Our Mission

The mission of the Public Employees' Retirement System of Mississippi is to provide secure benefits to our members and consistently deliver quality service by meeting our customers' needs, operating efficiently and transparently, investing and managing assets prudently, and acting in the best interest of all members.
## Table of Contents

- Total System Overview.................................................................................................................. 4
- Total System Membership................................................................................................................ 5
- Total System Covered Employers and Members.............................................................................. 5
- Retirement Eligibility as Percentage of Active Members.............................................................. 5
- PERS Member and Retiree Statistics............................................................................................... 6
- Total System Revenues and Expenses........................................................................................... 7
- Annual Benefit Payments per Mississippi County........................................................................... 8
- Mississippi Key Findings.................................................................................................................. 10
- Growth in PERS Net Assets over 30 Years...................................................................................... 12
- Investment Assets FY 2008 - FY 2018............................................................................................ 12
- Investment Asset Allocation............................................................................................................ 12
- Annual Investment Rates of Return Since FY 1981......................................................................... 13
- Investment Annualized Rates of Return.......................................................................................... 13
- PERS Funded Status History............................................................................................................ 14
- PERS Funded Ratio........................................................................................................................... 16
- Targeting PERS Funding.................................................................................................................. 17
- PERS Amortization Period of Unfunded Accrued Liability............................................................... 18
- PERS Contribution Rate Change..................................................................................................... 18
- State Employer Contributions to PERS Compared to State Expenses.......................................... 19
- MS Highway Safety Patrol Retirement System (MHSPRS)............................................................ 20
- MHSPRS Contribution Rate Change History.................................................................................. 21
- Supplemental Legislative Retirement Plan (SLRP).......................................................................... 22
- SLRP Contribution Rate Change History........................................................................................ 23
The term “System” is used throughout this document in a broad context to refer to all retirement plans administered by PERS as the administrative agency.

Ranked 68th by assets among the 1,000 largest U.S. retirement funds¹ and 159th largest in the world², the Public Employees’ Retirement System of Mississippi (PERS) administers 25 programs/plans with a total system membership of 328,426³ and investment assets of $28.2 billion⁴ and total net assets of $28.3 billion⁵. FY 2018 administrative cost per member (actives, inactives, retirees, and beneficiaries) is $51⁶.

As of June 2018, the total number of retirees is 107,599⁵ and the total monthly benefit payroll is $167.1 million⁴.

The current average annual PERS benefit including the Cost-of-Living Adjustment is $23,823⁶ with $2.6 billion paid in total retirement benefits for fiscal year 2018⁵. Approximately 92 percent of all benefits paid remain in the state³, supporting the economy and providing jobs.

Looking at System revenue for fiscal year 2018, total member and employer contributions were $1.6 billion⁷ and net investment income was $2.4 billion⁸.

Mississippi Deferred Compensation

**Plan & Trust (MDC)**

*Established in 1973; Administration transferred to PERS in 1974*

- 38,736 participants⁶
- $1.8 billion in net assets⁸

Mississippi Highway Safety Patrol Retirement System (MHSPRS)

*Established in 1958*

- 511 active members⁵
- 55 inactive members⁵
- 725 retirees and beneficiaries⁵
- $354.2 million in net assets³
- Average Benefit: $42,227⁵

Supplemental Legislative Retirement Plan (SLRP)

*Established in 1989*

- 174 active members⁵
- 55 inactive members⁵
- 207 retirees and beneficiaries⁵
- $18 million in net assets³
- Average Benefit: $6,302⁵

Optional Retirement Plan for the Institutions of Higher Learning (ORP)

*Established in 1990 for eligible members only*

- 5,380 active participants⁷
- $1.1 billion in net assets⁷

Page Sources:
1. Pensions and Investments (February 5, 2018)
2. Pensions and Investments (September 3, 2018)
3. PERS Accounting
4. Board of Trustees Report for Fiscal Year 2018
5. System Actuarial Valuation Reports
6. Mississippi Government Employees’ Deferred Compensation Plan and Trust Account Summary
7. Optional Retirement Plan Quarterly Market Valuation Report
8. Monumental Life Insurance Company Quarterly Report
10. Callan Investment Measurement Service Quarterly Review for June 30, 2018
Mississippi has more than 258,975 working and retired state and local government employees. The active membership comprises almost 14 percent of Mississippi’s workforce with approximately 56 percent of the public sector workforce employed in education.

PERS is just one piece of the overall human resources package used to recruit and retain the quality workforce that is critical to the sound delivery of public services.

Total System Membership = 328,426

- Retirees
- Inactive Members
- Active Members

* Individual inactive accounts with small residual or zero balances removed from totals. No actuarial valuation measurements affected.

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**Source: System Actuarial Valuation Reports**

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**Source: PERS Database**

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**Source: PERS Database**

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**Source: PERS Database**

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Includes MHSPRS and SLRP

Includes MRS

Includes hospitals, libraries, and other juristic entities

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**PERS Facts & Figures - All data as of June 30, 2018, unless otherwise noted.**
PERS Member and Retiree Statistics

Active PERS Member Salary Distribution
Source: System Actuarial Valuation Reports and PERS Database

<table>
<thead>
<tr>
<th>Salary Range</th>
<th>Number</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Under $20,000</td>
<td>43,715</td>
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<td>$20,001 – $40,000</td>
<td>31,572</td>
<td>21%</td>
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<tr>
<td>$40,001 – $60,000</td>
<td>21,522</td>
<td>14%</td>
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<tr>
<td>$60,001 – $100,000</td>
<td>16,293</td>
<td>11%</td>
</tr>
<tr>
<td>Over $100,000</td>
<td>2,576</td>
<td>2%</td>
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<tr>
<td>Average Member Salary: $39,813</td>
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Annuity Distribution for PERS Service Retirees*
Source: System Actuarial Valuation Reports and PERS Database

<table>
<thead>
<tr>
<th>Age at Retirement</th>
<th>Number</th>
<th>Average Age</th>
<th>Average Years in Retirement</th>
<th>Average Annual Benefit including Cost-of-Living Adjustment</th>
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</thead>
<tbody>
<tr>
<td>Age 100+</td>
<td>27</td>
<td>101.87</td>
<td>36.23</td>
<td>17,072.34</td>
</tr>
<tr>
<td>Age 70-74</td>
<td>193</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 65-69</td>
<td>1,186</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 60-64</td>
<td>12,712</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 55-59</td>
<td>15,090</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 50-54</td>
<td>16,293</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$1 – $10,000</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$10,001 – $20,000</td>
<td>7,414</td>
<td>26%</td>
<td>22%</td>
<td></td>
</tr>
<tr>
<td>$20,001 – $30,000</td>
<td>13,498</td>
<td>22%</td>
<td>20%</td>
<td></td>
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<tr>
<td>$30,001 – $40,000</td>
<td>18,943</td>
<td>26%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$40,001 – $50,000</td>
<td>17,557</td>
<td>22%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over $50,000</td>
<td>22,589</td>
<td>26%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PERS Service Retirees by Age at Retirement
Sources: System Actuarial Valuation Reports and PERS Database

| Age 40-49 | 5,893 | Age 50-54 | 12,712 |
| Age 55-59 | 15,090 | Age 60-64 | 38,200 |
| Age 65-69 | 11,863 | Age 70-74 | 2,564  |
| Age 75-79 | 775   | Age 80-84 | 193    |
| Age 85+   | 27    |           |        |

Total System Retirees and Beneficiaries > Age 100
Source: PERS Database

Number: 68
Average age: 101.87
Average years in retirement: 36.23
Average annual benefit including Cost-of-Living Adjustment: $17,072.34

PERS Service Retirees with > 25 Years at Retirement during FY 2018
Source: PERS Database

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number</th>
<th>Percentage</th>
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<tr>
<td>25-25.75 Years</td>
<td>727</td>
<td>9%</td>
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<tr>
<td>26-29.75 Years</td>
<td>940</td>
<td>12%</td>
</tr>
<tr>
<td>30-34.75 Years</td>
<td>575</td>
<td>7%</td>
</tr>
<tr>
<td>35-39.75 Years</td>
<td>199</td>
<td>3%</td>
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<tr>
<td>40+ Years</td>
<td>96</td>
<td>1%</td>
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</table>

PERS Members Who Retire based on Years of Service and Age
Source: System Actuarial Valuation Reports and PERS Database

Members Who Retire based on Years of Service:
Average age at retirement: 57.2
Average years of service: 30.4

Members Who Retire based on Age:
Average age at retirement: 61.9
Average years of service: 14.8

PERS service retirees spend, on average, 20.1 years in retirement.
Total System Revenues and Expenses  (In Thousands)
Source: PERS Accounting

Revenues
Total Revenue for all Systems............................................................................................................ $4,051,861

Contributions:
Employer Contributions.................................................$1,047,920
MHSP Motor Vehicle Report and Other Fees .........................3,494
Member Contributions..................................................573,310
Total Contributions ......................................................................$1,624,724

Net Income:
Realized Gains on Investments .............................................$1,907,081
Unrealized Gains on Investments ...........................................38,573
Dividends, Interest, and Other Investment Income–Net ...........481,483
Total Net Income .................................................................$2,427,137

Expenses
Total Expenses for all Systems ................................................................. $(2,822,904)

Retirement Benefits.................................................................$(2,676,744)
Refunds......................................................................................(124,427)
Administrative Budget...............................................................(16,877)
Depreciation and Other Administrative Expenses...................(4,856)

Net Increase FY 2018...................................................................... $1,228,957

Sources of Revenue - 30 Years  Source: PERS Accounting
Over the 30-year period that ended June 30, 2018, employer (taxpayer) contributions to PERS made up only 27 percent of revenues, while earnings from investments provided the majority of the System’s funding with members contributing a mandatory 9 percent of their wages to complete 18 percent of that total funding.
PERS paid benefits of $2.6 billion during fiscal year 2018, with approximately 92 percent (approximately $2.4 billion) going to nearly 98,000 Mississippi residents. These steady and dependable benefits provide a strong and locally-disseminated economic stimulus to communities throughout the state, while helping to reduce poverty.

### Annual Benefit Payments per Mississippi County

<table>
<thead>
<tr>
<th>County</th>
<th>Payments</th>
<th>Amount Paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams</td>
<td>1,260</td>
<td>29,398,314</td>
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<tr>
<td>Alcorn</td>
<td>1,278</td>
<td>29,816,400</td>
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<td>Amite</td>
<td>371</td>
<td>7,032,269</td>
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<tr>
<td>Attala</td>
<td>830</td>
<td>18,726,259</td>
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<tr>
<td>Benton</td>
<td>204</td>
<td>4,114,437</td>
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<tr>
<td>Bolivar</td>
<td>1,546</td>
<td>38,136,466</td>
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<tr>
<td>Calhoun</td>
<td>467</td>
<td>10,071,928</td>
</tr>
<tr>
<td>Carroll</td>
<td>461</td>
<td>10,519,491</td>
</tr>
<tr>
<td>Chickasaw</td>
<td>597</td>
<td>13,567,480</td>
</tr>
<tr>
<td>Choctaw</td>
<td>365</td>
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<tr>
<td>Claiborne</td>
<td>359</td>
<td>8,412,048</td>
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<tr>
<td>Clarke</td>
<td>649</td>
<td>11,578,984</td>
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<td>Clay</td>
<td>645</td>
<td>16,110,490</td>
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<tr>
<td>Coahoma</td>
<td>945</td>
<td>25,937,820</td>
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<tr>
<td>Copiah</td>
<td>1,020</td>
<td>23,488,700</td>
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<tr>
<td>Covington</td>
<td>742</td>
<td>16,359,697</td>
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<tr>
<td>Desoto</td>
<td>1,738</td>
<td>38,187,703</td>
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<tr>
<td>Forrest</td>
<td>3,525</td>
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<tr>
<td>Franklin</td>
<td>333</td>
<td>7,458,396</td>
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<tr>
<td>George</td>
<td>687</td>
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<tr>
<td>Greene</td>
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<tr>
<td>Grenada</td>
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<tr>
<td>Hancock</td>
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<td>Harrison</td>
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<td>Hinds</td>
<td>9,944</td>
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<td>Holmes</td>
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<tr>
<td>Humphreys</td>
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<td>Issaquena</td>
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<td>446,511</td>
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<tr>
<td>Itawamba</td>
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<tr>
<td>Jackson</td>
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<tr>
<td>Jasper</td>
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<tr>
<td>Jefferson</td>
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<td>10,161,752</td>
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<tr>
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<td>7,844,700</td>
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<tr>
<td>Jones</td>
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<td>61,134,531</td>
</tr>
<tr>
<td>Kemper</td>
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<tr>
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<td>72,003,623</td>
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<tr>
<td>Lamar</td>
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<tr>
<td>Lauderdale</td>
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<tr>
<td>Lawrence</td>
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<td>Leake</td>
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<tr>
<td>Lee</td>
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<td>62,890,024</td>
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<td>1,140</td>
<td>28,755,520</td>
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<tr>
<td>Lincoln</td>
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<tr>
<td>Lowndes</td>
<td>1,783</td>
<td>42,807,511</td>
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<table>
<thead>
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<th>County</th>
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<td>Madison</td>
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<td>Marshall</td>
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<td>16,198,645</td>
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<tr>
<td>Monroe</td>
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<td>23,631,015</td>
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<td>Montgomery</td>
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<td>Neshoba</td>
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<td>Newton</td>
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<tr>
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<td>Oktibeha</td>
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<td>84,273,976</td>
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<td>Panola</td>
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<tr>
<td>Pearl River</td>
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<td>Pontotoc</td>
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<td>Quitman</td>
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<td>Sharkey</td>
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<td>Union</td>
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<td>Walthall</td>
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<td>8,882,281</td>
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<td>Warren</td>
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<tr>
<td>Yazoo</td>
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<td>18,838,959</td>
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<tr>
<th>County</th>
<th>Payments</th>
<th>Amount Paid</th>
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<tbody>
<tr>
<td>Mississippi</td>
<td>97,284</td>
<td>2,402,814,365</td>
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<tr>
<td>Out-of-State</td>
<td>9,778</td>
<td>205,874,070</td>
</tr>
<tr>
<td>Out-of-Country</td>
<td>25</td>
<td>726,805</td>
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</table>

Total .......... 107,087 .......... 2,609,415,240
Mississippi Key Findings

Source: National Institute on Retirement Security’s Pensionomics: Measuring the Economic Impact of State and Local Pension Plans

### Key Findings

Benefits paid by state and local pension plans support a significant amount of economic activity in the state of Mississippi.

Pension benefits received by retirees are spent in the local community. This spending ripples through the economy, as one person’s spending becomes another person’s income, creating a multiplier effect.

In 2016, expenditures stemming from state and local pensions supported...

- **22,223** jobs that paid $772.7 million in wages and salaries
- **$2.9** billion in total economic output
- **$506.5** million in federal, state, and local tax revenues

... in the state of Mississippi.

Each dollar paid out in pension benefits supported $1.11 in total economic activity in Mississippi.

Each dollar “invested” by Mississippi taxpayers in these plans supported $4.05 in total economic activity in the state.

### Pensionomics 2018: Measuring the Economic Impact of DB Pension Expenditures

#### Overview

Expenditures made by retirees of state and local government provide a steady economic stimulus to Mississippi communities and the state economy. In 2016, 108,115 residents of Mississippi received a total of $2.6 billion in pension benefits from state and local pension plans.

The average pension benefit received was $2,030 per month or $24,362 per year. These modest benefits provide retired teachers, public safety personnel, and others who served the public during their working careers income to meet basic needs in retirement.

Between 1993 and 2016, 27.33% of Mississippi’s pension fund receipts came from employer contributions, 17.57% from employee contributions, and 55.09% from investment earnings.* Earnings on investments and employee contributions—not taxpayer based contributions—have historically made up the bulk of pension fund receipts.

#### Impact on Jobs and Incomes

Retiree expenditures stemming from state and local pension plan benefits supported 22,223 jobs in the state. The total income to state residents supported by pension expenditures was $772.7 million.

To put these employment impacts in perspective, in 2016 Mississippi’s unemployment rate was 5.8%. The fact that DB pension expenditures supported 22,223 jobs is significant, as it represents 1.7 percentage points in Mississippi’s labor force.

#### Economic Impact

State and local pension funds in Mississippi and other states paid a total of $2.6 billion in benefits to Mississippi residents in 2016. Retirees’ expenditures from these benefits supported a total of $2.9 billion in total economic output in the state, and $1.5 billion in value added in the state.

$1.5 billion in direct economic impacts were supported by retirees’ initial expenditures. An additional $822.9 million in indirect impact resulted when these businesses purchased additional goods and services. $557.3 million in induced impacts occurred when workers employed by businesses as a result of the direct and indirect impacts made expenditures.

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>$1.5 billion</td>
</tr>
<tr>
<td>Indirect</td>
<td>$822.9 million</td>
</tr>
<tr>
<td>Induced</td>
<td>$557.3 million</td>
</tr>
</tbody>
</table>

Total Economic Impact $2.9 billion

*Totals may not add up due to rounding. For data and methodology, see Boivie, I., 2018, Pensionomics 2018: Measuring the Economic Impact of DB Pension Expenditures, National Institute on Retirement Security, Washington, DC, www.nirsonline.org. Results not directly comparable to previous Pensionomics due to methodological refinements.
**Economic Multipliers**

**Taxpayer Contribution Factor***

$1.00 contributed by taxpayers to Mississippi pensions over 30 years

$4.05 total output

Each $1 in taxpayer contributions to Mississippi’s state and local pension plans supported $4.05 in total output in the state. This reflects the fact that taxpayer contributions are a minor source of financing for retirement benefits—investment earnings and employee contributions finance the lion’s share.

**Pension Benefit Multiplier**

$1.00 pension benefits paid to retirees in Mississippi

$1.11 total output

Each $1 in state and local pension benefits paid to Mississippi residents ultimately supported $1.11 in total output in the state. This “multiplier” incorporates the direct, indirect, and induced impacts of retiree spending, as it ripples through the state economy.

*Caution should be used in interpreting these numbers. See the Technical Appendix of the full Pensionomics report for details.

**Impact on Tax Revenues**

State and local pension payments made to Mississippi residents supported a total of $506.5 million in revenue to federal, state, and local governments. Taxes paid by retirees and beneficiaries directly out of pension payments totaled $147.8 million. Taxes attributable to direct, indirect, and induced impacts accounted for $358.8 million in tax revenue.

**Economic Impacts by Industry Sector**

The economic impact of state and local pension benefits was broadly felt across various industry sectors in Mississippi. The ten industry sectors with the largest employment impacts are presented in the table below.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited-service restaurants</td>
<td>1,154</td>
<td>$17,775,883</td>
<td>$40,457,205</td>
<td>$82,687,959</td>
</tr>
<tr>
<td>Nursing and community care facilities</td>
<td>1,056</td>
<td>$36,458,724</td>
<td>$41,885,746</td>
<td>$68,798,415</td>
</tr>
<tr>
<td>Real estate</td>
<td>1,030</td>
<td>$14,207,835</td>
<td>$123,323,873</td>
<td>$184,154,519</td>
</tr>
<tr>
<td>Full-service restaurants</td>
<td>841</td>
<td>$15,595,329</td>
<td>$17,668,704</td>
<td>$37,693,903</td>
</tr>
<tr>
<td>Hospitals</td>
<td>704</td>
<td>$41,648,249</td>
<td>$51,432,616</td>
<td>$80,967,132</td>
</tr>
<tr>
<td>Retail - General merchandise stores</td>
<td>691</td>
<td>$18,867,395</td>
<td>$33,467,100</td>
<td>$50,827,689</td>
</tr>
<tr>
<td>Offices of physicians</td>
<td>602</td>
<td>$52,957,562</td>
<td>$51,998,031</td>
<td>$80,967,132</td>
</tr>
<tr>
<td>Retail - Food and beverage stores</td>
<td>553</td>
<td>$13,795,564</td>
<td>$23,065,805</td>
<td>$35,824,581</td>
</tr>
<tr>
<td>Individual and family services</td>
<td>519</td>
<td>$10,505,852</td>
<td>$9,592,854</td>
<td>$15,125,076</td>
</tr>
<tr>
<td>Personal care services</td>
<td>500</td>
<td>$10,087,477</td>
<td>$10,255,505</td>
<td>$16,806,653</td>
</tr>
</tbody>
</table>

Industry totals include the first round of impacts from pension payments to state residents, and do not account for recaptured “leakage” to or from other states.
### Growth in PERS Net Assets over 30 Years (In Billions)

**Sources:** PERS Accounting

<table>
<thead>
<tr>
<th>Beginning balance July 1, 1988</th>
<th>$3.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer Contributions</td>
<td>16.5</td>
</tr>
<tr>
<td>Member Contributions</td>
<td>10.8</td>
</tr>
<tr>
<td>Investment Income and Other Income</td>
<td>33.2</td>
</tr>
<tr>
<td>Benefit Payments</td>
<td>(33.5)</td>
</tr>
<tr>
<td>Refund Payments</td>
<td>(2.1)</td>
</tr>
<tr>
<td>Administrative and Other Expenses</td>
<td>(0.3)</td>
</tr>
</tbody>
</table>

| Ending Balance June 30, 2018 | $27.8 |

- Investment income is more than 55 percent of total inflows to the fund balance over the last 30 years.
- Employer and member contributions are 27 percent and 18 percent, respectively of total inflows to the fund balance over the last 30 years.
- Benefit payments and refund payments are 93 percent and 6 percent, respectively of total outflows of the fund balance over the last 30 years.

---

### Investment Assets FY 2008 - FY 2018

**Source:** Callan Investment Measurement Service Quarterly Review for June 30, 2018

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Asset Fair Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>'18</td>
<td>$28,149,743,000</td>
</tr>
<tr>
<td>'17</td>
<td>$26,914,637,000</td>
</tr>
<tr>
<td>'16</td>
<td>$24,477,393,000</td>
</tr>
<tr>
<td>'15</td>
<td>$25,225,827,000</td>
</tr>
<tr>
<td>'14</td>
<td>$26,285,653,000</td>
</tr>
<tr>
<td>'13</td>
<td>$22,044,712,000</td>
</tr>
<tr>
<td>'12</td>
<td>$20,109,804,000</td>
</tr>
<tr>
<td>'11</td>
<td>$20,760,399,000</td>
</tr>
<tr>
<td>'10</td>
<td>$17,098,740,000</td>
</tr>
<tr>
<td>'09</td>
<td>$15,445,202,000</td>
</tr>
<tr>
<td>'08</td>
<td>$19,691,325,000</td>
</tr>
</tbody>
</table>

---

### Investment Asset Allocation

**Source:** Callan Investment Measurement Service Quarterly Review for June 30, 2018

- **Total Investment Assets for all Systems as of June 30, 2018 = $28.2 Billion**

- **Equities, $17.2 Billion**
- **Real Estate, $2.8 Billion**
- **Cash & Equivalents, $0.3 Billion**
- **Fixed Income, $5.7 Billion**
- **Private Equity, $2.2 Billion**

- **Number of Portfolios: 55**
- **Number of Portfolio Managers: 40**
PERS began equity investments in August 1980. This chart demonstrates the volatility in the markets and the need to focus on the long term.

### Annual Investment Rates of Return Since FY 1981

Source: PERS Annual Investment Report

### Investment Annualized Rates of Return

Source: Callan Investment Measurement Service Quarterly Review for June 30, 2018

### Historical Returns as of June 30, 2018

- 1-Year: 9.48%
- 3-Year: 8.38%
- 5-Year: 9.32%
- 10-Year: 7.45%
- 20-Year: 6.28%
- 25-Year: 7.84%
- 30-Year: 8.55%

*Calculated - Actual data not available
PERS Funded Status History

Source: System Actuarial Valuation Reports

Accrued Liability:
The actuarial present value of the plan’s pension obligations as determined by the entry-age normal actuarial cost method.

Unfunded Accrued Liability:
The difference between the actuarial accrued liability and valuation of assets.

Actuarial Value Funded Ratio

Market Value Funded Ratio*

Funding Period (Years)

Percent Employer Contributions

Percent Employee Contributions

Accrued Liability (In Billions)

Unfunded Accrued Liability (In Billions)

* Assets are recorded at book value prior to 1995

** Actuarial Assumed ROR effective July, 2015, 7.75%
<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Market Value of Assets</th>
<th>Actuarial Accrued Liability</th>
<th>Actuarial Value of Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>'01</td>
<td>29.0</td>
<td>26.0</td>
<td>17.0</td>
</tr>
<tr>
<td>'02</td>
<td>30.0</td>
<td>32.5</td>
<td>19.4</td>
</tr>
<tr>
<td>'03</td>
<td>19.4</td>
<td>13.4</td>
<td>9.8</td>
</tr>
<tr>
<td>'04</td>
<td>29.3</td>
<td>29.4</td>
<td>30.0</td>
</tr>
<tr>
<td>'05</td>
<td>30.0</td>
<td>30.0</td>
<td>30.0</td>
</tr>
<tr>
<td>'06</td>
<td>30.0</td>
<td>30.0</td>
<td>30.0</td>
</tr>
<tr>
<td>'07</td>
<td>32.2</td>
<td>29.2</td>
<td>33.9</td>
</tr>
<tr>
<td>'08</td>
<td>36.6</td>
<td>38.4</td>
<td>30.9</td>
</tr>
<tr>
<td>'09</td>
<td>9.75%</td>
<td>9.75%</td>
<td>9.75%</td>
</tr>
<tr>
<td>'10</td>
<td>7.25%</td>
<td>7.25%</td>
<td>7.25%</td>
</tr>
<tr>
<td>'11</td>
<td>6.00%</td>
<td>6.00%</td>
<td>6.00%</td>
</tr>
<tr>
<td>'12</td>
<td>5.50%</td>
<td>6.00%</td>
<td>6.00%</td>
</tr>
<tr>
<td>'13</td>
<td>12.00%</td>
<td>12.93%</td>
<td>15.75%</td>
</tr>
<tr>
<td>'14</td>
<td>15.75%</td>
<td>15.75%</td>
<td>15.75%</td>
</tr>
<tr>
<td>'15**</td>
<td>15.75%</td>
<td>15.75%</td>
<td>15.75%</td>
</tr>
<tr>
<td>'16</td>
<td>14.26%</td>
<td>15.75%</td>
<td>15.75%</td>
</tr>
<tr>
<td>'17</td>
<td>15.75%</td>
<td>15.75%</td>
<td>15.75%</td>
</tr>
<tr>
<td>'18</td>
<td>15.75%</td>
<td>15.75%</td>
<td>15.75%</td>
</tr>
</tbody>
</table>
PERS Funded Ratio

Source: System Actuarial Valuation Reports

**Funded Ratio:** The ratio of the assets of a pension plan to its liabilities. The ratio is determined by dividing the actuarial value of assets by the actuarial accrued liability.

*Actuarial Assumed ROR effective July, 2015, 7.75%*
Targeting PERS Funding
Source: PERS Funding Policy

The Board adopted a revised funding policy in June 2018 to include additional metrics in the System’s performance analysis and to create a more comprehensive review of the System’s funding. The prior funding policy tracked the funding progress of the System by annually reviewing the projected 2042 funding ratio and watching for specific triggers that would call for an increase or decrease in contributions. The new funding policy continues to annually review the projected funding ratio but adds two new metrics; the projected cash flow as a percentage of beginning-year assets and the ratio of the actuarially determined contribution to the current contribution rate as set by the Board. Each metric is explained below:

- **Funded Ratio:** The funded ratio is the value of assets divided by the actuarial accrued liability. The new funding policy analyzes the funded ratio over the projection period with an ultimate goal of being fully funded. Given that the projected funded ratio was the major metric used in benchmarking the plan under the prior funding policy (and coupled with the fact that it is a key metric used by all systems), the Board thought continuing the review of the projected funded ratio each year was important.

- **Cash Flow as a Percentage of Assets:** The cash flow as a percentage of assets is defined as the difference between total contributions coming into the trust and the benefit payments made to retirees and beneficiaries going out of the trust as a percentage of beginning-year market value of assets. This funding policy metric will test the net cash flow percentage over the projected period. The actuaries anticipate that PERS, as a mature retirement system, will experience negative cash flow; however, if the amount of negative cash flow as a percentage of the plan assets becomes excessive, it may be a warning sign that the plan needs additional funding. If the negative cash flow creates a situation of insufficient liquid assets to pay retirement benefits, the investment portfolio may require changes to more liquid, cash-generating investments. This change in the asset allocation would affect the plan’s long-term investment earnings and likely require additional contributions. Monitoring our projected cash flow in this manner is a focus of the Board and is especially important for a mature retirement system like PERS that is expecting more retirees in the years ahead.

- **Actuarially Determined Contribution (ADC):** The actuarially determined contribution is the potential payment to the plan as determined by the actuary based on principal elements disclosed in the funding policy. Those elements include the actuarial cost method, the asset-smoothing method, and the amortization method. While the actuarial cost method and asset-smoothing method remained the same for PERS, the actuary recommended a new layered amortization for determining the actuarially determined contribution. Under this new metric in the revised funding policy, the unfunded actuarial accrued liability as of June 30, 2018, ($16.9 billion) will be amortized over 30 years closed and future changes to the unfunded actuarial accrued liability (i.e., gains, losses, assumption changes, and plan changes) will be amortized over 25-year closed periods. This is for the calculation of the ADC ratio only. The actuarially determined contribution rate will be calculated in the annual valuation report and will be compared to the current contribution rate set by the Board.

Adding these new metrics provides a more holistic view of the status of the System and a more granular gauge of the need for action based on System performance, changing demographics, and actuarial experience. The signal-light approach used in the new funding policy was recommended by the actuary to provide the Board a clearer and more comprehensive picture of the sustainability of PERS. When red, the metric fails so the actuary must recommend additional contributions for the Board to consider that will place all metrics back into the green status.

To view the new Funding Policy, visit the Financial page of www.pers.ms.gov.
PERS Amortization Period of Unfunded Accrued Liability

Source: System Actuarial Valuation Reports

**Amortization:** Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump-sum payment.

**Unfunded Accrued Liability:** The difference between the actuarial accrued liability and valuation of assets.

![Graph showing the amortization period of unfunded accrued liability with dates and percentages.]

▲ Actuary estimate of UAL period without benefit improvements implemented 1999 - 2002 with the employer contribution rate at 9.75% and the member rate at 7.25%

* Actuarial Assumed ROR effective July, 2015, 7.75%

---

PERS Contribution Rate Change

Source: System Actuarial Valuation Reports

![Graph showing the contribution rate change with dates and percentages.]

**Effective Date**

- 1/1/90 (FY '90)
- 7/1/91 (FY '92)
- 7/1/95 (FY '96)
- 7/1/06 (FY '07)
- 7/1/07 (FY '08)
- 7/1/09 (FY '10)
- 7/1/10 (FY '11)
- 7/1/12 (FY '13)
- 7/1/13 (FY '14)
- 7/1/19 (FY '20)

**Employer Rate**

- 6.50% (FY '90)
- 7.25% (FY '92)
- 7.25% (FY '06)
- 7.25% (FY '07)
- 7.25% (FY '08)
- 7.25% (FY '10)
- 9.00% (FY '11)
- 9.00% (FY '13)
- 9.00% (FY '14)
- 9.00% (FY '20)

**Member Rate**

- 6.50% (FY '90)
- 7.25% (FY '92)
- 7.25% (FY '06)
- 7.25% (FY '07)
- 7.25% (FY '08)
- 9.00% (FY '10)
- 9.00% (FY '11)
- 9.00% (FY '13)
- 9.00% (FY '14)
- 9.00% (FY '20)

**Percentage**

- 6%
- 8%
- 9%
- 10%
- 11%
- 12%
- 13%
- 14%
- 15%
- 16%
- 17%
- 18%

**Fiscal Year**

- '90
- '92
- '06
- '07
- '08
- '10
- '11
- '12
- '13
- '14
- '15
- '16
- '17
- '18
- '19
- '20

**Employer**

- 9.75%
- 9.75%
- 10.75%
- 11.30%
- 11.85%
- 12.00%
- 12.00%
- 12.00%
- 12.93%
- 14.26%
- 15.75%
- 17.40%

**Member**

- 6.50%
- 7.25%
- 7.25%
- 7.25%
- 7.25%
- 7.25%
- 7.25%
- 9.00%
- 9.00%
- 9.00%
- 9.00%

Source: System Actuarial Valuation Reports

*Actuarial Assumed ROR effective July, 2015, 7.75%*
State Employer Contributions to PERS Compared to State Expenses

Source: PERS Accounting and Supplement to Mississippi Comprehensive Annual Financial Report

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>State Expenses ($ in billions)</th>
<th>Employer Contributions as Percent of State Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>$4.2</td>
<td>4.35%</td>
</tr>
<tr>
<td>1991</td>
<td>$4.6</td>
<td>4.44%</td>
</tr>
<tr>
<td>1992</td>
<td>$4.6</td>
<td>4.35%</td>
</tr>
<tr>
<td>1993</td>
<td>$4.9</td>
<td>4.29%</td>
</tr>
<tr>
<td>1994</td>
<td>$5.3</td>
<td>4.48%</td>
</tr>
<tr>
<td>1995</td>
<td>$6.1</td>
<td>3.97%</td>
</tr>
<tr>
<td>1996</td>
<td>$6.5</td>
<td>4.01%</td>
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<td>1997</td>
<td>$6.8</td>
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<tr>
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<td>3.94%</td>
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<td>1999</td>
<td>$7.8</td>
<td>3.65%</td>
</tr>
<tr>
<td>2000</td>
<td>$8.6</td>
<td>3.73%</td>
</tr>
<tr>
<td>2001</td>
<td>$8.8</td>
<td>3.69%</td>
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<tr>
<td>2002</td>
<td>$9.5</td>
<td>3.49%</td>
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<td>2003</td>
<td>$10.3</td>
<td>3.25%</td>
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<td>2005</td>
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<td>2006</td>
<td>$13.2</td>
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<td>2007</td>
<td>$15.3</td>
<td>3.10%</td>
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<td>2008</td>
<td>$14.9</td>
<td>3.54%</td>
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<td>$15.5</td>
<td>3.55%</td>
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<td>$16.3</td>
<td>3.44%</td>
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<td>2011</td>
<td>$16.3</td>
<td>3.37%</td>
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<tr>
<td>2012</td>
<td>$15.8</td>
<td>3.69%</td>
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<tr>
<td>2013</td>
<td>$15.7</td>
<td>4.27%</td>
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<tr>
<td>2014</td>
<td>$15.7</td>
<td>4.68%</td>
</tr>
<tr>
<td>2015</td>
<td>$16.3</td>
<td>4.65%</td>
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<tr>
<td>2016</td>
<td>$16.4</td>
<td>4.81%</td>
</tr>
<tr>
<td>2017</td>
<td>$16.2</td>
<td>4.82%</td>
</tr>
<tr>
<td>2018</td>
<td>$16.0</td>
<td>4.84%</td>
</tr>
</tbody>
</table>

FY 2018 Comparison State Expenses to State Employer Contributions

$0  $5  $10  $15

State Expenses  State Employer Contributions to PERS

PERS Facts & Figures - All data as of June 30, 2018, unless otherwise noted.
Funded Ratio

Funded Ratio: The ratio of the assets of a pension plan to its liabilities. The ratio is determined by dividing the actuarial value of assets by the actuarial accrued liability.

Amortization Period of Unfunded Accrued Liability

* Actuarial Assumed ROR effective July, 2015, 7.75%

* Actuarial Assumed ROR effective July, 2015, 7.75%
### MHSPRS Contribution Rate Change History

Source: System Actuarial Valuation Reports

<table>
<thead>
<tr>
<th>Effective Date</th>
<th>FY '08</th>
<th>FY '09</th>
<th>FY '10</th>
<th>FY '11</th>
<th>FY '12</th>
<th>FY '13</th>
<th>FY '14</th>
<th>FY '15</th>
<th>FY '16</th>
<th>FY '17</th>
<th>FY '18</th>
<th>FY '19</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employer Rate as % of covered payroll</strong></td>
<td>30.30%</td>
<td>30.30%</td>
<td>30.30%</td>
<td>30.30%</td>
<td>35.21%</td>
<td>37.00%</td>
<td>37.00%</td>
<td>37.00%</td>
<td>37.00%</td>
<td>37.00%</td>
<td>37.00%</td>
<td>49.08%</td>
</tr>
<tr>
<td><strong>Revenue from Motor Vehicle Reports</strong></td>
<td>9.10%</td>
<td>11.70%</td>
<td>12.90%</td>
<td>14.10%</td>
<td>-</td>
<td>14.00%</td>
<td>18.00%</td>
<td>13.30%</td>
<td>14.10%</td>
<td>13.50%</td>
<td>13.20%</td>
<td>11.80%</td>
</tr>
<tr>
<td><strong>Total Employer Rate</strong></td>
<td>39.40%</td>
<td>42.00%</td>
<td>43.20%</td>
<td>44.40%</td>
<td>-</td>
<td>51.00%</td>
<td>55.00%</td>
<td>50.30%</td>
<td>51.10%</td>
<td>50.50%</td>
<td>50.20%</td>
<td>60.88%</td>
</tr>
<tr>
<td><strong>Member Rate</strong></td>
<td>7.25%</td>
<td>7.25%</td>
<td>7.25%</td>
<td>7.25%</td>
<td>7.25%</td>
<td>7.25%</td>
<td>7.25%</td>
<td>7.25%</td>
<td>7.25%</td>
<td>7.25%</td>
<td>7.25%</td>
<td>7.25%</td>
</tr>
</tbody>
</table>

PERS Facts & Figures - All data as of June 30, 2018, unless otherwise noted.
Supplemental Legislative Retirement Plan (SLRP)

Source: System Actuarial Valuation Reports

Funded Ratio

Funded Ratio: The ratio of the assets of a pension plan to its liabilities. The ratio is determined by dividing the actuarial value of assets by the actuarial accrued liability.

Amortization Period of Unfunded Accrued Liability

* Actuarial Assumed ROR effective July, 2015, 7.75%
SLRP Contribution Rate Change History

Source: System Actuarial Valuation Reports

### Effective Date

<table>
<thead>
<tr>
<th></th>
<th>FY '90</th>
<th>FY '97</th>
<th>FY '12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employer Rate</strong></td>
<td>6.33%</td>
<td>6.65%</td>
<td>7.40%</td>
</tr>
<tr>
<td><strong>Member Rate</strong></td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
</tr>
</tbody>
</table>

**Percentage**

- '90: 6.33%
- '07: 6.65%
- '12: 7.40%
- '18: 3.00%

**Fiscal Year**

- '90
- '07
- '12
- '13
- '14
- '15
- '16
- '17
- '18

**Source:** System Actuarial Valuation Reports