Comprehensive Annual Financial Report

South Carolina Retirement Systems

For the fiscal year ended June 30, 2019

Pension trust funds of the state of South Carolina

south carolina peba

state health plan | retirement systems

South Carolina Retirement Systems

Administered by the South Carolina Public Employee Benefit Authority

Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2019

Pension Trust Funds of the state of South Carolina

S.C. Public Employee Benefit Authority
202 Arbor Lake Drive
Columbia, SC 29223
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Peggy G. Boykin, CPA
Executive Director

Prepared by the joint efforts of the South Carolina Public Employee Benefit Authority Retirement Finance staff.

This page contains no other content.

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Introductory Section

LETTER OF TRANSMITTAL

November 25, 2019

The Honorable Henry D. McMaster, Governor
State of South Carolina
Members of the S.C. State Fiscal Accountability Authority
S.C. Public Employee Benefit Authority Board

We are pleased to present the *Comprehensive Annual Financial Report* (CAFR) of the South Carolina Retirement Systems (Systems) as administered by the South Carolina Public Employee Benefit Authority (PEBA), for the fiscal year ended June 30, 2019. Section 9-1-300 of the South Carolina Code of Laws requires that a report be published annually showing the fiscal transactions of the Systems, and the CAFR fulfills that statutory requirement. PEBA is considered a division of the primary government of the state of South Carolina; and therefore, financial information for the Retirement Systems' trust funds is also included in the CAFR of the state of South Carolina. Responsibility for both the accuracy of the data, and the completeness and reliability of the presentation, including all disclosures, rests with the management of PEBA. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to present fairly the financial position and results of the Systems.

The CAFR was prepared to conform to the principles of governmental accounting and reporting set forth by the Governmental Accounting Standards Board (GASB). GASB is an organization established under the Financial Accounting Foundation and establishes and approves governmental standards. GASB is recognized as the official source of generally accepted accounting principles (GAAP) for state and local governments.

Financial transactions of the Systems are reported on the accrual basis of accounting. Sufficient internal accounting controls exist to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements and supporting schedules, with consideration that the cost of internal control should not exceed anticipated benefits.

The financial statements presented in this CAFR have been independently audited by CliftonLarsonAllen, LLP, under the direction of the State Auditor's Office. CliftonLarsonAllen issued an unmodified opinion, which means that, based upon the financial audit, they concluded that the financial statements were fairly presented in all material respects and are free from material misstatement, in accordance with accounting principles generally accepted in the United States of America.

In accordance with Governmental Auditing Standards, as part of obtaining reasonable assurance about whether the Systems' financial statements are free of material misstatement, CliftonLarsonAllen also considered internal controls over financial reporting and compliance with certain provisions of laws, regulations, contracts, and other matters. Although independent auditors cannot guarantee the accuracy of the statements, they do have a reasonable basis for the opinion they rendered. The independent auditor's report is presented as the first

component of the financial section of this report. Management's Discussion and Analysis (MD&A), which can also be found in the financial section starting on page 30, provides a narrative introduction to and analysis of the financial statements. This letter of transmittal is meant to complement the MD&A and should be read in conjunction with it.

Profile of the Systems

The South Carolina Public Employee Benefit Authority (PEBA), created July 1, 2012 and governed by an 11-member Board, is the state agency responsible for the administration and management of the various Retirement Systems and retirement programs of the state of South Carolina, including the State Optional Retirement Program (State ORP) and the S.C. Deferred Compensation Program, as well as the state's employee insurance programs. As such, PEBA is responsible for administering the South Carolina Retirement Systems' five defined benefit pension plans. A defined benefit plan is a retirement plan in which contributions are made to fund a level of retirement income at a future retirement date. Specified monthly service retirement benefits, as well as disability benefits and death benefits are provided to eligible members and/or their surviving beneficiaries. The plans' terms specify the amount of pension benefits to be provided at a future date or after a certain period of time. Monthly benefits are specified as a function of a formula that is based on years of creditable service, average final compensation, and age. PEBA's administrative and reporting structure is outlined in the Introductory Section of this report.

This report contains information on the following defined benefit pension trust funds:

- The South Carolina Retirement System (SCRS) was established July 1, 1945, to provide retirement and other benefits for teachers and employees of the state and its political subdivisions. SCRS covers employees of state agencies, public school districts, higher education institutions, other participating local subdivisions of government and individuals newly elected to the South Carolina General Assembly at or after the 2012 general election.
- The South Carolina Police Officers Retirement System (PORS) was established July 1, 1962, to provide retirement and other benefits to police officers and firefighters. PORS also covers peace officers, coroners, probate judges and magistrates.
- The Retirement System for Members of the General Assembly of the State of South Carolina (GARS) was established January 1, 1966, to provide retirement and other benefits to members of the General Assembly. Retirement reform legislation closed the GARS plan to individuals newly elected to the South Carolina General Assembly at or after the 2012 general election.
- The Retirement System for Judges and Solicitors of the State of South Carolina (JSRS) was established July 1, 1979, to provide retirement and other benefits to state judges and solicitors. JSRS also covers circuit public defenders.
- The South Carolina National Guard Supplemental Retirement Plan (SCNG) was established July 1, 1975, to provide supplemental retirement benefits to members who served in the South Carolina National Guard.

Fiscal Year 2019 Administrative and Operational Activities

In administering and managing the five defined benefit pension plans, PEBA's vision is to serve those who serve South Carolina and our mission is to provide competitive retirement and insurance benefit programs for South Carolina public employers, employees and retirees. The agency accomplishes this by focusing efforts and goals in areas that promote financially sound programs, encourage retirement awareness, enhance customer experience and responsibly manage risk.

Legislative

PEBA continued to work with leadership of the General Assembly, Senate Finance and House Ways and Means Retirement Subcommittees, and the Retirement System Investment Commission (RSIC) to provide the projected impact of various retirement related legislative proposals. Stress testing was also performed to determine the adequacy of retirement contribution rates under various investment return assumptions. The General Assembly provided increased funding to stabilize JSRS and again provided nonemployer contributions for SCRS and PORS in an effort to help offset a portion of the increased contribution requirements for some employers.

Operations

More than 600,000 public employees are covered by the five defined benefit plans. An additional 50,000 members participate in the State Optional Retirement Program (State ORP), and 100,000 participate in the supplementary Deferred Compensation Plan (401k and 457 plans). PEBA collects over $2.8 billion in contributions and disburses more than $3.5 billion in retirement benefits each year.

PEBA's core operational units processed 5,616 service retirement applications, 207 disability applications, 12,358 refund requests, 5,415 death claims and nearly 5,000 Teacher and Employee Retention Incentive (TERI) program payments during fiscal year 2019. TERI was a deferred retirement option plan which had been in place under SCRS since January 2001; however, legislation closed the program to all members effective June 30, 2018. Therefore, with the closure of the TERI program, PEBA disbursed funds totaling $377 million to participants who ended their TERI participation on June 30, 2018 or earlier. Additionally, once a member ended their TERI participation, each member's monthly benefit had to be recalculated prospectively.

We encourage increased retirement awareness among members through a Be Aware and Prepare educational series. This series provides members with information that can help them make smart decisions about their financial future. PEBA offers preretirement planning seminars to members who are a few years away from retirement eligibility. We also offer a mid-career seminar for those members who are still years away from retirement to explain what they need to consider now and how to take action to help ensure a secure financial future. The agency also worked diligently to improve member and employer education for a variety of topics, such as the decision for newly hired employees to make an enrollment election between State ORP and SCRS.

Benchmarking

PEBA's Retirement Division participates in CEM's pension administration benchmarking service biannually. The process allows the plan's costs and service level measurements to be compared relative to our peers with the goal of understanding influencing factors and potentially identifying areas that can be improved. Based on the most recent survey conducted as of 2018, PEBA's total pension administration cost was $36 per active member and annuitant. This was $44 below the peer average of $80 per active member and annuitant, the lowest of our peer group, and the fourth lowest cost in the CEM universe. This demonstrates the value that PEBA provides to our membership through a very low administration cost, yet relatively high service level.

Information Technology

Technology upgrades, including a courtesy call back feature in the contact center's call management system, have provided for enhanced customer experiences.

PEBA continues to responsibly manage risk through active management of our third-party vendors, annual risk assessments for compliance with federal mandates and monitoring of compliance with state issued information security requirements. In addition, PEBA continues to update and test our business continuity and incident response plans. This fiscal year, we conducted a more robust business continuity test in conjunction with our annual disaster recovery program and an information technology-specific test of our incident response

capabilities. PEBA has matured the enterprise risk management program with the addition of a risk oversight committee that monitors risks to operations, projects and the plans.

One of the most significant operational challenges the agency faces is the replacement of its legacy information systems. Linea Solutions was awarded the client services vendor contract and is onsite working with staff. In August 2018, Icon Integration and Design, Inc. was awarded the data conversion and bridging services contract. Icon is onsite working to cleanse operational data for the new system. The agency also defined, developed and released a request for qualification to procure a new benefits administration system. The request for proposal for new benefits administration system implementation was released in July 2019.

Summary of Financial Condition

Actuarial Results

The main funding objective of the pension trust funds is to meet future benefit obligations of retirees and beneficiaries through employee and employer contributions and investment earnings. Each year, the external consulting actuaries determine the actuarial soundness of the plans based on long term obligations and the sufficiency of current contribution levels to fund the liabilities of each plan over a reasonable time frame. In addition to contribution requirements, there are numerous measures used to monitor a plan's funding status including the dollar amount of the unfunded actuarial accrued liability (UAAL), the funding period and the funded ratio.

The most recent annual actuarial valuations dated July 1, 2018 determined the actuarial status of each plan and were adopted by the PEBA Board in December 2018. Under each plan, the market value of assets is less than the actuarial value of assets, which means deferred investment losses exist and will be recognized as investment losses in future years. Actuarial smoothing techniques, which defer investment gains and losses, help to dampen the short-term volatility inherent in investment markets by using a systematic approach that allows only a portion of investment gains and losses to be recognized each year. Adjusting for a five-year smoothing phase, each System recognized a net actuarial loss on investment returns for the valuation year.

Since the future recognition of deferred losses is expected to further increase the UAAL for SCRS and PORS, and to help lessen the impact should actual investment returns not exceed the assumed rate of return, pension reform legislation in 2017 modified state statute to schedule additional funding. The legislation increased, but also established a ceiling for SCRS and PORS employee contribution rates. Effective July 1, 2017, employee rates were increased to a capped rate of 9.00 percent for SCRS and 9.75 percent for PORS. The legislation also increased employer contribution rates beginning July 1, 2017 for both SCRS and PORS by two percentage points and further scheduled employer contribution rates to increase again by a minimum of one percentage point each year through July 1, 2022. If the scheduled contributions are not sufficient to meet the funding periods set in state statute, the board shall increase the employer contribution rates as necessary to meet the funding periods set for the applicable year. The valuations recognize employer contribution rate increases effective July 1, 2019 for both SCRS and PORS by one percentage point to 15.56 percent and 18.24 percent, respectively. The 2017 legislation also scheduled the maximum funding period of SCRS and PORS to be reduced over a ten-year schedule from 30 years beginning fiscal year 2018 to 20 years by fiscal year 2028.

As of July 1, 2018, the dollar amount of the UAAL for SCRS increased from $21.1 billion in the prior year to $22.1 billion and PORS increased from $2.6 billion to $2.7 billion. The largest source of increase was the annual accrual of interest on the UAAL and continual recognition of deferred investment losses. Absent significant favorable investment experience, those deferred losses will continue to be reflected in the actuarial value of assets over the next few years. Other non-investment related experience activity such as mortality, salary experience,

payroll growth and turnover, which are considered normal within the course of plan experience, contributed to other actuarial gains and losses, as actual experience cannot be precisely predicted and will not exactly match the estimated assumptions.

Similar to mortgage financing, the UAAL of each System is paid down or amortized over a period of years after which time the plan is expected to be fully funded. The funding period for SCRS, which represents the largest membership of the five plans, decreased from 24 years in the prior year to 22 years as of July 1, 2018. The funding period for PORS decreased from 23 years to 20 years. As mentioned above, scheduled increases in SCRS and PORS employer contribution rates and the maximum amortization period that is specified in state statute will, in time, result in improved financial security. The funding period for JSRS decreased from 30 years in the prior year to 28 years and GARS and SCNG each improved one year in accordance with the level-dollar closed period funding policy.

The funded ratio is another measurement of a plan's funded status and it is calculated as the ratio of the actuarial value of assets to the actuarial accrued liability. The funded ratios of the five plans as of July 1, 2018, range from a low of 44.2 percent for SCNG to a high of 63.1 percent for PORS. The funded ratio for SCRS, which represents the largest membership of the five plans, decreased from 56.3 percent in fiscal year 2017 to 55.0 percent in 2018. The decrease resulted from the recognition of deferred investment losses that occurred in prior years and because the contributions to the plan attributable to financing the UAAL were less than the interest on the unfunded liability. Absent favorable investment or liability experience, the actuaries expect the funded ratio to remain relatively unchanged for the next couple of years then begin to gradually improve due to the additional funding provided by the 2017 legislation. The funded ratios for PORS, GARS, JSRS and SCNG each showed a slight increase from fiscal year 2017 to 2018. Although the funded ratios of JSRS and SCNG are very low, the General Assembly is committed to ensure all plans are sufficiently funded so each year recurring funds are set aside in the state's annual budget to provide funding to JSRS and SCNG so future improvement in the funded ratios is expected.

For additional financial information, refer to management's discussion and analysis, financial statements and schedules included in the financial section and the actuarial section of this report. It is important to note that the actuarial valuations determine the funding of the pension plans; however, under standards issued by the Governmental Accounting Standards Board (GASB), Statements 67 and 68 completely disconnect the funding of pensions from the accounting and reporting of pensions.

Investment Performance

As of June 30, 2019, the custodial bank reported that the net asset value of the pension trust funds, invested and managed by the Retirement System Investment Commission (RSIC), had a fair value of $32.0 billion. This represents a $647 million increase, after payment of benefits, over the previous fiscal year end's fair value.

The Plans' assets returned 5.84 percent investment return, net of fees on a time-weighted calculation basis, for the fiscal year ending June 30, 2019, compared to the Policy benchmark's return of 6.50 percent. The three-year annualized net of fees return was 8.48 percent, as of the fiscal year end, compared to the Policy benchmark return of 8.51 percent. The five-year Plan annualized return and Policy benchmark return were 5.26 percent and 5.45 percent respectively.

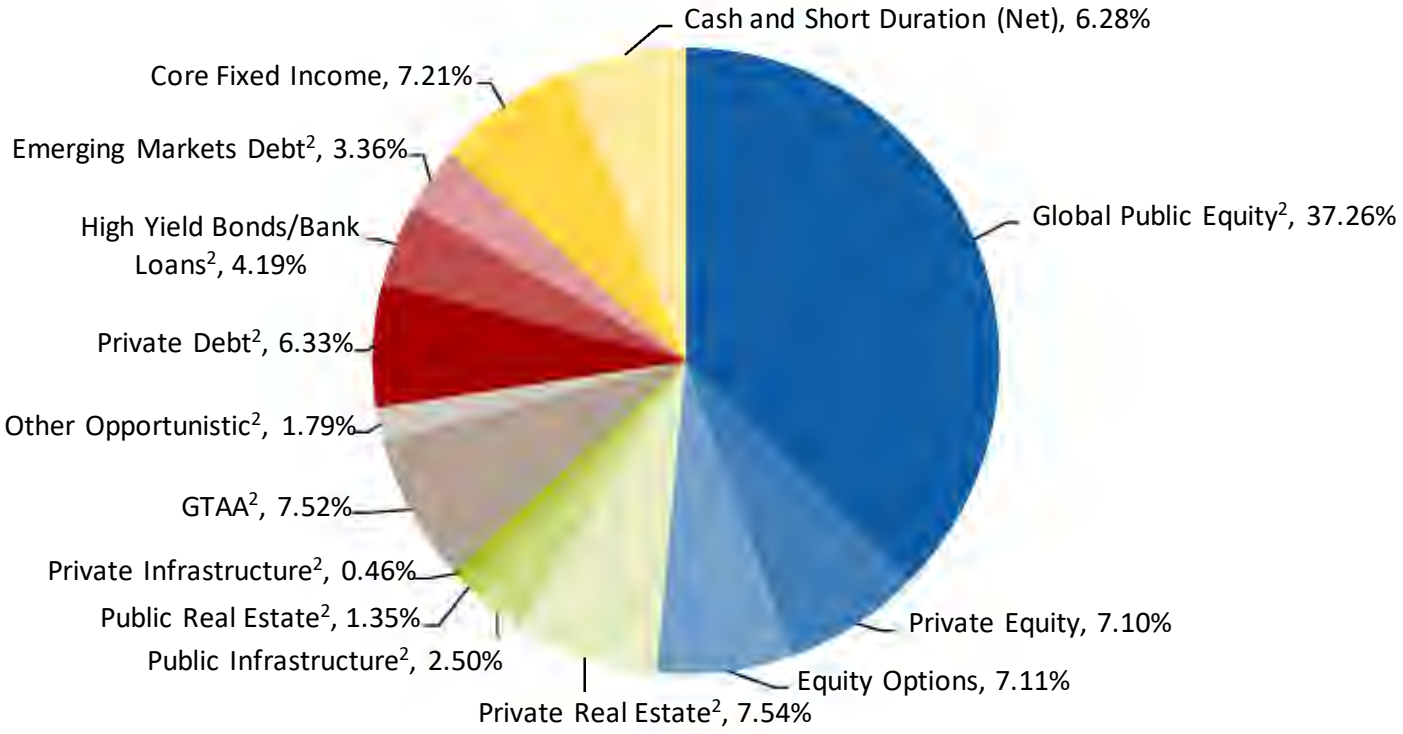
The Plan's actuarial assumed rate of return, as of fiscal year end, was 7.25 percent. Investment performance, in comparison to the actuarial assumed rate of investment return, is a significant factor in the actuarial valuations. The actuarial asset valuation method utilized dampens year-to-year fluctuations, mitigates the effect of annual return volatility in the market and helps provide a consistent estimate for the actuarial value of assets.

For fiscal year 2019, the Commission approved and implemented changes to the portfolio's target asset allocation. The asset allocation increased the equity allocation from 47 percent to 51 percent of the Plan by increasing both the Global Equity asset class and the Equity Options asset class by 2 percentage points each. The allocation to non-portable alpha hedge funds was reduced to zero and hedge funds used in the portable alpha strategy were given a 10 percent allocation target making them now part of the Policy Benchmark. The asset allocation also introduced a 2 percent allocation to treasury inflation protected securities (TIPS) and reduced cash from a 3 percent target to a 1 percent target. The Emerging Markets Debt allocation target was reduced from 5 percent to 4 percent of the Plan. Additionally, Real Assets increased from 10 percent to a 12 percent target allocation by increasing both the Total Real Estate asset class and the Total Infrastructure asset class by 1 percentage point each. Mixed Credit was renamed to High Yield Bonds/Bank Loans to better represent the holding of the asset class and the allocation was reduced 2 percentage points to 4 percent of the Plan.

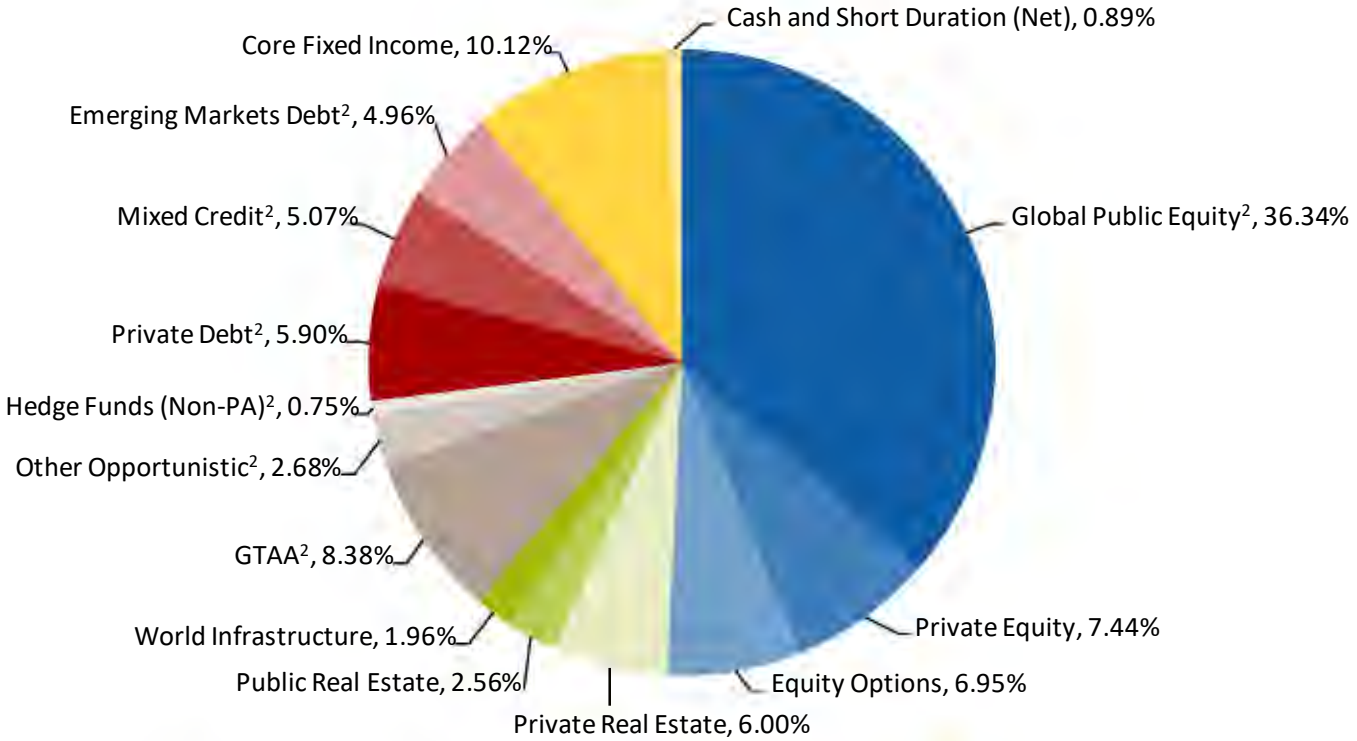
The charts on pages 17-18 were provided by RSIC and they summarize the asset allocation of the Retirement Systems' trust funds for the prior and most recent fiscal years, and the RSIC's target allocation in effect as of fiscal year ended June 30, 2019.

Detailed investment results for fiscal year 2019 can be found within both the financial and investment sections of this report.

Portfolio Exposure as of June 30, 2019[1]



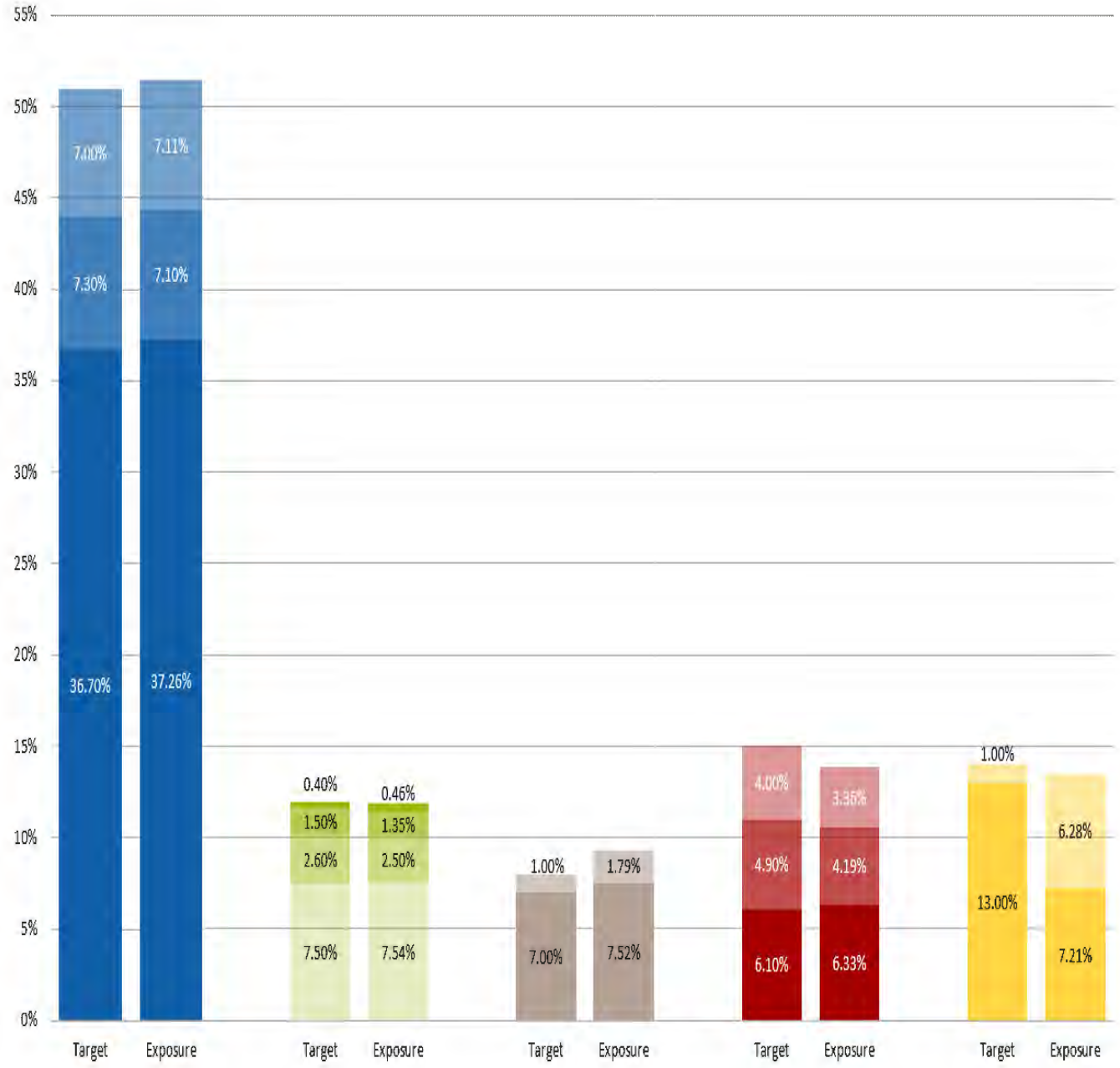
Portfolio Exposure as of June 30, 2018[1]



Global Equity **Real Assets** **Opportunistic** **Diversified Credit** **Conservative Fixed Income**

[1] Asset class exposures include exposure from RSIC's derivative overlay program.
[2] Asset classes in which hedge funds can be used. Total hedge fund exposure cannot exceed 20% of total Plan assets.

Portfolio Exposure and Target Asset Allocation as of June 30, 2019[1]



Global Equity
- Global Public Equity[2]
- Private Equity
- Equity Options

Real Assets
- Private Real Estate[2]
- Public Infrastructure[2]
- Public Real Estate[2]
- Private Infrastructure[2]

Opportunistic
- GTAA[2]
- Other Opportunistic[2]

Diversified Credit
- Private Debt[2]
- High Yield Bonds/Bank Loans[2]
- Emerging Markets Debt[2]

Conservative Fixed Income
- Core Fixed Income
- Cash and Short-Duration (net of overlays)

[1] Target Asset Allocation reflects the policy targets that were adopted by the Commission and in effect at the end of fiscal year 2019. The target weights to Private Equity, Private Debt, and Private Real Estate are equal to their actual weights, reported by the custodial bank, as of the prior month end.

[2] Asset classes in which hedge funds can be used. Total hedge fund exposure cannot exceed 20% of total Plan assets.

Certificate of Achievement

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the South Carolina Retirement Systems for its Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2018. This was the 32nd consecutive year that the Retirement Systems has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements, and we are submitting it to GFOA to determine its eligibility for another certificate.

Public Pension Standards Award

The South Carolina Retirement Systems received the Public Pension Coordinating Council's Public Pension Standards Award in 2019 for the 16th consecutive year in recognition of meeting professional plan design and administration standards. The Public Pension Coordinating Council is a confederation of the National Association of State Retirement Administrators, the National Conference on Public Employee Retirement Systems, and the National Council on Teacher Retirement.

Acknowledgments

The compilation of this report reflects the combined efforts of the staff of PEBA functioning under your leadership. The report is intended to provide comprehensive and reliable information about the Retirement Systems, to demonstrate compliance with legal provisions, and to allow for the evaluation of responsible stewardship of the trust funds of the Retirement Systems.

We express our gratitude to the Governor, the S.C. General Assembly, the S.C. State Fiscal Accountability Authority, the PEBA Board, the RSIC, the staff, the consultants, and the many people who have worked so diligently to assure the continued successful operation of the Retirement Systems for the members we serve.

Respectfully submitted,

Peggy G. Boykin, CPA	Travis J. Turner, CPA, CISA	Tammy B. Nichols, CPA
Executive Director	Chief Financial Officer	Retirement Finance Director

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

South Carolina Employee Benefit Authority-South Carolina Retirement Systems

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

South Carolina Retirement Systems

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
Program Administrator

Governing Board and Administration as of Issuance

S.C. Public Employee Benefit Authority Board of Directors

John A. Sowards, J.D., *Chairman*
Joe W. "Rocky" Pearce, Jr., *Vice Chairman*
Jennifer Blumenthal, J.D.
Calvin Elam, CLU, ChFC, MSFS
Stephen M. Heisler
Paige Parsons Lewis
Sheriff Leon Lott
Steve A. Matthews, J.D.
Charles "Chuck" Richardson
Alexander G. Shissias, J.D.
Edward L. Walton, CPA

Retirement System Investment Commission

Dr. Ronald P. "Ron" Wilder, *Chair*
Dr. Rebecca M. Gunnlaugsson, *Vice Chair*
William J. "Bill" Condon, J.D., M.A., CPA
Allen R. Gillespie, CFA
Edward N. Giobbe, MBA
William H. "Bill" Hancock, CPA
Reynolds Williams, J.D., CFP
Peggy G. Boykin, CPA

Custodial Bank

BNY Mellon Asset Servicing

Investment Consultants

Meketa Investment Group
Albourne America, LLC

Consulting Actuaries

Gabriel Roeder Smith & Company

S.C. Public Employee Benefit Authority Executive Management

Peggy G. Boykin, CPA, *Executive Director*
Sarah N. Corbett, CPA, *Chief Operating Officer*
Travis J. Turner, CPA, *Chief Financial Officer*
John E. Page, CIA, CISA, CRMA *Director of Internal Audit*
Stephen R. Van Camp, J.D., *General Counsel*
Gwen Bynoe, *Governmental Affairs*
Robin E. Tester, *Healthcare Policy Director*
James Manning, *Risk Management and Compliance Director*
Heather Muller, *Board Liaison*

Retirement System Investment Commission Executive Management

Michael Hitchcock, *Chief Executive Officer*
Geoffrey Berg, CFA, *Chief Investment Officer*
Betsy Burn, *Chief Legal Officer*
Andrew Chernick, CPA, CAIA, *Chief Operating Officer*

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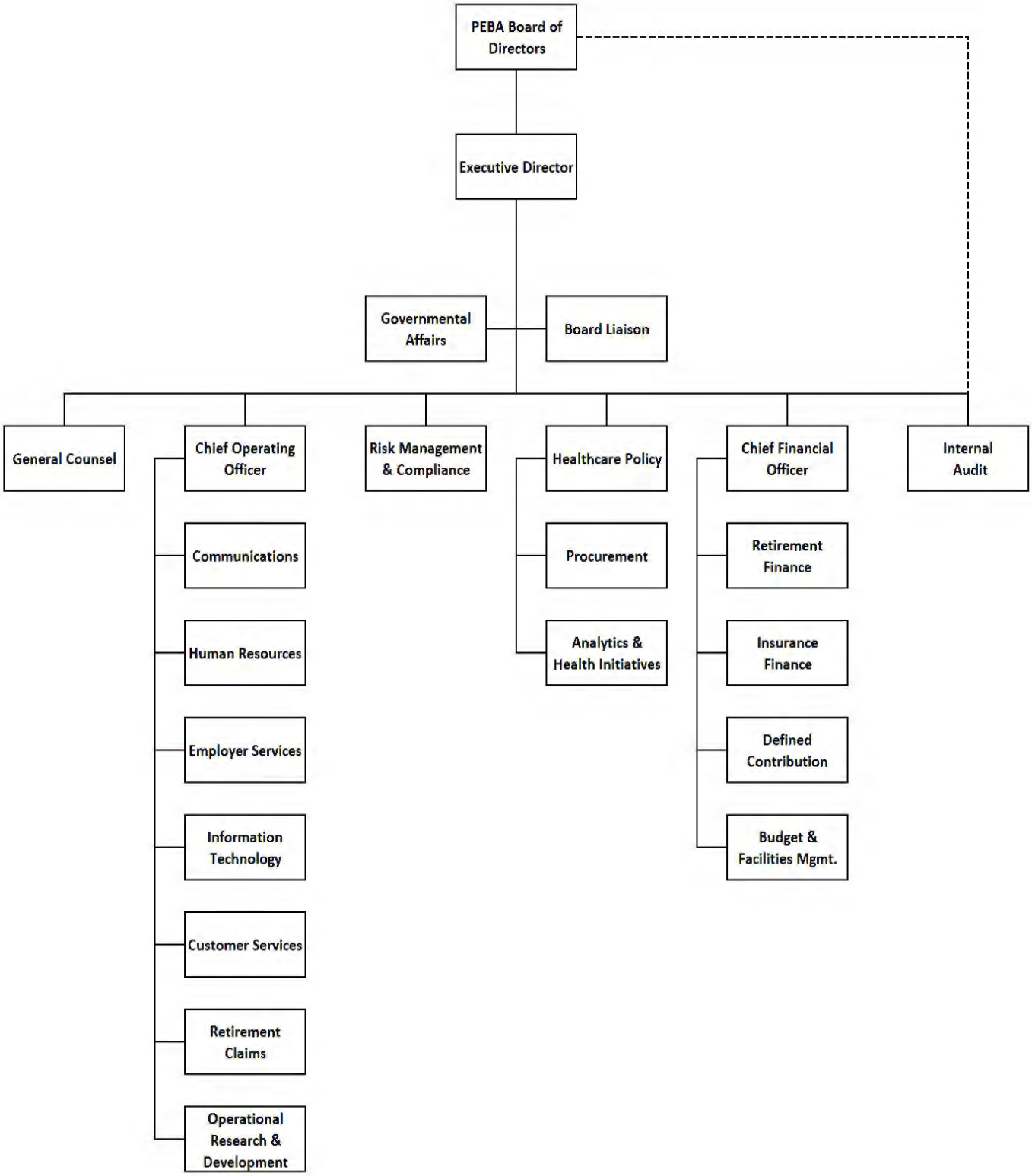
Danielle M. Quattlebaum, CPA, *Retirement Systems Finance*
Faith K. Wright, *Retirement Systems Finance*
J. Evan Mitchell, CPA, *Retirement Systems Finance*

Additional information regarding investment professionals who provide services to the System can be found in the Schedule of Investment Managers and Fees on pages 116-120. The Schedule of Investment Fees and Commissions can be found on page 115.

S.C. PEBA Organizational Chart



Organizational Description

The structural organization of the South Carolina Public Employee Benefit Authority (PEBA) is depicted in the organizational chart on page 23. A brief description of the primary functions performed by each department follows:

Governmental Affairs

Serves as liaison to the SC General Assembly. Provides research and assistance to legislative staff in the provisions of retirement and health benefits, both in the service of constituents and legislation governing the agency.

General Counsel

Provides consultation to agency leadership and staff concerning the operation and compliance of governmental employee retirement and insurance benefit plans. Represents the agency in matters at the administrative, trial and appellate levels, and coordinates associated outside legal counsel.

Chief Operating Officer

Provides leadership and oversight of internal operations and administrative functions to include customer service, employer services, information technology, communications and human resources. Directs operational research and development and the development and implementation of agency strategic plans.

Risk Management and Compliance

Leads the agency in the development, implementation and monitoring of enterprise compliance programs and policies. Oversees information security and privacy programs. Develops and implements an enterprise risk management framework.

Healthcare Policy

Directs healthcare policy for the public employee insurance benefits package. Oversees the research, analysis, and pricing of the State Health Plan. Directs contract and plan compliance in offering the most cost-effective options while providing maximum benefit within regulatory requirements.

Chief Financial Officer

Directs the financial activity and financial reporting of the retirement plans and insurance benefits offered to public employees. Provides oversight and leadership to the financial operations of insurance benefits and Other Post Employment Benefit trusts, five defined benefit plans, a defined contribution plan and the deferred compensation program.

Internal Audit

Responsible to the Board of Directors for providing independent analysis and assurance of agency processes, policies and internal controls.

Financial Section

CliftonLarsonAllen LLP
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INDEPENDENT AUDITORS' REPORT

The Honorable Henry D. McMaster, Governor
Mr. George L. Kennedy, CPA, State Auditor,
and Board of Directors
South Carolina Public Employee Benefit Authority
Columbia, South Carolina

Report on the Financial Statements

We have audited the accompanying financial statements of the South Carolina Retirement Systems (the Systems), as administered by the South Carolina Public Employee Benefit Authority, 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, as listed in the table of contents.

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.

Auditors' 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 from 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 auditors' 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.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Systems as of June 30, 2019, and the respective changes in its financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Report on Summarized Comparative Information

We have previously audited the Systems' 2018 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated October 15, 2018. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2018 is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and the schedules of changes in employers' net pension liability, employers' net pension liability, employers' contributions and investment returns and related notes, as listed in the table of contents, be presented to supplement the financial statements. Such information, although not a part of the financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the 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 financial statements, and other knowledge we obtained during our audit of the 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 Systems' financial statements. The other supplementary information, and the introductory, investment, actuarial, and statistical sections, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the financial statements.

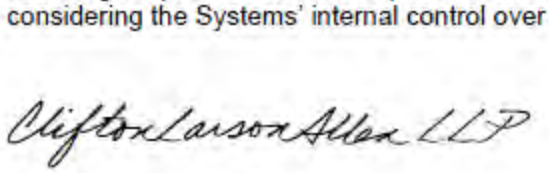
The other supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. Such information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the financial statements as a whole.

The Honorable Henry D. McMaster, Governor
Mr. George L. Kennedy, CPA, State Auditor,
and Board of Directors
South Carolina Public Employee Benefit Authority

The introductory, investment, actuarial and statistical sections, as listed in the table of contents, have not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an 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 October 15, 2019 on our consideration of the Systems' internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Systems' internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Systems' internal control over financial reporting and compliance.



CliftonLarsonAllen LLP

Baltimore, Maryland
October 15, 2019

Management's Discussion and Analysis

This section presents management's discussion and analysis of the financial position and performance for the year ended June 30, 2019, for the South Carolina Retirement Systems' pension trust funds (Systems), and is offered as an introduction and analytical overview. This narrative is intended as a supplement and should be read in conjunction with the financial statements and other information presented in the *Comprehensive Annual Financial Report*.

The Systems' financial statements provide information about the activities of the five defined benefit pension plans administered, which are listed below, in addition to comparative summary information about the activities of the Systems as a whole:

- The South Carolina Retirement System (SCRS) - A member contributory multiple-employer plan covering teachers, as well as state and municipal employees;
- The Police Officers Retirement System (PORS) - A member contributory multiple-employer plan covering state and local law enforcement personnel and firefighters;
- The Retirement System for Members of the General Assembly of the State of South Carolina (GARS) - A member contributory plan providing benefits to members of the South Carolina General Assembly, which is closed to persons first elected to the South Carolina General Assembly at or after the general election in November 2012;
- The Retirement System for Judges and Solicitors of the State of South Carolina (JSRS) - A member contributory plan covering Judges, Solicitors, Public Defenders and Administrative Law Judges; and
- The South Carolina National Guard Supplemental Retirement Plan (SCNG) - A non-contributory supplemental benefit plan for members of the South Carolina National Guard.

Overview of the Financial Statements

The Systems represents the collective retirement funds that are held in a group trust for the plans and are protected by the state's constitution. The South Carolina Public Employee Benefit Authority (PEBA) was created July 1, 2012 and operates a Retirement Division to administer the various retirement systems and retirement programs. PEBA has an 11-member Board of Directors, appointed by the Governor and General Assembly leadership, which serves as custodian, co-trustee and co-fiduciary of the Systems and the assets of the retirement trust funds. The Retirement System Investment Commission (Commission as the governing body, RSIC as the agency), created by the General Assembly in 2005, has exclusive authority to invest and manage the retirement trust funds' assets. The Commission, an eight-member board, serves as co-trustee and co-fiduciary for the assets of the retirement trust funds. By law, the State Fiscal Accountability Authority (SFAA), which consists of five elected officials, also reviews certain PEBA Board decisions regarding the actuary of the Systems.

PEBA is considered a division of the primary government of the state of South Carolina and therefore, retirement trust fund financial information is also included in the comprehensive annual financial report of the state. Financial statements prepared on behalf of the Systems, include the following information, for the fiscal year ended June 30, 2019, with combined total comparative information for the fiscal year ended June 30, 2018:

- Statement of Fiduciary Net Position
- Statement of Changes in Fiduciary Net Position
- Notes to the Financial Statements
- Required Supplementary Information
- Other Supplementary Information

The Statement of Fiduciary Net Position presents the Systems' assets and liabilities and the resulting net position restricted for pensions. This statement reflects a year-end snapshot of the Systems' investments, at fair value, along with cash and short-term investments, receivables and other assets and liabilities.

The Statement of Changes in Fiduciary Net Position presents information showing how the Systems' net positions restricted for pensions changed during the year. This statement includes additions for members, employers, nonemployer and state appropriated contributions and investment earnings (losses) and deductions for retirement benefit payments, refunded contributions, death benefit payments and administrative expenses.

Notes to the Financial Statements are an integral part of the basic financial statements and provide additional information that is necessary in order to gain a comprehensive understanding of data reported in the basic financial statements.

Required Supplementary Information presents schedules pertaining to the employers' net pension liability, changes in employers' net pension liability, employers' and nonemployer's contributions, and the money-weighted rate of return on investments. These schedules are intended to provide additional information useful in evaluating the condition of the Systems.

Other Supplementary Information includes Schedules of Changes in Fiduciary Net Position by System, as well as Schedules of Administrative Expenses, Professional and Consultant Fees and Investment Fees and Expenses.

Financial Highlights

- Total fiduciary net position for all five defined benefit plans of the Systems combined, increased from $31.2 billion to $32.3 billion, which was over three percent from the prior year net position. The net position of the plans is impacted by contributions paid into the plans, investment performance, and benefit payments out of the system. The plans are in a net cash outflow position with benefit payments exceeding contributions; therefore, investment performance must first make up this gap before fiduciary net position can grow. The increase in net position was attributable to both increased contributions and positive investment performance.
- For the fiscal year ended June 30, 2019, the net of fee investment performance return on a time-weighted basis reported by the custodial bank, the Bank of New York Mellon (BNYM), was 5.84 percent. This net return reflects performance of the Systems, at the aggregate for the pooled investments of the consolidated pension trust funds, after the deduction for manager fees and/or expenses. This fiscal year's performance was below the prior year's return of 7.82 percent and is considered an actuarial loss since it was less than the actuarial assumed rate of return of 7.25 percent. Actuarial valuations are prepared for each of the plans annually for funding purposes, at which time gains and losses from investment performance are recognized using smoothing methods that help mitigate sharply fluctuating market returns over a long-term period. The smoothing methodology offsets both deferred investment gains and losses against each other and is intended to produce an actuarial asset value that should be fairly consistent with market value during periods of ordinary investment returns. Smoothing investment performance avoids overreaction to inherently volatile conditions that would otherwise overweight the effects of a single year of performance that may potentially be reversed in subsequent years. Actuarial smoothing is intended to result in more stable contribution rates and a more level funded status and is also a valuable methodology for governmental entities because it permits participating employers to plan their budgets over more than one fiscal year.
- Liability calculations for financial reporting purposes for each of the five defined benefit plans were performed and certified by Gabriel Roeder Smith & Company (GRS) in the GASB No. 67 Accounting

Valuation Report as of June 30, 2019. The calculations presented in the accounting valuation report are not applicable for other purposes, such as determining the plans' funding requirements. The total pension liability, net pension liability, and sensitivity information for each plan are based on the actuarial valuations performed as of July 1, 2018. The total pension liability for each plan was rolled-forward from the valuation date to the plans' fiscal year ending June 30, 2019, using generally accepted actuarial principles. There were no significant changes noted for other systems; however, the General Assembly approved a 35.8 percent salary increase for active members participating in JSRS, effective July 1, 2019. Due to the cost of living adjustment feature in JSRS, there is also a corresponding 35.8 percent increase in the monthly retirement benefits for retirees in JSRS beginning July 1, 2019. The salary and annuity increases required the JSRS employer contribution rate to increase from 52.49 percent to 62.94 percent, effective July 1, 2019. The Notes and Required Supplementary Information (RSI) sections of the Financial Statements include disclosures required by GASB No. 67.

- Cash and cash equivalents, receivables, and prepaid expenses reported on the condensed Statement of Fiduciary Net Position increased significantly in fiscal year 2019, primarily due to an increase in unsettled investment sales as of June 30, 2019. Unsettled investment sales increased from $613 million the prior year to $1.411 billion as of June 30, 2019. In addition, there was also a slight increase in the dollar amount of cash equivalents at June 30, 2019.
- Other liabilities reported on the condensed Statement of Fiduciary Net Position also increased substantially as compared to the prior year as a result of the increase in accounts payable-unsettled investment purchases from $860 million the prior year to $1.281 billion as of June 30, 2019.
- The dollar amount of employee and employer contributions collected increased compared to the prior year and the rise is primarily attributable to increased contribution rates and some limited payroll growth. For fiscal year 2019, employee rates remained a capped rate of 9.00 percent for SCRS and 9.75 percent for PORS: however, employer contribution rates for both SCRS and PORS increased by 1 percent of pay to 14.56 percent and 17.24 percent, respectively. These employer rates are inclusive of contributions for the death benefit plan which are only applicable to participating employers. Effective July 1, 2019, employee rates will remain the same but employer contribution rates are scheduled to again increase by 1 percentage point for both SCRS and PORS to 15.56 percent and 18.24 percent, respectively. In accordance with the legislative funding schedule, employer contribution rates will continue to increase by a minimum of 1 percentage point each year through July 1, 2022, and further, if the scheduled contributions are not sufficient to meet the funding periods set for the applicable year. The board shall increase the employer contribution rates as necessary to meet the amortization period set in statute.
- In an effort to help offset a portion of the increased contribution requirements for employers, the General Assembly again provided nonemployer contributions to PEBA. Based on the criteria provided in the South Carolina 2018-2019 Appropriations Act, Section 117.139, PEBA issued credit invoices to certain SCRS and PORS employers for fiscal year 2019 who then applied the credit invoices towards contributions otherwise due to the Systems. The amount of credit invoices issued in fiscal year 2019 totaled $88.7 million and $12.5 million for SCRS and PORS respectively. The nonemployer contributions were slightly less than the prior year amounts due to the General Assembly reducing the funding allocated to certain employers.
- Although the amount of regular monthly retirement benefits increased, the total amount of benefit expenses decreased 12.3 percent from the prior fiscal year due to the closure of the Teacher and Employee Retention Incentive (TERI) program on June 30, 2018. The increase in regular monthly retirement benefits was attributable to an annual benefit adjustment equal to the lesser of 1 percent or $500 granted to eligible SCRS and PORS annuity recipients effective July 1, 2018, and an increase in the

number of annuitants. Deferred retirement benefit expenses for the year ended June 30, 2018 were almost $708 million but there were no deferred retirement benefit expenses for the current year.

- TERI was a deferred retirement option program available under SCRS that allowed members who were eligible to retire to accumulate annuity benefits on a deferred basis for up to 60 months while continuing employment. Legislation enacted in 2012 closed the TERI program to all participants effective June 30, 2018, so not all TERI participants were eligible to participate for the full 60 months. During the member's period of participation, both the member and the employer were required to pay the same contribution rate on compensation earned, in the same manner as for active members. TERI participants did not earn additional service credit or interest on their TERI account, but they were eligible to receive retirement benefit increases in the same manner as other annuitant payees. At the end of the member's TERI participation and upon termination from employment, the balance in the member's accumulated TERI account was distributed. Deferred retirement benefit liabilities decreased from $377 million in the prior year to $70 thousand as the majority of the TERI funds were disbursed.
- The Systems' investment portfolio participates in a securities lending program, managed by BNYM, whereby securities are loaned for the purpose of generating additional income. As the securities lending agent, BNYM is responsible for making loans of securities on a collateralized basis from the Systems' investment portfolio to various third party broker-dealers and financial institutions. Securities lending revenue net of borrower rebates was $3.05 million, an increase from $1.99 million in the prior year. As reported by BNYM, at June 30, 2019, the fair value of securities on loan was $83.25 million, the fair value of the invested cash collateral was $41.33 million, and the securities lending obligations were $86.65 million. The reported difference in the value of the invested cash collateral and the securities lending obligations in the securities lending program, is reflected within "Other Liabilities" on the Retirement Systems' Statement of Fiduciary Net Position, consistent with information reported on accounting statements provided by BNYM as both the custodial bank and securities lending agent.
- The Commission operates pursuant to statutory provisions and under governance policies that allow for a diverse asset allocation and which afford the RSIC and its Chief Investment Officer (CIO) discretion and flexibility to quickly react to changes in market conditions. The Retirement Systems investment portfolio is structured to focus on ensuring the long-term stability of the plans, seeking superior returns at acceptable levels of risk.
- The Commission is responsible for establishing and managing a target asset allocation that manages risk, ensures liquidity, and as mentioned above, affords flexibility to quickly react to changes in market conditions. The fiscal year 2019 policy allocation, including target weights, ranges and benchmarks for each asset class, was adopted by the Commission on February 8, 2018 for the fiscal year beginning July 1, 2018. The asset policy increased the allocation to the Equity target by 4 percentage points; a 2 percentage point increase in both the Global Public Equity target and the Equity Options target. The target allocation to Diversified Credit was reduced by 3 percentage points. The asset allocation also introduced a target to Portable Alpha Hedge Funds of 10 percent and now includes this asset class in the policy benchmark.
- The Commission has exclusive authority to select the custodial bank, with PEBA as a third-party beneficiary of the contract with full rights to information. The Commission contracted with BNYM to serve as custodial bank for the Retirement Systems' funds. Under a provision of the contract for custody services and in an effort to maintain transparency, BNYM directly invoices the trust funds on a quarterly basis for both custody and other ancillary services utilized. PEBA and the RSIC jointly verify that invoices accurately reflect services rendered and are appropriate for the period before amounts are paid. The trust funds' securities lending revenue account is the initial source from which such costs are paid to the custodial agent.

- All investment manager fees, whether directly invoiced or deducted from the fund Net Asset Value (NAV) on a net of fee basis, are classified and reported as investment expense in the Statement of Changes in Fiduciary Net Position. The RSIC validates and provides the non-invoiced fee information to PEBA on an annual basis so that amounts can be reclassified and reported in the Systems' financial statements. Investment manager fees reported include management fees, performance fees and carried interest (accrued during the fiscal year), and other expenses. There is no industry standard for reporting pension plan investment fees and expenses; therefore, in order to compare investment expenses as reported by the Systems with investment management costs reported by other public pension plans, an understanding of the actual fees and expenses included in any comparative report is necessary. Total investment manager fees for fiscal year 2019 were $310.2 million, which includes both invoiced amounts and amounts deducted on a net of fee basis, but excludes bank fees and other miscellaneous investment expenses. Comparatively, total investment manager fees were 13.6 percent less than the prior fiscal year 2018 total of $359.0 million. The decrease is largely attributed to lower performance fees as a result of generally lower market returns for the fiscal year in the asset classes that incur performance fees.
- PEBA is the governing body responsible for administration of both the state's retirement plans and employee insurance programs, and its administrative costs for retirement operations are funded from the retirement trust funds. Administrative expenses for fiscal year 2019 increased 6.6 percent from the prior year. This increase resulted largely from higher information technology operating expenses and other costs associated with building and facilities maintenance.
- GRS is on retainer as the Systems' consulting actuary for the defined benefit retirement plans. South Carolina state statute requires that the actuary complete a valuation of the Systems annually and conduct an experience study at least once in each five year period. The most recent valuation reports were issued as of July 1, 2018. GRS completed an actuarial experience study on the Systems with the report issued as of July 1, 2015. As a result of the experience study, the actuary recommended adjustments to the actuarial assumptions, which included salary increase, payroll growth, mortality, retirement, terminations, refunds, disability, inflation, and asset valuation method. These recommended assumption and method changes were adopted and incorporated starting with the July 1, 2016 valuations. The experience study also recommended reducing the long-term investment rate of return assumption; the assumed rate of return was reduced from 7.50 to 7.25 percent effective July 1, 2017 as part of the Retirement System Funding and Administration Act of 2017. The 7.25 percent assumed rate of return expires on July 1, 2021, and every four years thereafter, and as such, the PEBA Board, in consultation with the Commission, must propose an assumed annual rate of return based on recommendations of the Board's actuary. The next experience study will be conducted as of June 30, 2019.
- As a cost-sharing multiple-employer defined benefit pension plan, PEBA works closely with our consulting actuary and external audit firm to ensure employers are provided with pension information needed to prepare their GAAP based financial statements in compliance with Governmental Accounting Standards Board (GASB), specifically Statements No. 68, 71 and 82. PEBA's public website includes a dedicated GASB section where information is posted for participating employers and auditors to access financial statement disclosure information related to their proportionate share of the net pension liability, deferred inflows and outflows of resources and pension expense.
- All of the plans (excluding SCNG) include certain provisions that allow retired members to return to covered employment while also receiving a monthly retirement benefit. For members who return to work for a covered employer after retirement, the employer must pay the corresponding employer

contribution for that particular plan, and under SCRS, PORS and JSRS, retired members are also required to pay the same employee contribution as an active member in the same position. As of June 30, 2018, the actuarial valuations for SCRS and PORS collectively reported that over 4,000 TERI participants plus approximately 15,750 retirees were working for a covered employer while receiving monthly retirement benefits, thereby making up more than 7 percent of the total public workforce covered by the Systems. The historical return-to-work provisions, coupled with demographic changes of the membership, caused concern over the long-term stability of the plan so legislation enacted in 2012 addressed retiree return-to-work provisions. Generally, SCRS and PORS members may return to covered employment after retirement; however, a member who retires after January 1, 2013 who has not yet reached age 62 (SCRS) or age 57 (PORS) at retirement, and who has been retired at least 30 calendar days, may return to work for a participating employer, but receipt of their annuity benefit is subject to an earnings limit of $10,000 on wages earned each calendar year from covered employment. Under SCRS, participants in the TERI program received a deferred accrual for the full monthly retirement benefit, with no limit on the amount of wages they earned from employment.

- Qualified Excess Benefit Arrangement (QEBA) trust funds are maintained for each of the plans administered by the Retirement Division of PEBA (excluding SCNG). A QEBA is intended to be a qualified governmental excess benefit arrangement within the meaning of Section 415(m)(3) of the Internal Revenue Code and provides the part of a participant's retirement benefit that would have been paid by the Systems had there been no limitations under Code Section 415(b). The QEBA plans are separate and apart from the funds comprising the retirement funds and are not commingled with assets of those funds. The QEBA is not prefunded; therefore, no assets or income are accumulated to pay future benefits. The amount of required contributions necessary to pay benefits under the plans is determined and deposited to the trust funds on an as-needed basis. Employer contributions to fund the excess benefits are not credited or commingled with contributions paid into and accumulated in the retirement funds.
- GARS was closed to persons first elected to the South Carolina General Assembly at or after the general election in November 2012. Members so elected to the SC Senate or House of Representatives have the option to join SCRS, the State Optional Retirement Program (State ORP), which is a defined contribution plan, or they may elect to opt out of a plan altogether. As a result of the plan closure, employee contributions to the GARS plan should decrease over time, while employer contributions may experience a general increase over time.

Condensed Financial Information

The Systems' financial stability and long-term ability to sufficiently fund retirement benefits payable to members in future years is viable because funds are accumulated and invested on a regular and systematic basis. The five defined benefit funds provide monthly service retirement benefits, disability benefits and death benefits to eligible members and/or their surviving beneficiaries.

The Systems' principal sources of revenue are employee contributions, employer contributions, nonemployer contributions and investment earnings. Funds were legislatively appropriated to PEBA and credited towards the contributions due from participating employers in SCRS and PORS for fiscal year 2019. Required annual contributions for the SCNG are funded through an annual state appropriation. Expenses of the Systems consist primarily of payments of monthly annuities to retired members or their beneficiaries, and refunds of member contributions and interest that are paid subsequent to termination of employment. The defined benefit plans include an incidental death benefit for both active and retired members and an accidental death plan for members of PORS.

PEBA sponsors the State ORP which is a defined contribution plan administered by four different third party record keepers. The State ORP is an alternative plan available to newly hired employees of state agencies, institutions of higher education, public school districts and individuals first elected to the General Assembly at or after the general election in November 2012. In addition, PEBA is responsible for the South Carolina Deferred Compensation Plan (401k and 457 plans) administered by a third party record keeper. Both State ORP and Deferred Compensation assets are outside the group trust fund of the Systems and are not invested or managed by the RSIC. Summary comparative financial statements of the SC Retirement Systems' pension trust funds are presented on the following page.

Fiduciary Net Position

As of June 30

(Amounts expressed in thousands)

Assets	2019	2018	Increase / (Decrease)	% Increase / (Decrease)
Cash and cash equivalents, receivables, and prepaid expenses	$ 4,323,924	$ 3,359,600	$ 964,324	28.70%
Investments, at fair value	29,547,472	29,243,863	303,609	1.04%
Securities lending cash collateral invested	41,327	34,612	6,715	19.40%
Capital assets, net of accumulated depreciation	2,232	2,362	(130)	(5.50%)
Total assets	33,914,955	32,640,437	1,274,518	3.90%
Liabilities				
Deferred retirement benefits	70	377,263	(377,193)	(99.98%)
Obligations under securities lending	41,327	34,612	6,715	19.40%
Other liabilities	1,587,595	1,021,458	566,137	55.42%
Total liabilities	1,628,992	1,433,333	195,659	13.65%
Net Position Restricted for Pensions	$ 32,285,963	$ 31,207,104	$ 1,078,859	3.46%

Changes in Fiduciary Net Position

Years Ended June 30

(Amounts expressed in thousands)

Additions	2019	2018	Increase / (Decrease)	% Increase / (Decrease)
Employee contributions	$ 1,028,413	$ 1,010,636	$ 17,777	1.76%
Employer contributions	1,705,663	1,528,741	176,922	11.57%
Nonemployer contributions	101,176	118,096	(16,920)	(14.33%)
State appropriated contributions	5,290	4,814	476	9.89%
Net investment income	1,776,400	2,334,478	(558,078)	(23.91%)
Other income	1,577	1,902	(325)	(17.09%)
Total additions	4,618,519	4,998,667	(380,148)	(7.60%)
Deductions				
Refunds	139,692	137,766	1,926	1.40%
Annuity benefits	3,356,747	3,826,806	(470,059)	(12.28%)
Death benefits	23,717	25,207	(1,490)	(5.91%)
Administrative and other expenses	19,504	18,712	792	4.23%
Total deductions	3,539,660	4,008,491	(468,831)	(11.70%)
Net increase in Net Position	1,078,859	990,176	88,683	8.96%
Net Position Restricted for Pensions				
Beginning of year	31,207,104	30,216,928	990,176	3.28%
End of year	$ 32,285,963	$ 31,207,104	$ 1,078,859	3.46%

Analysis of the Plan's Financial Position and Results of Operations

On a combined basis, the defined benefit plans' fiduciary net position was $32.3 billion at June 30, 2019. This represents an increase of more than three percent in net position from the previous fiscal year-end. The increase in the fiduciary net position from the prior fiscal year was primarily attributable to strong performance of the plan investments and increased contributions which exceeded the impact of net negative cash flows that result from benefit payments exceeding contributions received.

During fiscal year 2019, the total dollar amount of contributions added to the plans increased in accordance with the increase in employer contribution rates, and regular monthly retirement benefits paid to annuitants also increased compared with the previous fiscal year. As previously referenced, the increase in regular monthly retirement benefits was attributable to an annual benefit adjustment equal to the lesser of 1 percent or $500 granted to eligible SCRS and PORS annuity recipients effective July 1, 2018, and an increase in the number of annuitants. The total benefit expenses decreased due to the closure of the TERI program.

Net of fee performance return, on a time-weighted basis was 5.84 percent for the fiscal year. Relative to the policy benchmark, which returned a 6.50 percent, the Plan underperformed by 66 basis points. Additionally, the Plan fell short of the actuarial assumed rate of return of 7.25 percent by 141 basis points.

The Infrastructure asset class was the highest performing asset class on an absolute basis returning 12.55 percent. Relative to its benchmark Infrastructure assets slightly underperformed by 14 basis points. Emerging Markets Debt was the second highest performing asset class on an absolute basis returning 9.50 percent but underperforming its benchmark by 127 basis points. Private Equity was the third highest performing asset class returning 8.47 percent versus a benchmark return of 9.23 percent. The Real Estate and Other Opportunistic asset classes, both beating their benchmarks, returned 7.84 percent and 7.72 percent respectively. The Core Fixed Income asset class returned 7.65 percent versus a benchmark return of 7.87 percent. The GTAAN and High Yield/Bank Loans asset classes returned 4.77 percent versus a 5.88 percent benchmark return and 4.39 percent versus a 5.72 percent benchmark return, respectively. The Global Public Equity asset class, the largest allocation in the Plan at 37.3 percent, returned 4.11 percent but underperformed the benchmark by 34 basis points. The Private Debt asset class returned 3.07 percent versus a benchmark return of 4.47 percent. The Equity Options asset class beat its benchmark by 77 basis points returning 2.40 percent versus 1.63 percent. The Portable Alpha Hedge Funds excess return over three-month LIBOR was a negative 0.75 percent return and was the only negative returning asset class in the Plan and underperformed its benchmark return of 2.50 percent.

Actuarial Valuations and Funding Progress

Actuarial valuations are performed annually by an external consulting actuary for each of the five defined benefit plans to ensure applicable contribution rates satisfy the funding parameters specified in Title 9 of the South Carolina Code of Laws. Under these provisions, SCRS and PORS contribution requirements must be sufficient to maintain an amortization period for the financing of the unfunded actuarial accrued liability (UAAL) over a period that does not exceed the number of years scheduled in state statute. Additionally, the Board is prohibited from decreasing the SCRS and PORS contribution rates until the funded ratio is at least 85 percent. The Retirement System Funding and Administration Act of 2017, which became effective on July 1, 2017, schedules the amortization period to be reduced by one year for each of the next 8 years to 20 years. Over time, and provided investment performance meets long-term assumptions and there are no future benefit enhancements, the funded ratio of each system is expected to improve significantly.

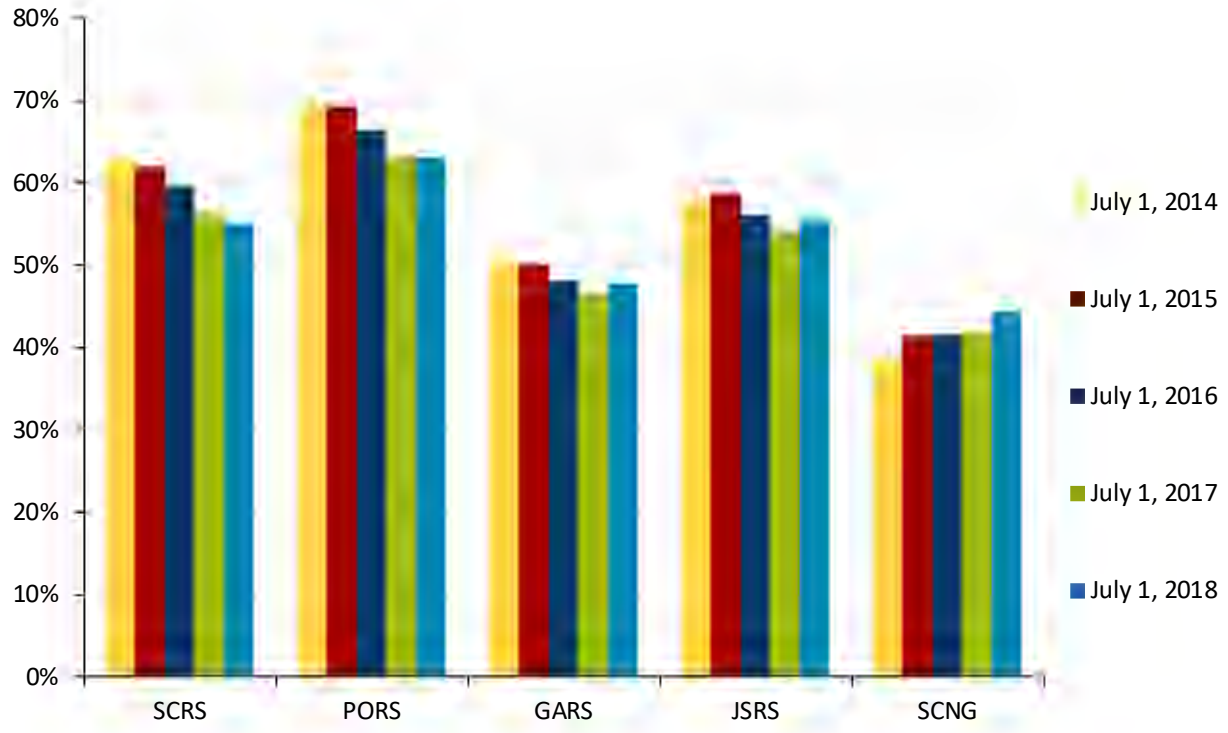
For purposes of developing the actuarially determined contribution rate, the most recently completed valuations prepared, as of July 1, 2018, recognized investment performance using the smoothing method, which

recognizes each year's investment gain or loss, determined on a market value of assets basis, over a closed five year period at a rate of 20 percent per year. This asset valuation method mitigates the short term impact of market volatility and allows changes in market conditions to be recognized (smoothed) over a longer period of time. In contrast, the accounting valuation report determines the plan fiduciary net position for the purpose of providing accounting information under GASB Statement No. 67, which uses a market value basis. Since the valuation report prepared for accounting purposes uses the market value of assets rather than the actuarial value of assets, the ratio of plan fiduciary net position to the total pension liability can result in significant short-term volatility.

For the actuarial valuations prepared for funding purposes, the funded ratio (the ratio of the actuarial assets to the actuarial accrued liability) is a standard of measure of a plan's funded status. It provides an indication as to whether sufficient assets are accumulated to pay benefits when due; the greater the level of funding, the larger the ratio of assets to liabilities. The funding progress of a retirement system should be reviewed over a multi-year period, such as five to ten years, to identify trends in the system's funded status. The most recent actuarial valuations prepared for funding purposes as of July 1, 2018, showed a slight decrease in funded status for SCRS while the funded ratio for PORS, GARS, JSRS and SCNG showed a slight increase. The changes in the levels of funding do not affect the availability of funds or resources for future use and actuarial projections indicate that unfunded liabilities should be amortized and funded within the guidelines established in Title 9 of the SC Code of Laws. The actuarial funded ratios of the five plans are presented in the graph on the following page. Percentages for GASB Statement No. 67 reporting purposes can be found in the Schedule of Employers' Net Pension Liability beginning on Page 86.

Actuarial Funded Ratios

(Actuarial assets as a percentage of actuarial accrued liabilities)



Requests for Information

This financial report is designed to provide a general overview of the Retirement Systems' financial activities and position for all interested parties. Questions concerning any of the information provided in this report or requests for additional financial information should be directed to the South Carolina PEBA, Attn: Retirement Systems Finance, 202 Arbor Lake Drive, Columbia, SC 29223. Inquiries may also be made at www.peba.sc.gov or by calling 888.260.9430.

South Carolina Retirement Systems
Statement of Fiduciary Net Position

June 30, 2019

With summarized comparative totals for June 30, 2018

(Amounts expressed in thousands)

	SCRS	PORS	GARS	JSRS	SCNG	TOTAL	2018 TOTAL
Assets							
Cash and cash equivalents	$ 2,098,978	$ 391,292	$ 5,281	$ 16,874	$ 5,802	$ 2,518,227	$ 2,358,093
Receivables							
Due from other systems		50		69		119	278
Employee and employer contributions	306,674	29,547	25	830	1	337,077	336,412
Accrued investment income	41,341	7,320	54	251	49	49,015	46,519
Unsettled investment sales	1,191,159	210,265	1,406	7,081	1,190	1,411,101	613,543
Other investment receivables	3,807	672	5	22	4	4,510	1,163
Total receivables	1,542,981	247,854	1,490	8,253	1,244	1,801,822	997,915
Investments, at fair value							
Short-term securities	340,059	60,027	401	2,021	340	402,848	586,272
Fixed Income	3,899,462	688,338	4,601	23,181	3,896	4,619,478	5,287,168
Global Public Equity	9,827,095	1,734,692	11,595	58,419	9,818	11,641,619	10,777,971
Opportunistic	2,300,496	406,087	2,714	13,676	2,298	2,725,271	3,092,930
Alternatives	8,574,936	1,513,660	10,118	50,975	8,567	10,158,256	9,499,522
Total investments	24,942,048	4,402,804	29,429	148,272	24,919	29,547,472	29,243,863
Securities lending cash collateral invested	34,886	6,158	41	207	35	41,327	34,612
Prepaid expenses	3,294	554	4	20	3	3,875	3,592
Capital assets, net of accumulated depreciation	2,010	207	6	9		2,232	2,362
Total assets	28,624,197	5,048,869	36,251	173,635	32,003	33,914,955	32,640,437
Liabilities							
Due to other systems	119					119	278
Accounts payable - unsettled investment purchases	1,081,545	190,916	1,276	6,429	1,081	1,281,247	859,659
Investment fees payable	9,756	1,722	12	58	10	11,558	12,717
Obligations under securities lending	34,886	6,158	41	207	35	41,327	34,612
Deferred retirement benefits	70					70	377,263
Due to Employee Insurance Program	72,466	1,435				73,901	67,069
Benefits payable	4,882	388			17	5,287	4,570
Other liabilities	181,557	32,441	210	1,098	177	215,483	77,165
Total liabilities	1,385,281	233,060	1,539	7,792	1,320	1,628,992	1,433,333
Net Position Restricted for Pensions	$ 27,238,916	$ 4,815,809	$ 34,712	$ 165,843	$ 30,683	$ 32,285,963	$ 31,207,104

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

South Carolina Retirement Systems
Statement of Changes in Fiduciary Net Position

Year Ended June 30, 2019

With summarized comparative totals for the year ended June 30, 2018

(Amounts expressed in thousands)

	SCRS	PORS	GARS	JSRS	SCNG	TOTAL	2018 TOTAL
Additions							
Contributions							
Employee	$ 880,664	$ 144,747	$ 162	$ 2,840	$ -	$ 1,028,413	$ 1,010,636
Employer	1,450,308	237,821	5,804	11,730		1,705,663	1,528,741
Nonemployer	88,706	12,470				101,176	118,096
State appropriated					5,290	5,290	4,814
Total contributions	2,419,678	395,038	5,966	14,570	5,290	2,840,542	2,662,287
Investment income							
Net appreciation in fair value of investments	1,255,386	221,668	1,484	7,519	1,257	1,487,314	2,108,348
Interest and dividend income	521,382	91,513	729	3,319	635	617,578	598,359
Investment expense	(279,952)	(49,309)	(329)	(1,670)	(279)	(331,539)	(374,222)
Net income from investing activities	1,496,816	263,872	1,884	9,168	1,613	1,773,353	2,332,485
From securities lending activities:							
Securities lending income	2,825	494	3	17	3	3,342	2,218
Securities lending borrower rebates	(250)	(43)		(2)		(295)	(225)
Net income from securities lending activities	2,575	451	3	15	3	3,047	1,993
Total net investment income	1,499,391	264,323	1,887	9,183	1,616	1,776,400	2,334,478
Supplemental retirement benefits funded by the State	320	13				333	368
Transfers of contributions from other Systems		1,148		96		1,244	1,534
Total additions	3,919,389	660,522	7,853	23,849	6,906	4,618,519	4,998,667
Deductions							
Refunds of contributions to members	118,067	21,608	17			139,692	137,766
Transfers of contributions to other Systems	1,244					1,244	1,534
Regular retirement benefits	2,938,416	387,228	6,480	17,947	4,534	3,354,605	3,116,772
Deferred retirement benefits							707,932
Supplemental retirement benefits	320	13				333	368
Death benefits	21,806	1,890	18	3		23,717	25,207
Accidental death benefits		1,809				1,809	1,734
Depreciation	151	19		1		171	216
Administrative expenses	15,385	2,577	20	91	16	18,089	16,962
Total deductions	3,095,389	415,144	6,535	18,042	4,550	3,539,660	4,008,491
Net increase in Net Position	824,000	245,378	1,318	5,807	2,356	1,078,859	990,176
Net Position Restricted for Pensions							
Beginning of year	26,414,916	4,570,431	33,394	160,036	28,327	31,207,104	30,216,928
End of year	$ 27,238,916	$ 4,815,809	$ 34,712	$ 165,843	$ 30,683	$ 32,285,963	$ 31,207,104

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

South Carolina Retirement Systems

Notes to Financial Statements

I. Basis of Presentation and Summary of Significant Accounting Policies

Description of the Entity

The South Carolina Public Employee Benefit Authority (PEBA) was created by the S.C. General Assembly effective July 1, 2012. PEBA is a state agency responsible for the administration and management of the state's employee insurance programs and retirement systems.

The governing board of the authority is a board of directors consisting of 11 members. The membership composition is as follows:

- three non-representative members appointed by the Governor;
- two members appointed by the President Pro Tempore of the Senate, one a non-representative member and one a representative member who is either an active or retired member of the South Carolina Police Officers Retirement System (PORS);
- two members appointed by the Chairman of the Senate Finance Committee, one a non-representative member and one a representative member who is a retired member of the South Carolina Retirement System (SCRS);
- two members appointed by the Speaker of the House of Representatives, one a non-representative member and one a representative member who must be a state employee who is an active contributing member of SCRS;
- two members appointed by the Chairman of the House Ways and Means Committee, one a non-representative member and one a representative member who is an active contributing member of SCRS employed by a public school district.

Non-representative members of the PEBA board may not belong to the classes of employees and retirees from which representative members must be appointed. Individuals appointed to the PEBA board must possesses certain qualifications.

Members of the PEBA board serve for terms of four years, on a staggered schedule and until their successors are appointed and qualify. Vacancies on the PEBA Board must be filled within 60 days in the manner of the original appointment for the unexpired portion of the term.

The financial statements of the South Carolina Retirement Systems (Systems) presented herein contain the following funds:

Pension Trust Funds

- South Carolina Retirement System (SCRS)
- South Carolina Police Officers Retirement System (PORS)
- Retirement System for Members of the General Assembly of the State of South Carolina (GARS)
- Retirement System for Judges and Solicitors of the State of South Carolina (JSRS)
- South Carolina National Guard Supplemental Retirement Plan (SCNG)

Each pension trust fund operates on an autonomous basis; funds may not be utilized for any purpose other than for the benefit of each plan's participants.

The Systems are part of the state of South Carolina's primary government and are included in the *Comprehensive Annual Financial Report of the State of South Carolina*. In making this determination, factors of financial accountability, governance and fiduciary responsibility of the state were considered.

Plan Descriptions

The South Carolina Retirement System (SCRS), a cost–sharing multiple-employer defined benefit pension plan, was established effective July 1, 1945, pursuant to the provisions of Section 9-1-20 of the South Carolina Code of Laws for the purpose of providing retirement allowances and other benefits for public school districts and employees of the state and political subdivisions thereof.

The South Carolina Police Officers Retirement System (PORS), a cost–sharing multiple-employer defined benefit pension plan, was established effective July 1, 1962, pursuant to the provisions of Section 9-11-20 of the South Carolina Code of Laws for the purpose of providing retirement allowances and other benefits for police officers and firemen of the state and its political subdivisions.

The Retirement System for Members of the General Assembly of the State of South Carolina (GARS), a single-employer defined benefit pension plan, was created effective January 1, 1966, pursuant to the provisions of Section 9-9-20 of the South Carolina Code of Laws to provide retirement allowances and other benefits for members of the General Assembly. Retirement reform legislation closed the plan to individuals newly elected to the Senate or House of Representatives on or after the general election of 2012.

The Retirement System for Judges and Solicitors of the State of South Carolina (JSRS), a single-employer defined benefit pension plan, was created effective July 1, 1979, pursuant to the provisions of Section 9-8-20 of the South Carolina Code of Laws for the purpose of providing retirement allowances and other benefits for judges, solicitors, circuit public defenders of the state and administrative law court judges.

The South Carolina National Guard Supplemental Retirement Plan (SCNG), a single-employer defined benefit pension plan, was created effective July 1, 1975, and is governed by the provisions of Section 9-10-30 of the South Carolina Code of Laws for the purpose of providing supplemental retirement benefits to certain members who served in the South Carolina National Guard.

A summary of information related to participating employers and members follows (dollars amounts expressed in thousands). This information was reported in the most recent actuarial valuation reports dated July 1, 2018.

	State	School	Other	Total
SCRS				
Number of Employers[1]	27	118	576	721
Annual Covered Payroll for Active Members	$2,524,592	$3,592,284	$2,383,143	$8,500,019
Average Number of:				
Active Contributing Members	52,870	87,343	55,971	196,184
Retirees and beneficiaries currently receiving benefits				142,278
Terminated members entitled to but not yet receiving benefits[2]				182,933
Total SCRS Membership				521,395
PORS				
Number of Employers[1]	18	3	285	306
Annual Covered Payroll for Active Members	$406,984		$843,904	$1,250,888
Average Number of:				
Active Contributing Members	9,301		17,792	27,093
Retirees and beneficiaries currently receiving benefits				18,491
Terminated members entitled to but not yet receiving benefits[2]				17,277
Total PORS Membership				62,861
GARS				
Number of Employers	1			1
Annual Covered Payroll for Active Members	$1,866			$1,866
Average Number of:				
Active Members	83			83
Retirees and beneficiaries currently receiving benefits	343			343
Terminated members entitled to but not yet receiving benefits	37			37
Total GARS Membership	463			463
JSRS				
Number of Employers	1			1
Annual Covered Payroll for Active Members	$22,347			$22,347
Average Number of:				
Active Members (160 positions)	160			160
Retirees and beneficiaries currently receiving benefits	213			213
Terminated members entitled to but not yet receiving benefits	4			4
Total JSRS Membership	377			377
SCNG				
Number of Employers	1			1
Annual Covered Payroll for Active Members[3]	N/A			N/A
Average Number of:				
Active Members	11,853			11,853
Retirees and beneficiaries currently receiving benefits	4,821			4,821
Terminated members entitled to but not yet receiving benefits	1,895			1,895
Total SCNG Membership	18,569			18,569

[1] Although there are 92 SCRS, 26 PORS, 2 GARS and 4 JSRS state agencies and Quasi-State Agencies that report separately, the State is considered the primary government and therefore, all state agencies and Quasi-State Agencies are included as a single employer. Institutions of Higher Education are counted as separate employers and included within the "State" category.

[2] Employee Class not determinable from data.

[3] Annual covered payroll is not applicable for SCNG because it is a non-contributory plan.

Membership

Membership requirements are prescribed in Title 9 of the South Carolina Code of Laws. A brief summary of the requirements under each system is presented below.

SCRS

Generally, all employees of covered employers are required to participate in and contribute to the system as a condition of employment. This plan covers general employees and teachers and individuals newly elected to the South Carolina General Assembly beginning with the November 2012 general election. A member of the system with an effective date of membership prior to July 1, 2012, is a Class Two member. A member of the system with an effective date of membership on or after July 1, 2012, is a Class Three member.

State ORP

As an alternative to membership in SCRS, newly hired state, public school and higher education employees and individuals newly elected to the S.C. General Assembly beginning with the November 2012 general election have the option to participate in the State Optional Retirement Program (State ORP), which is a defined contribution plan. State ORP participants direct the investment of their funds into an account administered by one of four third party administrators. The Retirement Systems assumes no liability for State ORP benefits. Rather, the benefits are the liability of the four third party administrators. For this reason, State ORP assets are not considered part of the Systems for financial statement purposes.

Contributions to the State ORP are at the same rates as SCRS. A direct remittance is required from the employers to the investment providers for the employee contribution (9 percent) and a portion of the employer contribution (5 percent). A direct remittance is also required to SCRS for a portion of the employer contribution (9.41 percent) and a death benefit contribution (0.15 percent), which is retained by SCRS. The activity for the State ORP is as follows:

State ORP Activity

Year Ended June 30, 2019

(Dollar amounts expressed in thousands)

Active Contributing Participants	32,132
Annual Covered Payroll	$1,604,026
Employer Contributions Retained by SCRS	$150,939
Death Benefit Contributions Retained by SCRS	$2,406
Employee Contributions to Investment Providers	$144,362
Employer Contributions to Investment Providers	$80,201

PORS

To be eligible for PORS membership, an employee must be required by the terms of his employment, by election or appointment, to preserve public order, protect life and property and detect crimes in the state; to prevent and control property destruction by fire; be a coroner in a full-time permanent position; or be a peace officer employed by the Department of Corrections, the Department of Juvenile Justice or the Department of Mental Health. Probate judges and coroners may elect membership in PORS. Magistrates are required to participate in PORS for service as a magistrate. PORS members, other than magistrates and probate judges, must also earn at least $2,000 per year and devote at least 1,600 hours per year to this work, unless exempted by statute. A member of the system with an effective date of membership prior to July 1, 2012, is a Class Two member. A member of the system with an effective date of membership on or after July 1, 2012, is a Class Three member.

GARS

Members of the Senate and the House of Representatives who were first elected to office prior to November 2012 are required to participate in and contribute to the system upon taking office as a member of the S.C. General Assembly; however, the GARS plan is closed to individuals newly elected to the Senate or the House of Representatives on or after the general election of 2012.

JSRS
All solicitors, circuit public defenders, judges of a Circuit, Family or Administrative Law Court and justices of the Court of Appeals and Supreme Court are required to participate in and contribute to the system upon taking office.

SCNG
Membership consists of individuals who serve in the South Carolina National Guard.

Pension Benefits

Benefit terms are prescribed in Title 9 of the South Carolina Code of Laws. PEBA does not have the authority to establish or amend benefit terms without a change in the code of laws. Key elements of the benefit calculation include the benefit multiplier, years of service and average final compensation/current annual salary. A brief summary of benefit terms for each system is presented below.

SCRS
A Class II member who has separated from service with at least five years of earned service is eligible for a monthly pension at age 65 or with 28 years credited service regardless of age. A member may elect early retirement with reduced pension benefits payable at age 55 with 25 years of service credit. A Class III member who has separated from service with at least eight years of earned service is eligible for a monthly pension subject to the Rule of 90 requirement that the total of the member's age and the member's creditable service equals at least 90 years. Both Class II and Class III members are eligible to receive a reduced deferred annuity at age 60 if they satisfy the five- or eight-year earned service requirement, respectively. An incidental death benefit is also available to beneficiaries of active and retired members of employers who participate in the death benefit program.

The annual retirement allowance of eligible retirees or their surviving annuitants is increased by the lesser of one percent or five hundred dollars every July 1. Only those annuitants in receipt of a benefit on July 1 of the preceding year are eligible to receive the increase. Members who retire under the early retirement provisions at age 55 with 25 years of service are not eligible for the benefit adjustment until the second July 1 after reaching age 60 or the second July 1 after the date they would have had 28 years of service credit had they not retired.

PORS
A Class II member who has separated from service with at least five years of earned service is eligible for a monthly pension at age 55 or with 25 years of service regardless of age. A Class III member who has separated from service with at least eight years of earned service is eligible for a monthly pension at age 55 or with 27 years of service regardless of age. Both Class II and Class III members are eligible to receive a deferred annuity at age 55 with five or eight years earned service, respectively. An incidental death benefit is also available to beneficiaries of active and retired members of employers who participate in the death benefit program. Accidental death benefits are also provided upon the death of an active member working for a covered employer whose death was a natural and proximate result of an injury incurred while in the performance of duty.

The retirement allowance of eligible retirees or their surviving annuitants is increased by the lesser of one percent or five hundred dollars every July 1. Only those annuitants in receipt of a benefit on July 1 of the preceding year are eligible to receive the increase.

GARS
A member is eligible for a monthly pension at age 60 or with 30 years credited service. A member who has attained age 70 or has 30 years of service is eligible to retire and draw an annuity while continuing to serve in the General Assembly. A member is eligible to receive a deferred annuity with eight years of service. An incidental death benefit is also provided to beneficiaries of deceased members. Retirees receive increases in benefits based upon increases in the current salary of their respective active positions. GARS is closed to new members and persons newly elected to the General

Assembly must elect membership in SCRS or State ORP or may elect non-membership.

JSRS

A pension benefit is payable at age 70 with 15 years' service, age 65 with 20 years' service, 25 years' service regardless of age for a judge or 24 years of service for a solicitor or a circuit public defender regardless of age. A judge is vested in the system after attaining 10 years of earned service in the position of judge, and a solicitor or a circuit public defender is vested in the system after attaining eight years of earned service. A member who has reached maximum eligibility is eligible to retire and draw an annuity while continuing to serve. An incidental death benefit is also provided to members. Retirees receive increases in benefits based upon increases in the current salary of their respective active positions.

SCNG

A monthly pension is payable at age 60 provided the member was honorably discharged from active duty with at least 20 years of total creditable military service. Of the 20 years total creditable military service, at least 15 must have been served in the South Carolina National Guard. Additionally, the final 10 years of military service must have been served in the South Carolina National Guard. No cost-of-living increases are provided to SCNG retirees.

Summary of Significant Accounting Policies

Fund Structure

The Systems' accounts are maintained in accordance with the principles of fund accounting. This is the procedure whereby resources for various purposes are classified for accounting and reporting purposes into funds that are in accordance with specified activities or objectives. Separate pension trust funds (fiduciary fund type) are used to account for the activities of the five public employee retirement systems administered by PEBA.

Comparative Totals

The basic financial statements include certain prior-year summarized comparative information in total but not at the level of detail required for a presentation in accordance with generally accepted accounting principles. Accordingly, such information should be read in conjunction with the Systems' financial statements for the year ended June 30, 2018, from which the summarized information was derived.

Basis of Accounting

All funds are accounted for using the economic resources measurement focus and the accrual basis of accounting. Revenues are recognized when earned and expenses are recognized when incurred. Benefit and refund expenses are recognized when due and payable in accordance with the terms of the plan.

Administrative Expenses

Administrative expenses are the responsibility of PEBA and all accounting and corresponding disclosures relating to administrative expenses of the pension trust funds are included in the financial statements of the Systems.

Administrative expenses for the Retirement Division of PEBA are funded by the trust funds and are allocated to each of the systems based on its respective portion of total assets in order to pay for actual expenses incurred during the year. Administrative expenses of the Systems include the Retirement Division's portion of PEBA employee salaries and associated employee benefits, costs for contractual services and operating expenses.

Cash and Cash Equivalents

The Systems classify cash on deposit in financial institutions and cash on deposit in the state's internal cash management pool as cash and cash equivalents. The Systems also classify certain short-term highly liquid securities as cash equivalents if the date of maturity is three months or less from the date of acquisition. Forward contracts, foreign currencies and cash held in the strategic partnership

accounts are also classified as cash and cash equivalents.

Contributions

Employee, employer, nonemployer and state appropriated contributions are recognized in the period in which they are due, pursuant to formal commitments as well as statutory requirements. Substantially all contributions receivable are collected within 30 days of year-end.

Investments

The Retirement System Investment Commission (Commission as the governing body, RSIC as the agency), created by the General Assembly in 2005, has exclusive authority for investing and managing all assets held in trust for the South Carolina Retirement Systems. The Commission serves as co-trustee and co-fiduciary for the assets of the Retirement Systems. Funds of the Systems are invested subject to the terms, conditions, limitations, and restrictions imposed by Section 16, Article X of the South Carolina Constitution and Section 9-1-1310 (B) and Title 9 Chapter 16 of the South Carolina Code of Laws. The funds and assets of the various state retirement systems are not funds of the State, but are instead held in trust as provided in Section 9-16-20.

The RSIC is structured as a separate state agency reporting to a body of appointed and ex officio Commissioners. The Commission is an eight member board as provided in Section 9-16-315 of the South Carolina Code of Laws. The Commission employs a Chief Executive Officer (CEO) who serves as the agency head of the RSIC, reporting directly to the Commission, with functions and duties assigned by the Commission. The CEO is the central source of authority and accountability for administrative decisions. In addition, the Commission employs a Chief Investment Officer (CIO) who reports to the CEO for day to day oversight and strategic planning objectives and who serves as the central source of authority and accountability for all investment decisions delegated to him or her by the Commission and state law. The Commission also engages external investment consultants, who are accountable to the Commission, to work collaboratively with RSIC staff to fulfill the duties of investing the Systems' portfolio.

As with PEBA, administrative costs of the RSIC are paid from the Systems, and its budget is funded entirely from the trust fund. Costs include Commissioner, investment and administrative staff compensation, as well as other contractual services and other operating expenses. The allocation of those administrative costs is based upon a proration of such costs in proportion to the assets that each system bears to the total assets of all of the systems for the most recently completed fiscal year.

The Commission has adopted a Statement of Investment Objectives and Policies (SIOP) in order to establish investment and performance objectives, policies and guidelines, roles, responsibilities and delegation of authority for the investment and management of assets of the Systems. The SIOP is reviewed by the Commission at least annually to determine its continued applicability. The SIOP provides the framework pursuant to which the CIO and staff develop the Annual Investment Plan (AIP), which provides a formal plan for investing the Systems' assets to achieve the Commission's investment objectives and mission. As required by Section 9-16-320, the AIP must be submitted to the Commission no later than April 1 of each year, and the Commission must meet no later than May 1 of each year to adopt the proposed AIP for the following fiscal year. The Commission may amend the SIOP and AIP during the fiscal year as it deems appropriate.

The Commission manages Systems' assets with a long-term horizon and seeks to earn an appropriate risk-adjusted return in consideration of the specific goals, needs and circumstances of the Systems and in the exclusive interest of members of the Systems. Among the decisions the Commission can make, asset allocation has the most significant impact on the portfolio's return, risk profile and cost and is reviewed annually as part of the development of the AIP.

Based on the Commission's determination of the appropriate risk tolerance for the Portfolio and its long-term return expectations, it has authorized the following Policy Asset Allocation, including target allocations and ranges for each asset class that were adopted by the Commission for the fiscal year beginning July 1, 2018.

Asset Class	Policy Allocation	Minimum	Maximum
Global Equity	**51.0%**	**31.0%**	**59.0%**
Global Public Equity[1]	35.0%	22.0%	50.0%
Private Equity[1,2]	9.0%	5.0%	13.0%
Equity Options Strategies	7.0%	5.0%	9.0%
Real Assets	**12.0%**	**7.0%**	**17.0%**
Real Estate	**9.0%**	**5.0%**	**13.0%**
Real Estate-REITs[1]	1.0%	0.0%	13.0%
Real Estate-Private[1,2]	8.0%	0.0%	13.0%
Infrastructure	**3.0%**	**1.0%**	**5.0%**
Infrastructure - Public[1]	1.0%	0.0%	5.0%
Infrastructure - Private[1,2]	2.0%	0.0%	5.0%
Credit	**15.0%**	**10.0%**	**20.0%**
High Yield/Bank Loans[3]	4.0%	0.0%	8.0%
Private Debt[1,2]	7.0%	3.0%	11.0%
Emerging Markets Debt	4.0%	2.0%	6.0%
Rate Sensitive	**14.0%**	**4.0%**	**24.0%**
Core Fixed Income[1]	13.0%	6.0%	20.0%
Cash and Short Duration (Net)	1.0%	0.0%	7.0%
Opportunistic	**18.0%**		
GTAA	7.0%	3.0%	11.0%
Other Opportunistic Strategies	1.0%	0.0%	3.0%
Portable Alpha Hedge Funds[3,4]	10.0%	0.0%	12.0%

[1] The target weights to Private Equity, Private Debt, Private Real Estate and Private Infrastructure will be equal to their actual weights as of prior month end. Private Equity and Public Equity will combine for 44% of the entire portfolio. Private Debt and High Yield/Bank Loans will combine for 11% of the entire portfolio. Private Real Estate and Real Estate (REITs) will combine for 9% of the entire portfolio. Private Infrastructure and Public Infrastructure will combine for 3% of the entire portfolio.

[2] RSIC staff and Consultant will notify the Commission if Private Markets assets exceed 25% of total assets.

[3] RSIC staff and Consultant will notify the Commission if Hedge Fund assets exceed 20% of total assets.

[4] Portable Alpha Hedge Funds are expressed as gross exposure but, as collateral supporting the Overlay program, net to zero when calculating total Plan market value. For benchmarking purposes, there is a 10% weight assigned to it in the Policy benchmark.

At June 30, 2019, the Systems held no investments (other than those issued or explicitly guaranteed by the U.S. government) in any one organization that represent five percent or more of the plans' fiduciary net position.

For the year ended June 30, 2019, the annual money weighted rate of return on plan investments was 5.80 percent net of fees. The money weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested.

As a fiduciary acting on behalf of the Systems, the Commission enters into individual agreements with various investment managers to invest plan assets. As of June 30, 2019, 153 legal agreements were in place with 93 investment managers.

The PEBA Board serves as custodian and co-trustee of the assets of the retirement trust funds. The Commission is also co-trustee of the assets of the retirement trust funds and has exclusive authority to select the custodial bank with PEBA as a third-party beneficiary of the contract, with full rights to information.

BNYM serves as custodial bank of the funds of the Retirement Systems. Assets also include investments not custodied at BNYM, such as funds held in partnerships, commingled accounts, or private market asset classes. The custodial bank provides consolidated recordkeeping services which reflect these securities not held in the custodian's vault or for which the custodian or its nominee is not the registered owner (non-custody securities).

For financial statement purposes, investments of the pension trust funds are reported at fair value in the Statement of Fiduciary Net Position. Short term securities categorized as cash or cash equivalents are reported at fair value. The Systems hold domestic and global equity securities which are traded on organized exchanges. Equity securities held by the custodian are valued by the custodian using the last reported price on a trade-date basis. The Systems hold domestic and global fixed income securities. The custodian values those fixed income

assets which are held in custody based upon prices received from external pricing sources and in accordance with the custodian's pricing policy. Commingled funds, which may contain equity and/or fixed income securities are priced based upon the manager's pricing policy and a Net Asset Value (NAV) is provided to the custodian. Private market investments typically utilize a limited partnership structure and private equity funds normally invest in companies that are not publicly traded on a stock exchange. The fair values of alternative investments including private equity, private debt, hedge funds, real estate and commodities, for which daily market values are not readily ascertainable, are valued in good faith based on the most recent financial information available for the underlying companies and reported by the investment managers at the measurement date, adjusted for subsequent cash flow activities through June 30, 2019. Valuation of investments is a joint responsibility of PEBA and RSIC. Staff from both offices serve on a joint valuation committee which oversees and reviews the valuations provided by the custodian and/or the external investment managers. The estimated fair value of these investments is intended to approximate, but at times may differ, from values that would have been used had a liquid public market existed.

Investments are combined in a commingled investment pool, with each system owning a percentage of the pool and receiving proportionate investment income in accordance with their respective ownership percentage. Investment income includes realized and unrealized appreciation (depreciation) in the fair value of investments, interest income earned, dividend income earned, less investment expense, plus income from securities lending activities, less deductions for securities lending expenses.

While some investment managers submit invoices for their investment management fees, a significant number of investment managers provide account valuations on a net of fee basis. For greater transparency, the RSIC makes a good faith attempt to account for netted fee amounts that are not necessarily readily separable. Through a process that consists of the collection, aggregation, and reasonableness testing, RSIC is able to provide the Retirement Division of PEBA with a collection of investment fees and expenses that would not otherwise be disclosed. The RSIC provides the netted fee information to PEBA on an annual basis so that amounts can be reclassified and reported in the financial statements on the Investment expense line of the Statement of Changes in Fiduciary Net Position. The non-invoiced investment expenses include amounts for investment management fees, performance fees (including carried interest allocations), and other investment expenses such as organizational expenses in limited partnership structures. The total netted fee amounts reported also reflect the impact of any offsets which have the effect of reducing this total. There is no industry standard for reporting pension plan investment fees and expenses, therefore, in order to compare investment expense as reported by the Systems with investment management costs reported by other public pension plans, an understanding of the actual fees and expenses included in any comparative reports is necessary. Additionally, investment plan composition directly influences the fee structure of a plan and adjustments for differences in plan asset allocation are necessary before conclusions can be reached from such comparisons.

Capital Assets

Capital Assets are valued at historical cost or at estimated historical cost if actual historical cost data is not available. The costs of normal maintenance and repairs that do not significantly add to the value of an asset or materially extend the asset's useful life are not capitalized. An individual asset is capitalized and reported if it has an estimated useful life of at least two years and a historical cost as follows: more than $5 thousand for machinery and equipment; more than $100 thousand for buildings. All land and non-depreciable land improvements are capitalized and reported,

regardless of cost. Depreciation is recorded using the straight line method over the useful life of 40 years for the building and a useful life of 2 to 25 years for equipment. Land is not depreciated.

II. Contributions and Reserves

Contributions to each of the Plans are prescribed in Title 9 of the South Carolina Code of Laws. The board may increase the percentage rate in SCRS and PORS employer contributions on the basis of the actuarial valuations. If the scheduled employee and employer contributions provided in statute or the rates last adopted by the board are insufficient to maintain a 28-year amortization schedule of the unfunded liabilities of the plans, the board shall increase the contribution rates for the employer as necessary to maintain the amortization period.

If the most recent annual actuarial valuation of the Systems for funding purposes shows a ratio of the actuarial value of system assets to the actuarial accrued liability of the system (the funded ratio) that is equal to or greater than 85 percent, then the board, effective on the following July first, may decrease the then current contribution rates upon making a finding that the decrease will not result in a funded ratio of less than 85 percent. If contribution rates are decreased pursuant to this provision, and the most recent annual actuarial valuation of the system shows a funded ratio of less than 85 percent, then effective on the following July first, and annually thereafter as necessary, the board shall increase the then current contribution rates until a subsequent annual actuarial valuation of the system shows a funded ratio that is equal to or greater than 85 percent.

The Retirement System Funding and Administration Act established a ceiling on employee contribution rates at 9 percent and 9.75 percent for SCRS and PORS respectively. The employer contribution rates will continue to increase annually by 1 percent through July 1, 2022. The legislation's ultimate scheduled employer rate is 18.56 percent for SCRS and 21.24 percent for PORS. The amortization period is scheduled to be reduced one year for each of the next 8 years to a 20-year amortization schedule.

Following are the employee and employer contribution rates applicable for fiscal year 2019 (amounts expressed in thousands):

System	Employee Rate	Employer Rate
SCRS	9%	14.56%[1]
PORS	9.75%	17.24%[2]
GARS	11%	$5,804[3]
JSRS	10%	52.49%[3]
SCNG	Non-contributory	$5,290

[1] Includes incidental death benefit contribution rate of 0.15%
[2] Includes incidental death benefit and accidental death benefit contribution rate of 0.20% each
[3] Includes incidental death benefit contributions as determined by the Systems' actuary

In an effort to help offset a portion of the increased contribution requirements for employers, the General Assembly again provided nonemployer contributions to PEBA. Based on the criteria provided in the South Carolina 2018-2019 Appropriations Act, Section 117.139, PEBA issued credit invoices to certain SCRS and PORS employers for fiscal year 2019 who then applied the credit invoices towards contributions otherwise due to the Systems. The amount of credit invoices issued in fiscal year 2019 totaled $88.7 million and $12.5 million for SCRS and PORS respectively.

Employer contributions for GARS and SCNG are determined by the Systems' actuary on an annual basis. SCNG employer contributions are provided annually by state appropriations.

In accordance with South Carolina State Statute, for fiscal year 2019, an additional employer contribution surcharge of 6.05 percent of covered payroll was added to the contribution rate applicable to state and local governments, and public school entities covered by the state's retiree health and dental insurance benefits. This assessment is for the purpose of providing retiree health and dental insurance benefits and is not a part of the actuarially established contribution rates for retirement funding purposes. Functioning as a collecting agent, SCRS and PORS collected and remitted these funds to the South Carolina Retiree Health Insurance Trust Fund. (amounts expressed in thousands):

	Retiree Insurance Surcharge
SCRS	$405,974
State ORP	96,395
PORS	26,944
Total	$529,313

The Fiduciary Net Position of each plan is required to be reserved in the following accounts:

The **Employer Fund** is credited with all employer and nonemployer retirement contributions and investment earnings of the Employee and Employer Funds. Upon retirement, all member account balances and contributions are transferred to the Employer Fund as all annuities and administrative expenses of the Systems are paid from this fund. Annual state appropriations to the SCNG are also credited to the Employer Fund to provide funding for the payment of annuities and administrative expenses.

The **Employee Fund** is credited with all contributions made by active members of the Systems. Interest is credited to each active member's individual account at an annual rate of 4 percent by transferring funds from the Employer Fund to the Employee Fund. At termination of employment prior to retirement, employee contributions and accumulated interest may be refunded from this fund to the member. At retirement, employee contributions and interest are transferred from the Employee Fund to the Employer Fund for subsequent payment of benefits.

The **Death Benefit Fund**, an incidental death program within SCRS and PORS, is the fund to which participating employers contribute for the purpose of providing a death benefit to active and retired members of the Systems. Employer contributions and investment earnings are credited to this fund. Death benefit payments and administrative expenses are paid from this fund. The assets in the Death Benefits Fund are not held separately in a dedicated trust for the sole purpose of paying death benefits to beneficiaries of deceased members. These benefits are considered allowable within the defined benefit plans and are held within the pension trust funds.

The **Accidental Death Fund** (PORS only) is the fund to which participating employers contribute for the purpose of providing annuity benefits to beneficiaries of members of PORS killed in the actual performance of their duties. This fund and its benefits are independent of any other retirement benefit available to the beneficiary. Employer contributions and investment earnings are credited to this fund. Monthly survivor annuities and administrative expenses are paid from this fund.

The **Qualified Excess Benefit Arrangement (QEBA) Fund** is the fund from which annuity benefits are paid when a benefit recipient exceeds IRC Section 415(b) limits on the amount an individual may receive annually from a qualified defined benefit pension plan. Employer contributions are credited to this fund on an as-needed basis in an amount equivalent to the amount of funds necessary to pay benefits out of the QEBA fund due to IRC Section 415(b) limitations. Accordingly, the QEBA fund currently has no reserve balance.

Balances in the respective reserves at June 30, 2019, were as follows (amounts expressed in thousands):

	SCRS	PORS	GARS	JSRS	SCNG	Total
Employee Fund	$ 9,106,401	$ 1,179,539	$ 6,661	$ 30,289	$ -	$ 10,322,890
Employer Fund	18,003,688	3,519,048	28,051	135,554	30,683	21,717,024
Death Benefit Fund	128,827	49,837				178,664
Accidental Death Fund		67,385				67,385
QEBA Fund						-
Totals	$ 27,238,916	$ 4,815,809	$ 34,712	$ 165,843	$ 30,683	$ 32,285,963

III. Deposits and Investments

Deposit and Investment Risk Disclosures

The tables presented on Pages 61-64 include disclosures of credit and interest rate risk in accordance with Governmental Accounting Standards Board Statement 40 and are designed to inform financial statement users about investment risks which could affect the Systems' ability to meet its obligations. These tables classify investments by risk type, while the financial statements disclose investments by asset class. The table amounts were provided by the custodian bank and agree to the Statement of Fiduciary Net Position.

Custodial Credit Risk

Deposits

The Systems' deposits at June 30, 2019, were as follows (amounts expressed in thousands):

	Carrying Amount
SCRS	$61,425
PORS	10,742
GARS	141
JSRS	237
SCNG	126
Total	$72,671

Custodial credit risk for deposits is the risk that in the event of a bank failure, the Systems' deposits may not be recovered. Deposits are insured by the Federal Deposit Insurance Corporation (FDIC) up to $250,000; however, amounts in excess of $250,000 are uninsured and uncollateralized. The Commission has a formal Counterparty Policy which covers policies and procedures related to oversight and management of Counterparty Risk, including the custodial bank. To monitor custodial credit risk, the credit quality of financial institutions at which deposits are held are periodically reviewed using internal analysis and rating agencies' reports.

As of June 30, 2019, actual bank balances totaled $63,380 thousand. Amounts in excess of $250,000 were uninsured and uncollateralized.

As of June 30, 2019, cash held by the custodian, in broker and strategic partnerships accounts as well as forward contracts and foreign currencies totaled $197.1 million. These balances are classified as cash and cash equivalents on the Statement of Fiduciary Net Position.

Investments

Custodial credit risk for investments is the risk that, in the event of a failure of the counterparty, the Systems will not be able to recover the value of the investments or collateral securities that are in the possession of an outside party. Investing for the Systems is governed by Section 16, Article X of the South Carolina Constitution and Section 9-1-1310(B) and Title 9 Section 16 of the South Carolina Code of Laws. Funds held in trust for the Retirement Systems may be invested and reinvested in a variety of instruments including, but not limited to, fixed income instruments of the United States, foreign fixed income obligations, swaps, forward contracts, futures and options, domestic and international equity securities, private equity, real estate, and fund of funds.

The following table presents the fair value of investments:

Statement of Invested Assets

June 30, 2019

(Amounts expressed in thousands)

Investment Type	Fair Value
Short Term Investments	
Short Term Investment Funds (U.S. Regulated)	$ 1,318,934
Certificates of Deposit	5,403
Commercial Paper	940,969
U. S. Government Agency	35,005
U. S. Treasury Bills	312,704
Non U. S. Government Short Term	19,824
Corporate Bonds	5,078
Strategic Partnership Short Duration	13,298
Options - Cash	(20)
Total Short Term Investments	$ 2,651,195
Equity Allocation	
Global Public Equity[2]	
Common Stocks	10,050,777
Real Estate Investment Trusts	705,442
Preferred	7,160
Options - Equity	839,383
Futures - Equity	23,225
Swaps - Equity	15,632
Total Global Public Equity	$ 11,641,619
Opportunistic	
Global Tactical Asset Allocation	2,404,366
Other Opportunistic	320,905
Total Global Tactical Asset Allocation	$ 2,725,271
Alternatives	
Hedge Funds	3,197,690
Private Equity Limited Partnerships	2,323,786
Private Debt	2,036,401
Private Real Estate	2,456,239
Private Infrastructure	144,140
Total Alternative Investments	$ 10,158,256

Investment Type	Fair Value
Fixed Income Allocation	
U.S. Government	
U.S. Government Treasuries[1]	$ 338,406
U.S. Government Agencies	645,479
Mortgage Backed	
Government National Mortgage Association	31,266
Federal National Mortgage Association	19,986
Federal Home Loan Mortgage Association (Multiclass)	4,069
Collateralized Mortgage Obligations	1,914
Municipals	44,516
Corporate	
Corporate Bonds	1,741,863
High Yield/Bank Loans	12,467
Asset Backed Securities	264,993
Private Placements	667,831
Yankee Bonds	636
Emerging Debt	838,500
Options - Fixed Income	2
Futures - Fixed Income	2,709
Swaps - Fixed Income	4,841
Total Fixed Income	$ 4,619,478

Total Invested Assets	**$ 31,795,819**
Invested Securities Lending Collateral	$ 41,327

Reconciliation of Statement of Invested Assets (listed above) to the *Statement of Fiduciary Net Position*

Total Invested Assets	$ 31,795,819
Short Term Investments classified as Cash & Cash Equivalents on *Statement of Fiduciary Net Position*	
Short Term Investment Funds (U.S. Regulated)	(1,318,934)
Commercial Paper	(874,384)
U.S. Treasury Bills	(40,513)
Non U. S. Government Short Term	(12,558)
Corporate Bonds	(1,978)
Options - Cash	20
Total Investments on *Statement of Fiduciary Net Position*	$ 29,547,472

[1] *U.S. Government Treasuries includes Notes, Bonds, and Treasury Inflation Protected Securities (TIPS).*

[2] *RSIC's Public Equity benchmark as of 6/30/2019 is the weighted average of regional sub-asset class targets in the Policy Portfolio. The Benchmark is comprised of 51.4% MSCI U. S. IMI Index for U.S. Equity, 31.4% MSCI World ex-U.S. IMI Index for Developed Market Equity (non-U.S.), and 17.1% MSCI Emerging Markets IMI Index for Emerging Market Equity. As of June 30, 2019, RSIC had a NAV of $5,259,330,892 in Global Equity managers that invest to the MSCI World. The MSCI World is comprised of 62.67% MSCI U.S. and 37.33% MSCI EAFE + CAD.*

Fair Value Measurements

The Systems categorize fair value measurements within the fair value hierarchy established by GASB Statement No. 72, *Fair Value Measurement and Application*. The valuation technique uses a three level hierarchy of inputs to measure the fair value of the asset and gives the highest priority to unadjusted quoted prices in active markets (level 1 measurements) and the lowest priority to unobservable inputs (level 3 measurements). These classifications are summarized as follows:

Level 1 Inputs: Quoted prices (unadjusted) for identical assets or liabilities in active markets that a reporting entity can access at the measurement date.

Level 2 Inputs: Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable.

Level 3 Inputs: Unobservable inputs for an asset or liability.

In the event that inputs used to measure the fair value of an asset or liability fall into different levels in the fair value hierarchy, the overall level of the fair value hierarchy in its entirety is determined based on the lowest level input that is significant to the entire valuation. These levels are not necessarily an indication of risk but are based upon the pricing transparency of the investment. In determining the appropriate levels, the Systems performed a detailed analysis of the assets and liabilities that are subject to GASB Statement No. 72.

Fair value of certain investments that do not have a readily determinable fair value is established using net asset value (or its equivalent) as a practical expedient. These investments are not categorized according to the fair value hierarchy.

Investments classified according to the fair value hierarchy are valued according to the pricing policy established by the Plan's custodian bank. Pricing is based primarily on prices from several third-party vendors or other specified alternative sources which are considered to be reliable. Where available, the custodian bank uses more than one vendor for securities of each asset type, class or issue. The price received from a primary source is used in valuation unless a tolerance check, or price challenge, results in the use of a price from a secondary vendor. The Systems may override prices provided by the custodian bank if it is deemed necessary or appropriate.

The Systems have the following recurring fair value measurements as of June 30, 2019 (amounts in thousands):

Investments by Fair Value Level	At 6/30/2019	Fair Value Measurements Using: Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Short Term Investments				
Short Term Investment Funds (U. S. Regulated)	$ 1,318,934	$ 1,318,934	$ -	$ -
Certificates of Deposit	5,403		5,403	
Commercial Paper	940,969		940,969	
U. S. Government Agency	35,005		35,005	
U. S. Treasury Bills	312,704	312,704		
Non U. S. Government Short Term Investments	19,824		19,824	
Corporate Bonds	5,078		5,078	
Total Short Term Investments	$ 2,637,917	$ 1,631,638	$ 1,006,279	$ -
Equity Allocation				
Global Public Equity				
Common Stocks	$ 5,221,350	$ 5,221,350	$ -	$ -
Real Estate Investment Trusts	705,442	705,442		
Preferred	7,160	2,780	4,380	
Total Global Public Equity	$ 5,933,952	$ 5,929,572	$ 4,380	$ -
Fixed Income Allocation				
U. S. Government				
U.S. Government Treasuries	$ 338,406	$ 338,406	$ -	$ -
U.S. Government Agencies	645,479		645,479	
Mortgage Backed				
Government National Mortgage Association	31,266		31,266	
Federal National Mortgage Association	19,986		19,986	
Federal Home Loan Mortgage Association (Multiclass)	4,069		4,069	
Collateralized Mortgage Obligations	1,914		1,914	
Municipals	44,516		44,516	
Corporate				
Corporate Bonds	1,741,863		1,491,262	250,601
Asset Backed Securities	264,993		264,993	
Private Placements	667,831		667,831	
Yankee Bonds	636		636	
Total Fixed Income	$ 3,760,959	$ 338,406	$ 3,171,952	$ 250,601
Total Investments by Fair Value Level	$ 12,332,828	$ 7,899,616	$ 4,182,611	$ 250,601
Investments measured at the net asset value (NAV)				
Strategic Partnership Short Duration	$ 13,298			
Global Equity	5,686,544			
Global Tactical Asset Allocation	2,404,366			
Other Opportunistic	320,905			
High Yield/Bank Loans	12,467			
Emerging Debt	838,500			
Hedge Funds	3,197,690			
Private Equity	2,323,786			
Private Debt	2,036,401			
Private Real Estate	2,456,239			
Private Infrastructure	144,140			
Total investments measured at the NAV	$ 19,434,336			
Total investments measured at fair value	$ 31,767,164			
Investment derivative instruments				
Short Term Investments				
Options - Cash	$ (20)	$ -	$ (20)	$ -
Equity Investments				
Options - Equity	(17,734)	781	(18,515)	
Futures - Equity	23,225	23,225		
Swaps - Equity	15,632		15,632	
Fixed Income Investments				
Options - Fixed Income	2		2	
Futures - Fixed Income	2,709	2,709		
Swaps - Fixed Income	4,841		4,841	
Total investment derivative instruments	$ 28,655	$ 26,715	$ 1,940	$ -
Total Invested Assets	$ 31,795,819			

The investments that are measured at the Net Asset Value (NAV) are noted below (amounts in thousands).

	Fair Value at 6/30/19	Unfunded Commitments[1]	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Strategic Partnership Short Duration	$ 13,298	$ -	Monthly	5 - 10 days
Global Equity	5,686,544		Daily/Monthly	5 - 30 days
Global Tactical Asset Allocation	2,404,366		Monthly	5 - 14 days
Other Opportunistic	320,905	35,979	Monthly	5 - 30 days
High Yield/Bank Loans	12,467		Monthly	5 - 30 days
Emerging Debt	838,500		Daily/Monthly	10 - 15 days
Hedge Funds	3,197,690		Monthly/Quarterly	2 - 90 days
Private Equity	2,323,786	2,083,579	Illiquid	Illiquid
Private Debt	2,036,401	1,936,090	Illiquid	Illiquid
Private Real Estate	2,456,239	975,512	Illiquid	Illiquid
Private Infrastructure	144,140	274,308	Illiquid	Illiquid
Total investments measured at the NAV	$ 19,434,336	$ 5,305,468		

[1] For purposes of this table, amounts are reported in US Dollars. The Private Equity Category includes €105,115,228 and AUD $65,695,707 that have been converted to USD. The Infrastructure category includes €52,968,532 that has been converted to USD.

Strategic Partnership Short Duration Funds. This investment type contains one fund that invests primarily in short duration debt instruments which generally have a one to three-year maturity. The fair values of the investments have been determined using the percent ownership of the NAV of the fund and reported by the Investment Manager. Redemptions are generally allowed monthly, provided adequate notice.

Global Equity Funds. This investment type includes 14 funds that invest primarily in global developed and emerging equity public markets instruments with one of the funds invested in an equity options strategy. One of the funds is held in a strategic partnership. The fair values of the investments in this asset type have been determined using NAV per share of the investments or percent ownership of the NAV of the fund and reported by the Investment Managers. Redemptions are generally allowed monthly, provided adequate notice.

Global Tactical Asset Allocation Funds. This investment type includes three funds that may be invested in liquid securities and instruments, including but not limited to equities, fixed income securities, bank loans, commodities, futures, swaps, forwards, options and currencies. The fair values of the investments in this asset type have been determined using NAV per share of the investments or percent ownership of the NAV of the fund and reported by the Investment Managers. Redemptions are allowed monthly, provided adequate notice.

Other Opportunistic Funds. This investment type includes four funds all of which are strategic partnership investments. The objective of this asset class is to identify investments that, while they may not fit into other asset classes, still offer compelling opportunities for the Portfolio. These investments may offer either high returns, diversifying returns, or both. Examples of potential investments include, but are not limited to, commodities, CTAs, TIPS, and insurance strategies. This allocation also includes risk parity investments. The fair values of three investments in this asset type are valued in good faith based upon the most recent financial information available for the underlying companies. These are reported by the Investment Managers at the measurement date, adjusted for subsequent cash flow activities through the year-end reporting date. The fair value of one investment in this asset type has been determined using NAV per share of the investments or percent ownership of the NAV of the fund and reported by the Investment Manager. Redemptions are generally allowed monthly, provided adequate notice.

High Yield/Bank Loan Funds. This investment type includes one fund that generally invests in high yield, bank loan and structured credit instruments. The fair values of the investments in this asset type have been determined using NAV per share of the investments or percent ownership of the NAV of the fund and reported by the Investment Manager. Redemptions are generally allowed monthly, provided adequate notice.

Emerging Debt Funds. This investment type includes three funds that generally invest in debt securities issued in any currency and may hold foreign currency. The fair values of the investments in this asset type have been determined using NAV per share of the investments or percent ownership of the NAV of the fund and reported by the Investment Managers. Redemptions are generally allowed monthly, provided adequate notice, and one fund charges a redemption fee.

Hedge Funds. This investment type includes 22 funds that generally invest in hedge fund strategies that seek alpha in equity or credit markets or seek to minimize embedded market beta. There are 15 of these funds invested through strategic partnership investments which may consist of underlying investments in more than one hedge fund. The fair values of the investments in this asset type have been determined using NAV per share of the investments or percent ownership of the NAV of the fund and reported by the Investment Managers. Redemptions are generally allowed monthly, provided adequate notice; however, it is common that funds have authority to require longer redemption timeframes and/or make the redemption subject to gates to mitigate any detrimental impact to the fund.

Private Equity Funds. This investment type includes 55 funds that consist of investments in limited partnerships or co-investments and five funds within strategic partnership investments. Strategic partnerships may consist of underlying investments in more than one limited partnership or co-investment fund. The private equity investments span the venture capital, growth equity, fund of funds, secondaries, energy and buyout strategies. Private equity is considered an illiquid investment strategy as funds generally have a life span of seven to 10 years. The nature of investments in this asset type is that distributions are received through the liquidation of the underlying assets of the fund. The fair values of the investments in this asset type are valued in good faith based upon the most recent financial information available for the underlying companies. These are reported by the Investment Managers at the measurement date, adjusted for subsequent cash flow activities through the year-end reporting date. The estimated fair value of these investments may differ from values that would have been used had a ready market existed.

Private Debt Funds. This investment type includes 26 funds that consist of investments in limited partnerships and 4 funds that are strategic partnership investments. Strategic partnerships may consist of underlying investments in more than one limited partnership or co-investment fund. The private debt investments span the direct lending, distressed, energy, mezzanine, mortgages, opportunistic and other strategies. Private Debt is considered an illiquid investment strategy as funds generally have a life span of seven to 10 years. The nature of investments in this asset type is that distributions are received through investment generated income and the liquidation of the underlying assets of the fund. The fair values of the investments in this asset type are valued in good faith based upon the most recent financial information available for the underlying companies. These are reported by the Investment Managers at the measurement date, adjusted for subsequent cash flow activities through the year-end reporting date. The estimated fair value of these investments may differ from values that would have been used had a ready market existed.

Private Real Estate Funds. This investment type includes 28 funds that consist of investments in limited partnerships or co-investments and four funds that are strategic partnership investments. Strategic partnerships may consist of underlying investments in more than one limited partnership or co-investment fund. The real estate investments span the core, diversified, real estate debt, timber, value add and opportunistic strategies.

Real Estate is considered an illiquid investment strategy as funds generally have a life span of seven to 10 years. The nature of investments in this asset type is that distributions are received through investment generated income and the liquidation of the underlying assets of the fund. The fair values of the investments in this asset type are valued in good faith based upon the most recent financial information available for the underlying companies. These are reported by the Investment Managers at the measurement date, adjusted for subsequent cash flow activities through the year-end reporting date. The estimated fair value of these investments may differ from values that would have been used had a ready market existed.

Private Infrastructure Funds. This investment type includes three funds that consist of investments in limited partnerships. Common types of infrastructure investments are in transportation, energy, telecommunications, water supply, sewage, or hospitals. These assets tend to benefit from a rising inflation environment. Infrastructure is considered an illiquid investment strategy as funds generally have a life span of 20 years. The nature of investments in this asset type is that distributions are received through investment generated income and the liquidation of the underlying assets of the fund. The fair values of the investments in this asset type are valued in good faith based upon the most recent financial information available for the underlying companies. These are reported by the Investment Managers at the measurement date, adjusted for subsequent cash flow activities through the year-end reporting date. The estimated fair value of these investments may differ from values that would have been used had a ready market existed.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. While the RSIC has no formal interest rate risk policy, interest rate risk is observed within the portfolio using effective duration (option adjusted duration), which is a measure of the price sensitivity of a bond or a portfolio of bonds to interest rate movements given a 100 basis point change in interest rates. Effective duration takes into account that expected cash flows will fluctuate as interest rates change and provides a measure of risk that changes proportionately with market rates. Investment guidelines may specify the degree of interest rate risk taken versus the benchmark within each fixed income portfolio. Disclosures for interest rate risk at June 30, 2019, are noted below (amounts expressed in thousands).

Investment Type	Fair Value Total	Fair Value Duration Not Available	Fair Value Duration Available	Effective Duration (option adjusted duration)
Short Term Investments				
Short Term Investment Funds (U.S. Regulated)	$ 1,318,934	$ -	$ 1,318,934	0.08
Invested Securities Lending Collateral	41,327	41,327		
Certificates of Deposit	5,403		5,403	0.31
Commercial Paper	940,969		940,969	0.07
U. S. Government Agency	35,005		35,005	0.34
U. S. Treasury Bills	312,704		312,704	0.32
Non U. S. Government Short Term	19,824		19,824	0.22
Corporate Bonds	5,078		5,078	0.24
Strategic Partnership Short Duration	13,298	13,298		
Options - Cash	(20)	(20)		
Total Short Term Investments	$ 2,692,522	$ 54,605	$ 2,637,917	
Equity Allocation				
Preferred	7,160	7,160		
Total Equity Investments	$ 7,160	$ 7,160	$ -	
Fixed Income Allocation				
U. S. Government				
U.S. Government Treasuries	338,406		338,406	6.97
U. S. Government Agencies	645,479	5,124	640,355	1.05
Mortgage Backed				
Government National Mortgage Association	31,266	5,362	25,904	2.50
Federal National Mortgage Association	19,986		19,986	2.63
Federal Home Loan Mortgage Association (FHLMC Multiclass)	4,069		4,069	2.30
Collateralized Mortgage Obligations	1,914		1,914	2.50
Municipals	44,516		44,516	0.25
Corporate				
Corporate Bonds	1,741,863	23,844	1,718,019	2.06
High Yield/Bank Loans	12,467		12,467	2.00
Asset Backed Securities	264,993	22,796	242,197	1.27
Private Placements	667,831	63,773	604,058	1.36
Yankee Bonds	636		636	1.24
Emerging Debt	838,500		838,500	6.13
Options - Fixed Income	2		2	(56.95)
Futures - Fixed Income	2,709		2,709	3.86
Swaps - Fixed Income	4,841	8,729	(3,888)	4.69
Total Fixed Income	$ 4,619,478	$ 129,628	$ 4,489,850	
Mixed Credit Hedge Fund Allocation				
Mixed Credit Hedge Funds	33,629	3,429	30,200	0.01
Total Mixed Credit Hedge Funds	$ 33,629	$ 3,429	$ 30,200	
Total Invested Assets	**$ 7,352,789**	**$ 194,822**	**$ 7,157,967**	
Total Portfolio Effective Duration (option adjusted duration)				**1.86**

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations to the holders of its securities. Each individual portfolio within fixed income is managed in accordance with investment guidelines that are specific as to permissible credit quality ranges, exposure levels within individual quality tiers and average credit quality. Within high yield portfolios, a quality rating of lower than C is not permissible in any of the fixed income guidelines except in those circumstances of downgrades subsequent to purchase, in which case the investment manager is responsible for communicating the downgrade to the Commission's consultant and staff. The Systems' fixed income investments at June 30, 2019, were rated by Moody's and are presented below.

Credit Risk

(Amounts expressed in thousands)

Investment Type and Fair Value	AAA	AA	A	BAA	BA
Short Term Investments					
Short Term Investment Funds (U. S. Regulated)	$ 1,318,934	$ -	$ -	$ -	$ -
Invested Securities Lending Collateral					
Certificates of Deposit					
Commercial Paper		275,779		656,599	
Non U. S. Government Short Term					
Corporate Bonds				201	1,777
Strategic Partnership Short Duration					
Options - Cash					
Equity Investments					
Preferred					
Fixed Income Allocation[2]					
Mortgage Backed:					
Federal National Mortgage Association	19,986				
Federal Home Loan Mortgage Association (Multiclass)	4,069				
Collateralized Mortgage Association	1,914				
Municipals		4,800	7,165		
Corporate:					
Corporate Bonds	45,325	214,454	454,028	290,827	190,500
High Yield/Bank Loans					
Asset Backed Securities	95,118	1,704	5,901	27,935	60,845
Private Placements	35,289	79,559	185,859	57,942	57,117
Yankee Bonds				636	
Emerging Debt					
Options - Fixed Income					
Futures - Fixed Income					
Swaps - Fixed Income					
Totals	**$ 1,520,635**	**$ 576,296**	**$ 652,953**	**$ 1,034,140**	**$ 310,239**

Chart continued on next page

[1] *The column labeled Not Rated by S&P or Moody's represents securities that were either not rated or had a withdrawn rating.*

[2] *U.S. Treasury Bills, Notes and Bonds, Agencies and Government National Mortgage Association securities with a fair value of $1.13 billion are not included because they are not subject to credit risk.*

Chart continued from previous page

Credit Risk (cont.)

(Amounts expressed in thousands)

				Not Rated			
B	CAA	CA	C	Int'l and EMD Commingled Funds or held in Strategic Partnerships	Rated by S&P; not by Moody's	Not rated by S&P or Moody's[1]	TOTAL
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,318,934
						41,327	41,327
						5,403	5,403
						8,591	940,969
						19,824	19,824
						3,100	5,078
				13,298			13,298
						(20)	(20)
						7,160	7,160
							19,986
							4,069
							1,914
					32,551		44,516
225,327	29,737	4,864	1,515		152,290	132,996	1,741,863
						12,467	12,467
15,544	5,862	6,857			39,574	5,653	264,993
52,864	27,291	2,609			102,404	66,897	667,831
							636
				838,500			838,500
						2	2
						2,709	2,709
						4,841	4,841
$ 293,735	**$ 62,890**	**$ 14,330**	**$ 1,515**	**$ 851,798**	**$ 326,819**	**$ 310,950**	**$ 5,956,300**

Concentration of Credit Risk – Investments

Concentration of credit risk is the risk of loss attributed to the magnitude of investment in a single issuer. The Systems' policy for reducing this risk is to comply with the Statement of Investment Objectives and Policies as amended and adopted by the Commission which states that "except that no limitations on issues and issuers shall apply to obligations of the U.S. Government and Federal Agencies, the domestic fixed income portfolio shall contain no more than 6 percent exposure to any single issuer." As of June 30, 2019, there is no single issuer exposure within the portfolio that comprises five percent or more of the overall portfolio. Therefore, there is no concentration of credit risk.

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. The Systems participates in foreign markets to diversify assets, reduce risk and enhance returns. Currency forwards are used to manage currency fluctuations and are permitted by investment policy. Policy forbids speculating in forwards and other derivatives.

The table below presents the Systems' exposure to foreign currency risk in U.S. dollars at June 30, 2019, (amounts expressed in thousands):

Currency	Cash & Cash Equivalents	Forward Contracts	Futures Contracts	Private Equity	Private Infrastructure	Preferred Securities	Fixed Income	Equity	Total
Australian Dollar	$ 1,685	$ 13,215	$ (87)	$ 22,667	$ -	$ -	$ 2,442	$ 131,742	$ 171,664
Brazil Real		(10,970)					10,849		(121)
Canadian Dollar	1,990	26,270	113				41	253,938	282,352
Danish Krone	182	(742)						49,274	48,714
Euro Currency	9,850	(61,893)	464	192,228	85,663	2,780	186,588	595,269	1,010,949
Hong Kong Dollar	950	10,078	59					99,673	110,760
Israeli Shekel	540	(1,775)					1,293	9,257	9,315
Japanese Yen	23,385	69,426	(100)				(2,367)	393,557	483,901
Mexican Peso	327	138							465
New Zealand Dollar	71	(248)						11,422	11,245
Norwegian Krone	63	798						26,044	26,905
Pound Sterling	3,419	32,293	193				11,126	302,159	349,190
Singapore Dollar	836	274						18,132	19,242
South African Rand	2								2
Swedish Krona	(76)	7,096	54					60,279	67,353
Swiss Franc	387	(2,908)						114,058	111,537
Totals	$ 43,611	$ 81,052	$ 696	$ 214,895	$ 85,663	$ 2,780	$ 209,972	$ 2,064,804	$ 2,703,473

Derivatives

Derivatives are financial instruments for which the value is derived from underlying assets or data. All of the Systems' derivatives are considered investments. Excluding futures, derivatives generally take the form of contracts in which two parties agree to make payments at a later date based on the value of specific assets or indices. Through certain collective trust funds, the Systems may invest in various derivative financial instruments such as futures and options thereon; forward foreign currency contracts, options, interest rate, currency, equity, index, credit default, total return swaps, interest-only strips, and CMOs to enhance the performance and reduce volatility.

To comply with the requirements of multiple exchanges, cash and securities in the amount of $95.9 and $244.1 million, respectively, were held in trust by the clearing brokers on June 30, 2019. The Systems' derivatives, consisting of futures, options, forward contracts and swaps are presented in the tables on Pages 65-70. Investments in limited partnerships and commingled funds may include derivatives that are not shown in the derivative totals.

The RSIC works with their overlay provider to utilize derivatives primarily to facilitate changes to the asset allocation of the total plan and take

advantage of their low cost of implementation. Derivatives are utilized for several reasons:

- Asset Allocation: In many cases, synthetic exposures (using derivatives) are placeholders until managers are hired and funded. In time, the Commission may substitute traditional managers for much of the synthetic exposure currently in the portfolio. Efficient Market Theory dictates that in some asset classes, synthetics are the best way to achieve exposure.
- Risk Management: Derivatives allow investors the ability to swiftly and efficiently increase or decrease exposures in order to manage portfolio risk.
- Cost: A synthetic (derivative) solution is often the least expensive way to gain exposure to an asset class or to manage portfolio risk. Derivatives are more beneficial in each of the three major measures of cost: commission costs, market impact of trading and opportunity costs.

Futures

Futures are contractual obligations that require the buyer (seller) to buy (sell) assets at a predetermined date at a predetermined price. These contracts are standardized and trade on an organized exchange with gains and losses settled daily thereby significantly reducing credit and default risk. Gains and losses are included in the net appreciation/ (depreciation) in the fair value of investments total of the Statement of Changes in Fiduciary Net Position.

The tables below present classification information on the Systems' derivatives at June 30, 2019, (amounts expressed in thousands):

	Changes in Fair Value	
	Classification	Gain
Futures Contracts	Net appreciation	$ 56,266
Forward Contracts	Net appreciation	7,569
Swaps	Net appreciation	48,916
Options	Net appreciation	42,069

	Fair Value			
	Forward Contracts	Futures	Options[1]	Swaps
Cash and Cash Equivalents	$ (492)	$ -	$ (20)	$ -
Fixed Income		2,709	2	4,841
Global Public Equity		23,225	839,383	15,632
Totals	$ (492)	$ 25,934	$ 839,365	$ 20,473

[1] *Includes options held in commingled accounts with fair value of $857,117 (in thousands).*

At June 30, 2019, the Systems had the following exposure via futures contracts (dollar amounts expressed in thousands):

Futures Contracts	Expiration	Long/Short	Quantity	Notional Value[1]	Fair Value
SPI 200 Future (SFE)	September 19	Long	84	$ 9,666	$ 111
S&P/TSX 60 Index Future (MSE)	September 19	Long	89	13,318	121
DAX Index Future (EUX)	September 19	Long	39	13,755	256
EURO STOXX 50 Future (EUX)	September 19	Long	370	14,604	443
IBEX 35 Index Future (MFM)	July 19	Long	40	4,178	27
CAC40 10 EURO Future (EOP)	July 19	Long	258	16,256	420
FTSE/MIB Index Future (MIL)	September 19	Long	32	3,855	80
AMSTERDAM Index Future (EOE)	July 19	Long	38	4,855	60
HANG SENG Index Future (HKG)	July 19	Long	31	5,655	59
TOPIX Index Future (OSE)	September 19	Long	214	30,807	(100)
FTSE 100 Index Future (ICF)	September 19	Long	244	22,884	252
OMXS30 Index Future (SSE)	July 19	Long	198	3,459	54
S&P500 EMINI Future (CME)	September 19	Long	9,758	1,436,475	23,596
E-MINI RUSS 2000 Future (CME)	September 19	Short	(1,264)	(99,041)	(2,154)
Total Equity				1,480,726	23,225
US Long Bond Future (CBT)	September 19	Short	(9)	(1,400)	(47)
US 10YR Note Future (CBT)	September 19	Long	1,280	163,800	2,984
US 5YR Note Future (CBT)	September 19	Long	625	73,847	942
US 5YR Note Future (CBT)	September 19	Short	(24)	(2,836)	(36)
AUST 10YR Bond Future (SFE)	September 19	Short	(321)	(32,359)	(194)
AUST 3YR Bond Future (SFE)	September 19	Short	(35)	(2,824)	(4)
CAN 10YR Bond Future (MSE)	September 19	Short	(5)	(547)	(8)
EURO BUXL 30Y Bond Future (EUX)	September 19	Short	(20)	(4,621)	(158)
EURO-OAT Future (EUX)	September 19	Short	(191)	(35,861)	(710)
Long GILT Future (ICF)	September 19	Short	(46)	(7,628)	(60)
Total Fixed Income				149,571	2,709
Total				$ 1,630,297	$ 25,934

[1] *Notional value is the nominal or face amount that is used to calculate payments made on derivative instruments (futures, forwards, swaps and options). This amount generally does not change hands and is thus referred to as notional. The notional amount represents the economic equivalent to an investment in the physical securities represented by the derivative contract.*

Forwards

Forwards are contractual obligations that require the delivery of assets at a fixed price on a predetermined date. These contracts are "over-the-counter" (OTC) instruments, meaning they are not traded on an organized exchange. Currency forwards gains and losses are included in the net appreciation/(depreciation) in the fair value of investments total of the Statement of Changes in Fiduciary Net Position.

At June 30, 2019, the Systems had the following forward exposures, listed by counterparty (amounts expressed in thousands):

Broker	Notional Value	Fair Value	Counterparty Exposure
Bank of America	$ 15,316	$ 232	1.96%
Bank of Montreal	46,165	167	5.92%
Bank of New York Mellon	194,397	(1,309)	24.91%
Barclays Bank PLC	10,612	(91)	1.36%
BNP Paribas Securities Corporation	45,963	108	5.88%
Citibank	74,541	201	9.55%
Citigroup Global Markets	9,961	(103)	1.28%
Commonwealth Bank of Australia	36,427	144	4.67%
Deutsche Bank AG	8,796	(14)	1.13%
Goldman Sachs	117,251	99	15.03%
HSBC Bank	7,154	203	0.92%
Instinet Europe Ltd	8,878	(1)	1.14%
JPMorgan Chase Bank	83,021	(225)	10.64%
Morgan Stanley & Company	2,476	(15)	0.32%
Royal Bank of Canada	46,743	139	5.99%
Standard Chartered Bank	9,011	50	1.15%
State Street Corporation	41,448	143	5.31%
UBS AG/Stamford CT	22,133	(220)	2.84%
Totals	$ 780,293	$ (492)	100%

Swaps

The Systems has entered into various swap agreements to manage plan exposure. Swaps are OTC agreements to exchange a series of cash flows according to specified terms. The underlying asset can be an interest rate, an exchange rate, a commodity price or any other index.

Total return swaps are primarily used to efficiently achieve a target asset allocation. Exposures to an asset class are typically gained by paying a reference rate such as LIBOR, plus or minus a spread, in exchange for the risk and returns of a desired market index. Similarly, exposures can be reduced by receiving a reference rate in exchange for the economic risks and returns of an index.

Counterparty risk, or default risk, is the risk that a party will not honor its contractual obligations. The Systems seeks to actively manage its counterparty risk by thorough analysis and evaluation of all potential counterparties by investment staff and the independent overlay manager. Risk is further minimized through diversification among counterparties with high credit ratings and collateralizing unrealized gains and losses. The Systems currently does not participate in a master netting agreement. Unrealized gains and losses are not netted across instrument types and are included in the net appreciation/(depreciation) in the fair value of investments total of the Statement of Changes in Fiduciary Net Position. The table below reflects the counterparty credit ratings at June 30, 2019, for currency forwards, swap agreements, and options (amounts expressed in thousands):

Quality rating	Forwards	Swaps	Options[1]	Total
Aa2	$ (932)	$ (12,873)	$ 298	$ (13,507)
Aa3	375	404		779
A1	(18)	27,961	316	28,259
A2	98	9,191		9,289
A3	(14)			(14)
Baa2	(1)			(1)
Total subject to credit risk	$ (492)	$ 24,683	$ 614	$ 24,805
Centrally cleared:				
Chicago Board Options Exchange			$ (18,366)	$ (18,366)
Chicago Mercantile Exchange		(3,087)		(3,087)
Intercontinental Exchange		(151)		(151)
LCH Ltd		(972)		(972)
Total not subject to credit risk	$ -	$ (4,210)	$ (18,366)	$ (22,576)
Totals	$ (492)	$ 20,473	$ (17,752)	$ 2,229

[1] *Options held in commingled accounts are not included in this table.*

At June 30, 2019, the Systems held swaps as shown in the tables below (amounts expressed in thousands):

Counterparty	Total Return Swaps	SCRS Pays	SCRS Receives	Maturity Date	Current Notional	Fair Value[1]	Gain/Loss Since Trade
Bank of America	S&P 600 Swap	Fixed Rate	Fixed Rate	3/31/2020	$ 101,867	$ 1,202	$ 1,210
Bank of America	Russell 2000 Growth Swap	Fixed Rate	Variable Rate	9/30/2019	(141,455)	(2,943)	10,999
Bank of America	Russell 2000 Proxy	Fixed Rate	Variable Rate	9/30/2019	(140,024)	(2,001)	12,536
BNP Paribas	MSCI World Swap Proxy	Variable Rate	Fixed Rate	7/31/2019	576,572	404	6,226
Barclays Bank	Barclays US Securitized Proxy	Variable Rate	Fixed Rate	4/30/2020	51,040	174	808
Barclays Bank	Barclays US Securitized Proxy	Fixed Rate	Fixed Rate	4/1/2020	306,133	1,672	4,057
Barclays Bank	Barclays US Securitized Proxy	Variable Rate	Fixed Rate	7/31/2019	137,825	733	5,286
Barclays Bank	Barclays US Corporate Proxy	Variable Rate	Fixed Rate	7/31/2019	109,004	2,377	7,724
Barclays Bank	Barclays US Agg Proxy	Variable Rate	Fixed Rate	9/30/2019	319,610	3,159	17,325
Barclays Bank	TIPS Proxy	Variable Rate	Fixed Rate	9/30/2019	158,556	1,077	5,594
Goldman Sachs	Russell 1000 Value Proxy	Variable Rate	Fixed Rate	8/30/2019	359,726	25,066	2,114
Goldman Sachs	Russell 2500 Growth Proxy	Variable Rate	Fixed Rate	6/30/2020	140,003	3,097	3,068
Merrill Lynch	CSI 500 Net TR Proxy	Variable Rate	Fixed Rate	6/30/2020	24,997	(398)	(320)
Merrill Lynch	Shenzhen Comp Index TR proxy	Variable Rate	Fixed Rate	1/15/2020	86,665	(8,796)	13,939
Societe Generale	TIPS Proxy	Variable Rate	Fixed Rate	6/30/2020	457,077		
					$ 2,547,596	$ 24,823	$ 90,566

Counterparty	Fixed Income Swaps	SCRS Pays	SCRS Receives	Maturity Date	Current Notional	Fair Value[1]
Bank of America	Credit Default Swaps	Variable Rate	Fixed Rate	6/20/2021	$ 2,000	$ 25
Credit Suisse	Credit Default Swaps	Variable Rate	Fixed Rate	9/17/2058	12,500	127
Goldman Sachs	Credit Default Swaps	Fixed/Variable	Fixed/Variable	various	12,630	(248)
HSBC Securities	Credit Default Swaps	Variable Rate	Fixed Rate	6/20/2021	1,200	15
JP Morgan Chase Bank	Credit Default Swaps	Variable Rate	Fixed Rate	9/17/2058	2,200	22
Morgan Stanley Capital	Credit Default Swaps	Fixed Rate	Variable Rate	12/20/2023	4,000	(81)
					$ 34,530	$ (140)
Chicago Mercantile Exchange	Cleared Interest Rate Swaps	Fixed/Variable	Fixed/Variable	various	$ 175,976	$ (3,087)
Intercontinental Exchange	Cleared Credit Default Swaps	Fixed/Variable	Fixed/Variable	various	92,670	(151)
LCH Ltd	Cleared Interest Rate Swaps	Fixed/Variable	Fixed/Variable	various	221,737	(972)
					$ 490,383	$ (4,210)

[1] Fair Value is the amount reasonably expected to be received if the underlying positions were liquidated on the following business day.

Options

Options are exchange traded agreements between two parties for a future transaction on an underlying asset at a reference or strike price. The buyer of an option has the right, but not the obligation, to transact. The seller of an option has the obligation to transact if forced by the buyer. The price of an option is derived by taking the difference in the underlying asset and the strike price plus a premium for the remaining time until expiration. At June 30, 2019, the Systems had the following option positions (dollar amounts expressed in thousands):

Option Contracts	Underlying Security	Expiration	Quantity	Fair Value[1]
Call Aug 19 020.410	MXN/USD Spot Option 2019	August 2019	(7,400,000)	$ (10)
Call Jul 19 019.640	MXN/USD Spot Option 2019	July 2019	(1,750,000)	(3)
Call Aug 19 019.800	MXN/USD Spot Option 2019	August 2019	(1,750,000)	(7)
Total Cash & Cash Equivalents				(20)
Put Dec 19 002.750	IRS P US0003M R 2.75% 12/11/24	December 2019	(9,900,000)	(2)
Put Dec 19 002.945	IRS P US0003M R 2.945% 12/11/49	December 2019	2,200,000	4
Total Fixed Income				2
Call Jun 20 6618.800	ASX S&P/ASX 200 Index (OTC)	June 2020	3,728	624
Put Jun 20 6618.800	ASX S&P/ASX 200 Index (OTC)	June 2020	(2,146)	(643)
Put Jun 20 21275.920	NIKKEI 225 (OTC)	June 2020	(182,106)	(2,752)
Call Jun 20 21275.920	NIKKEI 225 (OTC)	June 2020	259,810	2,701
Call Jun 20 7425.630	FTSE 100 Index (OTC)	June 2020	5,229	1,648
Put Jun 20 7425.630	FTSE 100 Index (OTC)	June 2020	(2,653)	(1,728)
Put Jul 19 2870.000	S & P 500 Index (SPX)	July 2019	(368)	(221)
Put Jul 19 2530.000	S & P 500 Index (SPX)	July 2019	(64)	(6)
Put Jul 19 2755.000	S & P 500 Index (SPX)	July 2019	64	37
Put Jul 19 2885.000	S & P 500 Index (SPX)	July 2019	(369)	(568)
Put Jul 19 2950.000	S & P 500 Index (SPX)	July 2019	(1,101)	(4,349)
Put Aug 19 2935.000	S & P 500 Index (SPX)	August 2019	(1,095)	(6,756)
Put Jul 19 2940.000	S & P 500 Index (SPX)	July 2019	(1,452)	(5,038)
Put Jul 19 2935.000	S & P 500 Index (SPX)	July 2019	(365)	(1,464)
Call May 21 000.355	2Y-10 CMS CAP	May 2021	630,000	146
Call May 21 000.365	2Y-10 CMS CAP	May 2021	655,000	148
Call May 21 000.455	2Y-10 CMS CAP	May 2021	783,000	142
Call May 21 000.355	2Y-10 CMS CAP	May 2021	787,000	182
Call May 21 000.365	2Y-10 CMS CAP	May 2021	249,000	56
Call May 21 000.605	2Y-10 CMS CAP	May 2021	492,000	60
Call Jun 20 3473.690	EURO STOXX 50 Future (OTC)	June 2020	39,558	5,988
Put Jun 20 3473.690	EURO STOXX 50 Future (OTC)	June 2020	(19,979)	(5,941)
Total Equity				(17,734)
Total				$ (17,752)

[1] *Options held in commingled accounts are not included in this table.*

Alternative Investments

The Alternative Investment category includes the following asset classes: private equity, hedge funds, private debt, real estate and infrastructure.

Private equity, private debt, real estate and private infrastructure investments are typically structured as limited partnerships. In this structure, the Systems is one of several limited partners, while the investment manager serves as the general partner. Investing in such limited partnerships legally obligates the Systems to invest the committed amount until the investment is fully funded or the contractual investment period has expired. Hedge fund investments are typically on subscription basis with a single, initial investment with no further commitment.

The Systems established several strategic partnerships to gain access to deal flow, to receive favorable economics and to efficiently take advantage of market opportunities. Investments within the strategic partnership accounts may include allocations to any asset class including those considered alternative investments. Assets of Strategic Partnerships are reported within their respective asset class totals.

The Commission's intent is to access superior risk-adjusted returns through investing in alternative investment asset classes. Due to their low correlation to traditional asset classes, alternative investments diversify the portfolio and help reduce the risk associated with volatility of returns.

Commitments

The Commission, on behalf of the Systems, has entered into contractual agreements with numerous alternative investment managers and is committed for future funding of private equity, private debt, private real estate and private infrastructure investments. At June 30, 2019, the Systems' commitments, including commitments within Strategic Partnerships, are shown in the following table (amounts expressed in thousands):

	Total Commitment	Amount Funded to Date	Remaining Unfunded Commitment
Limited Partnerships USD			
Private Equity	$ 5,251,815	$ 3,334,040	$ 1,917,775
Private Debt	5,856,766	3,920,676	1,936,090
Private Real Estate	3,780,331	2,804,819	975,512
Private Infrastructure	275,000	61,013	213,987
Other Opportunistic	105,249	69,270	35,979
Totals	$ 15,269,161	$ 10,189,818	$ 5,079,343
Limited Partnerships EUR			
Private Equity	€ 359,080	€ 253,965	€ 105,115
Private Infrastructure	125,000	72,031	52,969
Totals	€ 484,080	€ 325,996	€ 158,084
Limited Partnerships AUD			
Private Equity	$ 100,000	$ 34,304	$ 65,696
Totals	$ 100,000	$ 34,304	$ 65,696

Securities Lending

The Systems' investment portfolio currently participates in a securities lending program, managed by BNYM ("Securities Lending Program"), whereby securities are loaned for the purpose of generating additional income. BNYM is responsible for making loans of securities on a collateralized basis to various third party broker-dealers and financial institutions and collecting cash and non-cash collateral. The fair value of the required collateral must initially meet or exceed 102 percent of the fair value of the securities loaned for U. S. securities, 105 percent for cross currency securities and 107 percent for equity securities, providing a margin against a decline in the fair value of collateral. If the collateral value falls below 102 percent, the borrower must post additional collateral. In conjunction with generating revenue, the collateral pool seeks to maintain a net asset value (NAV) of $1.00, which is determined by dividing the fair value of the assets by the cost of those assets.

There are no restrictions on the amount of securities that may be loaned and conservative investment guidelines continue to be maintained within the Securities Lending Program. The re-investment of the cash collateral is restricted to short duration, very low risk securities and is monitored by RSIC on an ongoing basis. The types of securities available for loan during the year ended June 30, 2019 included U. S. Government securities, U. S. Government agencies, Corporate bonds, Non-U. S. Sovereign debt and Global equities. The contractual agreement between the RSIC and BNYM provides indemnification in the event the borrower fails to return the securities lent or fails to pay the Systems income distribution by the securities' issuers while the securities are on loan. Indemnification is also provided if the investment of cash collateral results in investment loss. Cash, U. S. Government securities, Corporate securities, Asset-backed securities and Global equities are received as collateral for these loans. Collateral securities cannot be pledged or sold without a borrower default. Cash collateral received is invested, and accordingly, investments made with cash collateral are reported as an asset. A corresponding liability is recorded as the Systems must return the cash collateral to the borrower upon the expiration of the loan.

At June 30, 2019, the fair value of securities on loan was $83.25 million. The fair value of the invested cash collateral was $41.33 million, securities lending obligations were $86.65 million with the difference reported within "Other Liabilities" on the Statement of Fiduciary Net Position. The gross securities lending revenue for the fiscal year was $3.0 million, an increase from $2.0 million in the prior year.

With regard to counterparty credit risk, the Systems' cash collateral invested is held by the counterparty and is uninsured. All securities loaned can be terminated on demand by either the Systems or the borrower. At year end the average number of days the loans were outstanding was two days. The average weighted maturity of investments made with cash collateral was one day. At June 30, 2019, there had been no losses resulting from borrower defaults and the Systems had no credit risk exposure to borrowers because the amounts the Systems owed the borrowers exceeded the amounts the borrowers owed the Systems.

The following table presents the fair value (amounts expressed in thousands) of the underlying securities and the total collateral received for securities on loan at June 30, 2019:

	SCRS	PORS	GARS	JSRS	SCNG	06/30/19 TOTALS	06/30/18 TOTALS
Securities lent for cash collateral							
U. S. Government	$ 839	$ 148	$ 1	$ 5	$ 1	$ 994	$ -
Corporate bonds	6,086	1,075	7	36	6	7,210	14,083
Global Public Equity	63,346	11,182	75	377	63	75,043	64,556
Total	$ 70,271	$ 12,405	$ 83	$ 418	$ 70	$ 83,247	$ 78,639
Securities lent for non-cash collateral							
U. S. Government securities	$ 232,719	$ 41,080	$ 275	$ 1,383	$ 232	$ 275,689	$ 78,444
Corporate Bonds	1,767	312	2	10	2	2,093	198
Global Public Equity	637,379	112,511	752	3,789	637	755,068	856,385
Total	$ 871,865	$ 153,903	$ 1,029	$ 5,182	$ 871	$ 1,032,850	$ 935,027
Cash collateral invested as follows							
Repurchase agreements	$ 34,886	$ 6,158	$ 41	$ 207	$ 35	$ 41,327	$ 34,612
Total	$ 34,886	$ 6,158	$ 41	$ 207	$ 35	$ 41,327	$ 34,612
Securities received as collateral							
U.S. Government securities	$ 246,806	$ 43,566	$ 292	$ 1,467	$ 247	$ 292,378	$ 175,751
Global Public Equity	666,478	117,648	786	3,962	666	789,540	803,887
Global Fixed Income	27,448	4,845	32	163	28	32,516	48,560
Total	$ 940,732	$ 166,059	$ 1,110	$ 5,592	$ 941	$ 1,114,434	$ 1,028,198

IV. Transfers between Systems

Transfers between systems are statutorily authorized internal transfers of contributions and service credit from one retirement system to another retirement system that result from members voluntarily initiating the transfer when certain conditions are met.

Transfers made within the systems administered by PEBA during the fiscal year ended June 30, 2019, were as follows (amounts expressed in thousands):

Transfers from:	Transfers to:					
	SCRS	PORS	GARS	JSRS	SCNG	Total
SCRS	$ -	$1,148	$ -	$ 96	$ -	$1,244
PORS						-
GARS						-
JSRS						-
SCNG						-
Total	$ -	$1,148	$ -	$ 96	$ -	$1,244

The following schedule reflects amounts due to or due from other systems as of June 30, 2019, (amounts expressed in thousands):

Due from:	Due to:					
	SCRS	PORS	GARS	JSRS	SCNG	Total
SCRS	$ -	$ 50	$ -	$ 69	$ -	$ 119
PORS						-
GARS						-
JSRS						-
SCNG						-
Total	$ -	$ 50	$ -	$ 69	$ -	$ 119

V. Related Party Transactions

The pension plans provide pension and other benefits to employees of all state agencies. Revenues received from these agencies are recorded in the financial statements as employee and employer contributions and constitute approximately 32 percent of combined contribution revenues.

At June 30, 2019, liabilities of approximately $73.9 million were due to the Employee Insurance Program. Employee and employer contributions receivable of approximately $70.8 million were due from institutions of higher education and quasi-state agencies.

The SCNG Supplemental Retirement Plan received state appropriated contributions in the amount of $5.3 million during the fiscal year.

The General Assembly appropriated $101 million for SCRS and PORS collectively to help offset the increased contribution requirements for employers. Based on the criteria provided in the South Carolina 2018-2019 Appropriations Act, Section 117.139, PEBA issued credit invoices to certain SCRS and PORS employers for fiscal year 2019 who then applied the credit invoices towards contributions otherwise due to the Systems. The amount of credit invoices issued in fiscal year 2019 totaled $88.7 million and $12.5 million for SCRS and PORS respectively. Funds appropriated in future years will be reduced by the excess funds received.

The Retirement System Investment Commission is a separate state agency; however, the administrative costs of the RSIC are funded by transfers from the Systems' trust funds. Transfers in the amount of approximately $15.8 million were made to the RSIC during the fiscal year.

VI. Deferred Retirement Option Plans

The TERI program was a deferred retirement option plan available to active SCRS members eligible for service retirement on or after January 1, 2001 but before June 30, 2018. When a member entered TERI, the member's status changed from an active member to a retiree even though the employee continued to work at their regular job and earn their regular salary for a period of up to five years. TERI participants continued to contribute at the same rate as active members. No additional service credit was earned during this period and participants were ineligible for disability retirement benefits. During the TERI participation period, the retiree's monthly benefits were accumulated in the trust account. Upon termination of employment at the end of the TERI period, funds were distributed and the retiree elected a payment method to either roll over their funds into a qualified retirement plan or to receive a single-sum distribution (or a combination thereof). No interest was paid on the participant funds accumulated in the TERI account. Legislation enacted in 2012 closed the TERI program to all members effective June 30, 2018.

As of June 30, 2019, TERI benefits held in trust totaled $70,408.

A deferred retirement option plan continues to exist under JSRS. A member who has not yet reached the age of 60 years, but who is eligible to retire and receive the maximum monthly benefit, may retire and continue to serve as a judge, a solicitor or a circuit public defender. The member's normal monthly retirement benefit is deferred and placed in the system's trust fund on behalf of the member. Upon reaching the age of 60 years, the balance of the member's deferred retirement benefit is distributed to the member. As of June 30, 2019, the benefits held in trust totaled $455,786.

VII. Capital Assets

Capital assets at June 30, 2019, consist of the following amounts (expressed in thousands).

	Beginning Balances 7/1/2018	Additions	Deletions	Ending Balances 6/30/2019
Asset Class (at Cost)				
Land	$ 582	$ -	$ -	$ 582
Building	4,749			4,749
Equipment	2,111	41	(18)	2,134
Total Capital Assets	7,442	41	(18)	7,465
Accumulated Depreciation				
Building	3,061	119		3,180
Equipment	2,019	52	(18)	2,053
Total Accumulated Depreciation	5,080	171	(18)	5,233
Capital Assets, Net	$ 2,362	$ (130)	$ -	$ 2,232

VIII. Compensated Absences

As state employees, most full-time permanent employees of SC PEBA's Retirement Division earn 15 days of annual leave and 15 days of sick leave per year during their first ten years of service. After ten years of service is complete, most employees earn an additional 1.25 days of annual leave for each year of service over ten until they reach a maximum of 30 days per year. Sick leave earnings remain at 15 days per year regardless of years of service. Employees may carry forward up to 45 days of annual leave and 180 days of sick leave from one calendar year to the next. Upon termination of employment, employees are eligible to receive payment for up to 45 days of accumulated unused annual leave at the pay rate then in effect. Employees are not eligible to receive payment for accumulated unused sick leave upon termination. As of June 30, 2019, the total amount accrued for unused annual leave for PEBA's Retirement Division employees was $868,556 and the associated liability is included in Other Liabilities on the Statement of Fiduciary Net Position.

IX. Participation in Pension Plans

Generally, all employees of PEBA are required to participate in the South Carolina Retirement System (SCRS) or the State Optional Retirement Program (ORP) as a condition of employment. Additional information related to membership, benefits and contribution requirements is contained within these notes to the financial statements.

Employer contributions for Retirement Division staff are paid by PEBA and are allocated to the pension trust funds along with all other administrative expenses. Administrative expenses of the Systems are funded by investment earnings. For the year ended June 30, 2019, PEBA's contributions to SCRS for Retirement Division staff were $1,215,057 of which $79,424 represented the nonemployer contribution that was applied as a legislatively appropriated credit.

X. Net Pension Liability of Employers

The total pension liability of each defined benefit pension plan summarized below was determined based on the most recent actuarial valuation, which was conducted using membership data as of July 1, 2018 projected forward to the end of the fiscal year, and financial information as of June 30, 2019, using generally accepted actuarial procedures. Information included in the following schedule is based on the certification provided by our consulting actuary, Gabriel Roeder Smith & Company. A Schedule of Employers' Net Pension Liability is intended to provide information about whether the plan fiduciary net positions are increasing or decreasing over time relative to the total pension liability. This schedule as well as a Schedule of Changes in the Employers' Net Pension Liability is presented in the Required Supplementary Information (RSI) section.

The net pension liability (i.e. the Systems' total pension liability determined in accordance with GASB Statement No. 67 less the fiduciary net position) as of June 30, 2019, is as follows (dollar amounts expressed in thousands):

	Total Pension Liability	Plan Fiduciary Net Position	Employers' Net Pension Liability	Plan Fiduciary Net Position as a % of the Total Pension Liability
SCRS	$ 50,073,060	$ 27,238,916	$ 22,834,144	54.4%
PORS	7,681,750	4,815,809	2,865,941	62.7%
GARS	72,001	34,712	37,289	48.2%
JSRS	396,705	165,843	230,862	41.8%
SCNG	67,106	30,683	36,423	45.7%

Actuarial valuations of the ongoing plan involve estimates of the reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality and future salary increases. Amounts determined regarding the net pension liability are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. South Carolina state statute requires that an actuarial experience study be completed at least once in each five-year period. An experience report on the Systems was most recently issued as of July 1, 2015.

The following table provides a summary of the actuarial assumptions and methods used to calculate the total pension liability for each plan as of June 30, 2019. The total pension liability for each plan is based on the actuarial valuations performed as of July 1, 2018 and rolled-forward from the valuation date to the plans' fiscal year ending June 30, 2019, using generally accepted actuarial principles.

	SCRS	PORS	GARS	JSRS	SCNG
Actuarial cost method	Entry age normal	Entry age normal	Entry age normal	Entry age normal	Entry age normal
Actuarial assumptions:					
Investment rate of return[1]	7.25%	7.25%	7.25%	7.25%	7.25%
Projected salary increases	3.0% to 12.5% (varies by service)[1]	3.5% to 9.5% (varies by service)[1]	None	2.75%[1]	None
Benefit adjustments	lesser of 1% or $500 annually	lesser of 1% or $500 annually	None	2.75%	None

[1] Includes inflation at 2.25%

The post-retiree mortality assumption is dependent upon the member's job category and gender. The base mortality assumption, the 2016 Public Retirees of South Carolina Mortality table (2016 PRSC), was developed using the Systems' mortality experience. These base rates are adjusted for future improvement in mortality using published Scale AA projected from the year 2016.

Former Job Class	Males	Females
Educators and Judges	2016 PRSC Males multiplied by 92%	2016 PRSC Females multiplied by 98%
General Employees and Members of the General Assembly	2016 PRSC Males multiplied by 100%	2016 PRSC Females multiplied by 111%
Public Safety, Firefighters and members of the South Carolina National Guard	2016 PRSC Males multiplied by 125%	2016 PRSC Females multiplied by 111%

The long-term expected rate of return on pension plan investments is based upon 20-year capital market assumptions. The long-term expected rates of return represent assumptions developed using an arithmetic building block approach primarily based on consensus expectations and market based inputs. Expected returns are net of investment fees. The expected returns, along with the expected inflation rate, form the basis for the target asset allocation adopted at the beginning of the 2019 fiscal year. The long-term expected rate of return is produced by weighting the expected future real rates of return by the target allocation percentage and adding expected inflation and is summarized in the table below. For actuarial purposes, the 7.25 percent assumed annual investment rate of return used in the calculation of the total pension liability includes a 5.00 percent real rate of return and a 2.25 percent inflation component.

Allocation / Exposure	Policy Target	Expected Arithmetic Real rate of Return	Long Term Expected Portfolio Real Rate of Return
Global Equity	**51.0%**		
Global Public Equity[1,2]	35.0%	7.29%	2.55%
Private Equity[2,3]	9.0%	7.67%	0.69%
Equity Options Strategies[1]	7.0%	5.23%	0.37%
Real Assets	**12.0%**		
Real Estate (Private)[2,3]	8.0%	5.59%	0.45%
Real Estate (REITs)[2]	1.0%	8.16%	0.08%
Infrastructure (Private)[2,3]	2.0%	5.03%	0.10%
Infrastructure (Public)[2]	1.0%	6.12%	0.06%
Opportunistic	**8.0%**		
Global Tactical Asset Allocation[1]	7.0%	3.09%	0.22%
Other Opportunistic Strategies	1.0%	3.82%	0.04%
Credit	**15.0%**		
High Yield Bonds/ Bank Loans[1,2]	4.0%	3.14%	0.13%
Emerging Markets Debt	4.0%	3.31%	0.13%
Private Debt[2,3]	7.0%	5.49%	0.38%
Rate Sensitive	**14.0%**		
Core Fixed Income[1]	13.0%	1.62%	0.21%
Cash and Short Duration (Net)	1.0%	0.31%	0.00%
Total Expected Return[4]	100.0%		5.41%
Inflation for Actuarial Purposes			2.25%
			7.66%

[1] Portable Alpha Strategies will be capped at 12% of total assets; Hedge funds (including all hedge funds used in portable alpha implementation) capped at 20% of total assets

[2] The target weights to Private Equity, Private Debt, Private Infrastructure and Private Real Estate will be equal to their actual weights as of prior month end. Private Equity and Public Equity combine for 44 percent of entire portfolio. Private Debt and High Yield/Bank Loans combine for 11 percent of the entire portfolio. Private Infrastructure and Public Infrastructure combine for 3 percent of the entire portfolio. Private Real Estate and Real Estate (REITs) combine for 9 percent of entire portfolio.

[3] RSIC staff and Consultant will notify the Commission if Private Markets assets exceed 25% of total assets.

[4] The expected return for each of the Portable Alpha asset classes includes the expected return attributed to the Overlay Program. For benchmarking purposes there is a 10% weight assigned to Portable Alpha Hedge Funds in the Policy Benchmark.

The discount rate used to measure the total pension liability of each plan was 7.25 percent. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers in SCRS and PORS will be made based on the actuarially determined rates based on provisions in the South Carolina Code of Laws. The contributions required for JSRS, GARS, and the SCNG are based on PEBA's current funding policy which include the change in funding in future years as a result of the enactment of the Retirement System Funding and Administration Act of 2017. Based on those assumptions, the system's fiduciary net position was projected to be available to make all the projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

In accordance with GASB Statement No. 67 regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the following table presents the net pension liability of the participating employers calculated using the discount rate of 7.25 percent, as well as what the employers' net pension liability would be if it were calculated using a discount rate that is 1.00 percent lower (6.25 percent) or 1.00 percent higher (8.25 percent) than the current rate.

Discount Rate Sensitivity Analysis

(Amounts expressed in thousands)

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
SCRS	$ 28,766,243	$ 22,834,144	$ 17,883,464
PORS	3,884,030	2,865,941	2,031,869
GARS	43,561	37,289	31,878
JSRS	273,208	230,862	194,256
SCNG	44,850	36,423	29,513

XI. Death Benefit Program

In addition to monthly pension benefits provided through the Systems, a death benefit program is available to employers. For participating employers, incidental death benefits are provided for both active and retired members. These benefits are funded through separate death benefit programs within SCRS and PORS on a cost-sharing, multiple-employer basis. The assets in the death benefits fund are not held separately in a dedicated trust for the sole purpose of paying death benefits to beneficiaries of deceased members. These benefits are considered allowable within the defined benefit plans and are held within the pension trust funds. Coverage is provided to eligible active and retired working members as well as non-working retirees under the governing statute. Funding for the plans is collected as a percent of covered payroll as determined by the Systems' actuary and approved by the governing board. The current employer contribution rates for the programs are 0.15 percent and 0.20 percent of payroll for SCRS and PORS respectively. These contributions fund both the active and retiree death benefits.

Active Death Benefits

An incidental death benefit is payable upon the death of an SCRS, State ORP or PORS contributing member who worked for a participating employer

at the time of death. The member must have been in service and had at least one full year of membership or must have died as a result of an injury arising in the course of performing his duties regardless of length of membership. The incidental death benefit is equal to the annual earnable compensation of the member at the time of death and is payable apart and separate from the payment of pension benefits.

Retiree Death Benefits

Retired members of SCRS and PORS whose last employer prior to retirement is covered by the program, and who met applicable service credit requirements, are also protected under the state-sponsored death benefit program. Upon the death of a retired member, the beneficiary of a non-working retiree will receive a benefit payment of $2,000, $4,000 or $6,000 based on the member's total creditable service at the time of retirement.

Members who work after retirement by returning to covered employment as a working retiree are eligible for an increased level of death benefits. Beneficiaries of working retirees are provided with a death benefit equal to the amount of the member's annual earnable compensation in lieu of the standard $2,000, $4,000 or $6,000 retired member benefit.

All benefits provided by the Systems are included in the actuarial valuations, including the incidental death benefit program for SCRS, PORS, GARS and JSRS. The July 1, 2018 actuarial valuations reflect the inclusion of the assets and liabilities of the incidental death benefit program and accidental death benefits for PORS.

XII. Litigation

The following claim against SCRS has been dismissed by the court, however the case remains active due to remaining claims against other defendants, the appeals process, and a related matter on appeal to the Supreme Court.

Marc S. Kirschner, as Litigation Trustee for the Tribune Litigation Trust v. Dennis J. Fitzsimmons, et al., United States District Court Southern District of New York, Case No. 1:11-cv-02652. This case is a bankruptcy litigation matter filed on December 20, 2011 and has been stayed since shortly after it was filed. The Plaintiff attempted to serve a summons on the South Carolina Retirement System in August 2013. SCRS is a defendant as a result of selling Tribune Company stock in connection with a leveraged buyout of the Tribune Company in 2007. Through this lawsuit the creditors of the Tribune Company are attempting to claw-back funds received by SCRS in connection with the sale of the stock. The plaintiff has asserted a claim of approximately two million dollars against SCRS. The South Carolina Retirement System Investment Commission contests the amount the plaintiff alleges SCRS received, contends that there are persuasive arguments favoring dismissal, and has engaged counsel to represent SCRS in this matter.

South Carolina Retirement Systems
Required Supplementary Information

Schedule of Changes in the Employers' Net Pension Liability[1]

SCRS Pension Trust Fund
Years Ended June 30
(Amounts expressed in thousands)

	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service cost	$ 967,897	$ 910,846	$ 804,057	$ 763,357	$ 744,197	$ 739,021
Interest	3,463,073	3,401,588	3,318,051	3,231,572	3,148,090	3,021,004
Benefit changes						
Difference between actual and expected experience	(101,351)	(172,340)	54,584	46,714	(44,636)	638,745
Assumption changes			1,746,649			
Benefit payments	(3,078,289)	(3,562,801)	(3,035,119)	(2,782,738)	(2,705,547)	(2,571,049)
Net Change in Total Pension Liability	1,251,330	577,293	2,888,222	1,258,905	1,142,104	1,827,721
Total Pension Liability - Beginning	48,821,730	48,244,437	45,356,215	44,097,310	42,955,206	41,127,485
Total Pension Liability - Ending (a)	$ 50,073,060	$ 48,821,730	$ 48,244,437	$ 45,356,215	$ 44,097,310	$ 42,955,206
Plan Fiduciary Net Position						
Employer contributions	$ 1,450,308	$ 1,300,477	$ 1,168,847	$ 1,072,659	$ 1,022,478	$ 962,798
Nonemployer contributions	88,706	104,974				
Employee contributions	880,664	868,681	826,543	754,153	716,107	652,631
Refunds of contributions to members	(118,067)	(113,867)	(105,169)	(93,694)	(95,104)	(90,250)
Annuity benefits	(2,938,416)	(3,426,650)	(2,907,273)	(2,668,385)	(2,590,299)	(2,461,559)
Death benefits	(21,806)	(22,284)	(22,677)	(20,659)	(20,144)	(19,240)
Net investment income (loss)	1,499,391	1,986,948	2,791,215	(165,394)	374,152	3,517,324
Administrative expenses	(15,536)	(14,658)	(13,469)	(13,149)	(12,554)	(11,765)
Net transfers to other systems	(1,244)	(1,534)	(1,550)	(997)	(1,329)	(2,470)
Net Change in Plan Fiduciary Net Position	824,000	682,087	1,736,467	(1,135,466)	(606,693)	2,547,469
Plan Fiduciary Net Position - Beginning	26,414,916	25,732,829	23,996,362	25,131,828	25,738,521	23,191,052
Plan Fiduciary Net Position - Ending (b)	$ 27,238,916	$ 26,414,916	$ 25,732,829	$ 23,996,362	$ 25,131,828	$ 25,738,521
Net Pension Liability - Ending (a) - (b)	$ 22,834,144	$ 22,406,814	$ 22,511,608	$ 21,359,853	$ 18,965,482	$ 17,216,685

[1] *Schedules are intended to show information for 10 years. Additional years will be displayed as they become available.*

South Carolina Retirement Systems
Required Supplementary Information (continued)

Schedule of Changes in the Employers' Net Pension Liability[1]

PORS Pension Trust Fund
Years Ended June 30
(Amounts expressed in thousands)

	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service cost	$ 189,379	$ 184,570	$ 166,682	$ 156,567	$ 154,102	$ 149,606
Interest	528,699	500,758	473,059	453,696	435,329	417,950
Benefit changes						-
Difference between actual and expected experience	(27,766)	102,882	5,044	11,582	6,771	64,336
Assumption changes			333,190			
Benefit payments	(412,535)	(397,921)	(376,801)	(360,656)	(344,410)	(331,783)
Net Change in Total Pension Liability	277,777	390,289	601,174	261,189	251,792	300,109
Total Pension Liability - Beginning	7,403,973	7,013,684	6,412,510	6,151,321	5,899,529	5,599,420
Total Pension Liability - Ending (a)	$ 7,681,750	$ 7,403,973	$ 7,013,684	$ 6,412,510	$ 6,151,321	$ 5,899,529
Plan Fiduciary Net Position						
Employer contributions	$ 237,821	$ 211,793	$ 192,006	$ 175,223	$ 166,451	$ 155,608
Nonemployer contributions	12,470	13,122				
Employee contributions	144,747	138,652	127,840	115,188	106,854	96,004
Refunds of contributions to members	(21,608)	(23,899)	(19,964)	(19,178)	(17,453)	(16,184)
Annuity benefits	(387,228)	(369,536)	(352,986)	(337,928)	(323,252)	(311,593)
Death benefits	(3,699)	(4,485)	(3,852)	(3,550)	(3,705)	(4,007)
Net investment income (loss)	264,323	331,529	455,914	(24,636)	58,705	538,386
Administrative expenses	(2,596)	(2,402)	(2,149)	(2,055)	(1,938)	(1,820)
Net transfers to other systems	1,148	1,534	1,278	1,147	1,061	2,260
Net Change in Plan Fiduciary Net Position	245,378	296,308	398,087	(95,789)	(13,277)	458,654
Plan Fiduciary Net Position - Beginning	4,570,431	4,274,123	3,876,036	3,971,825	3,985,102	3,526,448
Plan Fiduciary Net Position - Ending (b)	$ 4,815,809	$ 4,570,431	$ 4,274,123	$ 3,876,036	$ 3,971,825	$ 3,985,102
Net Pension Liability - Ending (a) - (b)	$ 2,865,941	$ 2,833,542	$ 2,739,561	$ 2,536,474	$ 2,179,496	$ 1,914,427

[1] *Schedules are intended to show information for 10 years. Additional years will be displayed as they become available.*

South Carolina Retirement Systems
Required Supplementary Information (continued)

Schedule of Changes in the Employers' Net Pension Liability[1]

GARS Pension Trust Fund
Years Ended June 30
(Amounts expressed in thousands)

	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service cost	$ 440	$ 464	$ 488	$ 493	$ 553	$ 572
Interest	5,149	5,200	5,293	5,301	5,380	5,437
Benefit changes						
Difference between actual and expected experience	(1,135)	138	(348)	798	(294)	(2,585)
Assumption changes			2,330			
Benefit payments	(6,515)	(6,468)	(6,737)	(6,656)	(6,660)	(6,861)
Net Change in Total Pension Liability	(2,061)	(666)	1,026	(64)	(1,021)	(3,437)
Total Pension Liability - Beginning	74,062	74,728	73,702	73,766	74,787	78,224
Total Pension Liability - Ending (a)	$ 72,001	$ 74,062	$ 74,728	$ 73,702	$ 73,766	$ 74,787
Plan Fiduciary Net Position						
Employer contributions	$ 5,804	$ 5,428	$ 4,539	$ 4,501	$ 4,275	$ 4,063
Employee contributions	162	287	468	292	369	384
Refunds of contributions to members	(17)			(22)		(41)
Annuity benefits	(6,480)	(6,452)	(6,678)	(6,625)	(6,639)	(6,799)
Death benefits	(18)	(16)	(59)	(9)	(21)	(20)
Net investment income (loss)	1,887	2,376	3,329	(266)	500	4,545
Administrative expenses	(20)	(18)	(17)	(18)	(18)	(17)
Net transfers to other systems			19	(147)	(18)	15
Net Change in Plan Fiduciary Net Position	1,318	1,605	1,601	(2,294)	(1,552)	2,130
Plan Fiduciary Net Position - Beginning	33,394	31,789	30,188	32,482	34,034	31,904
Plan Fiduciary Net Position - Ending (b)	$ 34,712	$ 33,394	$ 31,789	$ 30,188	$ 32,482	$ 34,034
Net Pension Liability - Ending (a) - (b)	$ 37,289	$ 40,668	$ 42,939	$ 43,514	$ 41,284	$ 40,753

[1] Schedules are intended to show information for 10 years. Additional years will be displayed as they become available.

South Carolina Retirement Systems
Required Supplementary Information (continued)

Schedule of Changes in the Employers' Net Pension Liability[1]

JSRS Pension Trust Fund
Years Ended June 30
(Amounts expressed in thousands)

	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service cost	$ 6,645	$ 6,521	$ 6,186	$ 5,886	$ 5,760	$ 5,571
Interest	21,737	21,271	20,404	20,022	19,440	18,857
Benefit changes					666	
Difference between actual and expected experience	80,801	(3,548)	(995)	(3,085)	(1,138)	(3,240)
Assumption changes			13,790			
Benefit payments	(17,950)	(17,811)	(18,602)	(17,191)	(16,836)	(16,684)
Net Change in Total Pension Liability	91,233	6,433	20,783	5,632	7,892	4,504
Total Pension Liability - Beginning	305,472	299,039	278,256	272,624	264,732	260,228
Total Pension Liability - Ending (a)	$ 396,705	$ 305,472	$ 299,039	$ 278,256	$ 272,624	$ 264,732
Plan Fiduciary Net Position						
Employer contributions	$ 11,730	$ 11,043	$ 10,534	$ 10,202	$ 10,109	$ 9,659
Employee contributions	2,840	3,016	2,928	2,303	3,153	2,448
Refunds of contributions to members			(629)	(60)		
Annuity benefits	(17,947)	(17,655)	(17,679)	(16,989)	(16,832)	(16,675)
Death benefits	(3)	(156)	(293)	(143)	(4)	(10)
Net investment income (loss)	9,183	11,723	16,399	(871)	2,216	19,962
Administrative expenses	(92)	(86)	(79)	(75)	(71)	(68)
Net transfers to other systems	96		253	(3)	286	195
Net Change in Plan Fiduciary Net Position	5,807	7,885	11,434	(5,636)	(1,143)	15,511
Plan Fiduciary Net Position - Beginning	160,036	152,151	140,717	146,353	147,496	131,985
Plan Fiduciary Net Position - Ending (b)	$ 165,843	$ 160,036	$ 152,151	$ 140,717	$ 146,353	$ 147,496
Net Pension Liability - Ending (a) - (b)	$ 230,862	$ 145,436	$ 146,888	$ 137,539	$ 126,271	$ 117,236

[1] *Schedules are intended to show information for 10 years. Additional years will be displayed as they become available.*

South Carolina Retirement Systems
Required Supplementary Information (continued)

Schedule of Changes in the Employers' Net Pension Liability[1]

SCNG Pension Trust Fund
Years Ended June 30
(Amounts expressed in thousands)

	2019	2018	2017	2016	2015	2014
Total Pension Liability						
Service cost	$ 786	$ 804	$ 696	$ 689	$ 690	$ 697
Interest	4,764	4,743	4,589	4,594	4,481	4,417
Benefit changes						
Difference between actual and expected experience	(1,501)	(767)	(843)	(992)	612	(262)
Assumption changes			4,161			
Benefit payments	(4,534)	(4,411)	(4,426)	(4,310)	(4,249)	(4,248)
Net Change in Total Pension Liability	(485)	369	4,177	(19)	1,534	604
Total Pension Liability - Beginning	67,591	67,222	63,045	63,064	61,530	60,926
Total Pension Liability - Ending (a)	$ 67,106	$ 67,591	$ 67,222	$ 63,045	$ 63,064	$ 61,530
Plan Fiduciary Net Position						
Employer contributions	$ 5,290	$ 4,814	$ 4,591	$ 4,591	$ 4,591	$ 4,586
Employee contributions						
Refunds of contributions to members						
Annuity benefits	(4,534)	(4,411)	(4,425)	(4,310)	(4,249)	(4,248)
Death benefits						
Net investment income (loss)	1,616	1,902	2,533	(121)	313	2,806
Administrative expenses	(16)	(14)	(13)	(12)	(11)	(10)
Net transfers to other systems						
Net Change in Plan Fiduciary Net Position	2,356	2,291	2,686	148	644	3,134
Plan Fiduciary Net Position - Beginning	28,327	26,036	23,350	23,202	22,558	19,424
Plan Fiduciary Net Position - Ending (b)	$ 30,683	$ 28,327	$ 26,036	$ 23,350	$ 23,202	$ 22,558
Net Pension Liability - Ending (a) - (b)	$ 36,423	$ 39,264	$ 41,186	$ 39,695	$ 39,862	$ 38,972

[1] *Schedules are intended to show information for 10 years. Additional years will be displayed as they become available.*

South Carolina Retirement Systems
Required Supplementary Information (continued)

Schedule of Employers' Net Pension Liability[1]

(Dollar amounts expressed in thousands)

	Total Pension Liability	Plan Fiduciary Net Position	Employers' Net Pension Liability (Asset)	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	Projected Covered Payroll[2]	Net Pension Liability as a Percentage of Covered Payroll
SCRS						
6/30/2019	$ 50,073,060	$ 27,238,916	$ 22,834,144	54.4%	$ 9,183,081	248.7%
6/30/2018	48,821,730	26,414,916	22,406,814	54.1%	8,592,885	260.8%
6/30/2017	48,244,437	25,732,829	22,511,608	53.3%	8,213,042	274.1%
6/30/2016	45,356,215	23,996,362	21,359,853	52.9%	7,765,588	275.1%
6/30/2015	44,097,310	25,131,828	18,965,482	57.0%	7,539,996	251.5%
6/30/2014	42,955,206	25,738,521	17,216,685	59.9%	7,434,820	231.6%
PORS						
6/30/2019	7,681,750	4,815,809	2,865,941	62.7%	1,306,961	219.3%
6/30/2018	7,403,973	4,570,431	2,833,542	61.7%	1,263,314	224.3%
6/30/2017	7,013,684	4,274,123	2,739,561	60.9%	1,187,195	230.8%
6/30/2016	6,412,510	3,876,036	2,536,474	60.4%	1,105,703	229.4%
6/30/2015	6,151,321	3,971,825	2,179,496	64.6%	1,076,885	202.4%
6/30/2014	5,899,529	3,985,102	1,914,427	67.5%	1,033,189	185.3%
GARS						
6/30/2019	72,001	34,712	37,289	48.2%	1,866	1,998.8%
6/30/2018	74,062	33,394	40,668	45.1%	1,961	2,074.3%
6/30/2017	74,728	31,789	42,939	42.5%	2,316	1,853.7%
6/30/2016	73,702	30,188	43,514	41.0%	2,338	1,861.0%
6/30/2015	73,766	32,482	41,284	44.0%	2,601	1,587.5%
6/30/2014	74,787	34,034	40,753	45.5%	2,688	1,516.2%
JSRS						
6/30/2019	396,705	165,843	230,862	41.8%	22,347	1,033.1%
6/30/2018	305,472	160,036	145,436	52.4%	22,347	650.8%
6/30/2017	299,039	152,151	146,888	50.9%	21,958	668.9%
6/30/2016	278,256	140,717	137,539	50.6%	21,267	646.7%
6/30/2015	272,624	146,353	126,271	53.7%	20,815	606.6%
6/30/2014	264,732	147,496	117,236	55.7%	20,407	574.5%
SCNG						
6/30/2019	67,106	30,683	36,423	45.7%	Not Applicable[3]	Not Applicable[3]
6/30/2018	67,591	28,327	39,264	41.9%	Not Applicable[3]	Not Applicable[3]
6/30/2017	67,222	26,036	41,186	38.7%	Not Applicable[3]	Not Applicable[3]
6/30/2016	63,045	23,350	39,695	37.0%	Not Applicable[3]	Not Applicable[3]
6/30/2015	63,064	23,202	39,862	36.8%	Not Applicable[3]	Not Applicable[3]
6/30/2014	61,530	22,558	38,972	36.7%	Not Applicable[3]	Not Applicable[3]

[1] Schedules are intended to show information for 10 years. Additional years will be displayed as they become available.
[2] Projected covered payroll is based on the actuarial valuation associated with the measurement date and includes payroll for members earning but not yet receiving benefits.
[3] The contributions and benefits associated with the SCNG are not determined as a function of payroll.

South Carolina Retirement Systems
Required Supplementary Information (continued)

Schedule of Employers' and Nonemployer's Contributions

(Dollar amounts expressed in thousands)

	Actuarially Determined Contributions[1]	Amount of Contributions Recognized	Difference Between Actuarially Determined Contributions[2] and Contributions Recognized	Projected Covered Payroll[3]	Percentage of Contributions to Covered Payroll
SCRS					
6/30/2019	$ 1,539,014	$ 1,539,014	$ -	$ 9,183,081	16.8%
6/30/2018	1,405,451	1,405,451		8,592,885	16.4%
6/30/2017	1,168,847	1,168,847		8,213,042	14.2%
6/30/2016	1,072,659	1,072,659		7,765,588	13.8%
6/30/2015	1,022,478	1,022,478		7,539,996	13.6%
6/30/2014	962,798	962,798		7,434,820	12.9%
6/30/2013	948,157	948,157		7,356,231	12.9%
6/30/2012	824,652	824,652		7,687,558	10.7%
6/30/2011	808,343	808,343		7,769,820	10.4%
6/30/2010	818,523	818,523		7,761,808	10.5%
PORS					
6/30/2019	250,291	250,291		1,306,961	19.2%
6/30/2018	224,915	224,915		1,263,314	17.8%
6/30/2017	192,006	192,006		1,187,195	16.2%
6/30/2016	175,223	175,223		1,105,703	15.8%
6/30/2015	166,451	166,451		1,076,885	15.5%
6/30/2014	155,608	155,608		1,033,189	15.1%
6/30/2013	143,389	143,389		1,019,241	14.1%
6/30/2012	134,299	134,299		1,087,587	12.3%
6/30/2011	129,314	129,314		1,076,467	12.0%
6/30/2010	123,163	123,163		1,084,154	11.4%
GARS[4]					
6/30/2019	5,804	5,804		1,866	311.0%
6/30/2018	5,428	5,428		1,961	276.8%
6/30/2017	4,539	4,539		2,316	196.0%
6/30/2016	4,501	4,501		2,338	192.5%
6/30/2015	4,275	4,275		2,601	164.4%
6/30/2014	4,063	4,063		2,688	151.2%
6/30/2013	2,831	2,831		3,854	73.5%
6/30/2012	2,532	2,532		3,854	65.7%
6/30/2011	2,414	2,414		3,854	62.6%
6/30/2010	2,598	2,598		3,854	67.4%

Schedule of Employers' and Nonemployer's Contributions continued on next page

South Carolina Retirement Systems
Required Supplementary Information (continued)

Schedule of Employers' and Nonemployer's Contributions (cont.)

(Dollar amounts expressed in thousands)

	Actuarially Determined Contributions[1]	Amount of Contributions Recognized	Difference Between Actuarially Determined Contributions[2] and Contributions Recognized	Projected Covered Payroll[3]	Percentage of Contributions to Covered Payroll
JSRS					
6/30/2019	$ 11,730	$ 11,730	$ -	$ 22,347	52.5%
6/30/2018	11,044	11,044		22,347	49.4%
6/30/2017	10,534	10,534		21,958	48.0%
6/30/2016	10,202	10,202		21,267	48.0%
6/30/2015	10,109	10,109		20,815	48.6%
6/30/2014	9,659	9,659		20,407	47.3%
6/30/2013	8,667	8,667		19,221	45.1%
6/30/2012	8,414	8,414		18,661	45.1%
6/30/2011	8,414	8,414		18,661	45.1%
6/30/2010	8,414	8,414		18,661	45.1%
SCNG[5]					
6/30/2019	5,290	5,290		Not Applicable	Not Applicable
6/30/2018	4,814	4,814		Not Applicable	Not Applicable
6/30/2017	4,509	4,591	(82)	Not Applicable	Not Applicable
6/30/2016	4,570	4,591	(21)	Not Applicable	Not Applicable
6/30/2015	4,591	4,591		Not Applicable	Not Applicable
6/30/2014	4,586	4,586		Not Applicable	Not Applicable
6/30/2013	4,539	4,539		Not Applicable	Not Applicable
6/30/2012	3,937	3,937		Not Applicable	Not Applicable
6/30/2011	3,905	3,905		Not Applicable	Not Applicable
6/30/2010	3,945	3,945		Not Applicable	Not Applicable

[1] *The actuarially determined contribution rate for SCRS and PORS is determined in accordance with the SC State Code of Laws. The contribution rate for JSRS is based on the funding policy maintained by the SC Public Employee Benefit Authority. Includes employer contributions on employee payroll of members in TERI as well as contributions remitted to SCRS on the payroll of employees participating in State ORP.*

[2] *The actuarially determined contributions are based on the funding policy maintained by the SC Public Employee Benefit Authority.*

[3] *Projected covered payroll is based on the actuarial valuation associated with the measurement date and includes payroll for members earning but not yet receiving benefits.*

[4] *GARS was closed to new members beginning with the 2012 general election.*

[5] *Benefits for members in the SCNG are not a function of pay.*

South Carolina Retirement Systems
Required Supplementary Information (continued)

Schedule of Investment Returns[1]

Fiscal Year Ending June 30	Annual Money Weighted Rate of Return, Net of Investment Expense
2019	5.80%
2018	7.91
2017	11.88
2016	(0.47)
2015	1.59
2014	15.30

[1] Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Notes to Required Supplementary Information

The following table provides a summary of the actuarial methods and significant assumptions used in calculations of the actuarially determined contributions for fiscal year 2019 for each of the individual plans administered by PEBA.

Summary of Actuarial Methods and Significant Assumptions[1]

	SCRS	PORS	GARS	JSRS	SCNG
Valuation date	07/01/17	07/01/17	07/01/17	07/01/17	07/01/17
Actuarial cost method	Entry age normal	Entry age normal	Entry age normal	Entry age normal	Entry age normal
Amortization method	Level percent of pay	Level percent of pay	Level dollar	Level percent of pay	Level dollar
Amortization period	30 year maximum, closed period [2]	30 year maximum, closed period [2]	10 years, closed	30 years variable, but not to exceed 30 years	19 years, closed
Asset Valuation method	5-Year Smoothed	5-Year Smoothed	5-Year Smoothed	5-Year Smoothed	5-Year Smoothed
Actuarial assumptions:					
Inflation rate	2.25%	2.25%	2.25%	2.25%	2.25%
Projected salary increases	3.0% plus step-rate increases for members with less than 21 years of service[3]	3.5% plus step-rate increases for members with less than 15 years of service[3]	None	2.75%[3]	None
Investment rate of return	7.25%	7.25%	7.25%	7.25%	7.25%
Benefit adjustments	lesser of 1% or $500 annually	lesser of 1% or $500 annually	None	2.75%	None

[1] The actual contribution rates and the actuarially determined contribution rates for SCRS and PORS are determined in accordance with Sections 9-1-1085 and 9-11-225 of the South Carolina Code, respectively. Contribution requirements for JSRS, GARS and the SCNG are determined in accordance with funding policies established and maintained by the PEBA Board.

[2] Pension reform legislation enacted effective July 1, 2017 schedules the amortization period to be reduced one year for each of the next 10 years, to 20 years.

[3] Includes inflation at 2.25%.

South Carolina Retirement Systems
Schedule of Changes in Fiduciary Net Position

SCRS Pension Trust Fund
Year Ended June 30, 2019
With summarized comparative totals for the year ended June 30, 2018
(Amounts expressed in thousands)

	EMPLOYEE FUND	EMPLOYER FUND	DEATH BENEFIT FUND	QEBA FUND	TOTAL	2018 TOTAL
Additions						
Employee contributions						
State	$ 249,970	$ 13,878	$ -	$ -	$ 263,848	$ 261,641
Public school	350,860	25,587			376,447	372,171
Other	229,072	11,297			240,369	234,869
Employer contributions						
State		476,826	5,861	665	483,352	434,509
Public school		592,393	6,852		599,245	544,381
Other		364,260	3,451		367,711	321,587
Nonemployer contributions						
State		31,126			31,126	36,726
Public school		43,822			43,822	43,822
Other		13,758			13,758	24,426
Total contributions	829,902	1,572,947	16,164	665	2,419,678	2,274,132
Investment income						
Net appreciation						
in fair value of investments		1,249,331	6,055		1,255,386	1,794,429
Interest and dividend income		518,871	2,511		521,382	508,252
Investment expense		(278,602)	(1,350)		(279,952)	(317,426)
Net income from investing activities		1,489,600	7,216		1,496,816	1,985,255
From securities lending activities:						
Securities lending income		2,811	14		2,825	1,885
Securities lending borrower rebates		(249)	(1)		(250)	(192)
Net income from securities lending activities		2,562	13		2,575	1,693
Total net investment income		1,492,162	7,229		1,499,391	1,986,948
Supplemental retirement benefits funded by the State		320			320	355
Total additions	829,902	3,065,429	23,393	665	3,919,389	4,261,435
Deductions						
Refunds of contributions to members	118,067				118,067	113,867
Transfers of contributions to other systems	834	410			1,244	1,534
Regular retirement benefits		2,937,751		665	2,938,416	2,718,718
Deferred retirement benefits						707,932
Supplemental retirement benefits		320			320	355
Death benefits		(95)	21,901		21,806	22,284
Depreciation		151			151	190
Administrative expenses		15,311	74		15,385	14,468
Total deductions	118,901	2,953,848	21,975	665	3,095,389	3,579,348
Interfund transfers according to statutory requirements						
Contributions by members at retirement	(404,459)	404,459				
Interest credited to members' accounts	298,808	(298,808)				
Net interfund transfers	(105,651)	105,651				
Net increase in Net Position	605,350	217,232	1,418		824,000	682,087
Net Position Restricted for Pensions						
Beginning of year	8,501,051	17,786,456	127,409		26,414,916	25,732,829
End of year	$ 9,106,401	$ 18,003,688	$ 128,827	$ -	$ 27,238,916	$ 26,414,916

South Carolina Retirement Systems
Schedule of Changes in Fiduciary Net Position

PORS Pension Trust Fund
Year Ended June 30, 2019
With summarized comparative totals for the year ended June 30, 2018
(Amounts expressed in thousands)

	EMPLOYEE FUND	EMPLOYER FUND	DEATH BENEFIT FUND	ACCIDENTAL DEATH FUND	QEBA FUND	TOTAL	2018 TOTAL
Additions							
Employee contributions							
State	$ 42,322	$ 2,025	$ -	$ -	$ -	$ 44,347	$ 43,414
Public school	82	465				547	506
Other	91,190	8,663				99,853	94,732
Employer contributions							
State		70,485	883	883	2	72,253	66,340
Public school		829	10	10		849	770
Other		160,895	1,965	1,859		164,719	144,683
Nonemployer contributions							
State		4,070				4,070	4,070
Public school		44				44	44
Other		8,356				8,356	9,008
Total contributions	133,594	255,832	2,858	2,752	2	395,038	363,567
Investment income							
Net appreciation							
in fair value of investments		216,378	2,242	3,048		221,668	299,669
Interest and dividend income		89,334	923	1,256		91,513	85,823
Investment expense		(48,132)	(499)	(678)		(49,309)	(54,249)
Net income from investing activities		257,580	2,666	3,626		263,872	331,243
From securities lending activities:							
Securities lending income		482	5	7		494	318
Securities lending borrower rebates		(42)		(1)		(43)	(32)
Net income from securities lending activities		440	5	6		451	286
Total net investment income		258,020	2,671	3,632		264,323	331,529
Supplemental retirement benefits funded by the State		13				13	13
Transfers of contributions from other systems	738	410				1,148	1,534
Total additions	134,332	514,275	5,529	6,384	2	660,522	696,643
Deductions							
Refunds of contributions to members	21,607	1				21,608	23,899
Regular retirement benefits		387,226			2	387,228	369,536
Supplemental retirement benefits		13				13	13
Death Benefits			1,890			1,890	2,751
Accidental death benefits				1,809		1,809	1,734
Depreciation		19				19	25
Administrative expenses		2,516	26	35		2,577	2,377
Total deductions	21,607	389,775	1,916	1,844	2	415,144	400,335
Interfund transfers according to statutory requirements							
Contributions by members at retirement	(77,500)	77,500					
Interest credited to members' accounts	39,742	(39,742)					
Net interfund transfers	(37,758)	37,758					
Net increase in Net Position	74,967	162,258	3,613	4,540		245,378	296,308
Net Position Restricted for Pensions							
Beginning of year	1,104,572	3,356,790	46,224	62,845		4,570,431	4,274,123
End of year	$ 1,179,539	$ 3,519,048	$ 49,837	$ 67,385	$ -	$ 4,815,809	$ 4,570,431

South Carolina Retirement Systems
Schedule of Changes in Fiduciary Net Position

GARS Pension Trust Fund
Year Ended June 30, 2019
With summarized comparative totals for the year ended June 30, 2018
(Amounts expressed in thousands)

	EMPLOYEE FUND	EMPLOYER FUND	QEBA FUND	TOTAL	2018 TOTAL
Additions					
Contributions					
Employee contributions - State	$ 162	$ -	$ -	$ 162	$ 287
Employer contributions - State		5,803	1	5,804	5,428
Total contributions	162	5,803	1	5,966	5,715
Investment income					
Net appreciation in fair value of investments		1,484		1,484	2,090
Interest and dividend income		729		729	647
Investment expense		(329)		(329)	(363)
Net income from investing activities		1,884		1,884	2,374
From securities lending activities:					
Securities lending income		3		3	2
Net income from securities lending activities		3		3	2
Total net investment income		1,887		1,887	2,376
Total additions	162	7,690	1	7,853	8,091
Deductions					
Refunds of contributions to members	17			17	
Regular retirement benefits		6,479	1	6,480	6,452
Death benefits		18		18	16
Administrative expenses		20		20	18
Total deductions	17	6,517	1	6,535	6,486
Interfund transfers according to statutory requirements					
Contributions by members at retirement	(756)	756			
Interest credited to members' accounts	206	(206)			
Net interfund transfers	(550)	550			
Net increase in Net Position	(405)	1,723		1,318	1,605
Net Position Restricted for Pensions					
Beginning of year	7,066	26,328		33,394	31,789
End of year	$ 6,661	$ 28,051	$ -	$ 34,712	$ 33,394

South Carolina Retirement Systems
Schedule of Changes in Fiduciary Net Position

JSRS Pension Trust Fund
Year Ended June 30, 2019
With summarized comparative totals for the year ended June 30, 2018
(Amounts expressed in thousands)

	EMPLOYEE FUND	EMPLOYER FUND	QEBA FUND	TOTAL	2018 TOTAL
Additions					
Contributions					
Employee contributions - State	$ 2,566	$ 274	$ -	$ 2,840	$ 3,016
Employer contributions - State		11,608	122	11,730	11,043
Total contributions	2,566	11,882	122	14,570	14,059
Investment income					
Net appreciation					
in fair value of investments		7,519		7,519	10,491
Interest and dividend income		3,319		3,319	3,101
Investment expense		(1,670)		(1,670)	(1,879)
Net income from investing activities		9,168		9,168	11,713
From securities lending activities:					
Securities lending income		17		17	11
Securities lending borrower rebates		(2)		(2)	(1)
Net income from securities lending activities		15		15	10
Total net investment income		9,183		9,183	11,723
Transfers of contributions from other systems	96			96	
Total additions	2,662	21,065	122	23,849	25,782
Deductions					
Regular retirement benefits		17,825	122	17,947	17,655
Death benefits		3		3	156
Depreciation		1		1	1
Administrative expenses		91		91	85
Total deductions		17,920	122	18,042	17,897
Interfund transfers according to statutory requirements					
Contributions by members at retirement	(1,724)	1,724			
Interest credited to members' accounts	1,092	(1,092)			
Net interfund transfers	(632)	632			
Net increase in Net Position	2,030	3,777		5,807	7,885
Net Position Restricted for Pensions					
Beginning of year	28,259	131,777		160,036	152,151
End of year	$ 30,289	$ 135,554	$ -	$ 165,843	$ 160,036

South Carolina Retirement Systems
Schedule of Changes in Fiduciary Net Position

SCNG Pension Trust Fund
Year Ended June 30, 2019
With summarized comparative totals for the year ended June 30, 2018
(Amounts expressed in thousands)

	2019 Total	2018 Total
Additions		
Contributions		
State appropriated	$ 5,290	$ 4,814
Total contributions	5,290	4,814
Investment income		
Net appreciation		
in fair value of investments	1,257	1,669
Interest and dividend income	635	536
Investment expense	(279)	(305)
Net Income from investing activities	1,613	1,900
From securities lending activities:		
Securities lending income	3	2
Net income from securities lending activities	3	2
Total net investment income	1,616	1,902
Total additions	6,906	6,716
Deductions		
Regular retirement benefits	4,534	4,411
Administrative expenses	16	14
Total deductions	4,550	4,425
Net increase in Net Position	2,356	2,291
Net Position Restricted for Pensions		
Beginning of year	28,327	26,036
End of year	$ 30,683	$ 28,327

South Carolina Retirement Systems
Schedule of Administrative Expenses

Year Ended June 30, 2019

(Amounts expressed in thousands)

Personnel Services	
Salaries and Wages	$ 8,441
Employee Benefits	3,270
Total Personnel Services	11,711
Professional and Consultant Fees	
Information Technology	697
Medical and Health Services	298
Financial Audit	253
Actuarial Services	405
Management Professional Services	1,040
Legal Services	81
Total Professional and Consultant Fees	2,774
Operating Expenses	
Facilities Management	212
Building Renovations	1,305
Building Rent	117
Software Licenses and Programs	904
Furniture and Equipment - Expensed	102
Communications and Utilities	268
Insurance	234
Postage	185
Supplies	203
Miscellaneous Expenses	74
Total Operating Expenses	3,604
Total Administrative Expenses	$ 18,089
Allocation of Administrative Expenses	
SCRS	$ 15,385
PORS	2,577
GARS	20
JSRS	91
SCNG	16
Total Administrative Expenses	$ 18,089

South Carolina Retirement Systems
Schedule of Professional and Consultant Fees[1]

Year Ended June 30, 2019

(Amounts expressed in thousands)

Professional / Consultant Type	Nature of Service Provided	Amounts Paid
Bruner, Powell, Wall, & Mullins	Legal Services	$ 15
CEM Benchmarking, Inc.	Benchmarking Service	45
ClarkPowell	AV Installation Services	14
CliftonLarsonAllen	Audit and Consulting Services	253
Find Great People	Personnel Services	39
Funston Advisory Services LLC	Fiduciary Audit	84
Gabriel Roeder Smith & Company	Actuarial and Consulting Services	240
Ice Miller	IRC Consulting Services and Compliance Review	62
ICON Integration & Design, Inc.	Data Conversion and Bridging Services	178
Linea Solutions	Client Services Vendor to Facilitate and Support Program Activities	655
NWN Corporation	IT Installation Services	14
Roper Personnel Services	Personnel Services	77
Segal Consulting	Investment Consulting Services for State ORP and Deferred Compensation	117
SunGard Availability Services	IT Disaster Recovery	127
Tapfin	Application Development Resources	535
USC Department of Internal Medicine	Disability Review	49
Vocational Rehabilitation	Disability Review	248
Aggregate of payees less than $10,000 each	Professional and Consulting Services	22
Total Professional and Consultant Fees		$ 2,774

[1] *A Schedule of Investment Managers and Fees can be found in the Investment Section of the CAFR.*

South Carolina Retirement Systems
Schedule of Investment Fees and Expenses

Year Ended June 30, 2019

(Amounts expressed in thousands)

	SCRS	PORS	GARS	JSRS	SCNG	TOTALS[1]
Short Term	$ 1,134	$ 200	$ 1	$ 7	$ 1	$ 1,343
Fixed Income:						
Core Fixed Income	1,456	256	2	9	2	1,725
High Yield/Bank Loans	5,428	956	6	33	6	6,429
Emerging Market Debt	4,363	768	5	26	4	5,166
Global Public Equity	25,332	4,458	30	152	25	29,997
Equity Options Strategy	3,383	595	4	20	3	4,005
Public Real Estate	2,118	373	2	13	2	2,508
Public Infrastructure	2,463	434	3	15	3	2,918
Opportunistic/GTAA	5,964	1,053	7	36	6	7,066
Alternatives:						
Hedge Funds	64,040	11,304	76	381	64	75,865
Private Debt	31,083	5,485	37	185	31	36,821
Private Equity	76,447	13,492	90	455	76	90,560
Private Real Estate	32,521	5,735	38	194	32	38,520
Private Infrastructure	1,718	303	2	10	2	2,035
Strategic Partnerships[2]	3,089	545	4	18	3	3,659
Beta Overlay	1,373	242	2	8	1	1,626
Total Investment Manager Fees	261,912	46,199	309	1,562	261	310,243
Bank Fees and Investment Expenses[3]	18,040	3,110	20	108	18	21,296
Total Investment Expenses	279,952	49,309	329	1,670	279	331,539
Securities Lending Expenses:						
Borrower Rebates	$ 250	$ 43	$ -	$ 2	$ -	$ 295
Total Securities Lending Expenses	$ 250	$ 43	$ -	$ 2	$ -	$ 295

[1] *All investment manager fees, whether directly invoiced ($46,981) or deducted from the fund on a net basis ($263,262) are classified and reported as Investment Expense. Investment expenses include amounts for investment management fees, performance fees (including carried interest allocations), other expenses such as organizational expenses in limited partnership structures as well as offsets which may have the effect of reducing the total.*

[2] *Represents management and other fees at the Strategic Partnership level, not fees at the underlying investment level included in each applicable asset class.*

[3] *Includes miscellaneous investment expenses, commissions on futures, bank fees and RSIC administrative expenses.*

This page contains no other content

Investment Section

MEMORANDUM

To: The Honorable Henry McMaster, Governor
State Fiscal Accountability Authority
Members of the General Assembly

From: Meketa Investment Group

Date: September 10, 2019

Re: Fiscal Year Ending June 30, 2019 Review

As the general investment consultant for the Retirement System Investment Commission (RSIC) of South Carolina, Meketa Investment Group is pleased to present this summary of the fiscal year events and investment performance of the South Carolina Retirement System (SCRS) investment portfolio for the fiscal year ending June 30, 2019.

FISCAL 2019 MARKET ENVIRONMENT REVIEW

While the early start of fiscal 2019 may have been characterized by worries of rising interest rates globally, this quickly shifted throughout the fiscal year as increasing concerns of a slowing global growth - made worse by trade tensions between the U.S. and China - prompted major central banks to consider more accommodative policies. In the U.S., the Federal Reserve reversed its prior course and cut interest rates. The European Central Bank (ECB) for its part held rates steady with a potential for further reduction, while the Bank of Japan showed no signs of pulling back from its unprecedented monetary stimulus. Of all the central banks, the U.S. has the most room to lower rates, while Japan and Europe are already in negative territory. With growth revisions for 2019 and 2020 (IMF forecast of 3.2% and 3.5% respectively) down by 0.1%, key risks to monitor will not only be continued trade tensions between U.S. and China, but the declining growth in China, political uncertainty in Europe, and risks related to Brexit dealings.

While global equities rebounded significantly from the lows of December 2018, the past twelve months certainly saw heightened volatility, with the VIX reaching 36 in December 2018 before re-tracing to 25 and further retreating to more muted levels by the June 30, 2019 fiscal year end. Nonetheless, for much of the fiscal year, most markets embraced a "risk on" appetite.

U.S. equities, as represented by the Russell 3000 Index, closed out the fiscal year with a 8.98% return. Non-U.S. equity markets, however, did not fare as well. Emerging markets delivered negative returns in the first half of the fiscal year, to close out the fiscal year with a 1.21% return. Trade tensions and a strong U.S. dollar strength continued to weigh down on results. The MSCI EAFE Index, representing foreign developed markets, followed closely behind returning 1.08%. Overall growth declined in Europe given the slowdown in Germany, uncertainties related to Brexit, and trade tensions.

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The trend of U.S. growth stocks outperforming value stocks persisted throughout the fiscal year, with growth holding a 3.26% lead over value, as the Russell 3000 Growth closed out the fiscal year with a 10.6% return, versus 7.34% for the Russell 3000 Value.

Within fixed income, investment grade markets closed out the fiscal year on a strong note. Throughout out the first half of FY 2019, concerns over rising interest rates and inflation created headwinds. In the U.S., the Federal Reserve increased short-term interest rates to a range of 2.25% to 2.50% by December but this hawkish stance turned dovish in the second half of the fiscal year as central banks abruptly shifted to a more accommodative policy by early January 2019. Investment grade credit and high yield rebounded alongside the equity markets as a result, with the high yield market posting one of the strongest quarterly returns in nearly 10 years (7.26% for the quarter ending March 31, 2019). Despite this, the deterioration of U.S. and Chinese trade talk in May 2019 prompted a temporary drop in global equity prices and U.S. Treasury yields. The 3mo-10yr segment of the yield curve inverted for the second time in 2019, causing investors to question whether this might be a sign of worse things to come. Historically, the yield curve has been relied on as a barometer of economic strength and potential recession indicator. Inversions in the yield curve have historically preceded recessions, with a few exceptions.

Over the trailing fiscal year, the broad U.S. bond market, represented by the Bloomberg Barclays Aggregate Index, returned 7.87%, high yield bonds returned 7.48%, TIPS returned 4.84% and emerging market bonds (as represented by JPM GBI-EM Global Diversified Index) posted a 8.99% return for the fiscal year.

Within other asset classes, natural resource stocks (S&P Global Natural Resources Index) returned -4.02%, commodities (Bloomberg Commodity Index) lost -6.75%, and REITs (MSCI U.S. REIT Index) gained 9.66%. U.S. crude settled at $58.72/barrel, down roughly 5% from prior fiscal year end levels, but well above the December 31, 2018 value of $40.41. OPEC-led production cuts along with sanctions on Iran and Venezuela drove the higher prices though tempered by the slowing global economy.

Looking Forward

Looking forward, there are several issues that we will continue to monitor. First is slowing global growth. After increasing rates over the last several years from record lows, major central banks have shifted to a more accommodative stance. With little room for a reduction in rates outside the U.S., there is speculation of other policy measures being implemented, such as negative rates and/or further quantitative easing. Outside of the U.S., European economic conditions appear bleak as we continue to witness political uncertainty and ongoing structural issues. Brexit negotiations remain a concern. Within emerging markets, and China specifically, growth has slowed. Second, in the U.S., equity markets remain extended despite the volatility spike in the fourth quarter of 2018, and the current economic cycle has been one of the longest on record, now going into the tenth year. Also in the U.S., trade policy remains a key issue. We also see declining growth in China amid the impact of trade tensions with the U.S.

The U.S. economy and equity markets have experienced a long period of growth since the Global Financial Crisis due in part to central bank support. Late cycle dynamics of low unemployment and rising inflation are in place, and valuations are stretched for equites, despite the recent pullback witnessed in December 2018. With the long economic and market expansions, and the many unresolved political and trade issues, we could see heightened volatility in the remainder of calendar year 2019. Other key issues in the U.S. will be policy uncertainty related to tariffs, immigration, and strategic alliances.

China has the second largest economy behind the U.S. After an extended period of growth driven by government investment and exports, it continues to manage a repositioning of its economy to one based increasingly on domestic consumption. This rebalancing process has led to a slowing of the economy which has hurt countries that have become reliant on its trade. The recent focus on tariffs between the U.S. and China is another key issue that could have a disproportionately negative impact on China, as the U.S. is one of their largest export destinations (18% of exports). Another core issue in China remains its high debt levels, particularly in the corporate sector.

Europe continues to have the structural problem of maintaining a single currency and central bank, while fiscal policy rests with each individual country. Consequently, countries that are experiencing financial difficulties are unable to use the traditional tools of lowering interest rates and devaluing their currency to stimulate growth. This has caused tensions within the Eurozone, as highlighted by the recent elections in Italy and the prior elections in Germany, as well as the on-going issues in Greece. Given the size of Italy's bond market and economy within the euro area, an Italian sovereign debt crisis or its departure from the euro could have significant consequences. Further, Brexit uncertainty continues to affect the Eurozone. We will continue to monitor these issues and others.

SCRS Investment Results[1]

As of June 30, 2019, the SCRS investment portfolio totaled $31.98 billion. This represented an increase of $674 million from June 30, 2018. Investment gains of $1.76 billion were partially offset by net outflows of -$1.08 billion in net benefit payments. SCRS generated a net return of 5.8%, underperforming the 6.5% return of its Policy Index. Over longer trailing periods, SCRS is outperforming its Policy Index and outperforming its actuarial rate of return. For example, the ten-year trailing net return for SCRS as of June 30, 2019 was 8.3% vs. a Policy Benchmark return of 7.7%.

The portfolio's asset allocation as of fiscal year-end is provided in the following table. All investments were consistent with the targets and ranges set forth in the Annual Investment Plan and in the Statement of Investment Objectives and Policy.

[1] SCRS returns are from BNY Mellon and are time-weighted, total return calculations, net of fees and expenses.

Asset Class	% of Total System as of June 30, 2019	Target Allocation
Equities	**51.5**	**51.0**
Global Equity	37.3	36.7
Private Equity	7.1	7.3
Equity Options	7.1	7.0
Rate Sensitive	**13.5**	**14.0**
Cash and Short Duration	6.3	1.0
Core Fixed Income	7.2	13.0
Credit	**13.9**	**15.0**
Mixed Credit	4.2	4.9
Private Debt	6.3	6.1
Emerging Markets Debt	3.4	4.0
Opportunistic	**9.3**	**8.0**
GTAA	7.5	7.0
Other Opportunistic	1.8	1.0
Real Assets	**11.8**	**12.0**
Private Real Estate	7.5	7.5
Public Real Estate	1.3	1.5
Private Infrastructure	0.5	0.4
Public Infrastructure	2.5	2.6
Total	**100.0**	**100.0**
Hedge Funds PA	9.7	10.0

Respectfully submitted,

Frank E. Benham

Frank E. Benham, CFA, CAIA
Director of Research, Managing Principal
Meketa Investment Group

The investment performance information provided in the Investment Section of the *Comprehensive Annual Financial Report* is provided by the Systems' custodian, BNY Mellon, and is independently calculated using a time weighted rate of return.

South Carolina Retirement System
Summary of Investment Growth

(Amounts expressed in thousands)

Year Ended June 30,	Fair Value of Investments[1]	Fair Value % Increase/Decrease for Year	Net Income (Loss) from Investments	Net Income (Loss) % Increase/Decrease for Year
2019	$ 26,979,601	1.17%	$ 1,496,816	(24.60%)
2018	26,668,596	2.24%	1,985,255	(28.86%)
2017	26,083,511	6.13%	2,790,555	1,778.99%
2016	24,576,968	(4.39%)	(166,204)	(144.62%)
2015	25,707,561	0.65%	372,452	(89.41%)
2014	25,540,648	7.48%	3,515,834	59.84%
2013	23,762,666	7.50%	2,199,550	1,934.60%
2012	22,105,265	(4.85%)	108,107	(96.99%)
2011	23,232,653	17.26%	3,596,902	37.67%
2010	19,812,203	8.62%	2,612,663	154.95%

Police Officers Retirement System
Summary of Investment Growth

(Amounts expressed in thousands)

Year Ended June 30,	Fair Value of Investments[1]	Fair Value % Increase/Decrease for Year	Net Income (Loss) from Investments	Net Income (Loss) % Increase/Decrease for Year
2019	$ 4,783,354	4.73%	$ 263,872	(20.34%)
2018	4,567,249	5.73%	331,243	(27.33%)
2017	4,319,861	9.11%	455,806	1,940.52%
2016	3,959,326	(2.31%)	(24,765)	(142.38%)
2015	4,052,870	2.69%	58,440	(89.14%)
2014	3,946,522	9.44%	538,157	63.05%
2013	3,606,143	9.29%	330,061	1,839.14%
2012	3,299,647	(2.58%)	17,021	(96.72%)
2011	3,386,895	19.93%	519,363	43.25%
2010	2,824,156	11.33%	362,566	156.79%

[1] *Fair Value also includes investment categories classified as cash equivalents for financial statement purposes. Investments made with cash collateral received in the securities lending program are excluded.*

General Assembly Retirement System
Summary of Investment Growth

(Amounts expressed in thousands)

Year Ended June 30,	Fair Value of Investments[1]	Fair Value % Increase/Decrease for Year	Net Income (Loss) from Investments	Net Income (Loss) % Increase/Decrease for Year
2019	$ 34,569	3.31%	$ 1,884	(20.64%)
2018	33,463	3.95%	2,374	(28.67%)
2017	32,192	4.37%	3,328	1,346.44%
2016	30,845	(6.89%)	(267)	(153.61%)
2015	33,129	(1.61%)	498	(89.04%)
2014	33,671	3.56%	4,543	45.75%
2013	32,515	2.11%	3,117	1,733.53%
2012	31,843	(10.27%)	170	(97.01%)
2011	35,488	8.65%	5,680	22.36%
2010	32,662	2.79%	4,642	149.34%

Judges and Solicitors Retirement System
Summary of Investment Growth

(Amounts expressed in thousands)

Year Ended June 30,	Fair Value of Investments[1]	Fair Value % Increase/Decrease for Year	Net Income (Loss) from Investments	Net Income (Loss) % Increase/Decrease for Year
2019	$ 164,909	2.84%	$ 9,168	(21.73%)
2018	160,361	4.15%	11,713	(28.56%)
2017	153,976	7.03%	16,395	1,971.58%
2016	143,863	(3.62%)	(876)	(139.71%)
2015	149,265	2.20%	2,206	(88.94%)
2014	146,095	8.25%	19,954	58.03%
2013	134,963	7.75%	12,627	1,527.19%
2012	125,255	(3.91%)	776	(96.14%)
2011	130,357	17.65%	20,086	37.14%
2010	110,798	9.44%	14,646	154.77%

[1] *Fair Value also includes investment categories classified as cash equivalents for financial statement purposes. Investments made with cash collateral received in the securities lending program are excluded.*

South Carolina National Guard Supplemental Retirement Plan
Summary of Investment Growth

(Amounts expressed in thousands)

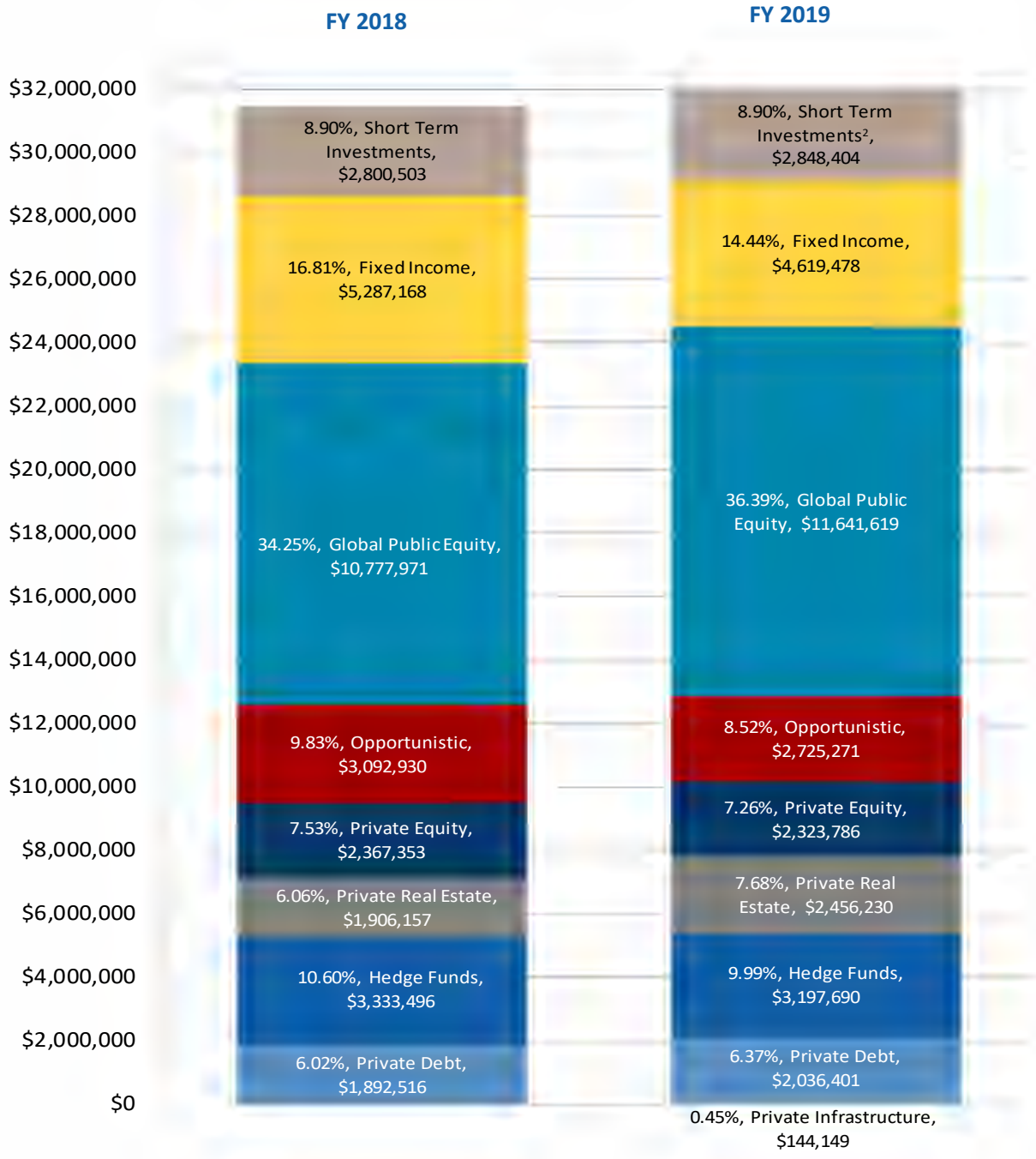
Year Ended June 30,	Fair Value of Investments[1]	Fair Value % Increase/Decrease for Year	Net Income (Loss) from Investments	Net Income (Loss) % Increase/Decrease for Year
2019	$ 30,595	7.63%	$ 1,613	(15.11%)
2018	28,425	7.67%	1,900	(24.99%)
2017	26,400	10.55%	2,533	2,176.23%
2016	23,880	0.75%	(122)	(139.10%)
2015	23,701	5.73%	312	(88.87%)
2014	22,417	12.63%	2,805	67.46%
2013	19,904	12.69%	1,675	1,701.08%
2012	17,662	(1.13%)	93	(96.33%)
2011	17,864	19.04%	2,531	35.71%
2010	15,007	16.25%	1,865	146.39%

[1] Fair Value also includes investment categories classified as cash equivalents for financial statement purposes. Investments made with cash collateral received in the securities lending program are excluded.

South Carolina Retirement Systems
Schedule of Investment Allocation[1]

Fair Value of Investments as of June 30, 2019

(Dollar amounts in thousands)



[1] *Data provided in this chart is derived from the Statement of Fiduciary Net Position and for financial statement purposes, allocations are made based on the manager's style. Actual underlying holdings would result in a different allocation.*

[2] *Short-term investments with an original maturity of three months or less are classified as cash equivalents for financial statement purposes. The short-term total includes cash of $197,100 (in thousands). Investments made with cash collateral received in the securities lending program are excluded.*

South Carolina Retirement System
Summary of Fair Value of Investments[1]

(Amounts expressed in thousands)

	Fair Value		% of Fair Value at
	06/30/2018	06/30/2019	06/30/19
Short-Term Investments	$ 2,369,960	$ 2,377,612	8.81%
Debt:			
Fixed Income	4,482,965	3,899,462	14.45%
Public Equity:			
Global Public Equity	9,138,590	9,827,095	36.43%
Opportunistic/GTAA	2,622,481	2,300,496	8.53%
Alternatives:			
Hedge Funds	2,826,455	2,699,281	10.00%
Private Debt	1,604,655	1,718,997	6.37%
Private Equity	2,007,268	1,961,588	7.27%
Private Real Estate	1,616,222	2,073,389	7.69%
Private Infrastructure		121,681	0.45%
Total Investments	$ 26,668,596	$ 26,979,601	100.00%

Police Officers Retirement System
Summary of Fair Value of Investments[1]

(Amounts expressed in thousands)

	Fair Value		% of Fair Value at
	06/30/2018	06/30/2019	06/30/19
Short-Term Investments	$ 403,283	$ 440,577	9.21%
Debt:			
Fixed Income	768,228	688,338	14.39%
Public Equity:			
Global Public Equity	1,566,046	1,734,692	36.27%
Opportunistic/GTAA	449,405	406,087	8.49%
Alternatives:			
Hedge Funds	484,359	476,481	9.96%
Private Debt	274,984	303,440	6.34%
Private Equity	343,978	346,262	7.24%
Private Real Estate	276,966	365,998	7.65%
Private Infrastructure		21,479	0.45%
Total Investments	$ 4,567,249	$ 4,783,354	100.00%

[1] Fair Value excludes investments made with cash collateral received in the securities lending program. Assets of the Systems are pooled for investment purposes; however, percentages vary slightly between systems due to cash flow differences, which primarily impact the short-term investment category.

General Assembly Retirement System
Summary of Fair Value of Investments[1]

(Amounts expressed in thousands)

	Fair Value		% of Fair Value at
	06/30/2018	06/30/2019	06/30/19
Short-Term Investments	$ 5,798	$ 5,541	16.03%
Debt:			
Fixed Income	5,104	4,601	13.31%
Public Equity:			
Global Public Equity	10,405	11,595	33.54%
Opportunistic/GTAA	2,986	2,714	7.85%
Alternatives:			
Hedge Funds	3,218	3,185	9.21%
Private Debt	1,827	2,028	5.87%
Private Equity	2,285	2,315	6.70%
Private Real Estate	1,840	2,446	7.07%
Private Infrastructure		144	0.42%
Total Investments	$ 33,463	$ 34,569	100.00%

Judges and Solicitors Retirement System
Summary of Fair Value of Investments[1]

(Amounts expressed in thousands)

	Fair Value		% of Fair Value at
	06/30/2018	06/30/2019	06/30/19
Short-Term Investments	$ 16,462	$ 18,658	11.32%
Debt:			
Fixed Income	26,549	23,181	14.06%
Public Equity:			
Global Public Equity	54,120	58,419	35.42%
Opportunistic/GTAA	15,530	13,676	8.29%
Alternatives:			
Hedge Funds	16,739	16,046	9.73%
Private Debt	9,503	10,219	6.20%
Private Equity	11,887	11,661	7.07%
Private Real Estate	9,571	12,326	7.47%
Private Infrastructure		723	0.44%
Total Investments	$ 160,361	$ 164,909	100.00%

[1] Fair Value excludes investments made with cash collateral received in the securities lending program. Assets of the Systems are pooled for investment purposes; however, percentages vary slightly between systems due to cash flow differences, which primarily impact the short-term investment category.

South Carolina National Guard Supplemental Retirement Plan

Summary of Fair Value of Investments[1]

(Amounts expressed in thousands)

	Fair Value		% of Fair Value at
	06/30/2018	06/30/2019	06/30/19
Short-Term Investments	$ 5,000	$ 6,016	19.66%
Debt:			
Fixed Income	4,322	3,896	12.73%
Public Equity:			
Global Public Equity	8,810	9,818	32.09%
Opportunistic/GTAA	2,528	2,298	7.51%
Alternatives:			
Hedge Funds	2,725	2,697	8.82%
Private Debt	1,547	1,717	5.61%
Private Equity	1,935	1,960	6.41%
Private Real Estate	1,558	2,071	6.77%
Private Infrastructure		122	0.40%
Total Investments	$ 28,425	$ 30,595	100.00%

[1] Fair Value excludes investments made with cash collateral received in the securities lending program. Assets of the Systems are pooled for investment purposes; however, percentages vary slightly between systems due to cash flow differences, which primarily impact the short-term investment category.

South Carolina Retirement Systems
List of Largest Assets Held
As of June 30, 2019

Index Fund Holdings

Units	Description	SCRS	PORS	GARS	JSRS	SCNG	Fair Value
51,616,586	Blackrock MSCI World Index	$ 965,514,918	$ 170,434,029	$ 1,139,219	$ 5,739,645	$ 964,602	$ 1,143,792,413
18,280,361	Daily MSCI USA Index NL Fund	634,032,535	111,920,300	748,100	3,769,100	633,433	751,103,468
4,113,386	MSCI EAFE Index NL Fund (FD12)	344,232,156	60,764,337	406,162	2,046,339	343,907	407,792,901
2,963,305	Blackrock EME	127,934,798	22,583,227	150,951	760,527	127,814	151,557,317
10,168,223	Blackrock EME Small Cap	105,818,883	18,679,296	124,857	629,056	105,719	125,357,811
410,670	MSCI CAD Index NL Fund (CA-12)	35,055,376	6,188,024	41,362	208,392	35,022	41,528,176
		Total					**$ 2,621,132,086**

Top Ten Equity Holdings

Units	Description	SCRS	PORS	GARS	JSRS	SCNG	Fair Value
2,613,901	The Williams Company Inc	$ 61,869,830	$ 10,921,348	$ 73,001	$ 367,794	$ 61,811	$ 73,293,784
357,937	American Tower Corp	61,773,966	10,904,426	72,888	367,224	61,716	73,180,220
503,595	Microsoft Corp	56,946,668	10,052,305	67,192	338,528	56,893	67,461,586
1,121,873	TC Energy Corp	47,048,033	8,304,984	55,512	279,684	47,004	55,735,217
28,154	Amazon.com Inc	45,003,575	7,944,093	53,100	267,530	44,961	53,313,259
1,461,769	Enbridge Inc	44,664,171	7,884,181	52,700	265,513	44,622	52,911,187
261,129	Apple Inc	43,627,122	7,701,120	51,476	259,348	43,586	51,682,652
347,844	Sempra Energy	40,356,122	7,123,719	47,617	239,903	40,318	47,807,679
333,190	Crown Castle International Corp	36,661,884	6,471,606	43,258	217,942	36,627	43,431,317
2,841,748	Energy Transfer LP	33,775,361	5,962,073	39,852	200,783	33,743	40,011,812
		Total					**$ 558,828,713**

Top Ten Fixed Income Holdings

Par Value	Description	SCRS	PORS	GARS	JSRS	SCNG	Fair Value
$ 76,600,000	Commit to Purchase FNMA 3.00% due 09/01/2049	$ 65,112,053	$ 11,493,670	$ 76,826	$ 387,068	$ 65,051	$ 77,134,668
75,000,000	US Treasury Note 2.50% due 12/31/2020	63,923,581	11,283,879	75,424	380,003	63,863	75,726,750
50,000,000	US Treasury Note 2.50% due 01/31/2021	42,648,643	7,528,397	50,321	253,531	42,608	50,523,500
48,200,000	Commit to Purchase GNMA 4.00% due 08/20/2049	42,165,464	7,443,106	49,751	250,659	42,126	49,951,106
33,800,000	US Treasury Bond 2.50% due 02/15/2045	28,423,619	5,017,377	33,537	168,968	28,397	33,671,898
25,500,000	Commit to Purchase FNMA 3.50% due 09/01/2049	21,995,122	3,882,609	25,952	130,753	21,974	26,056,410
25,225,000	NBC Universal Enterprise 144A VAR RT due 04/01/2021	21,338,015	3,766,616	25,177	126,847	21,318	25,277,973
24,200,000	Bank of America Corp VAR RT due 07/21/2021	20,405,794	3,602,059	24,077	121,305	20,387	24,173,622
23,000,000	Federal Home Loan Bank 2.70% due 04/29/2022	19,447,716	3,432,938	22,947	115,610	19,429	23,038,640
22,375,000	Federal Home Loan Bank 2.60% due 01/05/2021	18,887,893	3,334,117	22,286	112,282	18,870	22,375,448
		Total					**$ 407,930,015**

Note: A complete list of portfolio holdings is available upon request.

South Carolina Retirement Systems
Schedule of Investment Results
Combined Investment Portfolio

Schedule of Investments	FYE 2019	3 Years	5 Years	10 Years
South Carolina Plan Return (Net of Fees)[1]	**5.84%**	**8.48%**	**5.26%**	**8.33%**
South Carolina Policy Benchmark[2]	*6.50%*	*8.51%*	*5.45%*	*7.69%*
Global Public Equity[3]	**4.11%**	**11.29%**	**5.84%**	
Global Public Equity Blend[2]	*4.45%*	*11.38%*	*6.02%*	
Equity Options[3]	**2.40%**	**6.85%**	**n/a**	
Blended Equity Options BM[2]	*1.63%*	*6.91%*	*n/a*	
Private Equity[3]	**8.47%**	**12.81%**	**10.30%**	
Private Equity Blend[2]	*9.23%*	*15.28%*	*11.76%*	
GTAA[3]	**4.77%**	**5.44%**	**2.96%**	
GTAA Benchmark Blend[2]	*5.88%*	*6.59%*	*3.97%*	
Other Opportunistic	**7.72%**	**n/a**	**n/a**	
GTAA Benchmark Blend[2]	*5.88%*	*n/a*	*n/a*	
Core Fixed Income[3]	**7.65%**	**2.50%**	**2.87%**	
Barclays US Aggregate Bond Index	*7.87%*	*2.31%*	*2.95%*	
TIPS[3]	**4.82%**	**n/a**	**n/a**	
Barclays US Treasury Inflation Notes	*4.84%*	*n/a*	*n/a*	
Cash and Short Duration (Net)[4]	**2.80%**	**1.45%**	**1.11%**	
ICE BofA Merrill Lynch 3-Month T-Bill	*2.31%*	*1.38%*	*0.87%*	
High Yield Bonds/Bank Loans	**4.39%**	**6.45%**	**2.87%**	
High Yield Bonds/Bank Loans Blend[2]	*5.72%*	*6.38%*	*4.53%*	
Private Debt	**3.07%**	**6.85%**	**4.79%**	
S&P/LSTA Leveraged Loan + 150 Bps on a 3-month lag	*4.47%*	*7.17%*	*5.12%*	
Emerging Markets Debt[3]	**9.50%**	**4.98%**	**2.81%**	
Emerging Markets Debt Blend[2]	*10.77%*	*4.91%*	*2.46%*	
Private Real Estate[3]	**6.90%**	**8.82%**	**11.65%**	
Private Real Estate Custom Benchmark[2]	*6.46%*	*8.11%*	*10.55%*	
Public Real Estate	**11.96%**	**5.19%**	**n/a**	
FTSE NAREIT Equity REITs Index	*11.21%*	*4.20%*	*n/a*	
Public Infrastructure	**13.22%**	**6.60%**	**n/a**	
Private Infrastructure	**11.63%**	**n/a**	**n/a**	
Dow Jones Brookfield Global Infrastructure Net Index	*12.69%*	*7.64%*	*n/a*	
Portable Alpha Hedge Funds[5]	**-0.75%**	**3.79%**	**3.49%**	
Portable Alpha HF Blend	*2.50%*	*0.83%*	*1.01%*	

[1] Plan returns are provided by BNY Mellon and are presented on a time-weighted calculation basis, net of fees. All returns are expressed in U.S. dollars. Periods greater than one year are annualized.

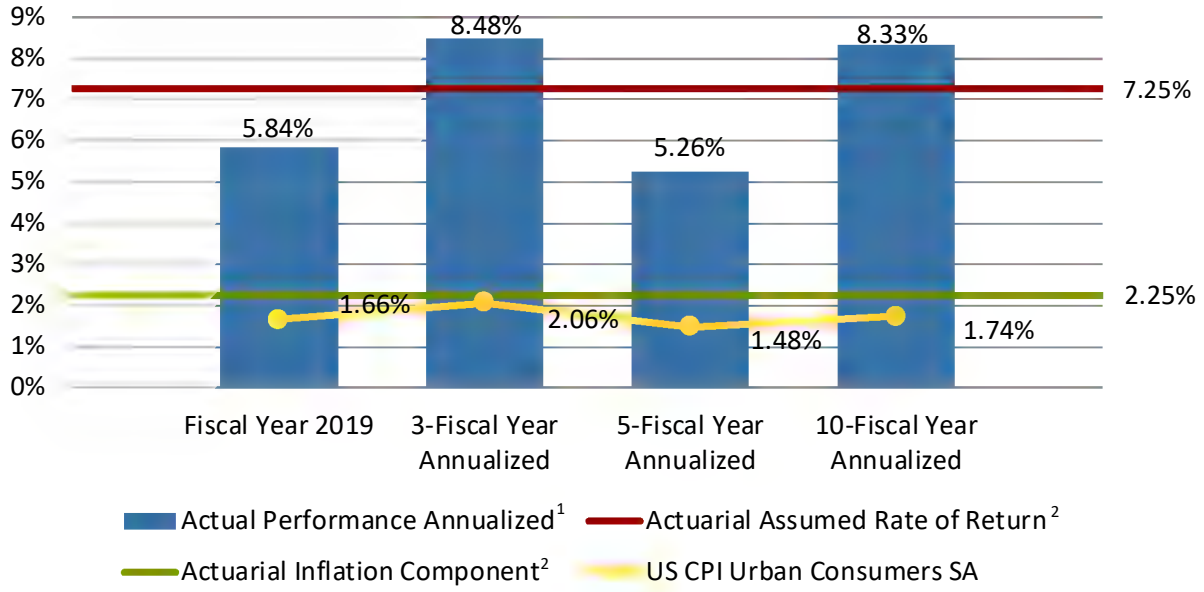
[2] The South Carolina Policy Benchmark is set annually by the Commission and has changed over time. The presented returns are a blend of these past policies.

[3] Returns generated from synthetic exposure through the Overlay Program are blended into the asset class segment returns.

[4] Cash returns are estimated using the ICE BofA Merrill Lynch 3-Month T-Bill.

[5] Portable Alpha Hedge Funds are expressed as gross exposure but, as collateral supporting the Overlay Program, amounts net to zero when calculating total Plan market value. For benchmarking purposes, there is a 10% weight assigned to Portable Alpha Hedge Funds in the Policy benchmark. The three and five year Portable Alpha Hedge Fund returns are considered supplemental information provided by RSIC staff to illustrate performance of these hedge funds even though they were classified under a different asset class during these periods. The cost of holding these assets is proxied using 3 month LIBOR and the performance presented is excess of LIBOR.

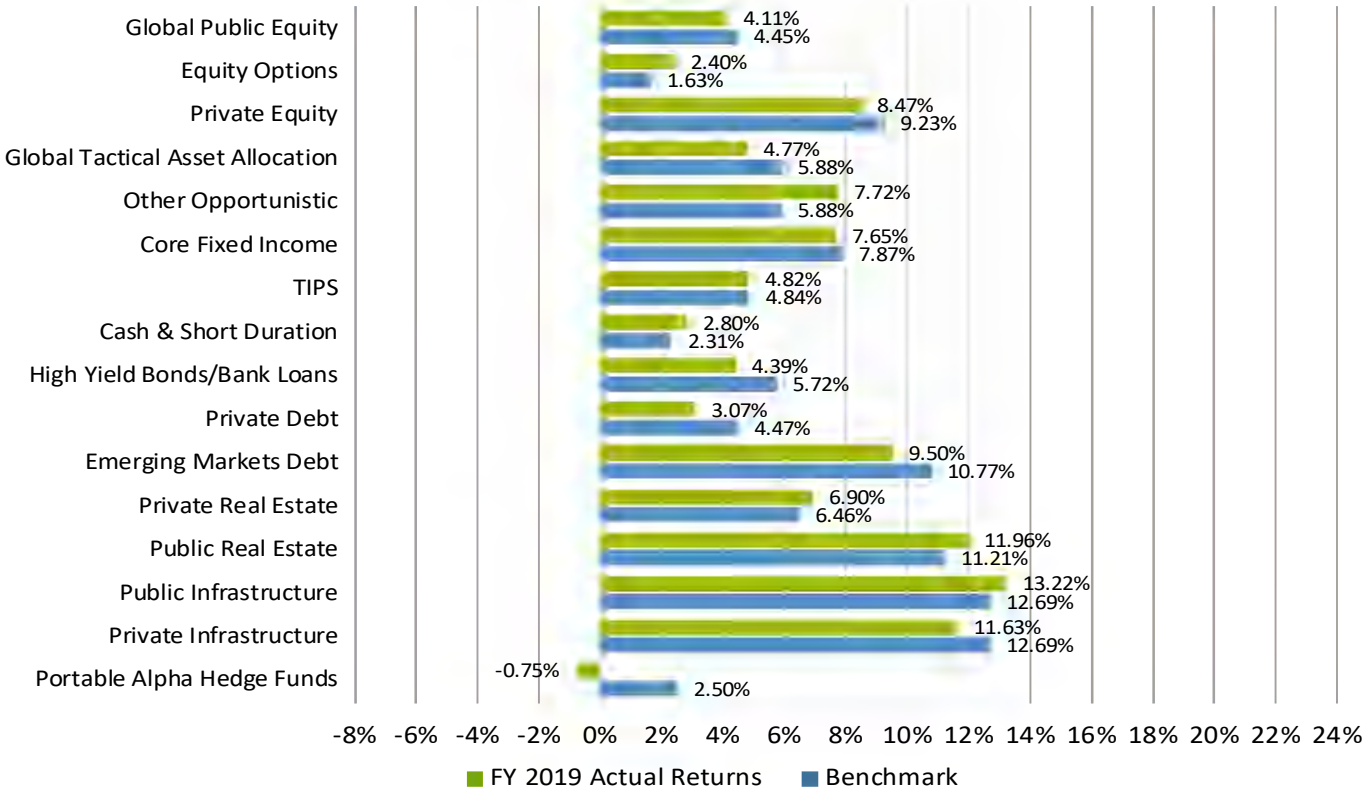
South Carolina Retirement Systems
Investment Performance Summary



[1] Plan returns are provided by BNY Mellon and are presented on a time-weighted calculation basis, net of fees. All returns are expressed in U.S. dollars. Periods greater than one year are annualized.

[2] The actuarial assumed rate of return is net of investment and administrative expenses and was set at 7.50 percent for fiscal years July 1, 2011 – June 30, 2017, but reduced to 7.25 percent for fiscal year 2018. The rate was composed of 2.75 percent inflation and 4.75 percent real rate of return through fiscal year 2016; 2.25 percent inflation and 5.25 percent real return for fiscal year 2017; and 2.25 percent inflation and 5.00 percent real return beginning with fiscal year 2018.

Fiscal Year 2019 Investment Performance by Market Segment



South Carolina Retirement Systems
Schedule of Investment Fees and Commissions

For the Year Ended June 30, 2019

	Fair Value of Assets Under Management at June 30, 2019[1]	Reported Fees[2]
Investment Managers' Fees	$ 31,993,028,103	$ 310,242,716
Other Investment Service Fees		
Bank Fees and Investment Expenses[3]		21,296,437
		$ 331,539,153

Brokerage Firm	Number of Shares Traded	Commissions[4]	Average Commissions per Share
Goldman Sachs & Co.	31,316,686	876,582	0.0280
Merrill Lynch Pierce Fenner Smith Inc.	20,715,703	282,524	0.0136
Credit Suisse	50,881,143	231,530	0.0046
Instinet Europe Ltd	38,467,140	174,552	0.0045
Morgan Stanley & Co., Inc.	23,520,217	163,343	0.0069
Liquidnet Inc.	9,152,145	152,917	0.0167
Jefferies & Co., Inc.	9,287,478	144,901	0.0156
J.P. Morgan Securities Inc.	4,940,291	136,078	0.0275
Deutsche Bank Securities Inc.	27,592,254	134,974	0.0049
Convergex Execution Solution	2,998,667	119,947	0.0400
Stifel Nicolaus	3,498,961	98,738	0.0282
Wells Fargo Securities LLC	2,389,535	80,605	0.0337
UBS Securities LLC	8,958,581	74,332	0.0083
ISI Group Inc.	2,809,161	72,854	0.0259
Investment Tech Group Inc.	4,349,263	66,786	0.0154
Keybank Capital Markets Inc.	2,281,980	66,287	0.0290
Citigroup Global Markets Inc.	2,893,212	59,417	0.0205
Instinet Corp.	4,604,001	55,901	0.0121
J.P. Morgan Securities LLC	3,173,342	55,487	0.0175
UBS Equities	14,674,344	50,676	0.0035
All Others[5]	493,964,774	1,334,945	0.0027
	762,468,878	$ 4,433,376	0.0058

[1] Assets under management include categories classified as cash and cash equivalents for financial statement purposes.

[2] A portion of investment expenses are directly invoiced by the manager; however, a significant number of investment managers provide account valuations on a net of fee basis. The RSIC makes a good faith attempt to account for fees that are not necessarily readily separable. Through a process that consists of the collection, aggregation and reasonableness testing, the RSIC provides the Retirement Division of PEBA with investment fees and expenses that would not be disclosed otherwise. These amounts include management fees, performance fees (carried interest) and other expenses such as organizational expenses in limited partnership structures.

[3] Includes miscellaneous investment expenses, commissions on futures, bank fees and RSIC administrative expenses.

[4] Commissions paid to brokers are considered a part of the investment asset cost and are therefore not reported as expenses of the System.

[5] All others include 159 additional brokers each receiving less than $50,000 in total commissions.

South Carolina Retirement Systems
Schedule of Investment Managers and Fees

For the Year Ended June 30, 2019

(Amounts expressed in thousands)

Style	Investment Manager	Fair Value of Assets Under Management at 6/30/2019[1]	Manager Fees Directly Invoiced	Manager Fees Deducted on a Net of Fee Basis[2]			Total Investment Manager Fees
				Management Fees	Performance Fees	Other Fees	
Short Duration:							
	Apollo Partnership Short Duration	$ 13,299	$ -	$ 427	$ -	$ 334	$ 761
	Penn Limited Term HY	207,528	582				582
Fixed Income:							
Core Fixed Income							
	Loomis Sayles Securitized[4]		10				10
	Pacific Investment Management Co.	974,801	1,715				1,715
High Yield Bonds/Bank Loans							
	Barings	122,466	457				457
	Caspian SC Holdings LP[3]	224,376		989	1		990
	GCM Partnership Mixed Credit			28		32	60
	Goldentree Structured Credit	442,931	2,303				2,303
	Guggenheim	359,749	1,620				1,620
	Pinebridge	209,165	999				999
Emerging Market Debt							
	Ashmore External Debt	233,671	915				915
	GMO Emerging Country Debt	295,133		1,317			1,317
	Goldman Sachs Partnership Emerging Market Debt[4]			284		91	375
	Mondrian Investment Group, Inc.	260,807	1,118				1,118
	Wellington Emerging Local Debt	282,560	1,441				1,441
Global Public Equity							
	Aberdeen	366,789	1,225				1,225
	Algert	205,484	1,225				1,225
	AQR	936,816	2,165				2,165
	Blackrock Global Equity	1,143,792	262				262
	Blackrock Emerging Markets Small Cap Equity Index	125,358	29				29
	Blackrock MSCI Emerging Markets Free	151,557	12				12
	D. E. Shaw World Enhanced	987,826	3,609				3,609
	Intech	980,898	1,843				1,843
	Integrity Small V	355,561	1,772				1,772
	Johnston[5]	(6)					
	Lighthouse Partnership Developed International Equity	476,937		2,442		224	2,666
	LSV Asset Management	583,497		4,255			4,255
	Man Numeric International Small Cap	238,064	1,271				1,271
	Numeric Investors	256,598	1,139				1,139
	Pyramis Small C	402,332	2,206			(13)	2,193
	Russell International Small Cap Transition	160,986	318				318
	Schroders	149,460	2,256				2,256
	State Street Global Equity	1,200,425	164				164
	TimesSquare SMID G	232,612	1,573				1,573
	William Blair	375,014	2,020				2,020
Equity Options Strategy							
	AQR Options	857,117	2,759				2,759
	Russell Options	962,544	1,246				1,246
Public Real Estate							
	CenterSquare US Real Estate	100,612	1,715				1,715
	CenterSquare US REIT Focus	327,929	535				535
	Russell Investment Group	95,416	258				258
Public Infrastructure							
	Deutsche Infrastructure	700,124	2,918				2,918

Continued on pages 117-120

South Carolina Retirement Systems
Schedule of Investment Managers and Fees (cont.)

For the Year Ended June 30, 2019

(Amounts expressed in thousands)

Style	Investment Manager	Fair Value of Assets Under Management at 6/30/2019[1]	Manager Fees Directly Invoiced	Manager Fees Deducted on a Net of Fee Basis[2]			Total Investment Manager Fees
				Management Fees	Performance Fees	Other Fees	
Other Opportunistic/Global Tactical Asset Allocation							
	Apollo Partnership[7]	70,915					
	Bridgewater Associates, Inc.[4]			366		35	401
	Entrust Partnership[7]	72,421					
	Lighthouse Partnership[7]	89,837					
	Morgan Stanley GTAAN	815,695		2,958			2,958
	Pinebridge GTAAN	755,292		1,682			1,682
	Russell Investment Group	252,045	57				57
	Standard Life GTAAN	833,379		1,968			1,968
	WL Ross Partnership[7]	87,731					
Alternatives:							
Hedge Funds (Portable Alpha and Non-Portable Alpha)							
	Blackstone SAF II	673		629	492		1,121
	Bridgewater Associates, Inc.	487,273		11,695	2,442	490	14,627
	Bridgewater Associates, Inc.	115,740		2,653		134	2,787
	DE Shaw - DE Shaw Composite	637,697		15,215	23,072		38,287
	Goldman Sachs Partnership Hedge Funds	8,614				133	133
	Grosvenor Partnership Hedge Funds	5,197			249	85	334
	GSO Partnership Hedge Funds	30,200				149	149
	Lighthouse Partnership Hedge Funds	1,145,524		8,933	3,528	1,257	13,718
	Man Alt Beta	217,494	(321)	2,255			1,934
	Morgan Stanley Partnership Hedge Funds	42,836		29		137	166
	Reservoir Strategic Partners Fund L.P.	731		418	91	164	673
	Wellington Alt Beta	281,335	1,936				1,936
Private Debt							
	Angelo Gordon VI	6			63		63
	Apollo Partnership Private Debt	335,563		2,696	1,567	1,207	5,470
	Ares Jasper	263,864		2,984	2,356	255	5,595
	Avenue Europe II[4]				(14)	67	53
	Avenue Spec VI	8,203				25	25
	Crescent Mezz V	2,588		79	(289)		(210)
	Crescent Mezz VI	38,645		521	479	146	1,146
	DE Shaw Direct Capital[4]			17	(878)		(861)
	Gateway Energy	9,240			1	346	347
	Goldman Sachs Mezz V	1,233		12	72		84
	Goldman Sachs Partnership Private Debt	117,637		842	397	994	2,233
	Golub PEARLS[4]			240	334	701	1,275
	GSO Partnership Private Debt	372,919		4,203	(3,571)	3,165	3,797
	Highbridge Sandlapper Credit	176,787		1,080	2,160	435	3,675
	Jocassee Partners[7]	50,002					
	KKR Special Situations Fund II	115,927		1,610		547	2,157
	KKR Lending Partners II	41,740		848	182	113	1,143
	KKR Lending Partners III	75,710		686		766	1,452
	Morgan Stanley Partnership Private Debt	1,919		14	245	78	337
	Northstar Mezz V	18,864		294	1,271	17	1,582
	Owl Rock Capital	198,751		2,342			2,342
	Owl Rock First Lien	61,398		1,178		1,066	2,244
	Owl Rock Technology Finance	25,246		389	10		399
	Sankaty COP IV	11,349		385	(1,018)	70	(563)
	Sankaty COP V	27,051		460	(284)		176
	Selene II	38,285		361	2,822	182	3,365
	SJC DL II	2,545		81	(1,162)	130	(951)
	Strategic Credit Opportunities[7]	33,417					
	WL Ross - WLR Whole Loans	7,511		44	386	16	446

Continued on pages 118-120

South Carolina Retirement Systems
Schedule of Investment Managers and Fees (cont.)

For the Year Ended June 30, 2019

(Amounts expressed in thousands)

Style	Investment Manager	Fair Value of Assets Under Management at 6/30/2019[1]	Manager Fees Directly Invoiced	Manager Fees Deducted on a Net of Fee Basis[2]			Total Investment Manager Fees
				Management Fees	Performance Fees	Other Fees	
Private Equity							
	Advent International GPE VII	37,205		410	(743)	31	(302)
	Apax Europe VII	7,423			(129)	2	(127)
	Apax Europe VIII	46,771		606	2,940	141	3,687
	Apollo Partnership Private Equity	581,853		6,706	5,105	3,978	15,789
	Aquiline Financial Services I	51,636		89	3,050		3,139
	Aquiline Financial Services II	70,357		958	9,694		10,652
	Azalea Fund III	4,488		209	77	35	321
	Azalea Fund IV	11,520		265		20	285
	BC European Cap IX	23,085		212	1,224	13	1,449
	Bridgepoint Europe IV[6]	18,586		116	5,088	82	5,286
	Bridgepoint Europe V[6]	90,461		678		390	1,068
	Bridgepoint Europe VI[6]	4,026		1,122		177	1,299
	Brookfield Capital IV	116,667		1,945	7,856	221	10,022
	Brookfield Capital V	(2,243)		1,498		86	1,584
	Brookfield Capital Co-Invest I[7]	22,048					
	Brookfield Capital Co-Invest II[7]	156					
	Carousel Capital IV	35,196		139	2,891	14	3,044
	CD&R VIII	16,521			(627)	76	(551)
	Crestview II	48,394		538	(1,011)	265	(208)
	Crestview III	58,104		790	2,107	236	3,133
	Digital Colony	13,703		1,497		219	1,716
	Franscisco Partners	27,267		162	411	334	907
	GCM Edisto - GCM Direct[7]	43,466					
	GCM Edisto - RSIC Direct[7]	27,500					
	Goldman Sachs Partnership Private Equity	13,966		288	1,030	471	1,789
	Green Equity	44,584		293	1,573	11	1,877
	Hellman & Friedman	(303)		123		168	291
	Industry Ventures VII	29,980		311	2,065		2,376
	Lexington Capital VII	26,571		353	230	136	719
	Lexington Middle Market II	17,568		189	196	40	425
	Morgan Stanley Partnership Private Equity	156,596		1,273	(3,665)	323	(2,069)
	Neuberger Berman[4]				(16)		(16)
	Oaktree EOF III	31,570		463	558	55	1,076
	Pacific Equity Partners	22,666		2,000	3,708	438	6,146
	Pantheon Europe	13,535		394	347	142	883
	Pantheon USA VII	49,874		1,047	832	308	2,187
	Paul Capital IX	20,281		545			545
	Providence Equity Fund VIII	(1,702)		2,250		721	2,971
	Providence Strategic Growth Fund III	58,528		1,301		618	1,919
	Providence Strategic Growth Fund IV	(305)		272		22	294
	Providence Equity Fund VIII Co-Invest[7]	11,254					
	Reservoir Capital Partners (Cayman) L.P.	27,370		275	(609)	56	(278)
	Square 1 Venture 1	19,352		235	80	38	353
	Truebridge Capital I	45,373		284	292	69	645
	Truebridge Capital II	91,180		447	881	97	1,425
	Warburg Pincus X	52,120		164	2,586	117	2,867
	Warburg Pincus XI	45,760		324	(526)	150	(52)
	Welsh Carson Anderson & Stowe XI	17,389		116	(387)	8	(263)
	WL Ross Partnership Private Equity	41,140		383		35	418
	Various Private Equity Managers[8]	135,248		678	1,001	160	1,839

Continued on pages 119-120

South Carolina Retirement Systems
Schedule of Investment Managers and Fees (cont.)

For the Year Ended June 30, 2019

(Amounts expressed in thousands)

Style	Investment Manager	Fair Value of Assets Under Management at 6/30/2019[1]	Manager Fees Directly Invoiced	Manager Fees Deducted on a Net of Fee Basis[2]			Total Investment Manager Fees
				Management Fees	Performance Fees	Other Fees	
Private Real Estate							
	Apollo Partnership Real Estate	50,038		665	(2,514)	498	(1,351)
	Asana Partners	(308)		641		154	795
	Blackstone Property Partners	506,991		3,386	783	249	4,418
	Blackstone Real Estate VII	88,119		1,061	1,399	42	2,502
	Brookfield REF IV	4,691		153	73	(5)	221
	Brookfield REF V	34,767		459	433	280	1,172
	Brookfield SREP LP	51,495		651	1,463		2,114
	Brookfield SREP II LP	65,300		1,065	(1,573)	35	(473)
	Brookfield SREP III LP	21,340		2,266			2,266
	Carlyle VI	12,734		215	(177)	352	390
	Congaree Partners LP	18,428		249		98	347
	Crow Holdings	69,108		843	2,309	96	3,248
	Goldman Sachs Partnership Real Estate	627			(1)	4	3
	Greystar IX	130,132		1,322			1,322
	Greystar X	20,814		791		49	840
	Heitman Core Real Estate	101,591		557		107	664
	Lone Star II	1,996		2	7	7	16
	Morgan Stanley Prime Property	702,233					
	Morgan Stanley Partnership Real Estate	65,274		5,001	3,247	232	8,480
	Oaktree ROF V	7,070		66	(133)	117	50
	Oaktree ROF VI	30,630		531	348	347	1,226
	Och-Ziff II	12,528	147		76	17	240
	TA Realty X	38,831		732	1,836		2,568
	TA Realty Fund of One	277,938		1,365	2,807		4,172
	Torchlight III[4]				(5)	35	30
	Torchlight IV	23,276		306	(320)	216	202
	Torchlight V	89,628		1,200	1,197	292	2,689
	WL Ross Partnership Real Estate	30,969		244		125	369
Private Infrastructure							
	Actis Infrastructure[7]	5,067					
	Brookfield Super Core	55,608		164		351	515
	Macquarie Super Core	83,465		1,070	138	312	1,520
Strategic Partnerships[9]							
	Apollo	123,250					
	Entrust	5,001		607	(1,261)	629	(25)
	Goldman Sachs	2,157				404	404
	Grosvenor	1,907				67	67
	GSO	8,012				9	9
	Lighthouse	5,327		2,365		567	2,932
	Morgan Stanley	11,081	(144)	19		397	272
	WL Ross	5,221					
Beta Overlay							
	Russell Investment Group	542,630	1,626				1,626

Continued on page 120

South Carolina Retirement Systems
Schedule of Investment Managers and Fees (cont.)

For the Year Ended June 30, 2019

(Amounts expressed in thousands)

Style	Investment Manager	Fair Value of Assets Under Management at 6/30/2019[1]	Manager Fees Directly Invoiced	Manager Fees Deducted on a Net of Fee Basis[2]			Total Investment Manager Fees
				Management Fees	Performance Fees	Other Fees	
Internally Managed Assets							
	Core Fixed Income	25,711					
	Short Duration	925,074					
	SCRS Liquidity	757,122					
	Cash Accounts	504,606					
	Total Fair Value of Assets and Manager Fees	$ 31,828,521	$ 46,981	$ 139,853	$ 93,245	$30,164	$ 310,243
	Adjustments, Cash, Receivables and Payables	151,195					
	Net Asset Value as reported by the Custodial Bank	$ 31,979,716					

[1] The "Fair Value" of assets under management includes categories classified as cash equivalents for financial statement purposes and excludes cash, receivables and payables; therefore, these adjustments are necessary to reconcile to "Net Asset Values" reported by the Custodial Bank and the RSIC.

[2] Investment manager fees, whether directly invoiced ($46,980,999) or deducted from the fund on a net basis ($263,261,717) are classified and reported as Investment Expense. The RSIC makes a good faith attempt to account for fees that are not necessarily readily separable. Through a process that consists of the collection, aggregation and reasonableness testing, RSIC provides the Retirement Division of PEBA with investment fees and expenses that would not be disclosed otherwise. These amounts include management fees, performance fees (carried interest) and other expenses such as organizational expenses in limited partnership structures.

[3] This hedge fund is classified as a High Yield Bonds/Bank Loans mandate for investment purposes by RSIC due to it having higher factor or beta exposures to the asset class; however, for financial statement purposes it is classified as Hedge Funds.

[4] Account liquidated during the fiscal year. Fees may not represent a full year.

[5] Negative fair value represents FX loss on accrued dividend reclaims receivable included in the adjustment line at the bottom of this schedule.

[6] Net asset value is reported gross of performance fees.

[7] Account has incurred initial funding but has not accrued fees and expenses.

[8] Represents the aggregation of six managers, each with total investment manager fees of less than $250,000, and one manager that has a non-disclosure agreement.

[9] Represents management and other fees at the Strategic Partnership level, and not fees at the underlying investment level which are included in each applicable asset class. Fair Value represents cash balances at the Strategic Partnership level.

Actuarial Section

GRS Retirement Consulting

P: 469.524.0000 | F: 469.524.0003 | www.grsconsulting.com

October 4, 2019

South Carolina Public Employee Benefit Authority
South Carolina Retirement Systems
P.O. Box 11960
Columbia, SC 29211-1960

Subject: Statement of Certification for the Actuarial Valuation as of July 1, 2018

Dear Members of the Board:

Actuarial valuations are prepared annually as of July 1, the first day of the plan year, for each of the five retirement systems (i.e. the South Carolina Retirement System, the Police Officers Retirement System, the Judges and Solicitors Retirement System, the General Assembly Retirement System, and the South Carolina National Guard Supplemental Retirement Plan). These reports describe the current actuarial condition of the South Carolina Retirement Systems and document the calculated employer contribution rates as well as the changes in these contribution rates.

FINANCING OBJECTIVES AND FUNDING POLICY

The employer and member contribution rates for the South Carolina Retirement System and the Police Officers Retirement System are determined in accordance with South Carolina Code, as last amended by the Retirement System Funding and Administration Act of 2017.

In accordance with State Code, the employer and member contribution rates for the South Carolina Retirement System that was in effect for the fiscal year ending June 30, 2019 are 14.56% and 9.00%, respectively. In addition, the employer contribution rate is scheduled to increase at the rate of 1.00% of pay for each of the next four subsequent fiscal years (i.e. an ultimate employer contribution rate of 18.56% of pay for fiscal year 2023). Similarly, the employer and member contribution rate for the Police Officers Retirement System that was in effect for the fiscal year ending June 30, 2019 are 17.24% and 9.75%, respectively. Also, the employer contribution rate for the Police Officers Retirement System is scheduled to increase at the rate of 1.00% of pay for each of the next four subsequent fiscal years (i.e. an ultimate employer contribution rate of 21.24% of pay for fiscal year 2023).

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Additionally, the State Code specifies that the maximum amortization period is 29 years as of July 1, 2018 and the maximum amortization period will decrease by one year in each of the next nine years until reaching a maximum 20-year funding period on July 1, 2027 for both the South Carolina Retirement System and Police Officers Retirement System and the contribution rates determined by an actuarial valuation must be sufficient to maintain an amortization period that does not exceed 20 years each year thereafter. Finally, the Board is not permitted to decrease the employer and member contribution rates until the funded ratio of the plan is at least 85%.

The Board also certifies the employer contribution rates annually for the Judges and Solicitors Retirement System, the General Assembly Retirement System, and the South Carolina National Guard Supplemental Retirement Plan. The Board's principle objectives to determine the appropriate funding requirements for these systems include:

- Establish a contribution rate that remains relatively level over time.
- To set rates so that the measures of the System's funding progress, which include the unfunded actuarial accrued liability, funded ratio, and funding period, will be maintained or improved.
- To set a contribution rate that will result in the unfunded actuarial accrued liability (UAAL), which is the actuarial accrued liability less the actuarial value of assets, to be amortized over a period from the current valuation date that does not exceed 30 years.

To accomplish this, the employer contribution rate will be at least equal to the sum of the employer normal cost rate (which pays the current year's cost) and an amortization rate which results in the UAAL being funded over a period that does not exceed 30 years in installments. These installments increase at the assumed rate of growth in payroll for each System.

If new legislation is enacted between the valuation date and the date the contribution rates become effective, the Board may adjust the calculated rates before certifying them, in order to reflect this new legislation. Such adjustments are based on information supplied by the actuary.

PROGRESS TOWARD REALIZATION OF FINANCING OBJECTIVES

The funded ratio (the ratio of the actuarial value of assets to the actuarial accrued liability) is a standard measure of a plan's funded status. In the absence of benefit improvements, assumption changes, or investment losses, it should increase over time, until it reaches at least 100%. However, due to the recognition of investment losses that occurred in prior years, the funded ratio decreased from 57.1% in 2017 to 56.1% in 2018 for all systems on a combined basis.

ASSUMPTIONS AND METHODS

The Board, in consultation with the actuary, sets the actuarial assumptions and methods used in the valuation. South Carolina State Code requires the Board to have the actuary perform an experience study at least every five years. The July 1, 2018 actuarial valuations were based on actuarial assumptions that were based on the System's experience for the five-year period ending July 1, 2015. The experience study report, which included recommended assumption changes, was adopted by the Board in 2016. There were no assumption changes since the prior actuarial valuation.

All the assumptions and methods adopted by the Board satisfy the requirements in the Actuarial Standards of Practice that are applicable for actuarial valuations of public retirement systems. The Board plans to have the next experience study conducted using the plan's experience for the five-year period ending June 30, 2019. The actuarial assumptions that result from the experience study will be first used to prepare the July 1, 2020 actuarial valuation.

It is our opinion that the actuarial assumptions used to perform this valuation are internally consistent and reasonably reflect the anticipated future experience of the System. The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can, and almost certainly will, differ as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated employer contribution rate, and funding period. The actuarial calculations are intended to provide information for rational decision making.

The benefit structure is outlined in this section of the annual report. GRS prepared the following schedules in the actuarial section: *Actuarial Balance Sheet, Results of the Valuation as of July 1, 2018, Summary of Actuarial Assumptions and Methods, Development of the Actuarial Value of Assets, Solvency Test*, and the *Reconciliation of the UAAL*. GRS also prepared the following trend information in the actuarial section for years on and after July 1, 2011: *Summary of Historical Active Membership, Schedule of Retirants Added to and Removed from Rolls*, and the *Schedule of Funding Progress*.

South Carolina PEBA relied upon the data prepared by GRS and included in the actuarial valuations for each system to prepare the following schedules and graphs found in the actuarial section: *Summary of Active Membership Data, Summary of Membership Data* and *Funding Progress and Funding Ratios*. In addition, GRS prepared the following schedules in the financial section in accordance with GASB Statement No. 67: *Net Pension Liability Schedule, Discount Rate Sensitivity Analysis, Schedule of Changes in the Employers' Net Pension Liability, Schedule of Employers' Net Pension Liability*, and the *Schedule of Employers' and Nonemployer's Contributions*.

GRS Retirement Consulting

DATA

Member data for retired, active and inactive members was supplied as of July 1, 2018, by the PEBA staff. The staff also supplied asset information as of July 1, 2018. We did not audit this data, but we did apply a number of tests to the data, and we concluded that it was reasonable and consistent with the prior year's data. GRS is not responsible for the accuracy or completeness of the information provided to us by the Systems.

CERTIFICATION

We certify that the information presented herein is accurate and fairly portrays the actuarial position of the Retirement Systems as of July 1, 2018. All of our work conforms with generally accepted actuarial principles and practices, and in conformity with the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of South Carolina Code of Laws and, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The undersigned are independent actuaries and consultants. Mr. Newton and Mr. White are Enrolled Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries. Both are experienced in performing valuations for large public retirement systems.

Sincerely,

Gabriel, Roeder, Smith & Co.

Joseph P. Newton, FSA, MAAA, EA
Senior Consultant

Daniel J. White, FSA, MAAA, EA
Senior Consultant

GRS Retirement Consulting

South Carolina Retirement System
Actuarial Balance Sheet

(Amounts expressed in thousands)

	July 1, 2018	July 1, 2017
1. Assets		
a. Current assets (actuarial value)		
i. Employee annuity savings fund	$ 8,501,051	$ 7,938,850
ii. Employer annuity accumulation fund	18,529,886	19,302,720
iii. Total current assets	$ 27,030,937	$ 27,241,570
b. Present value of future member contributions	$ 6,352,402	$ 6,215,042
c. Present value of future employer contributions		
i. Normal contributions	$ 407,722	$ 510,498
ii. Accrued liability contributions	22,073,826	21,133,155
iii. Total future employer contributions	$ 22,481,548	$ 21,643,653
d. Total assets	$ 55,864,887	$ 55,100,265
2. Liabilities		
a. Employee annuity savings fund		
i. Past member contributions	$ 8,501,051	$ 7,938,850
ii. Present value of future member contributions	6,352,402	6,215,042
iii. Total contributions to employee annuity savings fund	$ 14,853,453	$ 14,153,892
b. Employer annuity accumulation fund		
i. Benefits currently in payment	$ 30,760,223	$ 30,745,598
ii. Benefits to be provided to other members	10,251,211	10,200,775
iii. Total benefits payable from employer annuity accumulation fund	$ 41,011,434	$ 40,946,373
c. Total liabilities	$ 55,864,887	$ 55,100,265

Police Officers Retirement System
Actuarial Balance Sheet

(Amounts expressed in thousands)

		July 1, 2018	July 1, 2017
1.	**Assets**		
a.	Current assets (actuarial value)		
	i. Employee annuity savings fund	$ 1,104,572	$ 1,034,549
	ii. Employer annuity accumulation fund	3,549,621	3,446,345
	iii. Total current assets	$ 4,654,193	$ 4,480,894
b.	Present value of future member contributions	$ 951,783	$ 923,875
c.	Present value of future employer contributions		
	i. Normal contributions	$ 441,917	$ 440,704
	ii. Accrued liability contributions	2,723,891	2,628,718
	iii. Total future employer contributions	$ 3,165,808	$ 3,069,422
d.	Total assets	$ 8,771,784	$ 8,474,191
2.	**Liabilities**		
a.	Employee annuity savings fund		
	i. Past member contributions	$ 1,104,572	$ 1,034,549
	ii. Present value of future member contributions	951,783	923,875
	iii. Total contributions to employee annuity savings fund	$ 2,056,355	$ 1,958,424
b.	Employer annuity accumulation fund		
	i. Benefits currently in payment	$ 4,307,805	$ 4,136,503
	ii. Benefits to be provided to other members	2,407,624	2,379,264
	iii. Total benefits payable from employer annuity accumulation fund	$ 6,715,429	$ 6,515,767
c.	Total liabilities	$ 8,771,784	$ 8,474,191

General Assembly Retirement System
Actuarial Balance Sheet

(Amounts expressed in thousands)

	July 1, 2018	July 1, 2017
1. Assets		
a. Current assets (actuarial value)		
i. Employee annuity savings fund	$ 7,066	$ 6,852
ii. Employer annuity accumulation fund	27,836	28,035
iii. Total current assets	$ 34,902	$ 34,887
b. Present value of future member contributions[1]	$ 1,070	$ 1,171
c. Present value of future employer contributions		
i. Normal contributions	$ 880	$ 1,010
ii. Accrued liability contributions	38,102	39,968
iii. Total future employer contributions	$ 38,982	$ 40,978
d. Total assets	$ 74,954	$ 77,036
2. Liabilities		
a. Employee annuity savings fund		
i. Past member contributions	$ 7,066	$ 6,852
ii. Present value of future member contributions[1]	1,070	1,171
iii. Total contributions to employee annuity savings fund	$ 8,136	$ 8,023
b. Employer annuity accumulation fund		
i. Benefits currently in payment	$ 55,749	$ 58,042
ii. Benefits to be provided to other members	11,069	10,971
iii. Total benefits payable from employer annuity accumulation fund	$ 66,818	$ 69,013
c. Total liabilities	$ 74,954	$ 77,036

[1] *Includes expected contributions from special contributors.*

Judges and Solicitors Retirement System
Actuarial Balance Sheet

(Amounts expressed in thousands)

		July 1, 2018	July 1, 2017
1.	**Assets**		
a.	Current assets (actuarial value)		
	i. Employee annuity savings fund	$ 28,259	$ 26,703
	ii. Employer annuity accumulation fund	135,099	133,486
	iii. Total current assets	$ 163,358	$ 160,189
b.	Present value of future member contributions	$ 14,873	$ 14,450
c.	Present value of future employer contributions		
	i. Normal contributions	$ 27,583	$ 25,875
	ii. Accrued liability contributions	130,457	135,441
	iii. Total future employer contributions	$ 158,040	$ 161,316
d.	Total assets	$ 336,271	$ 335,955
2.	**Liabilities**		
a.	Employee annuity savings fund		
	i. Past member contributions	$ 28,259	$ 26,703
	ii. Present value of future member contributions	14,873	14,450
	iii. Total contributions to employee annuity savings fund	$ 43,132	$ 41,153
b.	Employer annuity accumulation fund		
	i. Benefits currently in payment	$ 198,893	$ 203,030
	ii. Benefits to be provided to other members	94,246	91,772
	iii. Total benefits payable from employer annuity accumulation fund	$ 293,139	$ 294,802
c.	Total liabilities	$ 336,271	$ 335,955

South Carolina National Guard Supplemental Retirement Plan
Actuarial Balance Sheet

(Amounts expressed in thousands)

		July 1, 2018	July 1, 2017
1.	**Assets**		
a.	Current assets (actuarial value)	$ 29,246	$ 27,807
b.	Present value of future member contributions	0	0
c.	Present value of future employer contributions		
	i. Normal contributions	$ 7,274	$ 7,456
	ii. Accrued liability contributions	36,946	38,699
	iii. Total future employer contributions	$ 44,220	$ 46,155
d.	Total assets	$ 73,466	$ 73,962
2.	**Liabilities**		
a.	Benefits to be paid to retired members	$ 35,132	$ 35,391
b.	Benefits to be paid to former members entitled to deferred pensions	11,348	11,251
c.	Benefits to be paid to current active members	26,986	27,320
d.	Total liabilities	$ 73,466	$ 73,962

South Carolina Retirement System
Results of the Valuation as of July 1, 2018

(Amounts expressed in thousands)

		July 1, 2018
1.	**Actuarial Present Value of Future Benefits**	
a.	Present retired members and beneficiaries	$ 30,760,223
b.	Present active and inactive members	25,104,664
c.	Total actuarial present value	$ 55,864,887
2.	**Present Value of Future Normal Contributions**	
a.	Employee	$ 6,352,402
b.	Employer	407,722
c.	Total future normal contributions	$ 6,760,124
3.	**Actuarial Liability**	$ 49,104,763
4.	**Current Actuarial Value of Assets**	$ 27,030,937
5.	**Unfunded Actuarial Liability**	$ 22,073,826
6.	**UAAL Amortization Rates Based on an Employer Contribution Rate of 15.56%**	
a.	Active members	13.90%
b.	ORP members	10.56%
c.	Re-employed retirees (including employee contributions)	24.56%
7.	**Unfunded Actuarial Liability Liquidation Period**	22 years

Note: The employer contribution rate includes the cost of incidental death benefits.

Police Officers Retirement System
Results of the Valuation as of July 1, 2018

(Amounts expressed in thousands)

		July 1, 2018
1.	**Actuarial Present Value of Future Benefits**	
	a. Present retired members and beneficiaries	$ 4,307,805
	b. Present active and inactive members	4,463,979
	c. Total actuarial present value	$ 8,771,784
2.	**Present Value of Future Normal Contributions**	
	a. Employee	$ 951,783
	b. Employer	441,917
	c. Total future normal contributions	$ 1,393,700
3.	**Actuarial Liability**	$ 7,378,084
4.	**Current Actuarial Value of Assets**	$ 4,654,193
5.	**Unfunded Actuarial Liability**	$ 2,723,891
6.	**UAAL Amortization Rates based on an Employer Contribution Rate of 18.24%**	
	a. Active members	13.38%
	b. Re-employed retirees (including employee contributions)	27.99%
7.	**Unfunded Actuarial Liability Liquidation Period**	20 years

Note: The employer contribution rate includes the cost of accidental and incidental death benefits.

General Assembly Retirement System
Results of the Valuation as of July 1, 2018

(Amounts expressed in thousands)

		July 1, 2018	
1.	**Actuarial Present Value of Future Benefits**		
	a. Present retired members and beneficiaries	$	55,749
	b. Present active and inactive members		19,205
	c. Total actuarial present value	$	74,954
2.	**Present Value of Future Normal Contributions**		
	a. Employee	$	1,070
	b. Employer		880
	c. Total future normal contributions	$	1,950
3.	**Actuarial Liability**	$	73,004
4.	**Current Actuarial Value of Assets**	$	34,902
5.	**Unfunded Actuarial Liability**	$	38,102
6.	**Unfunded Actuarial Liability Liquidation Period from the Valuation Date**		9 years

Judges and Solicitors Retirement System
Results of the Valuation as of July 1, 2018

(Amounts expressed in thousands)

		July 1, 2018	
1.	**Actuarial Present Value of Future Benefits**		
	a. Present retired members and beneficiaries	$	198,893
	b. Present active and inactive members		137,378
	c. Total actuarial present value	$	336,271
2.	**Present Value of Future Normal Contributions**		
	a. Employee	$	14,873
	b. Employer		27,583
	c. Total future normal contributions	$	42,456
3.	**Actuarial Liability**	$	293,815
4.	**Current Actuarial Value of Assets**	$	163,358
5.	**Unfunded Actuarial Liability**	$	130,457
6.	**UAAL Amortization Rates Based on an Employer Contribution Rate of 52.49%**		
	a. Active members		32.63%
	b. Deferred Retirement Option Program (DROP) and Retired-in-Place Members (including employee contributions)		62.49%
7.	**Unfunded Actuarial Liability Liquidation Period**		28 Years

Note: The employer contribution rate includes the cost of incidental death benefits.

South Carolina National Guard Supplemental Retirement Plan
Results of the Valuation as of July 1, 2018

(Amounts expressed in thousands)

		July 1, 2018	
1.	**Actuarial Present Value of Future Benefits**		
	a. Present retired members and beneficiaries	$	35,132
	b. Present active and inactive members		38,334
	c. Total actuarial present value	$	73,466
2.	**Present Value of Future Normal Contributions**		
	a. Employee	$	0
	b. Employer		7,274
	c. Total future normal contributions	$	7,274
3.	**Actuarial Liability**	$	66,192
4.	**Current Actuarial Value of Assets**	$	29,246
5.	**Unfunded Actuarial Liability**	$	36,946
6.	**Unfunded Actuarial Liability Liquidation Period**[1]		18 years

[1] *There are four years remaining in the amortization of the unfunded liability attributable to the 2006 legislation change and 18 years remaining in the amortization of the unfunded liability due to other plan experience. The disclosure of an 18 year funding period is for stakeholders to understand when the system is expected to attain a 100% funded ratio.*

South Carolina Retirement System

Summary of Actuarial Methods and Assumptions

Based on recommendations from the consulting actuary, the PEBA Board is responsible for adopting all actuarial methods and assumptions used in the annual actuarial valuations, except for the assumed rate of investment return. The assumed rate of return is established by the General Assembly. South Carolina State Statute requires that an experience analysis that reviews the economic and demographic assumptions be performed at least once every five years. As a result of the most recent experience analysis for the five year period ended June 30, 2015, the PEBA Board adopted a number of changes in the actuarial assumptions which were utilized beginning with the July 1, 2016 annual valuations. The recommended adjustments to the actuarial assumptions included salary increase, payroll growth, mortality, retirement, refunds, inflation, and asset valuation method. The experience study also recommended reducing the long-term investment rate of return assumption, which was lowered by the General Assembly to 7.25 percent beginning with the July 1, 2017 annual valuations. The assumed rate of return will expire on July 1, 2021, and every four years thereafter. Before the assumed rate of return is due to expire the PEBA Board must propose an annual rate of return, which will become effective if the General Assembly fails to enact a rate of return before its expiration.

Following is a summary of the actuarial assumptions and methods used in the July 1, 2018 valuation of the South Carolina Retirement System for funding purposes and financial reporting purposes.

Investment Rate of Return

The assumed annual investment rate of return of 7.25 percent net of investment expenses is composed of a 2.25 percent inflation component and a 5.00 percent real rate of return, net of investment expenses.

The annual investment return assumption is prescribed in Section 9-16-335 of the South Carolina Code of Laws and as described above, the Retirement System Funding and Administration Act of 2017 lowered the assumed annual rate of return from 7.50 percent to 7.25 percent, effective July 1, 2017.

Rates of Annual Salary Increase

Rates of annual salary increase are assumed to vary for the first 20 years of service due to expected merit and promotional increases which differ by employee groups. Beginning with the 21st year of service, the assumed annual rate of increase is 3.0 percent for both groups and for all future years of service.

The 3.0 percent rate of the increase is composed of a 2.25 percent inflation component and a 0.75 percent real rate of wage increase (productivity) component.

South Carolina Retirement System
Active Male and Female Salary Increase Rate

Years of Service	General Employees		Teachers	
	Annual Promotional/Longevity Rates of Increase	Total Annual Rate of Increase Including 3.0% Wage Inflation	Annual Promotional/Longevity Rates of Increase	Total Annual Rate of Increase Including 3.0% Wage Inflation
1	4.00%	7.00%	7.00%	10.00%
2	3.00%	6.00%	9.50%	12.50%
3	2.25%	5.25%	3.00%	6.00%
4	1.75%	4.75%	2.75%	5.75%
5	1.50%	4.50%	2.50%	5.50%
6	1.25%	4.25%	2.25%	5.25%
7	1.00%	4.00%	2.00%	5.00%
8	1.00%	4.00%	1.75%	4.75%
9	1.00%	4.00%	1.75%	4.75%
10	0.75%	3.75%	1.50%	4.50%
11	0.50%	3.50%	1.50%	4.50%
12	0.50%	3.50%	1.25%	4.25%
13	0.50%	3.50%	1.00%	4.00%
14	0.50%	3.50%	1.00%	4.00%
15	0.50%	3.50%	0.75%	3.75%
16	0.50%	3.50%	0.75%	3.75%
17	0.50%	3.50%	0.50%	3.50%
18	0.50%	3.50%	0.50%	3.50%
19	0.25%	3.25%	0.25%	3.25%
20	0.25%	3.25%	0.25%	3.25%
21+	0.00%	3.00%	0.00%	3.00%

South Carolina Retirement System
Active Member Decrement Rates

a. Assumed rates of service retirement are shown in the following tables. The first table provides retirement rates for Class Two members who attain age 65 before attaining 28 years of service. The second table is based on service and is for Class Two members who attain 28 years of service before age 65. The third table provides the retirement rate applicable to Class Three members.

Class Two Age Based Retirement Rates[1]

Age	General Employees				Teachers			
	Reduced		Normal		Reduced		Normal	
	Male	Female	Male	Female	Male	Female	Male	Female
55	10%	9%	0%	0%	10%	9%	0%	0%
56	9%	10%	0%	0%	11%	9%	0%	0%
57	9%	10%	0%	0%	11%	10%	0%	0%
58	9%	11%	0%	0%	11%	10%	0%	0%
59	9%	11%	0%	0%	11%	10%	0%	0%
60	9%	11%	0%	0%	11%	10%	0%	0%
61	9%	11%	0%	0%	11%	13%	0%	0%
62	22%	20%	0%	0%	22%	20%	0%	0%
63	16%	18%	0%	0%	22%	20%	0%	0%
64	16%	18%	0%	0%	22%	20%	0%	0%
65	0%	0%	20%	22%	0%	0%	20%	25%
66	0%	0%	20%	22%	0%	0%	20%	25%
67	0%	0%	17%	19%	0%	0%	20%	20%
68	0%	0%	17%	19%	0%	0%	20%	20%
69	0%	0%	17%	19%	0%	0%	20%	20%
70	0%	0%	17%	19%	0%	0%	20%	20%
71	0%	0%	17%	19%	0%	0%	20%	20%
72	0%	0%	17%	19%	0%	0%	20%	20%
73	0%	0%	17%	19%	0%	0%	20%	20%
74	0%	0%	17%	19%	0%	0%	20%	20%
75	0%	0%	100%	100%	0%	0%	100%	100%

[1] Retirement rate is 50% at the later of age 62 or when the member is first eligible for a normal retirement benefit (i.e. the first age the member is eligible to concurrently commence benefits and continue employment).

South Carolina Retirement System

Class Two Service Based Retirement Rates[1]

Years of Service	General Employees		Teachers	
	Male	Female	Male	Female
28	15%	18%	7%	8%
29	10%	10%	8%	9%
30	10%	10%	8%	9%
31	10%	10%	9%	10%
32	10%	10%	10%	11%
33	18%	20%	11%	12%
34	18%	20%	12%	18%
35	18%	20%	13%	18%
36	20%	20%	14%	18%
37	20%	20%	18%	18%
38	20%	20%	17%	19%
39	20%	20%	17%	20%
40+	100%	100%	100%	100%

[1] Retirement rate is 50% at the later of age 62 or when the member is first eligible for a normal retirement benefit (i.e. the first age the member is eligible to concurrently commence benefits and continue employment).

South Carolina Retirement System
Class Three Retirement Rates[1]

Age	General Employees				Teachers				Rule of 90[2]
	Reduced		Normal		Reduced		Normal		
	Male	Female	Male	Female	Male	Female	Male	Female	
55	0%	0%	0%	0%	0%	0%	0%	0%	20%
56	0%	0%	0%	0%	0%	0%	0%	0%	20%
57	0%	0%	0%	0%	0%	0%	0%	0%	20%
58	0%	0%	0%	0%	0%	0%	0%	0%	20%
59	0%	0%	0%	0%	0%	0%	0%	0%	20%
60	9%	11%	0%	0%	11%	10%	0%	0%	20%
61	9%	11%	0%	0%	11%	13%	0%	0%	20%
62	22%	20%	0%	0%	22%	20%	0%	0%	20%
63	16%	18%	0%	0%	22%	20%	0%	0%	20%
64	16%	18%	0%	0%	22%	20%	0%	0%	20%
65	0%	0%	20%	22%	0%	0%	20%	25%	20%
66	0%	0%	20%	22%	0%	0%	20%	25%	20%
67	0%	0%	17%	19%	0%	0%	20%	20%	20%
68	0%	0%	17%	19%	0%	0%	20%	20%	20%
69	0%	0%	17%	19%	0%	0%	20%	20%	20%
70	0%	0%	17%	19%	0%	0%	20%	20%	20%
71	0%	0%	17%	19%	0%	0%	20%	20%	20%
72	0%	0%	17%	19%	0%	0%	20%	20%	20%
73	0%	0%	17%	19%	0%	0%	20%	20%	20%
74	0%	0%	17%	19%	0%	0%	20%	20%	20%
75	0%	0%	100%	100%	0%	0%	100%	100%	100%

[1] Retirement rate is 50% at the later of age 62 or when the member is first eligible for a normal retirement benefit (i.e. the first age the member is eligible to concurrently commence benefits and continue employment).
[2] The "Rule of 90" retirement rates do not apply if the "Rule of 90" is achieved after age 65.

b. Assumed rates of disability are shown in the following table.

Disability Rates

Age	General Employees		Teachers	
	Male	Female	Male	Female
25	0.0504%	0.0440%	0.0419%	0.0458%
30	0.1008%	0.0616%	0.0629%	0.0616%
35	0.1512%	0.1232%	0.0838%	0.0616%
40	0.2520%	0.1584%	0.1572%	0.1074%
45	0.3528%	0.2288%	0.2620%	0.2200%
50	0.5040%	0.3872%	0.4192%	0.3520%
55	0.8064%	0.6160%	0.6812%	0.5720%
60	1.0080%	0.9416%	1.0480%	0.8800%
64	1.2600%	1.3112%	1.3100%	1.1000%

There is no differentiation between duty and nonduty related disability benefits.

c. Active Member Mortality

Rates of active member mortality are based upon the RP-2014 Mortality Table for Employees with applicable multipliers to better reflect anticipated experience and provide margin for future improvement in mortality.

South Carolina Retirement System
Active Mortality Rates (Multiplier Applied)

Age	General Employees		Teachers	
	Male	Female	Male	Female
25	0.0460%	0.0164%	0.0460%	0.0147%
30	0.0429%	0.0207%	0.0429%	0.0185%
35	0.0497%	0.0272%	0.0497%	0.0243%
40	0.0597%	0.0376%	0.0597%	0.0337%
45	0.0924%	0.0624%	0.0924%	0.0558%
50	0.1602%	0.1047%	0.1602%	0.0937%
55	0.2649%	0.1589%	0.2649%	0.1422%
60	0.4454%	0.2320%	0.4454%	0.2076%
64	0.7008%	0.3220%	0.7008%	0.2881%
Multiplier	95%	95%	95%	85%

For purposes of determining active death benefits, 5 percent of active deaths for general employees are assumed to be duty related.

d. Rates of Withdrawal

Rate of withdrawal for active members prior to eligibility for retirement are for each employee group and differ by gender and service. Sample rates are shown in the following tables.

South Carolina Retirement System

Withdrawal Rates - Male General Employees

Age	Years of Service														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
25	0.200	0.175	0.123	0.103	0.090	0.085	0.071	0.064	0.055	0.050	0.040	0.000	0.000	0.000	0.000
30	0.200	0.175	0.123	0.103	0.090	0.085	0.071	0.064	0.055	0.050	0.040	0.040	0.037	0.034	0.031
35	0.200	0.175	0.123	0.103	0.090	0.085	0.071	0.064	0.055	0.050	0.040	0.040	0.037	0.034	0.031
40	0.200	0.175	0.123	0.103	0.090	0.085	0.071	0.064	0.055	0.050	0.034	0.034	0.034	0.034	0.031
45	0.200	0.175	0.123	0.103	0.090	0.085	0.071	0.064	0.055	0.050	0.031	0.031	0.029	0.026	0.023
50	0.200	0.175	0.123	0.103	0.090	0.085	0.071	0.064	0.055	0.050	0.020	0.020	0.020	0.020	0.020
55	0.200	0.175	0.123	0.103	0.090	0.085	0.071	0.064	0.055	0.050	0.010	0.010	0.010	0.010	0.010
60	0.200	0.175	0.123	0.103	0.090	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Age	Years of Service (Continued)													
	15	16	17	18	19	20	21	22	23	24	25	26	27	28+
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.029	0.026	0.023	0.020	0.018	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.029	0.026	0.023	0.020	0.018	0.015	0.013	0.011	0.010	0.009	0.008	0.000	0.000	0.000
45	0.020	0.020	0.020	0.020	0.018	0.015	0.013	0.011	0.010	0.009	0.008	0.007	0.006	0.000
50	0.020	0.018	0.015	0.013	0.011	0.010	0.010	0.010	0.010	0.009	0.008	0.007	0.006	0.000
55	0.010	0.010	0.010	0.010	0.010	0.010	0.009	0.008	0.007	0.006	0.000	0.000	0.000	0.000
60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Withdrawal Rates - Female General Employees

Age	Years of Service														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
25	0.230	0.217	0.141	0.118	0.101	0.097	0.084	0.075	0.067	0.057	0.046	0.000	0.000	0.000	0.000
30	0.230	0.217	0.141	0.118	0.101	0.097	0.084	0.075	0.067	0.057	0.046	0.046	0.042	0.038	0.034
35	0.230	0.217	0.141	0.118	0.101	0.097	0.084	0.075	0.067	0.057	0.046	0.046	0.042	0.038	0.034
40	0.230	0.217	0.141	0.118	0.101	0.097	0.084	0.075	0.067	0.057	0.038	0.038	0.038	0.038	0.034
45	0.230	0.217	0.141	0.118	0.101	0.097	0.084	0.075	0.067	0.057	0.034	0.034	0.030	0.026	0.023
50	0.230	0.217	0.141	0.118	0.101	0.097	0.084	0.075	0.067	0.057	0.020	0.020	0.020	0.020	0.020
55	0.230	0.217	0.141	0.118	0.101	0.097	0.084	0.075	0.067	0.057	0.012	0.012	0.012	0.012	0.012
60	0.230	0.217	0.141	0.118	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Age	Years of Service (Continued)													
	15	16	17	18	19	20	21	22	23	24	25	26	27	28+
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.030	0.026	0.023	0.020	0.018	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.030	0.026	0.023	0.020	0.018	0.016	0.014	0.013	0.012	0.011	0.010	0.000	0.000	0.000
45	0.020	0.020	0.020	0.020	0.018	0.016	0.014	0.013	0.012	0.011	0.010	0.009	0.008	0.000
50	0.020	0.018	0.016	0.014	0.013	0.012	0.012	0.012	0.012	0.011	0.010	0.009	0.008	0.000
55	0.012	0.012	0.012	0.012	0.012	0.012	0.011	0.010	0.009	0.008	0.000	0.000	0.000	0.000
60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

South Carolina Retirement System

Withdrawal Rates - Male Teachers

Age	Years of Service														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
25	0.000	0.217	0.145	0.117	0.098	0.083	0.071	0.061	0.050	0.042	0.039	0.000	0.000	0.000	0.000
30	0.000	0.217	0.145	0.117	0.098	0.083	0.071	0.061	0.050	0.042	0.039	0.030	0.030	0.029	0.028
35	0.000	0.217	0.145	0.117	0.098	0.083	0.071	0.061	0.050	0.042	0.039	0.030	0.030	0.029	0.028
40	0.000	0.217	0.145	0.117	0.098	0.083	0.071	0.061	0.050	0.042	0.039	0.029	0.029	0.029	0.028
45	0.000	0.217	0.145	0.117	0.098	0.083	0.071	0.061	0.050	0.042	0.039	0.028	0.027	0.026	0.024
50	0.000	0.217	0.145	0.117	0.098	0.083	0.071	0.061	0.050	0.042	0.039	0.022	0.022	0.022	0.022
55	0.000	0.217	0.145	0.117	0.098	0.083	0.071	0.061	0.050	0.042	0.039	0.013	0.013	0.013	0.013
60	0.000	0.217	0.145	0.117	0.098	0.083	0.071	0.061	0.050	0.042	0.039	0.008	0.008	0.008	0.008

Age	Years of Service (Continued)													
	15	16	17	18	19	20	21	22	23	24	25	26	27	28+
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.027	0.026	0.024	0.022	0.020	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.027	0.026	0.024	0.022	0.020	0.017	0.015	0.014	0.013	0.012	0.011	0.000	0.000	0.000
45	0.022	0.022	0.022	0.022	0.020	0.017	0.015	0.014	0.013	0.012	0.011	0.010	0.009	0.000
50	0.022	0.020	0.017	0.015	0.014	0.013	0.013	0.013	0.013	0.012	0.011	0.010	0.009	0.000
55	0.013	0.013	0.013	0.013	0.013	0.013	0.012	0.011	0.010	0.009	0.008	0.008	0.008	0.000
60	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.000	0.000	0.000	0.000

Withdrawal Rates – Female Teachers

Age	Years of Service														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
25	0.000	0.202	0.125	0.103	0.089	0.074	0.069	0.057	0.053	0.046	0.037	0.000	0.000	0.000	0.000
30	0.000	0.202	0.125	0.103	0.089	0.074	0.069	0.057	0.053	0.046	0.037	0.030	0.030	0.027	0.024
35	0.000	0.202	0.125	0.103	0.089	0.074	0.069	0.057	0.053	0.046	0.037	0.030	0.030	0.027	0.024
40	0.000	0.202	0.125	0.103	0.089	0.074	0.069	0.057	0.053	0.046	0.037	0.030	0.027	0.027	0.024
45	0.000	0.202	0.125	0.103	0.089	0.074	0.069	0.057	0.053	0.046	0.037	0.024	0.022	0.020	0.018
50	0.000	0.202	0.125	0.103	0.089	0.074	0.069	0.057	0.053	0.046	0.037	0.018	0.016	0.016	0.016
55	0.000	0.202	0.125	0.103	0.089	0.074	0.069	0.057	0.053	0.046	0.037	0.010	0.009	0.009	0.009
60	0.000	0.202	0.125	0.103	0.089	0.074	0.069	0.057	0.053	0.046	0.037	0.006	0.006	0.006	0.006

Age	Years of Service (Continued)													
	15	16	17	18	19	20	21	22	23	24	25	26	27	28+
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
35	0.022	0.020	0.018	0.016	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
40	0.022	0.020	0.018	0.016	0.014	0.012	0.011	0.010	0.009	0.008	0.007	0.000	0.000	0.000
45	0.016	0.016	0.016	0.016	0.014	0.012	0.011	0.010	0.009	0.008	0.007	0.006	0.006	0.000
50	0.016	0.014	0.012	0.011	0.010	0.009	0.009	0.009	0.009	0.008	0.007	0.006	0.006	0.000
55	0.009	0.009	0.009	0.009	0.009	0.009	0.008	0.007	0.006	0.006	0.006	0.006	0.006	0.000
60	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.000	0.000	0.000	0.000

South Carolina Retirement System
Refund of Member Contributions

The following percentage of vested members are assumed to elect to receive a refund of contributions upon termination of employment prior to becoming eligible to commence a service retirement benefit. This assumption is based on the plan's experience.

Age	Less than 40	40-49	50 or More
Refund rate	45%	40%	35%

Post Retirement Mortality

a. Healthy retirees and beneficiaries – The 2016 Public Retirees of South Carolina Mortality Table for Males and the 2016 Public Retirees of South Carolina Mortality Table for Females, projected using the AA projection table from the year 2016 and with multipliers based on plan experience. The following are sample rates of the base table:

Nondisabled Annuitant Mortality Rates Before Projection (Multiplier Applied)

Age	General Employees		Teachers	
	Male	Female	Male	Female
50	0.2038%	0.1454%	0.1875%	0.1284%
55	0.3205%	0.2465%	0.2949%	0.2177%
60	0.5863%	0.4265%	0.5394%	0.3765%
65	1.0198%	0.5924%	0.9382%	0.5230%
70	1.5718%	0.9640%	1.4461%	0.8511%
75	2.7195%	1.8534%	2.5019%	1.6363%
80	5.0493%	3.7276%	4.6454%	3.2910%
85	9.1594%	7.0538%	8.4266%	6.2277%
90	15.9042%	12.3489%	14.6319%	10.9026%
Multiplier	100%	111%	92%	98%

The following table provides the life expectancy for individuals retiring in future years based on the assumption with full generational projection.

Life Expectancy for an Age 65 Retiree in Years

Employee Type	Year of Retirement			
	2020	2025	2030	2035
General Employee - Male	20.6	20.9	21.3	21.6
General Employee - Female	22.7	22.8	23.0	23.2
Teacher - Male	21.2	21.5	21.9	22.2
Teacher - Female	23.6	23.8	24.0	24.1

b. A separate table of mortality rates is used for disabled retirees based on the RP-2014 Disabled Mortality table projected using the AA projection table from the year 2014 and with multipliers based on plan experience. The following are sample rates of the base table:

South Carolina Retirement System

Disabled Annuitant Mortality Rates (Multiplier Applied)

Age	General Employees		Teachers	
	Male	Female	Male	Female
50	2.5494%	1.4884%	2.5494%	1.4884%
55	2.9211%	1.8099%	2.9211%	1.8099%
60	3.3255%	2.1249%	3.3255%	2.1249%
65	3.9606%	2.6075%	3.9606%	2.6075%
70	5.0433%	3.5254%	5.0433%	3.5254%
75	6.7859%	5.1306%	6.7859%	5.1306%
80	9.5770%	7.6295%	9.5770%	7.6295%
85	14.1629%	11.3025%	14.1629%	11.3025%
90	21.6256%	16.5815%	21.6256%	16.5815%
Multiplier	125%	125%	125%	125%

Asset Valuation Method

The actuarial value of assets is equal to the market value, adjusted for the five-year phase in of the actual investment return in excess of (or less than) the expected investment return on a market value of asset basis. This five-year phase in begins with the investment experience for the fiscal year ending June 30, 2016. The actual return is calculated net of investment expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's market value of assets, adjusted for contributions, benefits paid, and refunds.

Expected earnings are determined using the assumed investment rate of return and the beginning of year actuarial value of assets (adjusted for receipts and disbursements during the year). The returns are computed net of administrative and investment expenses.

Actuarial Cost Method

The Entry Age Normal actuarial cost method allocates the System's actuarial present value of future benefits to various periods based upon service. The portion of the present value of future benefits allocated to years of service prior to the valuation date is the actuarial accrued liability, and the portion allocated to years following the valuation date is the present value of future normal costs. The normal cost is determined for each active member as the level percent of payroll necessary to fully fund the expected benefits to be earned over the career of each individual active member. The normal cost is partially funded with active member contributions with the remainder funded by employer contributions.

An unfunded accrued liability exists in the amount equal to the excess of accrued liability over valuation assets. The amortization period of the System is the number of years required to fully amortize the unfunded accrued liability, on an actuarial value of asset basis, with the expected amount of employer contributions in excess of the employers' portion of the normal cost.

Note, the principle financial measurement calculations in this actuarial valuation, which include the unfunded actuarial accrued liability, funded ratio, contribution rates, and funding period, are based on an actuarial value

of assets (smoothed value) basis. The actuarial value of assets is a calculated asset value which may be greater than or less than the market value of assets and is used to dampen some of the volatility in the market value of assets. As a result, many of these measures would be different if they were determined on a market value of assets basis.

Development of the Contribution Rate and Funding Period

The calculation of the employer and member contribution rate as well as the derived funding period takes into account several differences in the contributions paid by the various members as well as the delayed timing (if any) in the effective date of the new contribution rate. Specifically, the factors that are reflected in the calculations of the contribution rate include:

1. The cost (normal cost and actuarial accrued liability) due to incidental death benefits provided to members in the ORP.
2. Member and employer contributions made on the payroll of working retirees are being used to finance the unfunded actuarial accrued liability since these members do not have a normal cost. Also, the number of working retirees is expected to decrease due to changes in working after retirement provisions enacted with 2012 legislative changes.
3. The money collected on the payroll of members in ORP that is allocated to finance the unfunded liability in SCRS, which is the SCRS employer contribution rate less 5%, is less than the money collected on the payroll of members in SCRS to finance the unfunded actuarial accrued liability.
4. For purposes of calculating the amortization cost and funding period, discrete pay increases and continuous interest was assumed, with amortization payments made at the end of each month.

Unused Annual Leave

To account for the effect of unused annual leave in Average Final Compensation (AFC) of Class Two members, the AFC for Class Two members is increased 2.14 percent at their date of retirement. Unused annual leave is not included in the calculation of the AFC for Class Three members.

Unused Sick Leave

To account for the effect of unused sick leave on credited service for Class Two members, the service of active Class Two members who retire is increased three months. Unused sick leave is not included in determining the credited service for Class Three members.

Future Post-Retirement Benefit Adjustments

Benefits are assumed to increase by the lesser of 1.00 percent annually or $500 beginning on the July 1st following the receipt of 12 monthly benefit payments. The $500 limit in the annual increase is not indexed to escalate in future years.

Payroll Growth Rate

The total annual payroll of active members (also applies to ORP members and working retirees) is assumed to increase at an annual rate of 3.00 percent. This rate represents the underlying expected annual rate of wage inflation and does not anticipate increases in the number of members.

Other Assumptions

1. Valuation payroll (used for determining the amortization contribution rate): Prior fiscal year payroll projected forward one year using the overall payroll growth rate. This was determined for working retirees by dividing the actual member contributions received during the prior fiscal year by the member contribution rate in effect for that year, and then projecting that amount forward one year.
2. The normal cost rate is increased by 0.12 percent to account for administrative expenses that are paid with plan assets.
3. Individual salaries used to project benefits: Actual salaries from the past fiscal year are used to determine the final average salary as of the valuation date. For future salaries, the salary from the last fiscal year is projected forward with one year's salary scale.
4. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported salaries represent amounts paid to members during the year ended on the valuation date.
5. Percent married: 100 percent of male and 100 percent of female employees are assumed to be married.
6. Age difference: Males are assumed to be three years older than their spouses.
7. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an immediate life annuity.
8. Inactive Population: All non-vested members are assumed to take an immediate refund.
9. There will be no recoveries once disabled.
10. Decrement timing: Terminations for public school employees are assumed to occur at the beginning of the year. Decrements of all types are assumed to occur mid-year.
11. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
12. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
13. Incidence of contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
14. Benefit service: All members are assumed to accrue one year of eligibility service each year.
15. All calculations were performed without regard to the compensation limit in IRC Section 401(a)(17) and the benefit limit under IRC Section 415.

Participant Data

Participant data was securely supplied in electronic text files. There were separate files for (i) active and inactive members and (ii) members and beneficiaries receiving benefits.

The data for active members included birth date, gender, service with the current employer and total vesting service, salary, and employee contribution account balances. For retired members and beneficiaries, the data included date of birth, gender, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and form of payment code.

Salary supplied for the current year was based on the annualized earnings for the year preceding the valuation date. Assumptions were made to correct for missing or inconsistent data. These had no material impact on the results presented.

South Carolina Retirement System
Development of Actuarial Value of Assets

(Amounts expressed in thousands)

			Year Ending June 30, 2018
1.	Actuarial value of assets at beginning of year	$	27,241,570
2.	Market value of assets at beginning of year	$	25,732,829
3.	Net new investments		
	a. Contributions	$	2,274,487
	b. Disbursements		(3,579,348)
	c. Subtotal		(1,304,861)
4.	Market value of assets at end of year	$	26,414,916
5.	Net earnings (Item 4. - Item 2. - Item 3.c.)	$	1,986,948
6.	Assumed investment return rate for fiscal year		7.25%
7.	Expected return (Item 6. x (Item 2. + 1/2 Item 3.c.))	$	1,818,329
8.	Excess return (Item 5. - Item 7.)	$	168,619
9.	Excess return on assets as of June 30, 2018:		

	Fiscal Year Ending June 30,	Excess Return/(Shortfall)	Percent Deferred	Deferred Amount
a.	2018	$ 168,619	80%	$ 134,895
b.	2017	1,031,041	60%	618,625
c.	2016	(2,027,545)	40%	(811,018)
d.	2015	(2,792,616)	20%	(558,523)
e.	2014	N/A	0%	N/A
f.	Total			$ (616,021)

10.	Actuarial value of assets as of June 30, 2018 (Item 4. - Item 9.f.)	$	27,030,937
11.	Expected actuarial value as of June 30, 2018	$	27,864,422
12.	Asset gain (loss) for year (Item 10. - Item 11.)	$	(833,485)
13.	Asset gain (loss) as % of the actuarial value of assets		(3.1%)
14.	Ratio of actuarial value to market value		102.3%

Police Officers Retirement System

Summary of Actuarial Methods and Assumptions

Based on recommendations from the consulting actuary, the PEBA Board is responsible for adopting all actuarial methods and assumptions used in the annual actuarial valuations, except for the assumed rate of investment return. The assumed rate of return is established by the General Assembly. South Carolina State Statute requires that an experience analysis that reviews the economic and demographic assumptions be performed at least once every five years. As a result of the most recent experience analysis for the five year period ended June 30, 2015, the PEBA Board adopted a number of changes in the actuarial assumptions which were utilized beginning with the July 1, 2016 annual valuations. The recommended adjustments to the actuarial assumptions included salary increase, payroll growth, mortality, retirement, refunds, inflation, and asset valuation method. The experience study also recommended reducing the long-term investment rate of return assumption, which was lowered by the General Assembly to 7.25 percent beginning with the July 1, 2017 annual valuations. The assumed rate of return will expire on July 1, 2021, and every four years thereafter. Before the assumed rate of return is due to expire the PEBA Board must propose an annual rate of return, which will become effective if the General Assembly fails to enact a rate of return before its expiration.

Following is a summary of the actuarial assumptions and methods used in the July 1, 2018 valuation of the Police Officers Retirement System for funding purposes and financial reporting purposes.

Investment Rate of Return

The assumed annual investment rate of return of 7.25 percent net of investment expenses is composed of a 2.25 percent inflation component and a 5.00 percent real rate of return, net of investment expenses.

The annual investment return assumption is prescribed in Section 9-16-335 of the South Carolina Code of Laws and as described above, the Retirement System Funding and Administration Act of 2017 lowered the assumed annual rate of return from 7.50 percent to 7.25 percent, effective July 1, 2017.

Rates of Annual Salary Increase

Rates of annual salary increase are assumed to vary for the first 15 years of service to include anticipated merit and promotional increases. The assumed annual rate of increase is 3.50 percent for all members with 15 or more years of service.

The 3.50 percent rate of increase is composed of a 2.25 percent inflation component and a 1.25 percent real rate of wage increase (productivity) component.

Police Officers Retirement System
Active Male and Female Salary Increase Rate

Years of Service	Annual Promotional/Longevity Rates of Increase	Total Annual Rate of Increase Including 3.50% Wage Inflation
1	6.00%	9.50%
2	5.50%	9.00%
3	3.00%	6.50%
4	1.50%	5.00%
5	1.25%	4.75%
6	1.00%	4.50%
7	1.00%	4.50%
8	0.75%	4.25%
9	0.75%	4.25%
10	0.50%	4.00%
11	0.50%	4.00%
12	0.50%	4.00%
13	0.50%	4.00%
14	0.25%	3.75%
15	0.00%	3.50%
16	0.00%	3.50%
17	0.00%	3.50%
18	0.00%	3.50%
19	0.00%	3.50%
20+	0.00%	3.50%

Police Officers Retirement System
Active Member Decrement Rates

a. Assumed rates of service retirement are shown in the following tables. The first table is for members who attain age 55 before attaining 25 years of service (27 years of service for Class Three Members). The second table is based on service and is for members who attain 25 years of service (27 years of service for Class Three Members) before age 55.

Age Based Retirement Rates/Service Based Retirement Rates

Age	Male	Female
55	20%	20%
56	20%	20%
57	20%	20%
58	10%	10%
59	10%	10%
60	10%	10%
61	25%	25%
62	25%	25%
63	25%	25%
64	25%	25%
65	25%	25%
66	25%	25%
67	25%	25%
68	25%	25%
69	25%	25%
70	100%	100%
71	100%	100%
72	100%	100%
73	100%	100%
74	100%	100%
75	100%	100%

Years of Service			
Class Two	Class Three	Male	Female
25	27	40%	40%
26	28	10%	10%
27	29	10%	10%
28	30	10%	10%
29	31	10%	10%
30	32	10%	10%
31	33	10%	10%
32	34	10%	10%
33	35	10%	10%
34	36	10%	10%
35	37	10%	10%
36	38	10%	10%
37	39	10%	10%
38	40	10%	10%
39	41	10%	10%
40	42	100%	100%

b. Assumed rates of disability are shown in the following table. Twenty-five percent of disabilities are assumed to be duty-related.

Police Officers Retirement System
Disability Rates

Age	Male	Female
25	0.1740%	0.1740%
30	0.2320%	0.2320%
35	0.4350%	0.4350%
40	0.5800%	0.5800%
45	0.8700%	0.8700%
50	1.0875%	1.0875%
55	0.0000%	0.0000%
60	0.0000%	0.0000%
64	0.0000%	0.0000%

c. Active Member Mortality

Rates of active member mortality are based upon the RP-2014 Mortality Table for Employees with applicable multipliers to better reflect anticipated experience and provide margin for future improvement in mortality.

Active Mortality Rates (Multiplier Applied)

Age	Male	Female
25	0.0460%	0.0164%
30	0.0429%	0.0207%
35	0.0497%	0.0272%
40	0.0597%	0.0376%
45	0.0924%	0.0624%
50	0.1602%	0.1047%
55	0.2649%	0.1589%
60	0.4454%	0.2320%
64	0.7008%	0.3220%
Multiplier	95%	95%

For purposes of determining active death benefits, five percent of active deaths for general employees are assumed to be duty related.

d. Rates of Withdrawal

Rates of withdrawal are service related. Sample rates are shown in the table below.

Police Officers Retirement System
Annual Withdrawal Rate

Years of Service	Male	Female
0	25.00%	25.00%
1	18.00%	18.00%
2	14.00%	14.00%
3	12.00%	12.00%
4	10.70%	10.70%
5	9.54%	9.54%
6	8.50%	8.50%
7	7.58%	7.58%
8	6.75%	6.75%
9	6.02%	6.02%
10	5.37%	5.37%
11	4.78%	4.78%
12	4.26%	4.26%
13	3.80%	3.80%
14	3.39%	3.39%
15	3.02%	3.02%
16	2.69%	2.69%
17	2.40%	2.40%
18	2.14%	2.14%
19	1.91%	1.91%
20	1.70%	1.70%
21	1.51%	1.51%
22	1.35%	1.35%
23	1.20%	1.20%

Police Officers Retirement System
Post Retirement Mortality

a. Healthy retirees and beneficiaries – The 2016 Public Retirees of South Carolina Mortality Table for Males and the 2016 Public Retirees of South Carolina Mortality Table for Females. Future mortality improvements are assumed each year using Scale AA from the year 2016 and multipliers applied to the base table to appropriately fit with plan experience. The following are sample rates:

Nondisabled Annuitant Mortality Rates Before Projection (Multiplier Applied)

Age	Male	Female
50	0.2548%	0.1454%
55	0.4006%	0.2465%
60	0.7329%	0.4265%
65	1.2748%	0.5924%
70	1.9648%	0.9640%
75	3.3994%	1.8534%
80	6.3116%	3.7276%
85	11.4493%	7.0538%
90	19.8803%	12.3489%
Multiplier	125%	111%

Life Expectancy for an Age 65 Retiree in Years

Gender	Year of Retirement			
	2020	2025	2030	2035
Male	18.9	19.3	19.7	20.0
Female	22.7	22.8	23.0	23.2

b. A separate table of mortality rates is used for disabled retirees based on the RP-2014 Disabled Mortality Table projected using the AA projection table from the year 2014 with multipliers applied to appropriate fit to plan experience. The following are sample rates:

Police Officers Retirement System
Disabled Annuitant Mortality Rates (Multiplier Applied)

Age	Male	Female
50	1.7336%	1.0121%
55	1.9864%	1.2307%
60	2.2613%	1.4449%
65	2.6932%	1.7731%
70	3.4294%	2.3973%
75	4.6144%	3.4888%
80	6.5124%	5.1881%
85	9.6308%	7.6857%
90	14.7054%	11.2754%
Multiplier	85%	85%

Asset Valuation Method

The actuarial value of assets is equal to the market value, adjusted for the five-year phase in of the actual investment return in excess of (or less than) the expected investment return on a market value of asset basis. This five-year phase in begins with the investment experience for the fiscal year ending June 30, 2016. The actual return is calculated net of investment expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's market value of assets, adjusted for contributions, benefits paid, and refunds.

Actuarial Cost Method

The Entry Age Normal actuarial cost method allocates the System's actuarial present value of future benefits to various periods based upon service. The portion of the present value of future benefits allocated to years of service prior to the valuation date is the actuarial accrued liability, and the portion allocated to years following the valuation date is the present value of future normal costs. The normal cost is determined for each active member as the level percent of payroll necessary to fully fund the expected benefits to be earned over the career of each individual active member. The normal cost is partially funded with active member contributions with the remainder funded by employer contributions.

An unfunded accrued liability exists in the amount equal to the excess of accrued liability over valuation assets. The amortization period of the System is the number of years required to fully amortize the unfunded accrued liability, on an actuarial value of asset basis, with the expected amount of employer contributions in excess of the employers' portion of the normal cost.

Note, the principle financial measurement calculations in this actuarial valuation, which include the unfunded actuarial accrued liability, funded ratio, contribution rates, and funding period, are based on an actuarial value of assets (smoothed value) basis. The actuarial value of assets is a calculated asset value which may be greater than or less than the market value of assets and is used to dampen some of the volatility in the market value of

assets. As a result, many of these measures would be different if they were determined on a market value of assets basis.

Development of the Contribution Rate and Funding Period

The calculation of the employer and member contribution rate as well as the derived funding period takes into account several differences in the contributions paid by the various members as well as the delayed timing (if any) in the effective date of the new contribution rate. Specifically, the factors that are reflected in the calculations of the contribution rate include:

1. Member and employer contributions made on the payroll of working retirees are being used to finance the unfunded actuarial accrued liability since these members do not have a normal cost. Also, the number of working retirees is expected to decrease due to changes in working after retirement provisions enacted with 2012 legislative changes.
2. For purposes of calculating the amortization cost and funding period, discrete pay increases and continuous interest was assumed, with amortization payments made at the end of each month.

Unused Annual Leave

To account for the effect of unused annual leave in Average Final Compensation (AFC) of Class Two members, the AFC for Class Two members is increased 3.75 percent at their projected date of termination or retirement. Unused annual leave is not included in the calculation of the AFC for Class Three members.

Unused Sick Leave

To account for the effect of unused sick leave on credited service for Class Two members, the service of active Class Two members who retire is increased three months. Unused sick leave is not included in determining the credited service for Class Three members.

Future Post-Retirement Benefit Adjustments

Benefits are assumed to increase by the lesser of 1.00 percent annually or $500 beginning on the July 1st following the receipt of 12 monthly benefit payments. The $500 limit in the annual increase is not indexed to escalate in future years.

Payroll Growth Rate

The total annual payroll of all contributing members is assumed to increase at an annual rate of 3.00 percent.

Other Assumptions

1. Valuation payroll (used for determining the amortization contribution rate): Prior fiscal year payroll projected forward one year using the overall payroll growth rate. This was determined separately for active employees and return to work employees by dividing the actual member contributions received during the prior fiscal year by the applicable member contribution rate for that fiscal year, and then projecting forward at 3.00 percent.
2. Individual salaries used to project benefits: Actual salaries from the past fiscal year are used to determine the final average salary as of the valuation date. For future salaries, the salary from the last fiscal year is projected forward with one year's salary scale.
3. Pay increase timing: Beginning of (fiscal) year. This is equivalent to assuming that reported salaries represent amounts paid to members during the year ended on the valuation date.

4. Percent married: 100 percent of male and 100 percent of female employees are assumed to be married.
5. Age difference: Males are assumed to be four years older than their spouses.
6. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an immediate life annuity.
7. Inactive Population: All non-vested members are assumed to take an immediate refund. Vested members are assumed to elect a refund or a deferred benefit commencing at age 65, whichever is more valuable at the valuation date.
8. There will be no recoveries once disabled.
9. Decrement timing: Decrements of all types are assumed to occur mid-year.
10. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
11. Decrement relativity: Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
12. Incidence of contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
13. Benefit service: All members are assumed to accrue one year of eligibility service each year.
14. All calculations were performed without regard to the compensation limit in IRC Section 401(a)(17) and the benefit limit under IRC Section 415.

Participant Data

Participant data was securely supplied in electronic text files. There were separate files for (i) active and inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active members included birth date, gender, service with the current employer and total vesting service, salary, and employee contribution account balances. For retired members and beneficiaries, the data included date of birth, gender, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and form of payment code.

Salary supplied for the current year was based on the annualized earnings for the year preceding the valuation date. Assumptions were made to correct for missing or inconsistent data. These had no material impact on the results presented.

Police Officers Retirement System
Development of Actuarial Value of Assets

(Amounts expressed in thousands)

		Year Ending June 30, 2018
1.	Actuarial value of assets at beginning of year	$ 4,480,894
2.	Market value of assets at beginning of year	$ 4,274,123
3.	Net new investments	
	a. Contributions	$ 363,580
	b. Disbursements	(398,801)
	c. Subtotal	(35,221)
4.	Market value of assets at end of year	$ 4,570,431
5.	Net earnings (Item 4. - Item 2. - Item 3.c.)	$ 331,529
6.	Assumed investment return rate for fiscal year	7.25%
7.	Expected return (Item 6. x (Item 2. + 1/2 Item 3.c.))	$ 308,597
8.	Excess return (Item 5. - Item 7.)	$ 22,932
9.	Excess return on assets as of June 30, 2018:	

	Fiscal Year Ending June 30,	Excess Return/(Shortfall)	Percent Deferred	Deferred Amount
a.	2018	$ 22,932	80%	$ 18,346
b.	2017	167,381	60%	100,429
c.	2016	(321,987)	40%	(128,795)
d.	2015	(368,711)	20%	(73,742)
e.	2014	N/A	0%	N/A
f.	Total			$ (83,762)

10.	Actuarial value of assets as of June 30, 2018 (Item 4. - Item 9.f.)	$ 4,654,193
11.	Expected actuarial value as of June 30, 2018	$ 4,769,261
12.	Asset gain (loss) for year (Item 10. - Item 11.)	$ (115,068)
13.	Asset gain (loss) as % of the actuarial value of assets	(2.5%)
14.	Ratio of actuarial value to market value	101.8%

General Assembly Retirement System

Summary of Actuarial Methods and Assumptions

Based on recommendations from the consulting actuary, the PEBA Board is responsible for adopting all actuarial methods and assumptions used in the annual actuarial valuations, except for the assumed rate of investment return. The assumed rate of return is established by the General Assembly. South Carolina State Statute requires that an experience analysis that reviews the economic and demographic assumptions be performed at least once every five years. As a result of the most recent experience analysis for the five year period ended June 30, 2015, the PEBA Board adopted a number of changes in the actuarial assumptions which were utilized beginning with the July 1, 2016 annual valuations. The recommended adjustments to the actuarial assumptions included salary increase, payroll growth, mortality, retirement, refunds, inflation, and asset valuation method. The experience study also recommended reducing the long-term investment rate of return assumption, which was lowered by the General Assembly to 7.25 percent beginning with the July 1, 2017 annual valuations. The assumed rate of return will expire on July 1, 2021, and every four years thereafter. Before the assumed rate of return is due to expire the PEBA Board must propose an annual rate of return, which will become effective if the General Assembly fails to enact a rate of return before its expiration.

Following is a summary of the actuarial assumptions and methods used in the July 1, 2018 valuation of the General Assembly Retirement System for funding purposes and financial reporting purposes.

Investment Rate of Return

The assumed annual investment rate of return of 7.25 percent net of investment expenses is composed of a 2.25 percent inflation component and a 5.00 percent real rate of return, net of investment expenses.

The annual investment return assumption is prescribed in Section 9-16-335 of the South Carolina Code of Laws and as described above, the Retirement System Funding and Administration Act of 2017 lowered the assumed annual rate of return from 7.50 percent to 7.25 percent, effective July 1, 2017.

Rates of Annual Salary Increase

No increases in salary are assumed.

General Assembly Retirement System
Active Member Decrement Rates

a. Assumed rates of service retirement are shown in the following table. In addition to the rates in the table below, members with 30 years of service are assumed to immediately commence their retirement benefit. Special contributors are assumed to retire at the earlier of attaining age 60 or attaining 22 years of service.

Age Based Retirement Rates

Age	Assumed Rate
60 & Under	50.00%
61-64	10.00%
65-69	20.00%
70 & older	100.00%

b. An abbreviated table with the assumed rates of disability and mortality while employed is shown below. There is no active employment withdrawal assumption.

Disability Rates/Pre-Retirement Mortality

Age	Disability Rates		Pre-Retirement Mortality	
	Male	Female	Male	Female
25	0.0419%	0.0458%	0.0460%	0.0164%
30	0.0629%	0.0616%	0.0429%	0.0207%
35	0.0838%	0.0616%	0.0497%	0.0272%
40	0.1572%	0.1074%	0.0597%	0.0376%
45	0.2620%	0.2200%	0.0924%	0.0624%
50	0.4192%	0.3520%	0.1602%	0.1047%
55	0.6812%	0.5720%	0.2649%	0.1589%
60	1.0480%	0.8800%	0.4454%	0.2320%
Multiplier	104.8%	88%	95%	95%

Note: The multiplier has been applied to the decrement in the illustrative table.

General Assembly Retirement System
Post Retirement Mortality

a. Healthy retirees and beneficiaries – The 2016 Public Retirees of South Carolina Mortality Table for Males and the 2016 Public Retirees of South Carolina Mortality Table for Females multiplied projected using the AA projection table from the year 2016 with multipliers based on plan experience. The following are sample rates:

Healthy Annuitant Mortality Rates Before Projection

Age	Male	Female
50	0.2038%	0.1454%
55	0.3205%	0.2465%
60	0.5863%	0.4265%
65	1.0198%	0.5924%
70	1.5718%	0.9640%
75	2.7195%	1.8534%
80	5.0493%	3.7276%
85	9.1594%	7.0538%
90	15.9042%	12.3489%
Multiplier	100%	111%

Note: The multiplier has been applied to the decrement in the illustrative table.

The following table provides the life expectancy for individuals retiring in future years based on the assumption with full generational projection.

Life Expectancy for an Age 65 Retiree in Years

Gender	Year of Retirement			
	2020	2025	2030	2035
Male	20.6	20.9	21.3	21.6
Female	22.7	22.8	23.0	23.2

b. A separate table of mortality rates is used for disabled retirees based on the RP-2014 Disabled Mortality table projected using the AA projection table from the year 2014 and with multipliers based on plan experience. The following are sample rates of the base table:

General Assembly Retirement System
Disabled Annuitant Mortality Rates

Age	Male	Female
50	2.5494%	1.4884%
55	2.9211%	1.8099%
60	3.3255%	2.1249%
65	3.9606%	2.6075%
70	5.0433%	3.5254%
75	6.7859%	5.1306%
80	9.5770%	7.6295%
85	14.1629%	11.3025%
90	21.6256%	16.5815%
Multiplier	125%	125%

Note: The multiplier has been applied to the decrement in the illustrative table.

Asset Valuation Method

The actuarial value of assets is equal to the market value, adjusted for the five-year phase in of the actual investment return in excess of (or less than) the expected investment return on a market value of asset basis. This five-year phase in begins with the investment experience for the fiscal year ending June 30, 2016. The actual return is calculated net of investment expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's market value of assets, adjusted for contributions, benefits paid, and refunds.

Actuarial Cost Method

The Entry Age Normal actuarial cost method allocates the System's actuarial present value of future benefits to various periods based upon service. The portion of the present value of future benefits allocated to years of service prior to the valuation date is the actuarial accrued liability, and the portion allocated to years following the valuation date is the present value of future normal costs. The normal cost is determined for each active member as the level dollar amount necessary to fully fund the expected benefits to be earned over the career of each individual active member. The normal cost is partially funded with active member contributions with the remainder funded by employer contributions.

An unfunded accrued liability exists in the amount equal to the excess of accrued liability over valuation assets. The amortization period of the System is the number of years required to fully amortize the unfunded accrued liability, on an actuarial value of asset basis, with the expected amount of employer contributions in excess of the employers' portion of the normal cost.

Note, the principle financial measurement calculations in this actuarial valuation, which include the unfunded actuarial accrued liability, funded ratio, contribution rates, and funding period, are based on an actuarial value of assets (smoothed value) basis. The actuarial value of assets is a calculated asset value which may be greater than or less than the market value of assets and is used to dampen some of the volatility in the market value of

assets. As a result, many of these measures would be different if they were determined on a market value of assets basis.

Future Cost-of-Living Increases

No increases are assumed.

Payroll Growth Rate

None assumed.

Other Assumptions

1. The normal cost is increased by $15,000 to account for administrative expenses that are paid with plan assets.
2. Percent married: 100 percent of active members are assumed to be married.
3. Age difference: Males are assumed to be four years older than their spouses.
4. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an immediate life annuity.
5. Inactive Population: All non-vested members are assumed to take an immediate refund. Members with a vested benefit are assumed to elect a refund or a deferred benefit commencing at age 60, whichever is more valuable at the valuation date.
6. It is assumed there will be no recoveries once disabled.
7. Decrement timing: Decrements of all types are assumed to occur mid-year.
8. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
9. Benefit Service: All active and special contributing members are assumed to accrue one year of eligibility service each year.

Participant Data

Participant data was securely supplied in electronic text files. There were separate files for (i) active and inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active members included birth date, gender, service with the current employer and total vesting service, salary, and employee contribution account balances. For retired members and beneficiaries, the data included date of birth, gender, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and form of payment code.

Salary supplied for the current year was based on the annualized earnings for the year preceding the valuation date. Assumptions were made to correct for missing or inconsistent data. These had no material impact on the results presented.

General Assembly Retirement System
Development of Actuarial Value of Assets

(Amounts expressed in thousands)

			Year Ending June 30, 2018
1.	Actuarial value of assets at beginning of year	$	34,887
2.	Market value of assets at beginning of year	$	31,789
3.	Net new investments		
	a. Contributions	$	5,715
	b. Disbursements		(6,486)
	c. Subtotal		(771)
4.	Market value of assets at end of year	$	33,394
5.	Net earnings (Item 4. - Item 2. - Item 3.c.)	$	2,376
6.	Assumed investment return rate for fiscal year		7.25%
7.	Expected return (Item 6. x (Item 2. + 1/2 Item 3.c.))	$	2,277
8.	Excess return (Item 5. - Item 7.)	$	99
9.	Excess return on assets as of June 30, 2018:		

	Fiscal Year Ending June 30,	Excess Return/(Shortfall)	Percent Deferred	Deferred Amount
a.	2018	$ 99	80%	$ 79
b.	2017	1,130	60%	678
c.	2016	(2,645)	40%	(1,058)
d.	2015	(6,037)	20%	(1,207)
e.	2014	N/A	0%	N/A
f.	Total			$ (1,508)

10.	Actuarial value of assets as of June 30, 2018 (Item 4. - Item 9.f.)	$	34,902
11.	Expected actuarial value as of June 30, 2018	$	36,617
12.	Asset gain (loss) for year (Item 10. - Item 11.)	$	(1,715)
13.	Asset gain (loss) as % of the actuarial value of assets		(4.9%)
14.	Ratio of actuarial value to market value		104.5%

Judges and Solicitors Retirement System

Summary of Actuarial Methods and Assumptions

Based on recommendations from the consulting actuary, the PEBA Board is responsible for adopting all actuarial methods and assumptions used in the annual actuarial valuations, except for the assumed rate of investment return. The assumed rate of return is established by the General Assembly. South Carolina State Statute requires that an experience analysis that reviews the economic and demographic assumptions be performed at least once every five years. As a result of the most recent experience analysis for the five year period ended June 30, 2015, the PEBA Board adopted a number of changes in the actuarial assumptions which were utilized beginning with the July 1, 2016 annual valuations. The recommended adjustments to the actuarial assumptions included salary increase, payroll growth, mortality, retirement, refunds, inflation, and asset valuation method. The experience study also recommended reducing the long-term investment rate of return assumption, which was lowered by the General Assembly to 7.25 percent beginning with the July 1, 2017 annual valuations. The assumed rate of return will expire on July 1, 2021, and every four years thereafter. Before the assumed rate of return is due to expire the PEBA Board must propose an annual rate of return, which will become effective if the General Assembly fails to enact a rate of return before its expiration.

Following is a summary of the actuarial assumptions and methods used in the July 1, 2018 valuation of the Judges and Solicitors Retirement System for funding purposes and financial reporting purposes.

Investment Rate of Return

The assumed annual investment rate of return of 7.25 percent net of investment expenses is composed of a 2.25 percent inflation component and a 5.00 percent real rate of return, net of investment expenses.

The annual investment return assumption is prescribed in Section 9-16-335 of the South Carolina Code of Laws and as described above, the Retirement System Funding and Administration Act of 2017 lowered the assumed annual rate of return from 7.50 percent to 7.25 percent, effective July 1, 2017.

Rates of Annual Salary Increase

Rates of salary are assumed to increase at an annual rate of 2.75 percent.

Judges and Solicitors Retirement System
Active Member Decrement Rates

a. Assumed rates of service retirement are shown in the following table. In addition to the rates in the table below, all participants are assumed to retire upon reaching the mandatory retirement age of 72.

Service Based Retirement Rates

Years of Service	Male	Female
15-19	10.00%	10.00%
20-24	40.00%	40.00%
25-31	15.00%	15.00%
32+	100.00%	100.00%

Note: Retirement rate will be 100% at 31 years of service for solicitors and public defenders.

b. An abbreviated table with the assumed rates of disability incidence and pre-retirement mortality is shown below. The pre-retirement mortality assumption is based upon the RP-2014 Mortality Table for Employees with applicable multipliers to better reflect anticipated experience and provide margin for future improvement in mortality.

Disability Rates/Pre-Retirement Mortality

Age	Disability Incidence Rates		Pre-Retirement Mortality	
	Male	Female	Male	Female
25	0.0419%	0.0458%	0.0460%	0.0147%
30	0.0629%	0.0616%	0.0429%	0.0185%
35	0.0838%	0.0616%	0.0497%	0.0243%
40	0.1572%	0.1074%	0.0597%	0.0337%
45	0.2620%	0.2200%	0.0924%	0.0558%
50	0.4192%	0.3520%	0.1602%	0.0937%
55	0.6812%	0.5720%	0.2649%	0.1422%
60	1.0480%	0.8800%	0.4454%	0.2076%
Multiplier	105%	88%	95%	85%

Note: The multiplier has been applied to the decrement in the illustrative table.

c. There is no active employment withdrawal assumption.

Judges and Solicitors Retirement System
Post Retirement Mortality

a. Healthy retirees and beneficiaries – The 2016 Public Retirees of South Carolina Mortality Table for Males and the 2016 Public Retirees of South Carolina Mortality Table for Females, both projected used the AA projection table from the year 2016 with multipliers based on plan experience. The following are sample rates:

Healthy Annuitant Mortality Rates Before Projection

Age	Male	Female
50	0.1875%	0.1284%
55	0.2949%	0.2177%
60	0.5394%	0.3765%
65	0.9382%	0.5230%
70	1.4461%	0.8511%
75	2.5019%	1.6363%
80	4.6454%	3.2910%
85	8.4266%	6.2277%
90	14.6319%	10.9026%
Multiplier	92%	98%

Note: The multiplier has been applied to the decrement in the illustrative table.

The following table provides the life expectancy for individuals retiring in future years based on the assumption with full generational projection.

Life Expectancy for an Age 65 Retiree in Years

Gender	Year of Retirement			
	2020	2025	2030	2035
Male	21.2	21.5	21.9	22.2
Female	23.6	23.8	24.0	24.1

b. A separate table of mortality rates is used for disabled retirees based on the RP-2014 Disabled Mortality table projected using the AA projection table from the year 2016 and with multipliers based on plan experience. The following are sample rates:

Judges and Solicitors Retirement System
Disabled Annuitant Mortality Rates

Age	Male	Female
50	2.5494%	1.4884%
55	2.9211%	1.8099%
60	3.3255%	2.1249%
65	3.9606%	2.6075%
70	5.0433%	3.5254%
75	6.7859%	5.1306%
80	9.5770%	7.6295%
85	14.1629%	11.3025%
90	21.6256%	16.5815%
Multiplier	125%	125%

Note: The multiplier has been applied to the decrement in the illustrative table.

Asset Valuation Method

The actuarial value of assets is equal to the market value, adjusted for the five-year phase in of the actual investment return in excess of (or less than) the expected investment return on a market value of asset basis. This five-year phase in begins with the investment experience for the fiscal year ending June 30, 2016. The actual return is calculated net of investment expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's market value of assets, adjusted for contributions, benefits paid, and refunds.

Actuarial Cost Method

The Entry Age Normal actuarial cost method allocates the System's actuarial present value of future benefits to various periods based upon service. The portion of the present value of future benefits allocated to years of service prior to the valuation date is the actuarial accrued liability, and the portion allocated to years following the valuation date is the present value of future normal costs. The normal cost is determined for each active member as the level percent of payroll necessary to fully fund the expected benefits to be earned over the career of each individual active member. The normal cost is partially funded with active member contributions with the remainder funded by employer contributions.

An unfunded accrued liability exists in the amount equal to the excess of accrued liability over valuation assets. The amortization period of the System is the number of years required to fully amortize the unfunded accrued liability, on an actuarial value of asset basis, with the expected amount of employer contributions in excess of the employers' portion of the normal cost.

The calculation of the amortization period takes into account scheduled increases to contribution rates applicable to future years and payroll growth. Also, the calculation of the amortization period reflects additional contributions the System receives with respect to members in DROP and who are retired-in-place. These

contributions are assumed to grow at the same payroll growth rate as for active employees. It is assumed that amortization payments are made monthly at the end of the month.

Note, the principle financial measurement calculations in this actuarial valuation, which include the unfunded actuarial accrued liability, funded ratio, contribution rates, and funding period, are based on an actuarial value of assets (smoothed value) basis. The actuarial value of assets is a calculated asset value, which may be greater than or less than the market value of assets and is used to dampen some of the volatility in the market value of assets. As a result, many of these measures would be different if they were determined on a market value of assets basis.

Future Cost-of-Living Increases

Future benefits are assumed to increase at an annual rate of 2.75 percent.

Payroll Growth Rate

The total annual payroll of active members (including DROP and retired-in-place participants) is assumed to increase at an annual rate of 2.75 percent. This rate represents the underlying expected annual rate of wage inflation and does not anticipate increases in the number of members.

Other Assumptions

1. The normal cost rate is increased by 0.12 percent to account for administrative expenses that are paid with plan assets.
2. Percent married: 95 percent of male and female employees are assumed to be married.
3. Age difference: Males are assumed to be four years older than their spouses.
4. Percent electing annuity on death (when eligible): All of the spouses of vested, married participants are assumed to elect an immediate life annuity.
5. Inactive Population: All non-vested members are assumed to take an immediate refund. Members with a vested benefit are assumed to elect a deferred benefit commencing at their earliest possible commencement age.
6. There will be no recoveries once disabled.
7. Decrement timing: Decrements of all types are assumed to occur mid-year.
8. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
9. Benefit Service: All active members are assumed to accrue one year of eligibility service each year.

Participant Data

Participant data was securely supplied in electronic text files. There were separate files for (i) active and inactive members, and (ii) members and beneficiaries receiving benefits.

The data for active members included birth date, gender, service with the current employer and total vesting service, salary, and employee contribution account balances. For retired members and beneficiaries, the data included date of birth, gender, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and form of payment code.

Salary supplied for the current year was based on the annualized earnings for the year preceding the valuation date. Assumptions were made to correct for missing or inconsistent data. These had no material impact on the results presented.

Judges and Solicitors Retirement System
Development of Actuarial Value of Assets

(Amounts expressed in thousands)

		Year Ending June 30, 2018
1.	Actuarial value of assets at beginning of year	$ 160,189
2.	Market value of assets at beginning of year	$ 152,151
3.	Net new investments	
	a. Contributions	$ 14,059
	b. Disbursements	(17,897)
	c. Subtotal	(3,838)
4.	Market value of assets at end of year	$ 160,036
5.	Net earnings (Item 4. - Item 2. - Item 3.c.)	$ 11,723
6.	Assumed investment return rate for fiscal year	7.25%
7.	Expected return (Item 6. x (Item 2. + 1/2 Item 3.c.))	$ 10,892
8.	Excess return (Item 5. - Item 7.)	$ 831
9.	Excess return on assets as of June 30, 2018:	

	Fiscal Year Ending June 30,	Excess Return/(Shortfall)	Percent Deferred	Deferred Amount
a.	2018	$ 831	80%	$ 665
b.	2017	6,031	60%	3,619
c.	2016	(11,747)	40%	(4,699)
d.	2015	(14,537)	20%	(2,907)
e.	2014	N/A	0%	N/A
f.	Total			$ (3,322)

10.	Actuarial value of assets as of June 30, 2018 (Item 4. - Item 9.f.)	$ 163,358
11.	Expected actuarial value as of June 30, 2018	$ 167,826
12.	Asset gain (loss) for year (Item 10. - Item 11.)	$ (4,468)
13.	Asset gain (loss) as % of the actuarial value of assets	(2.7%)
14.	Ratio of actuarial value to market value	102.1%

South Carolina National Guard

Supplemental Retirement Plan

Summary of Actuarial Methods and Assumptions

Based on recommendations from the consulting actuary, the PEBA Board is responsible for adopting all actuarial methods and assumptions used in the annual actuarial valuations, except for the assumed rate of investment return. The assumed rate of return is established by the General Assembly. South Carolina State Statute requires that an experience analysis that reviews the economic and demographic assumptions be performed at least once every five years. As a result of the most recent experience analysis for the five year period ended June 30, 2015, the PEBA Board adopted a number of changes in the actuarial assumptions which were utilized beginning with the July 1, 2016 annual valuations. The recommended adjustments to the actuarial assumptions included salary increase, payroll growth, mortality, retirement, inflation, and asset valuation method. The experience study also recommended reducing the long-term investment rate of return assumption, which was lowered by the General Assembly to 7.25 percent beginning with the July 1, 2017 annual valuations. The assumed rate of return will expire on July 1, 2021, and every four years thereafter. Before the assumed rate of return is due to expire the PEBA Board must propose an annual rate of return, which will become effective if the General Assembly fails to enact a rate of return before its expiration.

Following is a summary of the actuarial assumptions and methods used in the July 1, 2018 valuation of the South Carolina National Guard Supplemental Retirement Plan for funding purposes and financial reporting purposes.

Investment Rate of Return

The assumed annual investment rate of return of 7.25 percent net of investment expenses is composed of a 2.25 percent inflation component and a 5.00 percent real rate of return, net of investment expenses.

The annual investment return assumption is prescribed in Section 9-16-335 of the South Carolina Code of Laws and as described above, the Retirement System Funding and Administration Act of 2017 lowered the assumed annual rate of return from 7.50 percent to 7.25 percent, effective July 1, 2017.

Rates of Annual Salary Increase

No increases in salary are assumed. The benefit is not related to pay.

South Carolina National Guard Supplemental Retirement Plan

Active Member Decrement Rates

a. Assumed rates of service retirement are shown in the following table. Members who retire prior to age 60 are assumed to defer retirement benefits until age 60.

Age and Service Based Retirement Rates

Age	Years of Service		
	20 – 24	25 – 29	30 +
Age<60	2.5%	5.0%	100.0%
Age>59	100.0%	100.0%	100.0%

Note: Members who reach age 60 with less than 20 years of service are assumed to retire at age 60 without a benefit from the plan.

b. An abbreviated table with the assumed rates of disability and mortality while employed is shown below. There is no active employment withdrawal assumption.

Disability Rates/Pre-Retirement Mortality

Age	Disability Rates		Pre-Retirement Mortality	
	Male	Female	Male	Female
25	0.1740%	0.1740%	0.0460%	0.0164%
30	0.2320%	0.2320%	0.0429%	0.0207%
35	0.4350%	0.4350%	0.0497%	0.0272%
40	0.5800%	0.5800%	0.0597%	0.0376%
45	0.8700%	0.8700%	0.0924%	0.0624%
50	1.0875%	1.0875%	0.1602%	0.1047%
55	0.0000%	0.0000%	0.2649%	0.1589%
60	0.0000%	0.0000%	0.4454%	0.2320%
Multiplier	145%	145%	95%	95%

Note: The multiplier has been applied to the decrement in the illustrative table.

South Carolina National Guard Supplemental Retirement Plan

Post Retirement Mortality

Retirees and beneficiaries – The 2016 Public Retirees of South Carolina Mortality Table for Males and the 2016 Public Retirees of South Carolina Mortality Table for Females projected using Scale AA projection table from the year 2016 and multipliers based on plan experience. The following are sample rates:

Annuitant Mortality Rates Before Projection

Age	Male	Female
50	0.2548%	0.1454%
55	0.4006%	0.2465%
60	0.7329%	0.4265%
65	1.2748%	0.5924%
70	1.9648%	0.9640%
75	3.3994%	1.8534%
80	6.3116%	3.7276%
85	11.4493%	7.0538%
90	19.8803%	12.3489%
Multiplier	125%	111%

The following table provides the life expectancy for individuals retiring in future years based on the assumption with full generational projection.

Life Expectancy for an Age 65 Retiree in Years

Gender	Year of Retirement			
	2020	2025	2030	2035
Male	18.9	19.3	19.7	20.0
Female	22.7	22.8	23.0	23.2

Asset Valuation Method

The actuarial value of assets is equal to the market value, adjusted for the five-year phase in of the actual investment return in excess of (or less than) the expected investment return on a market value of asset basis. This five-year phase in begins with the investment experience for the fiscal year ending June 30, 2016. The actual return is calculated net of investment expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's market value of assets, adjusted for contributions, benefits paid, and refunds.

Actuarial Cost Method

The Entry Age Normal actuarial cost method allocates the System's actuarial present value of future benefits to various periods based upon service. The portion of the present value of future benefits allocated to years of service prior to the valuation date is the actuarial accrued liability, and the portion allocated to years following the valuation date is the present value of future normal costs. The normal cost is determined for each active member as the level dollar amount necessary to fully fund the expected benefits to be earned over the career of

each individual active member. The normal cost is partially funded with active member contributions with the remainder funded by employer contributions.

An unfunded accrued liability exists in the amount equal to the excess of accrued liability over valuation assets. The amortization period of the System is the number of years required to fully amortize the unfunded accrued liability, on an actuarial value of asset basis, with the expected amount of employer contributions in excess of the employers' portion of the normal cost.

Note, the principle financial measurement calculations in this actuarial valuation, which include the unfunded actuarial accrued liability, funded ratio, contribution rates, and funding period, are based on an actuarial value of assets (smoothed value) basis. The actuarial value of assets is a calculated asset value which may be greater than or less than the market value of assets and is used to dampen some of the volatility in the market value of assets. As a result, many of these measures would be different if they were determined on a market value of assets basis.

Future Cost-of-Living Increases

No increases are assumed.

Payroll Growth Rate

None assumed.

Other Assumptions

1. The normal cost includes $15,000 for plan incurred administrative expenses.
2. There is not a marriage assumption.
3. Decrement timing: Decrements of all types are assumed to occur mid-year.
4. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

Participant Data

Participant data was securely supplied in electronic text files. There were separate files for (i) active, and (ii) members and beneficiaries receiving benefits.

The data for active members included birth date, gender, total military service, and total South Carolina National Guard service. For retired members and beneficiaries, the data included date of birth, gender, spouse's date of birth (where applicable), amount of monthly benefit, date of retirement, and form of payment code.

Assumptions were made to correct for missing or inconsistent data. These had no material impact on the results presented.

South Carolina National Guard Supplemental Retirement Plan
Development of Actuarial Value of Assets

(Amounts expressed in thousands)

			Year Ending June 30, 2018
1.	Actuarial value of assets at beginning of year	$	27,807
2.	Market value of assets at beginning of year	$	26,036
3.	Net new investments		
	a. Contributions	$	4,814
	b. Disbursements	$	(4,425)
	c. Subtotal		389
4.	Market value of assets at end of year	$	28,327
5.	Net earnings (Item 4. - Item 2. - Item 3.c.)	$	1,902
6.	Assumed investment return rate for fiscal year		7.25%
7.	Expected return (Item 6. x (Item 2. + 1/2 Item 3.c.))	$	1,902
8.	Excess return (Item 5. - Item 7.)	$	0
9.	Excess return on assets as of June 30, 2018:		

	Fiscal Year Ending June 30,	Excess Return/(Shortfall)	Percent Deferred	Deferred Amount
a.	2018	$ -	80%	$ -
b.	2017	776	60%	466
c.	2016	(1,884)	40%	(754)
d.	2015	(3,156)	20%	(631)
e.	2014	N/A	0%	N/A
f.	Total			$ (919)

10.	Actuarial value of assets as of June 30, 2018 (Item 4. - Item 9.f.)	$	29,246
11.	Expected actuarial value as of June 30, 2018	$	30,226
12.	Asset gain (loss) for year (Item 10. - Item 11.)	$	(980)
13.	Asset gain (loss) as % of the actuarial value of assets		(3.4%)
14.	Ratio of actuarial value to market value		103.2%

South Carolina Retirement System
Summary of Historical Active Membership

		Active Members		Covered Payroll[1]		Average Annual Pay			
July 1,	Number of Employers[2]	Number	Percent Increase/ (Decrease)	Amount in Thousands	Percent Increase/ (Decrease)	Amount	Percent Increase/ (Decrease)	Average Age	Average Service
2018	812	196,184	1.1%	$ 8,797,592	2.4%	$ 44,844	1.23%	45	10
2017	807	193,985	1.6%	8,592,885	4.6%	44,297	2.97%	45	10
2016	812	190,923	1.9%	8,213,042	5.8%	43,018	3.77%	45	10
2015	816	187,318	1.1%	7,765,588	3.0%	41,457	1.86%	45	10
2014	810	185,265	0.3%	7,539,996	1.4%	40,698	1.10%	45	10
2013	808	184,690	(0.6%)	7,434,820	1.1%	40,256	1.65%	45	10
2012	806	185,748	(1.0%)	7,356,231	(4.3%)	39,603	(3.35%)	45	10
2011	803	187,611	(1.4%)	7,687,558	(1.1%)	40,976	0.33%	45	11
2010	800	190,239	(1.1%)	7,769,820	(4.7%)	40,842	1.20%	45	10
2009	781	192,319	(0.3%)	7,761,808	2.7%	40,359	2.95%	45	10

[1] Covered payroll is the annualized, projected compensation for the following year and does not include payroll attributable to members in ORP or working retirees.

[2] Number of employers that cover employees eligible for SCRS benefits and that contributed to the system during the last fiscal year. Although the state is considered the primary government and includes all state agencies as a single employer, for purposes of this schedule, each state agency is reported separately and counted as an employer.

Police Officers Retirement System
Summary of Historical Active Membership

		Active Members		Covered Payroll[1]		Average Annual Pay			
July 1,	Number of Employers[2]	Number	Percent Increase/ (Decrease)	Amount in Thousands	Percent Increase/ (Decrease)	Amount	Percent Increase/ (Decrease)	Average Age	Average Service
2018	333	27,093	0.1%	$ 1,306,961	3.5%	$ 48,240	3.31%	39.4	9.7
2017	332	27,056	1.5%	1,263,314	6.4%	46,693	4.82%	39.4	9.7
2016	313	26,651	0.3%	1,187,195	7.4%	44,546	7.06%	39.5	9.8
2015	312	26,575	(0.5%)	1,105,703	2.7%	41,607	3.15%	39.4	9.7
2014	310	26,697	1.9%	1,076,885	4.2%	40,337	2.27%	39.5	9.5
2013	356	26,194	0.1%	1,033,189	1.4%	39,444	1.31%	39.5	9.4
2012	325	26,179	(1.8%)	1,019,241	(6.3%)	38,934	(4.60%)	39.6	9.5
2011	356	26,650	0.3%	1,087,587	1.0%	40,810	0.72%	39.8	9.6
2010	322	26,568	(0.1%)	1,076,467	(0.7%)	40,517	(0.60%)	39.8	8.7
2009	318	26,598	0.6%	1,084,154	2.2%	40,761	1.55%	39.6	8.4

[1] Covered payroll does not include payroll attributable to working retirees.

[2] Number of employers that cover employees eligible for PORS benefits and that contributed to the system during the last fiscal year. Although the state is considered the primary government and includes all state agencies as a single employer, for purposes of this schedule, each state agency is reported separately and counted as an employer.

General Assembly Retirement System
Summary of Historical Active Membership

		Active Members		Covered Payroll[1]		Average Annual Pay			
July 1,	Number of Employers[2]	Number	Percent Increase/ (Decrease)	Amount in Thousands	Percent Increase/ (Decrease)	Amount	Percent Increase/ (Decrease)	Average Age	Average Service
2018	2	83	(4.6%)	$ 1,866	(4.8%)	$22,476	(0.3%)	57.8	16.0
2017	2	87	(14.7%)	1,961	(15.3%)	22,535	(0.8%)	56.9	15.1
2016	2	102	(1.9%)	2,316	(0.9%)	22,710	1.0%	56.4	14.3
2015	2	104	(9.6%)	2,338	(10.1%)	22,481	(0.6%)	55.6	13.4
2014	2	115	(3.4%)	2,601	(3.2%)	22,617	0.1%	54.7	12.4
2013	2	119	(30.0%)	2,688	(30.3%)	22,588	(0.4%)	53.7	11.8
2012	2	170	0.0%	3,854	0.0%	22,671	0.0%	53.3	10.8
2011	2	170	0.0%	3,854	0.0%	22,671	0.0%	52.7	9.8
2010	2	170	0.0%	3,854	0.0%	22,671	0.0%	52.3	10.2
2009	2	170	0.0%	3,854	0.0%	22,671	0.0%	51.4	9.0

[1] For valuations prior to 2013 the annual covered payroll included the payroll of filled and unfilled positions.
[2] Number of employers that cover employees eligible for GARS benefits and that contributed to the system during the last fiscal year. Although the state is considered the primary government and includes all state agencies as a single employer, for purposes of this schedule, each state agency is reported separately and counted as an employer.

Judges and Solicitors Retirement System
Summary of Historical Active Membership

		Active Members	Covered Payroll	Average Annual Pay			
July 1,	Number of Employers[2]	Number[1]	Amount in Thousands[1]	Amount	Percent Increase/ (Decrease)	Average Age	Average Service
2018	3	160	$ 22,347	$ 139,666	0.00%	57.1	15.0
2017	3	160	22,347	139,666	(0.14%)	57.4	15.4
2016	3	157	21,958	139,861	4.56%	57.2	15.4
2015	3	157	21,267	133,756	0.28%	56.5	15.1
2014	3	153	20,815	136,048	2.00%	56.3	15.1
2013	3	153	20,407	133,381	(0.07%)	56.0	15.5
2012	3	144	19,221	133,476	3.00%	55.6	15.1
2011	3	144	18,661	129,590	0.00%	55.1	14.3
2010	3	144	18,661	129,590	0.00%	54.9	15.0
2009	3	144	18,661	129,590	0.00%	55.0	15.4

[1] Includes filled and unfilled positions and members in DROP or retired-in-place.
[2] Number of employers that cover employees eligible for JSRS benefits and that contributed to the system during the last fiscal year. Although the state is considered the primary government and includes all state agencies as a single employer, for purposes of this schedule, each state agency is reported separately and counted as an employer.

South Carolina National Guard Supplemental Retirement Plan
Summary of Historical Active Membership

July 1,	Number of Employers	Number of Members	Annual Payroll[1]	Average Pay[1]	Percent Increase in Average Pay[1]	Average Age	Average Service
2018	1	11,853	N/A	N/A	N/A	32.4	9.9
2017	1	12,116	N/A	N/A	N/A	32.3	9.8
2016	1	12,253	N/A	N/A	N/A	32.2	9.7
2015	1	12,165	N/A	N/A	N/A	32.2	9.7
2014	1	12,221	N/A	N/A	N/A	32.1	9.7
2013	1	11,997	N/A	N/A	N/A	32.0	9.5
2012	1	12,041	N/A	N/A	N/A	31.8	9.2
2011	1	12,271	N/A	N/A	N/A	32.0	9.3
2010	1	12,445	N/A	N/A	N/A	31.9	9.0
2009	1	12,599	N/A	N/A	N/A	31.7	8.7

[1] Not applicable as this is a non-contributory plan.

South Carolina Retirement System
Summary of Active Membership Data

As of July 1, 2018

(Dollar amounts expressed in thousands)

Group	Number[1]	Annual Compensation[2]
State employees	52,870	$ 2,524,592
Public school employees	87,343	3,592,284
Other agency employees	55,971	2,383,143
Total	196,184	$ 8,500,019

[1] In addition, there are 182,933 inactive members with contributions still in the system. The results of the valuation were adjusted to take these members into account.

[2] Total compensation is the annualized pay for the prior year.

Police Officers Retirement System
Summary of Active Membership Data

As of July 1, 2018

(Dollar amounts expressed in thousands)

Group	Number[1]	Annual Compensation[2]
State employees	9,301	$ 406,984
Public school employees	0	0
Other agency employees	17,792	843,904
Total	27,093	$ 1,250,888

[1] In addition, there are 17,277 inactive members with contributions still in the system. The results of the valuation were adjusted to take these members into account.

[2] Total compensation is the annualized pay for the prior year.

General Assembly Retirement System
Summary of Active Membership Data

As of July 1, 2018

(Dollar amounts expressed in thousands)

Number[1]	Annual Compensation
83	$ 1,866

[1] *There are 37 inactive members with contributions still in the system, and there are 17 special contributors. The results of the valuation were adjusted to take these members into account. Numbers shown above include members receiving retirement benefits while continuing in office.*

Judges and Solicitors Retirement System
Summary of Active Membership Data

As of July 1, 2018

(Dollar amounts expressed in thousands)

Number[1]	Annual Compensation
160	$ 22,347

[1] *The number of active members reflects the number of seats, including 20 participants who are either in the DROP or have retired in place and are receiving retirement benefits while continuing in office. There are four inactive members with contributions still in the system. The results of the valuation were adjusted to take these members into account.*

South Carolina Retirement System
Summary of Membership Data

		July 1, 2018	July 1, 2017
1.	**Service retirees**		
a.	Number	119,619	117,727
b.	Total annual benefits	$ 2,600,913,042	$ 2,540,974,363
c.	Average annual benefits	$ 21,743	$ 21,584
d.	Average age at the valuation date	70.6	70.2
2.	**Disabled retirees**		
a.	Number	12,623	12,879
b.	Total annual benefits	$ 179,033,020	$ 180,736,448
c.	Average annual benefits	$ 14,183	$ 14,033
d.	Average age at the valuation date	65.4	64.8
3.	**Beneficiaries**		
a.	Number	10,036	9,682
b.	Total annual benefits	$ 126,197,858	$ 120,014,180
c.	Average annual benefits	$ 12,575	$ 12,396
d.	Average age at the valuation date	67.9	67.8

Police Officers Retirement System
Summary of Membership Data

		July 1, 2018	July 1, 2017
1.	**Service retirees**		
a.	Number	14,330	13,853
b.	Total annual benefits	$ 303,834,421	$ 289,442,139
c.	Average annual benefits	$ 21,203	$ 20,894
d.	Average age at the valuation date	65.6	65.3
2.	**Disabled retirees**		
a.	Number	2,735	2,663
b.	Total annual benefits	$ 57,369,555	$ 55,341,936
c.	Average annual benefits	$ 20,976	$ 20,782
d.	Average age at the valuation date	55.6	55.1
3.	**Beneficiaries**		
a.	Number	1,426	1,371
b.	Total annual benefits	$ 18,160,969	$ 17,136,546
c.	Average annual benefits	$ 12,736	$ 12,499
d.	Average age at the valuation date	67.8	67.6

General Assembly Retirement System
Summary of Membership Data

		July 1, 2018	July 1, 2017
1.	**Service retirees**		
a.	Number	272	279
b.	Total annual benefits	$ 5,374,962	$ 5,470,720
c.	Average annual benefits	$ 19,761	$ 19,608
d.	Average age at the valuation date	74.4	73.8
2.	**Disabled retirees**		
a.	Number	0	0
b.	Total annual benefits	$ 0	$ 0
c.	Average annual benefits	$ 0	$ 0
d.	Average age at the valuation date	N/A	N/A
3.	**Beneficiaries**		
a.	Number	71	75
b.	Total annual benefits	$ 980,964	$ 1,060,790
c.	Average annual benefits	$ 13,816	$ 14,144
d.	Average age at the valuation date	74.0	74.1

Judges and Solicitors Retirement System
Summary of Membership Data

		July 1, 2018	July 1, 2017
1.	**Service retirees**		
a.	Number[1]	155	157
b.	Total annual benefits	$ 16,157,726	$ 16,267,077
c.	Average annual benefits	$ 104,243	$ 103,612
d.	Average age at the valuation date	72.2	71.7
2.	**Disabled retirees**		
a.	Number	0	0
b.	Total annual benefits	$ 0	$ 0
c.	Average annual benefits	$ 0	$ 0
d.	Average age at the valuation date	N/A	N/A
3.	**Beneficiaries**		
a.	Number	58	56
b.	Total annual benefits	$ 1,683,805	$ 1,633,030
c.	Average annual benefits	$ 29,031	$ 29,161
d.	Average age at the valuation date	71.0	70.8

[1] *Includes members in DROP and retired-in-place.*

South Carolina National Guard Supplemental Retirement Plan
Summary of Membership Data

		July 1, 2018	July 1, 2017
1.	**Active members**		
a.	Males	9,548	9,813
b.	Females	2,305	2,303
c.	Total members	11,853	12,116
d.	Average age	32.4	32.3
e.	Average service	9.9	9.8
2.	**Vested inactive members**		
a.	Number	1,895	1,901
b.	Total annual deferred benefits	$ 1,516,920	$ 1,508,760
c.	Average annual deferred benefits	$ 800	$ 794
3.	**Service retirees**		
a.	Number	4,821	4,789
b.	Total annual benefits	$ 4,381,020	$ 4,357,440
c.	Average annual benefit	$ 909	$ 910
d.	Average age	71.2	70.8

South Carolina Retirement System
Schedule of Retirants Added to and Removed from Rolls

(Amounts except average allowance expressed in thousands)

	Added to Rolls[2]		Removed from Rolls[3]		Rolls End of the Year			
July 1,	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits	% Increase in Annual Benefit	Average Annual Benefit
2018	5,841	$ 127,882	3,851	$ 63,463	142,278	$ 2,906,144	2.3%	$ 20,426
2017	6,044	132,616	3,611	57,354	140,288	2,841,725	2.7%	20,256
2016	6,515	133,741	3,300	50,824	137,855	2,766,463	3.1%	20,068
2015	6,640	133,490	3,510	54,660	134,640	2,683,547	3.0%	19,931
2014	7,084	148,060	3,270	49,971	131,510	2,604,716	3.9%	19,806
2013	9,088	204,581	3,319	50,142	127,696	2,506,627	6.6%	19,630
2012	9,523	205,050	2,968	44,099	121,927	2,352,188	7.3%	19,292
2011	6,336	141,242	2,358	31,382	115,372	2,191,236	5.3%	18,993
2010	6,596	151,348	3,216	44,049	111,394	2,081,376	5.4%	18,685
2009	6,190	101,813	2,698	36,834	108,014	1,974,077	3.4%	18,276

[2] Annual benefits added to rolls includes the benefit adjustments provided to continuing retirees.
[3] The removed from rolls count does not include members who are replaced by beneficiaries.

Police Officers Retirement System
Schedule of Retirants Added to and Removed from Rolls

(Amounts except average allowance expressed in thousands)

	Added to Rolls[2]		Removed from Rolls[3]		Rolls End of the Year			
July 1,	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits	% Increase in Annual Benefit	Average Annual Benefit
2018	983	$ 24,066	379	$ 6,621	18,491	$ 379,365	4.8%	$ 20,516
2017	987	22,709	388	6,662	17,887	361,921	4.6%	20,234
2016	928	19,940	349	5,394	17,288	345,874	4.4%	20,007
2015	968	19,767	362	6,076	16,709	331,329	4.3%	19,829
2014	818	16,881	332	5,650	16,103	317,638	3.7%	19,725
2013	1,278	27,584	314	5,106	15,617	306,407	7.9%	19,620
2012	1,566	34,086	271	4,143	14,653	283,929	11.8%	19,377
2011	1,042	22,580	250	2,970	13,358	253,986	8.4%	19,014
2010	943	21,877	327	5,000	12,566	234,376	7.8%	18,652
2009	931	17,937	267	3,879	11,950	217,499	6.9%	18,201

[2] Annual benefits added to rolls includes the benefit adjustments provided to continuing retirees.
[3] The removed from rolls count does not include members who are replaced by beneficiaries.

General Assembly Retirement System
Schedule of Retirants Added to and Removed from Rolls

(Amounts except average allowance expressed in thousands)

	Added to Rolls[2]		Removed from Rolls[3]		Rolls End of the Year			
July 1,	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits	% Increase in Annual Benefit	Average Annual Benefit
2018	4	$ 55	15	$ 231	343	$ 6,356	-2.7%	$ 18,530
2017	18	345	22	427	354	6,532	-1.2%	18,451
2016	7	109	11	161	358	6,614	-0.8%	18,475
2015	15	262	8	193	362	6,666	1.1%	18,414
2014	12	200	20	358	355	6,596	-2.3%	18,581
2013	22	444	17	353	363	6,754	1.4%	18,606
2012	16	251	11	130	358	6,663	1.8%	18,611
2011	12	238	5	108	353	6,542	2.0%	18,534
2010	7	148	14	261	346	6,412	-1.7%	18,532
2009	26	505	15	266	353	6,525	3.8%	18,484

[2] Annual benefits added to rolls includes benefit adjustments provided to continuing retirees.
[3] The removed from rolls count does not include members who are replaced by beneficiaries.

Judges and Solicitors Retirement System
Schedule of Retirants Added to and Removed from Rolls[1]

(Amounts except average allowance expressed in thousands)

	Added to Rolls[2]		Removed from Rolls[3]		Rolls End of the Year			
July 1,	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits	% Increase in Annual Benefit	Average Annual Benefit
2018	11	$ 734	11	$ 792	213	$ 17,842	-0.3%	$ 83,765
2017	7	535	4	352	213	17,900	1.0%	84,038
2016	10	1,355	6	300	210	17,717	6.3%	84,367
2015	8	757	6	497	206	16,662	1.6%	80,883
2014	7	637	4	192	204	16,402	2.8%	80,402
2013	10	279	9	42	201	15,957	1.5%	79,388
2012	6	912	4	184	200	15,720	4.9%	78,600
2011	9	827	5	196	198	14,992	4.4%	75,717
2010	18	1,210	8	593	194	14,361	4.5%	74,025
2009	10	903	4	259	184	13,744	4.9%	74,696

[1] Includes participants who have retired in place.
[2] Annual benefits added to rolls includes benefit adjustments provided to continuing retirees.
[3] The removed from rolls count does not include members who are replaced by beneficiaries.

South Carolina National Guard Supplemental Retirement Plan
Schedule of Retirants Added to and Removed from Rolls

(Amounts except average allowance expressed in thousands)

	Added to Rolls		Removed from Rolls		Rolls End of the Year			
July 1,	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits	% Increase in Annual Benefit	Average Annual Benefit
2018	192	$ 174	160	$ 150	4,821	$ 4,381	0.6%	$ 909
2017	222	197	142	137	4,789	4,357	1.4%	910
2016	195	172	133	125	4,709	4,297	1.1%	912
2015	155	142	136	122	4,647	4,250	0.5%	915
2014	195	165	108	103	4,628	4,230	1.5%	914
2013	244	211	122	116	4,541	4,168	2.3%	918
2012	259	228	92	87	4,419	4,073	3.6%	922
2011	399	351	98	93	4,252	3,932	7.0%	925
2010	267	237	101	99	3,951	3,674	3.9%	930
2009	378	335	85	83	3,785	3,536	7.7%	934

Schedule of Funding Progress[1]

(Amounts expressed in thousands)

SCRS	July 1,	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Annual Covered Payroll[2]	UAAL as % of Payroll
	2018	$ 27,030,937	$ 49,104,763	$ 22,073,826	55.0%	$ 9,183,081	240.4%
	2017	27,241,570	48,374,725	21,133,155	56.3%	8,592,885	245.9%
	2016	27,293,968	45,859,906	18,565,938	59.5%	8,213,042	226.1%
	2015	27,365,921	44,119,176	16,753,255	62.0%	7,765,588	215.7%
	2014	26,910,740	42,889,614	15,978,874	62.7%	7,539,996	211.9%
	2013	25,753,068	41,196,062	15,442,994	62.5%	7,434,820	207.7%
	2012	25,540,749	39,457,708	13,916,959	64.7%	7,356,231	189.2%
	2011	25,604,823	38,011,610	12,406,787	67.4%	7,687,558	161.4%
	2010	25,400,331	38,774,029	13,373,698	65.5%	7,769,820	172.1%
	2009	25,183,062	37,150,315	11,967,253	67.8%	7,761,808	154.2%

PORS	July 1,	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Annual Covered Payroll[2]	UAAL as % of Payroll
	2018	$ 4,654,193	$ 7,378,084	$ 2,723,891	63.1%	$ 1,306,961	208.4%
	2017	4,480,894	7,109,612	2,628,718	63.0%	1,263,314	208.1%
	2016	4,354,853	6,567,397	2,212,544	66.3%	1,187,195	186.4%
	2015	4,266,794	6,162,095	1,895,301	69.2%	1,105,703	171.4%
	2014	4,105,308	5,905,828	1,800,520	69.5%	1,076,885	167.2%
	2013	3,922,041	5,663,756	1,741,715	69.2%	1,033,189	168.6%
	2012	3,808,934	5,357,492	1,548,558	71.1%	1,019,241	151.9%
	2011	3,728,241	5,122,501	1,394,260	72.8%	1,087,587	128.2%
	2010	3,612,700	4,850,457	1,237,757	74.5%	1,076,467	115.0%
	2009	3,482,220	4,564,111	1,081,891	76.3%	1,084,154	99.8%

[1] Funding progress for July 1, 2011, valuation adjusted to reflect pension reform legislation in 2012.
[2] Covered payroll does not include payroll attributable to members in State ORP or working retirees.

Effective July 1, 2008, actuarial assumptions for SCRS were changed as a result of a 5 year experience study. Changes in the investment return assumptions were adopted by the Board for the July 1, 2008 valuation for all plans.

Effective July 1, 2011, actuarial assumptions were changed as a result of a 5 year experience study. The investment return assumption, inflation assumption, rate of salary increases, payroll growth assumption, post-retirement mortality assumption for all groups, retirement rates and termination rates were revised for both SCRS and PORS. The actuarial valuation of asset method was changed from one that recognized the difference between the expected and actual return on the market value of assets over a 10-year period, to a modified 5-year asset smoothing method for both SCRS and PORS. In addition, there were minor changes to the rates of disability incidence for SCRS.

Effective July 1, 2012, disability and retirement rates were updated to more appropriately reflect the anticipated plan experience as a result of the legislation which resulted in substantial changes to the benefit provisions of both SCRS and PORS.

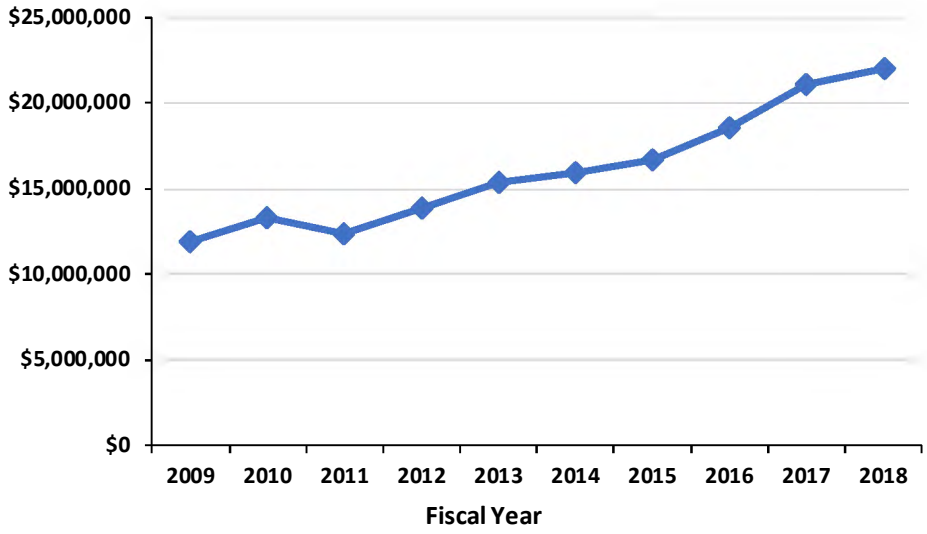
Effective July 1, 2016, actuarial assumptions were changed as a result of a 5 year experience study. The inflation assumption, rate of salary increases, payroll growth assumption, post-retirement mortality tables and pre-retirement mortality assumption were revised for both SCRS and PORS. The actuarial valuation of asset method was changed such that each year's investment gain or loss (determined on a market value of asset basis) is recognized over a closed five-year period at the rate of 20% per year for both SCRS and PORS. In addition, there were changes to the rates of withdrawal and retirement for SCRS and changes to the rates of retirement and disability for PORS.

Effective July 1, 2017, the Retirement System Funding and Administration Act of 2017 became law. The legislation lowered the retirement systems' assumed rate of return from 7.50 percent to 7.25 percent and reduced the maximum amortization period for the retirement systems from 30 years to 20 years over a ten-year schedule.

South Carolina Retirement System
Funding Progress with Funded Ratios[1]

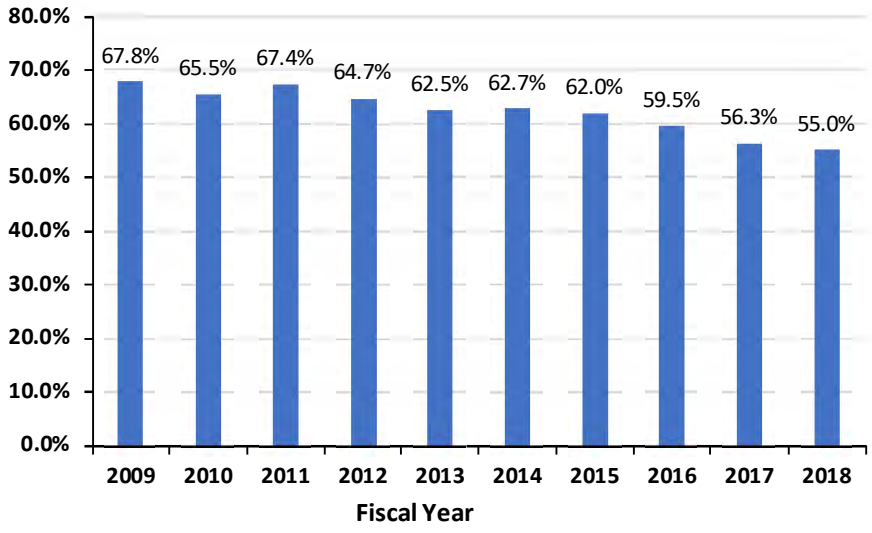
Unfunded Accrued Liabilities

(Amounts expressed in thousands)



Funded Ratios

(Actuarial assets as a percentage of actuarial accrued liabilities)

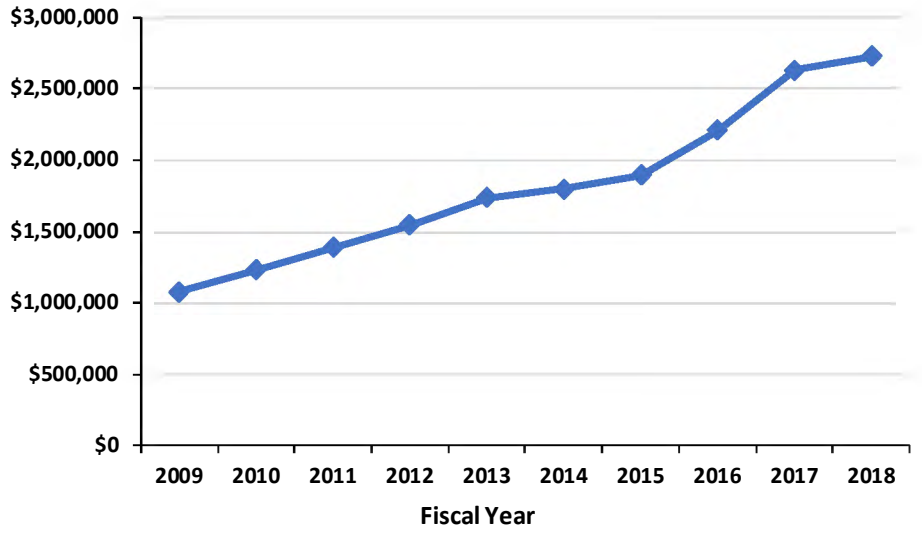


[1] *A 10-year schedule of actuarially determined and actual contributions can be found in the Required Supplementary Information portion of the Financial Section as part of the Schedule of Employers' and Nonemployer's Contributions.*

Police Officers Retirement System
Funding Progress with Funded Ratios[1]

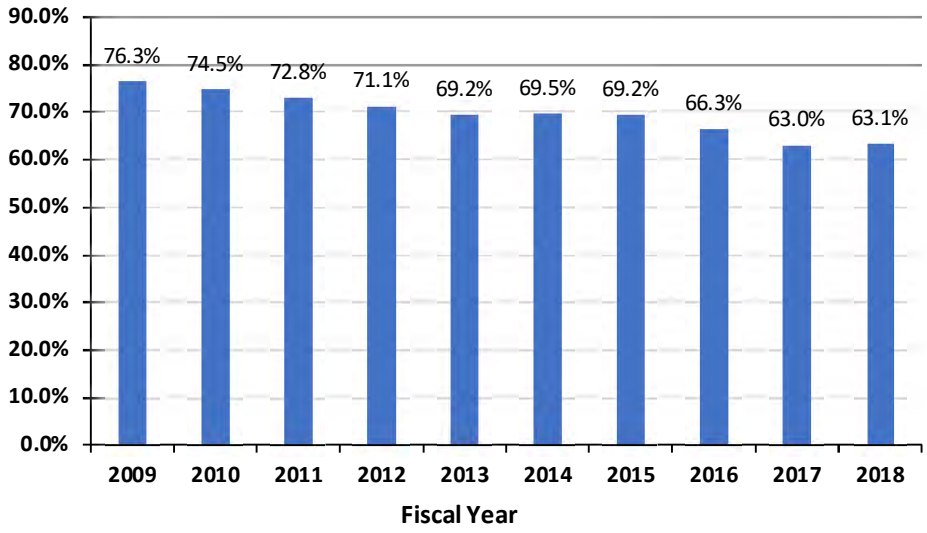
Unfunded Accrued Liabilities

(Amounts expressed in thousands)



Funded Ratios

(Actuarial assets as a percentage of actuarial accrued liabilities)



[1] *A 10-year schedule of actuarially determined and actual contributions can be found in the Required Supplementary Information portion of the Financial Section as part of the Schedule of Employers' and Nonemployer's Contributions.*

Schedule of Funding Progress

(Amounts expressed in thousands)

GARS	July 1,	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Annual Covered Payroll[1]	UAAL as % of Payroll
	2018	$ 34,902	$ 73,004	$ 38,102	47.8%	$ 1,866	2,041.9%
	2017	34,887	74,855	39,968	46.6%	1,961	2,038.2%
	2016	35,926	74,996	39,070	47.9%	2,316	1,686.9%
	2015	37,312	74,509	37,197	50.1%	2,338	1,591.0%
	2014	37,646	74,514	36,868	50.5%	2,601	1,417.5%
	2013	38,033	75,639	37,606	50.3%	2,688	1,399.0%
	2012	39,233	74,332	35,099	52.8%	3,854	910.7%
	2011	41,484	74,604	33,120	55.6%	3,854	859.4%
	2010	43,712	68,671	24,959	63.7%	3,854	647.6%
	2009	45,891	68,491	22,600	67.0%	3,854	586.4%

[1] For valuations prior to 2013, the annual covered payroll included the payroll of filled and unfilled positions.

JSRS	July 1,	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Annual Covered Payroll	UAAL as % of Payroll
	2018	$ 163,358	$ 293,815	$ 130,457	55.6%	$ 22,347	583.8%
	2017	160,189	295,630	135,441	54.2%	22,347	606.1%
	2016	158,837	283,304	124,467	56.1%	21,958	566.8%
	2015	157,983	269,675	111,692	58.6%	21,267	525.2%
	2014	152,839	264,293	111,454	57.8%	20,815	535.4%
	2013	147,648	256,988	109,340	57.5%	20,407	535.8%
	2012	145,604	251,729	106,125	57.8%	19,221	552.1%
	2011	144,927	243,514	98,587	59.5%	18,661	528.3%
	2010	142,871	215,823	72,952	66.2%	18,661	390.9%
	2009	141,797	214,363	72,566	66.1%	18,661	388.9%

Changes in the investment return assumptions were adopted by the Board for the July 1, 2008 valuation for all plans.

Effective July 1, 2011, actuarial assumptions were changed as a result of a 5 year experience study. The investment return assumption, inflation assumption and the mortality assumption were revised for both GARS and JSRS. The actuarial valuation of asset method was changed from one that recognized the difference between the expected and actual return on the market value of assets over a 10-year period, to a modified 5-year asset smoothing method for both GARS and JSRS.

Effective July 1, 2012, legislation increased the member contribution rate from 10 percent of pay to 11 percent of pay effective January 1, 2013 for GARS members. The legislation also closed GARS to new members. Newly elected members of the General Assembly on or after the general election of 2012 shall elect to become members of SCRS, State ORP or non-membership.

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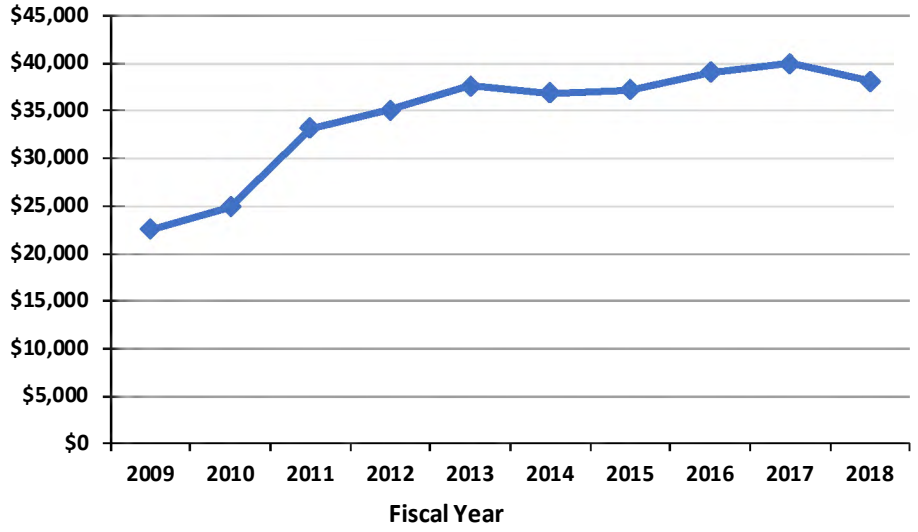
Effective July 1, 2017, the Retirement System Funding and Administration Act of 2017 became law. The legislation lowered the retirement systems' assumed rate of return from 7.50 percent to 7.25 percent.

General Assembly Retirement System

Funding Progress with Funded Ratios[1]

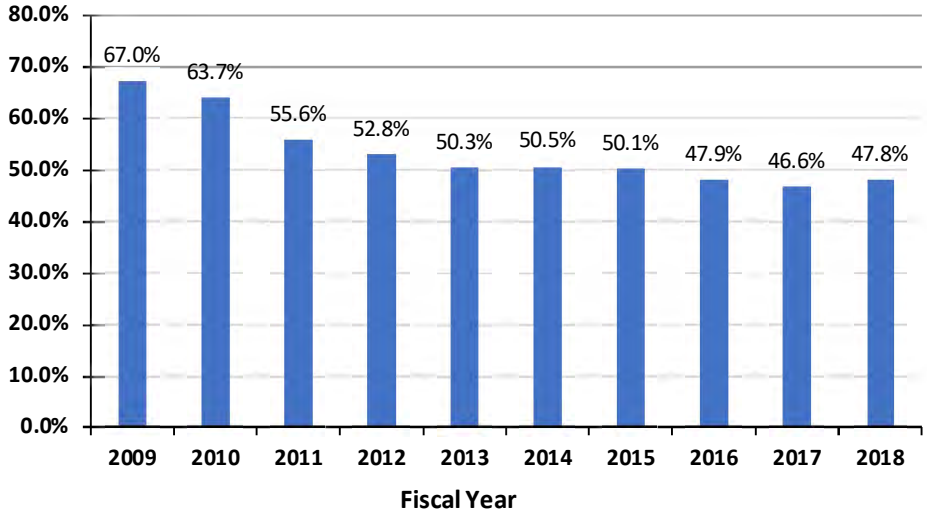
Unfunded Accrued Liabilities

(Amounts expressed in thousands)



Funded Ratios

(Actuarial assets as a percentage of actuarial accrued liabilities)

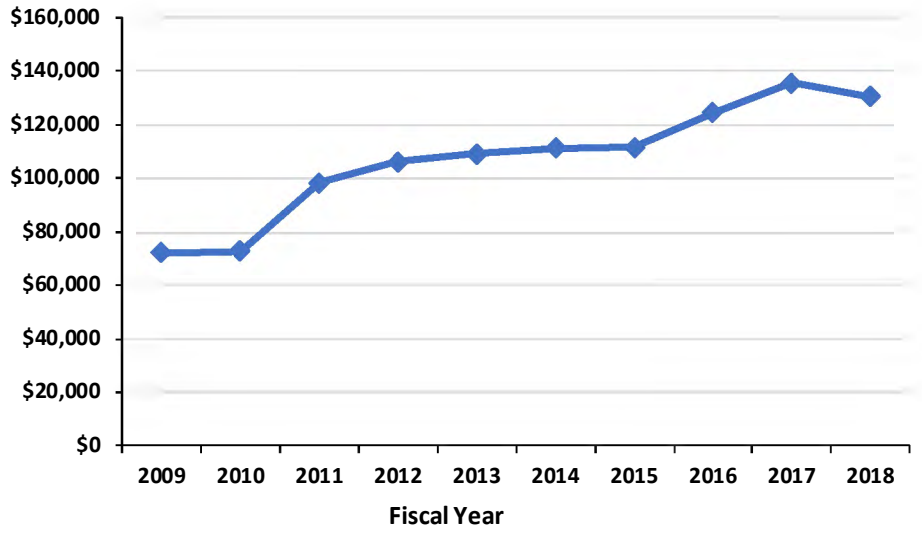


[1] *A 10-year schedule of actuarially determined and actual contributions can be found in the Required Supplementary Information portion of the Financial Section as part of the Schedule of Employers' and Nonemployer's Contributions.*

Judges and Solicitors Retirement System
Funding Progress with Funded Ratios[1]

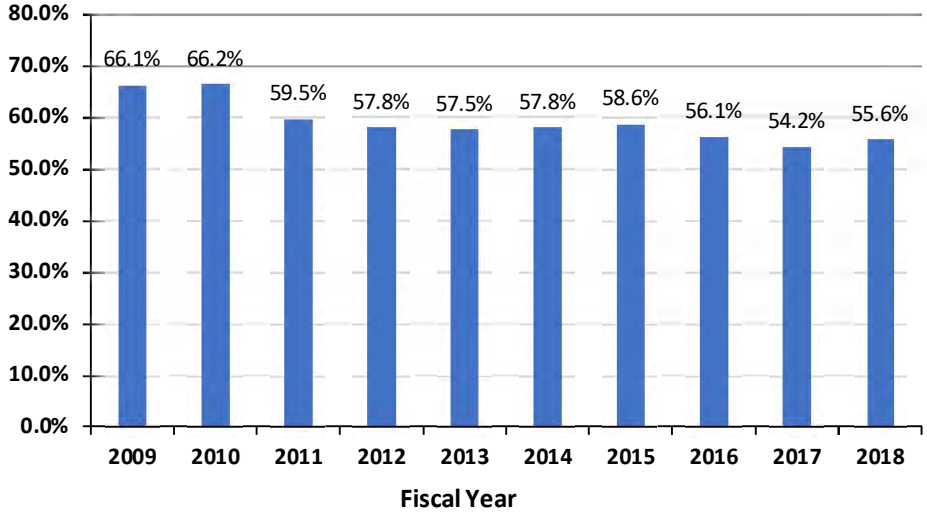
Unfunded Accrued Liabilities

(Amounts expressed in thousands)



Funded Ratios

(Actuarial assets as a percentage of actuarial accrued liabilities)



[1] *A 10-year schedule of actuarially determined and actual contributions can be found in the Required Supplementary Information portion of the Financial Section as part of the Schedule of Employers' and Nonemployer's Contributions.*

Schedule of Funding Progress

(Amounts expressed in thousands)

SCNG	July 1,	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Annual Covered Payroll	UAAL as % of Payroll
	2018	$ 29,246	$ 66,192	$ 36,946	44.2%	N/A	N/A
	2017	27,807	66,506	38,699	41.8%	N/A	N/A
	2016	26,751	64,445	37,694	41.5%	N/A	N/A
	2015	25,727	62,141	36,414	41.4%	N/A	N/A
	2014	24,029	62,100	38,071	38.7%	N/A	N/A
	2013	22,208	61,576	39,368	36.1%	N/A	N/A
	2012	20,814	60,942	40,128	34.2%	N/A	N/A
	2011	20,138	60,388	40,250	33.3%	N/A	N/A
	2010	19,458	54,153	34,695	35.9%	N/A	N/A
	2009	18,600	53,421	34,821	34.8%	N/A	N/A

Changes in the investment return assumptions were adopted by the Board for the July 1, 2008 valuation for all plans.

Effective July 1, 2011, actuarial assumptions were changed as a result of a 5 year experience study. The investment return assumption, inflation assumption and the mortality assumption were revised for SCNG. The actuarial valuation of asset method was changed from one that recognized the difference between the expected and actual return on the market value of assets over a 10-year period, to a modified 5-year asset smoothing method for SCNG.

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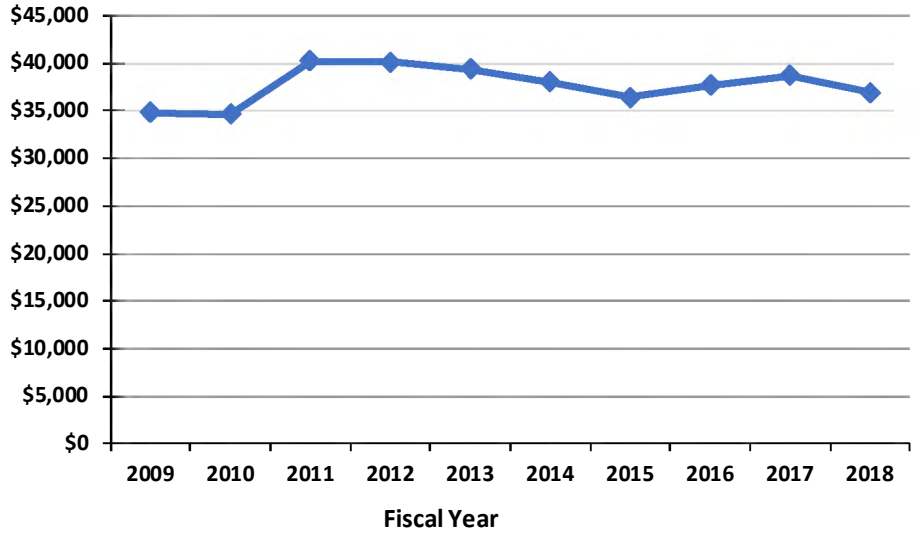
Effective July 1, 2017, the Retirement System Funding and Administration Act of 2017 became law. The legislation lowered the retirement systems' assumed rate of return from 7.50 percent to 7.25 percent.

South Carolina National Guard Supplemental Retirement Plan

Funding Progress with Funded Ratios[1]

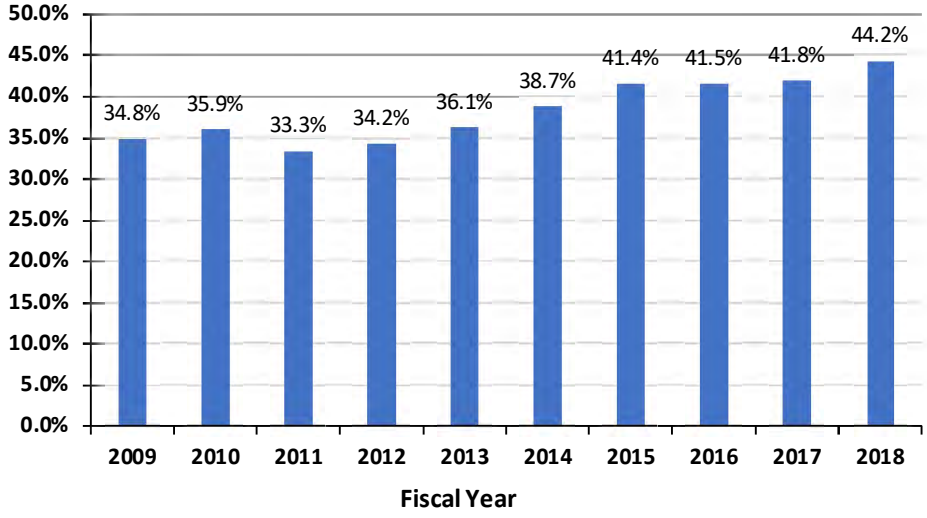
Unfunded Accrued Liabilities

(Amounts expressed in thousands)



Funded Ratios

(Actuarial assets as a percentage of actuarial accrued liabilities)



[1] *A 10-year schedule of actuarially determined and actual contributions can be found in the Required Supplementary Information portion of the Financial Section as part of the Schedule of Employers' and Nonemployer's Contributions.*

South Carolina Retirement System
Reconciliation of UAAL

As of July 1, 2018

(Amounts expressed in thousands)

Item		Amount of Increase/Decrease
Beginning of year UAAL	$	21,133,155
Interest on UAAL		1,532,154
Amortization payment		(1,228,369)
Assumption/method changes		0
Asset experience		833,485
Salary experience		(153,810)
Other liability experience		(42,789)
Legislative changes		0
End of year UAAL	$	22,073,826

Police Officers Retirement System
Reconciliation of UAAL

As of July 1, 2018

(Amounts expressed in thousands)

Item		Amount of Increase/Decrease
Beginning of year UAAL	$	2,628,718
Interest on UAAL		190,582
Amortization payment		(161,576)
Assumption/method changes		0
Asset experience		117,557
Salary experience		4,816
Other liability experience		(56,206)
Legislative changes		0
End of year UAAL	$	2,723,891

General Assembly Retirement System
Reconciliation of UAAL

As of July 1, 2018

(Amounts expressed in thousands)

Item		Amount of Increase/Decrease
Beginning of year UAAL	$	39,968
Interest on UAAL		2,898
Amortization payment		(5,421)
Assumption/method changes		0
Asset experience		1,715
Other liability experience		(1,058)
Legislative changes		0
End of year UAAL	$	38,102

Judges and Solicitors Retirement System
Reconciliation of UAAL

As of July 1, 2018

(Amounts expressed in thousands)

Item		Amount of Increase/Decrease
Beginning of year UAAL	$	135,441
Interest on UAAL		9,819
Amortization payment		(8,524)
Assumption/method changes		0
Asset experience		4,468
COLA		(5,434)
Salary experience		(2,402)
Other liability experience		(2,911)
Legislative changes		0
End of year UAAL	$	130,457

South Carolina National Guard Supplemental Retirement Plan

Reconciliation of UAAL

As of July 1, 2018

(Amounts expressed in thousands)

Item		Amount of Increase/Decrease
Beginning of year UAAL	$	38,699
Interest on UAAL		2,806
Amortization payment		(4,284)
Assumption/method changes		0
Asset experience		995
Other liability experience		(1,270)
Legislative changes		0
End of year UAAL	$	36,946

Solvency Test

(Amounts expressed in thousands)

		Actuarial Accrued Liability				Portion of Aggregate Accrued Liabilities Covered by Assets		
SCRS	July 1,	Active Member Contributions	Retirants & Beneficiaries	Active & Inactive Members (Employer Financed)	Valuation Assets	Active	Retirants	ER Financed
	2018	$ 8,501,051	$ 30,760,223	$ 9,843,489	$ 27,030,937	100%	60.2%	0%
	2017	7,938,850	30,745,598	9,690,277	27,241,570	100%	62.8%	0%
	2016	7,447,442	29,830,649	8,581,815	27,293,968	100%	66.5%	0%
	2015	7,054,277	28,645,954	8,418,945	27,365,921	100%	70.9%	0%
	2014	6,717,327	27,942,644	8,229,643	26,910,740	100%	72.3%	0%
	2013	6,491,895	26,548,472	8,155,695	25,753,068	100%	72.6%	0%
	2012	6,459,192	24,732,406	8,266,110	25,540,749	100%	77.2%	0%
	2011	6,472,646	23,160,658	8,378,306	25,604,823	100%	82.6%	0%
	2010	6,222,854	22,585,243	9,965,932	25,400,331	100%	84.9%	0%
	2009	5,980,022	21,381,561	9,788,732	25,183,062	100%	89.8%	0%
PORS	2018	$ 1,104,572	$ 4,307,805	$ 1,965,707	$ 4,654,193	100%	82.4%	0.0%
	2017	1,034,549	4,136,503	1,938,560	4,480,894	100%	83.3%	0.0%
	2016	968,722	3,881,514	1,717,161	4,354,853	100%	87.2%	0.0%
	2015	905,768	3,624,713	1,631,614	4,266,794	100%	92.7%	0.0%
	2014	850,383	3,490,161	1,565,284	4,105,308	100%	93.3%	0.0%
	2013	793,414	3,385,496	1,484,846	3,922,041	100%	92.4%	0.0%
	2012	773,710	3,118,016	1,465,766	3,808,934	100%	97.3%	0.0%
	2011	786,724	2,784,144	1,551,633	3,728,241	100%	100.0%	10.1%
	2010	758,695	2,577,772	1,513,990	3,612,700	100%	100.0%	18.2%
	2009	726,214	2,348,685	1,489,212	3,482,220	100%	100.0%	27.4%

Effective July 1, 2008, actuarial assumptions for SCRS were changed as a result of a 5 year experience study. Changes in the investment return assumptions were adopted by the Board for the July 1, 2008 valuation for all plans.

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July 1, 2011, valuation adjusted to reflect pension reform legislation in 2012.

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Solvency Test

(Amounts expressed in thousands)

		Actuarial Accrued Liability				Portion of Aggregate Accrued Liabilities Covered by Assets		
GARS	July 1,	Active Member Contributions	Retirants & Beneficiaries	Active & Inactive Members (Employer Financed)	Valuation Assets	Active	Retirants	ER Financed
	2018	$ 7,066	$ 55,749	$ 10,189	$ 34,902	100%	49.9%	0%
	2017	6,852	58,042	9,961	34,887	100%	48.3%	0%
	2016	7,334	57,314	10,348	35,926	100%	49.9%	0%
	2015	7,295	58,384	8,830	37,312	100%	51.4%	0%
	2014	7,358	58,098	9,058	37,646	100%	52.1%	0%
	2013	7,164	59,592	8,883	38,033	100%	51.8%	0%
	2012	7,267	58,213	8,852	39,233	100%	54.9%	0%
	2011	7,100	58,291	9,213	41,484	100%	59.0%	0%
	2010	7,265	53,486	7,920	43,712	100%	68.1%	0%
	2009	6,822	54,586	7,083	45,891	100%	71.6%	0%
JSRS	2018	$ 28,259	$ 198,893	$ 66,663	$ 163,358	100%	67.9%	0.0%
	2017	26,703	203,030	65,897	160,189	100%	65.7%	0.0%
	2016	25,082	200,323	57,899	158,837	100%	66.8%	0.0%
	2015	24,650	186,481	58,544	157,983	100%	71.5%	0.0%
	2014	22,926	184,625	56,742	152,839	100%	70.4%	0.0%
	2013	21,369	178,526	57,093	147,648	100%	70.7%	0.0%
	2012	20,005	177,483	54,241	145,604	100%	70.8%	0.0%
	2011	18,864	169,841	54,809	144,927	100%	74.2%	0.0%
	2010	17,816	150,696	47,311	142,871	100%	83.0%	0.0%
	2009	18,431	144,464	51,468	141,797	100%	85.4%	0.0%

Changes in the investment return assumptions were adopted by the Board for the July 1, 2008 valuation for all plans.

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Solvency Test

(Amounts expressed in thousands)

SCNG	July 1,	Actuarial Accrued Liability: Active Member Contributions	Actuarial Accrued Liability: Retirants & Beneficiaries	Actuarial Accrued Liability: Active & Inactive Members (Employer Financed)	Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets: Active	Portion of Aggregate Accrued Liabilities Covered by Assets: Retirants	Portion of Aggregate Accrued Liabilities Covered by Assets: ER Financed
	2018	$ 0	$ 35,132	$ 31,060	$ 29,246	N/A	83.2%	0%
	2017	0	35,391	31,115	27,807	N/A	78.6%	0%
	2016	0	34,562	29,883	26,751	N/A	77.4%	0%
	2015	0	33,521	28,620	25,727	N/A	76.7%	0%
	2014	0	33,739	28,361	24,029	N/A	71.2%	0%
	2013	0	33,590	27,986	22,208	N/A	66.1%	0%
	2012	0	32,989	27,953	20,814	N/A	63.1%	0%
	2011	0	32,038	28,350	20,138	N/A	62.9%	0%
	2010	0	28,492	25,661	19,458	N/A	68.3%	0%
	2009	0	27,558	25,863	18,600	N/A	67.5%	0%

Changes in the investment return assumptions were adopted by the Board for the July 1, 2008 valuation for all plans.

Effective July 1, 2011, actuarial assumptions were changed as a result of a 5 year experience study. The investment return assumption, inflation assumption and the mortality assumption were revised for SCNG. The actuarial valuation of asset method was changed from one that recognized the difference between the expected and actual return on the market value of assets over a 10-year period, to a modified 5-year asset smoothing method for SCNG.

Effective July 1, 2016, actuarial assumptions were changed as a result of a 5 year experience study. The inflation assumption, rate of salary increases, payroll growth assumption, post-retirement mortality tables, pre-retirement mortality assumption and rates of withdrawal, disability and retirement were revised for SCNG. The actuarial valuation of asset method was changed such that each year's investment gain or loss (determined on a market value of asset basis) is recognized over a closed five-year period at the rate of 20% per year for SCNG.

Effective July 1, 2017, the Retirement System Funding and Administration Act of 2017 became law. The legislation lowered the retirement systems' assumed rate of return from 7.50 percent to 7.25 percent.

Summary of Basic Provisions

As of July 1, 2018

SCRS	PORS	GARS	JSRS	SCNG
1. Membership				
All permanent, full-time and part-time employees of covered employers must join unless specifically exempted by statute or are eligible and elect to participate in the State ORP. Individuals first elected to serve in the General Assembly in the general election in November 2012 or after must elect membership in either SCRS or State ORP or elect to be a nonmember.	To be eligible for PORS membership, an employee must be required by the terms of his employment, by election or appointment, to preserve public order, protect life and property, and detect crimes in the state; to prevent and control property destruction by fire; be a coroner or deputy coroner in a full-time permanent position; or be a peace officer employed by the SC Department of Corrections, the SC Department of Juvenile Justice, or the SC Department of Mental Health. Probate judges and coroners may elect membership in PORS. Magistrates are required to participate in PORS for service as a magistrate. PORS members, other than magistrates and probate judges, must also earn at least $2,000 per year and devote at least 1,600 hours per year to this work, unless exempted by statute.	All members of the General Assembly who acquired office prior to the 2012 general election are required to participate, unless exempted by Statute. Members with eight (8) or more years of credited service that cease membership in the General Assembly may elect to continue earning future service in the system by contributing the required membership contributions (i.e. special contributing member). Closed to new members. Individuals first elected to serve in the General Assembly in the general election in November 2012 or after must elect membership in either SCRS or State ORP or elect to be a nonmember.	All solicitors, circuit public defenders, judges of a Circuit or Family Court, and justices of the Court of Appeals and Supreme Court are required to participate upon taking office prior to age 72 unless exempted by statute. Effective July 1, 2014, the definition of judge is expanded to include administrative law judges. Administrative law judges who have not retired are allowed to become members.	Individuals serving in the South Carolina National Guard.
2. Employee Contributions				
Class II 9.00% of earnable compensation **Class III** 9.00% of earnable compensation Effective January 1, 2013, earnable compensation does not include pay for non-mandatory overtime.	**Class II** 9.75% of earnable compensation **Class III** 9.75% of earnable compensation	11% of earnable compensation	10% of earnable compensation	Not applicable as this is a non-contributory plan

SCRS	PORS	GARS	JSRS	SCNG
3. Employer Contributions				
Class II & III 14.41% of earnable compensation	**Class II& III** 16.84% of earnable compensation	$5,804,000 paid annually	52.49% of earnable compensation	Annual lump-sum appropriation of $5,289,727
Death Benefit Program 0.15% of earnable compensation	**Death Benefit Program** 0.20% of earnable compensation	**Death Benefit Program** Included within annual payment	**Death Benefit Program** Included within employer contribution	**Death Benefit Program** Not applicable
Accidental Death Program Not applicable	**Accidental Death Program** 0.20% of earnable compensation	**Accidental Death Program** Not applicable	**Accidental Death Program** Not applicable	**Accidental Death Program** Not applicable
4. Requirements for Service Annuity				
Class II 5 years earned service The member is entitled to a deferred reduced annuity at age 60.	**Class II** 5 years earned service The member is entitled to a deferred annuity at age 55.	8 years of service The member is entitled to a deferred annuity at age 60.	Members are vested in the system with 10 years earned service in position of judge; 8 years earned service in position of solicitor or circuit public defender.	20 years total creditable military service, at least 15 of which must have been served in the South Carolina National Guard. Additionally, the last 10 years of service must have been served in the South Carolina National Guard.
Class III 8 years earned service The member is entitled to a deferred reduced annuity at age 60.	**Class III** 8 years earned service The member is entitled to a deferred annuity at age 55.		For vested members who joined prior to 7/1/2004, member is eligible for a deferred annuity at age 55. For members who joined after 6/30/2004, member is eligible for a deferred annuity at age 65.	
5. Normal Retirement Age				
Not applicable	Not applicable	Not applicable	Age 60	Not applicable
6. Requirements for Full Service Retirement				
Class II Age 65 with 5 years of service or 28 years of credited service. The member must have a minimum of five years of earned service to qualify for retirement.	**Class II** Age 55 with 5 years of service or 25 years of credited service. The member must have a minimum of five years of earned service to qualify for retirement.	Age 60 or 30 years of service Age 70 or 30 years of service while continuing to serve in the General Assembly	Age 70 with 15 years of service Age 65 with 20 years of service 25 years of service as judge regardless of age 24 years of service as solicitor or circuit public defender regardless of age Age 65 with 4 years earned service as judge or solicitor and at least 25 years other service with the state if a member as of 6/30/2004.	Age 60 provided the member was honorably discharged from active duty with at least 20 years of total creditable military service. Of that 20 years of service, 15 years, and the final 10 years, must have been served in the South Carolina National Guard.
Class III Age 65 or meet the rule of 90 requirement. This means that the member's age plus the years of service must add up to a total of at least 90. The member must have a minimum of 8 years of earned service to qualify for retirement.	**Class III** Age 55 or 27 years of credited service. The member must have a minimum of 8 years of earned service to qualify for retirement.			

SCRS	PORS	GARS	JSRS	SCNG
7. Early Retirement				
Class II Age 60 with 5% reduction for each year of age under age 65 Age 55 with 25 years of service, reduced 4% for each year of service under 28. The member must have a minimum of five years of earned service to qualify for early retirement. **Class III** Age 60 with 5% reduction for each year under age 65 The member must have a minimum of eight years of earned service to qualify for early retirement.	Not applicable	Age 60 with 8 years of service credit	Members are vested in the system with 10 years earned service in position of judge; 8 years earned service in position of solicitor or circuit public defender. For vested members who joined prior to 7/1/2004, member is eligible for a deferred annuity at age 55. For members who joined after 6/30/2004, member is eligible for a deferred annuity at age 65.	Not applicable
8. Formula for Normal Service Retirement				
Class II 1.82% of Average Final Compensation (AFC) times years of credited service (annual benefit amount). AFC is the average annual earnable compensation during 12 consecutive quarters and includes an amount for up to 45 days termination pay at retirement for unused annual leave. **Class III** 1.82% of Average Final Compensation times years of credited service. AFC is the average annual earnable compensation during 20 consecutive quarters and termination pay for unused annual leave at retirement is not included.	**Class II** 2.14% of Average Final Compensation (AFC) times years of credited service (annual benefit amount). AFC is the average annual earnable compensation during 12 earnable consecutive quarters and includes an amount for up to 45 days termination pay at retirement for unused annual leave. **Class III** 2.14% of Average Final Compensation times years of credited service. AFC is the average annual earnable compensation during 20 consecutive quarters and termination pay for unused annual leave at retirement is not included.	4.82% of earnable compensation times years of credited service	Annual allowance of 71.3% of the current active salary of the member's position. Benefit formula increases by 2.67% for each year of active service over 25 years for judges or over 24 years for solicitors or circuit public defenders. The monthly retirement allowance may not exceed 90% of the current active salary for the member's position. Upon retirement, a member will receive an additional lump sum benefit equal to employee contributions and accumulated interest remitted after reaching the maximum 90% benefit.	For 20 years of service, retirees receive a $50 monthly benefit. For each year of service beyond the 20 years, up to 30 years of service, the retiree receives an additional $5. The maximum monthly benefit a retiree can receive is $100.

SCRS	PORS	GARS	JSRS	SCNG
9. Requirements for Disability Retirement				
A member may receive disability retirement benefits only if the member qualifies for the payment of Social Security disability benefits. **Class II** Must have at least 5 years of earned service, unless disability is the result of an injury arising out of and in the course of the performance of job duties. **Class III** Must have at least 8 years of earned service, unless disability is the result of an injury arising out of and in the course of the performance of job duties.	A member may receive disability retirement benefits only if after a medical examination of the member, the member is mentally or physically incapacitated for further performance of duty, that the incapacity is likely to be permanent, and that the member should be retired. **Class II** Must have at least 5 years of earned service, unless disability is the result of an injury arising out of and in the course of the performance of job duties. **Class III** Must have at least 8 years of earned service, unless disability is the result of an injury arising out of and in the course of the performance of job duties.	A member may receive disability retirement benefits only if after a medical examination of the member, the member is mentally or physically incapacitated for further performance of duty, that the incapacity is likely to be permanent, and that the member should be retired. Must have at least 5 years of credited service, unless disability is the result of an injury arising out of and in the course of the performance of legislative duties.	A member may receive disability retirement benefits only if to the satisfaction of the Supreme Court, or a majority of the justices thereof, the member is totally and permanently disabled, physically or mentally, or both, from further rendering useful and efficient service in the position. Must have at least 5 years of earned service.	Not applicable
10. Formula for Disability Retirement				
Disability retirement benefit is based on years of credited service at retirement, average final compensation at retirement and the current benefit multiplier for service retirement benefits. Minimum benefit of 15% of AFC at any age. .	Disability retirement benefit is based on a projection of service credit to age 55 or 25 years of service credit, whichever is less, AFC at retirement and the current benefit multiplier for service retirement benefits. Minimum benefit of 15% of AFC at any age.	The disability retirement benefit is based on the greater of the following options: a. Service benefit based upon actual credited service or b. 50% of service benefit based on projection of service to earlier of age 60 or 35 years of service.	The disability retirement benefit is based on the service retirement formula.	Not applicable

SCRS	PORS	GARS	JSRS	SCNG
11. Benefit Options				
Option A (Maximum/Retiree Only) Formula benefit as calculated in item 8. Non-recovered contributions paid upon death. **Option B (100% - 100% Joint Retiree/Survivor)** Provides a reduced (from Option A) lifetime benefit that upon retiree's death continues to retiree's beneficiary. This option is subject to non-spousal beneficiary limitations based on state statute and an Internal Revenue Code formula. **Option C (100% - 50% Joint Retiree/Survivor)** Provides a reduced (from Option A) lifetime benefit that upon retiree's death will continue to retiree's beneficiary at 50% of the retiree's annuity. Note: If a retiree selects Option B or Option C and all of the retiree's beneficiaries predecease the retiree, the retiree's benefit will revert to Option A.	**Option A (Maximum/Retiree Only)** Formula benefit as calculated in item 8. Non-recovered contributions paid upon death. **Option B (100% - 100% Joint Retiree/Survivor)** Provides a reduced (from Option A) lifetime benefit that upon retiree's death continues to retiree's beneficiary. This option is subject to non-spousal beneficiary limitations based on state statute and an Internal Revenue Code formula. **Option C (100% - 50% Joint Retiree/Survivor)** Provides a reduced (from Option A) lifetime benefit that upon retiree's death will continue to retiree's beneficiary at 50% of the retiree's annuity. Note: If a retiree selects Option B or Option C and all of the retiree's beneficiaries predecease the retiree, the retiree's benefit will revert to Option A.	**Maximum Benefit (Retiree Only)** Formula benefit as calculated in item 8. Non-recovered contributions paid upon death. **Option 1** Provides a reduced (from the Maximum Benefit) lifetime benefit that upon retiree's death continues to retiree's beneficiary. Benefit will not revert to Maximum if all of the retiree's beneficiaries predecease the retiree. **Option 2** Provides a reduced (from the Maximum Benefit) lifetime benefit that upon retiree's death will continue to retiree's beneficiary at 50% of the retiree's annuity. Benefit will not revert to Maximum if all of the retiree's beneficiaries predecease the retiree. **Revert to Maximum (1A or 2A)** This feature will allow benefits to be changed to the Maximum Benefit if the retiree selects Option 1 or Option 2 and all of the retiree's beneficiaries predecease the retiree.	**Maximum Benefit (Retiree/One-Third Spouse)** Formula as calculated in item 8. Continued annuity of one-third of member's benefit to a spouse beneficiary upon death of retiree or return of contributions to a designated non-spouse beneficiary. **Optional Allowance** Provides a reduced (from the Maximum Benefit) lifetime annuity that upon the retiree's death will continue at one-third of the retiree's annuity to a non-spouse beneficiary (or in equal shares to multiple beneficiaries).	Formula benefit as calculated in item 8.

SCRS	PORS	GARS	JSRS	SCNG
12. Deferred Retirement Option Programs				
The TERI program ended effective June 30, 2018.	Not applicable	Not applicable	A JSRS member who has not reached age 60, but is eligible to retire and receive the 90 percent maximum JSRS annuity may retire and continue to serve as a judge, solicitor, or circuit public defender. However, the monthly annuity will be deferred, without interest, until the member reaches age 60. Payout of the deferred annuity will be made when the retired JSRS member reaches the normal retirement age of 60. Employee and employer contributions must continue to be paid while a member is participating in the JSRS deferred retirement program, but no additional service is earned.	Not applicable

SCRS	PORS	GARS	JSRS	SCNG
13. Return to Work Provisions				
There is no earning limitation for members who retired prior to 1/1/2013. For members retiring after 1/1/2013, in order to return to work for a covered employer after retirement, the member must first have a complete, bona fide severance or termination of employment. After 30 days of retirement, he may be hired by an employer covered by one of the retirement systems administered by PEBA Retirement Benefits. If the member is under age 62 at retirement and returns to covered employment, he will be subject to a $10,000 per year earnings limitation. A member can earn up to $10,000 per year and continue to receive his monthly annuity. If wages earned exceed $10,000 in a calendar year, the monthly annuity will be suspended for the remainder of that year. The $10,000 earnings limitation does not apply to a retired member who receives compensation for service as an elected official, service as an appointee of the Governor with confirmation by the Senate, or service by appointment or election by the General Assembly. The $10,000 earnings limitation does not apply if the State Department of Education determines that no qualified, non-retired member is available for employment in the position, and 1) that a certified teacher is teaching in a critical academic need area or a geographic need area as defined by the State Board of Education, or 2) that a retired certified school teacher or certified employee *Continued on Next Page*	There is no earning limitation for members who retired prior to 1/1/2013. For members retiring after 1/1/2013, in order to return to work for a covered employer after retirement, the member must first have a complete, bona fide severance or termination of employment. After 30 days of retirement, he may be hired by an employer covered by one of the retirement systems administered by PEBA Retirement Benefits. If the member is under age 57 at retirement and returns to covered employment, he will be subject to a $10,000 per year earnings limitation. A member can earn up to $10,000 per year and continue to receive his monthly annuity. If wages earned exceed $10,000 in a calendar year, the monthly annuity will be suspended for the remainder of that year. The $10,000 earnings limitation does not apply to a retired member who receives compensation for service as an elected official, service as an appointee of the Governor with confirmation by the Senate, or service by appointment or election by the General Assembly. Under certain circumstances, a PORS member who retired on or before December 31, 2017, may return to covered employment without affecting his monthly retirement benefit if he is a Class 1 law enforcement officer and returns to work with a public school district as a critical needs school resource officer. The $10,000 earnings limitation does not apply if the public school *Continued on Next Page*	An active GARS member who has reached age 70 or has 30 years of service credit may retire and begin receiving a GARS retirement annuity while continuing to serve in office. The retired GARS member will receive a retirement annuity in lieu of a per diem salary and additional line item pay for certain positions. If a retired member returns to service in a position other than as a member of the General Assembly that is covered by SCRS, PORS, or JSRS, the member is subject to the same earnings limitation as under SCRS.	A member who is age 60 and eligible to receive the maximum monthly benefit, may retire and receive a retirement benefit while continuing to serve as a judge, solicitor, or circuit public defender until the end of the calendar year in which the member reaches age 72. Employee and employer contributions must continue to be paid as if the retiree was an active contributing member, but no additional service credit accrues and no additional interest is credited to their retirement account. Effective July 1, 2014, a retired member who has been retired for 30 days may be rehired by an SCRS or PORS employer and earn up to $10,000 per year. The earnings limit does not apply to members who retired prior to July 1, 2014, were at least 62 at retirement or are serving as appointed or elected official. Employee and employer contributions must continue to be paid as if the member were active in SCRS or PORS; however, the member cannot be an active member and does not accrue service credit.	Not applicable

SCRS	PORS	GARS	JSRS	SCNG
Return to Work Provisions (continued)				
is employed in a school or school district that has received a "below average" or "unsatisfactory" academic performance rating pursuant to the Education Accountability Act. After approval is received from the Department of Education, school districts must notify PEBA Retirement Benefits of the member's exemption from the earnings limitation. Retired members who return to work for a covered employer are required to contribute at the same tax-deferred percentage of gross pay as active members. No additional service credit or interest is earned. Employers of return to work retirees are also required to pay the employer contribution at the same rate as an active member.	district where the retiree is physically working and the covered employer for which the member works submit a completed School Resource Officer Critical Needs Certification (Form 7214) to PEBA. This exemption is effective July 1, 2018, and is contingent upon continued approval in each year's state budget. Retired members who return to work for a covered employer are required to contribute at the same tax-deferred percentage of gross pay as active members. No additional service credit or interest is earned. Employers of return to work retirees are also required to pay the employer contribution at the same rate as an active member.			
14. Post Retirement Increase				
Eligible annuitant payees receive an annual benefit adjustment equal to the lesser of 1% or $500.	Eligible annuitant payees receive an annual benefit adjustment equal to the lesser of 1% or $500.	Generally, if the General Assembly approves an increase in earnable compensation for active GARS members, benefits for GARS retirees and beneficiaries will increase by the same percentage on the effective date of the earnable compensation increase.	Retired member receives benefit based on current salary for member's position.	Post retirement increases are not provided.
15. Accidental Death Program				
Not applicable	Provides 50% of earnable compensation at time of accidental death in the line of duty as an annuity to either the surviving spouse, children, or parents. The annuity to surviving children ends upon each child's 18th birthday.	Not applicable	Not applicable	Not applicable

SCRS	PORS	GARS	JSRS	SCNG
16. Death Benefit Program				
Lump-sum payment equal to one year's salary payable to the beneficiary upon the death of an active member or working retired contributing member with at least one year of service.	Lump-sum payment equal to one year's salary payable to the beneficiary upon the death of an active member or working retired contributing member with at least one year of service.	Lump-sum payment equal to one year's salary payable to the beneficiary upon the death of an active member with at least one year of service.	Lump-sum payment equal to one year's salary payable to the beneficiary upon the death of an active member with at least one year of service.	Not applicable
No service requirement for death resulting from an injury arising out of the actual performance of duties for an active member.	No service requirement for death resulting from an injury arising out of the actual performance of duties for an active member.	No service requirement for death resulting from an injury arising out of the actual performance of duties for an active member.	No service requirement for death resulting from an injury arising out of the actual performance of duties for an active member.	
Lump-sum payment to retiree's beneficiary of up to $6,000 based upon years of service at retirement. Working retired contributing members are eligible for an increased death benefit payment equal to their annual salary in lieu of the standard retired member benefit.	Lump-sum payment to retiree's beneficiary of up to $6,000 based upon years of service at retirement. Working retired contributing members are eligible for an increased death benefit payment equal to their annual salary in lieu of the standard retired member benefit.	Lump-sum payment to retiree's beneficiary of up to $3,000 based upon years of service at retirement.	Lump-sum payment to retiree's beneficiary of up to $3,000 based upon years of service at retirement.	
17. Withdrawal of Employee Contributions				
Accumulated contributions, plus interest, payable upon request 90 days after termination of all covered employment.	Accumulated contributions, plus interest, payable upon request 90 days after termination of all covered employment.	Accumulated contributions, plus interest, paid as promptly as feasible upon request after termination of all covered employment.	Accumulated contributions, plus interest, paid as promptly as feasible upon request after termination of all covered employment.	Not applicable as this is a non-contributory plan.
Effective July 1, 2012, no interest is accrued on inactive accounts.	Effective July 1, 2012, no interest is accrued on inactive accounts.	Effective July 1, 2012, no interest is accrued on inactive accounts.	Effective July 1, 2012, no interest is accrued on inactive accounts.	

SCRS	PORS	GARS	JSRS	SCNG
18. Actuarial Cost Method				
The individual Entry Age Normal cost method is used for the actuarial valuation of the retirement systems for funding purposes. Under this cost method, the cost of each member's projected pension benefit is allocated on a level percent of payroll over the member's projected service with the Retirement System. Employers also finance the unfunded actuarial accrued liability as a level percentage of pay over the funding period. This method was selected because it is the method that will produce the most level contributions as a percentage of payroll from year to year. It is also the method that most equitably allocates pension costs among various generations of taxpayers.	The individual Entry Age Normal cost method is used for the actuarial valuation of the retirement systems for funding purposes. Under this cost method, the cost of each member's projected pension benefit is allocated on a level percent of payroll over the member's projected service with the Retirement System. Employers also finance the unfunded actuarial accrued liability as a level percentage of pay over the funding period. This method was selected because it is the method that will produce the most level contributions as a percentage of payroll from year to year. It is also the method that most equitably allocates pension costs among various generations of taxpayers.	The individual Entry Age Normal cost method is used for the actuarial valuation of the retirement systems for funding purposes. Under this cost method, the cost of each member's projected pension benefit is allocated on a level dollar amount over the member's projected service with the Retirement System. Employers also finance the unfunded actuarial accrued liability as a level dollar amount over the funding period. This method was selected because it is the method that will produce the most level contributions as a percentage of payroll from year to year. It is also the method that most equitably allocates pension costs among various generations of taxpayers.	The individual Entry Age Normal cost method is used for the actuarial valuation of the retirement systems for funding purposes. Under this cost method, the cost of each member's projected pension benefit is allocated on a level percent of payroll over the member's projected service with the Retirement System. Employers also finance the unfunded actuarial accrued liability as a level percentage of pay over the funding period. This method was selected because it is the method that will produce the most level contributions as a percentage of payroll from year to year. It is also the method that most equitably allocates pension costs among various generations of taxpayers.	The individual Entry Age Normal cost method is used for the actuarial valuation of the retirement systems for funding purposes. Under this cost method, the cost of each member's projected pension benefit is allocated on a level dollar amount over the member's projected service with the Retirement System. Employers also finance the unfunded actuarial accrued liability as a level dollar amount over the funding period. This method was selected because it is the method that will produce the most level contributions as a percentage of payroll from year to year. It is also the method that most equitably allocates pension costs among various generations of taxpayers.
The individual Entry Age Normal cost method is also the actuarial cost method used for financial reporting purposes.	The individual Entry Age Normal cost method is also the actuarial cost method used for financial reporting purposes.	The individual Entry Age Normal cost method is also the actuarial cost method used for financial reporting purposes.	The individual Entry Age Normal cost method is also the actuarial cost method used for financial reporting purposes.	The individual Entry Age Normal cost method is also the actuarial cost method used for financial reporting purposes.
19. Funding Policy				
The base funding policy for SCRS is set by Section 9-1-1085 of the Code of Laws, which sets contribution rates and a schedule of the maximum funding period for the system's unfunded actuarial accrued liability. Under that section, the maximum funding period must decline from 30 years for fiscal year 2018 to 20 years by fiscal year 2028. The PEBA Board must increase the employer contribution rate if necessary to meet the maximum funding period set in statute. Contributions to the system may not be decreased until the system is at least 85 percent funded.	The base funding policy for PORS is set by Section 9-11-225 of the Code of Laws, which sets contribution rates and a schedule of the maximum funding period for the system's unfunded actuarial accrued liability. Under that section, the maximum funding period must decline from 30 years for fiscal year 2018 to 20 years by fiscal year 2028. The PEBA Board must increase the employer contribution rate if necessary to meet the maximum funding period set in statute. Contributions to the system may not be decreased until the system is at least 85 percent funded.	The PEBA Board is responsible for establishing and maintaining the funding policy for GARS. The current GARS funding policy, originally set by the former Budget and Control Board, amortizes the unfunded actuarial accrued liability of the system as a level-dollar amount over a closed 25-year period beginning July 1, 2002.	The PEBA Board is responsible for establishing and maintaining the funding policy for JSRS. The current JSRS funding policy requires that the maximum funding period for the system's unfunded actuarial accrued liability decline from 28 years in fiscal year 2020 to 20 years by fiscal year 2028. The PEBA Board must increase the employer contribution rate if necessary to meet the maximum funding period set out in the policy. Contributions to the system may not be decreased until the system is at least 85 percent funded.	The PEBA Board is responsible for establishing and maintaining the funding policy for the SCNG plan. The SCNG funding policy, originally set by the former Budget and Control Board, amortizes the unfunded actuarial accrued liability of the system as a level-dollar amount over a closed 30-year period beginning July 1, 2006.

This page contains no other content.

Statistical Section

Statistical Section Summary

The objective of the Statistical Section is to provide financial statement users with additional historical perspective, context, and detail to assist in using information presented in the Financial Statements, Notes to the Financial Statements, and Required Supplementary Information to understand and assess the Systems' economic condition. Information reported in the Systems' statistical section is presented in four main categories: Financial Trends Information, Operating Information, Revenue Capacity Information, and Demographic and Economic Information.

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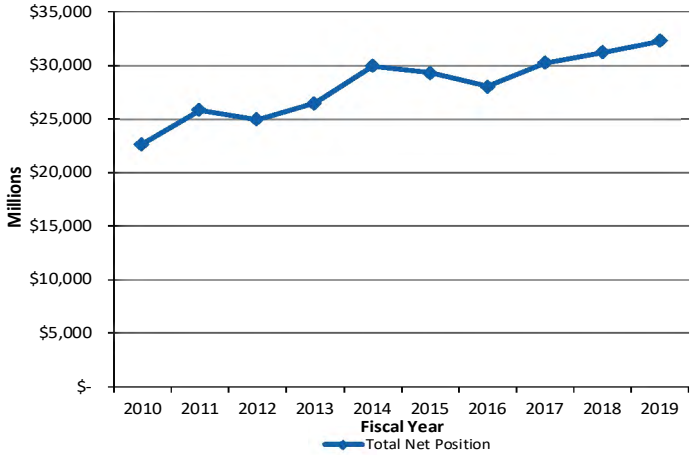
Financial Trends Information

Financial Trends Information is intended to assist users in understanding and assessing how the Systems' financial position has changed over time. The 10 year summary of fiduciary net position and 10 year schedules of changes in fiduciary net position as well as the additions by source, deductions by type, and benefit expenses by type for the last 10 fiscal years may be considered useful in determining financial trends.

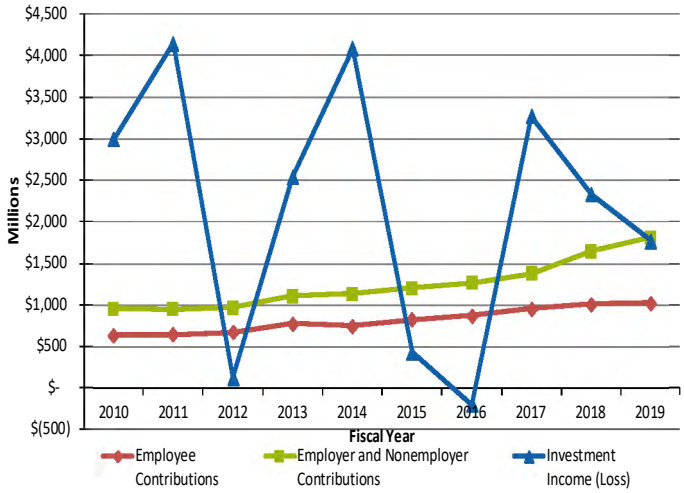
Trend of Total Fiduciary Net Position Values

A trend of the total fiduciary net position over the past 10 years reflects an overall increase; however, the plans are in a net cash outflow position with benefit payments exceeding contributions; therefore, investment performance must first make up this gap before fiduciary net position can grow. Negative investment returns and relatively flat investment performance realized during fiscal years 2012, 2015 and 2016 resulted in decreases in the net position of the portfolio. The increases in fiscal years 2017, 2018 and 2019 were attributable to both increased contributions and positive investment performance.



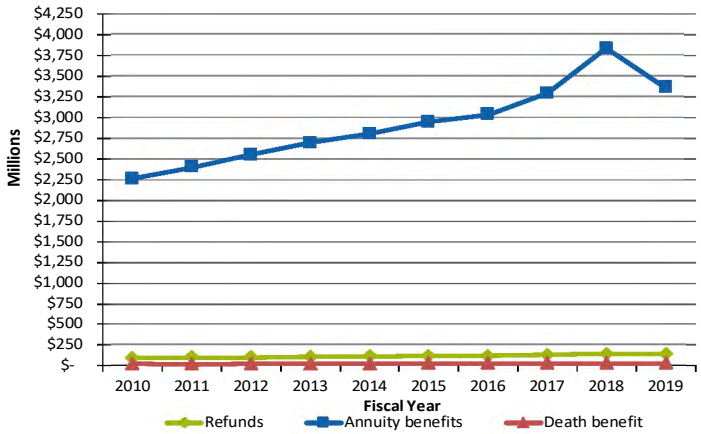
Trend of Total Pension Trust Funds Additions by Source

Employee and employer contributions have gradually increased primarily due to increases in contribution rates, although changes in the amount of covered payroll and members purchasing service have also had an impact. Legislation enacted effective July 1, 2017 increased the employer and employee contribution rates and established a ceiling on SCRS and PORS employee contribution rates. To help offset a portion of the increased contribution requirement for employers, the General Assembly funded a portion of SCRS and PORS contributions for fiscal years 2018 and 2019 as nonemployer contributions. Investment income is much more volatile due to its dependence on the market.



Trend of Total Pension Trust Funds Deductions by Type

The combined impact of increases in the number of retired members and benefit adjustments granted to retirees, has resulted in a steady rise in the annuity expense over the past 10 years. In addition, the surge in the amount of distributions paid to members with the closure of the TERI program spiked an increase in fiscal years 2017 and 2018. Even though regular monthly retirement benefits increased, total benefit expenses decreased from fiscal year 2018 to 2019 due to the closure of the TERI program the prior year.



South Carolina Retirement Systems
10 Year Summary of Fiduciary Net Position

As of June 30

(Amounts expressed in thousands)

	2019	2018	2017	2016	2015
Assets					
Cash and cash equivalents, receivables, and prepaid expenses	$ 4,323,924	$ 3,359,600	$ 3,712,085	$ 4,979,349	$ 3,622,210
Investments, at fair value	29,547,472	29,243,863	27,995,164	24,790,218	27,093,961
Securities lending cash collateral invested	41,327	34,612	123,275	55,737	70,177
Capital assets, net of accumulated depreciation	2,232	2,362	2,537	2,741	3,005
Total assets	33,914,955	32,640,437	31,833,061	29,828,045	30,789,353
Liabilities					
Deferred retirement benefits	70	377,263	95,327	71,693	68,104
Obligations under securities lending	41,327	34,612	123,275	55,737	70,177
Other liabilities	1,587,595	1,021,458	1,397,531	1,633,962	1,345,382
Total liabilities	1,628,992	1,433,333	1,616,133	1,761,392	1,483,663
Net Position Restricted for Pensions	$ 32,285,963	$ 31,207,104	$ 30,216,928	$ 28,066,653	$ 29,305,690

	2014	2013[1]	2012[2]	2011	2010
Assets					
Cash and cash equivalents, receivables, and prepaid expenses	$ 4,063,173	$ 4,023,274	$ 3,416,972	$ 3,977,880	$ 5,298,443
Investments, at fair value	26,754,819	24,587,950	23,157,144	23,870,891	18,829,568
Securities lending cash collateral invested	72,645	106,633	184,025	229,161	324,593
Capital assets, net of accumulated depreciation	2,912	3,083	2,984	3,103	3,221
Total assets	30,893,549	28,720,940	26,761,125	28,081,035	24,455,825
Liabilities					
Deferred retirement benefits	56,901	68,344	386,302	364,005	323,093
Obligations under securities lending	72,645	106,633	184,025	229,161	324,593
Other liabilities	836,292	1,645,150	1,211,693	1,596,020	1,116,479
Total liabilities	965,838	1,820,127	1,782,020	2,189,186	1,764,165
Net Position Restricted for Pensions	$ 29,927,711	$ 26,900,813	$ 24,979,105	$ 25,891,849	$ 22,691,660

[1] In accordance with GASB 67, financial statements for fiscal year 2013 were restated to report a liability only for benefits due, but not yet distributed to members who had ended their participation in the DROP program at June 30. Also, in an effort to more closely align with RSIC and their investment advisor, Global asset allocation and certain derivative investments such as swaps, options and futures were reclassified for fiscal year 2013 to conform to the presentation in fiscal year 2014.

[2] Certain assets held in strategic partnerships were reclassified for fiscal year 2012 to conform to the change in presentation for fiscal year 2013. In an effort to conform to investment reporting by the RSIC; cash, short duration and high yield investments held in the strategic partnerships that were previously classified as alternatives are now presented in the respective categories of cash and cash equivalents, short term securities and domestic fixed income.

South Carolina Retirement System
10 Year Schedule of Changes in Fiduciary Net Position

Year Ended June 30

(Amounts expressed in thousands)

	2019	2018	2017	2016	2015
Additions					
Employee contributions	$ 880,664	$ 868,681	$ 826,543	$ 754,153	$ 716,107
Employer contributions	1,450,308	1,300,477	1,168,847	1,072,659	1,022,478
Nonemployer contributions	88,706	104,974			
Net investment income (loss)	1,499,391	1,986,948	2,791,215	(165,394)	374,152
Other income	320	355	393	611	514
Total additions	3,919,389	4,261,435	4,786,998	1,662,029	2,113,251
Deductions					
Refunds	118,067	113,867	105,169	93,694	95,104
Annuity benefits	2,938,736	3,427,005	2,907,666	2,668,819	2,590,806
Death benefits	21,806	22,284	22,677	20,659	20,144
Administrative and other expenses	16,780	16,192	15,019	14,323	13,890
Total deductions	3,095,389	3,579,348	3,050,531	2,797,495	2,719,944
Net increase (decrease) in Net Position	824,000	682,087	1,736,467	(1,135,466)	(606,693)
Net Position Restricted for Pensions					
Beginning of year	26,414,916	25,732,829	23,996,362	25,131,828	25,738,521
End of year	$ 27,238,916	$ 26,414,916	$ 25,732,829	$ 23,996,362	$ 25,131,828

	2014	2013 [1]	2012	2011	2010
Additions					
Employee contributions	$ 652,631	$ 674,783	$ 586,818	$ 562,170	$ 561,261
Employer contributions	962,798	948,157	824,652	808,343	818,523
Net investment income (loss)	3,517,324	2,195,648	109,307	3,598,069	2,612,663
Other income	587	657	733	884	957
Total additions	5,133,340	3,819,245	1,521,510	4,969,466	3,993,404
Deductions					
Refunds	90,250	87,212	83,134	84,591	75,814
Annuity benefits	2,462,146	2,368,510	2,256,519	2,134,031	2,014,418
Death benefits	19,240	19,133	18,295	16,485	19,921
Administrative and other expenses	14,235	16,629	21,683	20,467	19,593
Total deductions	2,585,871	2,491,484	2,379,631	2,255,574	2,129,746
Net increase (decrease) in Net Position	2,547,469	1,327,761	(858,121)	2,713,892	1,863,658
Net Position Restricted for Pensions					
Beginning of year	23,191,052	21,863,291	22,395,029	19,681,137	17,817,479
End of year	$ 25,738,521	$ 23,191,052	$ 21,536,908	$ 22,395,029	$ 19,681,137

[1] In accordance with GASB 67, Annuity Benefits reported in fiscal year 2013 were restated to include only DROP amounts actually distributed to participants as well as amounts due but not yet distributed. Also, RSIC administrative expenses previously classified as administrative expenses were reclassified as investment expenses and therefore included in the net investment income (loss) category for fiscal year 2013.

Police Officers Retirement System
10 Year Schedule of Changes in Fiduciary Net Position

Year Ended June 30

(Amounts expressed in thousands)

	2019	2018	2017	2016	2015
Additions					
Employee contributions	$ 144,747	$ 138,652	$ 127,840	$ 115,188	$ 106,854
Employer contributions	237,821	211,793	192,006	175,223	166,451
Nonemployer contributions	12,470	13,122			
Net investment income (loss)	264,323	331,529	455,914	(24,636)	58,705
Other income	1,161	1,547	1,293	1,192	1,083
Total additions	660,522	696,643	777,053	266,967	333,093
Deductions					
Refunds	21,608	23,899	19,964	19,178	17,453
Annuity benefits	389,050	371,283	354,749	339,536	324,829
Death benefits	1,890	2,751	2,104	1,960	2,150
Administrative and other expenses	2,596	2,402	2,149	2,082	1,938
Total deductions	415,144	400,335	378,966	362,756	346,370
Net increase (decrease) in Net Position	245,378	296,308	398,087	(95,789)	(13,277)
Net Position Restricted for Pensions					
Beginning of year	4,570,431	4,274,123	3,876,036	3,971,825	3,985,102
End of year	$ 4,815,809	$ 4,570,431	$ 4,274,123	$ 3,876,036	$ 3,971,825

	2014	2013 [1]	2012	2011	2010
Additions					
Employee contributions	$ 96,004	$ 97,164	$ 84,470	$ 79,334	$ 77,051
Employer contributions	155,608	143,389	134,299	129,314	123,163
Net investment income (loss)	538,386	329,467	17,198	519,531	362,566
Other income	2,286	3,043	1,957	1,944	1,308
Total additions	792,284	573,063	237,924	730,123	564,088
Deductions					
Refunds	16,184	14,983	15,162	14,902	13,673
Annuity benefits	313,216	297,631	265,582	244,443	224,977
Death benefits	2,410	1,985	1,851	1,984	2,019
Administrative and other expenses	1,820	2,006	2,872	2,735	2,577
Total deductions	333,630	316,605	285,467	264,064	243,246
Net increase (decrease) in Net Position	458,654	256,458	(47,543)	466,059	320,842
Net Position Restricted for Pensions					
Beginning of year	3,526,448	3,269,990	3,317,533	2,851,474	2,530,632
End of year	$ 3,985,102	$ 3,526,448	$ 3,269,990	$ 3,317,533	$ 2,851,474

[1] In accordance with GASB 67, RSIC administrative expenses previously classified as administrative expenses were reclassified as investment expenses and therefore included in the net investment income (loss) category for fiscal year 2013.

General Assembly Retirement System
10 Year Schedule of Changes in Fiduciary Net Position

Year Ended June 30

(Amounts expressed in thousands)

	2019	2018	2017	2016	2015
Additions					
Employee contributions	$ 162	$ 287	$ 468	$ 292	$ 369
Employer contributions	5,804	5,428	4,539	4,501	4,275
Net investment income (loss)	1,887	2,376	3,329	(266)	500
Other income			19		
Total additions	7,853	8,091	8,355	4,527	5,144
Deductions					
Refunds	17			22	
Annuity benefits	6,480	6,452	6,678	6,625	6,639
Death benefits	18	16	59	9	21
Administrative and other expenses	20	18	17	165	36
Total deductions	6,535	6,486	6,754	6,821	6,696
Net increase (decrease) in Net Position	1,318	1,605	1,601	(2,294)	(1,552)
Net Position Restricted for Pensions					
Beginning of year	33,394	31,789	30,188	32,482	34,034
End of year	$ 34,712	$ 33,394	$ 31,789	$ 30,188	$ 32,482

	2014	2013 [1]	2012	2011	2010
Additions					
Employee contributions	$ 384	$ 1,091	$ 724	$ 624	$ 544
Employer contributions	4,063	2,831	2,532	2,414	2,598
Net investment income (loss)	4,545	3,111	172	5,682	4,642
Other income	15	199		1	36
Total additions	9,007	7,232	3,428	8,721	7,820
Deductions					
Refunds	41	3	31	57	4
Annuity benefits	6,799	6,720	6,570	6,528	6,512
Death benefits	20	16	35	58	6
Administrative and other expenses	17	20	30	179	33
Total deductions	6,877	6,759	6,666	6,822	6,555
Net increase (decrease) in Net Position	2,130	473	(3,238)	1,899	1,265
Net Position Restricted for Pensions					
Beginning of year	31,904	31,431	34,669	32,770	31,505
End of year	$ 34,034	$ 31,904	$ 31,431	$ 34,669	$ 32,770

[1] In accordance with GASB 67, RSIC administrative expenses previously classified as administrative expenses were reclassified as investment expenses and therefore included in the net investment income (loss) category for fiscal year 2013.

Judges and Solicitors Retirement System
10 Year Schedule of Changes in Fiduciary Net Position

Year Ended June 30

(Amounts expressed in thousands)

	2019	2018	2017	2016	2015
Additions					
Employee contributions	$ 2,840	$ 3,016	$ 2,928	$ 2,303	$ 3,153
Employer contributions	11,730	11,043	10,534	10,202	10,109
Net investment income (loss)	9,183	11,723	16,399	(871)	2,216
Other income	96		253	27	286
Total additions	23,849	25,782	30,114	11,661	15,764
Deductions					
Refunds			629	60	
Annuity benefits	17,947	17,655	17,679	16,989	16,832
Death benefits	3	156	293	143	4
Administrative and other expenses	92	86	79	105	71
Total deductions	18,042	17,897	18,680	17,297	16,907
Net increase (decrease) in Net Position	5,807	7,885	11,434	(5,636)	(1,143)
Net Position Restricted for Pensions					
Beginning of year	160,036	152,151	140,717	146,353	147,496
End of year	$ 165,843	$ 160,036	$ 152,151	$ 140,717	$ 146,353

	2014	2013 [1]	2012	2011	2010
Additions					
Employee contributions	$ 2,448	$ 2,596	$ 2,299	$ 2,209	$ 2,343
Employer contributions	9,659	8,667	8,414	8,414	8,414
Net investment income (loss)	19,962	12,605	783	20,092	14,646
Other income	195	184	261	193	114
Total additions	32,264	24,052	11,757	30,908	25,517
Deductions					
Refunds		57	134		
Annuity benefits	16,675	15,745	15,171	14,750	14,168
Death benefits	10	134	134	128	11
Administrative and other expenses	68	76	111	104	101
Total deductions	16,753	16,012	15,550	14,982	14,280
Net increase (decrease) in Net Position	15,511	8,040	(3,793)	15,926	11,237
Net Position Restricted for Pensions					
Beginning of year	131,985	123,945	127,152	111,226	99,989
End of year	$ 147,496	$ 131,985	$ 123,359	$ 127,152	$ 111,226

[1] In accordance with GASB 67, Annuity Benefits reported in fiscal year 2013 were restated to include only DROP amounts actually distributed to participants as well as amounts due but not yet distributed. Also, RSIC administrative expenses previously classified as administrative expenses were reclassified as investment expenses and therefore included in the net investment income (loss) category for fiscal year 2013.

South Carolina National Guard Supplemental Retirement Plan
10 Year Schedule of Changes in Fiduciary Net Position

Year Ended June 30

(Amounts expressed in thousands)

	2019	2018	2017	2016	2015
Additions					
State appropriated contributions	$ 5,290	$ 4,814	$ 4,591	$ 4,591	$ 4,591
Net investment income (loss)	1,616	1,902	2,533	(121)	313
Other income					
Total additions	6,906	6,716	7,124	4,470	4,904
Deductions					
Annuity benefits	4,534	4,411	4,425	4,310	4,249
Administrative and other expenses	16	14	13	12	11
Total deductions	4,550	4,425	4,438	4,322	4,260
Net increase (decrease) in Net Position	2,356	2,291	2,686	148	644
Net Position Restricted for Pensions					
Beginning of year	28,327	26,036	23,350	23,202	22,558
End of year	$ 30,683	$ 28,327	$ 26,036	$ 23,350	$ 23,202

	2014	2013[1]	2012	2011	2010
Additions					
State appropriated contributions	$ 4,586	$ 4,539	$ 3,937	$ 3,904	$ 4,052
Net investment income (loss)	2,806	1,671	94	2,533	1,865
Other income					
Total additions	7,392	6,210	4,031	6,437	5,917
Deductions					
Annuity benefits	4,248	4,193	4,065	4,011	3,624
Administrative and other expenses	10	10	15	13	13
Total deductions	4,258	4,203	4,080	4,024	3,637
Net increase (decrease) in Net Position	3,134	2,007	(49)	2,413	2,280
Net Position Restricted for Pensions					
Beginning of year	19,424	17,417	17,466	15,053	12,773
End of year	$ 22,558	$ 19,424	$ 17,417	$ 17,466	$ 15,053

[1] In accordance with GASB 67, RSIC administrative expenses previously classified as administrative expenses were reclassified as investment expenses and therefore included in the net investment income (loss) category for fiscal year 2013.

Pension Trust Funds Additions by Source

(Amounts expressed in thousands)

Year Ended June 30,	Employee contributions [1]	Employer and Nonemployer contributions [1]	Net investment income(loss) [2]	Other income	Total additions
South Carolina Retirement System (SCRS)					
2019	$ 880,664	$ 1,539,014	$ 1,499,391	$ 320	$ 3,919,389
2018	868,681	1,405,451	1,986,948	355	4,261,435
2017	826,543	1,168,847	2,791,215	393	4,786,998
2016	754,330	1,072,659	(165,394)	434	1,662,029
2015	716,114	1,022,478	374,152	507	2,113,251
2014	652,631	962,798	3,517,324	587	5,133,340
2013	674,783	948,157	2,195,648	657	3,819,245
2012	586,818	824,652	109,307	733	1,521,510
2011	562,222	808,343	3,598,069	832	4,969,466
2010	561,261	818,523	2,612,663	957	3,993,404
Police Officer's Retirement System (PORS)					
2019	$ 145,485	$ 250,701	$ 264,323	$ 13	$ 660,522
2018	139,528	225,573	331,529	13	696,643
2017	128,623	192,501	455,914	15	777,053
2016	115,910	175,675	(24,636)	18	266,967
2015	107,504	166,862	58,705	22	333,093
2014	97,418	156,454	538,386	26	792,284
2013	99,106	144,460	329,467	30	573,063
2012	85,701	134,991	17,198	34	237,924
2011	80,582	129,973	519,531	37	730,123
2010	77,844	123,636	362,566	42	564,088
General Assembly Retirement System (GARS)					
2019	$ 162	$ 5,804	$ 1,887	$ -	$ 7,853
2018	287	5,428	2,376		8,091
2017	487	4,539	3,329		8,355
2016	292	4,501	(266)		4,527
2015	369	4,275	500		5,144
2014	399	4,063	4,545		9,007
2013	1,286	2,835	3,111		7,232
2012	724	2,532	172		3,428
2011	625	2,414	5,682		8,721
2010	580	2,598	4,642		7,820
Judges and Solicitors Retirement System (JSRS)					
2019	$ 2,936	$ 11,730	$ 9,183	$ -	$ 23,849
2018	3,016	11,043	11,723		25,782
2017	3,181	10,534	16,399		30,114
2016	2,330	10,202	(871)		11,661
2015	3,439	10,109	2,216		15,764
2014	2,632	9,670	19,962		32,264
2013	2,780	8,667	12,605		24,052
2012	2,560	8,414	783		11,757
2011	2,402	8,414	20,092		30,908
2010	2,457	8,414	14,646		25,517
South Carolina National Guard Supplemental Retirement Plan (SCNG)					
2019	$ -	$ 5,290	$ 1,616	$ -	$ 6,906
2018		4,814	1,902		6,716
2017		4,591	2,533		7,124
2016		4,591	(121)		4,470
2015		4,591	313		4,904
2014		4,586	2,806		7,392
2013		4,539	1,671		6,210
2012		3,937	94		4,031
2011		3,904	2,533		6,437
2010		4,052	1,865		5,917

[1] Includes transfers between systems. SCNG employer contributions are provided annually by a State appropriation.

[2] Includes unrealized gains and losses in accordance with GASB Statement 67 and RSIC administrative expenses previously classified as administrative expenses were reclassified as investment expenses and therefore included in the net investment income (loss) category for fiscal year 2013.

Pension Trust Funds Deductions by Type

(Amounts expressed in thousands)

Year Ended June 30,	Refunds	Annuity benefits	Death benefits	Administrative and other expenses[1]	Total deductions
South Carolina Retirement System (SCRS)					
2019	$ 118,067	$ 2,938,736	$ 21,806	$ 16,780	$ 3,095,389
2018	113,867	3,427,005	22,284	16,192	3,579,348
2017	105,169	2,907,666	22,677	15,019	3,050,531
2016	93,694	2,668,819	20,659	14,323	2,797,495
2015	95,104	2,590,806	20,144	13,890	2,719,944
2014	90,250	2,462,146	19,240	14,235	2,585,871
2013	87,212	2,368,510	19,133	16,629	2,491,484
2012	83,134	2,256,519	18,295	21,683	2,379,631
2011	84,591	2,134,031	16,485	20,467	2,255,574
2010	75,814	2,014,418	19,921	19,593	2,129,746
Police Officer's Retirement System (PORS)					
2019	$ 21,608	$ 389,050	$ 1,890	$ 2,596	$ 415,144
2018	23,899	371,283	2,751	2,402	400,335
2017	19,964	354,749	2,104	2,149	378,966
2016	19,178	339,536	1,960	2,082	362,756
2015	17,453	324,829	2,150	1,938	346,370
2014	16,184	313,216	2,410	1,820	333,630
2013	14,983	297,631	1,985	2,006	316,605
2012	15,162	265,582	1,851	2,872	285,467
2011	14,902	244,443	1,984	2,735	264,064
2010	13,673	224,977	2,019	2,577	243,246
General Assembly Retirement System (GARS)					
2019	$ 17	$ 6,480	$ 18	$ 20	$ 6,535
2018		6,452	16	18	6,486
2017		6,678	59	17	6,754
2016	22	6,625	9	165	6,821
2015		6,639	21	36	6,696
2014	41	6,799	20	17	6,877
2013	3	6,720	16	20	6,759
2012	31	6,570	35	30	6,666
2011	57	6,528	58	179	6,822
2010	4	6,512	6	33	6,555
Judges and Solicitors Retirement System (JSRS)					
2019	$ -	$ 17,947	$ 3	$ 92	$ 18,042
2018		17,655	156	86	17,897
2017	629	17,679	293	79	18,680
2016	60	16,989	143	105	17,297
2015		16,832	4	71	16,907
2014		16,675	10	68	16,753
2013	57	15,745	134	76	16,012
2012	134	15,171	134	111	15,550
2011		14,750	128	104	14,982
2010		14,168	11	101	14,280
South Carolina National Guard Supplemental Retirement Plan (SCNG)					
2019	$ -	$ 4,534	$ -	$ 16	$ 4,550
2018		4,411		14	4,425
2017		4,425		13	4,438
2016		4,310		12	4,322
2015		4,249		11	4,260
2014		4,248		10	4,258
2013		4,193		10	4,203
2012		4,065		15	4,080
2011		4,011		13	4,024
2010		3,624		13	3,637

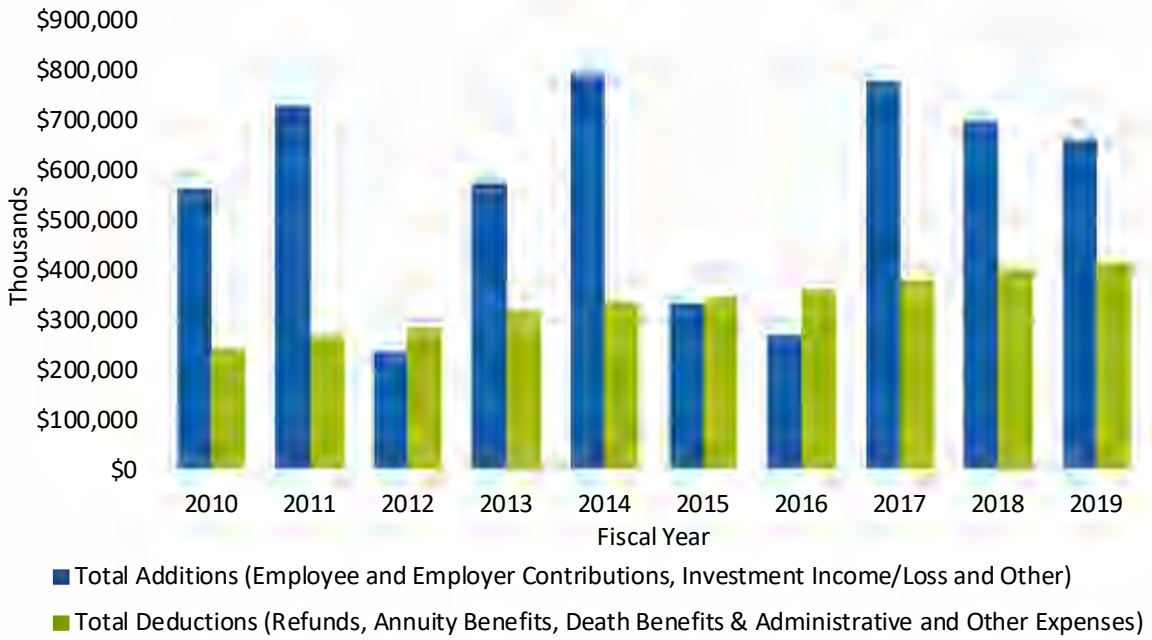
[1] In accordance with GASB 67, RSIC administrative expenses previously classified as administrative expenses were reclassified as investment expenses for fiscal year 2013 and therefore included in the net investment income (loss) category for fiscal year 2013.

South Carolina Retirement System
Pension Trust Funds Additions and Deductions

(Amounts expressed in thousands)

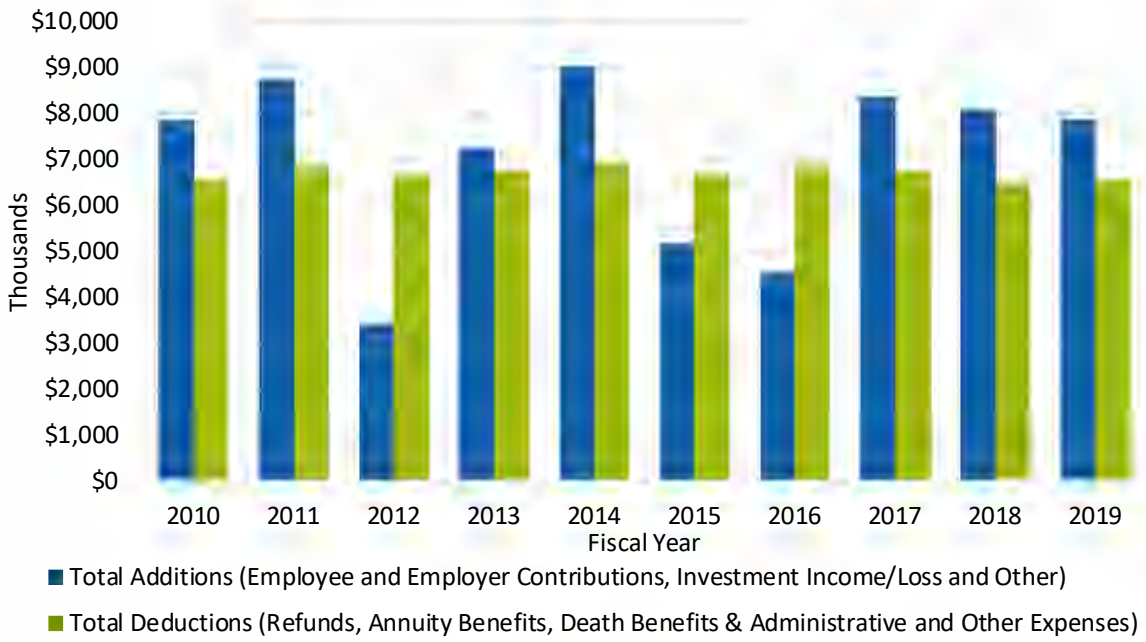
Police Officers Retirement System
Pension Trust Funds Additions and Deductions

(Amounts expressed in thousands)



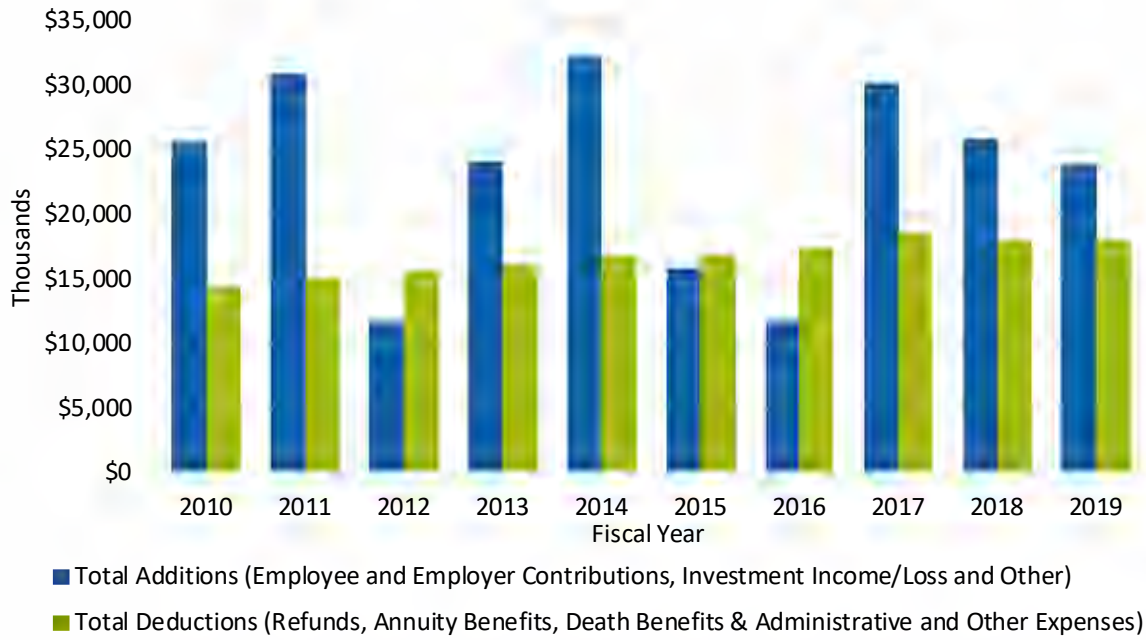
General Assembly Retirement System
Pension Trust Funds Additions and Deductions

(Amounts expressed in thousands)



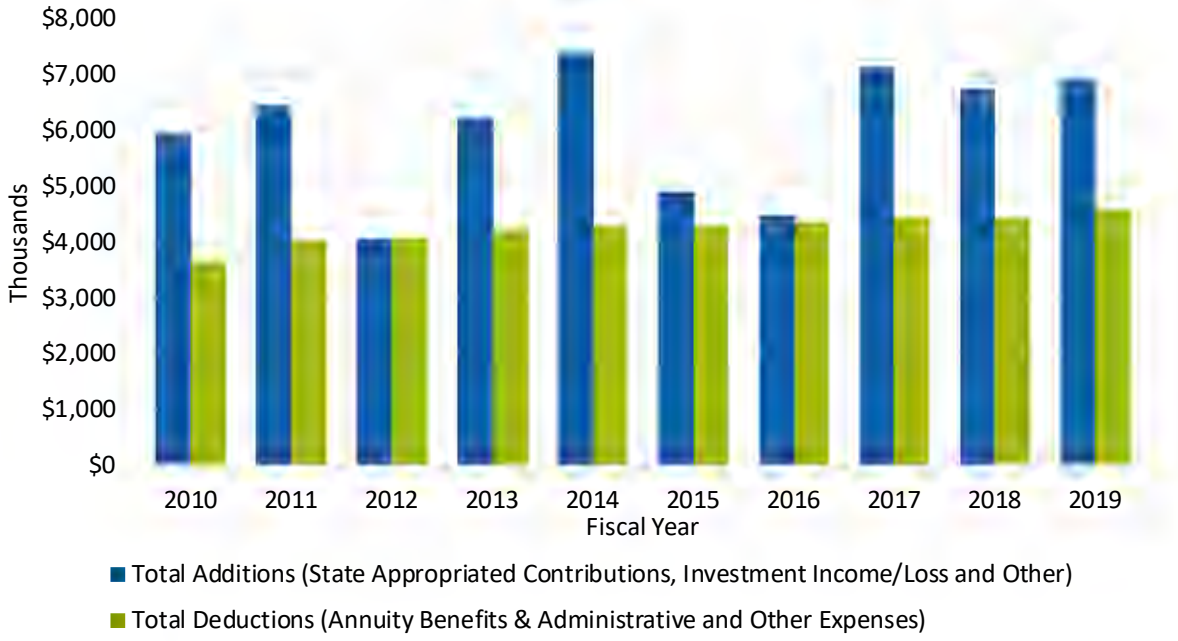
Judges and Solicitors Retirement System
Pension Trust Funds Additions and Deductions

(Amounts expressed in thousands)



South Carolina National Guard Supplemental Retirement Plan
Pension Trust Funds Additions and Deductions

(Amounts expressed in thousands)



Pension Trust Funds Benefit Expenses by Type

(Amounts expressed in thousands)

Year Ended	Refunds		Annuity Benefits		Death Benefits		
June 30,	Member	Survivor/Other	Member	Survivor/Other	Active	Retired	Total
South Carolina Retirement System (SCRS)							
2019	$ 109,828	$ 8,239	$ 2,804,528	$ 134,208	$ 9,601	$ 12,205	$ 3,078,609
2018	106,320	7,547	3,298,201	128,804	9,949	12,335	3,563,156
2017	97,372	7,797	2,785,394	122,272	10,819	11,858	3,035,512
2016	87,419	6,275	2,552,413	116,406	8,626	12,033	2,783,172
2015	88,952	6,152	2,480,965	109,841	8,427	11,717	2,706,054
2014	84,678	5,572	2,356,997	105,149	8,452	10,788	2,571,636
2013 [1]	81,754	5,458	2,267,657	100,853	8,245	10,888	2,474,855
2012	77,707	5,427	2,160,393	96,126	8,469	9,826	2,357,948
2011	79,238	5,353	2,043,662	90,369	7,815	8,670	2,235,107
2010	70,917	4,897	1,929,281	85,137	7,495	12,426	2,110,153
Police Officer's Retirement System (PORS)							
2019	$ 21,093	$ 515	$ 366,917	$ 22,133	$ 790	$ 1,100	$ 412,548
2018	22,733	1,166	349,799	21,484	1,537	1,214	397,933
2017	19,663	301	334,460	20,289	934	1,170	376,817
2016	18,565	613	320,079	19,457	971	989	360,674
2015	16,603	850	306,383	18,446	976	1,174	344,432
2014	15,551	633	295,566	17,650	1,192	1,218	331,810
2013	14,246	737	280,699	16,932	1,020	965	314,599
2012	14,618	544	249,123	16,459	872	979	282,595
2011	14,518	384	228,739	15,704	912	1,072	261,329
2010	13,300	373	210,242	14,735	1,086	933	240,669
General Assembly Retirement System (GARS)							
2019	$ 17	$ -	$ 5,466	$ 1,014	$ -	$ 18	$ 6,515
2018			5,438	1,014		16	6,468
2017			5,550	1,128	45	14	6,737
2016	22		5,469	1,156		9	6,656
2015			5,443	1,196		21	6,660
2014	41		5,587	1,212		20	6,860
2013		3	5,554	1,166		16	6,739
2012	7	24	5,389	1,181	22	13	6,636
2011	45	12	5,359	1,169	45	13	6,643
2010		4	5,296	1,216		6	6,522
Judges and Solicitors Retirement System (JSRS)							
2019	$ -	$ -	$ 16,034	$ 1,913	$ -	$ 3	$ 17,950
2018			15,760	1,895	142	14	17,811
2017		629	15,755	1,924	286	7	18,601
2016		60	15,193	1,796	134	9	17,192
2015			14,996	1,836		4	16,836
2014			14,839	1,836		10	16,685
2013 [1]	57		13,997	1,748	131	3	15,936
2012	83	51	13,322	1,849	130	4	15,439
2011			12,864	1,886	127	1	14,878
2010			12,213	1,955		11	14,179
South Carolina National Guard Supplemental Retirement Plan (SCNG)							
2019	$ -	$ -	$ 4,533	$ 1	$ -	$ -	$ 4,534
2018			4,410	1			4,411
2017			4,424	1			4,425
2016			4,309	1			4,310
2015			4,248	1			4,249
2014			4,247	1			4,248
2013			4,192	1			4,193
2012			4,064	1			4,065
2011			4,010	1			4,011
2010			3,623	1			3,624

[1] In accordance with GASB 67, Annuity Benefits reported in fiscal year 2013 were restated to include only DROP amounts actually distributed to participants as well as amounts due but not yet distributed.

Operating Information

Operating Information is intended to provide contextual information about the Systems' operations and resources to assist readers in using financial statement information to comprehend and evaluate the Systems' fiscal state. Schedules containing operating information include retired members by type of benefit and retired members by years of service, and principal participating employers for the current fiscal year and ten years prior.

Although retirement types include service, disability and beneficiary payees, members retiring at normal retirement based on age and service represent the majority of the systems' annuitant payees. Various payment options are available at retirement; however, the majority of members elect to receive benefits under the maximum benefit level.

As of June 30, 2019, more than 169,000 retirees or their beneficiaries were receiving annuity benefits from the five plans. Benefit terms are prescribed in Title 9 of the South Carolina Code of Laws. PEBA does not have the authority to establish or amend benefit terms without a change in the State Statute. Key elements of the benefit calculation include the benefit multiplier, years of service and average final compensation/current annual salary.

South Carolina Retirement System
Retired Members by Type of Benefit

As of June 30, 2019

Monthly Benefit[1]	Number of Annuitant Payees	Type 1	Type 2	Type 3	Type 4	Type 5	Opt 0	Opt 1	Opt 2	Opt 3	Opt 4	Opt 5	Opt 6
$ 1 - $ 500	27,085	20,534	304	2,829	2,389	1,029	18,305	83	1,281	428	196	4,866	1,926
$ 501 - $1,000	26,635	18,917	740	2,102	4,127	749	18,423	72	920	336	389	4,296	2,199
$1,001 - $1,500	20,211	14,786	1,146	1,362	2,585	332	13,190	52	556	172	707	3,507	2,027
$1,501 - $2,000	16,885	13,252	1,203	812	1,464	154	10,227	46	363	139	1,109	3,093	1,908
$2,001 - $2,500	17,581	15,033	1,054	521	902	71	10,037	54	214	122	1,413	3,519	2,222
$2,501 - $3,000	16,712	15,300	500	336	549	27	11,280	36	160	83	600	2,638	1,915
$3,001 - $3,500	8,303	7,656	195	198	235	19	5,386	24	127	60	281	1,408	1,017
$3,501 - $4,000	4,407	4,094	90	100	117	6	2,766	9	83	40	157	753	599
$4,001 - $4,500	2,699	2,534	43	71	48	3	1,613	7	67	35	103	442	432
$4,501 - $5,000	1,548	1,453	25	40	27	3	905	5	33	22	40	317	226
Over $5,000	2,626	2,490	31	83	21	1	1,258	11	82	66	24	671	514
Totals	144,692	116,049	5,331	8,454	12,464	2,394	93,390	399	3,886	1,503	5,019	25,510	14,985

Type 1: Normal Retirement for Age and Service
Type 2: Early Retirement
Type 3: Beneficiary Payment[2]
Type 4: Disability Payment
Type 5: Beneficiary Payment, Disability Payment

Option 0: Maximum Benefit
Option 1: 10 Year Beneficiary Protection
Option 2: Survivor Benefit, Full Payment
Option 3: Survivor Benefit, Half Payment
Option 4: Social Security Option
Option 5: Survivor Benefit, Full Payment, Revert to Maximum
Option 6: Survivor Benefit, Half Payment, Revert to Maximum

Police Officers Retirement System
Retired Members by Type of Benefit

As of June 30, 2019

Monthly Benefit[1]	Number of Annuitant Payees	Type 1	Type 2	Type 3	Type 4	Type 5	Opt 0	Opt 1	Opt 2	Opt 3	Opt 5	Opt 6
$ 1 - $ 500	2,790	1,819	361	408	118	84	1,639	110	50	84	679	228
$ 501 - $1,000	3,332	2,166	231	419	408	108	1,998	143	58	106	687	340
$1,001 - $1,500	2,968	1,761	248	306	595	58	1,690	88	47	118	662	363
$1,501 - $2,000	3,051	1,911	268	176	668	28	1,697	64	32	209	648	401
$2,001 - $2,500	2,763	1,990	184	89	487	13	1,600	33	14	121	603	392
$2,501 - $3,000	1,925	1,502	83	50	287	3	1,174	17	15	71	384	264
$3,001 - $3,500	1,025	871	35	22	95	2	662	14	11	31	173	134
$3,501 - $4,000	623	546	9	9	59		413	5	5	15	87	98
$4,001 - $4,500	342	311	3	6	22		226	5	1	6	53	51
$4,501 - $5,000	186	178		1	7		113		6	2	26	39
Over $5,000	240	231	2	3	4		161	4	4	7	16	48
Totals	19,245	13,286	1,424	1,489	2,750	296	11,373	483	243	770	4,018	2,358

Type 1: Normal Retirement for Age and Service
Type 2: Early Retirement
Type 3: Beneficiary Payment[2]
Type 4: Disability Payment
Type 5: Beneficiary Payment, Disability Payment

Option 0: Maximum Benefit
Option 1: Survivor Benefit, Full Payment
Option 2: Survivor Benefit, Half Payment
Option 3: Social Security Option
Option 5: Survivor Benefit, Full Payment, Revert to Maximum
Option 6: Survivor Benefit, Half Payment, Revert to Maximum

[1] Monthly benefit amounts represent current payment levels for all annuitant payees receiving monthly benefits, including any applicable benefit adjustments.
[2] Beneficiary payments include payments to alternate payees in accordance with Qualified Domestic Relations Orders.

General Assembly Retirement System
Retired Members by Type of Benefit

As of June 30, 2019

Monthly Benefit[1]	Number of Annuitant Payees	Type 1	Type 2	Type 3	Type 4	Type 5	Opt 0	Opt 1	Opt 2	Opt 5	Opt 6
$ 1 - $ 500	28	7	4	17			7	10	4	3	4
$ 501 - $1,000	66	37	4	25			22	19	7	12	6
$1,001 - $1,500	67	45	6	16			22	24	9	6	6
$1,501 - $2,000	101	70	23	8			44	27	11	13	6
$2,001 - $2,500	45	31	6	8			20	9	3	9	4
$2,501 - $3,000	26	23	2	1			12	4	2	6	2
$3,001 - $3,500	8	6	1	1			5	2		1	
$3,501 - $4,000	2	1		1				2			
$4,001 - $4,500	2	2					2				
$4,501 - $5,000											
Over $5,000											
Totals	345	222	46	77			134	97	36	50	28

Type 1: Normal Retirement for Age and Service
Type 2: Early Retirement
Type 3: Beneficiary Payment[2]
Type 4: Disability Payment
Type 5: Beneficiary Payment, Disability Payment

Option 0: Maximum Benefit
Option 1: Survivor Benefit, Full Payment
Option 2: Survivor Benefit, Half Payment
Option 5: Survivor Benefit, Full Payment, Revert to Maximum
Option 6: Survivor Benefit, Half Payment, Revert to Maximum

Judges and Solicitors Retirement System
Retired Members by Type of Benefit

As of June 30, 2019

Monthly Benefit[1]	Number of Annuitant Payees	Type 1	Type 2	Type 3	Type 4	Type 5	Opt 0	Opt 1
$ 1 - $ 500	1	1					1	
$ 501 - $1,000	14			14			1	13
$1,001 - $1,500	1			1				1
$1,501 - $2,000	5			5			2	3
$2,001 - $2,500	3			3			2	1
$2,501 - $3,000	24			24			23	1
$3,001 - $3,500	13	1		12			12	1
$3,501 - $4,000	5	1		4			4	1
$4,001 - $4,500	2	1		1			2	
$4,501 - $5,000	3	3					3	
Over $5,000	146	145		1			139	7
Totals	217	152		65			189	28

Type 1: Normal Retirement for Age and Service
Type 2: Early Retirement
Type 3: Beneficiary Payment[2]
Type 4: Disability Payment
Type 5: Beneficiary Payment, Disability Payment

Option 0: Maximum Benefit with Spouse Beneficiary
Option 1: Reduced Benefit with Non-Spouse Beneficiary

[1] Monthly benefit amounts represent current payment levels for all annuitant payees receiving monthly benefits, including any applicable benefit adjustments.
[2] Beneficiary payments include payments to alternate payees in accordance with Qualified Domestic Relations Orders.

South Carolina National Guard Supplemental Retirement Plan
Retired Members by Type of Benefit

As of June 30, 2018

Monthly Benefit[1]	Number of Annuitant Payees	Type 1	Opt 0
$ 1 - $ 500	4,937	4,937	4,937
$ 501 - $1,000			
$1,001 - $1,500			
$1,501 - $2,000			
$2,001 - $2,500			
$2,501 - $3,000			
$3,001 - $3,500			
$3,501 - $4,000			
$4,001 - $4,500			
$4,501 - $5,000			
Over $5,000			
Totals	4,937	4,937	4,937

Type 1: Normal Retirement for Age and Service

Option 0: Maximum Benefit

[1] Monthly benefit amounts represent current payment levels for all annuitant payees receiving monthly benefits.

South Carolina Retirement System
Retired Members by Years of Service

	Years of Credited Service							
	0 to 5	5+ to 10	10+ to 15	15+ to 20	20+ to 25	25+ to 30	30 Plus	Avgs/Tot
Period 07/01/2009 to 06/30/2010								
Average Monthly benefit	$ 208.16	$ 383.19	$ 645.82	$ 981.46	$ 1,345.57	$ 2,222.81	$ 2,909.37	$ 1,486.91
Average AFC	$ 31,836.52	$ 30,557.99	$ 35,746.52	$ 40,111.25	$ 43,257.40	$ 55,242.31	$ 63,116.06	$ 45,746.76
Number of Retired members	123	826	1,023	750	729	2,123	597	6,171
Period 07/01/2010 to 06/30/2011								
Average Monthly benefit	$ 201.31	$ 377.58	$ 657.49	$ 1,012.08	$ 1,369.07	$ 2,284.81	$ 2,888.59	$ 1,445.43
Average AFC	$ 30,617.92	$ 31,040.25	$ 35,794.70	$ 40,267.14	$ 43,960.69	$ 56,937.57	$ 63,057.44	$ 45,576.57
Number of Retired members	148	905	1,102	845	757	1,901	587	6,245
Period 07/01/2011 to 06/30/2012								
Average Monthly benefit	$ 157.11	$ 383.87	$ 676.96	$ 1,061.43	$ 1,360.48	$ 2,312.50	$ 2,876.19	$ 1,636.27
Average AFC	$ 33,828.02	$ 33,027.56	$ 37,681.65	$ 43,537.78	$ 44,369.67	$ 58,052.58	$ 62,467.71	$ 49,129.66
Number of Retired members	170	1,027	1,369	1,006	1,048	3,291	1,204	9,115
Period 07/01/2012 to 06/30/2013								
Average Monthly benefit	$ 163.89	$ 374.98	$ 668.48	$ 1,019.31	$ 1,402.80	$ 2,308.20	$ 2,939.03	$ 1,669.94
Average AFC	$ 33,386.42	$ 33,020.07	$ 36,800.54	$ 41,934.39	$ 45,275.03	$ 57,737.43	$ 63,670.71	$ 49,332.04
Number of Retired members	126	1,057	1,208	937	832	3,366	1,144	8,670
Period 07/01/2013 to 06/30/2014								
Average Monthly benefit	$ 171.12	$ 412.72	$ 699.77	$ 1,044.30	$ 1,432.72	$ 2,190.77	$ 3,086.07	$ 1,468.82
Average AFC	$ 38,671.40	$ 37,744.27	$ 39,400.64	$ 43,678.21	$ 46,511.62	$ 55,577.72	$ 66,635.46	$ 48,136.63
Number of Retired members	109	965	1,050	1,004	755	2,158	534	6,575
Period 07/01/2014 to 06/30/2015								
Average Monthly benefit	$ 99.03	$ 348.11	$ 623.25	$ 948.70	$ 1,395.11	$ 2,172.59	$ 2,912.32	$ 1,375.16
Average AFC	$ 32,198.66	$ 34,989.06	$ 37,781.86	$ 41,826.60	$ 47,729.70	$ 55,229.87	$ 61,677.87	$ 46,395.79
Number of Retired members	105	910	1,031	903	785	2,016	394	6,144
Period 07/01/2015 to 06/30/2016								
Average Monthly benefit	$ 133.51	$ 383.30	$ 648.52	$ 981.42	$ 1,433.69	$ 2,169.23	$ 2,844.29	$ 1,367.89
Average AFC	$ 35,596.69	$ 37,238.36	$ 39,215.13	$ 42,878.70	$ 48,939.03	$ 55,127.68	$ 60,835.89	$ 47,026.40
Number of Retired members	78	833	1,068	989	770	1,910	329	5,977
Period 07/01/2016 to 06/30/2017								
Average Monthly benefit	$ 114.40	$ 364.95	$ 643.84	$ 993.28	$ 1,435.44	$ 2,236.47	$ 2,944.60	$ 1,402.77
Average AFC	$ 38,072.38	$ 36,388.08	$ 39,376.67	$ 43,161.73	$ 48,600.24	$ 56,425.31	$ 61,769.03	$ 47,514.56
Number of Retired members	92	773	990	857	714	1,657	401	5,484
Period 07/01/2017 to 06/30/2018								
Average Monthly benefit	$ 120.69	$ 371.72	$ 679.25	$ 1,052.25	$ 1,479.78	$ 2,277.80	$ 3,079.28	$ 1,387.33
Average AFC	$ 36,240.01	$ 36,347.70	$ 41,462.53	$ 45,112.79	$ 50,112.14	$ 57,144.23	$ 64,926.33	$ 48,234.42
Number of Retired members	80	698	1,055	872	734	1,349	343	5,131
Period 07/01/2018 to 06/30/2019								
Average Monthly benefit	$ 138.38	$ 406.56	$ 676.14	$ 1,074.15	$ 1,464.32	$ 2,351.10	$ 3,261.38	$ 1,474.53
Average AFC	$ 39,900.17	$ 39,143.85	$ 40,765.51	$ 45,920.43	$ 49,598.65	$ 58,964.98	$ 67,826.42	$ 49,788.59
Number of Retired members	102	635	977	785	748	1,271	449	4,967
Ten year Averages								
Average Monthly benefit	$ 155.79	$ 380.45	$ 662.56	$ 1,017.21	$ 1,409.73	$ 2,255.49	$ 2,957.24	$ 1,489.06
Average AFC	$ 34,642.17	$ 34,742.83	$ 38,335.36	$ 42,871.02	$ 46,726.98	$ 56,697.37	$ 63,547.46	$ 47,774.90
Number of Retired members	1,133	8,629	10,873	8,948	7,872	21,042	5,982	64,479

Note: Benefit amounts represent original monthly benefit at retirement for all retirees who retired during the referenced period and, for comparison purposes, do not include benefit adjustments. Although a member's retirement eligibility and Average Final Compensation (AFC) may include service from other correlated Systems, the Years of Credited Service in this schedule represents only service credit used for calculating the monthly benefit under this respective System.

Police Officers Retirement System
Retired Members by Years of Service

	Years of Credited Service							
	0 to 5	5+ to 10	10+ to 15	15+ to 20	20+ to 25	25+ to 30	30 Plus	Avgs/Tot
Period 07/01/2009 to 06/30/2010								
Average Monthly benefit	$ 417.61	$ 699.54	$ 984.23	$ 1,362.61	$ 1,975.74	$ 2,451.48	$ 3,581.54	$ 1,634.95
Average AFC	$ 40,722.91	$ 39,473.83	$ 40,088.38	$ 42,712.24	$ 48,826.52	$ 55,428.90	$ 63,527.80	$ 47,202.77
Number of Retired members	80	121	127	129	120	240	47	864
Period 07/01/2010 to 06/30/2011								
Average Monthly benefit	$ 247.37	$ 708.80	$ 1,021.53	$ 1,474.19	$ 1,929.16	$ 2,484.33	$ 3,569.41	$ 1,585.11
Average AFC	$ 37,600.27	$ 39,952.37	$ 40,400.70	$ 44,622.87	$ 47,089.42	$ 55,621.41	$ 65,042.40	$ 46,655.15
Number of Retired members	92	157	181	117	145	274	40	1,006
Period 07/01/2011 to 06/30/2012								
Average Monthly benefit	$ 298.11	$ 714.20	$ 1,052.50	$ 1,427.66	$ 2,045.54	$ 2,498.87	$ 3,609.15	$ 1,773.18
Average AFC	$ 44,750.04	$ 39,977.95	$ 42,779.30	$ 43,692.98	$ 51,114.24	$ 56,323.94	$ 66,397.34	$ 49,905.44
Number of Retired members	125	200	184	156	217	552	67	1,501
Period 07/01/2012 to 06/30/2013								
Average Monthly benefit	$ 225.30	$ 644.64	$ 1,061.28	$ 1,544.22	$ 1,920.39	$ 2,420.06	$ 3,640.68	$ 1,671.16
Average AFC	$ 45,104.35	$ 38,218.81	$ 41,442.32	$ 47,487.15	$ 48,478.52	$ 54,611.27	$ 68,020.52	$ 48,265.26
Number of Retired members	80	170	164	161	185	421	25	1,206
Period 07/01/2013 to 06/30/2014								
Average Monthly benefit	$ 271.83	$ 869.27	$ 1,202.89	$ 1,448.14	$ 2,051.64	$ 2,363.73	$ 4,282.03	$ 1,482.40
Average AFC	$ 43,936.82	$ 40,539.73	$ 43,507.03	$ 45,089.53	$ 50,432.14	$ 52,417.06	$ 76,060.04	$ 46,695.67
Number of Retired members	86	144	147	125	85	145	22	754
Period 07/01/2014 to 06/30/2015								
Average Monthly benefit	$ 233.66	$ 719.35	$ 994.86	$ 1,380.11	$ 1,923.84	$ 2,562.22	$ 3,469.56	$ 1,509.39
Average AFC	$ 40,204.33	$ 39,792.49	$ 42,077.87	$ 43,569.64	$ 49,715.38	$ 57,066.54	$ 66,611.71	$ 46,877.13
Number of Retired members	60	173	131	152	145	176	28	865
Period 07/01/2015 to 06/30/2016								
Average Monthly benefit	$ 294.00	$ 767.13	$ 1,098.37	$ 1,444.82	$ 2,029.49	$ 2,456.72	$ 3,375.67	$ 1,581.09
Average AFC	$ 44,395.71	$ 41,378.44	$ 42,669.93	$ 45,791.64	$ 52,667.52	$ 54,734.15	$ 61,777.51	$ 48,165.41
Number of Retired members	67	153	137	128	118	204	35	842
Period 07/01/2016 to 06/30/2017								
Average Monthly benefit	$ 249.11	$ 753.60	$ 1,110.28	$ 1,573.83	$ 1,964.83	$ 2,644.64	$ 3,763.61	$ 1,734.07
Average AFC	$ 43,820.41	$ 42,088.24	$ 44,977.17	$ 48,696.31	$ 51,139.16	$ 58,377.87	$ 71,064.90	$ 50,961.08
Number of Retired members	78	127	148	141	131	221	61	907
Period 07/01/2017 to 06/30/2018								
Average Monthly benefit	$ 309.68	$ 728.10	$ 1,105.43	$ 1,633.08	$ 1,956.60	$ 2,765.80	$ 3,910.85	$ 1,811.24
Average AFC	$ 46,210.83	$ 45,702.60	$ 45,557.76	$ 50,938.02	$ 50,536.01	$ 61,553.39	$ 69,295.20	$ 52,804.63
Number of Retired members	66	122	154	130	138	223	62	895
Period 07/01/2018 to 06/30/2019								
Average Monthly benefit	$ 277.93	$ 691.12	$ 1,096.65	$ 1,632.73	$ 2,144.26	$ 2,772.90	$ 3,897.10	$ 1,903.93
Average AFC	$ 48,137.01	$ 47,038.44	$ 47,130.92	$ 54,267.17	$ 55,881.64	$ 61,254.25	$ 69,970.58	$ 55,278.66
Number of Retired members	71	119	126	120	140	245	74	895
Ten year Averages								
Average Monthly benefit	$ 283.42	$ 728.22	$ 1,072.69	$ 1,490.41	$ 1,991.85	$ 2,533.41	$ 3,717.74	$ 1,678.14
Average AFC	$ 43,441.65	$ 41,126.25	$ 42,986.63	$ 46,588.13	$ 50,530.21	$ 56,672.29	$ 67,780.06	$ 49,317.70
Number of Retired members	805	1,486	1,499	1,359	1,424	2,701	461	9,735

Note: Benefit amounts represent original monthly benefit at retirement for all retirees who retired during the referenced period and, for comparison purposes, do not include benefit adjustments. Although a member's retirement eligibility and Average Final Compensation (AFC) may include service from other correlated Systems, the Years of Credited Service in this schedule represents only service credit used for calculating the monthly benefit under this respective System.

General Assembly Retirement System
Retired Members by Years of Service

	Years of Credited Service							
	0 to 5	5+ to 10	10+ to 15	15+ to 20	20+ to 25	25+ to 30	30 Plus	Avgs/Tot
Period 07/01/2009 to 06/30/2010								
Average Monthly benefit				$ 1,484.56		$ 2,476.92		$ 1,980.50
Average AFC				$ 22,400.00		$ 22,400.00		$ 22,400.00
Number of Retired members				2		2		4
Period 07/01/2010 to 06/30/2011								
Average Monthly benefit	$ 132.70		$ 1,068.00	$ 1,142.12	$ 1,901.69	$ 2,838.65	$ 3,207.33	$ 1,852.00
Average AFC	$ 22,400.00		$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 24,200.00	$ 27,900.00	$ 23,727.27
Number of Retired members	1		3	1	2	2	2	11
Period 07/01/2011 to 06/30/2012								
Average Monthly benefit		$ 719.79	$ 1,097.69	$ 1,541.77	$ 1,945.10		$ 2,092.90	$ 1,468.33
Average AFC		$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,400.00		$ 22,400.00	$ 22,400.00
Number of Retired members		1	5	1	4		1	12
Period 07/01/2012 to 06/30/2013								
Average Monthly benefit		$ 831.73	$ 1,039.12	$ 1,448.99	$ 1,898.75	$ 1,886.18	$ 2,305.65	$ 1,652.52
Average AFC		$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,400.00
Number of Retired members		1	5	2	4	3	4	19
Period 07/01/2013 to 06/30/2014								
Average Monthly benefit	$ 152.97	$ 539.84			$ 2,313.46		$ 2,547.40	$ 1,387.75
Average AFC	$ 22,400.00	$ 22,400.00			$ 26,000.00		$ 22,400.00	$ 23,300.00
Number of Retired members	1	1			1		1	4
Period 07/01/2014 to 06/30/2015								
Average Monthly benefit			$ 997.75	$ 1,281.62	$ 1,822.57	$ 2,256.56		$ 1,440.18
Average AFC			$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,400.00		$ 22,400.00
Number of Retired members			3	4	3	1		11
Period 07/01/2015 to 06/30/2016								
Average Monthly benefit	$ 407.65				$ 1,798.98	$ 3,194.91		$ 1,799.50
Average AFC	$ 22,400.00				$ 22,400.00	$ 33,400.00		$ 25,150.00
Number of Retired members	1				2	1		4
Period 07/01/2016 to 06/30/2017								
Average Monthly benefit	$ 342.95		$ 1,169.65	$ 1,489.83	$ 2,008.43	$ 1,696.83	$ 2,202.97	$ 1,528.00
Average AFC	$ 26,000.00		$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,760.00
Number of Retired members	1		1	3	1	3	1	10
Period 07/01/2017 to 06/30/2018								
Average Monthly benefit			$ 813.02	$ 1,240.47	$ 1,507.91	$ 2,207.87		$ 1,316.00
Average AFC			$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,400.00		$ 22,400.00
Number of Retired members			2	1	1	1		5
Period 07/01/2018 to 06/30/2019								
Average Monthly benefit		$ 584.50		$ 1,372.92	$ 2,249.33	$ 2,554.87		$ 1,557.55
Average AFC		$ 22,400.00		$ 22,400.00	$ 22,400.00	$ 22,400.00		$ 22,400.00
Number of Retired members		2		4	1	2		9
Ten year Averages								
Average Monthly benefit	$ 259.06	$ 652.07	$ 1,035.63	$ 1,382.17	$ 1,911.77	$ 2,276.61	$ 2,497.84	$ 1,593.32
Average AFC	$ 23,300.00	$ 22,400.00	$ 22,400.00	$ 22,400.00	$ 22,589.47	$ 23,373.33	$ 23,622.22	$ 22,768.53
Number of Retired members	4	5	19	18	19	15	9	89

Note: Benefit amounts represent original monthly benefit at retirement for all retirees who retired during the referenced period and, for comparison purposes, do not include benefit adjustments. Although a member's retirement eligibility and Average Final Compensation (AFC) may include service from other correlated Systems, the Years of Credited Service in this schedule represents only service credit used for calculating the monthly benefit under this respective System.

Judges and Solicitors Retirement System
Retired Members by Years of Service

	Years of Credited Service							
	0 to 5	5+ to 10	10+ to 15	15+ to 20	20+ to 25	25+ to 30	30 Plus	Avgs/Tot
Period 07/01/2009 to 06/30/2010								
Average Monthly benefit					$ 7,538.96	$ 8,092.11	$ 9,773.78	$ 8,822.10
Average AFC					$ 126,883.00	$ 128,026.00	$ 131,683.80	$ 129,626.30
Number of Retired members					2	3	5	10
Period 07/01/2010 to 06/30/2011								
Average Monthly benefit					$ 7,730.82	$ 8,138.15	$ 9,378.37	$ 8,508.22
Average AFC					$ 129,454.75	$ 130,312.00	$ 127,740.25	$ 128,788.00
Number of Retired members					4	1	4	9
Period 07/01/2011 to 06/30/2012								
Average Monthly benefit				$ 5,654.22		$ 7,647.17	$ 9,687.67	$ 8,335.16
Average AFC				$ 126,883.00		$ 126,883.00	$ 129,169.00	$ 128,026.00
Number of Retired members				1		2	3	6
Period 07/01/2012 to 06/30/2013								
Average Monthly benefit			$ 4,309.38	$ 7,974.96	$ 7,905.00		$ 10,490.48	$ 7,256.71
Average AFC			$ 130,689.00	$ 134,221.00	$ 133,043.66		$ 139,873.00	$ 133,514.71
Number of Retired members			2	1	3		1	7
Period 07/01/2013 to 06/30/2014								
Average Monthly benefit				$ 6,962.75	$ 7,765.10	$ 9,405.95	$ 10,066.58	$ 8,538.00
Average AFC				$ 132,455.00	$ 130,689.00	$ 134,221.00	$ 134,221.00	$ 133,043.66
Number of Retired members				2	1	1	2	6
Period 07/01/2014 to 06/30/2015								
Average Monthly benefit				$ 7,920.42	$ 7,931.71	$ 8,891.35	$ 10,808.40	$ 8,615.00
Average AFC				$ 133,303.00	$ 135,705.00	$ 136,905.50	$ 144,112.00	$ 136,905.85
Number of Retired members				1	3	2	1	7
Period 07/01/2015 to 06/30/2016								
Average Monthly benefit							$ 9,808.35	$ 9,808.33
Average AFC							$ 136,906.00	$ 136,906.00
Number of Retired members							6	6
Period 07/01/2016 to 06/30/2017								
Average Monthly benefit		$ 2,828.74			$ 6,449.04	$ 8,983.69	$ 10,880.55	$ 7,624.80
Average AFC		$ 141,354.00			$ 137,634.00	$ 141,354.00	$ 145,074.00	$ 141,354.00
Number of Retired members		1			1	2	1	5
Period 07/01/2017 to 06/30/2018								
Average Monthly benefit			$ 3,236.95		$ 8,177.75	$ 8,810.26	$ 11,159.55	$ 8,168.57
Average AFC			$ 141,354.00		$ 137,634.00	$ 141,354.00	$ 148,794.00	$ 141,354.00
Number of Retired members			1		2	3	1	7
Period 07/01/2018 to 06/30/2019								
Average Monthly benefit			$ 8,398.78	$ 5,242.65		$ 8,399.66	$ 10,601.55	$ 8,160.00
Average AFC			$ 141,354.00	$ 137,634.00		$ 141,354.00	$ 141,354.00	$ 140,424.00
Number of Retired members			1	1		1	1	4
Ten year Averages								
Average Monthly benefit		$ 2,828.74	$ 5,063.62	$ 6,786.29	$ 7,755.06	$ 8,513.02	$ 9,934.76	$ 8,417.11
Average AFC		$ 141,354.00	$ 136,021.50	$ 132,825.16	$ 132,588.87	$ 134,954.13	$ 134,638.88	$ 134,240.25
Number of Retired members		1	4	6	16	15	25	67

Note: Benefit amounts represent original monthly benefit at retirement for all retirees who retired during the referenced period and, for comparison purposes, do not include benefit adjustments.

South Carolina National Guard Supplemental Retirement Plan
Retired Members by Years of Service

	Years of Credited Service							
	0 to 5	5+ to 10	10+ to 15	15+ to 20	20+ to 25	25+ to 30	30 Plus	Avgs/Tot
Period 07/01/2009 to 06/30/2010								
Average Monthly benefit				$ 50.00	$ 61.55	$ 90.28	$ 100.00	$ 73.48
Average AFC								
Number of Retired members				59	135	52	80	326
Period 07/01/2010 to 06/30/2011								
Average Monthly benefit				$ 50.00	$ 61.42	$ 88.15	$ 100.00	$ 76.17
Average AFC								
Number of Retired members				39	116	65	82	302
Period 07/01/2011 to 06/30/2012								
Average Monthly benefit				$ 50.00	$ 62.26	$ 91.02	$ 100.00	$ 73.54
Average AFC								
Number of Retired members				49	106	39	63	257
Period 07/01/2012 to 06/30/2013								
Average Monthly benefit				$ 50.00	$ 61.66	$ 88.02	$ 100.00	$ 72.69
Average AFC								
Number of Retired members				50	105	48	57	260
Period 07/01/2013 to 06/30/2014								
Average Monthly benefit				$ 50.00	$ 61.96	$ 90.71	$ 100.00	$ 71.78
Average AFC								
Number of Retired members				34	79	28	35	176
Period 07/01/2014 to 06/30/2015								
Average Monthly benefit				$ 50.00	$ 62.46	$ 90.27	$ 100.00	$ 76.33
Average AFC								
Number of Retired members				26	67	36	47	176
Period 07/01/2015 to 06/30/2016								
Average Monthly benefit				$ 50.00	$ 61.27	$ 89.48	$ 100.00	$ 73.65
Average AFC								
Number of Retired members				28	90	49	38	205
Period 07/01/2016 to 06/30/2017								
Average Monthly benefit				$ 50.00	$ 61.75	$ 90.31	$ 100.00	$ 73.26
Average AFC								
Number of Retired members				30	94	48	36	208
Period 07/01/2017 to 06/30/2018								
Average Monthly benefit				$ 50.00	$ 61.48	$ 89.57	$ 100.00	$ 73.90
Average AFC								
Number of Retired members				30	81	35	45	191
Period 07/01/2018 to 06/30/2019								
Average Monthly benefit				$ 50.00	$ 60.97	$ 91.28	$ 100.00	$ 74.31
Average AFC								
Number of Retired members				23	97	35	49	204
Ten year Averages								
Average Monthly benefit				$ 50.00	$ 61.65	$ 89.74	$ 100.00	$ 73.94
Average AFC								
Number of Retired members				368	970	435	532	2,305

Note: Benefit amounts represent original monthly benefit at retirement for all retirees who retired during the referenced period.

South Carolina Retirement System
Principal Participating Employers in Fiscal Year 2019 and Ten Years Prior Fiscal Year 2010

	Fiscal Year 2019					Fiscal Year 2010				
Participating Government	Covered Employees[1]	Rank	Percentage of Total System	Total Active Members	Total Working Retirees	Covered Employees[1]	Rank	Percentage of Total System	Total Active Members	Total Working Retirees
State Agency[2]	33,309	1	14.10%	29,957	3,352	34,660	1	15.42%	30,248	4,412
School District of Greenville County	9,415	2	3.98%	8,417	998	9,002	2	4.00%	7,762	1,240
Horry County School District	6,195	3	2.62%	5,817	378	5,025	6	2.23%	4,530	495
University of South Carolina	6,168	4	2.61%	5,385	783	5,259	5	2.33%	4,356	903
Lexington Medical Center	6,098	5	2.58%	5,894	204	4,137	9	1.84%	3,986	151
MUSC Hospital	5,489	6	2.32%	5,232	257	4,995	7	2.22%	4,752	243
Charleston County School District	5,170	7	2.18%	4,830	340	5,588	3	2.48%	4,899	689
Richland County School District 1	4,299	8	1.82%	3,711	588	4,278	8	1.90%	3,507	771
Lexington County School District 1	4,203	9	1.77%	3,844	359	3,354		1.49%	2,988	366
Berkeley County Department of Education	4,167	10	1.76%	3,867	300	3,743	10	1.66%	3,285	458
Spartanburg Regional Medical Center	3,873		1.64%	3,587	286	5,266	4	2.34%	5,034	232
All Other	147,814		62.62%	133,738	14,076	139,453		62.09%	123,253	16,200
Total[3]	236,200		100.00%	214,279	21,921	224,760		100.00%	198,600	26,160

In 2019, "All Other" consisted of:

Type	Number	Employees
Higher Ed/Quasi-State	31	19,826
City/County	577	57,294
Public Schools	112	70,694
Total	720	147,814

In 2010, "All Other" consisted of:

Type	Number	Employees
Higher Ed/Quasi-State	31	18,420
City/County	578	51,547
Public Schools	108	69,486
Total	717	139,453

[1] Employers are considered to be participating employers if they submit contributions for an active member or working retiree during the fiscal year. The number of covered employees represents the total number of employees reported by the employer throughout the fiscal year which includes working retirees and for fiscal year 2010 TERI participants.

[2] Although each state agency reports separately, the State is considered the primary government and therefore, all state agencies are included as a single employer. Institutions of Higher Education and Quasi-State Agencies are counted as separate employers.

[3] Fiscal Year 2019 total includes 731 governmental entities and fiscal year 2010 total includes 728 governmental entities.

Police Officers Retirement System
Principal Participating Employers in Fiscal Year 2019
and Ten Years Prior Fiscal Year 2010

	Fiscal Year 2019					Fiscal Year 2010				
Participating Government	Covered Employees[1]	Rank	Percentage of Total System	Total Active Members	Total Working Retirees	Covered Employees[1]	Rank	Percentage of Total System	Total Active Members	Total Working Retirees
State Agency[2]	10,024	1	30.59%	9,220	804	10,620	1	34.70%	9,864	756
County Council of Richland County	1,007	2	3.07%	844	163	962	2	3.14%	813	149
Horry County Council	1004	3	3.06%	938	66	892	3	2.91%	864	28
City of Columbia	886	4	2.70%	823	63	853	4	2.78%	783	70
Greenville County Council	878	5	2.68%	767	111	813	5	2.65%	712	101
City of Charleston	828	6	2.53%	798	30	750	7	2.45%	690	60
County of Charleston	724	7	2.21%	622	102	791	6	2.58%	700	91
County of Lexington	722	8	2.20%	654	68	565	9	1.84%	500	65
City of North Charleston	620	9	1.89%	591	29	590	8	1.92%	551	39
Spartanburg County Council	576	10	1.76%	460	116	526	10	1.71%	438	88
All Other	15,501		47.31%	13,580	1,921	13,237		43.32%	11,852	1,385
Total[3]	32,770		100.00%	29,297	3,473	30,599		100.00%	27,767	2,832

In 2019, "All Other" consisted of:

Type	Number	Employees
Higher Ed/Quasi-State	29	697
City/County	322	14,595
Public Schools	60	209
Total	411	15,501

In 2010, "All Other" consisted of:

Type	Number	Employees
Higher Ed/Quasi-State	25	574
City/County	303	12,537
Public Schools	44	126
Total	372	13,237

[1] Employers are considered to be participating employers if they submit contributions for an active member or working retiree during the fiscal year. The number of covered employees represents the total number of employees reported by the employer throughout the fiscal year which includes working retirees.

[2] Although each state agency reports separately, the State is considered the primary government and therefore, all state agencies are included as a single employer. Institutions of Higher Education and Quasi-State Agencies are counted as separate employers.

[3] Fiscal Year 2019 total includes 421 governmental entities and fiscal year 2010 total includes 382 governmental entities.

Revenue Capacity Information

Revenue Capacity Information is intended to assist users in realizing and reviewing the factors that affect the Systems' ability to generate revenues. Employee and employer contribution rates for the most recent ten fiscal years are presented to aid in this category.

Prior to fiscal year 2012, the employee contribution rates for SCRS and PORS were fixed by statute and had historically been changed infrequently. Any contribution increases determined by the annual actuarial valuations of the systems were made in the employer contribution rate. Retirement reform legislation enacted in 2012 set an increased contribution schedule for SCRS and PORS employee and employer contribution rates. The Retirement Funding and Administration Act of 2017 again increased, but also established a ceiling for, employee contribution rates. Effective July 1, 2017, employee rates were increased to a capped rate of 9.00 percent for SCRS and 9.75 percent for PORS. The legislation also increased employer contribution rates beginning July 1, 2017 for both SCRS and PORS by two percentage points and further scheduled employer contribution rates to increase by a minimum of one percentage point each year through July 1, 2022. If the scheduled contributions are not sufficient to meet the funding periods set in state statute, the board shall increase the employer contribution rates as necessary to meet the funding periods set for the applicable year. The employer contribution rates effective July 1, 2019 were increased for both SCRS and PORS by one percentage point to 15.56 percent and 18.24 percent, respectively.

Pension reform legislation modified statute such that the employer contribution rates for SCRS and PORS to be further increased after June 30, 2027, not to exceed one-half of one percent in any one year if necessary, in order to improve the funding of the plans. The statute set rates intended to reduce the unfunded liability of SCRS and PORS to the maximum amortization period of 20 years from 30 years over a ten-year schedule, as determined by the annual actuarial valuations of the plan. Finally, under the revised statute, the contribution rates for SCRS and PORS may not be decreased until the plans are at least 85 percent funded.

Employee Contribution Rates

Most Recent 10 Fiscal Years

Fiscal Year Ended June 30,	SCRS Class II & III	PORS Class II & III	GARS[1]	JSRS	SCNG
2019	9.00%	9.75%	11.00%	10.00%	N/A
2018	9.00%	9.75%	11.00%	10.00%	N/A
2017	8.66%	9.24%	11.00%	10.00%	N/A
2016	8.16%	8.74%	11.00%	10.00%	N/A
2015	8.00%	8.41%	11.00%	10.00%	N/A
2014	7.50%	7.84%	11.00%	10.00%	N/A
2013	7.00%	7.00%	11.00%	10.00%	N/A
2012	6.50%	6.50%	10.00%	10.00%	N/A
2011	6.50%	6.50%	10.00%	10.00%	N/A
2010	6.50%	6.50%	10.00%	10.00%	N/A

[1] The General Assembly Retirement System (GARS) employee contribution rate increased from 10 percent of earnable compensation to 11 percent of earnable compensation effective January 1, 2013.

Employer Contribution Rates[1]

Most Recent 10 Fiscal Years

Fiscal Year Ended June 30,	SCRS - Class II & III[2]		PORS - Class II & III[2]			JSRS[3]
	All Employers	Death Benefit	All Employers	Death Benefit	Accidental Death	All Employers
2019	14.410%	0.15%	16.840%	0.20%	0.20%	52.49%
2018	13.410%	0.15%	15.840%	0.20%	0.20%	49.42%
2017	11.410%	0.15%	13.840%	0.20%	0.20%	47.97%
2016	10.910%	0.15%	13.340%	0.20%	0.20%	47.97%
2015	10.750%	0.15%	13.010%	0.20%	0.20%	47.97%
2014	10.450%	0.15%	12.440%	0.20%	0.20%	47.33%
2013	10.450%	0.15%	11.900%	0.20%	0.20%	45.09%
2012	9.385%	0.15%	11.363%	0.20%	0.20%	45.09%
2011	9.240%	0.15%	11.130%	0.20%	0.20%	45.09%
2010	9.240%	0.15%	10.650%	0.20%	0.20%	45.09%

[1] This schedule does not include employer contributions for the GARS because amounts are paid as an annual lump-sum appropriation, for which incidental death benefit contributions are included. The schedule also does not include employer contributions for the SCNG which are paid through an annual State appropriation.
[2] For employers with retiree insurance coverage, an additional retiree health insurance surcharge is collected by the Retirement Systems as a pass-through agency and amounts are remitted to the South Carolina Retiree Health Insurance Trust Fund; therefore, these insurance rates are not included in this schedule.
[3] The contribution rate includes the cost of incidental death benefits.

Demographic and Economic Information

Demographic and Economic Information is intended to assist users in evaluating the socioeconomic environment within which the Systems operate and to provide information that facilitates comparisons of financial statement information over time and among pension plans. Active and retired member data for the past ten fiscal years can be found in the Actuarial Section on pages 177-179 and 185-187.

A list of the number of employers currently participating in the SCRS and PORS systems is presented in this section. Participation by state agencies, institutions of higher education, and public school districts is mandated by South Carolina State Statute. The list of participating employers includes only other employers covered by an Employer Resolution and Application. This list includes employers for which contributions were reported during the fiscal year ending June 30, 2019.

	SCRS	PORS
State Agencies/Quasi-State & Institutions of Higher Education	34	30
Public Schools	118	60
Participating Employers Covered by an Employer Resolution and Application	579	331
Total	731	421

Participating Employers

Participating Employers Covered by an Employer Resolution and Application
As of June 30, 2019

Name	SCRS	PORS
ABBEVILLE COUNTY COUNCIL	Y	Y
AIKEN BAMBERG BARNWELL EDGEFIELD REGIONAL LIBRARY BOARD	Y	
AIKEN COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	Y
ALLENDALE COUNTY COUNCIL	Y	Y
ALLENDALE COUNTY OFFICE ON AGING	Y	
ALLENDALE HAMPTON JASPER REGIONAL LIBRARY	Y	
ALLENDALE-BARNWELL DISABILITIES & SPECIAL NEEDS BOARD	Y	
ALLIGATOR RURAL WATER & SEWER CO	Y	
ANDERSON COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	
ANDERSON COUNTY COUNCIL	Y	Y
ANDERSON COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
ANDERSON COUNTY FIRE PROTECTION COMMISSION	Y	Y
ANDERSON COUNTY LIBRARY BOARD	Y	
ANDERSON REGIONAL JOINT WATER SYSTEM	Y	
ASHLEY RIVER FIRE DISTRICT	Y	Y
AXIS I CENTER OF BARNWELL	Y	
BAMBERG BOARD OF PUBLIC WORKS	Y	
BAMBERG COUNTY COUNCIL	Y	Y
BAMBERG COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
BAMBERG COUNTY OFFICE ON AGING	Y	Y
BARNWELL COUNTY COUNCIL	Y	Y
BDST SERVICES, INC.	Y	
BEAUFORT MEMORIAL HOSPITAL	Y	Y
BEAUFORT SOIL & WATER CONSERVATION DISTRICT	Y	
BEAUFORT-JASPER COUNTY WATER AUTHORITY	Y	
BEECH ISLAND RURAL COMMUNITY WATER DISTRICT	Y	
BELMONT FIRE & SANITATION DISTRICT COMMISSION	Y	Y
BELTON-HONEA PATH WATER AUTHORITY	Y	
BEREA PUBLIC SERVICE DISTRICT COMMISSION	Y	
BERKELEY CHARLESTON DORCHESTER COUNCIL	Y	
BERKELEY CHARLESTON DORCHESTER RTMA	Y	
BERKELEY COUNTY GOVERNMENT	Y	Y
BETHUNE RURAL WATER COMPANY INC	Y	
BIG CREEK WATER AND SEWERAGE DISTRICT	Y	
BLUE RIDGE RURAL WATER COMPANY, INC.	Y	
BLUFFTON TOWNSHIP FIRE DISTRICT	Y	Y
BOILING SPRINGS FIRE DEPARTMENT		Y
BOILING SPRINGS FIRE DISTRICT, GREENVILLE	Y	Y
BROADWAY WATER AND SEWER DISTRICT	Y	
BROWNS CREEK WATER COMPANY, INC.	Y	Y
BUCKSPORT WATER SYSTEM, INC.	Y	
BURTON CENTER FOR DISABILITIES & SPECIAL NEEDS	Y	Y
BURTON FIRE DISTRICT	Y	Y

Name	SCRS	PORS
CALHOUN COUNTY COUNCIL	Y	Y
CALHOUN COUNTY COUNCIL ON AGING	Y	
CALHOUN COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
CAROMI VILLAGE VOLUNTEER FIRE DEPARTMENT		Y
CATAWBA AREA AGENCY ON AGING	Y	
CATAWBA REGIONAL COUNCIL OF GOVERNMENTS	Y	
CENTRAL MIDLANDS COUNCIL OF GOVERNMENTS	Y	
CENTRAL MIDLANDS REGIONAL TRANSIT AUTHORITY	Y	
CHARLESTON AREA TRANSPORTATION AUTHORITY	Y	
CHARLESTON COMMISSIONERS OF PUBLIC WORKS	Y	
CHARLESTON COUNTY AIRPORT DISTRICT	Y	Y
CHARLESTON COUNTY HOUSING & REDEVELOPMENT AUTHORITY	Y	
CHARLESTON COUNTY HUMAN SERVICES PALMETTO COMMUNITY ACTION	Y	
CHARLESTON COUNTY LIBRARY	Y	
CHARLESTON COUNTY PARK AND RECREATION COMMISSION	Y	
CHARLESTON NAVAL COMPLEX REDEVELOPMENT	Y	
CHEROKEE COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	
CHEROKEE COUNTY COUNCIL	Y	Y
CHEROKEE COUNTY DEVELOPMENT BOARD	Y	
CHEROKEE COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
CHEROKEE COUNTY PUBLIC LIBRARY	Y	
CHEROKEE COUNTY RECREATION DISTRICT	Y	
CHEROKEE SPRINGS FIRE DISTRICT		Y
CHESCO SERVICES	Y	Y
CHESTER COUNTY BOARD OF DIRECTORS	Y	Y
CHESTER COUNTY HOSPITAL & NURSING CENTER., INC.	Y	
CHESTER COUNTY LIBRARY	Y	
CHESTER METRO DISTRICT	Y	
CHESTER SEWER DISTRICT	Y	
CHESTER/LANCASTER COUNTY DISABILITIES & SPECIAL NEEDS BOARD, INC.	Y	
CHESTERFIELD COUNTY COUNCIL	Y	Y
CHESTERFIELD COUNTY RURAL WATER CO INC	Y	Y
CHESTERFIELD SOIL & WATER CONSERVATION DISTRICT	Y	
CITY OF ABBEVILLE	Y	Y
CITY OF AIKEN		Y
CITY OF ANDERSON		Y
CITY OF BAMBERG	Y	Y
CITY OF BARNWELL	Y	Y
CITY OF BEAUFORT	Y	Y
CITY OF BELTON	Y	Y
CITY OF BENNETTSVILLE	Y	Y
CITY OF CAMDEN & MUNICIPAL UTILITIES	Y	Y
CITY OF CAYCE	Y	Y
CITY OF CHARLESTON	Y	Y
CITY OF CHESTER	Y	Y
CITY OF CLEMSON	Y	Y
CITY OF CLINTON	Y	Y
CITY OF COLUMBIA	Y	Y

Name	SCRS	PORS
CITY OF CONWAY	Y	Y
CITY OF DARLINGTON	Y	Y
CITY OF DENMARK	Y	Y
CITY OF DILLON	Y	Y
CITY OF EASLEY	Y	Y
CITY OF FLORENCE	Y	Y
CITY OF FOLLY BEACH	Y	Y
CITY OF FOREST ACRES	Y	Y
CITY OF FOUNTAIN INN	Y	Y
CITY OF GAFFNEY	Y	Y
CITY OF GEORGETOWN	Y	Y
CITY OF GOOSE CREEK	Y	Y
CITY OF GREENVILLE	Y	Y
CITY OF GREENWOOD	Y	Y
CITY OF GREER	Y	Y
CITY OF HANAHAN	Y	Y
CITY OF HARDEEVILLE	Y	Y
CITY OF HARTSVILLE	Y	Y
CITY OF INMAN	Y	Y
CITY OF ISLE OF PALMS	Y	Y
CITY OF JOHNSONVILLE	Y	Y
CITY OF LAKE CITY	Y	Y
CITY OF LANCASTER	Y	Y
CITY OF LAURENS	Y	Y
CITY OF LIBERTY	Y	Y
CITY OF LORIS	Y	Y
CITY OF MANNING	Y	Y
CITY OF MARION	Y	Y
CITY OF MAULDIN	Y	Y
CITY OF MULLINS	Y	Y
CITY OF MYRTLE BEACH	Y	Y
CITY OF NEW ELLENTON	Y	Y
CITY OF NEWBERRY	Y	Y
CITY OF NORTH AUGUSTA	Y	Y
CITY OF NORTH CHARLESTON	Y	Y
CITY OF NORTH MYRTLE BEACH		Y
CITY OF ORANGEBURG	Y	Y
CITY OF PICKENS	Y	Y
CITY OF ROCK HILL	Y	Y
CITY OF SENECA	Y	Y
CITY OF SIMPSONVILLE	Y	Y
CITY OF SPARTANBURG	Y	Y
CITY OF SUMTER	Y	Y
CITY OF TEGA CAY	Y	Y
CITY OF TRAVELERS REST	Y	Y
CITY OF UNION	Y	Y
CITY OF WALHALLA	Y	Y
CITY OF WALTERBORO	Y	Y

Name	SCRS	PORS
CITY OF WEST COLUMBIA	Y	Y
CITY OF WOODRUFF	Y	Y
CITY OF YORK	Y	Y
CLARENDON COUNTY	Y	Y
CLARENDON COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	
CLARENDON COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	Y
CLEAR SPRING FIRE-RESCUE	Y	Y
CLINTON NEWBERRY NATURAL GAS AUTHORITY	Y	Y
COLLETON COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
COLUMBIA HOUSING AUTHORITY	Y	
COLUMBIA MUSEUM OF ART	Y	
COMBINED UTILITY SYSTEM – EASLEY	Y	
COMMISSION OF PUBLIC WORKS MUNICIPAL UTILITIES – NINETY SIX	Y	
COMMISSION ON PUBLIC WORKS – SUMMERVILLE	Y	
CONVERSE FIRE DISTRICT		Y
COUNTY COUNCIL FOR DORCHESTER COUNTY	Y	Y
COUNTY COUNCIL OF BEAUFORT COUNTY	Y	Y
COUNTY COUNCIL OF NEWBERRY COUNTY	Y	Y
COUNTY COUNCIL OF PICKENS COUNTY	Y	Y
COUNTY COUNCIL OF RICHLAND COUNTY	Y	Y
COUNTY OF AIKEN	Y	Y
COUNTY OF CHARLESTON	Y	Y
COUNTY OF COLLETON	Y	Y
COUNTY OF HAMPTON	Y	Y
COUNTY OF LAURENS	Y	Y
COUNTY OF LEXINGTON	Y	Y
COUNTY OF MARLBORO	Y	Y
COUNTY OF MCCORMICK	Y	Y
CROFT FIRE DISTRICT		Y
CULTURAL & HERITAGE COMMISSION OF YORK COUNTY	Y	
DARLINGTON COUNTY COMMUNITY ACTION AGENCY	Y	
DARLINGTON COUNTY COUNCIL	Y	Y
DARLINGTON COUNTY COUNCIL ON AGING	Y	
DARLINGTON COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
DARLINGTON COUNTY SOIL & WATER CONSERVATION DISTRICT	Y	
DARLINGTON COUNTY WATER & SEWER COMMISSION	Y	
DARLINGTON COURT LIBRARY COMMISSION	Y	
DAUFUSKIE ISLAND FIRE DISTRICT		Y
DILLON COUNTY COUNCIL	Y	Y
DILLON SOIL & WATER CONSERVATION DISTRICT	Y	
DONALDS-DUE WEST WATER & SEWER AUTHORITY	Y	
DONALDSON FIRE SERVICE AREA	Y	
DORCHESTER COUNTY BOARD OF DISABILITIES & SPECIAL NEEDS	Y	
DORCHESTER COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	
DORCHESTER COUNTY LIBRARY	Y	
DORCHESTER COUNTY WATER AUTHORITY	Y	
DORCHESTER SENIORS, INC	Y	
DUNCAN CHAPEL FIRE DISTRICT	Y	

Name	SCRS	PORS
EASLEY CENTRAL WATER DISTRICT	Y	
EAST RICHLAND COUNTY PUBLIC SERVICE DISTRICT	Y	
EDGEFIELD COUNTY COUNCIL	Y	Y
EDGEFIELD COUNTY WATER & SEWER AUTHORITY	Y	
ELLOREE COMMISSION OF PUBLIC WORKS	Y	
FAIRFIELD BEHAVIORAL HEALTH SERVICES	Y	
FAIRFIELD COUNTY COUNCIL	Y	Y
FAIRFIELD COUNTY COUNCIL ON AGING	Y	
FAIRFIELD COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
FAIRFIELD COUNTY LIBRARY	Y	
FAIRFIELD MEMORIAL HOSPITAL	Y	
FLINT HILL FIRE DISTRICT	Y	Y
FLORENCE COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	
FLORENCE COUNTY COUNCIL	Y	Y
FLORENCE COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
FLORENCE REGIONAL AIRPORT	Y	Y
FORRESTER CENTER FOR BEHAVIORAL HEALTH	Y	
FRIPP ISLAND PUBLIC SERVICE DISTRICT	Y	Y
GAFFNEY BOARD OF PUBLIC WORKS	Y	
GANTT FIRE SEWER AND POLICE DISTRICT	Y	Y
GASTON RURAL COMMUNITY WATER DISTRICT	Y	
GATEWAY COUNSELING CENTER	Y	
GENERATIONS UNLIMITED	Y	
GEORGETOWN COUNTY ALCOHOL & DRUG ABUSE COMMISSION	Y	
GEORGETOWN COUNTY COUNCIL	Y	Y
GEORGETOWN COUNTY DISABILITIES & SPECIAL NEED BOARD	Y	
GEORGETOWN COUNTY WATER AND SEWER DISTRICT	Y	
GEORGETOWN SOIL & WATER CONSERVATION DISTRICT	Y	
GILBERT-SUMMIT RURAL WATER DISTRICT	Y	
GLASSY MOUNTAIN FIRE SERVICE AREA	Y	Y
GLEAMNS HUMAN RESOURCES COMMISSION	Y	
GLENDALE FIRE DEPARTMENT		Y
GLENN SPRINGS-PAULINE FIRE DEPARTMENT		Y
GRAND STRAND WATER & SEWER AUTHORITY	Y	
GRASSY POND WATER COMPANY.INC.	Y	
GREATER GREENVILLE SANITATION COMMISSION	Y	
GREENVILLE AIRPORT COMMISSION	Y	
GREENVILLE AREA DEVELOPMENT CORPORATION	Y	
GREENVILLE COMMISSION OF PUBLIC WORKS	Y	
GREENVILLE COUNTY COMMISSION ON ALCOHOL-DRUG ABUSE	Y	
GREENVILLE COUNTY COUNCIL	Y	Y
GREENVILLE COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	Y
GREENVILLE COUNTY LIBRARY	Y	Y
GREENVILLE COUNTY MUSEUM COMMISSION	Y	
GREENVILLE REDEVELOPMENT AUTHORITY	Y	
GREENVILLE-SPARTANBURG AIRPORT DISTRICT	Y	Y
GREENWOOD COMMISSION OF PUBLIC WORKS	Y	
GREENWOOD COUNTY COUNCIL	Y	Y

Name	SCRS	PORS
GREENWOOD COUNTY LIBRARY	Y	
GREENWOOD METROPOLITAN DISTRICT COMMISSION	Y	
GREENWOOD SOIL & WATER CONSERVATION DISTRICT	Y	
GREER COMMISSION OF PUBLIC WORKS	Y	Y
GREER DEVELOPMENT CORPORATION	Y	
HAMPTON COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
HARTSVILLE COMMUNITY CENTER BUILDING COMMISSION	Y	
HARVIN CLARENDON COUNTY LIBRARY	Y	
HAZEL PITTMAN CENTER	Y	
HIGH HILLS RURAL WATER COMPANY	Y	
HILLTOP FIRE DISTRICT	Y	Y
HILTON HEAD NO 1 PUBLIC SERVICE DISTRICT	Y	
HOLLY SPRINGS FIRE-RESCUE DISTRICT		Y
HOMELAND PARK WATER DISTRICT	Y	
HORRY COUNTY COUNCIL	Y	Y
HORRY COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
HORRY COUNTY SOLID WASTE AUTHORITY, INC	Y	Y
HORRY SOIL CONSERVATION DISTRICT	Y	
HOUSING AUTHORITY OF CITY OF NEWBERRY	Y	
HOUSING AUTHORITY OF CITY OF SUMTER	Y	
HOUSING AUTHORITY OF CITY OF UNION	Y	Y
HOUSING AUTHORITY OF DARLINGTON	Y	
HOUSING AUTHORITY OF FLORENCE	Y	Y
HOUSING AUTHORITY OF FORT MILL	Y	
HOUSING AUTHORITY OF LANCASTER	Y	
HOUSING AUTHORITY OF THE CITY OF AIKEN	Y	
HOUSING AUTHORITY OF THE CITY OF CHARLESTON	Y	Y
HOUSING AUTHORITY OF THE CITY OF CHESTER	Y	
HOUSING AUTHORITY OF THE CITY OF CONWAY	Y	
HOUSING AUTHORITY OF THE CITY OF EASLEY	Y	
HOUSING AUTHORITY OF THE CITY OF GAFFNEY	Y	
HOUSING AUTHORITY OF THE CITY OF GREENWOOD	Y	
HOUSING AUTHORITY OF THE CITY OF MYRTLE BEACH	Y	Y
HOUSING AUTHORITY OF THE CITY OF NORTH CHARLESTON	Y	
HOUSING AUTHORITY OF THE CITY OF SPARTANBURG	Y	
HOUSING AUTHORITY OF TOWN OF WOODRUFF	Y	
HOWE SPRINGS FIRE DISTRICT		Y
INMAN COMMUNITY FIRE DEPARTMENT		Y
INMAN-CAMPOBELLO WATER DISTRICT	Y	Y
IRMO CHAPIN RECREATION DISTRICT	Y	Y
IRMO FIRE DISTRICT	Y	Y
ISLE OF PALMS WATER & SEWER COMMISSION	Y	
JAMES ISLAND PUBLIC SERVICE DISTRICT COMMISSION	Y	Y
JASPER COUNTY BOARD OF DISABILITIES & SPECIAL NEEDS	Y	
JASPER COUNTY COUNCIL	Y	Y
JOHNSONVILLE FIRE DEPARTMENT	Y	Y
JOINT MUNICIPAL WATER & SEWER COMMISSION	Y	
KEOWEE FIRE TAX DISTRICT		Y

Name	SCRS	PORS
KERSHAW COUNTY BOARD OF DISABILITIES & SPECIAL NEEDS	Y	
KERSHAW COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	
KERSHAW COUNTY COUNCIL	Y	Y
KINGSTREE HOUSING AUTHORITY	Y	
LADY'S ISLAND - ST HELENA FIRE DISTRICT	Y	Y
LAKE CITY HOUSING AUTHORITY	Y	
LAKE CUNNINGHAM FIRE DISTRICT	Y	Y
LANCASTER COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	
LANCASTER COUNTY COUNCIL	Y	Y
LANCASTER COUNTY COUNCIL ON AGING	Y	Y
LANCASTER COUNTY NATURAL GAS AUTHORITY	Y	
LANCASTER COUNTY WATER & SEWER DISTRICT	Y	
LANCASTER SOIL & WATER CONSERVATION DISTRICT	Y	
LAURENS COMMISSIONERS OF PUBLIC WORKS	Y	
LAURENS COUNTY DEVELOPMENT CORPORATION	Y	
LAURENS COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
LAURENS COUNTY WATER & SEWER COMMISSION	Y	Y
LEE COUNTY COUNCIL	Y	Y
LEE COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
LEXINGTON MEDICAL CENTER	Y	Y
LEXINGTON/RICHLAND ALCOHOL & DRUG ABUSE COUNCIL	Y	Y
LIBERTY-CHESNEE-FINGERVILLE WATER DISTRICT	Y	
LITTLE RIVER WATER & SEWER COMPANY, INC	Y	
LOWCOUNTRY COUNCIL OF GOVERNMENTS	Y	
LOWCOUNTRY REGIONAL EMS COUNCIL	Y	
LOWCOUNTRY REGIONAL TRANSPORTATION AUTHORITY	Y	
LOWCOUNTRY REGIONAL WATER SYSTEM	Y	
LOWER SAVANNAH COUNCIL OF GOVERNMENTS	Y	
LUGOFF FIRE DISTRICT		Y
LUGOFF WATER DISTRICT OF KERSHAW COUNTY	Y	
MARCO RURAL WATER COMPANY, INC.	Y	
MARION COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	
MARION COUNTY COUNCIL	Y	Y
MARION COUNTY LIBRARY	Y	
MARION-DILLON COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
MARLBORO COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
MARLBORO WATER COMPANY	Y	
MCCORMICK COMMISSION OF PUBLIC WORKS	Y	
MCCORMICK COUNTY COUNCIL ON AGING	Y	Y
MCCORMICK COUNTY WATER & SEWER AUTHORITY	Y	
METROPOLITAN SEWER SUB-DISTRICT	Y	
METROPOLITAN SUBDISTRICT B WATER & SEWER	Y	
MID COUNTY WATER COMPANY, INC	Y	
MONCKS CORNER WATER WORKS COMMISSION	Y	
MT PLEASANT WATER & SEWER COMMISSION	Y	
MUNICIPAL ASSOCIATION OF SOUTH CAROLINA	Y	
MURRELLS INLET-GARDEN CITY FIRE DISTRICT	Y	Y
NEW ELLENTON COMMISSION OF PUBLIC WORKS	Y	

Name	SCRS	PORS
NEW LIFE CENTER	Y	
NEWBERRY COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	Y
NEWBERRY COUNTY LIBRARY	Y	
NEWBERRY COUNTY WATER AND SEWER AUTHORITY	Y	
NORTH CHARLESTON SEWER DISTRICT	Y	
NORTH GREENVILLE FIRE DISTRICT		Y
NORTH SPARTANBURG AREA FIRE & RESCUE DISTRICT	Y	
OCONEE COUNTY	Y	Y
OCONEE DISABILITIES & SPECIAL NEEDS BOARD	Y	
OCONEE JOINT REGIONAL SEWER AUTHORITY	Y	
OLANTA RURAL FIRE DEPARTMENT		Y
OLD NINETY SIX TOURISM COMMISSION	Y	
OLD TOWN FIRE AND RESCUE DEPARTMENT	Y	
OLDE ENGLISH DISTRICT TOURISM COMMISSION	Y	
ORANGEBURG COUNTY COUNCIL	Y	Y
ORANGEBURG COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	Y
ORANGEBURG DEPARTMENT OF PUBLIC UTILITIES	Y	
PALMETTO STATE TEACHERS ASSOCIATION	Y	
PARKER SEWER & FIRE SUBDISTRICT	Y	Y
PARTNERSHIP FOR A GREATER GREENWOOD COUNTY	Y	
PEE DEE REGIONAL COUNCIL OF GOVERNMENTS	Y	
PEE DEE REGIONAL EMS, INC	Y	
PEE DEE REGIONAL TRANSPORTATION AUTHORITY	Y	Y
PELHAM BATESVILLE FIRE DEPARTMENT	Y	Y
PENDLETON DISTRICT HISTORICAL & RECREATIONAL COMMISSION	Y	
PICKENS COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	
PICKENS COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
PIEDMONT PARK FIRE DISTRICT	Y	Y
PIEDMONT PUBLIC SERVICE DISTRICT		Y
PINE RIDGE FIRE DEPARTMENT		Y
PIONEER RURAL WATER DISTRICT	Y	
POPLAR SPRINGS FIRE DEPARTMENT		Y
POWDERSVILLE WATER DISTRICT	Y	
RECREATION DISTRICT & RECREATION COMMISSION OF RICHLAND COUNTY	Y	Y
RECREATION DISTRICT LEXINGTON COUNTY	Y	Y
REIDVILLE FIRE DISTRICT		Y
RENEWABLE WATER RESOURCES (RE-WA)	Y	
RICHLAND COUNTY PUBLIC LIBRARY	Y	Y
RICHLAND LEXINGTON AIRPORT DISTRICT	Y	Y
RICHLAND/LEXINGTON COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
RICHLAND MEMORIAL/PALMETTO HEALTH	Y	
RIVERBANKS PARK COMMISSION	Y	
ROCKY CREEK WATER COMPANY, INC.	Y	
ROEBUCK FIRE DEPARTMENT		Y
RUBICON	Y	
RURAL COMMUNITY WATER DISTRICT OF GEORGETOWN CO	Y	
SALUDA COMMISSION OF PUBLIC WORKS	Y	
SALUDA COUNTY COUNCIL	Y	Y

Name	SCRS	PORS
SALUDA COUNTY WATER & SEWER AUTHORITY	Y	
SANDY SPRINGS WATER COMPANY	Y	
SANTEE COOPER COUNTIES PROMOTION COMMISSION	Y	
SANTEE FIRE SERVICE DISTRICT	Y	Y
SANTEE-LYNCHES COUNCIL FOR GOVERNMENTS	Y	
SANTEE-WATEREE REGIONAL TRANSPORTATION AUTHORITY	Y	
SC APPALACHIAN COUNCIL OF GOVERNMENTS	Y	
SC ASSOCIATION OF COUNTIES	Y	
SC ASSOCIATION OF SCHOOL ADMINISTRATORS	Y	
SC ASSOCIATION OF SCHOOL BOARDS	Y	
SC ATHLETIC COACHES ASSOCIATION	Y	
SC EDUCATION ASSOCIATION	Y	
SC HIGH SCHOOL LEAGUE	Y	
SC LAW ENFORCEMENT OFFICERS ASSOCIATION	Y	
SC MIDLANDS EMERGENCY MEDICAL SERVICES MANAGEMENT ASSOCIATION	Y	
SC STATE CREDIT UNION	Y	
SC STATE EMPLOYEES' ASSOCIATION	Y	
SC STATE FIREFIGHTERS' ASSOCIATION	Y	
SHELDON FIRE DISTRICT	Y	Y
SHORELINE BEHAVIORAL HEALTH SERVICES	Y	
SIX MILE RURAL WATER DISTRICT	Y	
SLATER-MARIETTA FIRE DEPARTMENT		Y
SOUTH CAROLINA SHERIFFS' ASSOCIATION	Y	
SOUTH CAROLINA TECHNOLOGY & AVIATION CENTER	Y	
SOUTH GREENVILLE AREA FIRE DISTRICT	Y	Y
SOUTH ISLAND PUBLIC SERVICE DISTRICT	Y	
SOUTH LYNCHES FIRE DEPARTMENT		Y
SOUTHSIDE RURAL COMMUNITY WATER DISTRICT	Y	
SPARTANBURG COMMISSIONERS OF PUBLIC WORKS	Y	Y
SPARTANBURG COUNTY COUNCIL	Y	Y
SPARTANBURG PUBLIC LIBRARY	Y	Y
SPARTANBURG REGIONAL MEDICAL CENTER	Y	Y
SPARTANBURG SANITARY SEWER DISTRICT	Y	
ST ANDREWS PARISH PARKS & PLAYGROUNDS	Y	
ST ANDREWS PUBLIC SERVICE DISTRICT COMMISSION	Y	
ST GEORGE WATER AND SEWER DEPARTMENT	Y	
ST JOHN'S FIRE DISTRICT	Y	Y
ST PAUL'S FIRE DISTRICT	Y	Y
STARR-IVA WATER COMPANY	Y	
STARTEX JACKSON WELLFORD DUNCAN WATER DISTRICT	Y	
SUMTER CONSERVATION DISTRICT	Y	
SUMTER COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	
SUMTER COUNTY COUNCIL	Y	Y
SUMTER COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	Y
SUMTER COUNTY LIBRARY	Y	
TAYLORS FIRE AND SEWER DISTRICT	Y	Y
THE ERNEST E. KENNEDY CENTER	Y	
THE PEE DEE TOURISM COMMISSION	Y	

Name	SCRS	PORS
THE RIVER ALLIANCE	Y	
THREE RIVERS SOLID WASTE AUTHORITY	Y	
TIGERVILLE FIRE DEPARTMENT		Y
TOWN OF ALLENDALE	Y	Y
TOWN OF ANDREWS	Y	Y
TOWN OF ATLANTIC BEACH	Y	Y
TOWN OF AYNOR	Y	Y
TOWN OF BATESBURG-LEESVILLE	Y	Y
TOWN OF BETHUNE	Y	Y
TOWN OF BISHOPVILLE	Y	Y
TOWN OF BLACKSBURG	Y	Y
TOWN OF BLACKVILLE	Y	
TOWN OF BLUFFTON	Y	Y
TOWN OF BLYTHEWOOD	Y	
TOWN OF BONNEAU		Y
TOWN OF BOWMAN	Y	Y
TOWN OF BRANCHVILLE	Y	Y
TOWN OF BRIARCLIFFE ACRES	Y	Y
TOWN OF BRUNSON	Y	
TOWN OF BURNETTOWN	Y	Y
TOWN OF CALHOUN FALLS	Y	Y
TOWN OF CAMERON	Y	Y
TOWN OF CAMPOBELLO	Y	Y
TOWN OF CARLISLE	Y	
TOWN OF CENTRAL	Y	Y
TOWN OF CHAPIN	Y	Y
TOWN OF CHERAW	Y	Y
TOWN OF CHESNEE	Y	Y
TOWN OF CHESTERFIELD	Y	Y
TOWN OF CLIO	Y	Y
TOWN OF CLOVER	Y	Y
TOWN OF CORDOVA	Y	
TOWN OF COTTAGEVILLE	Y	Y
TOWN OF COWARD	Y	Y
TOWN OF COWPENS	Y	Y
TOWN OF DUE WEST	Y	Y
TOWN OF DUNCAN	Y	Y
TOWN OF EASTOVER	Y	
TOWN OF EDGEFIELD	Y	Y
TOWN OF EDISTO BEACH	Y	Y
TOWN OF EHRHARDT	Y	Y
TOWN OF ELGIN	Y	Y
TOWN OF ELKO	Y	
TOWN OF ELLOREE	Y	Y
TOWN OF ESTILL	Y	Y
TOWN OF EUTAWVILLE	Y	Y
TOWN OF FAIRFAX	Y	Y
TOWN OF FORT LAWN	Y	Y

Name	SCRS	PORS
TOWN OF FORT MILL	Y	Y
TOWN OF GASTON	Y	Y
TOWN OF GIFFORD		Y
TOWN OF GILBERT	Y	
TOWN OF GRAY COURT	Y	
TOWN OF GREAT FALLS	Y	Y
TOWN OF GREELEYVILLE	Y	Y
TOWN OF HAMPTON	Y	Y
TOWN OF HARLEYVILLE	Y	Y
TOWN OF HEATH SPRINGS	Y	
TOWN OF HEMINGWAY	Y	Y
TOWN OF HILTON HEAD ISLAND		Y
TOWN OF HOLLY HILL	Y	Y
TOWN OF HOLLYWOOD	Y	
TOWN OF HONEA PATH	Y	Y
TOWN OF IRMO	Y	Y
TOWN OF IVA	Y	Y
TOWN OF JACKSON	Y	Y
TOWN OF JAMES ISLAND	Y	Y
TOWN OF JAMESTOWN	Y	Y
TOWN OF JEFFERSON	Y	
TOWN OF JOHNSTON	Y	Y
TOWN OF JONESVILLE	Y	Y
TOWN OF KERSHAW	Y	Y
TOWN OF KIAWAH ISLAND	Y	Y
TOWN OF KINGSTREE	Y	Y
TOWN OF LAKE VIEW	Y	Y
TOWN OF LAMAR		Y
TOWN OF LANDRUM	Y	Y
TOWN OF LANE	Y	Y
TOWN OF LATTA	Y	Y
TOWN OF LEXINGTON	Y	Y
TOWN OF LINCOLNVILLE	Y	
TOWN OF LITTLE MOUNTAIN	Y	Y
TOWN OF LIVINGSTON	Y	
TOWN OF LYMAN	Y	Y
TOWN OF MAYESVILLE	Y	
TOWN OF MCBEE	Y	
TOWN OF MCCLELLANVILLE	Y	
TOWN OF MCCOLL	Y	Y
TOWN OF MCCORMICK	Y	Y
TOWN OF MEGGETT	Y	
TOWN OF MONCKS CORNER	Y	Y
TOWN OF MONETTA	Y	
TOWN OF MT PLEASANT	Y	Y
TOWN OF MT. CROGHAN	Y	
TOWN OF NICHOLS	Y	Y
TOWN OF NINETY SIX	Y	Y

Name	SCRS	PORS
TOWN OF NORRIS	Y	
TOWN OF NORTH	Y	Y
TOWN OF NORWAY	Y	Y
TOWN OF OLANTA	Y	Y
TOWN OF OLAR	Y	Y
TOWN OF PACOLET	Y	Y
TOWN OF PAGELAND	Y	Y
TOWN OF PAMPLICO	Y	Y
TOWN OF PATRICK	Y	
TOWN OF PELION	Y	Y
TOWN OF PELZER	Y	
TOWN OF PENDLETON	Y	Y
TOWN OF PERRY	Y	Y
TOWN OF PINE RIDGE	Y	Y
TOWN OF PINEWOOD	Y	
TOWN OF POMARIA	Y	
TOWN OF PORT ROYAL	Y	Y
TOWN OF PROSPERITY	Y	Y
TOWN OF QUINBY	Y	Y
TOWN OF RAVENEL	Y	
TOWN OF REEVESVILLE	Y	
TOWN OF RIDGE SPRING	Y	Y
TOWN OF RIDGELAND	Y	Y
TOWN OF RIDGEVILLE	Y	Y
TOWN OF RIDGEWAY	Y	Y
TOWN OF SALLEY	Y	Y
TOWN OF SALUDA	Y	Y
TOWN OF SANTEE	Y	Y
TOWN OF SCRANTON	Y	Y
TOWN OF SEABROOK ISLAND	Y	
TOWN OF SIX MILE	Y	
TOWN OF SNELLING	Y	
TOWN OF SOCIETY HILL	Y	Y
TOWN OF SOUTH CONGAREE	Y	Y
TOWN OF SPRINGDALE	Y	Y
TOWN OF SPRINGFIELD	Y	Y
TOWN OF ST GEORGE	Y	Y
TOWN OF ST MATTHEWS	Y	Y
TOWN OF ST STEPHEN	Y	Y
TOWN OF SULLIVAN'S ISLAND	Y	Y
TOWN OF SUMMERTON	Y	Y
TOWN OF SUMMERVILLE	Y	Y
TOWN OF SURFSIDE BEACH	Y	Y
TOWN OF SWANSEA	Y	Y
TOWN OF TIMMONSVILLE	Y	Y
TOWN OF TRENTON	Y	Y
TOWN OF TURBEVILLE	Y	Y
TOWN OF VARNVILLE	Y	Y

Name	SCRS	PORS
TOWN OF WAGENER	Y	Y
TOWN OF WARE SHOALS	Y	Y
TOWN OF WELLFORD	Y	Y
TOWN OF WEST PELZER	Y	Y
TOWN OF WEST UNION	Y	Y
TOWN OF WESTMINSTER	Y	Y
TOWN OF WHITMIRE	Y	Y
TOWN OF WILLIAMSTON	Y	Y
TOWN OF WILLISTON	Y	Y
TOWN OF WINNSBORO	Y	Y
TOWN OF YEMASSEE	Y	Y
TRI-COUNTY COMMISSION ON ALCOHOL & DRUG ABUSE	Y	
TRI-COUNTY SOLID WASTE AUTHORITY	Y	
TYGER RIVER FIRE DISTRICT	Y	Y
UNA FIRE DEPARTMENT		Y
UNION COUNTY CARNEGIE LIBRARY	Y	
UNION COUNTY COUNCIL OF AGING	Y	
UNION COUNTY DEVELOPMENT BOARD	Y	
UNION COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
UNION COUNTY SUPERVISOR	Y	Y
UPPER SAVANNAH COUNCIL OF GOVERNMENTS	Y	
VALLEY PUBLIC SERVICE AUTHORITY	Y	
WACCAMAW ECONOMIC OPPORTUNITY COUNCIL	Y	
WACCAMAW REGIONAL COUNCIL OF GOVERNMENTS	Y	
WACCAMAW REGIONAL TRANSPORTATION AUTHORITY	Y	
WADE HAMPTON FIRE & SEWER DISTRICT	Y	Y
WEST FLORENCE RURAL VOLUNTEER FIRE DISTRICT		Y
WESTVIEW BEHAVIORAL HEALTH SERVICES	Y	
WESTVIEW-FAIRFOREST FIRE DEPARTMENT	Y	Y
WHITESVILLE RURAL VOLUNTEER FIRE DEPARTMENT		Y
WHITMIRE COMMISSION OF PUBLIC WORKS	Y	
WHITNEY AREA FIRE DEPARTMENT		Y
WILLIAMSBURG COUNTY COUNCIL	Y	Y
WILLIAMSBURG COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	
WILLIAMSBURG COUNTY LIBRARY	Y	
WINDY HILL VOLUNTEER FIRE COMPANY		Y
WOODRUFF ROEBUCK WATER DISTRICT	Y	
YORK COUNTY	Y	Y
YORK COUNTY CONVENTION & VISITORS BUREAU	Y	
YORK COUNTY COUNCIL ON AGING	Y	
YORK COUNTY DISABILITIES & SPECIAL NEEDS BOARD	Y	Y
YORK COUNTY LIBRARY	Y	
YORK SOIL & WATER CONSERVATION DISTRICT	Y	

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