (PERS) results for fiscal year ended June 30, 2019. During the fiscal year, the U.S. economy continued its now-record expansion. The Federal Reserve shifted to a relatively new policy objective—to "sustain the expansion"—and U.S. Treasury and stock markets rejoiced in tandem. In the U.S., the Bloomberg Barclays Aggregate Bond Index rose 7.9% for the 12-month period. U.S. Treasury yields hit multi-year lows in June, and the 10-year closed June 30th at 2.0% (the lowest since 11/2016). U.S. equity markets approached record levels as investors were heartened by the potential for imminent Fed rate cuts. Growth sectors fueled the advance with select names in the information technology sector seeing significant increases. While the S&P 500 Index rose 10.4%, small cap stocks, as represented by the Russell 2000 Index, were plagued by the fear of slowing global growth, fell by -3.3%. Non-U.S. markets generated positive returns as the MSCI EAFE Index and MSCI Emerging Markets Index rose 1.1% and 1.2%, respectively.

As of June 30, 2019, the Fund's market value totaled $28.65 billion, an increase in assets during the fiscal year. During the past twelve month period:

- Domestic equity markets advanced. The Russell 3000 Index, an index of domestic stocks covering all capitalizations, increased 8.98%.
- International equity markets trailed the U.S. equity market but were able to eke out small positive returns as the MSCI ACWI ex US IMI Index (All Country World Index ex United States) returned 0.26%.
- The domestic fixed income market reversed from the prior year and increased 7.87%, as measured by the Bloomberg Aggregate Bond Index.
- Private real estate as measured by the NCREIF Property Index returned 6.51%.

Within this environment, the Fund returned 6.87% during the twelve month period ended June 30, 2019, outperforming its benchmark by 0.14%. Over the trailing three-year period, the Fund outperformed its benchmark by 0.54% with an annualized return of 10.38%. Over the trailing five-year period, the Fund generated an annualized return of 7.06% which exceeded its benchmark by 0.29%.

The Fund continues to progress through an ongoing review of the asset allocation and asset class components. A Public Equity Structure Review which included domestic, international and global equity, as well as a Fixed Income Structure Review was completed during the 2019 fiscal year, resulting in no changes. A Real Assets Structure Evaluation is scheduled for the upcoming year.

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

Sincerely,

John P. Jackson

John P. Jackson, CFA
Senior Vice President
Callan LLC

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 an annual real rate of return of at least 4.75 percent and a nominal return that meets or exceeds the actuarial assumed rate of return on investments. Currently that rate is 7.75 percent;

» protect the investment portfolio from severe extended declines in asset value during periods of adverse market conditions by prudent diversification of assets;

» ensure adequate liquidity is available to meet all benefit payments and other cash requirements; and

» ensure total portfolio risk 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 the Board conducts annual actuarial valuations to evaluate the funded status of the System. 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 System's objective is to seek to provide financial security for members, retirees and beneficiaries. 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, which reflects both the Board's desired level of return and the Board's risk tolerance level for the portfolio.

REBALANCING

The Board will adopt a rebalancing policy at the time a strategic asset allocation policy is adopted. The investment staff will be responsible for implementing the rebalancing activity as contained in the policy.

ROLES AND RESPONSIBILITIES

Board of Trustees

The Systems' investment activities are governed by a ten-member Board 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 all 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 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 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 to the Board on all investment related matters. It is the responsibility of the CIO to make all necessary information available to the board members to assist them in making prudent informal investment decisions.

The investment staff is responsible for ensuring the Board's investment policies are implemented and for oversight of the external investment managers. Investment staff is charged with discharging their investment duties solely in the interest of the members and benefit recipients of the System.

The investment staff will ensure appropriate performance reporting schedules are in place to facilitate the Board's monitoring of the investment program. The staff's primary responsibilities include:

- monitoring investment managers' compliance to 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 Board on all investment matters and to discharge their investment duties solely in the interest of the System's members and benefit recipients. The consultant's responsibility is to work with the Board and staff to assist in the prudent management of the investment process.

The consultant will attend all investment related meetings of the Board and will provide an independent perspective on investment goals, structure, performance and managers. The consultant will review asset allocation, manager structure and performance and make recommendations to the Board as appropriate. The consultant assists in the manager search process. The consultant will also assist 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 will 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 will act as a fiduciary to the System. Further, each manager will be 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 will also maintain accurate records of all transactions related to investment activity. The custodial bank will serve as trustee of all assets within its control. It will also be 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:

Formal Review Agenda Item	Review Schedule
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 charged 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 quarter-end.

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 collateral reinvestment activities. All loans will have an initial collateral margin of 102.00 percent for domestic securities and 105.00 percent for non-domestic securities. At no time will the collateral margin be less than 100.00 percent of the current market value. Loaned securities will be marked-to-market daily to ensure collateral is maintained at the minimum required levels. All collateral reinvestment will be done within the guidelines mandated in the Securities Lending Agreement and Guaranty contract.

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.

Performance Test	Benchmark	Fail Criteria
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 the 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	Target	Rebalancing Ranges
Equity Securities	61%	±5%
Private Equity	8%	±5%
Debt Securities	20%	±5%
Real Estate	10%	±5%
Cash Equivalents	1%*	±1%

**Cash equivalents will consist of the assets in the Short-Term account used for benefit payments.*

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

Asset Class	Benchmark
Equity Securities	MSCI ACWI IMI Index
Private Equity	S&P 500 Index + 3%
Debt Securities	Bloomberg Barclays US Aggregate Index
Real Estate	NCREIF Property Index
Cash Equivalents	30-day US T-bills

Investment Summary

As of June 30, 2019, the System's portfolio value totaled $28.6 billion. The increase in value relative to the previous year's closing value of $28.1 billion was driven by broadly positive returns from equity securities, debt securities, real estate and private equity investment returns. As is common in mature pension plans, the System's annual distributions again surpassed contributions made by employees and employers. For fiscal year 2019, contributions totaled $1.66 billion, while the System paid out approximately $2.92 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 currently 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 60.35 percent equity securities, 19.86 percent debt securities, 10.21 percent public and private real estate investments, 8.47 percent private equity and 1.11 percent cash equivalents.

It is important to note that the asset allocation decision for a public pension 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 cash loans are secured by the receipt of collateral valued at 102.00 or 105.00 percent of the value of the loaned security, while non-cash loans are collateralized at 110.00 percent. In fiscal year 2019, the securities lending program generated approximately $16.3 million* in additional revenue for the investment program.

**$16.3 million were the earnings distributed for the fiscal year; $15.6 million was the reported net income as required by Governmental Accounting Standards Board Statement No. 28.*

Portfolio Performance

Callan LLC is employed by the Board 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 market values determined by the System's custodial bank.

In a year of consistently volatile markets, the System's portfolio was well-diversified to achieve positive results. The total portfolio gross return of 6.87 percent exceeded the System's customized Target Policy benchmark's 6.73 percent return and exceeded the returns of 62 percent of the funds in the Callan Public Very Large Defined Benefit universe. The System's three-year and five-year returns were 10.38 percent and 7.06 percent, respectively. These returns outpaced the returns of 91 percent of the Plan's peers over three years and 85 percent of the Plan's peers over five years. For the ten years ended June 30, the portfolio returned 10.53 percent, outperforming 88 percent of the Plan's peers.

The System's portfolio structure is designed to achieve success over the long term. While challenging events in the global financial markets often impact the portfolio's shorter-term returns, over longer periods the System has been successful in achieving its assumed target return of 7.75 percent. This is evidenced by the 25-year and 30-year returns of 8.07 and 8.29 percent, respectively.

EQUITY PORTFOLIO

Combining all segments of the equity portfolio, the program returned 5.12 percent for the fiscal year outperforming the 4.95 percent return of the Total Equity Custom benchmark. The total equity portfolio returns for the three-year and five-year periods ended June 30, were 12.21 percent and 6.91 percent, respectively, also exceeding the benchmark's 11.79 percent and 6.61 percent for the same periods. For the 10 years ended June 30, the equity portfolio's return of 11.96 percent exceeded the benchmark index return of 11.10 percent.

The System's domestic equity portfolio returned 8.49 percent for the fiscal year, while the benchmark Russell 3000 Index returned 8.98 percent and ranked in the 37th percentile of the Callan Public Plan domestic equity universe. The developed international equity portfolio saw returns of 0.14 percent compared with the benchmark MSCI EAFE Index return of 1.08 percent for the year. Global equities posted returns of 5.67 percent exceeding the custom benchmark return of 4.56 percent. Emerging markets portfolio returned 0.49 percent underperforming the MSCI Emerging Markets Index return of 1.22 percent for the year.

As of June 30, the System had allocated 28.18 percent of the total portfolio to domestic equities, 15.97 percent to international developed markets, 4.14 percent to emerging markets and 12.06 percent to global equities. Within the domestic equity portfolio 72.04 percent was invested in large, 17.69 percent in mid-cap and 10.27 percent in small-capitalization securities.

DEBT PORTFOLIO

At the close of the year, the debt portfolio included both active and passive core US portfolios, core-plus strategies that incorporate high-yield debt, non-US debt, as well as US core debt exposures, global bond portfolios and a dedicated emerging market debt portfolio.

The total debt portfolio's 8.65 percent return for the year exceeded the Fixed Income Custom benchmark's performance of 8.31 percent. For the three-year and five-year periods ended June 30, debt portfolio returns were 3.88 and 4.02 percent, respectively, also topping the Index's 2.80 and 3.29 percent returns for the same periods. The ten-year performance for the portfolio was 5.46 percent, while the Index returned 4.35 percent.

The System ended the year with 19.86 percent of the total portfolio invested in debt securities. The debt portfolio allocations consisted of 30.08 percent active and passive core US mandates, 35.23 percent core-plus and 24.47 percent hedged global bond strategies. The remaining 10.22 percent was invested in emerging market debt.

REAL ESTATE PORTFOLIO

At June 30, the real estate investment portfolio consisted of investments in core and value-added real estate funds, timber and public REITs. The total real estate portfolio returned 7.22 percent for the fiscal year, led by the value-added fund returns. The portfolio beat its custom benchmark return of 6.51 percent. The longer-term three-year return of 7.63 percent also exceeded the benchmark return of 6.89 percent, while the five-year portfolio returns of 9.33 percent beat the benchmark's 8.83 percent return. The ten-year return of 10.48 percent topped the benchmark return of 9.83 percent.

The core real estate portfolio returned 4.51 percent for the year underperforming the benchmark NFI-ODCE equal weighted Index return of 5.99 percent. Core real estate saw a three-year return of 6.30 percent while the Index returned 6.97 for the same period. For the five-years ended June 30, the core real estate portfolio's return of 8.41 percent lagged the 9.12 percent return of the Index.

The System's value-added real estate portfolio, consisting of 13 limited partnerships, posted a strong 14.26 percent return for the year to beat the benchmark NCREIF Total Index returns of 6.51 percent. For longer periods, the program also saw strong returns posting three-year and five-year gains of 13.06 and 14.35 percent. For the same periods, the Index had returns of 6.89 and 8.83 percent.

The System's timber portfolio, comprised of both US and non-US timber investments, returned 0.70 percent. NCREIF Timberland Index returns for the same period were 3.18 percent. Longer term, the portfolio three-year return of 8.75 percent compared favorably to the 3.37 return of the NCREIF Timberlands Index, while the portfolio's five-year return of 6.81 percent topped the Index return of 4.67 percent.

The public REIT portfolio, comprised of both US and non-US REIT investments, returned 12.17 percent for the year and 6.36 percent for three-year period ended June 30. The custom REIT portfolio benchmark returned 9.22 and 4.62 percent for the same periods. The five-year return of 7.97 percent outpaced the 6.74 percent return of the benchmark. Additionally, the portfolio's ten-year return of 14.32 percent outpaced the benchmark return of 13.48 percent. The fiscal year ended with the combined public and private real estate portfolios representing 10.20 percent of the System's total investments.

PRIVATE EQUITY PORTFOLIO

The System's private equity program consists of six separate fund-of-funds limited partnership commitment series and was the System's best returning asset class for the fiscal year. The private equity portfolio was invested in partnerships comprised of buyouts, venture capital/growth, distressed opportunity and special situation opportunities. On a time-weighted basis, the System's private equity investments returned 16.13 percent for the fiscal year outperforming the Private Equity benchmark's 13.70 percent results. The private equity program saw returns of 17.62 and 15.64 percent for the three-year and five-year periods while the benchmark returns were 17.29 and 13.79 percent for the same periods. As of June 30, private equity comprised approximately 8.47 percent of the System's total portfolio.

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 a modest 2.13 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, 2019

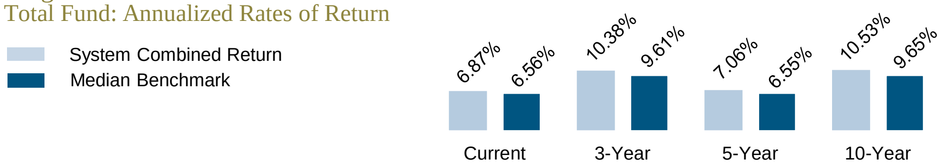
	Asset Allocation at Fair Value	Long-Term Target Asset Allocation
Equity Securities	60.3%	61.0%
Debt Securities	19.9	20.0
Real Estate	10.2	10.0
Private Equity	8.5	8.0
Cash & Equivalents	1.1	1.0

Defined Benefit Plans:
Performance Summary
For Fiscal Year Ended June 30,2019

		Annualized		
	Current	3-year	5-year	10-year
Total Fund:				
System Combined Return*	6.87%	10.38%	7.06%	10.53%
Callan Public Fd Very Lg DB Plan Benchmark	6.73	9.84	6.77	9.74
Public Funds>$10 Billion Median Benchmark	6.56	9.61	6.55	9.65
Total Equity Securities:				
Total Equity Manager's Composite*	5.12	12.21	6.91	11.96
Total Equity Custom Benchmark	4.95	11.79	6.61	11.10
Domestic Equity:				
Domestic Equity Managers Composite*	8.49	14.05	9.54	14.70
Russell 3000 Index	8.98	14.02	10.19	14.67
Domestic Equity Custom Benchmark	7.80	13.68	9.78	14.71
International Equity Securities:				
International Equity Managers Composite*	0.64	9.61	2.79	7.45
International Equity Benchmark	0.26	9.17	2.25	6.63
International Equity Custom Benchmark	1.43	10.36	2.92	6.98
Global Equity Securities:				
Global Equity Managers Composite*	5.67	12.93	7.87	11.32
Global Equity Benchmark	4.56	11.42	6.05	10.14
Debt Securities:				
Debt Securities Managers Composite*	8.65	3.88	4.02	5.46
Fixed Income Custom Benchmark	8.31	2.80	3.29	4.35
Real Estate:				
Commingled Funds and REITS Composite*	7.22	7.63	9.33	10.48
Real Estate Benchmark	6.51	6.89	8.83	9.83
Private Equity:				
Private Equity Composite*	16.13	17.62	15.64	10.97
Private Equity Benchmark	13.70	17.29	13.79	18.58

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

Large Public Plans*
Total Fund: Annualized Rates of Return



* Public funds >$10 billion median

Defined Benefit Plans:
Non-US Investments by Country
Fair Value at June 30, 2019

Angola	0.08%	Honduras	0.03%	Pakistan	0.04%
Argentina	0.41%	Hong Kong	2.83%	Panama	0.09%
Armenia	0.05%	Hungary	0.46%	Papua New Guinea	0.01%
Australia	5.17%	India	1.85%	Paraguay	0.12%
Austria	0.22%	Indonesia	0.97%	Peru	0.13%
Azerbaijan	0.17%	Iraq	0.01%	Philippines	0.12%
Belgium	0.51%	Ireland	3.29%	Poland	0.23%
Bermuda	0.86%	Isle Of Man	0.05%	Portugal	0.34%
Brazil	1.98%	Israel	0.63%	Puerto Rico	0.03%
British Virgin Islands	0.21%	Italy	1.62%	Qatar	0.45%
Canada	9.14%	Jamaica	0.04%	Romania	0.13%
Cayman Islands	2.09%	Japan	12.18%	Russia	1.27%
Chile	0.26%	Jersey CI	0.21%	Saudi Arabia	0.41%
China	3.08%	Jordan	0.06%	Senegal	0.09%
Colombia	0.15%	Kazakhstan	0.10%	Serbia	0.01%
Costa Rica	0.04%	Kenya	0.06%	Singapore	0.78%
Cote d'Ivoire	0.09%	Kuwait	0.04%	South Africa	1.09%
Croatia	0.21%	Latvia	0.03%	South Korea	2.56%
Curacao	0.22%	Lebanon	0.02%	Spain	1.67%
Cyprus	0.02%	Liberia	0.05%	Sri Lanka	0.20%
Czech Republic	0.04%	Lithuania	0.01%	Supranational Geographic Focus	0.29%
Denmark	1.26%	Luxembourg	0.95%	Sweden	1.82%
Dominican Republic	0.25%	Macau	0.07%	Switzerland	3.79%
Ecuador	0.10%	Macedonia	0.03%	Taiwan	1.30%
Egypt	0.31%	Malaysia	0.39%	Thailand	0.60%
Ethiopia	0.04%	Marshall Islands	0.02%	Tunisia	0.06%
Finland	0.68%	Mauritius	0.04%	Turkey	0.46%
France	5.79%	Mexico	1.21%	Ukraine	0.14%
Gabon	0.05%	Mongolia	0.01%	United Arab Emirates	0.17%
Georgia	0.02%	Morocco	0.10%	United Kingdom	11.30%
Germany	5.06%	Netherlands	3.03%	Uruguay	0.03%
Ghana	0.05%	New Zealand	0.22%	Venezuela	0.04%
Greece	0.28%	Nigeria	0.11%	Zambia	0.02%
Guatemala	0.02%	Norway	0.33%		
Guernsey CI	0.14%	Oman	0.11%		

Defined Benefit Plans:
Equity Portfolio

Equity Portfolio Summary

Total Equity Securities:	Total Number of Shares of Equity Securities Held:	Total Number of Issues of Equity Securities Held:
$16,974,060,831	1,200,785,899	4,303

Equity Investments by Industry Type
Fair Value at June 30, 2019

Industry	Percent
Basic Industries	3.89%
Communications	12.90
Consumer Cyclical	9.79
Consumer Non-Cyclical	20.98
Diversified	0.24
Energy	4.71
Financial Services	20.45
Industrial	12.04
Technology	12.71
Utilities	2.29
Totals	**100.00%**

Ten Largest Equity Holdings

	Shares	Fair Value
Microsoft Corporation	2,769,206	$370,962,836
Amazon.com Inc.	143,700	272,114,631
Apple Inc.	916,755	181,444,150
Berkshire Hathaway, Inc.	825,767	176,028,751
Alphabet Inc-cl C	136,651	147,707,432
Facebook Inc.	729,474	140,788,482
UnitedHealth Group Inc.	525,696	128,275,081
Wells Fargo & Co.	2,555,252	120,914,524
Alphabet Inc-cl A	109,651	118,730,103
Oracle Corporation	1,894,703	107,941,230
Totals	**10,606,855**	**$1,764,907,220**

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:
$2,323,258,369

Private Equity Investments By Strategy
June 30, 2019

Strategy	Percent
Buyouts	63.36%
Special Situations	22.31%
Venture Capital	14.33%
Total	100.00%

Bond Portfolio Summary*

Total Bond Investments:	Total Par of Bond Investments Held:	Total Number of Bond Issues Held:
$8,030,985,938	$105,963,193,045	4,717

Corporate Bond Investments by Industry Type*
Fair Value at June 30, 2019

Industry	Percent
Communications	4.49%
Consumer	16.18
Energy	6.98
Financial	59.49
Industrial	4.63
Technology	4.72
Utilities	3.43
Miscellaneous	0.08
Totals	**100.00%**

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

Ten Largest Long-term Corporate Bond Holdings*

	PAR	Fair Value
New York Life Global	$64,797,000	$64,816,166
IBM Credit LLC	51,800,000	51,824,009
Metropolitan Life Global	51,400,000	51,398,202
Principal Life Global	48,900,000	48,858,572
Massachusetts Mutual Global	48,200,000	48,140,576
Australia & New Zealand Banking Group Ltd.	44,300,000	44,349,053
Australia & New Zealand Banking Group Ltd.	44,100,000	44,152,362
Bank of Nova Scotia	39,674,000	39,776,756
Metropolitan Life Global	38,905,000	39,010,306
Loomis Sayles Senior Loan Fund	38,642,878	38,642,878
Totals	**$470,718,878**	**$470,968,880**

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

Real Estate Investment Portfolio Summary

Total Real Estate Investments:	Total Number of Shares* of Real Estate Investments Held:	Total Number of Issues of REITs Held:
$2,893,097,599	430,022,795	119

Includes units of commingled funds and shares of REITs.

Portfolio Distribution by Property Type
Fair Value at June 30, 2019

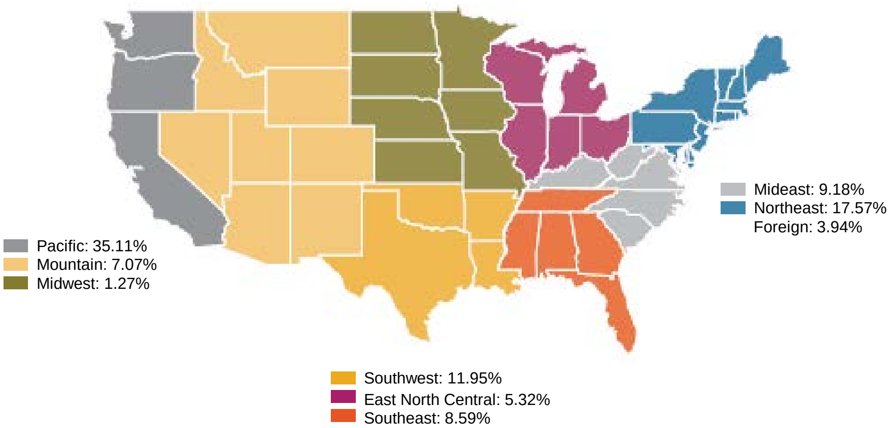
Property Type	Fair Value
Apartments	19.36%
Health Care	1.22
Hotels	1.34
Industrial	16.33
Office	30.16
Residential	7.24
Retail	16.18
Self-Storage	1.33
Timber	3.15
Other	3.69
Totals	**100.00%**

Ten Largest REIT Holdings

	Shares	Fair Value
Prologis, Inc.	230,114	$18,432,131
Public Storage	52,661	12,542,270
Equinix, Inc.	24,342	12,275,427
UDR Inc.	240,105	10,778,313
Ventas, Inc.	150,290	10,272,322
VEREIT, Inc.	1,119,351	10,085,353
Welltower, Inc.	119,010	9,702,885
Invitation Homes, Inc.	352,489	9,422,031
Sun Communities, Inc.	67,759	8,686,026
Extra Space Storage, Inc.	80,415	8,532,032
Totals	**2,436,536**	**$110,728,790**

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

Portfolio Distribution By Geographic Location
Fair Value At June 30, 2019



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 (Loss) on Investments	Appreciation (Depreciation) in Fair Value of Investments
2010	$184,923	$273,687	$12,169	$542,100	$1,180,636
2011	185,818	326,174	14,001	1,200,877	2,560,115
2012	186,038	323,610	9,460	585,346	(1,016,522)
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

Fiscal Year	Net Income (Loss) from Securities Lending	Total Income (Loss)	Manager* and Trading Fees	Net Income (Loss) from Investments
2010	$39,881	$2,233,396	$(33,904)	$2,199,492
2011	18,107	4,305,092	(42,765)	4,262,327
2012	17,293	105,225	(44,299)	60,926
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

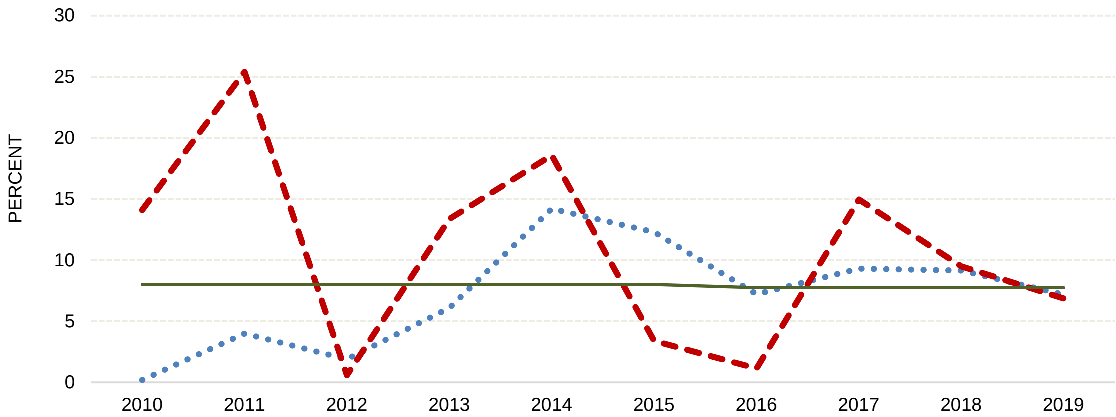
** Manager fees are subject to estimation.*

Defined Benefit Plans:
Ten-Year Total Pension Investment Rates of Return

[fair value in millions]

Fiscal Year	Total Investment Portfolio Fair Value	Smoothed Rate of Return	Fair Value Rate of Return	Actuarial Assumed Rate of Return
2010	16,767	0.20	14.10	8.00
2011	20,314	4.00	25.40	8.00
2012	19,578	1.90	0.59	8.00
2013	21,947	6.10	13.37	8.00
2014	24,600	14.20	18.58	8.00
2015	24,735	12.30	3.40	8.00
2016	23,938	7.21	1.15	7.75
2017	26,592	9.31	14.96	7.75
2018	28,280	9.16	9.48	7.75
2019	28,645	7.19	6.87	7.75

Ten-year Total Pension Investment Rates of Return



Smoothed Rate of Return *consists of investment income in a surplus or deficit of the assumed 7.75 percent on fair value smoothed over a five-year period with 20.0 percent of a year's surplus or deficit being recognized each year beginning with the current year. PERS, MHSPRS and SLRP smoothed rates have been averaged. MRS is excluded as an agent multi-employer plan.*

Fair Value Rate of Return *consists of cash income plus gains and losses due to changes in fair value, whether realized or unrealized (before deduction of investment fees).*

Actuarial Assumed Rate *is the assumed rate of return on the fair value of assets and is used in establishing retirement contribution rates and in determining current benefit reserve requirements.*

Defined Benefit Plans:
Portfolio Detail Illustrated by Advisor
At June 30, 2019

ADVISOR	Fund Type	Date Initiated	Fair Value Percent of Total Portfolio*
Equity Securities:			
Northern Trust Global Investment	Passive Large Cap (S&P 500 Index)	July 1985	16.72%
Northern Trust Global Investment	EAFE (Index)	December 2017	6.51
Eagle Capital Management	Large Cap	January 2005	3.87
Epoch Investment Partners, Inc.	Global	February 2012	3.15
Harding Loevner, LP	Global	February 2012	3.12
Acadian Asset Management, LLC	Global	July 2005	3.03
Longview Partners, LLC	Global	August 2015	2.91
Arrowstreet Capital, LP	ACWI Ex-US	June 2013	2.62
Baillie Gifford & Company	ACWI Ex-US	August 2014	2.62
Marathon Asset Management, LLP	ACWI Ex-US	May 2016	2.26
Lazard Asset Management	Emerging Markets	April 1998	2.13
Fisher Investments	Emerging Markets	April 2016	2.05
Artisan Partners, LP	Domestic Mid Cap Growth	September 2002	1.84
Wellington Management Company, LLP	Domestic Mid Cap Value	October 2001	1.63
Northern Trust Global Investment	Passive Mid Cap (Russell)	May 2019	1.59
Wellington Management Company, LLP	Domestic Small Cap Core	July 2002	1.20
Mondrian Investment Partners, Inc.	International Small Cap	May 2011	1.12
Principal Global Advisors	International Small Cap	September 2018	0.95
Riverbridge Partners, LLC	Small Cap Growth	November 2013	0.90
Dimensional Fund Advisors, Inc.	Small Cap Value	July 2002	0.83
Subtotal			**61.05**
Debt Securities:			
Prudential Fixed Income	Core Plus	January 2012	3.55
Loomis Sayles & Company, LP	Core Plus	August 2009	3.51
AllianceBernstein, LP	Global	February 2013	2.45
Pacific Investment Management Company	Global	February 2013	2.45
Pacific Investment Management Company	Domestic Core	August 1983	2.04
Manulife Asset Management LLC	Domestic Core	March 2017	2.04
Wellington Management Company, LLP	Emerging Market	May 2010	2.03
Northern Trust Global Investment	Passive Domestic Core	December 2017	1.94
Subtotal			**20.01**

** Includes cash and cash equivalents.*

ADVISOR	Fund Type	Date Initiated	Fair Value Percent of Total Portfolio*
Real Estate:			
Principal Global Investors	Core	June 2003	3.08%
J.P. Morgan Investment Management, Inc.	Core	July 2012	2.23
UBS Realty Investors, LLC	Core	June 2003	1.44
UBS Realty Investors, LLC	Core Plus	January 2011	0.75
Cohen & Steers Capital Management	Global REITs	October 2010	0.66
CenterSquare Investment Management	Domestic REITs	June 2017	0.65
Hancock Timber Resource Group	Timber	March 2008	0.32
T.A. Associates Realty	Fund XI – value added	April 2016	0.19
Angelo Gordon & Company	Fund IV – value added	August 2015	0.16
Invesco Fund	Fund IV – value added	April 2015	0.13
Heitman, LLC	Fund II – value added	November 2013	0.12
Westbrook Partners	Fund X – value added	March 2016	0.11
AEW Capital Management, LP	Fund VII – value added	June 2013	0.09
AEW Capital Management, LP	Fund VIII – value added	July 2016	0.09
AEW Capital Management, LP	Fund VI – value added	April 2010	0.08
T.A. Associates Realty	Fund X – value added	January 2013	0.08
Invesco Fund	Fund V – value added	February 2019	0.07
Heitman, LLC	Fund IV – value added	September 2017	0.04
Angelo Gordon & Company	Fund III – value added	January 2012	0.03
Angelo Gordon & Company	Fund X – value added	July 2018	0.02
Subtotal			**10.34**
Private Equity:			
Pathway Capital Management, LLC	Series 2013 Diversified	April 2013	2.64
Pathway Capital Management, LLC	Series 2008 Diversified	December 2008	1.82
GCM Grosvenor	Series 2009 Diversified	June 2009	1.56
GCM Grosvenor	Series 2014 Diversified	February 2014	1.47
Pathway Capital Management, LLC	Series 2016 Diversified	July 2016	1.00
GCM Grosvenor	Series 2018 Diversified	July 2018	0.11
Subtotal			**8.60**
Total			**100.00%**

** Includes cash and cash equivalents.*

Note: AEW Capital Management, LP Fund V, Angelo Gordon & Company Fund II and Heitman, LLC Fund II are not shown due to small residual balances.

In addition to the cash equivalent portfolio managed in-house, 38 firms managed 55 different investment portfolios for the System at year end.

Defined Benefit Plans:
Investment Fees and Commissions
For the Year Ended June 30, 2019

	Assets Under Management	Fees*
Investment Managers:		
Equity Securities	$17,234,208,278	$54,665,943
Debt Securities	5,645,946,206	10,955,669
Real Estate	2,920,665,856	24,689,306
Private Equity	2,425,150,072	13,781,142
Totals	**$28,225,970,412**	**$104,092,060**

Other Investment Service Fees:	
Securities Lending Agent/ Cash Management Fees	$2,873,576
Investment Consultant Fees	649,316
Custodial & Global Out-of-pocket Expenses	582,972
Total Investment Service Fees	**$4,105,864**

** Management fees are subject to estimation.*

Defined Benefit Plans:
Brokerage Commissions Paid*
For the Year Ended June 30, 2019

	Number of Shares Traded	Commissions	Commissions Per Share
Brokerage Firm, Including Subsidiaries:			
Goldman Sachs & Company	64,636,808	$439,078	$0.007
Merrill Lynch & Company	68,774,511	371,448	0.005
UBS AG	71,297,321	291,909	0.004
J.P. Morgan Securities	59,473,828	282,385	0.005
Instinet	130,604,601	264,114	0.002
Citigroup, Inc.	54,649,337	174,488	0.003
Investment Technology Group	42,016,889	173,906	0.004
Morgan Stanley & Company	50,473,034	168,168	0.003
Credit Suisse	31,270,609	166,557	0.005
Sanford C. Bernstein Co., LLC	17,752,492	147,216	0.008
Jefferies & Company, Inc.	17,427,270	136,233	0.008
Capital Institutional Services, Inc.	6,733,543	130,174	0.019
Macquarie Securities	75,741,353	112,745	0.001
Cowen & Company	9,963,292	102,078	0.010
Liquidnet, Inc.	6,394,768	100,369	0.016
Bank of New York Mellon	7,083,919	82,290	0.012
HSBC Securities, Inc.	77,193,764	70,770	0.001
Barclays Capital	3,676,858	61,283	0.017
Deutsche Bank	10,847,884	55,515	0.005
S.G. Americas Securities, LLC	39,939,324	51,590	0.001
Others (less than $50,000)	173,993,718	1,019,867	0.006
Commission Recapture Income		(139,259)	-
Totals	**1,019,945,123**	**$4,262,924**	$0.004

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

Defined Benefit Plans:
Investment Summary
For the Year Ended June 30, 2019

[in thousands]

	July 1, 2018 Beginning Fair Value*	Purchases	Sales and Maturities	Increase (Decrease) in Fair Value	June 30, 2019 Ending Fair Value**	Percent of Total Fair Value
Equities	$16,920,005	$6,766,540	$6,512,359	$(200,125)	$16,974,061	53.65%
Long-term Debt Securities	8,077,807	8,806,353	9,110,314	257,140	8,030,986	25.38
Private Equity	2,053,831	448,104	263,055	84,378	2,323,258	7.34
Real Estate	2,829,540	325,912	396,107	133,753	2,893,098	9.14
Short-term Investments	1,927,100	54,085,384	54,576,117	(14,167)	1,422,200	4.49
Totals	**$31,808,283**	**$70,432,293**	**$70,857,952**	**$260,979**	**$31,643,603**	**100.00%**

** Includes investment securities on loan to broker-dealers with a fair value of $4,724,228. It also includes the securities purchased with the cash collateral received in the lending program with a fair value of $3,527,980. As of June 30, 2018, 14.9 percent of the total fair value of investments were on loan to broker-dealers. To arrive at the net asset value of investments of $28.1 billion, the fair value total must be adjusted by $(3.7 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 $4,380,408. It also includes the securities purchased with the cash collateral received in the lending program with a fair value of $3,417,160. As of June 30, 2019, 13.84 percent of the total fair value of investments were on loan to broker-dealers. To arrive at the net asset value of investments of $28.6 billion, the fair value total must be adjusted by $(3.0 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.*

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SHARED RESPONSIBILITY

Funding PERS requires financial commitment from members, employers, and Mississippi

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

November 18, 2019

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 2018. 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. Since the previous valuation, the PERS Board of Trustees approved an increase in the employer contribution rate from 15.75% to 17.40% for the fiscal year beginning July 1, 2019. The Board also adopted a new funding policy which sets the funding goals, objectives and metrics for possible changes in the contribution rate for future valuations.

The latest completed actuarial valuation was based upon data and assumptions as of June 30, 2018. 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 150,687 active members as of June 30, 2018.

The total pension liabilities for the Governmental Accounting Standards Board Statement No. 67 (GASB 67) are based on the June 30, 2018 actuarial valuation and are rolled forward using actuarial techniques to the measurement date of June 30, 2019.

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

Board of Trustees
November 18, 2019
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 2014 to 2018. 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,

Edward J. Koebel

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

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

November 18, 2019

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 PERS Board and the HSPRS Administrative Board adopted an employer contribution rate of 49.08% of annual compensation effective July 1, 2018 and the amortization period is to be calculated on an open basis.

The latest completed actuarial valuation was based upon data and assumptions as of June 30, 2018. 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. There are 511 active members as of June 30, 2018.

The total pension liabilities for the Governmental Accounting Standards Board Statement No. 67 (GASB 67) are based on the June 30, 2018 actuarial valuation and are rolled forward using actuarial techniques to the measurement date of June 30, 2019.

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

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November 18, 2019
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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 2014 to 2018. 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

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

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November 18, 2019

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, 2018. These valuations indicate that the current contribution rates, for benefits then in effect, meet the basic financial objective. The employee contribution rates vary by participating City and are 7% - 10% of payroll for active members. There were 4 active members as of June 30, 2018.

The total pension liabilities for the Governmental Accounting Standards Board Statement No. 67 (GASB 67) are based on the June 30, 2018 actuarial valuation and are rolled forward using actuarial techniques to the measurement date of June 30, 2019.

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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 2014 to 2018. 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 pronounced 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,

Edward J. Koebel

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

Cavanaugh Macdonald
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November 18, 2019

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, 2018. 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 174 active members as of June 30, 2018.

The total pension liabilities for the Governmental Accounting Standards Board Statement No. 67 (GASB 67) are based on the June 30, 2018 actuarial valuation and are rolled forward using actuarial techniques to the measurement date of June 30, 2019.

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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 2014 to 2018. 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,

Edward J. Koebel

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

Actuarial valuations are performed annually to measure the funding progress of the plans and the total pension liabilities used for accounting purposes. Beginning with the year ending June 30, 2019, the valuation report will be finalized and approved by the Board at the December board meeting. As a result, total pension liabilities for accounting purposes will be based on the prior actuarial valuation (June 30, 2018), which is rolled forward to the June 30, 2019 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. In August 2019, the System adopted new actuarial assumptions based on the experience investigation for the four-year period ending June 30, 2018.

Significant methods and assumptions were as follows:

	PERS	MHSPRS	MRS	SLRP
Valuation Date	June 30, 2018	June 30, 2018	June 30, 2018	June 30, 2018
Measurement Date	June 30, 2019	June 30, 2019	June 30, 2019	June 30, 2019
Actuarial Cost Method	Entry age	Entry age	Entry age	Entry age
Amortization Method	Level percent open	Level percent open	Level dollar closed	Level percent open
Remaining Amortization Period	30.9 years	18.3 years	16.0 years	20.1 years
Asset Valuation Method	5-year Smoothed Market	5-year Smoothed Market	5-year Smoothed Market	5-year Smoothed Market
Actuarial Assumptions:				
Investment Rate Of Return	7.75%	7.75%	7.75%	7.75%
Salary Increases	3.00-18.25%	3.00-8.56%	3.00-4.50%	3.00%
Wage Inflation Rates	3.00%	3.00%	3.00%	3.00%
Increase In Benefits After Retirement	3.00%*	3.00%**	Various***	3.00%*

** 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 assumptions used in the actuarial valuation were adopted by the Board when the *Experience Investigation for the Four-Year Period Ending June 30, 2018*, was adopted August 27, 2019. Following are the assumptions adopted by the Board for this program.

INTEREST RATE: 7.75 percent per annum, compounded annually (net of investment expense only). The expected return on assets consists of 2.75 percent price inflation and 5.00 percent real rate of return.

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

	Annual Rates of					
	Withdrawal & Vesting*		Death**		Disability***	
Age	Male	Female	Male	Female	Male	Female
20	26.50%	32.50%	0.0483%	0.0126%	0.010%	0.0009%
25	18.50	18.50	0.0567	0.0189	0.012	0.011
30	11.75	12.00	0.0630	0.0259	0.017	0.014
35	8.50	8.75	0.0714	0.0350	0.036	0.017
40	6.75	7.00	0.0893	0.0483	0.110	0.070
45	6.25	6.00	0.1218	0.0665	0.230	0.140
50	6.25	6.00	0.1764	0.0917	0.290	0.220
55	6.25	6.00	0.2594	0.1274	0.500	0.380
60	6.25	6.00	0.3980	0.1757	0.530	0.410
65	6.25	6.00	0.6353	0.2429	0.200	0.150
70	6.25	6.00	1.1655	0.4739	0.200	0.150
74	6.25	6.00	1.8942	0.8092	0.200	0.150

* *For all ages, rates of 33.5 percent for first year of employment and 24.0 percent for second year.*
** *94.0 percent are presumed to be non-duty related, and 6.0 percent are assumed to be duty related.*
*** *91.0 percent are presumed to be non-duty related, and 9.0 percent are assumed to be duty related.*

	Annual Rates of Service Retirements			
	Male		Female	
Age	Under 25 Years of Service*	25 Years of Service & Over*	Under 25 Years of Service*	25 Years of Service & Over*
45	-%	22.50%	-%	18.00%
50	-	15.00	-	13.00
55	-	18.25	-	19.00
60	10.50	19.50	13.25	22.25
62	20.75	32.00	19.00	37.50
65	25.00	29.50	29.25	42.50
70	20.00	25.00	24.00	25.50
75	100.00	100.00	100.00	100.00

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

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

	Annual Rates of Salary Increases		
Service	Merit & Seniority	Base (Economy)	Increase Next Year
0	15.25%	3.00%	18.25%
1	5.25	3.00	8.25
2	2.75	3.00	5.75
3	1.75	3.00	4.75
4	1.25	3.00	4.25
5-7	0.75	3.00	3.75
8-27	0.25	3.00	3.25
28 & Over	-	3.00	3.00

PAYROLL GROWTH: 3.00 percent per annum, compounded annually.

ADMINISTRATIVE EXPENSES: 0.25 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 112.0 percent for ages less than 76 then scaled down to 105.0 percent for ages 80 to 119. Females are adjusted by 85.0 percent for ages less than 66 then scaled up to 102.0 percent for ages 75 to 119. The PubT.H-2010 Disabled Retiree Table is used for disabled retirees with the following adjustments: 137.0 percent of male rates at all ages and 115.0 percent of female rates at all ages. The projection scale MP-2018 will be 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: Market value of assets, five-year smoothed.

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 (currently 7.75 percent). 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.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for pension benefits to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his or her anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his or her behalf.

The unfunded actuarial accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from PERS. The accrued liability contribution amortizes the balance of the unfunded accrued liability over a period of years from the valuation date.

Assumptions used in the actuarial valuation were adopted by the MHSPRS Advisory Board when the *Experience Investigation for the Four-Year Period Ending June 30, 2018*, was adopted August 27, 2019. Following are the assumptions adopted by the PERS Board for this program.

INTEREST RATE: 7.75 percent per annum, compounded annually (net of investment expenses only). The expected return on assets consists of 2.75 percent price inflation and 5.00 percent real rate of return.

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

	Annual Rates of						
		Death		Disability			
Age	Withdrawal & Vesting	Males	Females	Non-Duty	Duty	Service	Service Retirement*
25	5.60%	0.06%	0.02%	0.07%	-%	5	5.00%
30	4.00	0.06	0.03	0.09	0.01	10	5.00
35	3.00	0.07	0.04	0.12	0.04	15	5.00
40	2.00	0.09	0.05	0.15	0.05	20	5.00
45	1.00	0.12	0.07	0.22	0.05	25	10.00
50	1.00	0.18	0.09	0.38	0.04	30	25.00
55	-	0.26	0.13	0.68	0.01	35	25.00
60	-	0.40	0.18	1.16	-	40+	100.00

**The annual rate of service retirement is 100.0 percent at age 61.*

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.

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

		Annual Rates of	
Age	Merit & Seniority	Base (Economy)	Increase Next Year
20	5.56%	3.00%	8.56%
25	2.31	3.00	5.31
30	1.49	3.00	4.49
35	1.49	3.00	4.49
40	1.49	3.00	4.49
45	1.00	3.00	4.00
50	0.50	3.00	3.50
55	0.50	3.00	3.50
60	-	3.00	3.00

PAYROLL GROWTH: 3.00 percent per annum, compounded annually.

ADMINISTRATIVE EXPENSES: 0.25 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 112.0 percent for ages less than 76 then scaled down to 105.0 percent for ages 80 to 119. Females are adjusted by 85.0 percent for ages less than 66 then scaled up to 102.0 percent for ages 75 to 119. The PubT.H-2010 Disabled Retiree Table is used for disabled retirees with the following adjustments: 137.0 percent of male rates at all ages and 115.0 percent of female rates at all ages. The projection scale MP-2018 will be 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: Market value of assets, five-year smoothed.

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 (currently 7.75 percent). 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.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for pension benefits to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his or her anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his or her behalf.

The unfunded actuarial accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from the MHSPRS. The accrued liability contribution amortizes the balance of the unfunded accrued liability over a period of years from the valuation date.

Statement of Actuarial Assumptions & Methods

Assumptions used in the actuarial valuation were adopted by the PERS Board of Trustees when the *Experience Investigation for the Four-Year Period Ending June 30, 2018*, was adopted on August 27, 2019. Following are the assumptions adopted by the PERS Board for this program.

INTEREST RATE: 7.75 percent per annum, compounded annually (net after investment expenses) for prior funding policy rate determination and GASB disclosure.

6.5 percent per annum, compounded annually (net after investment expenses) for current funding policy rate determination.

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

		Annual Rates of			
		Death		Disability	
Age	Withdrawal	Non-duty	Duty	Non-Duty	Duty
20	10.65%	0.04%	0.02%	0.08%	0.06%
25	8.64	0.05	0.03	0.12	0.12
30	6.87	0.08	0.04	0.18	0.26
35	4.86	0.11	0.05	0.24	0.52
40	2.97	0.15	0.07	0.36	0.60
45	1.44	0.22	0.09	0.64	0.54
50	0.24	0.34	0.14	1.10	0.88
55	-	0.44	0.20	1.58	1.18
60	-	0.51	0.32	2.20	1.30
64	-	0.57	0.42	2.86	1.38

Years of Service	Service Retirement
20	45.00%
21-28	17.50
29-33	35.00
34 & Over	20.00
Age 65	100.00

SALARY INCREASES: 3.00 percent for wage inflation, plus the following chart:

Ages	Merit & Seniority Salary Increase
Under 43	1.50%
43-47	1.00
48-52	0.50
53 & Over	-

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 112.0 percent for ages less than 76 then scaled down to 105 percent for ages 80 to 119. Females are adjusted by 85.0 percent for ages less than 66 then scaled up to 102 percent for ages 75 to 119. The PubT.H-2010 Disabled Retiree Table is used for disabled retirees with the following adjustments: 137 percent of male rates at all ages and 115 percent of female rates at all ages. The projection scale MP-2018 will be 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 amortized over a closed 30-year period from September 30, 1990, as a level percent of each municipality's assessed property valuation.

ASSESSED PROPERTY VALUE RATE OF INCREASE: 2.0 percent per annum, compounded annually (used in determining the millage rate under the prior funding policy).

EXPENSE LOAD: 2.0 percent of employer contributions.

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

Statement of Actuarial Assumptions & Methods

All assumptions used in the actuarial valuation were adopted by the PERS Board of Trustees when the *Experience Investigation for the Four-Year Period Ending June 30, 2018*, was adopted August 27, 2019. Following are the assumptions adopted by the PERS Board for this program.

INTEREST RATE: 7.75 percent per annum, compounded annually (net of investment expenses only). The expected return on assets consists of 2.75 percent price inflation and 5.00 percent rate of return.

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

	Annual Rates of		
	Death		
Age	Male	Female	Disability*
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 AND VESTING: 20.0 percent in an election year, none in a non-election year.

SERVICE RETIREMENT: 30.0 percent in an election year, none 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 two and a half years of service credit for unused leave at termination of employment.

PAYROLL GROWTH: 3.00 percent per annum, compounded annually.

ADMINISTRATIVE EXPENSES: 0.25 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 112.0 percent for ages less than 76 then scaled down to 105.0 percent for ages 80 to 119. Females are adjusted by 85.0 percent for ages less than 66 then scaled up to 102.0 percent for ages 75 to 119. The PubT.H-2010 Disabled Retiree Table is used for disabled retirees with the following adjustments: 137.0 percent of male rates at all ages and 115.0 percent of female rates at all ages. The projection scale MP-2018 will be 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: Market value of assets, five-year smoothed.

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 (currently 7.75 percent). 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.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made for pension benefits to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his or her anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his or her behalf.

The unfunded actuarial accrued liability is determined by subtracting the current assets and the present value of prospective employer normal contributions and member contributions from the present value of expected benefits to be paid from SLRP. The accrued liability contribution amortizes the balance of the unfunded accrued liability over a period of years from the valuation date.

SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

The following summary presents the main benefit and contribution provisions of the plan in effect June 30, 2018, as interpreted in preparing the actuarial valuation and as of June 30, 2019, 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 for employers and employees over the years are as follows:

Fiscal Date From	Fiscal Date To	Employer Rate	Maximum Covered Earnings	Employee Rate	Maximum Covered Earnings
2/1/1953	6/30/1958	2.50%	$6,000	4.00%	$4,800*
7/1/1958	6/30/1960	2.50	9,000	4.00	7,800*
7/1/1960	6/30/1966	2.50	15,000	4.00	13,800*
7/1/1966	6/30/1968	3.00	15,000	4.50	13,800*
7/1/1968	3/31/1971	4.50	15,000	4.50	15,000
4/1/1971	6/30/1973	4.50	35,000	4.50	35,000
7/1/1973	6/30/1976	5.85	35,000	5.00	35,000
7/1/1976	6/30/1977	7.00	35,000	5.00	35,000
7/1/1977	6/30/1978	7.50	35,000	5.50	35,000
7/1/1978	6/30/1980	8.00	35,000	5.50	35,000
7/1/1980	6/30/1981	8.00	53,000	5.50	53,000
7/1/1981	12/31/1983	8.75	53,000	6.00	53,000
1/1/1984	6/30/1988	8.75	63,000	6.00	63,000
7/1/1988	6/30/1989	8.75	75,600	6.00	75,600
7/1/1989	12/31/1989	8.75	75,600	6.50	75,600
1/1/1990	6/30/1991	9.75	75,600	6.50	75,600
7/1/1991	6/30/1992	9.75	75,600	7.25	75,600
7/1/1992	6/30/2002	9.75	125,000	7.25	125,000
7/1/2002	6/30/2005	9.75	150,000	7.25	150,000
7/1/2005	6/30/2006	10.75	150,000	7.25	150,000
7/1/2006	6/30/2007	11.30	150,000	7.25	150,000
7/1/2007	6/30/2008	11.85	150,000	7.25	150,000
7/1/2008	6/30/2009	11.85	230,000	7.25	230,000
7/1/2009	6/30/2010	12.00	245,000	7.25	245,000
7/1/2010	6/30/2011	12.00	245,000	9.00	245,000
7/1/2011	12/31/2011	12.00	245,000	9.00	245,000
1/1/2012	6/30/2012	12.93	245,000	9.00	245,000
7/1/2012	6/30/2013	14.26	250,000	9.00	250,000
7/1/2013	6/30/2014	15.75	255,000	9.00	255,000
7/1/2014	6/30/2015	15.75	260,000	9.00	260,000
7/1/2015	6/30/2017	15.75	265,000	9.00	265,000
7/1/2017	6/30/2018	15.75	270,000	9.00	270,000
7/1/2018	6/30/2019	15.75	275,000	9.00	275,000

**From February 1, 1953, through June 30, 1968, the first $100 in monthly earnings or $1,200 in annual earnings were not covered earnings for the employee.*

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 under condition (a) above 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.

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. 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

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 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.

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, 2018, as interpreted in preparing the actuarial valuation and as of June 30, 2019, 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 for employers and members over the years are as follows:

Date From	Date To	Employer Rate	Maximum Covered Earnings*	Member Rate	Maximum Covered Earnings*
7/1/1958	6/30/1968	13.33%	$-	5.00%	$-
7/1/1968	6/30/1971	15.33	-	5.00	-
7/1/1971	6/30/1973	18.59	-	5.00	-
7/1/1973	6/30/1975	20.77	-	5.00	-
7/1/1975	6/30/1978	24.65	-	5.00	-
7/1/1978	6/30/1980	26.16	-	6.00	-
7/1/1980	6/30/1989	26.16	-	6.50	-
7/1/1989	6/30/1990	27.97	-	6.50	-
7/1/1990	6/30/2003	26.16	-	6.50	-
7/1/2003	6/30/2006	28.16	-	6.50	-
7/1/2006	6/30/2008	30.30	-	6.50	-
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	6/30/2019	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 $146,850).*

Effective July 1, 2018, additional contributions from Senate Bill No. 2659 and House Bill No. 1015 are estimated to be $3,500,000 combined.

Benefits

SUPERANNUATION RETIREMENT

Condition for Retirement

a) 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 has attained age 63 shall be retired forthwith. Effective July 1, 2011, the Commissioner of Public Safety is authorized to allow a member who has attained age 63 to continue in active service. Such continued service may be authorized annually until the member attains age 65.

b) 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:

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. 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

3. 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, while it 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 exits.

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 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.

SUMMARY OF BENEFIT PROVISIONS EVALUATED

The following summary presents the main provisions of the plans in effect June 30, 2018, 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.

REFUND OF CONTRIBUTIONS

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

MINIMUM ALLOWANCES

The minimum monthly allowances 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 (not to exceed 64.4 percent) 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 30.0 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

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, Tupelo, 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 10/1 - 9/30	Valuation Date 9/30	Annual Required Contribution (A)	Actual Contribution (B)	Difference (A-B)	Percentage Contributed
1996-97	1996	$20,674	$71,350	$50,676	345.10%
1997-98	1997	14,727	14,200	(527)	96.40
1998-99	1998	13,803	13,770	(33)	99.80
1999-00	1999	12,364	14,162	1,798	114.50
2000-01	2000	11,276	14,201	2,925	125.90
2001-02	2001	10,823	14,338	3,515	132.50
2002-03	2002	11,989	13,979	1,990	116.60
2003-04	2003	13,286	13,890	604	104.50
2004-05	2004	14,091	14,173	82	100.60
2005-06	2005	15,397	15,635	238	101.50
2006-07	2006	15,426	14,976	(450)	97.10
2007-08	2007	15,219	16,132	913	106.00
2008-09	2008	14,765	16,892	2,127	114.40
2009-10	2009	17,739	21,426	3,687	120.80
2010-11	2010	18,576	22,791	4,215	122.70
2011-12	2011	18,751	23,823	5,072	127.00
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	-	-	N/A
2018-19	2018*	16,695	-	-	N/A

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

SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

The following summary presents the main benefit and contribution provisions of the plan in effect June 30, 2018, as interpreted in preparing the actuarial valuation and as of June 30, 2019, 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 for employers and employees over the years are as follows:

Date From	Date To	Employer Rate	Maximum Covered Earnings	Member Rate	Maximum Covered Earnings
7/1/1989	6/30/1992	6.33%	$75,600	3.00%	$75,600
7/1/1992	6/30/2002	6.33	125,000	3.00	125,000
7/1/2002	6/30/2006	6.33	150,000	3.00	150,000
7/1/2006	6/30/2008	6.65	150,000	3.00	150,000
7/1/2008	6/30/2009	6.65	230,000	3.00	230,000
7/1/2009	12/31/2011	6.65	245,000	3.00	245,000
1/1/2012	6/30/2012	7.40	245,000	3.00	245,000
7/1/2012	6/30/2013	7.40	250,000	3.00	250,000
7/1/2013	6/30/2014	7.40	255,000	3.00	255,000
7/1/2014	6/30/2015	7.40	260,000	3.00	260,000
7/1/2015	6/30/2017	7.40	265,000	3.00	265,000
7/1/2017	6/30/2018	7.40	270,000	3.00	270,000
7/1/2018	6/30/2019	7.40	275,000	3.00	275,000

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 the System. 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 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 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

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 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.

Changes in Plan Provisions

The Mississippi Legislature ended its 2019 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

As of June 30, 2019, valuation assets and funding progress of the System are based on the June 30, 2018 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, MRS, and SLRP 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, 2018 (in thousands):

	PERS	MHSPRS	MRS	SLRP	TOTAL
Asset Valuation as of June 30, 2017	**$26,364,446**	**$339,114**	**$157,674**	**$17,208**	**$26,878,442**
Contributions & Other Revenue	1,588,970	17,399	17,635	720	1,624,724
Benefit Payments	(2,733,721)	(32,418)	(33,604)	(1,428)	(2,801,171)
Administrative Expenses	(16,264)	(250)	(352)	(10)	(16,876)
Investment Expenses*	(103,669)	(1,207)	-	(62)	(104,938)
Net	**(1,264,684)**	**(16,476)**	**(16,321)**	**(780)**	**(1,298,261)**
Expected Total Investment Return For 2018 (7.75%)	2,115,770	27,099	11,657	1,378	2,155,904
Adjustment Toward Market (20%)	240,170	2,678	1,739	139	244,726
Asset Valuation as of June 30, 2018	**$27,455,702**	**$352,415**	**$154,749**	**$17,945**	**$27,980,811**

**This amount is based on a proportionate share of the total investment expense of the commingled assets. The ratio of this number to the total investment expense is equal to the ratio of a fiscal year average market value of assets for this fund to a fiscal year average market value of the total commingled assets.*

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.

The following table presents the actual remaining amortization periods as of June 30, 2018.

	PERS	MHSPRS	SLRP
Previously Reported Period	38.4 years	37.6 years	21.6 years
Change Due To:			
Normal Amortization	(1.0)	(1.0)	(1.0)
Actuarial Experience	2.4	3.1	(0.5)
Assumption Method Changes	-	3.5	-
Plan Amendments	-	-	-
Additional Assumed Contributions	-	(24.9)	-
Contribution Experience	(8.9)	-	-
Computed Period	30.9 years	18.3 years	20.1 years

For PERS, the primary reasons for the decrease in the amortization period was the increase in the Fixed Contribution Rate (FCR), the gain due to investment earnings on an actuarial value of assets basis better than expected (9.16 percent vs. 7.75 percent) and salary increases less than expected. These gains were partially offset by a loss due to withdrawals from employment.

For MHSPRS, the primary reasons for the decrease in the amortization period was due to the change in the employer contribution rate from 37.00 percent of pay to 49.08 percent of compensation. This was offset by losses on salary increases and a decrease in the Motor Vehicle Replacement (MVR) fee assumption from $3.8 million per year to $3.5 million per year.

For SLRP, the primary reason for the decrease in the amortization period was the investment gain on an actuarial value basis. There were also gains on mortality experience, as well as salary increases less than expected. These gains were slightly offset by losses from four retirements, which was more than expected in a non-election year.

The funded status of each of the plans is shown in the Schedules of Funding Progress on pages 144 and 145. This table shows funding ratios for the last 10 fiscal years. The table also shows the amount by which actuarial assets exceeded or fell short of actuarial benefit liabilities. An actuarial valuation of the plan's assets and benefit obligations is performed annually.

At the date of the most recent actuarial valuation, June 30, 2018, the funded status of PERS increased to 61.8 percent from 61.1 percent at June 30, 2017. The amount by which PERS' actuarial assets were less than actuarial benefit liabilities was $16.9 billion at June 30, 2018, an increase in unfunded actuarial accrued liabilities of $138 million from June 30, 2017.

At the date of the most recent actuarial valuation, June 30, 2018, the funded status of the MHSPRS decreased to 66.8 percent from 68.1 percent at June 30, 2017. The amount by which the MHSPRS' actuarial assets were less than actuarial benefit liabilities was $175.0 million, compared with $158.9 million at June 30, 2017.

As of the June 30, 2018, actuarial valuation of MRS, the funded status increased to 50.3 percent from 49.0 percent at June 30, 2017. The amount by which the MRS actuarial assets were less than actuarial benefit liabilities was $152.7 million at June 30, 2018, compared with $164.1 million at June 30, 2017.

At the date of the most recent actuarial valuation, June 30, 2018, the funded status of SLRP increased to 80.4 percent from 78.8 percent at June 30, 2017. The amount by which the SLRP actuarial assets were less than actuarial benefit liabilities was $4.4 million, compared with $4.6 million at June 30, 2017.

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)
Public Employees' Retirement System of Mississippi						
6/30/09	$20,597,581	$30,594,546	$9,996,965	67.30%	$5,831,864	171.40%
6/30/10	20,143,426	31,399,988	11,256,562	64.20	5,763,556	195.30
6/30/11	20,315,165	32,654,465	12,339,300	62.20	5,684,624	217.10
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
Mississippi Highway Safety Patrol Retirement System						
6/30/09	$292,322	$394,630	$102,308	74.10%	$26,390	387.70%
6/30/10	281,088	411,277	130,189	68.30	26,353	494.00
6/30/11	278,265	414,432	136,167	67.10	24,872	547.50
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
Municipal Retirement Systems						
9/30/09	$191,179	$381,036	$189,857	50.20%	$1,608	11,807.00%
9/30/10	175,988	372,897	196,909	47.20	1,425	13,818.20
9/30/11	167,604	363,604	196,000	46.10	1,357	14,443.60
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
Supplemental Legislative Retirement Plan						
6/30/09	$13,386	$16,535	$3,149	81.00%	$6,803	46.30%
6/30/10	13,241	17,081	3,840	77.50	6,605	58.10
6/30/11	13,606	18,605	4,999	73.10	6,810	73.40
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	95.90
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

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

Solvency Tests

[in thousands]

Valuation Date	Actuarial Accrued Liabilities For: (1) Accumulated Employee Contributions Including Allocated Investment Earnings	(2) Retirees and Beneficiaries Currently Receiving Benefits	(3) Active and Inactive Members Employer-financed Portion	Net Position Available For Benefits	Portions of Accrued Liabilities Covered by Assets (1)	(2)	(3)
Public Employees' Retirement System of Mississippi							
6/30/09	$4,235,466	$15,665,712	$10,693,368	$20,597,581	100.00%	100.00%	6.50%
6/30/10	4,266,621	16,763,455	10,369,912	20,143,426	100.00	94.70	-
6/30/11	4,356,556	18,001,718	10,296,191	20,315,165	100.00	88.70	-
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	-
Mississippi Highway Safety Patrol Retirement System							
6/30/09	$20,136	$273,774	$100,720	$292,322	100.00%	99.40%	-%
6/30/10	20,658	284,106	106,513	281,088	100.00	91.70	-
6/30/11	20,621	292,234	101,577	278,265	100.00	88.20	-
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	-
Municipal Retirement Systems							
9/30/09	$2,522	$369,470	$9,044	$191,179	100.00%	51.10%	-%
9/30/10	2,295	362,444	8,158	175,988	100.00	47.90	-
9/30/11	2,256	353,609	7,739	167,604	100.00	46.80	-
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	-
Supplemental Legislative Retirement Plan							
6/30/09	$2,327	$8,756	$5,432	$13,386	100.00%	100.00%	42.40%
6/30/10	2,509	8,777	5,795	13,241	100.00	100.00	33.70
6/30/11	2,642	8,734	7,229	13,606	100.00	100.00	33.80
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

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

Analysis of Financial Experience
Gains and Losses in Accrued Liabilities Resulting from Differences Between Assumed Experience and Actual Experience
For The Year Ended June 30, 2018

[in thousands]

	Gain (Loss) For Year			
Type of Activity	PERS	MHSPRS	MRS	SLRP
Age & Service Retirements: If members retire at older ages, there is a gain. If younger ages, a loss.	$85,100.00	$554.80	$42.20	$(158.00)
Disability Retirements: If disability claims are less than assumed, there is a gain. If more claims, a loss.	1,400.00	(19.60)	-	9.70
Death-in-service Benefits: If survivor claims are less than assumed, there is a gain. If more claims, a loss.	100.00	0.60	0.50	5.00
Withdrawal From Employment: If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(165,600.00)	(336.80)	-	72.90
Pay Increases: If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	236,400.00	(11,488.10)	14.30	241.50
New Members: Additional unfunded accrued liability will produce a loss.	(60,800.00)	(3,306.90)	-	(4.30)
Investment Income: If there is greater investment income than assumed, there is a gain. If less income, a loss.	254,000.00	2,880.30	1,796.30	149.00
Death After Retirement: If retirants live longer than assumed, there is a loss. If not as long, a gain.	20,400.00	131.80	4,562.20	144.90
Other: Miscellaneous gains and losses, data adjustments, timing of financial transactions, etc.	(155,300.00)	(3,122.70)	(14.10)	(150.40)
Gain (or Loss) During Year From Financial Experience	215,700.00	(14,706.60)	6,401.40	310.30
Non-recurring Items: Adjustments for plan amendments, assumption changes, or method changes and changes in valuation software.	-	-	(253.00)	-
Composite Gain (or Loss) During Year	$215,700.00	$(14,706.60)	$6,148.40	$310.30

Schedule of Active Member Valuation Data

Valuation Date	Number of Employers	Active Members: Number of Employees	Annual Payroll	Annual Average Pay	Increase in Average Pay
Public Employees' Retirement System of Mississippi					
6/30/09	866	167,122	$5,831,863,534	$34,896	4.30%
6/30/10	868	164,896	5,763,556,195	34,953	.20
6/30/11	872	161,676	5,684,624,214	35,161	.60
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
Mississippi Highway Safety Patrol Retirement System					
6/30/09	1	570	$26,389,909	$46,298	(2.10)%
6/30/10	1	542	26,353,400	48,623	5.00
6/30/11	1	515	24,872,085	48,295	(0.70)
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)
Municipal Retirement Systems					
9/30/09	17	31	$1,608,396	$51,884	6.00%
9/30/10	17	27	1,424,636	52,764	1.70
9/30/11	17	25	1,356,858	54,274	2.90
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)
Supplemental Legislative Retirement Plan					
6/30/09	5	174	$6,803,339	$39,100	1.30%
6/30/10	5	175	6,605,037	37,743	(3.50)
6/30/11	5	174	6,809,770	39,137	3.70
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)

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

Schedule of Retirants Added to and Removed from Rolls
Last Six Fiscal Years

	Added		Removed			Rolls At End Of Year			
Fiscal Year Ended *	Number	Annual Allowances	Number	Annual Allowances	Increase Due To Annual COLA	Number	Annual Allowances	Increase In Annual Allowances	Average Annual Allowances
June 30, 2013									
PERS	6,276	$120,592,399	(2,891)	$(47,237,330)	$48,758,557	90,214	$1,874,720,385	6.97%	$20,781
MHSPRS	23	642,344	(23)	(596,871)	622,206	713	25,835,619	2.65	36,235
MRS	40	896,085	(77)	(1,083,209)	195,722	1,941	35,105,891	0.02	18,086
SLRP	20	77,003	(5)	(26,497)	24,226	188	1,121,404	7.14	5,965
June 30, 2014									
PERS	6,159	120,190,296	(2,869)	(48,955,768)	52,368,041	93,504	1,998,322,954	6.59	21,372
MHSPRS	28	1,113,236	(21)	(661,028)	678,533	720	26,966,360	4.38	37,453
MRS	29	485,121	(80)	(1,041,083)	173,544	1,890	34,723,473	(1.09)	18,372
SLRP	6	32,688	(7)	(44,780)	30,165	187	1,139,477	1.61	6,093
June 30, 2015									
PERS	5,907	117,113,206	(3,073)	(55,158,128)	56,044,620	96,338	2,116,322,652	5.90	21,968
MHSPRS	22	890,167	(18)	(480,408)	700,417	724	28,076.536	4.12	38,780
MRS	40	731,337	(81)	(1,119,680)	143,234	1,849	34,478,364	(0.71)	18,647
SLRP	8	58,303	(10)	(95,910)	31,718	185	1,133,588	(0.52)	6,128
June 30, 2016									
PERS	6,548	132,970,248	(3,403)	(59,603,335)	59,355,139	99,483	2,249,044,704	6.27	22,607
MHSPRS	26	833,870	(26)	(830,278)	701,887	724	28,782,015	2.51	39,754
MRS	46	842,966	(97)	(1,365,194)	132,268	1,798	34,088,404	(1.13)	18,959
SLRP	28	177,207	(6)	(57,546)	24,514	207	1,277,763	12.72	6,173
June 30, 2017									
PERS	6,219	123,938,697	(3,442)	(62,470,173)	64,233,789	102,260	2,374,747,017	5.59	23,223
MHSPRS	22	717,225	(20)	(694,187)	758,789	726	29,563,842	2.72	40,722
MRS	34	712,490	(78)	(1,174,872)	125,506	1,754	33,751,528	(0.99)	19,243
SLRP	6	31,300	(8)	(64,321)	34,729	205	1,279,471	0.13	6,241
June 30, 2018									
PERS	5,985	121,870,115	(3,272)	(64,186,324)	68,319,584	104,973	2,500,750,392	5.31	23,823
MHSPRS	17	787,728	(18)	(494,512)	757,399	725	30,614,457	3.55	42,227
MRS	36	674,428	(96)	(1,530,600)	102,334	1,694	32,997,690	(2.23)	19,479
SLRP	6	34,983	(4)	(42,480)	32,574	207	1,304,548	1.96	6,302

*Information for MRS is as of September 30 for fiscal years 2011 through 2012.

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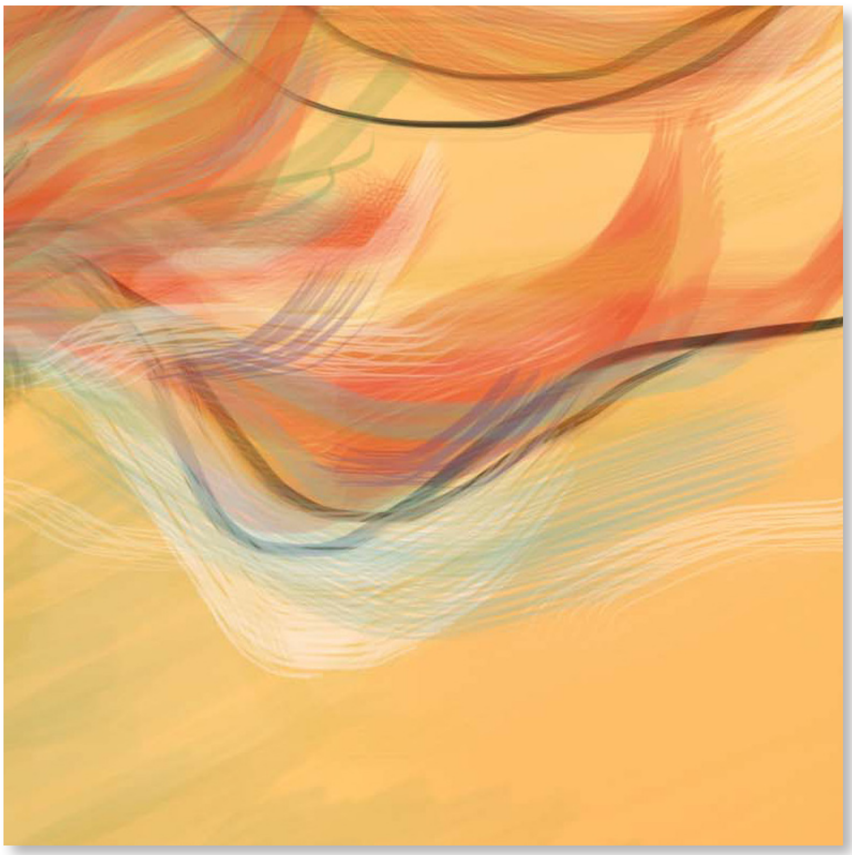
Statistical



FORWARD FACING

PERS always looks and plans ahead to provide for its members years down the road

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 is obtained from the System's internal resources and the actuarial valuation (the most recent being as of June 30, 2018) for each plan. The System had no outstanding debt as of June 30, 2019.

Financial Trends

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 are from the excess of investment earnings and contributions over deductions. Over the years, investment income has fluctuated with the economy with net earnings ranging from the least amount earned of approximately $61 million in 2009, to a high earnings mark of almost $4 billion in 2014. 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 steady increase in contributions is attributable to contribution rate increases as well as wage increases over the 10-year period.

Retirement annuities account for approximately 95-percent of the total deductions for the System and have increased steadily over the 10-year period for all plans with the exception of MRS. The drivers of this increase include an increase in the number of retirees (for example there were approximately 79,000 PERS retirees as of June 30, 2010 compared with 104,000 per the June 30, 2018 actuarial valuation report), wage and payroll increases, and the 3-percent cumulative annual cost of living adjustment.

Operating Information

These schedules provide information on retiree benefits and employer and member contributions. Retiree information includes total number and dollar amount by type of retirement (service, disability, survivor) as well as average monthly benefit based on years of service. Additionally, information is provided as to the retirement option selected by retirees. Employer information includes a summary of employer by type and the associated employer and member contribution amounts.

Demographic and Economic Information

The schedules of active members by age and years of service summarize relevant details about the composition of each plan's membership.. 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 for the multi-employer plans, which are PERS and MRS. A list of all public agency employers that participate in PERS is also provided.

Changes in Net Position

Last 10 Fiscal Years

[in thousands]

Public Employees' Retirement System of Mississippi

Fiscal Year	Beginning Net Position	Member Contributions Amount	Member Contributions Percent*	Employer Contributions Amount	Employer Contributions Percent*	Net Investment Income	Other Revenues	Total Additions
2010	$15,134,487	$439,397	7.25%	$731,544	12.00%	$2,148,749	$610	$3,320,300
2011	16,788,214	533,369	9.00	723,836	12.00	4,167,042	639	5,424,886
2012	20,377,236	545,587	9.00	768,914	12.93	59,595	664	1,374,760
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

Fiscal Year	Pension Benefits	Refunds	Administrative Expenses	Total Deductions	Change in Net Position	Ending Net Position
2010	$1,580,808	$73,580	$12,185	$1,666,573	$1,653,727	$16,788,214
2011	1,734,475	88,343	13,046	1,835,864	3,589,022	20,377,236
2012	1,862,826	93,379	14,404	1,970,609	(595,849)	19,781,387
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

** Percentage of annual covered payroll. The rate shown for 2012 for PERS was effective as of January 1, 2012. For 2012, the rate prior to January 1, 2012, was 12.0 percent.*

Changes in Net Position

Last 10 Fiscal Years

[in thousands]

Mississippi Highway Safety Patrol Retirement System

Fiscal Year	Beginning Net Position, as restated	Member Contributions Amount	Member Contributions Percent*	Employer Contributions Amount**	Employer Contributions Percent*	Net Investment Income	Other Revenues	Total Additions
2010	$214,374	$2,043	7.25%	$8,613	30.30%	$29,942	$3,985	$44,583
2011	232,873	1,948	7.25	8,067	30.30	57,090	3,427	70,532
2012	277,563	1,946	7.25	8,798	35.21	805	3,246	14,795
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

Fiscal Year	Pension Benefits	Refunds	Administrative Expenses	Total Deductions	Change in Net Position	Ending Net Position
2010	$25,847	$65	$172	$26,084	$18,499	$232,873
2011	25,620	60	162	25,842	44,690	277,563
2012	26,926	24	176	27,126	(12,331)	265,232
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

** Percentage of annual covered payroll. The rate shown for 2012 for MHSPRS was effective as of January 1, 2012. For 2012, the rate prior to January 1, 2012, was 30.30 percent.*

*** 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]

Municipal Retirement Systems

Fiscal Year	Beginning Net Position, as restated	Member Contributions Amount	Member Contributions Percent*	Employer Contributions Amount	Employer Contributions Percent*	Net Investment Income	Other Revenues	Total Additions
2010	$145,467	$145	**	$21,420	**	$19,369	$-	$40,934
2011	150,203	126	**	22,860	**	35,363	-	58,349
2012	172,451	121	**	23,449	**	487	-	24,057
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

Fiscal Year	Pension Benefits	Refunds	Administrative Expenses	Total Deductions	Change in Net Position	Ending Net Position
2010	$35,766	$3	$429	$36,198	$4,736	$150,203
2011	35,609	35	457	36,101	22,248	172,451
2012	35,348	3	469	35,820	(11,763)	160,688
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

** Percentage of annual covered payroll.*
*** Employee and employer rates vary among the 19 systems that comprise the Municipal Retirement Systems.*

[in thousands]

Supplemental Legislative Retirement Plan

Fiscal Year	Beginning Net Position	Member Contributions Amount	Member Contributions Percent*	Employer Contributions Amount	Employer Contributions Percent*	Net Investment Income	Other Revenues	Total Additions
2010	$9,832	$202	3.00%	$446	6.65%	$1,432	$ -	$2,080
2011	11,079	206	3.00	457	6.65	2,832	-	3,495
2012	13,737	206	3.00	490	7.40	39	-	735
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

Fiscal Year	Pension Benefits	Refunds	Administrative Expenses	Total Deductions	Change in Net Position	Ending Net Position
2010	$804	$20	$9	$833	$1,247	$11,079
2011	828	-	9	837	2,658	13,737
2012	1,268	25	10	1,303	(568)	13,169
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

** Percentage of annual covered payroll. The rate shown for 2012 for SLRP was effective as of January 1, 2012. For 2012, the rate prior to January 1, 2012, was 6.65 percent.*

Benefit and 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	Refunds Deaths*
2009	61,466	5,257	9,420	76,143	15,654	-
2010	64,049	5,399	9,720	79,168	14,433	-
2011	67,486	5,676	9,953	83,115	16,595	-
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

Total Payments by Type of Benefit
[in thousands]

Fiscal Year	Service	Disability	Survivor	Total	Refunds Terminated	Refunds Deaths*
2009	$1,339,209	$92,925	$33,366	$1,465,500	$70,050	$-
2010	1,444,987	99,920	35,901	1,580,808	73,580	-
2011	1,588,369	107,657	38,449	1,734,475	88,343	-
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

**Information unavailable prior to 2016.*

Benefit and 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	Refunds Deaths*
2009	480	16	196	692	14	-
2010	489	18	189	696	5	-
2011	500	18	186	704	14	-
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	-

Total Payments by Type of Benefit
[in thousands]

Fiscal Year	Service	Disability	Survivor	Total	Refunds Terminated	Refunds Deaths*
2009	$21,194	$478	$1,426	$23,098	$72	$-
2010	24,029	472	1,346	25,847	65	-
2011	23,953	507	1,160	25,620	60	-
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	-

** Information unavailable prior to 2016.*

Benefit and 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	Refunds Deaths*
2009*	1,431	93	566	2,090	3	-
2010*	1,388	84	584	2,056	9	-
2011*	1,334	80	602	2,016	7	-
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	-	-

*Total Payments by Type of Benefit****
[in thousands]

Fiscal Year	Service	Disability	Survivor	Total	Refunds Terminated	Refunds Deaths****
2009*	$27,409	$1,003	$7,045	$35,457	$3	$-
2010*	27,062	927	7,430	35,419	35	-
2011*	26,315	894	7,956	35,165	3	-
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	-	-

** 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.*

Benefit and 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	Refunds Deaths*
2009	113	2	26	141	1	-
2010	117	2	23	142	3	-
2011	118	2	27	147	-	-
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

Total Payments by Type of Benefit
[in thousands]

Fiscal Year	Service	Disability	Survivor	Total	Refunds Terminated	Refunds Deaths*
2009	$739	$12	$39	$790	$9	$-
2010	758	12	34	804	20	-
2011	781	12	35	828	-	-
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

** Information unavailable prior to 2016.*

Average Benefit Payments:
Public Employees' Retirement System of Mississippi

Retirement Effective Dates: July 1, 2013, To June 30, 2018	Years Credited Service							
	0-9	10-14	15-19	20-24	25	26-29	30	31+
2018								
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
2017								
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
2016								
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
2015								
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
2014								
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

Average Benefit Payments:
Mississippi Highway Safety Patrol Retirement System

Retirement Effective Dates: July 1, 2013, To June 30, 2018	Years Credited Service							
	0-9	10-15	16-20	21-24	25	26-29	30	31+
2018								
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
2017								
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
2016								
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
2015								
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
2014								
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

Average Benefit Payments:
Municipal Retirement Systems

Retirement Effective Dates: July 1, 2013, To June 30, 2018	Years Credited Service							
	0-9	10-14	15-19	20-24	25	26-29	30	31+
2018								
Average Monthly Benefit	$-	$-	$-	$-	$-	$-	$-	$3,738
Average Final Salary	$-	$-	$-	$-	$-	$-	$-	$67,277
Number of Active Retirants	-	-	-	-	-	-	-	2
2017								
Average Monthly Benefit	$-	$-	$-	$-	$-	$-	$-	$2,424
Average Final Salary	$-	$-	$-	$-	$-	$-	$-	$43,631
Number of Active Retirants	-	-	-	-	-	-	-	2
2016								
Average Monthly Benefit	$-	$-	$-	$-	$-	$-	$-	$3,479
Average Final Salary	$-	$-	$-	$-	$-	$-	$-	$44,155
Number of Active Retirants	-	-	-	-	-	-	-	3
2015								
Average Monthly Benefit	$-	$-	$-	$-	$-	$-	$2,898	$2,912
Average Final Salary	$-	$-	$-	$-	$-	$-	$51,253	$56,520
Number of Active Retirants	-	-	-	-	-	-	1	2
2014								
Average Monthly Benefit	$-	$-	$-	$-	$-	$-	$-	$2,778
Average Final Salary	$-	$-	$-	$-	$-	$-	$-	$47,160
Number of Active Retirants	-	-	-	-	-	-	-	2

Average Benefit Payments:
Supplemental Legislative Retirement Plan

Retirement Effective Dates: July 1, 2013, To June 30, 2018	Years Credited Service							
	0-9	10-15	16-20	21-24	25	26-29	30	31+
2018								
Average Monthly Benefit	$33	$-	$-	$521	$-	$-	$-	$1,285
Average Final Salary	$20,840	$-	$-	$27,700	$-	$-	$-	$41,618
Number of Active Retirants	2	-	-	3	-	-	-	1
2017								
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	-	-	-
2016								
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
2015								
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
2014								
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	-	-

Retired Members by Type of Benefit

June 30, 2018

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	16,251	736	2,697	163	132	468
501 - 1,000	14,675	682	2,806	172	185	907
1,001 - 1,500	11,860	684	3,027	191	247	1,153
1,501 - 2,000	9,426	465	2,505	120	267	1,156
2,001 - 2,500	6,718	282	1,874	75	185	1,071
2,501 - 3,000	3,986	151	1,104	40	136	630
3,001 - 3,500	2,452	94	678	24	95	426
3,501 - 4,000	1,339	52	398	12	46	235
4,001 - 4,500	773	23	248	6	38	184
4,501 - 5,000	409	9	144	2	13	102
Over 5,000	740	19	366	7	56	232
Totals	**68,629**	**3,197**	**15,847**	**812**	**1,400**	**6,564**

Amount of Monthly Benefit*	Opt. 4B	Opt. 4C***	Opt. 5	PLSO 1 YR.***	PLSO 2 YR.***	PLSO 3 YR.***
$1 - 500	1,753	169	60	586	479	2,284
501 - 1,000	1,486	782	79	790	568	1,968
1,001 - 1,500	1,401	972	85	750	682	2,766
1,501 - 2,000	1,262	431	37	645	709	3,254
2,001 - 2,500	928	123	22	708	627	2,634
2,501 - 3,000	590	48	16	521	416	1,452
3,001 - 3,500	351	19	7	401	269	813
3,501 - 4,000	169	10	-	225	147	385
4,001 - 4,500	104	3	-	139	85	259
4,501 - 5,000	53	2	-	65	34	137
Over 5,000	121	3	-	124	70	236
Totals	**8,218**	**2,562**	**306**	**4,954**	**4,086**	**16,188**

*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, 2018

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	31	-	1	-	-	4
501 - 1,000	83	-	-	1	-	9
1,001 - 1,500	37	-	3	-	-	29
1,501 - 2,000	13	-	9	2	-	72
2,001 - 2,500	7	-	9	-	-	85
2,501 - 3,000	2	-	10	1	-	81
3,001 - 3,500	5	1	9	-	-	78
3,501 - 4,000	-	-	1	1	-	45
4,001 - 4,500	1	1	4	-	-	27
4,501 - 5,000	-	-	1	-	-	14
Over 5,000	-	-	-	-	-	33
Totals	**179**	**2**	**47**	**5**	**-**	**477**

Amount of Monthly Benefit*	Opt. 4B	Opt. 4C***	Opt. 5	PLSO 1 YR.***	PLSO 2 YR.***	PLSO 3 YR.***
$1 - 500	-	-	-	-	-	-
501 - 1,000	-	1	-	-	1	-
1,001 - 1,500	1	3	-	2	-	3
1,501 - 2,000	3	3	-	1	1	7
2,001 - 2,500	2	1	-	8	3	16
2,501 - 3,000	5	3	-	4	5	36
3,001 - 3,500	1	-	-	8	5	32
3,501 - 4,000	2	-	-	7	4	19
4,001 - 4,500	1	-	-	3	3	9
4,501 - 5,000	-	-	-	2	1	5
Over 5,000	-	-	-	3	5	5
Totals	**15**	**11**	**-**	**38**	**28**	**132**

*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, 2018

Supplemental Legislative Retirement Plan

Amount of Monthly Benefit*	Option Selected ** Life	Opt. 1	Opt. 2	Opt. 3	Opt. 4	Opt. 4A
$1 - 100	5	-	6	-	-	-
101 - 200	17	1	16	-	-	-
201 - 300	14	-	13	2	1	3
301 - 400	21	1	13	-	-	3
401 - 500	12	1	6	2	-	1
501 - 600	4	-	2	1	-	2
601 - 700	3	-	10	-	-	1
701 - 800	1	-	4	-	-	-
801 - 900	4	-	1	-	-	1
901 – 1,000	1	-	1	-	-	-
Over 1,000	4	-	2	1	-	1
Totals	**86**	**3**	**74**	**6**	**1**	**12**

Amount of Monthly Benefit*	Opt. 4B	Opt. 4C***	Opt. 5	PLSO 1 YR.***	PLSO 2 YR.***	PLSO 3 YR.***
$1 - 100	3	1	-	-	-	1
101 - 200	1	-	-	-	-	4
201 - 300	2	-	-	1	-	2
301 - 400	7	-	-	2	-	8
401 - 500	3	-	-	1	3	6
501 - 600	2	-	-	1	1	3
601 - 700	2	-	-	-	-	1
701 - 800	-	-	-	-	-	1
801 - 900	2	-	-	-	-	1
901 – 1,000	2	-	-	-	1	1
Over 1,000	1	-	-	2	-	4
Totals	**25**	**1**	**-**	**7**	**5**	**32**

*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 and Member Contributions
Public Employees' Retirement System of Mississippi
For Fiscal Years Ended June 30, 2019 and 2018

[contributions in thousands]

Employer Group	Employer Units	Employer Contributions	Member Number	Member Contributions	Total Contributions	Percent
2019						
State Agencies	105	$177,548	27,259	$100,599	$278,147	17.18%
State Universities	9	164,607	17,878	93,016	257,623	15.91
Public Schools	140	394,418	60,792	222,399	616,817	38.10
Community/Junior Colleges	15	50,008	6,117	28,122	78,130	4.83
Counties	82	88,895	13,765	49,644	138,539	8.56
Municipalities	242	97,280	16,115	55,167	152,447	9.42
Others	261	65,352	8,725	31,994	97,346	6.00
Totals	**854**	**$1,038,108**	**150,651**	**$580,941**	**$1,619,049**	**100.00%**
2018						
State Agencies	107	$178,585	27,383	$100,120	$278,705	17.54%
State Universities	9	165,350	17,599	92,699	258,049	16.24
Public Schools	143	381,404	60,952	213,824	595,228	37.46
Community/Junior Colleges	15	49,890	6,076	27,970	77,860	4.90
Counties	82	83,693	13,741	46,920	130,613	8.22
Municipalities	242	99,780	16,168	55,939	155,719	9.80
Others	260	59,461	8,768	33,335	92,796	5.84
Totals	**858**	**$1,018,163**	**150,687**	**$570,807**	**$1,588,970**	**100.00%**

Note: Above table excludes MHSPRS, MRS, and SLRP 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 and Years of Service:
Public Employees' Retirement System of Mississippi
June 30, 2018

Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Numbers	Valuation Payroll
	Active Member Years of Service							Totals	
Under 21	270	-	-	-	-	-	-	270	$4,797,012
21-24	5,762	46	-	-	-	-	-	5,808	156,010,094
25-29	11,679	2,493	50	-	-	-	-	14,222	469,026,412
30-34	7,680	6,465	2,244	40	-	-	-	16,429	617,132,551
35-39	6,521	4,661	6,059	1,971	34	-	-	19,246	781,779,725
40-44	5,535	3,711	4,055	4,698	1,543	25	-	19,567	835,962,443
45-49	5,061	3,606	3,759	3,675	4,024	1,195	23	21,343	926,997,753
50-54	4,166	2,975	3,164	2,993	2,797	2,071	580	18,746	784,329,069
55-59	3,582	2,758	2,891	3,056	2,732	1,657	1,218	17,894	722,179,334
60-64	2,094	1,982	1,984	1,681	1,538	1,134	1,038	11,451	469,610,349
65-69	786	762	700	529	410	288	359	3,834	160,096,832
70 & Over	395	335	347	273	196	115	216	1,877	71,309,127
Totals	**53,531**	**29,794**	**25,253**	**18,916**	**13,274**	**6,485**	**3,434**	**150,687**	**$5,999,230,701**

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 44.8 years
Service: 10.3 years
Annual Pay: $39,813

Total Active Members by Attained Age and Years of Service:
Mississippi Highway Safety Patrol Retirement System
June 30, 2018

Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Numbers	Valuation Payroll
	Active Member Years of Service							Totals	
Under 25	16	-	-	-	-	-	-	16	$221,127
25-29	32	5	-	-	-	-	-	37	1,195,561
30-34	29	18	14	-	-	-	-	61	2,595,490
35-39	13	13	53	3	-	-	-	82	4,337,592
40-44	7	4	46	32	5	-	-	94	5,539,844
45-49	8	2	31	31	39	4	-	115	7,509,710
50-54	-	2	6	11	31	8	2	60	4,409,227
55-59	-	-	-	4	13	2	14	33	2,629,143
60-64	-	-	-	2	1	1	9	13	1,117,717
65 & Over	-	-	-	-	-	-	-	-	-
Totals	**105**	**44**	**150**	**83**	**89**	**15**	**25**	**511**	**$29,555,411**

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 42.6 years
Service: 13.8 years
Annual Pay: $57,838

Total Active Members by Attained Age and Years of Service:
Municipal Retirement System
June 30, 2018

	Active Member Years of Service							Totals	
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Numbers	Valuation Payroll
Under 25	-	-	-	-	-	-	-	-	$-
25-29	-	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-	-
55-59	-	-	-	-	-	-	1	1	50,886
60 & Over	-	-	-	-	-	-	3	3	148,856
Totals	**-**	**-**	**-**	**-**	**-**	**-**	**4**	**4**	**$199,742**

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 65.3 years
Service: 40.5 years
Annual Pay: $49.936

Total Active Members by Attained Age and Years of Service:
Supplemental Legislative Retirement Plan
June 30, 2018

	Active Member Years of Service							Totals	
Attained Age	0-4	5-9	10-14	15-19	20-24	25-29	30+	Numbers	Valuation Payroll
Under 25	-	-	-	-	-	-	-	-	$-
25-29	2	-	-	-	-	-	-	2	78,228
30-34	4	1	-	-	-	-	-	5	175,003
35-39	9	3	-	-	-	-	-	12	414,798
40-44	4	6	5	-	-	-	-	15	563,117
45-49	9	15	3	1	-	-	-	28	1,063,731
50-54	11	7	2	2	1	-	-	23	884,613
55-59	6	8	6	1	2	1	-	24	998,140
60-64	3	3	6	2	-	4	2	20	836,013
65-69	1	4	6	3	1	3	3	21	846,366
70-74	-	1	4	-	2	3	1	11	449,948
75 & Over	-	-	3	1	1	3	5	13	523,004
Totals	**49**	**48**	**35**	**10**	**7**	**14**	**11**	**174**	**$6,832,961**

While not used in the financial computations, the following group averages are computed and shown because of their general interest:

Age: 56.1 years
Benefit Service: 11.3 years
Eligibility Service: 16.3 years
Annual Pay: $39,270

System Benefit Payments by County

June 30, 2019
[in thousands]

County	Number of Payments	Amount Paid
Adams	1,334	$30,936
Alcorn	1,322	31,244
Amite	391	8,405
Attala	861	20,419
Benton	216	4,477
Bolivar	1,581	39,691
Calhoun	493	10,866
Carroll	493	11,046
Chickasaw	613	13,817
Choctaw	372	8,192
Claiborne	373	9,121
Clarke	655	12,239
Clay	671	17,236
Coahoma	992	27,493
Copiah	1,053	25,327
Covington	751	17,355
Desoto	1,848	42,198
Forrest	3,532	99,631
Franklin	334	8,090
George	688	14,166
Greene	369	7,513
Grenada	861	20,801
Hancock	1,030	22,755
Harrison	5,129	127,495
Hinds	10,422	290,550
Holmes	728	16,519
Humphreys	277	7,145
Issaquena	28	626
Itawamba	913	22,243
Jackson	3,912	96,160
Jasper	622	12,516
Jefferson	409	11,679
Jefferson Davis	405	8,300
Jones	2,736	62,307
Kemper	364	8,429
Lafayette	2,344	77,134
Lamar	1,308	29,281
Lauderdale	2,881	69,716
Lawrence	581	12,197
Leake	740	16,286
Lee	2,590	68,450
Leflore	1,182	30,719
Lincoln	1,087	26,384

County	Number of Payments	Amount Paid
Lowndes	1,756	$43,645
Madison	4,202	133,869
Marion	823	20,021
Marshall	785	17,261
Monroe	1,195	27,728
Montgomery	601	14,588
Neshoba	980	21,990
Newton	842	19,916
Noxubee	322	7,563
Oktibbeha	2,507	89,082
Panola	1,210	27,459
Pearl River	1,361	28,600
Perry	479	9,467
Pike	1,321	32,618
Pontotoc	828	20,596
Prentiss	856	21,195
Quitman	273	5,958
Rankin	6,435	177,637
Scott	887	19,808
Sharkey	218	5,203
Simpson	1,168	26,210
Smith	575	11,684
Stone	772	18,267
Sunflower	963	22,778
Tallahatchie	484	10,916
Tate	856	21,385
Tippah	840	18,789
Tishomingo	578	12,347
Tunica	261	5,009
Union	942	22,286
Walthall	424	9,716
Warren	1,486	39,085
Washington	1,711	41,236
Wayne	587	13,301
Webster	616	14,858
Wilkinson	311	6,918
Winston	738	18,680
Yalobusha	671	15,568
Yazoo	859	20,924
Mississippi	**102,214**	**$2,591,315**
Out-of-country	29	781
Out-of-state	10,309	224,349
Total	**112,552**	**$2,816,445**

Ten Largest Participating Employers

Participating Employer	2019 Covered Employees	2019 Rank	2019 Percentage of Total System	2010 Covered Employees	2010 Rank	2010 Percentage of Total System
Public Employees' Retirement System						
University Medical Center	7,940	1	5.27%	7,074	1	4.29%
Desoto County Board of Education	4,163	2	2.76	3,659	4	2.22
Jackson Municipal Separate Schools	3,892	3	2.58	4,754	2	2.88
Mississippi State University	3,684	4	2.45	3,834	3	2.33
Mississippi Department of Human Services	3,104	5	2.06	3,388	6	2.05
Mississippi Department of Transportation	3,010	6	2.00	3,417	5	2.07
Rankin County Board of Education	2,335	7	1.55	2,420	8	1.47
University of Mississippi	2,106	8	1.40	1,929	-	1.17
Harrison County Board of Education	1,850	9	1.23	-	-	-
Corrections Department	1,817	10	1.21	2,988	7	1.81
All Other*	116,750	-	77.49	131,433	-	79.71
Totals (854 Employers)	**150,651**	**-**	**100.00%**	**164,896**	**-**	**100.00%**
Municipal Retirement System						
City of Clinton	1	1	50.00%	6	1	19.35%
City of Greenwood	1	2	50.00	3	3	9.68
All Other*	-	-	-	22	-	70.97
Totals (17 Employers)**	**2**	**-**	**100.00%**	**31**	**-**	**100.00%**

** In 2019, "All Other" consisted of state agencies, state universities, public schools, community/junior colleges, counties, municipalities, and other political subdivisions (see chart below).*
*** All MRS are employers included in Ten Largest.*

Type	Number of Employers	Employees
Public Employees' Retirement System		
State Agencies	105	27,259
State Universities	9	17,878
Public Schools	140	60,792
Community/Junior Colleges	15	6,117
Counties	82	13,765
Municipalities	242	16,115
Other Political Subdivisions	261	8,725
Totals	**854**	**150,651**

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
Ackerman
Algoma
Amory
Anguilla
Arcola
Artesia
Ashland
Baldwyn
Bassfield
Batesville
Bay Springs
Bay St. Louis
Beaumont
Belmont
Belzoni
Benoit
Bentonia
Biloxi
Blue Mountain
Booneville
Boyle
Brandon
Brookhaven
Brooksville
Bruce
Bude
Burnsville
Byhalia
Byram
Caledonia
Calhoun City
Canton
Carthage
Cary
Centreville
Charleston
Chunky
Clarksdale
Cleveland
Clinton
Coffeeville
Coldwater
Collins
Columbia
Columbus
Como
Corinth
Crawford
Crenshaw
Crosby
Crystal Springs
Decatur
De Kalb
D'lo
Derma
D'Iberville
Drew
Duck Hill
Durant
Ecru
Edwards
Ellisville
Enterprise
Ethel
Eupora
Falkner
Farmington
Flora
Florence
Flowood
Forest
French Camp
Fulton
Gautier
Gloster
Golden
Goodman
Greenville
Greenwood
Grenada
Gulfport
Guntown
Hatley
Hattiesburg
Hazlehurst
Heidelberg
Hernando
Hickory
Hickory Flat
Hollandale
Holly Springs
Horn Lake
Houlka
Houston
Indianola
Inverness
Itta Bena
Iuka
Jackson
Jonestown
Jumpertown
Kilmichael
Kosciusko
Lake
Lambert
Laurel
Leakesville
Leland
Lena
Lexington
Liberty
Long Beach
Louin
Louise
Louisville
Lucedale
Lula
Lumberton
Lyon
Maben
Macon
Madison
Magee
Magnolia
Mantachie
Marietta
Marion
Marks
Mathiston
Mayersville
McComb
McLain
Meadville
Mendenhall
Meridian
Merigold
Metcalfe
Mize
Monticello
Moorhead
Morton
Moss Point
Mount Olive
Myrtle
Natchez
Nettleton
New Albany
New Augusta
New Hebron
Newton
North Carrollton
Noxapater
Ocean Springs
Okolona
Olive Branch
Osyka
Oxford
Pascagoula
Pass Christian
Pearl
Pelahatchie
Petal
Philadelphia
Picayune
Plantersville
Polkville
Pontotoc
Poplarville
Port Gibson
Potts Camp
Prentiss
Puckett
Purvis
Quitman
Raleigh
Raymond
Renova
Richland
Richton
Ridgeland
Rienzi
Ripley
Rolling Fork
Rosedale
Roxie
Ruleville
Saltillo
Sallis
Sandersville
Sardis
Sebastopol
Seminary
Senatobia
Shannon
Shaw
Shelby
Sherman
Shubuta
Shuqualak
Silver City
Sledge
Smithville
Soso
Southaven
Starkville
State Line
Stonewall
Sturgis
Summit
Sumner
Sumrall
Sunflower
Taylorsville
Tchula
Terry
Tishomingo
Tremont
Tunica
Tupelo
Tutwiler
Tylertown
Union
Vaiden
Vardaman
Verona
Vicksburg
Walnut
Walnut Grove
Walthall
Water Valley
Waveland
Waynesboro
Weir
Wesson
West
West Point
Wiggins
Winona
Woodland
Woodville
Yazoo City

Juristic Entities

Adams County Airport Commission
Adams County Soil & Water Conservation District
Bogue Philia Drainage District
Bolivar County Soil & Water Conservation District
Caledonia Natural Gas District
Calhoun County Soil & Water Conservation District
Canton Convention & Visitors Bureau
Canton Redevelopment Authority
Chickasawhay Natural Gas District
Choctaw County Economic Development District
Claiborne County Human Resource Agency
Cleary Water, Sewer & Fire District
Coahoma County Soil & Water Conservation District
Coast Coliseum & Convention Center
Copiah County Human Resource Agency
Corinth-Alcorn Airport Board
Corinth-Alcorn Convention & Agriculture Exposition Center
Corinth-Alcorn County Recreation Commission
Covington County Soil & Water Conservation District
Culkin Water District
Delta Blues Museum
Desoto County Convention & Visitors Bureau
Desoto County Regional Utility Authority
Desoto County Soil & Water Conservation District
Diamondhead Fire Protection District
East Leflore County Water & Sewer District
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
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
Holmes County Soil & Water Conservation District
Itawamba County Soil & Water Conservation District
Jackson County Emergency Communications District
Jackson County Port Authority
Jackson County Utility Authority
Jackson Municipal Airport Authority
Jones County Economic Development Authority
Kiln Water & Fire District Of Hancock County
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
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
Mississippi Levee Commissioners
Municipal Energy Agency Of Mississippi
Natchez-Adams County Port Commission
Natchez Waterworks
Neshoba County Soil Conservation District
Newton County Soil Conservation District
Northeast Mississippi Natural Gas District
Northeast Mississippi Regional Water Supply District
NRoute Transit Commission
Oxford Tourism Council
Panola County Soil & Water Conservation District
Philadelphia-Neshoba County Park Commission
Pike County Soil Conservation District
Pine Belt Region Solid Waste Management Authority
Pontotoc County Soil & Water Conservation District
Prentiss County Soil & Water Conservation District
Rankin County Human Resource Agency
Rankin-hinds Pearl River Flood
Reservoir Fire Protection District
Ridgeland Tourism Commission
Rosedale-bolivar County Port Commission
Runnelstown Utility District
Scenic Rivers Development Alliance
Sebastopol Natural Gas District
Simpson County Parks & Recreation
South Madison County Fire Protection District
South Mississippi Fair Commission
Stone County Soil & Water Conservation District
Stone County Utility Authority
Sunflower County Soil & Water Conservation District
Tallahatchie County Soil & Water Conservation District
Tennessee-Tombigbee Waterway Development Authority

Juristic Entities (continued)

Tunica County Airport Commission
Tunica County Tourism Commission
Tupelo Airport Authority
Union County Soil & Water Conservation District
Vicksburg Convention & Visitors Bureau
Walthall County Soil & Water Conservation District
Warren County Parks & Recreation Commission
Warren County Soil & Water Conservation District
Wayne County Economic Development District
Wayne County Soil & Water Conservation District
West Jackson County Utility District
West Rankin Utility Authority
Winston County Economic Development
Winston County Soil & Water Conservation District
Yalobusha Water & Sewer District
Yazoo County Convention & Visitors Bureau
Yazoo County Soil & Water Conservation District
Yazoo-Mississippi Delta Joint Water Management District
Yazoo-Mississippi Delta Levee Commission
Yazoo Recreation Commission

Housing Authorities

Attala County
Baldwyn
Bay Waveland
Biloxi
Booneville
Canton
Clarksdale
Columbus
Corinth
Forest
Greenwood
Hattiesburg
Hazlehurst
Holly Springs
Itta Bena
Iuka
Jackson
Laurel
Louisville
McComb
Meridian
MS Reg. IV-Columbus
MS Reg. V-Newton
MS Reg. VI-Jackson
MS Reg. VII-McComb
MS Reg. VIII-Gulfport
Mound Bayou
Natchez
Oxford
Picayune
Pontotoc
Sardis
Pontotoc
Sardis
Senatobia
Shelby
South Delta Region
Starkville
Summit
Tupelo
Vicksburg
Water Valley
Waynesboro
West Point
Winona
Yazoo City

Local Hospitals

Claiborne County Medical Center
Field Memorial Community
Franklin County Memorial
Jefferson County
Magnolia Regional Health Center
North Sunflower Medical Center
South Sunflower County
Tippah County

Local Libraries

Amory Municipal
Benton County
Bolivar County
Carnegie Public
Carroll County
Central Mississippi Regional
Choctaw County
Columbus-Lowndes Public
Copiah-Jefferson Regional
Covington County
Dixie Regional
East Mississippi Regional
Elizabeth Jones
Evans Memorial
First Regional
Greenwood-Leflore Public
Hancock County
Harriette Person Memorial
Harrison County
Hattiesburg-petal-Forrest County
Humphreys County
Jackson-George Regional
Jackson-Hinds
Jennie Stephens Smith
Judge George W Armstrong
Kemper-Newton County Regional
Lamar County
Laurel-Jones County
Lee-Itawamba County
Lincoln-Lawrence-Franklin
Madison County-Canton Public
Marks-Quitman County
Marshall County
Meridian-Lauderdale County
Mid-Mississippi Regional
Neshoba County Public
Northeast Regional
Noxubee County
Oktibbeha County
Pearl River County
Pike-Amite-Walthall County
Pine Forest Regional
Sharkey-Issaquena County
South Mississippi Regional
Sunflower County
Tallahatchie County
Tombigbee Regional
Washington County
Waynesboro-Wayne County
Wilkinson County
Yalobusha County
Yazoo Library Association

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