

Comprehensive Annual Financial Report

South Carolina Retirement Systems
For the fiscal year ended June 30, 2018
Pension trust funds of the State of South Carolina



Serving those who serve South Carolina

South Carolina Retirement Systems

Administered by South Carolina Public Employee Benefit Authority

Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2018

Pension Trust Funds of the State of South Carolina

S.C. Public Employee Benefit Authority
202 Arbor Lake Drive
Columbia, SC 29223
www.peba.sc.gov

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 27, 2018

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, 2018. 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 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 2018 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 the agency does this by focusing efforts and goals in areas that promote financially sound programs, encourage retirement awareness, enhance customer experience and responsibly manage risk.

PEBA worked with the General Assembly, the Joint Committee on Pension Systems Review and the South Carolina Retirement System Investment Commission (RSIC) to discuss potential benefit structure changes. These

efforts were a continuation of the previous work performed to ensure adequate funding of the pension trust funds that resulted in passage of the Retirement Funding and Administration Act of 2017, which became effective July 1, 2017. This legislation increased the employer and employee contribution rates, established a ceiling on the SCRS and PORS employee contribution rates, lowered the assumed rate of return, required a scheduled reduction of the funding periods, and addressed various governance issues including the assignment of the PEBA Board as custodian of the retirement trust funds and assignment of the RSIC and PEBA as co-trustees of the assets of the retirement trust funds. In an effort to help offset a portion of the burden of the increased contribution requirement for employers, the General Assembly appropriated nonemployer funds directly to PEBA totaling \$105 million and \$13.1 million for SCRS and PORS respectively. PEBA issued over 1,200 credit invoices to participating SCRS and PORS employers based on their proportionate share of the appropriated funds. Participating employers then applied the credit invoices towards contributions otherwise due to the Systems for the fiscal year.

In addition to implementing legislation changes, PEBA's core retirement operational areas experienced unprecedented workload volumes during the year. We processed nearly 6,000 member applications for retirement, over 12,000 member refund requests and approximately 5,000 death claims. The Teacher and Employee Retention Incentive (TERI) program, a deferred retirement option plan 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, over 7,500 members terminated employment and ended their participation during fiscal year 2018. As a result, PEBA paid participants over \$700 million in accumulated benefits during the year and as of June 30, 2018 held in trust another \$377 million to be paid in fiscal year 2019. Additionally, once a member ended their TERI participation, monthly benefits were recalculated prospectively to include an adjustment for payment of unused annual leave at termination, and accordingly, over 7,500 member's prospective benefits also had to be recalculated.

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 2016, PEBA's total pension administration cost was \$33 per active member and annuitant. This was \$47 below the peer average of \$80 per active member and annuitant, and the fourth lowest cost in the CEM universe. Similarly, the total service score which has remained stable over the last four years, was 73 compared to the peer median of 81. This demonstrates the value that PEBA provides to our membership through a very low administration cost, yet relatively high service level.

PEBA's Enterprise Risk Management (ERM) and Compliance Department continued to make strides to improve management of the programs that oversee PEBA's compliance with state and federal regulations as well as the monitoring of those programs. PEBA has made progress in the development of the risk program through: updating the agency's incident response plan, completing an agency risk assessment, developing a risk management framework and risk dashboard, and purchasing cyber liability insurance.

PEBA continued to make progress in fiscal year 2018 toward encouraging retirement awareness among its members through the addition of seminars, presentations, videos and flyers. Our *Be aware and prepare* series provides members with information that can help them make smart decisions about their financial future. The agency provides a retirement planning seminar for members who are a few years away from retirement eligibility, as well as an early-to 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 now to help ensure a secure financial future.

One of the most significant operational challenges the agency faces is the probable replacement of its legacy information systems. An extensive project named peba:connect is underway to assess the current environment, define new requirements and potentially acquire a new system. The initial procurement of a client services vendor which was originally awarded in January 2017, was delayed due to protests of the award. In October 2017, after an extended protest, Linea Solutions was awarded the client services vendor contract, although an appeal continues. Linea is onsite working to move peba:connect into the next phase. A request for proposal for a data vendor was issued in March 2018 and a request for qualifications for the new system was released in March 2018. The process to implement this new comprehensive benefit administration system is projected to take at least five years.

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.

The July 1, 2017, actuarial valuations which were adopted by the PEBA Board in December 2017, determined the actuarial status of each plan and the minimum necessary employee and employer contribution requirements for fiscal year 2018. The market value of assets is less than the actuarial value of assets, so deferred investment losses exist which will be recognized as investment losses in future years. Given both the magnitude of the deferred losses and short-term investment projections, increased funding requirements were recognized. Pension reform legislation which became effective July 1, 2017 increased employee rates to a capped rate of 9.00 percent for SCRS and 9.75 percent for PORS. The legislation also increased employer contribution rates effective July 1, 2018 for both SCRS and PORS by one percentage point to 14.56 percent and 17.24 percent, respectively. Employer contribution rates are scheduled to 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.

The funded ratios of the five plans as of July 1, 2017, range from a low of 41.8 percent for SCNG to a high of 63.0 percent for PORS. The funded ratio for SCRS, which represents the largest membership of the five plans, decreased from 59.5 percent to 56.3 percent and similarly PORS decreased from 66.3 percent to 63.0 percent. Declines in funded ratios were primarily due to the continued recognition of deferred investment losses experienced in prior fiscal years, which are recognized in the actuarial value of assets using a modified five-year smoothing technique. The funded ratios were also impacted by increases in the liability because the contributions to the plan attributable to financing the unfunded actuarial accrued liability were less than the interest on the unfunded liability.

The funded ratio of SCNG continues to be very low because at one time, the plan was not funded on an actuarially sound basis. However, since 2006 when the General Assembly transferred administrative responsibility to the Retirement Division, their commitment to ensure the SCNG plan would be sufficiently funded prospectively has been maintained and the funded ratio has steadily improved. Each year recurring funds are set aside in the state's annual budget to fund SCNG over an amortization period that does not exceed 30 years, so continued future improvement in the funded ratio is expected.

As of July 1, 2017, the unfunded actuarial accrued liability for SCRS increased from \$18.6 billion to \$21.1 billion and PORS increased from \$2.2 billion to \$2.6 billion. The largest source of increase was the result of continual recognition of deferred investment losses in the actuarial value of assets. Absent significant favorable investment experience, those deferred losses will continue to be reflected, or smoothed, 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 never exactly match the estimated assumptions.

Actuarial smoothing techniques, which defer investment gains and losses, help to dampen the short-term volatility inherent in investment markets by allowing only a portion of investment gains and losses to be recognized each year. Using smoothing techniques, all of the Systems recognized a net actuarial loss on investment returns for the valuation year. As of the July 1, 2017 valuation, the market value of SCRS assets was \$1.5 billion less than the actuarial value of those assets, which signifies that the retirement system is in a position of deferred losses. Therefore, unless investment returns in excess of the assumed rate of return are achieved, the future recognition of these deferred losses is expected to increase the unfunded actuarial accrued liability thus additional funding sources are scheduled per recent legislative action.

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 new 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

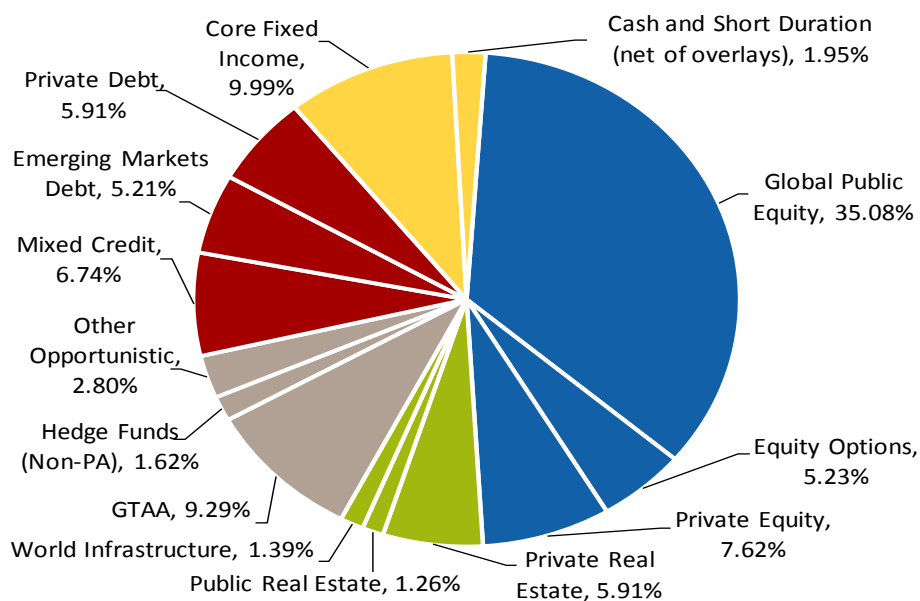
As of June 30, 2018, the custodial bank reported that the net asset value of the pension trust funds, invested and managed by the Retirement System Investment Commission (RSIC), had a fair value of \$31.3 billion. This represents a \$1.2 billion increase, after payment of benefits, over the previous fiscal year end's fair value.

The Plans' assets returned 7.82 percent, net of fees on a time-weighted calculation basis, for the fiscal year ending June 30, 2018, compared to the Policy benchmark's return of 7.28 percent. The three year annualized net of fees return was 6.31 percent, as of the fiscal year end, compared to the Policy benchmark return of 6.54 percent. The five year Plan annualized return and Policy benchmark return were 7.07 percent and 6.94 percent respectively.

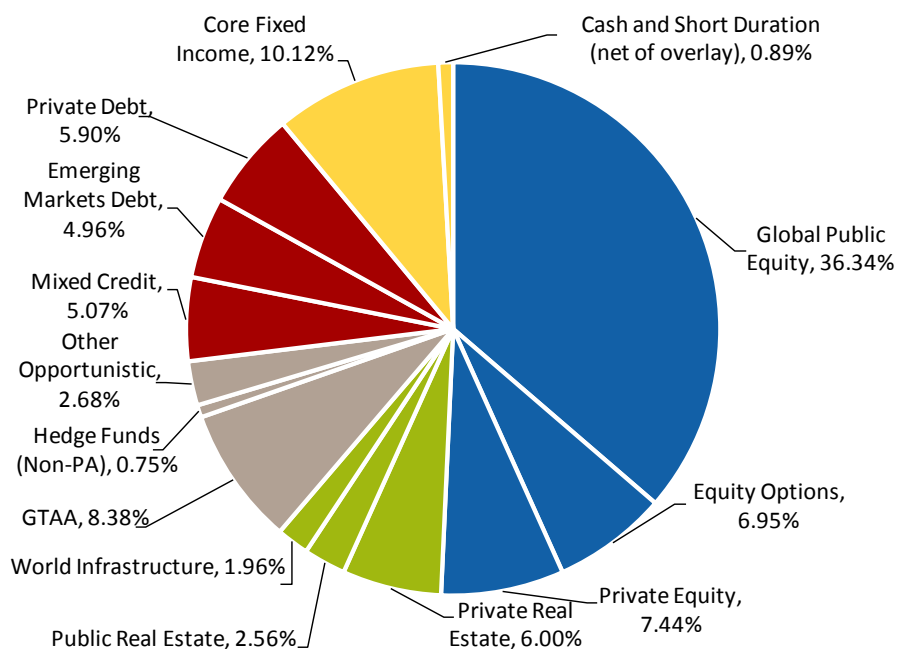
The Plan's actuarial assumed rate of return, as of fiscal year end, was 7.25 percent. Investment performance, in comparison to the actuarial assumed rate of investment return, is a significant factor in the actuarial valuations. The actuarial asset valuation method utilized dampens year-to-year fluctuations, mitigates the effect of annual return volatility in the market and helps provide a consistent estimate for the actuarial value of assets. Detailed investment results for fiscal year 2018 can be found within both the financial and investment sections of this report.

The RSIC provided the charts on pages 17-18, which summarize the asset allocation of the Retirement Systems' trust funds for the prior and most recent fiscal year periods and the RSIC's target allocation in effect as of fiscal year ended June 30, 2018. The Commission approved and implemented changes to the portfolio's target asset allocation for fiscal year 2018. The asset allocation introduced a mid-year increase in Cash & Short Duration allocation to accommodate an expected increase in benefit payments associated with the closure of the TERI program. The asset allocation temporarily increased the Cash & Short Duration target by 1 percentage point to 3 percent of Plan assets during the period commencing December 1, 2017 and ending June 30, 2018. The Cash & Short Duration allocation is reduced to 1 percent of Plan assets for the start of the fiscal year 2019 allocation. The fiscal year 2018 asset allocation policy also featured a 2 percentage point reduction in Hedge Funds from 4 percent to 2 percent of Plan assets on a path to a zero allocation beginning fiscal year 2019.

Portfolio Exposure as of June 30, 2017¹



Portfolio Exposure as of June 30, 2018¹



■ Global Equity

Global Public Equity²
Private Equity
Equity Options

■ Real Assets

Public Real Estate
Private Real Estate
World Infrastructure

■ Opportunistic

GTAA²
Hedge Funds (Non-PA)²
Other Opportunistic²

■ Diversified Credit

Mixed Credit²
Emerging Markets Debt²
Private Debt²

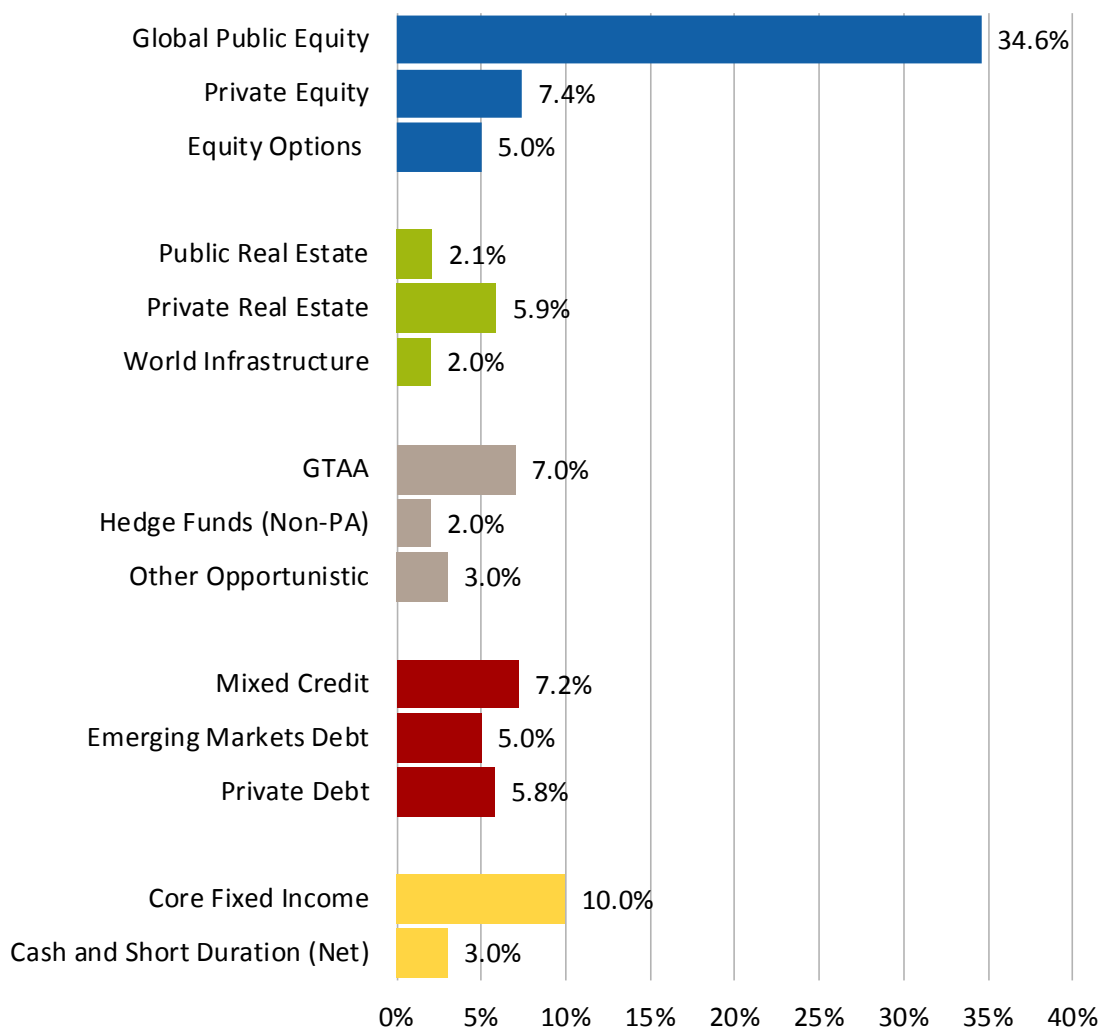
■ Conservative Fixed Income

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

¹Asset class exposures include exposure from RSIC's derivative overlay program.

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

Target Asset Allocation as of June 30, 2018¹



■ Global Equity

Global Public Equity²
Private Equity
Equity Options

■ Real Assets

Public Real Estate
Private Real Estate
World Infrastructure

■ Opportunistic

GTAA²
Hedge Funds (Non-PA)²
Other Opportunistic²

■ Diversified Credit

Mixed Credit²
Emerging Markets Debt²
Private Debt²

■ Conservative Fixed Income

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

¹Target Asset Allocation reflects the policy targets that were adopted by the Commission and in effect at the end of fiscal year 2018. 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.

²Asset 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, 2017. This was the 31st 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

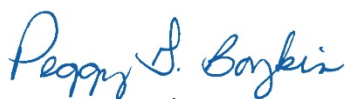
The South Carolina Retirement Systems received the Public Pension Coordinating Council's Public Pension Standards Award in 2018 for the 15th consecutive year in recognition of meeting professional plan design and administration standards. The Public Pension Coordinating Council is a confederation of 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 members of the S.C. State Fiscal Accountability Authority, PEBA's Board of Directors, the S.C. General Assembly, 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
Executive Director



Travis J. Turner, CPA, CISA
Chief Financial Officer



Tammy B. Nichols, CPA
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, 2017

Christopher P. Morrell

Executive Director/CEO



Public Pension Coordinating Council

***Public Pension Standards Award
For Funding and Administration
2018***

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)

A handwritten signature in cursive script, reading 'Alan H. Winkle', is positioned above the printed name and title.

Alan H. Winkle
Program Administrator

Governing Board and Administration as of Issuance

S.C. Public Employee Benefit Authority Board of Directors

John A. Sowards, <i>Chairman</i>	Audie M. Penn
Joe W. “Rocky” Pearce, Jr., <i>Vice Chairman</i>	Charles “Chuck” Richardson
Stephen M. Heisler	Alexander G. Shissias
Paige Parsons Lewis	Edward L. Walton
Sheriff Leon Lott	Vacant
Steve A. Matthews	

Retirement System Investment Commission¹

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

¹Refer to pages 116-120 for a list of investment managers and fees.

Custodial Bank

BNY Mellon Asset Servicing

Investment Consultants

Meketa Investment Group
Albourne America, LLC

Consulting Actuaries

GRS Consulting

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*

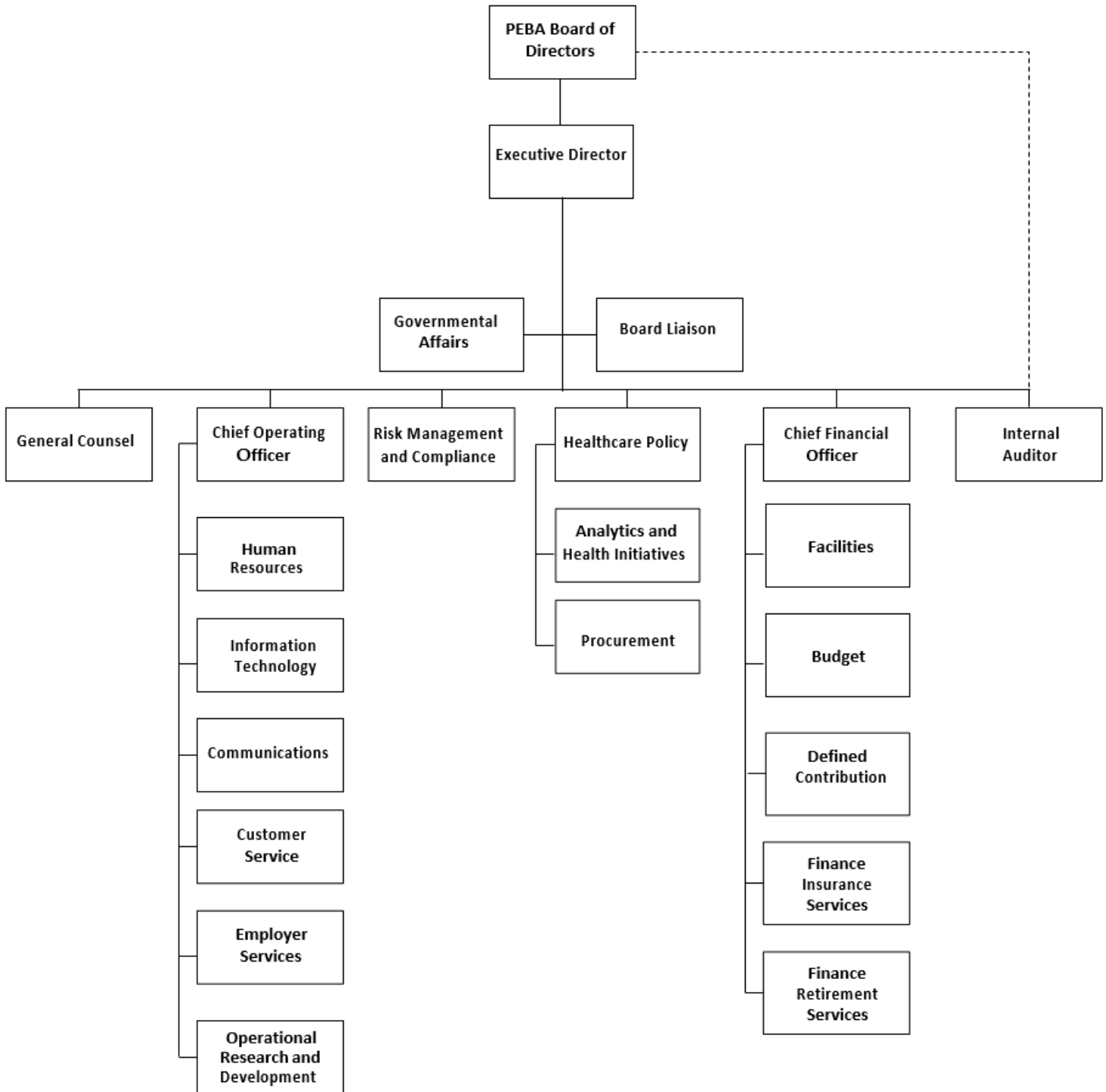
Retirement System Investment Commission Executive Management

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

S.C. Public Employee Benefit Authority staff responsible for compilation of CAFR

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

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



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, 2018, 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.

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

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, 2018, 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' 2017 financial statements, and we expressed an unmodified audit opinion on those audited financial statements in our report dated October 13, 2017. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2017 is consistent, in all material respects, with the audited financial statements from which it has been derived.

Emphasis of Matter

The financial statements include alternative investments valued at \$9.5 billion (approximately 30% of total net position). As explained in Note 1, their fair values have been estimated by management in the absence of readily determinable fair values. Management's estimates are based on information provided by the fund managers or the general partners. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis 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.

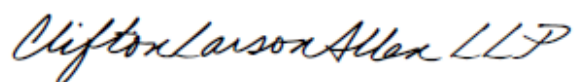
The Honorable Henry D. McMaster, Governor
Mr. George L. Kennedy, CPA, State Auditor,
and Board of Directors
South Carolina Public Employee Benefit Authority

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 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, 2018 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, 2018

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, 2018, 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 co-trustee and co-fiduciary of the Systems and the 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. Effective July 1, 2017, the Retirement System Funding and Administration Act of 2017 assigned the PEBA Board of Directors as the Custodian of the Retirement Trust Funds and assigned PEBA and the Retirement Systems Investment Commission (RSIC) as co-trustees of the Retirement Trust Funds.

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, 2018, with combined total comparative information for the fiscal year ended June 30, 2017:

- 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 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' and nonemployer's net pension liability, changes in employers' and nonemployer's 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

- Legislation addressing the funding of the state's public pension plans took effect July 1, 2017. This legislation, known as the Retirement Funding and Administration Act of 2017, represented the culmination of efforts on behalf of many people and organizations. Both the Board of Directors of PEBA and the South Carolina General Assembly made the sustainability of our state's pension plans a priority that was handled deliberately. This legislation increased the employer and employee contribution rates, established a ceiling on SCRS and PORS employee contribution rates, lowered the assumed rate of return, required a scheduled reduction of the funding periods, and addressed various governance issues including the assignment of the PEBA Board as custodian of the retirement trust funds and assignment of the Retirement System Investment Commission (RSIC) and PEBA as co-trustees of the assets of the retirement trust funds. Additional information regarding this legislation, as well as current funding schedules, are available on our public website.
- Total fiduciary net position for all five defined benefit plans of the Systems combined, increased by almost \$1 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. It is important to note that growth in fiduciary net position depends on both investment performance and contributions from employers and employees. 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 from \$30.2 billion to \$31.2 billion was attributable to both increased contributions and positive investment performance.
- For the fiscal year ended June 30, 2018, 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 7.82 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 lower than the prior year's return of 11.88 percent but greater than the

actuarial assumed rate of return and is therefore considered an actuarial gain. As referenced above, the Retirement Funding and Administration Act of 2017 lowered the assumed rate of return from 7.50 to 7.25 percent beginning July 1, 2017. 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 GRS Consulting in the GASB No. 67 Accounting Valuation Report as of June 30, 2018. The calculations presented in the accounting valuation are not applicable for other purposes, such as determining the plans' funding requirements. The total pension liability, net pension liability, and sensitivity information are based on an actuarial valuation performed as of July 1, 2017. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending June 30, 2018, using generally accepted actuarial principles. The Notes and Required Supplementary Information (RSI) sections of the Financial Statements include disclosures required by GASB No. 67.
- 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. Pension reform legislation increased both employee and employer contribution rates, but also established a ceiling for employee rates. Effective July 1, 2017, employee rates increased to a capped rate of 9.00 percent for SCRS and 9.75 percent for PORS. Employer contribution rates for both SCRS and PORS increased by 2 percent of pay to 13.56 percent and 16.24 percent, respectively. These employer rates are inclusive of contributions for the death benefit plan which are only applicable to participating employers. Effective July 1, 2018, employee rates will remain the same but employer contribution rates are scheduled to increase by 1 percentage point for both SCRS and PORS to 14.56 percent and 17.24 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 burden of the increased contribution requirement for employers, the General Assembly funded 1 percent of the SCRS and PORS contribution increases for fiscal year 2018. The State's budget appropriated these funds directly to PEBA for the South Carolina Retirement System Trust Fund and the Police Officers Retirement System Trust Fund. PEBA received the funds from the state and in turn issued credit invoices to each employer based on each employer's proportionate share of the appropriated funds. Participating employers then applied the credit invoices towards contributions otherwise due to the Systems for the fiscal year. The amount of nonemployer funds appropriated totaled \$105 million and \$13.1 million for SCRS and PORS respectively.
- Annuity benefits increased 16.3 percent from the prior fiscal year. The amount of benefits disbursed to payees increased from the prior year for several reasons. Eligible SCRS and PORS annuitant payees received an annual benefit adjustment equal to the lesser of 1 percent or \$500 on July 1, 2017, there

was a slight increase in the number of annuitants receiving benefits, and additionally, with the closure of the Teacher and Employee Retention Incentive (TERI) program, payments to members ending their participation in the program produced an increase of over \$375 million in annuity benefits paid in the form of TERI distributions.

- 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, the TERI participant was required to pay the same pre-tax member contribution rate on compensation earned, in the same manner as 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. The TERI program's closure not only caused a spike in the number of distributions paid during the year, but also resulted in an increase in the liability for deferred retirement benefits payable at June 30, 2018. The liability increase of over 295 percent in deferred retirement benefits occurred because for members terminating employment on June 30, 2018, their TERI balances became payable but could not be distributed until after fiscal year-end.
- The Systems' investment portfolio participates in a securities lending program, managed by BNYM (Securities Lending Program), 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 \$1.99 million, an increase from \$773 thousand in the prior year. As reported by BNYM, at June 30, 2018, the fair value of securities on loan was \$78.64 million, the fair value of the invested cash collateral was \$34.61 million, and the securities lending obligations were \$81.51 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 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 serves as co-trustee and co-fiduciary for the trust funds. The Retirement Funding and Administration Act of 2017 assigned RSIC as co-trustee of the retirement trust funds along with the PEBA Board. 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 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 affords flexibility to quickly react to changes in market conditions. The fiscal year 2018 policy allocation, including target weights, ranges and benchmarks for each asset class, was adopted by the Commission on April 27, 2017 for the fiscal year beginning July 1, 2017. The asset allocation introduced a mid-year increase in cash allocation to accommodate an expected increase in cash needs related to payment of distributions for member TERI accounts. The asset allocation temporarily increased the cash target by 1 percentage point during the period commencing December 1,

2017 and ending June 30, 2018 while, at the same time, temporarily decreased the GAA allocation from 8 percent to 7 percent. The fiscal year 2018 asset allocation policy also featured a 2 percentage point reduction in Hedge Funds from 4 percent to 2 percent of plan.

- The 2017 legislation also gave the Commission the exclusive authority to select the custodial bank effective July 1, 2017, with PEBA as a third-party beneficiary of the contract with the custodial bank with full rights to information under them. 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 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 include management fees, performance fees and carried interest (both realized and accrued), 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 2018 were \$359.0 million, which includes both invoiced amounts and amounts deducted on a net of fee basis, but excludes bank fees and investment expenses. Comparatively, total investment manager fees were 18.5 percent higher than the prior fiscal year 2017 total of \$302.9 million. The increase is largely attributed to higher performance fees as a result of strong performance 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 2018 increased 9.7 percent from the prior year. This increase resulted largely from the initial work towards a project to assess the needs, develop requirements and begin efforts to acquire a new comprehensive benefit administration system. The project has been named "peba:connect" and is expected to be ongoing for the next 5 to 7 years. The client services vendor, an expert in public pension and insurance enterprise system implementation, began work in fall 2017 by reviewing the functional and technical requirements for the new system. Increases in administrative expenses were also realized due to higher information technology operating expenses and other costs associated with building and facilities maintenance.
- PEBA works closely with our consulting actuary and external audit firm to ensure employers are provided with the information needed to prepare their GAAP based financial statements in compliance with Governmental Accounting Standards Board (GASB), specifically Statements No. 68 and 71. 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.
- GRS Consulting (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, 2017. 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.

- 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. Collectively among the plans, the 2017 actuarial valuations reported that approximately 23,500 retirees were working for a covered employer while receiving monthly retirement benefits, either directly or as a TERI participant, thereby making up approximately 8 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 who retire after January 1, 2013, and who have not yet reached age 62 (SCRS) or age 57 (PORS) at retirement, and who have 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 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 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 2018. 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)

	2018	2017	Increase / (Decrease)	% Increase / (Decrease)
Assets				
Cash and cash equivalents, receivables, and prepaid expenses	\$ 3,359,600	\$ 3,712,085	\$ (352,485)	(9.50%)
Investments, at fair value	29,243,863	27,995,164	1,248,699	4.46%
Securities lending cash collateral invested	34,612	123,275	(88,663)	(71.92%)
Capital assets, net of accumulated depreciation	2,362	2,537	(175)	(6.90%)
Total assets	<u>32,640,437</u>	<u>31,833,061</u>	<u>807,376</u>	<u>2.54%</u>
Liabilities				
Deferred retirement benefits	377,263	95,327	281,936	295.76%
Obligations under securities lending	34,612	123,275	(88,663)	(71.92%)
Other liabilities	1,021,458	1,397,531	(376,073)	(26.91%)
Total liabilities	<u>1,433,333</u>	<u>1,616,133</u>	<u>(182,800)</u>	<u>(11.31%)</u>
Net Position Restricted for Pensions	<u>\$ 31,207,104</u>	<u>\$ 30,216,928</u>	<u>\$ 990,176</u>	<u>3.28%</u>

Changes in Fiduciary Net Position

Years Ended June 30

(Amounts expressed in thousands)

	2018	2017	Increase / (Decrease)	% Increase / (Decrease)
Additions				
Employee contributions	\$ 1,010,636	\$ 957,779	\$ 52,857	5.52%
Employer contributions	1,528,741	1,375,926	152,815	11.11%
Nonemployer contributions	118,096		118,096	100.00%
State appropriated contributions	4,814	4,591	223	4.86%
Net investment income	2,334,478	3,269,390	(934,912)	(28.60%)
Other income	1,902	1,958	(56)	(2.86%)
Total additions	<u>4,998,667</u>	<u>5,609,644</u>	<u>(610,977)</u>	<u>(10.89%)</u>
Deductions				
Refunds	137,766	125,762	12,004	9.55%
Annuity benefits	3,826,806	3,291,197	535,609	16.27%
Death benefits	25,207	25,133	74	0.29%
Administrative and other expenses	18,712	17,277	1,435	8.31%
Total deductions	<u>4,008,491</u>	<u>3,459,369</u>	<u>549,122</u>	<u>15.87%</u>
Net increase (decrease) in Net Position	990,176	2,150,275	(1,160,099)	(53.95%)
Net Position Restricted for Pensions				
Beginning of year	30,216,928	28,066,653	2,150,275	7.66%
End of year	<u>\$ 31,207,104</u>	<u>\$ 30,216,928</u>	<u>\$ 990,176</u>	<u>3.28%</u>

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

On a combined basis, the defined benefit plans' fiduciary net position was valued at \$31.2 billion at June 30, 2018. This represents an increase of over 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 which exceeded the impact of net negative cash flows that result from benefit payments exceeding contributions received.

During fiscal year 2018, the total dollar amount of contributions added to the plans increased in accordance with the increase in employer and employee contribution rates, while monthly retirement benefits paid to annuitants also increased compared with the previous fiscal year. As previously referenced, the increase in benefits was attributable to a benefit adjustments granted to eligible SCRS and PORS annuity recipients effective July 1, 2017, an increase in the number of annuitants and distributions paid to members due to the closing of the TERI program.

The Plan experienced strong performance for the fiscal year having a net of fee performance return, on a time-weighted basis, of a positive 7.82 percent. The Plan outperformed the policy benchmark, which returned a positive 7.28 percent, by 54 basis points. Additionally, the Plan exceeded the actuarial assumed rate of return of 7.25 percent by 57 basis points.

The Private Equity asset class, comprising 7.4 percent of the Plan, was the highest performing asset class on an absolute basis returning 14.91 percent. Relative to its benchmark, however, it underperformed by 212 basis points. Private Real Estate was the second highest performing asset class on an absolute basis returning 11.39 percent and exceeded its benchmark by 257 basis points. Global Public equity, the largest allocation in the Plan at 36.3 percent, was the third highest performing asset class returning 10.13 percent but falling short of the benchmark return of 11.14 percent. The Other Opportunistic and Private Debt asset classes, both beating their benchmarks, returned 9.63 percent and 7.58 percent respectively. Equity options returned 6.85 percent verses its benchmark return of 7.28 percent. Public Real Estate returned 6.75 percent and Mixed Credit return 4.58 percent and both beat their benchmarks which returned 3.50 percent and 3.49 percent respectively. Hedge Funds (non-PA) and GTAA return 3.28 percent and 3.17 percent respectively and both fell short of their benchmark. The World Infrastructure asset class returned 2.35 percent verse its benchmark return of 2.48 percent.

Emerging Markets Debt, returning a negative 2.56 percent, was the lowest performing asset class in the Plan and underperformed its benchmark by 66 basis points. Core Fixed Income was the only other asset class with negative performance returning a negative 1.11 percent and falling short of the benchmark by 71 basis points.

Actuarial Valuations and Funding Progress

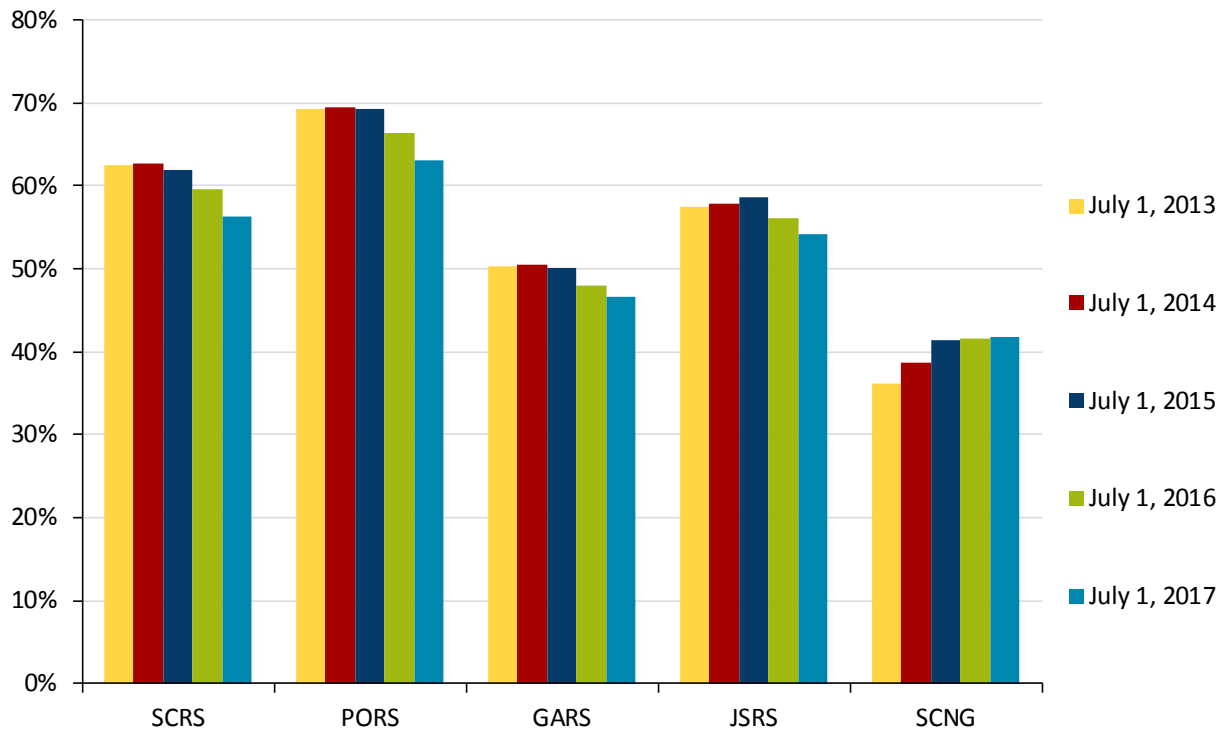
Actuarial valuations are performed annually by an external consulting actuary for each of the five defined benefit plans to ensure applicable contribution rates satisfy the funding parameters specified in Title 9 of the South Carolina Code of Laws. Under these provisions, SCRS and PORS contribution requirements 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 9 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 increase and eventually attain 100 percent.

For purposes of developing the actuarially determined contribution rate, the most recently completed valuations prepared as of July 1, 2017, 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 actuarial valuation also 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 actuarial valuation 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, 2017, showed a slight decrease in funded status for SCRS, PORS, GARS and JSRS while the funded ratio for SCNG stayed relatively level. 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' and Nonemployer's 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, 2018

With summarized comparative totals for June 30, 2017

(Amounts expressed in thousands)

	SCRS	PORS	GARS	JSRS	SCNG	TOTAL	2017 TOTAL
Assets							
Cash and cash equivalents	\$ 2,002,590	\$ 331,698	\$ 5,389	\$ 13,768	\$ 4,648	\$ 2,358,093	\$ 2,651,273
Receivables							
Due from other systems		278				278	397
Employee and employer contributions	303,213	32,357	32	810		336,412	256,491
Accrued investment income	39,429	6,763	49	236	42	46,519	43,256
Unsettled investment sales	520,220	89,148	592	3,081	502	613,543	756,013
Other investment receivables	986	169	1	6	1	1,163	809
Total receivables	863,848	128,715	674	4,133	545	997,915	1,056,966
Investments, at fair value							
Short-term securities	497,097	85,186	566	2,944	479	586,272	653,510
Fixed Income	4,482,965	768,228	5,104	26,549	4,322	5,287,168	6,392,261
Global Public Equity	9,138,590	1,566,046	10,405	54,120	8,810	10,777,971	9,939,742
Global Tactical Asset Allocation	2,622,481	449,405	2,986	15,530	2,528	3,092,930	2,065,561
Alternatives	8,054,600	1,380,287	9,170	47,700	7,765	9,499,522	8,944,090
Total investments	24,795,733	4,249,152	28,231	146,843	23,904	29,243,863	27,995,164
Securities lending cash collateral invested	29,348	5,029	33	174	28	34,612	123,275
Prepaid expenses	3,075	492	4	18	3	3,592	3,846
Capital assets, net of accumulated depreciation	2,126	220	6	10		2,362	2,537
Total assets	27,696,720	4,715,306	34,337	164,946	29,128	32,640,437	31,833,061
Liabilities							
Due to other systems	278					278	397
Accounts payable - unsettled investment purchases	728,900	124,909	830	4,317	703	859,659	1,251,053
Investment fees payable	10,783	1,848	12	64	10	12,717	12,767
Obligations under securities lending	29,348	5,029	33	174	28	34,612	123,275
Deferred retirement benefits	377,263					377,263	95,327
Due to Employee Insurance Program	65,787	1,282				67,069	63,938
Benefits payable	4,082	486			2	4,570	4,208
Other liabilities	65,363	11,321	68	355	58	77,165	65,168
Total liabilities	1,281,804	144,875	943	4,910	801	1,433,333	1,616,133
Net Position Restricted for Pensions	\$ 26,414,916	\$ 4,570,431	\$ 33,394	\$ 160,036	\$ 28,327	\$ 31,207,104	\$ 30,216,928

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, 2018

With summarized comparative totals for the year ended June 30, 2017

(Amounts expressed in thousands)

	SCRS	PORS	GARS	JSRS	SCNG	TOTAL	2017 TOTAL
Additions							
Contributions							
Employee	\$ 868,681	\$ 138,652	\$ 287	\$ 3,016	\$ -	\$ 1,010,636	\$ 957,779
Employer	1,300,477	211,793	5,428	11,043		1,528,741	1,375,926
Nonemployer	104,974	13,122				118,096	
State appropriated					4,814	4,814	4,591
Total contributions	2,274,132	363,567	5,715	14,059	4,814	2,662,287	2,338,296
Investment income							
Net appreciation							
in fair value of investments	1,794,429	299,669	2,090	10,491	1,669	2,108,348	3,094,632
Interest and dividend income	508,252	85,823	647	3,101	536	598,359	488,577
Investment expense	(317,426)	(54,249)	(363)	(1,879)	(305)	(374,222)	(314,592)
Net income from investing activities	1,985,255	331,243	2,374	11,713	1,900	2,332,485	3,268,617
From securities lending activities:							
Securities lending income	1,885	318	2	11	2	2,218	572
Securities lending borrower rebates	(192)	(32)		(1)		(225)	201
Net income from securities lending activities	1,693	286	2	10	2	1,993	773
Total net investment income	1,986,948	331,529	2,376	11,723	1,902	2,334,478	3,269,390
Supplemental retirement benefits funded by the State	355	13				368	408
Transfers of contributions from other Systems		1,534				1,534	1,550
Total additions	4,261,435	696,643	8,091	25,782	6,716	4,998,667	5,609,644
Deductions							
Refunds of contributions to members	113,867	23,899				137,766	125,762
Transfers of contributions to other Systems	1,534					1,534	1,550
Regular retirement benefits	2,718,718	369,536	6,452	17,655	4,411	3,116,772	2,956,627
Deferred retirement benefits	707,932					707,932	332,414
Supplemental retirement benefits	355	13				368	408
Death benefits	22,284	2,751	16	156		25,207	25,133
Accidental death benefits		1,734				1,734	1,748
Depreciation	190	25		1		216	269
Administrative expenses	14,468	2,377	18	85	14	16,962	15,458
Total deductions	3,579,348	400,335	6,486	17,897	4,425	4,008,491	3,459,369
Net increase in Net Position	682,087	296,308	1,605	7,885	2,291	990,176	2,150,275
Net Position Restricted for Pensions							
Beginning of year	25,732,829	4,274,123	31,789	152,151	26,036	30,216,928	28,066,653
End of year	\$ 26,414,916	\$ 4,570,431	\$ 33,394	\$ 160,036	\$ 28,327	\$ 31,207,104	\$ 30,216,928

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 possess 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, 2017.

	State	School	Other	Total
SCRS				
Number of Employers ¹	27	118	578	723
Annual Covered Payroll for Active Members	\$2,441,830	\$3,485,110	\$2,343,931	\$8,270,871
Average Number of:				
Active Contributing Members	51,775	86,239	55,971	193,985
Retirees and beneficiaries currently receiving benefits				140,288
Terminated members entitled to but not yet receiving benefits ²				176,045
Total SCRS Membership				510,318
PORS				
Number of Employers ¹	18	3	286	307
Annual Covered Payroll for Active Members	\$368,221		\$795,369	\$1,163,590
Average Number of:				
Active Contributing Members	9,152		17,904	27,056
Retirees and beneficiaries currently receiving benefits				17,887
Terminated members entitled to but not yet receiving benefits ²				16,004
Total PORS Membership				60,947
GARS				
Number of Employers	1			1
Annual Covered Payroll for Active Members	\$1,961			\$1,961
Average Number of:				
Active Members	87			87
Retirees and beneficiaries currently receiving benefits	354			354
Terminated members entitled to but not yet receiving benefits	35			35
Total GARS Membership	476			476
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	3			3
Total JSRS Membership	376			376
SCNG				
Number of Employers	1			1
Annual Covered Payroll for Active Members ³	N/A			N/A
Average Number of:				
Active Members	12,116			12,116
Retirees and beneficiaries currently receiving benefits	4,789			4,789
Terminated members entitled to but not yet receiving benefits	1,901			1,901
Total SCNG Membership	18,806			18,806

¹ Although there are 92 SCRS, 26 PORS, 2 GARS and 4 JSRS 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 (8.41 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, 2018

(Dollar amounts expressed in thousands)

Active Contributing Participants	30,055
Annual Covered Payroll	\$1,506,014
Employer Contributions Retained by SCRS	\$126,656
Death Benefit Contributions Retained by SCRS	\$2,259
Employee Contributions to Investment Providers	\$135,541
Employer Contributions to Investment Providers	\$75,301

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, 2017, 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, 2017.

Asset Class	Policy Allocation	Minimum	Maximum
Equity	47.0%	42.0%	52.0%
Global Equity ^{1,2}	33.0%	20.0%	36.0%
Private Equity ^{2,3}	9.0%	6.0%	14.0%
Equity Options Strategies	5.0%	0.0%	6.0%
Conservative Fixed Income	12.0%	10.0%	16.0%
Cash & Short Duration ⁴	2.0%	0.0%	7.0%
Core Bonds	10.0%	5.0%	15.0%
Diversified Credit	18.0%	15.0%	21.0%
Mixed Credit ^{1,2}	6.0%	2.0%	8.0%
Private Debt ^{1,2,3}	7.0%	4.0%	12.0%
Emerging Markets Debt ¹	5.0%	3.0%	7.0%
Opportunistic	13.0%	9.0%	19.0%
GAA ^{1,4}	8.0%	3.0%	12.0%
Hedge Funds (Non-PA) ¹	2.0%	0.0%	8.0%
Other Opportunistic Strategies ¹	3.0%	0.0%	5.0%
Real Assets	10.0%	8.0%	14.0%
Real Estate-REITs ²	2.0%	0.0%	3.0%
Real Estate-Private ^{2,3}	6.0%	4.0%	12.0%
World Infrastructure	2.0%	0.0%	5.0%

¹Asset classes in which hedge funds can be used, including for portable alpha implementation, up to a maximum of 20% of total assets.

Portable Alpha Strategies are capped at 12% of total assets.

²The target weights to Private Equity, Private Debt and Real Estate will be equal to their actual weights as of prior month end. Private Equity and Public Equity will combine for 42% of the entire portfolio. Private Debt and Mixed Credit will combine for 13% of the entire portfolio. Private Real Estate and Real Estate (REITs) will combine for 8% of the entire portfolio.

³Staff and Consultant will notify the Commission if Private Markets assets exceed 25% of total assets.

⁴Adopted asset allocation provided for a 1 percentage point increase in Cash & Short Duration to 3% and a 1 percentage point decrease in GAA to 7% on 12/1/17.

At June 30, 2018, the Systems held no investments (other than those issued or explicitly guaranteed by the U.S. government) in any one organization that represent 5 percent or more of the plans' fiduciary net position.

For the year ended June 30, 2018, the annual money weighted rate of return on plan investments was 7.91 percent. 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, 2018, legal agreements were in place with 147 investment managers.

Effective July 1, 2017, the Retirement System Funding and Administration Act of 2017 assigned the PEBA Board as custodian of the retirement trust funds and designated PEBA and RSIC as co-trustees of the retirement trust funds. The legislation also gave the Commission the exclusive authority to select the custodial bank provided that PEBA is a third-party beneficiary of the contract with the custodial bank, 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 reflects 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 which are 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, 2018. The issue of 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 concerted effort with Conifer Financial Services, administrator for the RSIC, the collection, aggregation, and reasonability testing enables RSIC 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 twenty-nine 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 eighty-five 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 eighty-five 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 eighty-five 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 9 years to a twenty year amortization schedule.

Employer contribution rates for SCRS and PORS increased by more than one percentage point for fiscal year 2018; therefore, in accordance with the South Carolina 2017-2018 Appropriations Act, Section 117.151, funds were legislatively appropriated to PEBA for the Retirement System Trust Funds for contributions due from participating employers. Amounts were credited toward the contributions due from participating employers for Fiscal Year 2018 based on each employer's proportionate share of the appropriated funds. Funds appropriated for SCRS and PORS totaled \$105 million and \$13.1 million respectively.

Following are the employee and employer contribution rates applicable for fiscal year 2018 (amounts expressed in thousands):

System	Employee Rate	Employer Rate
SCRS	9%	13.56% ¹
PORS	9.75%	16.24% ²
GARS	11%	\$5,428 ³
JSRS	10%	49.42% ³
SCNG	Non-contributory	\$4,814

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

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 2018, an additional employer contribution surcharge of 5.50 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 coverage and is not a part of the actuarially established contribution rates for retirement funding purposes. Functioning as a

collecting agent, SCRS and PORS collected (amounts expressed in thousands) \$449,740 and \$24,053 respectively in retiree insurance surcharges (\$82,311 of which was applicable to the State ORP) and remitted these funds to the South Carolina Retiree Health Insurance Trust Fund.

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, 2018, were as follows (amounts expressed in thousands):

	SCRS	PORS	GARS	JSRS	SCNG	Total
Employee Fund	\$ 8,501,051	\$ 1,104,572	\$ 7,066	\$ 28,259	\$ -	\$ 9,640,948
Employer Fund	17,786,456	3,356,790	26,328	131,777	28,327	21,329,678
Death Benefit Fund	127,409	46,224				173,633
Accidental Death Fund		62,845				62,845
QEBA Fund						-
Totals	\$ 26,414,916	\$ 4,570,431	\$ 33,394	\$ 160,036	\$ 28,327	\$ 31,207,104

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

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 Systems' do not have a formal policy with regards to Custodial credit risk for deposits. 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.

The Systems' deposits at June 30, 2018, were as follows (amounts expressed in thousands):

	Carrying Amount
SCRS	\$129,727
PORS	13,601
GARS	157
JSRS	250
SCNG	127
Total	\$143,862

As of June 30, 2018, actual bank balances totaled \$148,745 thousand. Amounts in excess of \$250,000 were uninsured and uncollateralized.

As of June 30, 2018, cash held by the custodian, in broker and strategic partnerships accounts as well as forward contracts and foreign currencies totaled \$621.6 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 as of June 30, 2018:

Statement of Invested Assets

June 30, 2018

(Amounts expressed in thousands)

Investment Type	Fair Value	Investment Type	Fair Value
Short Term Investments		Fixed Income Allocation	
Short Term Investment Funds (U.S. Regulated)	\$ 1,144,204	U.S. Government	
Certificates of Deposit	29,177	U.S. Government Treasuries ¹	\$ 188,315
Commercial Paper	550,063	U.S. Government Agencies	837,064
Discount Notes	5,792	Mortgage Backed	
U. S. Treasury Bills	246,693	Government National Mortgage Association	44,034
Non U. S. Government Short Term	8,261	Federal National Mortgage Association	43,796
Corporate Bonds	6,662	Federal Home Loan Mortgage Association	2,344
Strategic Partnership Short Duration	186,061	Federal Home Loan Mortgage Association (Multiclass)	13,771
Options - Cash	1,397	Collateralized Mortgage Obligations	15,329
Futures - Cash	545	Municipals	39,207
Total Short Term Investments	<u>\$ 2,178,855</u>	Corporate	
Equity Allocation		Corporate Bonds	1,761,577
Global Public Equity²		Mixed Credit	16,685
Common Stocks	\$ 9,023,685	Asset Backed Securities	319,022
Real Estate Investment Trusts	998,445	Private Placements	853,318
Preferred	9,567	Yankee Bonds	625
Convertible Preferred	1,307	Emerging Debt	1,149,641
Options - Equity	804,428	Options - Fixed Income	(158)
Futures - Equity	(33,686)	Futures - Fixed Income	2,809
Swaps - Equity	(25,775)	Swaps - Fixed Income	(211)
Total Global Public Equity	<u>\$ 10,777,971</u>	Total Fixed Income	<u>\$ 5,287,168</u>
Global Tactical Asset Allocation			
Commingled Funds Balanced	\$ 3,092,930		
Total Global Tactical Asset Allocation	<u>\$ 3,092,930</u>		
Alternatives			
Hedge Funds	\$ 3,333,496		
Private Equity Limited Partnerships	2,367,353		
Private Debt	1,892,516		
Real Estate	1,906,157		
Total Alternative Investments	<u>\$ 9,499,522</u>		
Total Invested Assets	<u>\$ 30,836,446</u>		
Invested Securities Lending Collateral	\$ 34,612		

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

Total Invested Assets	\$ 30,836,446
Short Term Investments classified as Cash & Cash Equivalents on Statement of Fiduciary Net Position	
Short Term Investment Funds (U.S. Regulated)	(1,144,204)
Commercial Paper	(426,228)
Discount Notes	(5,792)
Non U. S. Government Short Term	(8,261)
Corporate Bonds	(6,156)
Options - Cash	(1,397)
Futures - Cash	(545)
Total Investments on Statement of Fiduciary Net Position	<u>\$ 29,243,863</u>

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

² RSIC's Public Equity benchmark as of 6/30/2018 is the MSCI All Country World Investable Market Index. The Benchmark is comprised of 53.30% MSCI US Equity, 35.36% MSCI EAFE + CAD, and 11.34% MSCI EM Equity. As of June 30, 2018, RSIC had a NAV of \$4,959,087,416 in Global Equity managers that invest to the MSCI World. The MSCI World is comprised of 60.68% MSCI US and 39.32% 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: Inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly or indirectly.

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, 2018 (amounts in thousands):

Investments by Fair Value Level	At 6/30/2018	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)	\$ 1,144,204	\$ 1,144,204	\$ -	\$ -
Certificates of Deposit	29,177		29,177	
Commercial Paper	550,063		550,063	
Discount Notes	5,792		5,792	
U. S. Treasury Bills	246,693	246,693		
Non U. S. Government Short Term	8,261		8,261	
Corporate Bonds	6,662		6,662	
Total Short Term Investments	\$ 1,990,852	\$ 1,390,897	\$ 599,955	\$ -
Equity Allocation				
Global Public Equity				
Common Stocks	\$ 4,675,871	\$ 4,675,871	\$ -	\$ -
Real Estate Investment Trusts	998,445	998,445		
Preferred	9,567	2,470	7,097	
Convertible Preferred	1,307		1,307	
Total Global Public Equity	\$ 5,685,190	\$ 5,676,786	\$ 8,404	\$ -
Fixed Income Allocation				
U. S. Government				
U.S. Government Treasuries	\$ 188,315	\$ 188,315	\$ -	\$ -
U.S. Government Agencies	837,064		837,064	
Mortgage Backed				
Government National Mortgage Association	44,034		44,034	
Federal National Mortgage Association	43,796		43,796	
Federal Home Loan Mortgage Association	2,344		2,344	
Federal Home Loan Mortgage Association (Multiclass)	13,771		13,771	
Collateralized Mortgage Obligations	15,329		15,329	
Municipals	39,207		39,207	
Corporate				
Corporate Bonds	1,761,577		1,336,710	424,867
Asset Backed Securities	319,022		319,022	
Private Placements	853,318		853,318	
Yankee Bonds	625		625	
Total Fixed Income	\$ 4,118,402	\$ 188,315	\$ 3,505,220	\$ 424,867
Total Investments by Fair Value Level	\$ 11,794,444	\$ 7,255,998	\$ 4,113,579	\$ 424,867
Investments measured at the net asset value (NAV)				
Strategic Partnership Short Duration	\$ 186,061			
Global Equity	5,170,346			
Global Tactical Asset Allocation	3,092,930			
Mixed Credit	16,685			
Emerging Debt	1,149,641			
Hedge Funds	3,333,496			
Private Equity	2,367,353			
Private Debt	1,892,516			
Real Estate	1,906,157			
Total investments measured at the NAV	\$ 19,115,185			
Total investments measured at fair value	\$ 30,909,629			
Investment derivative instruments				
Short Term Investments				
Options - Cash	\$ 1,397	\$ 1,774	\$ (377)	\$ -
Futures - Cash	545	545		
Equity Investments				
Options - Equity	(18,104)	27	(18,131)	
Futures - Equity	(33,686)	(33,686)		
Swaps - Equity	(25,775)		(25,775)	
Fixed Income Investments				
Options - Fixed Income	(158)	(49)	(109)	
Futures - Fixed Income	2,809	2,809		
Swaps - Fixed Income	(211)		(211)	
Total investment derivative instruments	\$ (73,183)	\$ (28,580)	\$ (44,603)	\$ -
Total Invested Assets	\$ 30,836,446			

Investments Measured at the Net Asset Value (NAV):

	Fair Value	Unfunded Commitments ¹	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Strategic Partnership Short Duration	\$ 186,061	\$ -	Monthly	5 - 10 days
Global Equity	5,170,346		Daily/Monthly	5 - 30 days
Global Tactical Asset Allocation	3,092,930		Monthly/Quarterly	5 - 14 days
Mixed Credit	16,685		Monthly	5 - 30 days
Emerging Debt	1,149,641		Daily/Monthly	10 - 15 days
Hedge Funds	3,333,496		Monthly/Quarterly	2 - 90 days
Private Equity	2,367,353	1,090,568	Illiquid	Illiquid
Private Debt	1,892,516	1,585,383	Illiquid	Illiquid
Real Estate	1,906,157	789,987	Illiquid	Illiquid
Infrastructure ²		145,937	Illiquid	Illiquid
Total investments measured at the NAV	\$ 19,115,185			

¹ For purposes of this table, amounts are reported in thousands in US Dollars. The Private Equity Category includes €184,895,000 and AUD \$55,599,000 that have been converted to USD. The Infrastructure category includes €125,000,000 that has been converted to USD.

² At 6/30/18 no capital has been called for the Infrastructure fund.

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 11 funds that invest primarily in global developed and emerging equity public markets instruments. One of the funds invests in an equity options strategy. 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 five 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, except for one fund that may require a longer redemption timeframe and may be subject to gates and/or lock-ups.

Mixed Credit 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 four 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 14 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 6 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 44 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 25 funds that consist of investments in limited partnerships and 5 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.

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.

Infrastructure Funds. This investment type includes one fund that has been subscribed to but has not yet called capital. 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, 2018, 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)	\$ 1,144,204		\$ 1,144,204	0.08
Invested Securities Lending Collateral	34,612		34,612	0.01
Certificates of Deposit	29,177		29,177	0.05
Commercial Paper	550,063	3,950	546,113	0.08
Discount Notes	5,792		5,792	0.08
U. S. Treasury Bills	246,693		246,693	0.29
Non U. S. Government Short Term	8,261		8,261	0.07
Corporate Bonds	6,662		6,662	0.05
Strategic Partnership Short Duration	186,061		186,061	0.13
Options - Cash	1,397	1,464	(67)	0.24
Futures - Cash	545		545	1.14
Total Short Term Investments	2,213,467	5,414	2,208,053	
Equity Allocation				
Preferred	9,567	6,749	2,818	3.31
Convertible Preferred	1,307		1,307	0.04
Total Equity Investments	10,874	6,749	4,125	
Fixed Income Allocation				
U. S. Government				
U.S. Government Treasuries	188,315		188,315	7.54
U. S. Government Agencies	837,064		837,064	2.84
Mortgage Backed				
Government National Mortgage Association	44,034	5,132	38,902	5.27
Federal National Mortgage Association	43,796		43,796	4.99
Federal Home Loan Mortgage Corporation	2,344		2,344	6.28
Federal Home Loan Mortgage Association (FHLMC Multiclass)	13,771		13,771	9.15
Collateralized Mortgage Obligations	15,329		15,329	9.92
Municipals	39,207	30,825	8,382	4.59
Corporate				
Corporate Bonds	1,761,577	69,367	1,692,210	2.05
Mixed Credit	16,685		16,685	0.02
Asset Backed Securities	319,022	27,952	291,070	0.65
Private Placements	853,318	86,781	766,537	1.10
Yankee Bonds	625		625	1.59
Emerging Debt	1,149,641		1,149,641	5.65
Options - Fixed Income	(158)	(51)	(107)	(113.90)
Futures - Fixed Income	2,809	(308)	3,117	1.81
Swaps - Fixed Income	(211)	(2,920)	2,709	10.16
Total Fixed Income	\$ 5,287,168	\$ 216,778	\$ 5,070,390	
Mixed Credit Hedge Fund Allocation				
Mixed Credit Hedge Funds	52,287		52,287	(0.06)
Total Mixed Credit Hedge Funds	\$ 52,287	\$ -	\$ 52,287	
Total Invested Assets	\$ 7,563,796	\$ 228,941	\$ 7,334,855	
Total Portfolio Effective Duration (option adjusted duration)				2.16

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, 2018, were rated by Moody's and are presented below (amounts expressed in thousands).

Credit Risk

June 30, 2018

(Amounts expressed in thousands)

Investment Type and Fair Value	AAA	AA	A	BAA	BA
Short Term Investments					
Short Term Investment Funds (U. S. Regulated)	\$ 1,144,204	\$ -	\$ -	\$ -	\$ -
Invested Securities Lending Collateral					
Certificates of Deposit					
Commercial Paper		257,202		271,893	
Discount Notes	5,792				
Non U. S. Government Short Term					
Corporate Bonds		2,052	4,104		
Strategic Partnership Short Duration					
Options - Cash					
Futures - Cash					
Equity Investments					
Preferred				1,379	1,439
Convertible Preferred				1,307	
Fixed Income Allocation²					
Mortgage Backed:					
Federal National Mortgage Association	43,796				
Federal Home Loan Mortgage Association	2,344				
Federal Home Loan Mortgage Association (Multiclass)	13,771				
Collateralized Mortgage Association	15,329				
Municipals	630		12,900		
Corporate:					
Corporate Bonds	66,597	168,553	369,673	249,489	206,022
Mixed Credit					
Asset Backed Securities	70,243	2,188	8,958	29,404	99,681
Private Placements	68,390	125,371	157,504	60,067	60,961
Yankee Bonds					625
Emerging Debt					
Options - Fixed Income					
Futures - Fixed Income					
Swaps - Fixed Income					
Totals	\$ 1,431,096	\$ 555,366	\$ 553,139	\$ 613,539	\$ 368,728

Chart continued on Page 63

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

²U.S. Treasury Bills, Notes and Bonds, Agencies and Government National Mortgage Association securities with a fair value of \$1.03 billion are not included because they are not subject to credit risk.

Credit Risk

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
							\$ 1,144,204
						34,612	34,612
						29,177	29,177
						20,968	550,063
							5,792
						8,261	8,261
					506		6,662
				186,061			186,061
						1,397	1,397
						545	545
						6,749	9,567
							1,307
							43,796
							2,344
							13,771
							15,329
					7,752	17,925	39,207
231,609	44,012	8,146	12,866		243,470	161,140	1,761,577
						16,685	16,685
19,738	12,162	14,385			60,913	1,350	319,022
64,879	34,807	2,036			190,258	89,045	853,318
							625
				1,149,641			1,149,641
						(158)	(158)
						2,809	2,809
						(211)	(211)
\$ 316,226	\$ 90,981	\$ 24,567	\$ 12,866	\$ 1,335,702	\$ 502,899	\$ 390,294	\$ 6,195,403

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, 2018, there is no single issuer exposure within the portfolio that comprises

5 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, 2018, (amounts expressed in thousands):

Currency	Cash & Cash Equivalents	Forward Contracts	Futures Contracts	Private Equity	Preferred Securities	Fixed Income	Equity	Total
Australian Dollar	\$ 2,096	\$ 29,327	\$ 26	\$ 39,740	\$ -	\$ 3,198	\$ 126,130	\$ 200,517
Canadian Dollar	10,474	35,534	405			205	235,139	281,757
Czech Koruna		43						43
Danish Krone	141	(10,987)				11,238	36,836	37,228
Euro Currency	18	54,677	(5,126)	186,379	2,470	188,588	556,195	983,201
Hong Kong Dollar	(1,756)	22,078	(2)				75,325	95,645
Hungarian Forint	8,261	(8,273)						(12)
Israeli Shekel	18	(4,218)				4,227	5,579	5,606
Japanese Yen	2,615	106,825	(2,997)			(450)	402,466	508,459
Mexican Peso	326	1,311					3,606	5,243
New Zealand Dollar	55						6,473	6,528
Norwegian Krone	456	(549)					38,441	38,348
Pound Sterling	5,243	71,070	(671)			10,743	294,015	380,400
Russian Ruble (New)		(288)						(288)
Singapore Dollar	407						19,619	20,026
South African Rand		118						118
Swedish Krona	732	22,129	(20)				48,340	71,181
Swiss Franc	246	137					102,130	102,513
Totals	\$ 29,332	\$ 318,934	\$ (8,385)	\$ 226,119	\$ 2,470	\$ 217,749	\$ 1,950,294	\$ 2,736,513

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 \$192.1 and \$288.9 million, respectively, were held in trust by the clearing brokers on June 30, 2018. 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.

Derivatives directly managed by the Investment Commission are used primarily to facilitate changes to the asset allocation of the total plan and for their low cost of implementation. The Commission uses derivatives 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, 2018, (amounts expressed in thousands):

Changes in Fair Value				
	Classification	Gain/(Loss)		
Futures Contracts	Net appreciation/(depreciation)	\$	(4,385)	
Forward Contracts	Net appreciation/(depreciation)		(1,039)	
Swaps	Net appreciation/(depreciation)		(23,751)	

Fair Value				
	Forward Contracts	Futures	Options	Swaps
Cash and Cash Equivalents	\$ (8,061)	\$ 545	\$ 1,397	\$ -
Fixed Income		2,809	(158)	(211)
Equity		(33,686)	804,428	(25,775)
Totals	<u>\$ (8,061)</u>	<u>\$ (30,332)</u>	<u>\$ 805,667</u>	<u>\$ (25,986)</u>

At June 30, 2018, the Systems had the following exposure via futures contracts (dollar amounts expressed in thousands):

Futures Contracts	Expiration	Long/Short	Quantity	Notional Value¹
90DAY EURO\$ FUTURE (CME)	EXP DEC 19	Short	(50)	\$ (12,129)
90DAY EURO\$ FUTURE (CME)	EXP DEC 20	Short	(86)	(20,859)
90DAY EURO\$ FUTURE (CME)	EXP SEP 20	Short	(138)	(33,474)
90DAY EURO\$ FUTURE (CME)	EXP JUN 20	Short	(316)	(76,646)
90DAY EURO\$ FUTURE (CME)	EXP MAR 20	Short	(209)	(50,693)
Total Cash & Cash Equivalents				(193,801)
OMXS30 IND FUTURE (SSE)	EXP JUL 18	Long	703	12,267
FTSE 100 INDEX FUTURE (ICF)	EXP SEP 18	Long	845	84,803
TOPIX INDEX FUTURE (OSE)	EXP SEP 18	Long	750	117,174
HANG SENG INDEX FUTURE (HKG)	EXP JUL 18	Long	112	20,504
AMSTERDAM INDEX FUTURE (EOE)	EXP JUL 18	Long	146	18,805
FTSE/MIB INDEX FUTURE (MIL)	EXP SEP 18	Long	110	13,850
CAC40 10 EURO FUTURE (EOP)	EXP JUL 18	Long	908	56,405
IBEX 35 INDEX FUTURE (MFM)	EXP JUL 18	Long	136	15,246
EURO STOXX 50 FUTURE (EUX)	EXP SEP 18	Long	1,291	51,113
DAX INDEX FUTURE (EUX)	EXP SEP 18	Long	131	47,064
S&P/TSX 60 INDEX FUTURE (MSE)	EXP SEP 18	Long	310	45,403
SPI 200 FUTURE (SFE)	EXP SEP 18	Long	298	33,841
S & P 500 EMINI INDEX FUT (CME)	EXP SEP 18	Long	14,628	1,990,578
Total Equity				2,507,053
EURO-OAT FUTURE (EUX)	EXP SEP 18	Short	(239)	(43,124)
JPN 10YR BOND FUTURE (OSE)	EXP SEP 18	Short	(4)	(5,447)
EURO BUXL 30Y BND FUTURE (EUX)	EXP SEP 18	Short	(39)	(8,091)
EURO-BUND FUTURE (EUX)	EXP SEP 18	Short	(34)	(6,453)
CANADA 10YR BOND FUTURE (MSE)	EXP SEP 18	Short	(7)	(727)
AUST 10Y BOND FUTURE (SFE)	EXP SEP 18	Short	(241)	(23,035)
US LONG BOND FUTURE (CBT)	EXP SEP 18	Short	(251)	(36,395)
US LONG BOND FUTURE (CBT)	EXP SEP 18	Long	25	3,625
US 2YR TREAS NTS FUT (CBT)	EXP SEP 18	Long	2,962	627,435
US 5YR TREAS NTS FUTURE (CBT)	EXP SEP 18	Long	3,866	439,244
US 10YR NOTE FUTURE (CBT)	EXP SEP 18	Long	1,924	231,241
US 5YR TREAS NTS FUTURE (CBT)	EXP SEP 18	Long	740	84,077
US 10YR NOTE FUTURE (CBT)	EXP SEP 18	Long	741	89,059
US 5YR TREAS NTS FUTURE (CBT)	EXP SEP 18	Short	(218)	(24,769)
US 10YR ULTRA FUTURE (CBT)	EXP SEP 18	Short	(34)	(4,360)
Total Fixed Income				1,322,280
Total				<u>\$ 3,635,532</u>

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, 2018, the Systems had the following forward exposures, listed by counterparty (amounts expressed in thousands):

Broker	Notional Value	Fair Value	Counterparty Exposure
Bank of America	\$ 43,151	\$ 131	2.28%
Bank of Montreal	175,677	(2,272)	9.27%
BNP Paribas	14,116	(131)	0.74%
BNY Mellon	240,546	777	12.70%
Brown Brothers Harriman	14,819	(3)	0.78%
Citibank NA	50,749	9	2.68%
Citigroup Global Markets	364	(1)	0.01%
Commonwealth Bank of Australia	175,638	(2,233)	9.27%
Credit Agricole	128	(10)	0.01%
Credit Suisse International London	1,365	1	0.07%
Goldman Sachs	80,853	915	4.27%
HSBC Bank	16,816	24	0.89%
JP Morgan Chase Bank	89,060	1,754	4.70%
Merrill Lynch International	56	(2)	0.00%
Morgan Stanley	10,299	342	0.54%
Natwest Markets	781	49	0.04%
Royal Bank of Canada	425,129	(2,284)	22.44%
Standard Chartered Bank London	17,047	(447)	0.90%
State Street Boston Capital Market	152,994	(184)	8.08%
Toronto Dominion	2,964	(58)	0.16%
UBS AG/Stamford CT	206,451	(2,280)	10.90%
Westpac Banking Corp	175,563	(2,158)	9.27%
Totals	\$ 1,894,566	\$ (8,061)	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, 2018, for currency forwards, swap agreements, and options (amounts in thousands):

Quality rating	Forwards	Swaps	Options ¹	Total
Aa2	\$ (1,529)	\$ -	\$ -	\$ (1,529)
Aa3	(5,100)	(22,991)	(226)	(28,317)
A1	(1,817)	(2,763)	(91)	(4,671)
A2	(1)	(4,175)		(4,176)
A3	(2)			(2)
Baa2	49		(109)	(60)
Not rated by Moody's; rated A+ by Fitch	339		37	376
Total subject to credit risk	\$ (8,061)	\$ (29,929)	\$ (389)	\$ (38,379)
Centrally cleared:				
Chicago Board Options Exchange	\$ -	\$ -	\$ (16,476)	\$ (16,476)
Chicago Mercantile Exchange		492		492
Intercontinental Exchange		1,512		1,512
LCH Ltd		1,939		1,939
Total not subject to credit risk	\$ -	\$ 3,943	\$ (16,476)	\$ (12,533)
Totals	\$ (8,061)	\$ (25,986)	\$ (16,865)	\$ (50,912)

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

At June 30, 2018, 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	Russell 2000 Proxy	Russell 2000 Index Total Return	ICE LIBOR USD 3M - 30 bps	9/28/2018	\$ (273,449)	\$ (18,326)	\$ (18,325)
Barclays	Barclays US Agg Proxy	ICE LIBOR USD 1M + 24 bps	LBUSTRUU Index	1/31/2019	347,116	(1,093)	(4,619)
Barclays	Barclays US Securitized Proxy	ICE LIBOR USD 1M + 15 bps	LD19TRUU Index	7/31/2018	129,575	(200)	(2,273)
Barclays	Barclays US Corporate Proxy	ICE LIBOR USD 1M + 25 bps	LUACTRUU Index	7/31/2018	98,452	(772)	(3,571)
Barclays	Barclays US Agg Proxy	ICE LIBOR USD 1M + 26 bps	LBUSTRUU Index	2/28/2019	355,788	(1,152)	(892)
Barclays	Barclays US Agg Proxy	ICE LIBOR USD 1M + 27 bps	LBUSTRUU Index	9/28/2018	296,294	(966)	(7,975)
Goldman Sachs	MSCI World Swap Proxy	ICE LIBOR USD 3M	NDDUWI Index	7/31/2018	541,492	894	(30,972)
Goldman Sachs	Russell 2500 Growth Proxy	ICE LIBOR USD 3M + 29 bps	Russell 2500 Growth Index	11/30/2018	141,914	(3,651)	11,900
JP Morgan	Russell 2000 Proxy	Russell 2000 Index Total Return	ICE LIBOR USD 3M - 23 bps	10/31/2018	(72,662)	(4,692)	(4,692)
					<u>\$ 1,564,520</u>	<u>\$ (29,958)</u>	<u>\$ (61,419)</u>

Counterparty	Fixed Income Swaps	SCRS Pays	SCRS Receives	Maturity Date	Current Notional	Fair Value ¹
Bank of America	Credit Default Swaps	Fixed/Variable	Fixed/Variable	various	\$ 2,450	\$ 19
Barclays	Credit Default Swaps	Fixed Rate	Variable Rate	12/20/2023	400	8
Credit Suisse	Credit Default Swaps	Variable Rate	Fixed Rate	9/17/2058	12,500	(6)
HSBC Securities	Credit Default Swaps	Variable Rate	Fixed Rate	6/20/2021	1,200	9
JP Morgan	Credit Default Swaps	Variable Rate	Fixed Rate	9/17/2058	2,200	(1)
					<u>\$ 18,750</u>	<u>\$ 29</u>
Chicago Mercantile Exchange	Cleared Interest Rate Swaps	Fixed Rate	Variable Rate	various	\$ 303,318	\$ 492
Intercontinental Exchange	Cleared Credit Default Swaps	Variable Rate	Fixed Rate	various	99,600	1,512
LCH.Ltd	Cleared Interest Rate Swaps	Fixed/Variable	Fixed/Variable	various	149,658	1,939
					<u>\$ 552,576</u>	<u>\$ 3,943</u>

¹Fair 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, 2018, the Systems had the following option positions (amounts expressed in thousands):

Option Contracts	Underlying Security	Expiration	Quantity	Fair Value ¹
Put Dec 19 097.000 ED 12/16/19	90DAY EURODOLLAR FUTURE DEC 19	December 2019	(1,083)	\$ (663)
Put Dec 19 097.625 ED 12/16/19	90DAY EURODOLLAR FUT DEC 19	December 2019	1,083	1,841
Put Dec 18 097.625 ED 12/17/18	90DAY EURODOLLAR FUTURE DEC 18	December 2018	2,328	1,688
Put Dec 18 097.500 ED 12/17/18	90DAY EURODOLLAR FUT DEC 18	December 2018	(2,328)	(1,091)
Call Aug 18 019.500 ED 082118	MXN/USD SPOT OPTION 2018	August 2018	(3,050,000)	(97)
Call Aug 18 066.190 ED 082418	RUB/USD SPOT OPTION 2018	August 2018	(1,400,000)	(12)
Call Aug 18 066.090 ED 082718	RUB/USD SPOT OPTION 2018	August 2018	(1,400,000)	(12)
Call Aug 18 065.962 ED 082418	RUB/USD SPOT OPTION 2018	August 2018	(3,400,000)	(25)
Call Aug 18 066.400 ED 08/24/2018	RUB/USD SPOT OPTION 2018	August 2018	(2,300,000)	(15)
Call Aug 18 067.400 ED 081718	RUB/USD SPOT OPTION 2018	August 2018	(1,000,000)	(4)
Call Aug 18 066.550 ED 081718	RUB/USD SPOT OPTION 2018	August 2018	(1,800,000)	(9)
Call Aug 18 066.490 ED 081718	RUB/USD SPOT OPTION 2018	August 2018	(1,800,000)	(9)
Call July 18 066.600 ED 07/9/18	RUB/USD SPOT OPTION 2018	July 2018	(1,700,000)	(1)
Call July 18 066.3834 ED 070218	RUB/USD SPOT OPTION 2018	July 2018	(1,400,000)	0
Call Aug 18 021.850 ED 081718	MXN/USD SPOT OPTION 2018	August 2018	(1,600,000)	(4)
Call July 18 021.250 ED 071118	MXN/USD SPOT OPTION 2018	July 2018	(480,000)	(1)
Call July 18 021.200 ED 070518	MXN/USD SPOT OPTION 2018	July 2018	(2,020,000)	(1)
Call July 18 019.250 ED 071918	MXN/USD SPOT OPTION 2018	July 2018	(3,050,000)	(96)
Call Aug 18 021.940 ED 081618	MXN/USD SPOT OPTION 2018	August 2018	(1,800,000)	(3)
Call Aug 18 021.920 ED 082118	MXN/USD SPOT OPTION 2018	August 2018	(1,800,000)	(4)
Put July 18 001.332 ED 071218	USD/GBP SPOT OPTION 2018	July 2018	(1,441,000)	(21)
Put July 18 001.3225 ED 071218	USD/GBP SPOT OPTION 2018	July 2018	(3,800,000)	(32)
Put Aug 18 000.722 ED 08/20/18	USD/AUD SPOT OPTION 2018	August 2018	(8,200,000)	(32)
Total Cash & Cash Equivalents				1,397
Put July 18 000.750 ED 07/18/18	CDX SP CDX.NA.IG.30 V1	July 2018	(2,100,000)	(1)
Put July 18 000.750 ED 071818	CDX SP CDX.NA.IG.30 V1 062023	July 2018	(2,200,000)	(1)
Put Dec 19 002.945 ED 120919	IRS P US0003M R 2.945% 12/11/4	December 2019	2,200,000	144
Put Aug 18 002.940 ED 08/20/18	IRS P USD 30Y 97BPS R 2.94%	August 2018	1,600,000	35
Put Aug 18 002.800 ED 08/20/18	IRS P USD 5Y 22BPS R 2.8%	August 2018	(6,900,000)	(51)
Put Aug 18 002.905 ED 082018	IRS P USD 30Y 98BPS R 2.905%	August 2018	4,900,000	130
Put Aug 18 002.800 ED 082018	IRS P USD 5Y 22BPS R 2.8%	August 2018	(21,600,000)	(159)
Put Dec 19 002.750 ED 12/09/19	IRS P US0003M R 2.75% 12/11/24	December 2019	(9,900,000)	(206)
Put Aug 18 119.500 ED 072718	US 10YR NOTE FUTURE SEP 18	August 2018	(59)	(11)
Put Aug 18 161.500 ED 07/27/18	EURO-BUND FUTURE SEP 18	August 2018	(78)	(28)
Put Aug 15 160.500 ED 07/27/18	EURO-BUND FUTURE SEP 18	August 2018	(71)	(10)
Total Fixed Income				(158)
Put July 18 2770.000 ED 072018	S&P 500 INDEX SPX	July 2018	(1,154)	(6,636)
Put July 18 2755.000 ED 072718	S & P 500 INDEX (SPX)	July 2018	(383)	(1,969)
Put July 18 2780.000 ED 071318	S & P 500 INDEX (SPX)	July 2018	(380)	(2,367)
Put Aug 18 2720.000 ED 083118	S & P 500 INDEX (SPX)	August 2018	(1,154)	(6,497)
Put July 18 2730.000 ED 070618	S & P 500 INDEX (SPX)	July 2018	(384)	(856)
Call Jan 19 3000.000 ED 011819	S & P 500 INDEX (SPX)	January 2019	116	124
Call Jan 19 055.000 ED 011819	ISHARES MSCI EMERGING MARKET	January 2019	5,367	27
Put July 18 2770.000 ED 072018	S & P 500 INDEX (SPX)	July 2018	1,508	70
Total Equity				(18,104)
Total				\$ (16,865)

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, real estate and private infrastructure investments. At June 30, 2018, 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	\$ 4,137,812	\$ 3,304,186	\$ 833,626
Private Debt	5,064,658	3,479,275	1,585,383
Real Estate	3,120,476	2,330,489	789,987
Totals	\$ 12,322,946	\$ 9,113,950	\$ 3,208,996
Limited Partnerships EUR			
Private Equity	€ 429,080	€ 244,185	€ 184,895
Infrastructure	125,000		125,000
Totals	€ 554,080	€ 244,185	€ 309,895
Limited Partnerships AUD			
Private Equity	\$ 100,000	\$ 44,401	\$ 55,599
Totals	\$ 100,000	\$ 44,401	\$ 55,599

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, 2018 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, 2018, the fair value of securities on loan was \$78.64 million. The fair value of the invested cash collateral was \$34.61 million, securities lending obligations were \$81.51 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 \$2.0 million, an increase from \$773 thousand in the prior year. Since November 2008, gains and losses from the Securities Lending Program have been excluded from the Total Plan performance calculations.

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 one day. The average weighted maturity of investments made with cash collateral was two days. At June 30, 2018, 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, 2018:

	SCRS	PORS	GARS	JSRS	SCNG	06/30/18 TOTALS	06/30/17 TOTALS
Securities lent for cash collateral							
Corporate bonds	\$ 11,941	\$ 2,046	\$ 14	\$ 71	\$ 11	\$ 14,083	\$ 15,354
Global Public Equity	54,737	9,380	62	324	53	64,556	142,317
Global Fixed Income							6,982
Total	<u>\$ 66,678</u>	<u>\$ 11,426</u>	<u>\$ 76</u>	<u>\$ 395</u>	<u>\$ 64</u>	<u>\$ 78,639</u>	<u>\$ 164,653</u>
Securities lent for non-cash collateral							
U. S. Government securities	\$ 66,512	\$ 11,398	\$ 76	\$ 394	\$ 64	\$ 78,444	\$ -
Corporate Bonds	168	29		1		198	7,447
Global Public Equity	726,125	124,433	827	4,300	700	856,385	93,693
Total	<u>\$ 792,805</u>	<u>\$ 135,860</u>	<u>\$ 903</u>	<u>\$ 4,695</u>	<u>\$ 764</u>	<u>\$ 935,027</u>	<u>\$ 101,140</u>
Cash collateral invested as follows							
Repurchase agreements	\$ 29,348	\$ 5,029	\$ 33	\$ 174	\$ 28	\$ 34,612	\$ 123,275
Total	<u>\$ 29,348</u>	<u>\$ 5,029</u>	<u>\$ 33</u>	<u>\$ 174</u>	<u>\$ 28</u>	<u>\$ 34,612</u>	<u>\$ 123,275</u>
Securities received as collateral							
U.S. Government securities	\$ 149,018	\$ 25,537	\$ 170	\$ 883	\$ 143	\$ 175,751	\$ 103,875
Global Public Equity	681,613	116,805	776	4,036	657	803,887	
Global Fixed Income	41,173	7,056	47	244	40	48,560	
Total	<u>\$ 871,804</u>	<u>\$ 149,398</u>	<u>\$ 993</u>	<u>\$ 5,163</u>	<u>\$ 840</u>	<u>\$ 1,028,198</u>	<u>\$ 103,875</u>

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, 2018, were as follows (amounts expressed in thousands):

Transfers from:	Transfers to:					
	SCRS	PORS	GARS	JSRS	SCNG	Total
SCRS	\$ -	\$ 1,534	\$ -	\$ -	\$ -	\$ 1,534
PORS						-
GARS						-
JSRS						-
SCNG						-
Total	<u>\$ -</u>	<u>\$ 1,534</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 1,534</u>

The following schedule reflects amounts due to or due from other systems as of June 30, 2018, (amounts expressed in thousands):

Due from:	Due to:					
	SCRS	PORS	GARS	JSRS	SCNG	Total
SCRS	\$ -	\$ 278	\$ -	\$ -	\$ -	\$ 278
PORS						-
GARS						-
JSRS						-
SCNG						-
Total	<u>\$ -</u>	<u>\$ 278</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 278</u>

V. Related Party Transactions

The pension plans provide pension and other benefits to employees of all state agencies. Revenues attributed to these agencies are recorded in the financial statements as employee and employer contributions and constitute approximately 33 percent of combined contribution revenues.

At June 30, 2018, liabilities of approximately \$67.0 million were due to the Employee Insurance Program. Employee and employer contributions receivable of approximately \$76.3 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 \$4.8 million during the fiscal year.

PEBA directly received funds for the South Carolina Retirement System Trust Fund and the Police Officers Retirement System Trust Fund as budgeted

by the state in South Carolina's 2017-2018 Appropriations Act, Section 117.151. PEBA received the funds from the general fund of the state and in turn issued credit invoices to each employer based on each employer's proportionate share of the appropriated funds. Participating employers then applied the credit invoices towards contributions otherwise due to the Systems for the fiscal year. The amount of nonemployer funds appropriated totaled \$105 million and \$13.1 million for SCRS and PORS respectively.

The Retirement System Investment Commission is a separate state agency; however, the administrative costs of the Commission are funded by transfers from the Systems' trust funds. Transfers in the amount of approximately \$11.9 million were made to the Commission 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, 2018, the benefits held in trust for 4,808 TERI program participants totaled \$377,263,376.

A deferred retirement option plan exists 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, 2018, the benefits held in trust totaled \$331,916.

VII. Capital Assets

Capital assets at June 30, 2018, consist of the following amounts (expressed in thousands).

	Beginning Balances 7/1/2017	Additions	Deletions	Ending Balances 6/30/2018
Asset Class (at Cost)				
Land	\$ 582	\$ -	\$ -	\$ 582
Building	4,749			4,749
Equipment	2,070	41		2,111
Total Capital Assets	7,401	41	-	7,442
Accumulated Depreciation				
Building	2,942	119		3,061
Equipment	1,922	97		2,019
Total Accumulated Depreciation	4,864	216	-	5,080
Capital Assets, Net	\$ 2,537	\$ (175)	\$ -	\$ 2,362

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, 2018, the total amount accrued for unused annual leave for PEBA's Retirement Division employees was \$816,344 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, 2018, PEBA's contributions to SCRS for Retirement Division staff were \$1,130,610 of which \$80,190 represented the legislatively appropriated credit.

X. Net Pension Liability of Employers and Nonemployer

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, 2017, projected forward to the end of the fiscal year, and financial information as of June 30, 2018, using generally accepted actuarial procedures. Information included in the following schedule is based on the certification provided by our consulting actuary, GRS Consulting. A Schedule of Employers' and Nonemployer's 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' and Nonemployer's 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, 2018, is as follows (dollar amounts expressed in thousands):

	Total Pension Liability	Plan Fiduciary Net Position	Employers' and Nonemployer's Net Pension Liability	Plan Fiduciary Net Position as a % of the Total Pension Liability
SCRS	\$ 48,821,730	\$ 26,414,916	\$ 22,406,814	54.1%
PORS	7,403,973	4,570,431	2,833,542	61.7%
GARS	74,062	33,394	40,668	45.1%
JSRS	305,472	160,036	145,436	52.4%
SCNG	67,591	28,327	39,264	41.9%

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 as of June 30, 2018. The Total Pension Liability as of June 30, 2018, is based on the July 1, 2017 actuarial valuation.

	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

¹Includes 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 System's 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 30 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 2018 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 on the following page. 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	47.0%		
Global Public Equity ^{1,2}	33.0%	6.99%	2.31%
Private Equity ^{2,3}	9.0%	8.73%	0.79%
Equity Options Strategies	5.0%	5.52%	0.28%
Real Assets	10.0%		
Real Estate (Private) ^{2,3}	6.0%	3.54%	0.21%
Real Estate (REITs) ²	2.0%	5.46%	0.11%
Infrastructure	2.0%	5.09%	0.10%
Opportunistic	13.0%		
GTAA/Risk Parity ¹	8.0%	3.75%	0.30%
Hedge Funds (non-PA) ¹	2.0%	3.45%	0.07%
Other Opportunistic Strategies ¹	3.0%	3.75%	0.11%
Diversified Credit	18.0%		
Mixed Credit ^{1,2}	6.0%	3.05%	0.18%
Emerging Markets Debt ¹	5.0%	3.94%	0.20%
Private Debt ^{1,2,3}	7.0%	3.89%	0.27%
Conservative Fixed Income	12.0%		
Core Fixed Income	10.0%	0.94%	0.09%
Cash and Short Duration (Net)	2.0%	0.34%	0.01%
Total Expected Return	100.0%		5.03%
Inflation for Actuarial Purposes			2.25%
			7.28%

¹Portable 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.

²The target weights to Private Equity, Private Debt and Real Estate will be equal to their actual weights as of prior month end. Private Equity and Public Equity combine for 42 percent of entire portfolio. Private Debt and Mixed Credit combine for 13 percent of the entire portfolio. Private Real Estate and Real Estate (REITs) combine for 8 percent of entire portfolio.

³Staff and Consultant will notify the Commission if Private Markets assets exceed 25% of total assets.

The discount rate used to measure the total pension liability 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' and nonemployer's 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	\$ 28,631,747	\$ 22,406,814	\$ 17,956,583
PORS	3,819,969	2,833,542	2,025,576
GARS	47,113	40,668	35,116
JSRS	178,963	145,436	117,750
SCNG	47,778	39,264	32,287

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.

XII. Litigation

In addition to the litigation mentioned below, controversies or disputes between the South Carolina Retirement Systems and its members arising out of the provisions of Title 9 of the South Carolina Code of Laws (Retirement provisions) are resolved through the "South Carolina Retirement Systems Claims Procedures Act" established by S.C. Code Ann. §9-21-10 et seq. Claims brought pursuant to the Claims Procedures Act generally involve matters pertinent to the individual member or beneficiary. Claims may not be brought on behalf of a class under the Claims Procedures Act.

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

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 valuation, including the incidental death benefit program for SCRS, PORS, GARS and JSRS. The July 1, 2017 actuarial valuations reflect the inclusion of the assets and liabilities of the incidental death benefit program and accidental death benefits for PORS.

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

South Carolina Retirement Systems Required Supplementary Information

Schedule of Changes in the Employers' and Nonemployer's Net Pension Liability¹

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

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

¹Schedules 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' and Nonemployer's Net Pension Liability¹

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

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

¹Schedules 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' and Nonemployer's Net Pension Liability¹

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

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

¹Schedules 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' and Nonemployer's Net Pension Liability¹

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

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

¹Schedules 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' and Nonemployer's Net Pension Liability¹

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

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

¹Schedules 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' and Nonemployer's Net Pension Liability¹

(Dollar amounts expressed in thousands)

	Total Pension Liability	Plan Fiduciary Net Position	Employers' and Nonemployer's 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						
6/30/2018	\$ 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						
6/30/2018	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						
6/30/2018	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						
6/30/2018	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						
6/30/2018	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

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

²Projected covered payroll is based on the actuarial valuation associated with the measurement date and includes payroll for members earning but not yet receiving benefits.

³The 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					
6/30/2018	\$ 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%
6/30/2009	827,502	827,502		7,559,172	10.9%
PORS					
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%
6/30/2009	124,148	124,148		1,060,747	11.7%
GARS⁴					
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%
6/30/2009	2,495	2,495		3,854	64.7%

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					
6/30/2018	\$ 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%
6/30/2009	8,414	8,414		18,661	45.1%
SCNG⁵					
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
6/30/2009	4,052	4,052		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. For years prior to June 30, 2010, the Annual Pension Cost (APC) for SCNG includes both the Annual Required Contribution (ARC) and the discounted present value of the balance of the Net Pension Obligation (NPO). For fiscal years ended June 30, 2010 forward, the APC was calculated as part of the actuarial valuation and includes in the ARC.

South Carolina Retirement Systems Required Supplementary Information (continued)

Schedule of Investment Returns¹

Fiscal Year Ending June 30	Annual Money Weighted Rate of Return, Net of Investment Expense
2018	7.91%
2017	11.88
2016	(.47)
2015	1.59
2014	15.30

¹Schedule 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 2018 for each of the individual plans administered by PEBA.

Summary of Actuarial Methods and Significant Assumptions¹

	SCRS	PORS	GARS	JSRS	SCNG
Valuation date	07/01/16	07/01/16	07/01/16	07/01/16	07/01/16
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 years variable, but not to exceed 30 years ²	30 years variable, but not to exceed 30 years ²	11 years, closed	30 years variable, but not to exceed 30 years	17 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	7.50% ²	7.50% ²	7.50% ²	7.50% ²	7.50% ²
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 lowered the investment rate of return from 7.50 to 7.25 percent and schedules the amortization period to be reduced one year for each of the next 10 years, to 20 years.

³Includes inflation at 2.25%.

South Carolina Retirement Systems

Schedule of Changes in Fiduciary Net Position

SCRS Pension Trust Fund Year Ended June 30, 2018

With summarized comparative totals for the year ended June 30, 2017

(Amounts expressed in thousands)

	EMPLOYEE FUND	EMPLOYER FUND	DEATH BENEFIT FUND	QEBA FUND	TOTAL	2017 TOTAL
Additions						
Employee contributions						
State	\$ 236,153	\$ 25,488	\$ -	\$ -	\$ 261,641	\$ 250,811
Public school	334,324	37,847			372,171	352,621
Other	220,741	14,128			234,869	223,111
Employer contributions						
State		428,023	5,787	699	434,509	389,494
Public school		537,641	6,740		544,381	489,296
Other		318,237	3,350		321,587	290,057
Nonemployer contributions						
State		36,726			36,726	
Public school		43,822			43,822	
Other		24,426			24,426	
Total contributions	791,218	1,466,338	15,877	699	2,274,132	1,995,390
Investment income						
Net appreciation						
in fair value of investments		1,787,006	7,423		1,794,429	2,641,803
Interest and dividend income		505,800	2,452		508,252	416,925
Investment expense		(317,139)	(287)		(317,426)	(268,173)
Net income from investing activities		1,975,667	9,588		1,985,255	2,790,555
From securities lending activities:						
Securities lending income		1,876	9		1,885	488
Securities lending borrower rebates		(191)	(1)		(192)	172
Net income from securities lending activities		1,685	8		1,693	660
Total net investment income		1,977,352	9,596		1,986,948	2,791,215
Supplemental retirement benefits funded by the State		355			355	393
Total additions	791,218	3,444,045	25,473	699	4,261,435	4,786,998
Deductions						
Refunds of contributions to members	113,867				113,867	105,169
Transfers of contributions to other systems	876	658			1,534	1,550
Regular retirement benefits		2,718,019		699	2,718,718	2,574,859
Deferred retirement benefits		707,932			707,932	332,414
Supplemental retirement benefits		355			355	393
Death benefits		(44)	22,328		22,284	22,677
Depreciation		189	1		190	236
Administrative expenses		14,398	70		14,468	13,233
Total deductions	114,743	3,441,507	22,399	699	3,579,348	3,050,531
Interfund transfers according to statutory requirements						
Contributions by members at retirement	(392,064)	392,064				
Interest credited to members' accounts	277,790	(277,790)				
Net interfund transfers	(114,274)	114,274				
Net increase in Net Position	562,201	116,812	3,074		682,087	1,736,467
Net Position Restricted for Pensions						
Beginning of year	7,938,850	17,669,644	124,335		25,732,829	23,996,362
End of year	<u>\$ 8,501,051</u>	<u>\$ 17,786,456</u>	<u>\$ 127,409</u>	<u>\$ -</u>	<u>\$ 26,414,916</u>	<u>\$ 25,732,829</u>

South Carolina Retirement Systems

Schedule of Changes in Fiduciary Net Position

PORS Pension Trust Fund Year Ended June 30, 2018

With summarized comparative totals for the year ended June 30, 2017
(Amounts expressed in thousands)

	EMPLOYEE FUND	EMPLOYER FUND	DEATH BENEFIT FUND	ACCIDENTAL DEATH FUND	QEBA FUND	TOTAL	2017 TOTAL
Additions							
Employee contributions							
State	\$ 41,222	\$ 2,192	\$ -	\$ -	\$ -	\$ 43,414	\$ 39,934
Public school	55	451				506	436
Other	85,968	8,764				94,732	87,470
Employer contributions							
State		64,604	867	867	2	66,340	59,747
Public school		750	10	10		770	673
Other		141,110	1,837	1,736		144,683	131,586
Nonemployer contributions							
State		4,070				4,070	
Public school		44				44	
Other		9,008				9,008	
Total contributions	127,245	230,993	2,714	2,613	2	363,567	319,846
Investment income							
Net appreciation							
in fair value of investments		293,663	2,567	3,439		299,669	431,853
Interest and dividend income		83,810	860	1,153		85,823	68,259
Investment expense		(54,013)	(101)	(135)		(54,249)	(44,306)
Net income from investing activities		323,460	3,326	4,457		331,243	455,806
From securities lending activities:							
Securities lending income		311	3	4		318	80
Securities lending borrower rebates		(32)				(32)	28
Net income from securities lending activities		279	3	4		286	108
Total net investment income		323,739	3,329	4,461		331,529	455,914
Supplemental retirement benefits funded by the State		13				13	15
Transfers of contributions from other systems	876	658				1,534	1,278
Total additions	128,121	555,403	6,043	7,074	2	696,643	777,053
Deductions							
Refunds of contributions to members	23,899					23,899	19,964
Regular retirement benefits		369,534			2	369,536	352,986
Supplemental retirement benefits		13				13	15
Death Benefits			2,751			2,751	2,104
Accidental death benefits				1,734		1,734	1,748
Depreciation		25				25	32
Administrative expenses		2,321	24	32		2,377	2,117
Total deductions	23,899	371,893	2,775	1,766	2	400,335	378,966
Interfund transfers according to statutory requirements							
Contributions by members at retirement	(71,048)	71,048					
Interest credited to members' accounts	36,849	(36,849)					
Net interfund transfers	(34,199)	34,199					
Net increase in Net Position	70,023	217,709	3,268	5,308		296,308	398,087
Net Position Restricted for Pensions							
Beginning of year	1,034,549	3,139,081	42,956	57,537		4,274,123	3,876,036
End of year	\$ 1,104,572	\$ 3,356,790	\$ 46,224	\$ 62,845	\$ -	\$ 4,570,431	\$ 4,274,123

South Carolina Retirement Systems

Schedule of Changes in Fiduciary Net Position

GARS Pension Trust Fund
Year Ended June 30, 2018

With summarized comparative totals for the year ended June 30, 2017

(Amounts expressed in thousands)

	EMPLOYEE FUND	EMPLOYER FUND	QEBA FUND	TOTAL	2017 TOTAL
Additions					
Contributions					
Employee contributions - State	\$ 287	\$ -	\$ -	\$ 287	\$ 468
Employer contributions - State		5,426	2	5,428	4,539
Total contributions	287	5,426	2	5,715	5,007
Investment income					
Net appreciation					
in fair value of investments		2,090		2,090	3,130
Interest and dividend income		647		647	510
Investment expense		(363)		(363)	(312)
Net income from investing activities		2,374		2,374	3,328
From securities lending activities:					
Securities lending income		2		2	1
Net income from securities lending activities		2		2	1
Total net investment income		2,376		2,376	3,329
Transfers of contributions from other systems					19
Total additions	287	7,802	2	8,091	8,355
Deductions					
Refunds of contributions to members					
Transfers of contributions to other systems					
Regular retirement benefits		6,450	2	6,452	6,678
Death benefits		16		16	59
Administrative expenses		18		18	17
Total deductions		6,484	2	6,486	6,754
Interfund transfers according to statutory requirements					
Contributions by members at retirement	(271)	271			
Interest credited to members' accounts	198	(198)			
Net interfund transfers	(73)	73			
Net increase in Net Position	214	1,391		1,605	1,601
Net Position Restricted for Pensions					
Beginning of year	6,852	24,937		31,789	30,188
End of year	\$ 7,066	\$ 26,328	\$ -	\$ 33,394	\$ 31,789

South Carolina Retirement Systems

Schedule of Changes in Fiduciary Net Position

JSRS Pension Trust Fund
Year Ended June 30, 2018

With summarized comparative totals for the year ended June 30, 2017

(Amounts expressed in thousands)

	EMPLOYEE FUND	EMPLOYER FUND	QEBA FUND	TOTAL	2017 TOTAL
Additions					
Contributions					
Employee contributions - State	\$ 2,742	\$ 274	\$ -	\$ 3,016	\$ 2,928
Employer contributions - State		10,899	144	11,043	10,534
Total contributions	2,742	11,173	144	14,059	13,462
Investment income					
Net appreciation					
in fair value of investments		10,491		10,491	15,462
Interest and dividend income		3,101		3,101	2,488
Investment expense		(1,879)		(1,879)	(1,555)
Net income from investing activities		11,713		11,713	16,395
From securities lending activities:					
Securities lending income		11		11	3
Securities lending borrower rebates		(1)		(1)	1
Net income from securities lending activities		10		10	4
Total net investment income		11,723		11,723	16,399
Transfers of contributions from other systems					253
Total additions	2,742	22,896	144	25,782	30,114
Deductions					
Refunds of contributions to members					629
Regular retirement benefits		17,511	144	17,655	17,679
Death benefits		156		156	293
Depreciation		1		1	1
Administrative expenses		85		85	78
Total deductions		17,753	144	17,897	18,680
Interfund transfers according to statutory requirements					
Contributions by members at retirement	(2,149)	2,149			
Interest credited to members' accounts	963	(963)			
Net interfund transfers	(1,186)	1,186			
Net increase in Net Position	1,556	6,329		7,885	11,434
Net Position Restricted for Pensions					
Beginning of year	26,703	125,448		152,151	140,717
End of year	\$ 28,259	\$ 131,777	\$ -	\$ 160,036	\$ 152,151

South Carolina Retirement Systems

Schedule of Changes in Fiduciary Net Position

SCNG Pension Trust Fund

Year Ended June 30, 2018

With summarized comparative totals for the year ended June 30, 2017

(Amounts expressed in thousands)

	<u>2018 Total</u>	<u>2017 Total</u>
Additions		
Contributions		
State appropriated	\$ 4,814	\$ 4,591
Total contributions	<u>4,814</u>	<u>4,591</u>
Investment income		
Net appreciation		
in fair value of investments	1,669	2,384
Interest and dividend income	536	395
Investment expense	<u>(305)</u>	<u>(246)</u>
Net Income from investing activities	<u>1,900</u>	<u>2,533</u>
From securities lending activities:		
Securities lending income	<u>2</u>	<u></u>
Net income from securities lending activities	<u>2</u>	<u></u>
Total net investment income	<u>1,902</u>	<u>2,533</u>
Total additions	<u>6,716</u>	<u>7,124</u>
Deductions		
Regular retirement benefits	4,411	4,425
Administrative expenses	<u>14</u>	<u>13</u>
Total deductions	<u>4,425</u>	<u>4,438</u>
Net increase in Net Position	2,291	2,686
Net Position Restricted for Pensions		
Beginning of year	26,036	23,350
End of year	<u>\$ 28,327</u>	<u>\$ 26,036</u>

South Carolina Retirement Systems Schedule of Administrative Expenses

Year Ended June 30, 2018

(Amounts expressed in thousands)

Personnel Services

Salaries and Wages	\$ 8,731
Employee Benefits	2,934
Total Personnel Services	11,665

Professional and Consultant Fees

Information Technology	793
Medical and Health Services	303
Financial Audit	139
Actuarial Services	382
Management Professional Services	966
Legal Services	29
Total Professional and Consultant Fees	2,612

Operating Expenses

Facilities Management	247
Building Renovations	497
Building Rent	211
Software Licenses and Programs	578
Furniture and Equipment - Expensed	222
Communications and Utilities	326
Insurance	181
Postage	152
Supplies	192
Miscellaneous Expenses	79
Total Operating Expenses	2,685

Total Administrative Expenses	\$ 16,962
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Allocation of Administrative Expenses

SCRS	\$ 14,468
PORS	2,377
GARS	18
JSRS	85
SCNG	14
Total Administrative Expenses	\$ 16,962

South Carolina Retirement Systems

Schedule of Professional and Consultant Fees¹

Year Ended June 30, 2018

(Amounts expressed in thousands)

Professional / Consultant Type	Nature of Service Provided	Amounts Paid
Bruner, Powell, Wall, & Mullins	Legal Services	\$ 11
CliftonLarsonAllen	Audit	139
Find Great People	Personnel Services	21
GRS Consulting	Actuary Services	258
Ice Miller	IRC Consulting Services	18
Linea Solutions	Operational Consulting Services	861
NWN Corporation	IT Installation Services	17
OPTIV Security	IT Security Consulting Services	59
Roper Personnel Services	Personnel Services	70
Segal Consulting	Actuarial Audit	117
SHI International	Software Implementation and Training	13
SunGard Availability Services	IT Disaster Recovery	173
Tapfin	Application Development Resources	456
USC Department of Internal Medicine	Disability Review	67
Vocational Rehabilitation	Disability Review	237
Aggregate of payees less than \$10,000 each	Professional and Consulting Services	95
Total Professional and Consultant Fees		\$ 2,612

¹A 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, 2018

(Amounts expressed in thousands)

	SCRS	PORS	GARS	JSRS	SCNG	TOTALS ¹
Short Term	\$ 1,429	\$ 244	\$ 2	\$ 8	\$ 1	\$ 1,684
Fixed Income:						
Core Fixed Income	2,309	391	3	14	2	2,719
Mixed Credit	7,230	1,229	8	43	7	8,517
Emerging Market Debt	6,884	1,172	8	41	7	8,112
Global Public Equity	26,339	4,477	30	156	25	31,027
Equity Options Strategy	3,971	673	5	23	4	4,676
Infrastructure	2,348	399	3	14	2	2,766
Global Tactical Asset Allocation	8,943	1,528	10	53	9	10,543
Alternatives:						
Hedge Funds	76,109	13,040	87	451	73	89,760
Private Debt	41,923	7,184	48	248	40	49,443
Private Equity	78,499	13,452	89	465	76	92,581
Real Estate	38,865	6,657	44	230	38	45,834
Strategic Partnerships ²	8,610	1,476	10	51	8	10,155
Beta Overlay	966	164	1	6	1	1,138
Total Investment Manager Fees	304,425	52,086	348	1,803	293	358,955
Bank Fees and Investment Expenses ³	13,001	2,163	15	76	12	15,267
Total Investment Expenses	<u>317,426</u>	<u>54,249</u>	<u>363</u>	<u>1,879</u>	<u>305</u>	<u>374,222</u>
Securities Lending Expenses:						
Borrower Rebates	\$ 192	\$ 32	\$ -	\$ 1	\$ -	225
Total Securities Lending Expenses	<u>\$ 192</u>	<u>\$ 32</u>	<u>\$ -</u>	<u>\$ 1</u>	<u>\$ -</u>	<u>\$ 225</u>

¹ All investment manager fees, whether directly invoiced (\$54,383) or deducted from the fund on a net basis (\$304,572) 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.

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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, 2018

Re: Fiscal Year 2018 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, 2018.

FISCAL 2018 MARKET ENVIRONMENT REVIEW

The fiscal year was largely a story of two environments. In 2017, we saw synchronized global growth, low volatility, tax cuts in the U.S. at year-end, and a weak U.S. dollar. During the last two quarters of 2017 most asset classes were up, particularly riskier ones. Emerging market stocks led the way in Q3 (+7.9%) and Q4 (+7.4%). U.S. and developed international equities also posted strong returns over both quarters, while fixed income assets were largely up but with more modest returns in the “risk on” environment.

The trends of 2017 persisted into early 2018, but the environment quickly changed. In 2018, we have seen volatility increase from its very low levels, interest rates and inflation rise, the U.S. dollar rebound, and trade tensions between the U.S. and others heat-up. In this environment, U.S. equities were one of the few asset classes to perform well, while international equities and most fixed income asset classes fell. High yield bonds did post a modest gain (+0.2%) in the first two quarters of 2018.

The net result of the two environments on the fiscal year returns ending June 2018 was that equities increased, particularly in the U.S., while TIPS and high yield bonds posted relatively modest gains. Emerging market bonds fell and the broad U.S. bond market slightly declined.

For the fiscal year, U.S. equities, as represented by the Russell 3000, rose 14.8%. The trend of U.S. growth stocks outperforming value stocks persisted and small capitalization stocks (+17.6%) outperformed large capitalization (+14.5%) and mid-capitalization (+12.3%) stocks. The MSCI EAFE, representing foreign developed markets, increased at less than half the rate of U.S. equities, up 6.8%. Emerging market equities’ strong returns in 2017 were balanced by an 8.0% decline in the second quarter of 2018 as a stronger dollar and trade tensions weighed on results. The MSCI Emerging Markets Equity index gained 8.2% for the full fiscal year.

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100 LOWDER BROOK DRIVE SUITE 1100 WESTWOOD MA 02090
781 471 3500 fax 781 471 3411 www.meketagroup.com

Within fixed income, positive returns in the final two quarters of 2017 moved to concerns over rising interest rates and inflation creating headwinds in 2018. In the U.S., the Federal Reserve increased short-term interest rates for the seventh time in June to a range of 1.75% to 2.00% and continued to reduce its balance sheet. The rate increases contributed to the flattening of the U.S. yield curve during the fiscal year. Over the trailing year, TIPS (+2.1%) and high yield bonds (+2.6%) increased, while the broad U.S. bond market, represented by the Barclays Aggregate Index, fell 0.4%. Similar to emerging market equities, returns for emerging market bonds in the second quarter of 2018 weighed on the fiscal year results. In this case, the impact was more dramatic, as the 10.4% decline in the second quarter for emerging market bonds (as represented by JPM GBI-EM Global Diversified – Local Currency) led to a -2.3% return for the trailing year.

Within other asset classes, natural resource stocks (S&P Global Natural Resources Index) rose 24.8%, commodities (Bloomberg Commodity Index) gained 7.4%, and REITs (MSCI U.S. REIT Index) gained 3.6%. Oil prices finished the fiscal year at over \$60/barrel, representing a dramatic increase from their recent lows. Cuts from OPEC and strong growth globally contributed to the rise in oil prices.

LOOKING FORWARD

Looking forward, there are several issues that we continue to monitor. First is the potential for major central banks around the globe to tighten monetary policy at the same time. Second, in the U.S., equity markets remain extended and the current economic cycle has been long. Also in the U.S., trade policy remains a key issue. Next is the declining growth in China and the impact of trade tensions with the U.S. Finally, political uncertainty and ongoing structural issues remain a concern in Europe.

After an extended period of monetary support through low interest rates and bond purchases from banks (i.e., quantitative easing), we could be moving into a period where central banks pull back support at the same time. The U.S. is further along in that process with the Federal Reserve increasing interest rates and reducing its balance sheet. It is also largely expected that the European Central Bank (ECB) will end its quantitative easing by year-end. If multiple central banks begin pulling back support, this could put further upward pressure on rates, weigh on economic growth, and tighten liquidity.

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 equities. It is inevitable that growth will eventually slow and equity markets pull back, but the question is when. Other key issues in the U.S. include policy uncertainty related to tariffs, immigration, and strategic alliances.

China has the second largest economy behind the U.S. After a long period of growth through government investment, it continues to manage a repositioning of its economy to one of consumption. This has led to a slowing of its economy and has hurt countries that depend on its trade. The recent enactment of 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. 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 would have significant consequences.

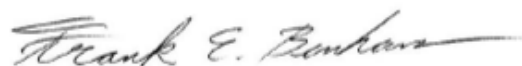
We will continue to monitor these issues and others.

SCRS INVESTMENT RESULTS

As of June 30, 2018, the SCRS investment portfolio totaled \$31.3 billion. This represented an increase of \$1.2 billion from June 30, 2017. Strong investment gains (+\$2.3 bb) were partially offset by net outflows (-\$1.1 bb) for benefit payments. SCRS generated a net return of 7.8%, outperforming the 7.3% return of its Policy Index, as well as its assumed actuarial rate of return of 7.25%. Over longer trailing periods, SCRS is outperforming its Policy Index but trailing its actuarial rate of return. The five year trailing net return for SCRS as of June 30, 2018 was 7.1% vs. a Policy Benchmark return of 6.9%. The ten year trailing net return for SCRS was 5.4% vs. a Policy Benchmark of 4.9%.

The portfolio's asset allocation as of the fiscal year end is listed 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.

Asset Class	% of Total System
Equity	50.7
Global Equity	36.3
Private Equity	7.4
Equity Options	6.9
Conservative Fixed Income	11.0
Cash and Short Duration	0.9
Core Fixed Income	10.1
Diversified Credit	15.9
Mixed Credit	5.1
Private Debt	5.9
Emerging Markets Debt	5.0
Opportunistic	11.8
GAA	8.4
Hedge Funds Non-PA	0.7
Other Opportunistic	2.7
Real Assets	10.5
Public Real Estate	2.6
Private Real Estate	6.0
World Infrastructure	2.0
Total	100.0
Hedge Funds PA	9.5



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
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%
2009	18,240,380	(21.05%)	(4,754,668)	(641.53%)

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
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%
2009	2,536,671	(18.18%)	(638,389)	(647.40%)

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
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%
2009	31,777	(27.02%)	(9,409)	(728.26%)

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
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%
2009	101,244	(19.64%)	(26,741)	(693.27%)

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
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%
2009	12,909	(17.39%)	(4,020)	(1,055.17%)

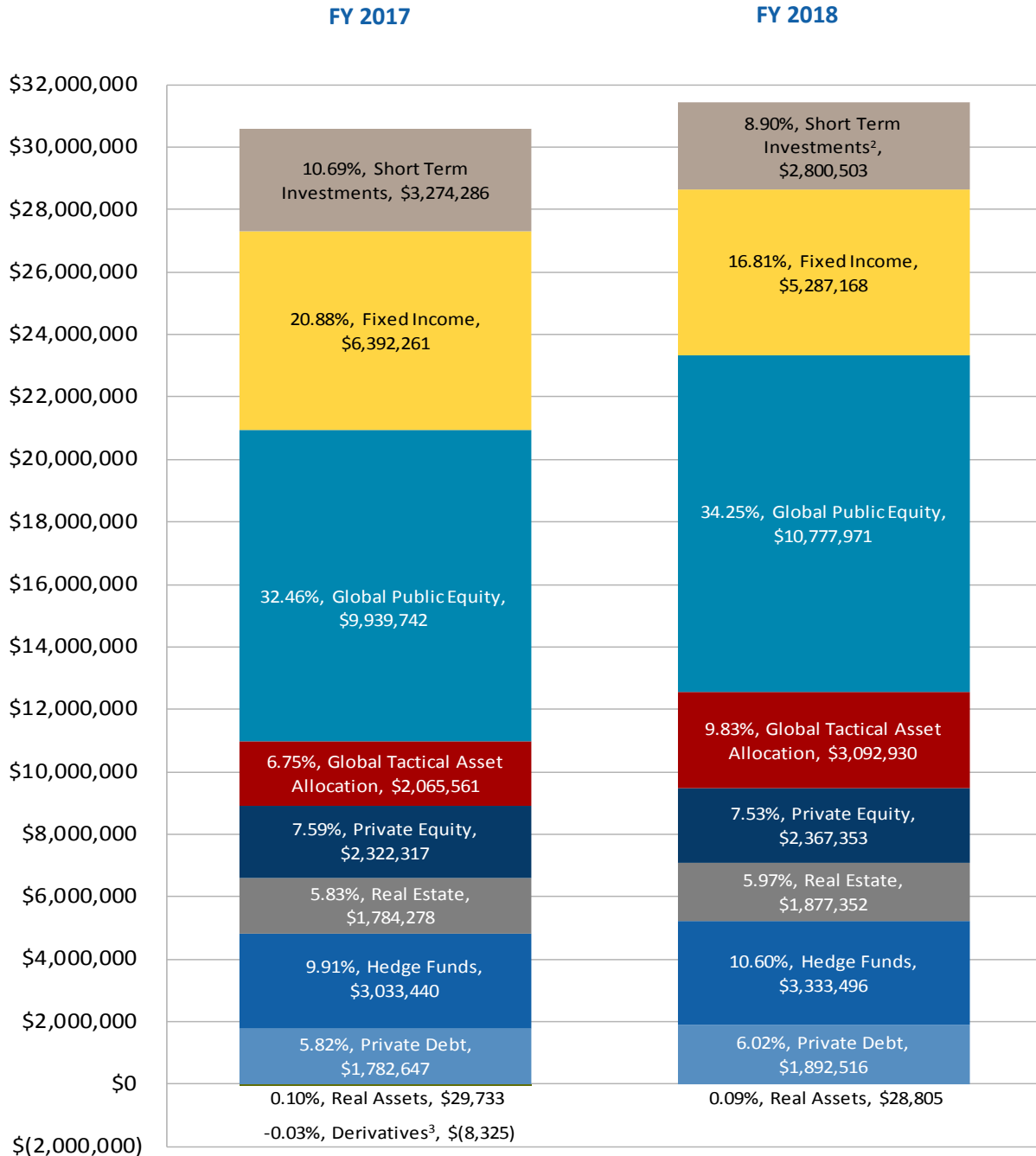
¹ Fair Value also includes investment categories classified as cash equivalents for financial statement purposes. Investments made with cash collateral received in the securities lending program are excluded.

South Carolina Retirement Systems

Schedule of Investment Allocation¹

Fair Value of Investments as of June 30, 2018

(Dollar amounts in thousands)



¹Data 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.

²Short-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 \$621,647 (in thousands). Investments made with cash collateral received in the securities lending program are excluded.

³For accounting purposes, derivatives such as futures, options and swaps are reflected in the asset class to which they pertain.

South Carolina Retirement System

Summary of Fair Value of Investments¹

(Amounts expressed in thousands)

	Fair Value		% of Fair Value at
	06/30/2017	06/30/2018	06/30/18
Short-Term Investments	\$ 2,782,072	\$ 2,369,960	8.89%
Debt:			
Fixed Income	5,447,691	4,482,965	16.80%
Public Equity:			
Global Public Equity	8,470,968	9,138,590	34.27%
Global Tactical Asset Allocation	1,760,338	2,622,481	9.83%
Alternatives:			
Hedge Funds	2,585,196	2,826,455	10.60%
Private Debt	1,519,229	1,604,655	6.02%
Private Equity	1,979,153	2,007,268	7.53%
Real Estate	1,545,959	1,616,222	6.06%
Swaps - Commodities	(7,095)		
Total Investments	<u>\$ 26,083,511</u>	<u>\$ 26,668,596</u>	<u>100.00%</u>

Police Officers Retirement System

Summary of Fair Value of Investments¹

(Amounts expressed in thousands)

	Fair Value		% of Fair Value at
	06/30/2017	06/30/2018	06/30/18
Short-Term Investments	\$ 462,913	\$ 403,283	8.83%
Debt:			
Fixed Income	901,724	768,228	16.82%
Public Equity:			
Global Public Equity	1,402,149	1,566,046	34.29%
Global Tactical Asset Allocation	291,378	449,405	9.84%
Alternatives:			
Hedge Funds	427,912	484,359	10.61%
Private Debt	251,469	274,984	6.02%
Private Equity	327,597	343,978	7.53%
Real Estate	255,893	276,966	6.06%
Swaps - Commodities	(1,174)		
Total Investments	<u>\$ 4,319,861</u>	<u>\$ 4,567,249</u>	<u>100.00%</u>

¹Fair 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 Investments¹

(Amounts expressed in thousands)

	Fair Value		% of Fair Value at 06/30/18
	06/30/2017	06/30/2018	
Short-Term Investments	\$ 5,220	\$ 5,798	17.33%
Debt:			
Fixed Income	6,306	5,104	15.25%
Public Equity:			
Global Public Equity	9,806	10,405	31.09%
Global Tactical Asset Allocation	2,037	2,986	8.92%
Alternatives:			
Hedge Funds	2,992	3,218	9.62%
Private Debt	1,759	1,827	5.46%
Private Equity	2,291	2,285	6.83%
Real Estate	1,789	1,840	5.50%
Swaps - Commodities	(8)		
Total Investments	<u>\$ 32,192</u>	<u>\$ 33,463</u>	<u>100.00%</u>

Judges and Solicitors Retirement System

Summary of Fair Value of Investments¹

(Amounts expressed in thousands)

	Fair Value		% of Fair Value at 06/30/18
	06/30/2017	06/30/2018	
Short-Term Investments	\$ 19,089	\$ 16,462	10.26%
Debt:			
Fixed Income	31,535	26,549	16.56%
Public Equity:			
Global Public Equity	49,037	54,120	33.75%
Global Tactical Asset Allocation	10,190	15,530	9.68%
Alternatives:			
Hedge Funds	14,965	16,739	10.44%
Private Debt	8,795	9,503	5.93%
Private Equity	11,457	11,887	7.41%
Real Estate	8,949	9,571	5.97%
Swaps - Commodities	(41)		
Total Investments	<u>\$ 153,976</u>	<u>\$ 160,361</u>	<u>100.00%</u>

¹Fair 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 Investments¹

(Amounts expressed in thousands)

	Fair Value		% of Fair Value at 06/30/18
	06/30/2017	06/30/2018	
Short-Term Investments	\$ 4,992	\$ 5,000	17.59%
Debt:			
Fixed Income	5,005	4,322	15.21%
Public Equity:			
Global Public Equity	7,782	8,810	30.99%
Global Tactical Asset Allocation	1,618	2,528	8.89%
Alternatives:			
Hedge Funds	2,375	2,725	9.59%
Private Debt	1,396	1,547	5.44%
Private Equity	1,818	1,935	6.81%
Real Estate	1,420	1,558	5.48%
Swaps - Commodities	(6)		
Total Investments	<u>\$ 26,400</u>	<u>\$ 28,425</u>	<u>100.00%</u>

¹Fair 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, 2018

Index Fund Holdings:

<u>Units</u>	<u>Description</u>		<u>SCRS</u>	<u>PORS</u>	<u>GARS</u>	<u>JSRS</u>	<u>SCNG</u>	<u>Fair Value</u>
51,616,586	Blackrock MSCI World Index	\$	907,494,420	\$ 155,513,923	\$ 1,033,229	\$ 5,374,274	\$ 874,858	\$ 1,070,290,704
18,313,580	Daily MSCI USA Index NL Fund		578,868,223	99,198,482	659,071	3,428,116	558,051	682,711,943
4,113,971	MSCI EAFE Index NL Fund (FD12)		340,903,395	58,419,340	388,136	2,018,864	328,644	402,058,379
397,465	MSCI CAD Index NL Fund (CA-12)		32,732,611	5,609,265	37,268	193,846	31,555	38,604,545
			Total					\$ 2,193,665,571

Top Ten Equity Holdings

<u>Units</u>	<u>Description</u>		<u>SCRS</u>	<u>PORS</u>	<u>GARS</u>	<u>JSRS</u>	<u>SCNG</u>	<u>Fair Value</u>
379,184	Apple Inc	\$	59,514,405	\$ 10,198,761	\$ 67,760	\$ 352,450	\$ 57,374	\$ 70,190,750
331,618	Simon Property Group Inc		47,853,569	8,200,487	54,484	283,394	46,133	56,438,067
1,368,009	Enbridge Inc		41,443,333	7,101,989	47,185	245,432	39,953	48,877,892
333,862	American Tower Corp		40,811,645	6,993,739	46,466	241,691	39,344	48,132,885
107,735	Equinix Inc		39,269,591	6,729,483	44,710	232,558	37,857	46,314,199
25,558	Amazon.com Inc		36,835,527	6,312,367	41,939	218,144	35,511	43,443,488
236,169	AvalonBay Communities Inc		34,420,384	5,898,492	39,189	203,841	33,183	40,595,089
375,767	Crown Castle International Corp		34,352,645	5,886,884	39,112	203,440	33,117	40,515,198
567,331	Prologis Inc		31,599,339	5,415,060	35,977	187,134	30,463	37,267,973
861,873	TransCanada Corp		31,598,811	5,414,970	35,977	187,131	30,462	37,267,351
			Total					\$ 469,042,892

Top Ten Fixed Income Holdings

<u>Par Value</u>	<u>Description</u>		<u>SCRS</u>	<u>PORS</u>	<u>GARS</u>	<u>JSRS</u>	<u>SCNG</u>	<u>Fair Value</u>
66,500,000	Commit to Purchase FNMA 3.50% due 08/01/2048	\$	56,049,544	\$ 9,605,001	\$ 63,815	\$ 331,931	\$ 54,034	\$ 66,104,325
57,800,000	Commit to Purchase FNMA 3.00% due 08/01/2048		47,428,808	8,127,697	54,000	280,878	45,723	55,937,106
45,865,000	Commit to Purchase FNMA 4.00% due 08/01/2048		39,591,047	6,784,570	45,076	234,462	38,167	46,693,322
43,135,000	Commit to Purchase FNMA 4.00% due 09/01/2048		37,177,067	6,370,895	42,328	220,166	35,840	43,846,296
43,125,000	Federal Home Loan Bank 2.20% due 01/29/2021		36,093,423	6,185,195	41,094	213,749	34,795	42,568,256
43,000,000	US Treasury Note 1.00% due 10/15/2019		35,794,475	6,133,965	40,754	211,979	34,507	42,215,680
30,000,000	Commit to Purchase FNMA 4.50% due 08/01/2048		26,438,561	4,530,677	30,102	156,572	25,488	31,181,400
33,800,000	US Treasury Bond 2.50% due 02/15/2045		26,130,002	4,477,801	29,750	154,745	25,190	30,817,488
28,000,000	Wells Fargo Bank 2.60% due 01/15/2021		23,362,872	4,003,608	26,600	138,357	22,523	27,553,960
20,500,000	Athene Global Funding 144A VAR RT due 04/20/2020		17,602,950	3,016,552	20,042	104,246	16,970	20,760,760
			Total					\$ 407,678,593

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 2018	3 Years	5 Years	10 Years
South Carolina Plan Return (Net of Fees)¹	7.82%	6.31%	7.07%	5.40%
South Carolina Policy Benchmark²	7.28%	6.54%	6.94%	4.87%
Global Public Equity³	10.13%	7.73%	9.06%	
<i>Global Public Equity Blend⁴</i>	11.14%	8.39%	9.54%	
Equity Options	6.85%	n/a	n/a	
<i>CBOE S&P 500 BuyWrite Index (BXM)</i>	7.28%	n/a	n/a	
Private Equity³	14.91%	11.08%	12.85%	
<i>Private Equity Blend⁴</i>	17.03%	12.32%	14.75%	
GTAA³	3.17%	3.80%	4.56%	
<i>GTAA Blend⁴</i>	5.30%	6.07%	5.75%	
Other Opportunistic³	9.63%	n/a	n/a	
<i>50% MSCI World / 50% Barclays Aggregate Bond Index</i>	5.30%	n/a	n/a	
Hedge Funds (Non-PA)	3.28%	n/a	n/a	
<i>50% MSCI World / 50% Barclays Aggregate Bond Index</i>	5.30%	n/a	n/a	
Core Fixed Income³	-1.11%	1.31%	1.99%	
<i>Barclays US Aggregate Bond Index</i>	-0.40%	1.72%	2.27%	
Cash and Short Duration (Net)⁵	1.36%	0.68%	0.42%	
<i>ICE BofA Merrill Lynch 3-Month T-Bill</i>	1.36%	0.68%	0.42%	
Mixed Credit	4.58%	4.00%	3.95%	
<i>Mixed Credit Blend⁴</i>	3.49%	5.25%	4.84%	
Private Debt	7.58%	5.34%	7.12%	
<i>S&P/LSTA Leveraged Loan + 150 Bps on a 3-month lag</i>	5.93%	5.71%	5.40%	
Emerging Markets Debt³	-2.56%	4.42%	2.45%	
<i>Emerging Markets Debt Blend⁴</i>	-1.90%	3.37%	1.89%	
Private Real Estate³	11.39%	10.90%	14.35%	
<i>NCREIF ODCE + 75 Bps</i>	8.82%	10.74%	12.18%	
Public Real Estate	6.75%	n/a	n/a	
<i>FTSE NAREIT Equity REITs Index</i>	3.50%	n/a	n/a	
World Infrastructure	2.35%	n/a	n/a	
<i>Dow Jones Brookfield Global Infrastructure Net Index</i>	2.48%	n/a	n/a	
Ported Cash^{5,6}	1.36%	n/a	n/a	
<i>3 Month LIBOR</i>	1.72%	n/a	n/a	
Ported Short Duration⁶	0.87%	n/a	n/a	
<i>3 Month LIBOR</i>	1.72%	n/a	n/a	
Portable Alpha Hedge Funds⁶	7.75%	n/a	n/a	
<i>3 Month LIBOR</i>	1.72%	n/a	n/a	

¹ Plan returns are from BNY Mellon and are time-weighted, total return calculations, net of fees and expenses. 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 RSIC and has changed over time. The presented returns are a blend of these past policies.

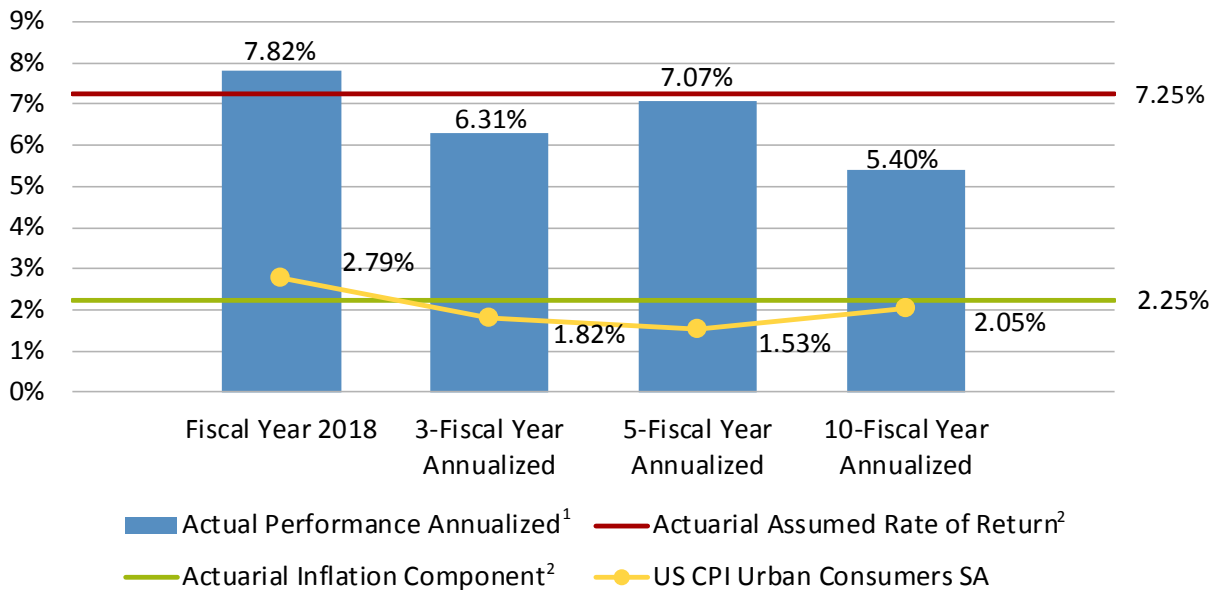
³ Returns generated from synthetic exposure through the Overlay Program are blended into the asset class segment returns.

⁴ The asset class benchmark has changed over time. The presented returns are a blend of these past benchmarks.

⁵ Cash returns are estimated using the Merrill Lynch 3-Month T-Bill.

⁶ Collateral held to support the overlay program represents opportunity cost associated with financing the overlay program. The Overlay collateral consists of Ported Cash, Ported Short Duration, and Portable Alpha Hedge Funds. The cost of holding these assets is proxied using 3 Month LIBOR. This benchmark is not a component of the Policy benchmark.

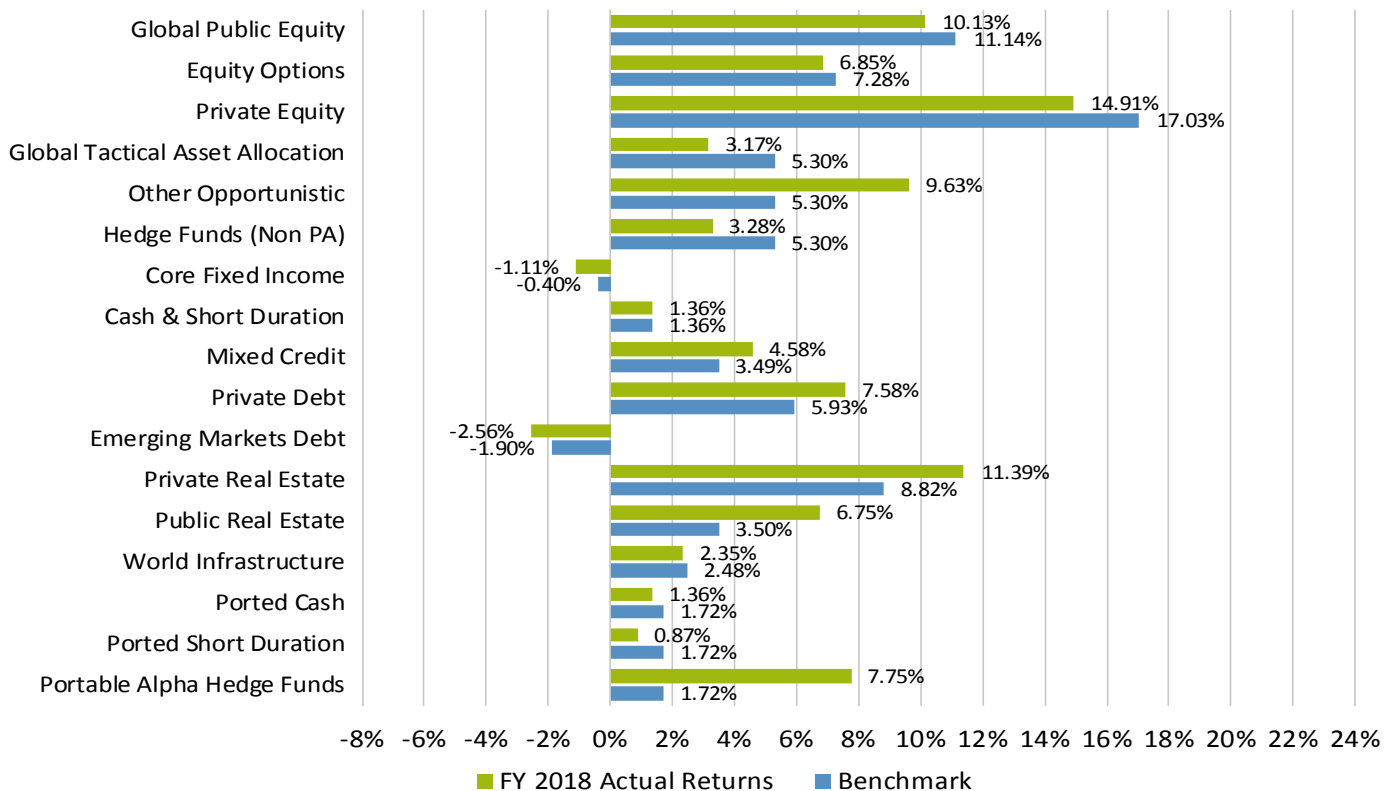
South Carolina Retirement Systems Investment Performance Summary



¹Plan returns are from BNY Mellon and are time-weighted, total return calculations, net of fees and expenses. All returns are expressed in U.S. Dollars. Periods greater than one year are annualized.

²The 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 for fiscal year 2018.

Fiscal Year 2018 Investment Performance by Market Segment



South Carolina Retirement Systems

Schedule of Investment Fees and Commissions

For the Year Ended June 30, 2018

		Fair Value of Assets Under Management at June 30, 2018 ¹	Reported Fees ²
Investment Managers' Fees		\$ 31,458,093,451	\$ 358,955,234
Other Investment Service Fees			
Bank Fees and Investment Expenses ³			15,266,736
			<u>\$ 374,221,970</u>

Brokerage Firm	Number of Shares Traded	Commissions ⁴	Average Commissions per Share
Goldman Sachs & Co.	39,727,544	\$ 1,417,516	0.0357
Merrill Lynch Pierce Fenner Smith Inc.	13,790,683	305,626	0.0222
Instinet Europe Ltd.	56,564,339	243,328	0.0043
Credit Suisse	70,506,717	227,783	0.0032
Morgan Stanley & Co., Inc.	29,988,154	154,391	0.0052
Deutsche Bank Securities Inc.	11,897,335	142,062	0.0119
Citigroup Global Markets Inc.	5,210,145	130,776	0.0251
Liquidnet Inc.	6,190,578	118,880	0.0192
Jefferies & Co., Inc.	5,614,946	116,147	0.0207
J.P. Morgan Clearing Corp.	5,192,097	113,348	0.0218
UBS Securities LLC	4,630,338	105,628	0.0228
UBS Warburg	18,621,520	102,271	0.0055
Stifel Nicolaus	3,325,119	100,943	0.0304
J.P. Morgan Securities Inc. NY	4,126,928	83,206	0.0202
J.P. Morgan Securities Ltd London	13,175,512	80,725	0.0061
Convergex Execution Solution	2,033,653	80,179	0.0394
Pershing LLC	2,346,640	79,013	0.0337
ITG Australia Ltd.	25,710,943	71,798	0.0028
ISI Group Inc	2,774,508	67,743	0.0244
RBC Capital Markets LLC	3,347,125	58,110	0.0174
ICBC Financial Services	1,485,140	54,631	0.0368
National Financial Services Corp	1,788,759	53,445	0.0299
Instinet Corp.	3,600,113	52,815	0.0147
Wells Fargo Securities LLC	1,389,578	51,584	0.0371
Morgan Stanley & Co. London	6,579,620	50,335	0.0077
All Others ⁵	485,488,408	1,275,338	0.0026
	<u>825,106,442</u>	<u>\$ 5,337,621</u>	0.0065

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. Conifer Financial Services, administrator for the RSIC, provides support to the RSIC for the collection, aggregation and reasonability testing so that the RSIC can provide 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 129 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, 2018

(Amounts expressed in thousands)

Style	Investment Manager	Fair Value of Assets Under Management at 6/30/2018 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	\$ 186,061		\$ 609		\$ 431	\$ 1,040
	Penn Limited Term HY	149,875	644				644
Fixed Income:							
Core Fixed Income							
	Loomis Sayles Investment Grade Credit	1,512	501				501
	Loomis Sayles Securitized	95,905	429				429
	Pacific Investment Management Co.	1,024,090	1,789				1,789
Mixed Credit							
	Barings	149,102	787				787
	Caspian SC Holdings LP ³	221,618		1,054	560		1,614
	Goldentree Structured Credit	449,410	2,460				2,460
	GSO Partnership Mixed Credit ⁴					2	2
	Guggenheim	440,239	2,109				2,109
	Pinebridge	379,217	1,545				1,545
Emerging Market Debt							
	Ashmore External Debt	296,622	1,200				1,200
	GMO Emerging Country Debt	338,704		1,551			1,551
	Goldman Sachs Partnership Emerging Market Debt	136,329		1,055		693	1,748
	Mondrian Investment Group, Inc.	236,166	1,245				1,245
	Wellington Emerging Local Debt	438,443	2,368				2,368
Global Public Equity							
	Aberdeen	270,185	2,330				2,330
	Algert	201,469	1,204				1,204
	AQR	914,964	2,138				2,138
	AQR Options	822,532	3,472				3,472
	Blackrock Global Equity	1,070,291	272				272
	D. E. Shaw World Enhanced	937,723	3,384				3,384
	Intech	904,746	1,829				1,829
	Integrity Small V	385,690	1,998				1,998
	Johnston ⁵	(5)					
	Lighthouse Partnership Developed International Equity	475,361		2,898		225	3,123
	LSV Asset Management	564,669		3,791			3,791
	Numeric Investors	210,161	1,087				1,087
	Pyramis Small C	387,935	2,101			2	2,103
	Russell Infrastructure Transition	87					
	Russell International Small Cap Transition	168,256	334				334
	Russell Options	941,349	1,203				1,203

Continued on pages 117-120

South Carolina Retirement Systems

Schedule of Investment Managers and Fees (cont.)

For the Year Ended June 30, 2018

(Amounts expressed in thousands)

Style	Investment Manager	Fair Value of Assets Under Management at 6/30/2018 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	
	Schroders	466,462	2,781				2,781
	State Street Global Equity	1,123,375	170				170
	TimesSquare SMID G	219,108	2,301				2,301
	William Blair	377,471	2,183				2,183
Global Tactical Asset Allocation							
	Bridgewater Associates, Inc.	628,056		2,632		375	3,007
	Entrust Partnership Global Tactical Asset Allocation	169,904					
	Grantham, Mayo, Van Otterloo & Co. LLC ⁴		2,316	1,315			3,631
	Morgan Stanley GTAAN	780,509		1,409		335	1,744
	Pinebridge GTAAN	735,935		460		192	652
	Standard Life GTAAN	778,526		1,062		447	1,509
Infrastructure							
	Deutsche Infrastructure	612,055	2,766				2,766
Alternatives:							
Hedge Funds (Portable Alpha and Non-Portable Alpha)							
	Apollo Partnership Hedge Funds ⁴					40	40
	Blackstone SAF II	79,905		681	367	83	1,131
	Bridgewater Associates, Inc.	472,098		10,997	1,117	493	12,607
	Bridgewater Associates, Inc.	116,988		2,514		128	2,642
	DE Shaw - DE Shaw Composite	568,884		13,687	19,036	746	33,469
	GAM PA ⁴					(1)	(1)
	Goldman Sachs Partnership Hedge Funds	5,818		106		47	153
	Grosvenor Partnership Hedge Funds	10,719		619	381	156	1,156
	GSO Partnership Hedge Funds	43,767		456		163	619
	Lighthouse Partnership Hedge Funds	1,199,173		12,908	13,618	6,301	32,827
	Man Alt Beta	213,956		2,310			2,310
	Morgan Stanley Partnership Hedge Funds	54,739		42	21	206	269
	Reservoir Strategic Partners Fund L.P.	34,952		458		158	616
	Wellington Alt Beta	310,878	1,922				1,922
Private Debt							
	Angelo Gordon VI	104		31	(143)	12	(100)
	Apollo Partnership Private Debt	292,425		2,893	4,587	1,495	8,975
	Ares Jasper	213,146		939	1,461	892	3,292
	Avenue Europe II	14,338		47	1,688	73	1,808
	Avenue Spec VI	9,211		25		90	115
	Crescent Mezz V	6,615		190	1,253		1,443
	Crescent Mezz VI	50,381		829	205	265	1,299
	DE Shaw Direct Capital	5,438		119	1,552	92	1,763
	Gateway Energy	12,760		7	5	356	368
	Goldman Sachs Mezz V	1,472		73	(210)		(137)
	Goldman Sachs Partnership Private Debt	94,050		608	2,151	653	3,412
	Golub PEARLS	39,466		548	308	575	1,431
	GSO Partnership Private Debt	597,130		6,830	2,737	3,464	13,031
	Highbridge Sandlapper Credit	107,120		609	543	551	1,703
	KKR Lending Partners II	73,662		986	1,046	490	2,522
	KKR Special Situations Fund II	85,046		917		718	1,635

Continued on pages 118-120

South Carolina Retirement Systems

Schedule of Investment Managers and Fees (cont.)

For the Year Ended June 30, 2018

(Amounts expressed in thousands)

Style	Investment Manager	Fair Value of Assets Under Management at 6/30/2018 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	
	Morgan Stanley Partnership Private Debt	6,188		105	176	121	402
	Northstar Mezz V	16,997		299	401	27	727
	Owl Rock Capital	68,769		807			807
	Sankaty COP IV	30,056		443	3,491	27	3,961
	Sankaty COP V	38,337		384	820	43	1,247
	Selene I ⁴				(15)	65	50
	Selene II	64,175		412	208	(1,094)	(474)
	SJC DL II	16,397		44	(130)	24	(62)
	WL Ross - WLR Whole Loans	9,905		79	67	79	225
	WL Ross Partnership Private Debt	39,329					
Private Equity							
	Advent - Advent International GPE VII	53,004		449	2,693	12	3,154
	Apax Europe VII	8,479			(88)	3	(85)
	Apax Europe VIII	78,525		607	3,163	309	4,079
	Apollo Partnership Private Equity	496,575		5,768	8,961	4,374	19,103
	Aquiline Financial Services II	87,445		1,035	2,526		3,561
	Azalea Fund IV	8,746		265			265
	BC European Cap IX	26,241		243	(1,703)	110	(1,350)
	Bridgepoint Europe IV ⁶	37,745		352		45	397
	Bridgepoint Europe V ⁶	68,146		1,564		484	2,048
	Brookfield Capital IV	120,675		1,741	26,438	887	29,066
	Carousel Capital III	55		(27)	6		(21)
	Carousel Capital IV	29,080		87	3,340		3,427
	CD&R VIII	24,046					
	Crestview II	66,352		629	(1,751)	328	(794)
	Crestview III	34,051		1,184	(1,534)	155	(195)
	Digital Colony ⁷	(989)		482		468	950
	Francisco Partners	6,408		373		208	581
	Goldman Sachs Partnership Private Equity	28,208		377	1,410	369	2,156
	Green Equity	41,910		147	3,835	252	4,234
	Industry Ventures VI	19,612		206	(289)		(83)
	Industry Ventures VII	37,630		275	914		1,189
	Lexington Capital VII	32,752		419	(584)	104	(61)
	Lexington Middle Market II	21,986		210	(494)	28	(256)
	Morgan Stanley Partnership Private Equity	181,703		1,536	(271)	304	1,569
	Oaktree EOF III	35,622		641	1,065	125	1,831
	Pacific Equity Partners	39,737		1,004	1,317	183	2,504
	Pantheon USA VII	63,762		994	539	495	2,028
	Paul Capital IX	27,664		605			605
	Reservoir Capital Partners (Cayman) L.P.	48,311		314	2,082	26	2,422
	Truebridge Capital I	44,812		164	175	51	390
	Truebridge Capital II	79,205		288	326	76	690
	Warburg Pincus X	52,221		250	2,647	392	3,289
	Warburg Pincus XI	49,104		(284)	2,442	197	2,355
	Welsh Carson Anderson & Stowe XI	28,136		153	(290)	13	(124)
	WL Ross Partnership Private Equity	202,245		432	987	375	1,794
	Various Private Equity Managers ⁸	188,940		1,076	361	426	1,863

Continued on pages 119-120

South Carolina Retirement Systems

Schedule of Investment Managers and Fees (cont.)

For the Year Ended June 30, 2018

(Amounts expressed in thousands)

Style	Investment Manager	Fair Value of Assets Under Management at 6/30/2018 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	
Real Estate							
	Apollo Partnership Real Estate	39,936		661	430	330	1,421
	Blackstone Property Partners	380,062		3,162	3,464	802	7,428
	Blackstone Real Estate VII	115,605		1,261	4,634	(62)	5,833
	Brookfield REF III	156		24			24
	Brookfield REF IV	13,947		254	53	(104)	203
	Brookfield REF V	22,768		60	58	88	206
	Brookfield SREP LP	82,019		719	6,252		6,971
	Brookfield SREP II LP	57,930		1,087	1,637		2,724
	Carlyle VI	18,392		237	(3,421)	30	(3,154)
	CenterSquare ⁹	797,034	2,199				2,199
	Congaree Partners LP	28,805		183			183
	Crow Holdings	82,820		968	4,797		5,765
	Goldman Sachs Partnership Real Estate	621			(5)	30	25
	Greystar VII ⁴				2		2
	Greystar IX	96,523					
	Heitman Core Real Estate	23,114		37			37
	Lone Star II	2,993		12	(116)		(104)
	Morgan Stanley Partnership Real Estate	62,650		553	1,106	180	1,839
	Morgan Stanley Prime Property	465,127		3,722	613		4,335
	Oaktree ROF V	10,300		150	(3,886)	142	(3,594)
	Oaktree ROF VI	45,527		749	(327)	555	977
	Och-Ziff II	14,820	178	39	(157)		60
	Pembroke Capital Management - PCI Investors Fund II ⁴			12	(411)	427	28
	TA Realty X	48,403		1,128	1,039		2,167
	TA Realty Fund of One	134,901		956	447		1,403
	Torchlight III	636		88	365	54	507
	Torchlight IV	47,599		550	2,795	247	3,592
	Torchlight V	71,424		1,200	2,437	283	3,920
	U. S. REIF	417					
	WL Ross Partnership Real Estate	38,663		523		314	837
Strategic Partnerships ¹⁰							
	Apollo	121,428					
	Entrust	5,240		806	1,893	834	3,533
	Goldman Sachs	18,626				1,151	1,151
	Grosvenor	845				81	81
	GSO	66,283				7	7
	Lighthouse	133,034		3,408		753	4,161
	Morgan Stanley	12,612		24		345	369
	WL Ross	17,633		831		22	853
Beta Overlay							
	Russell Investment Group	737,629	1,138				1,138

Continued on page 120

South Carolina Retirement Systems

Schedule of Investment Managers and Fees (cont.)

For the Year Ended June 30, 2018

(Amounts expressed in thousands)

Style	Investment Manager	Fair Value of Assets Under Management at 6/30/2018 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	31,695					
	Short Duration	816,785					
	SCRS Liquidity	377,273					
	Cash Accounts	327,005					
	Total Fair Value of Assets and Manager Fees	\$ 31,431,925	\$ 54,383	\$ 127,801	\$ 139,223	\$37,548	\$ 358,955
	Adjustments, Cash, Receivables and Payables	(125,791)					
	Net Asset Value as reported by the Custodial Bank	\$ 31,306,134					

¹The "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 Retirement System Investment Commission.

²Investment manager fees, whether directly invoiced (\$54,382,926) or deducted from the fund on a net basis (\$304,572,308) are classified and reported as Investment Expense. The RSIC makes a good faith attempt to account for fees that are not necessarily readily separable. Conifer Financial Services, administrator for the RSIC, provides support to the RSIC for the collection, aggregation and reasonability testing so that the RSIC can provide 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.

³This hedge fund is classified as a Mixed Credit 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.

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

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

⁶Net asset value is reported gross of performance fees.

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

⁸Represents 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.

⁹This fund is classified as a Real Estate mandate for investment purposes by the RSIC; however this fund is held in custody at BNY Mellon and, for financial statement purposes, reported as Global Public Equity.

¹⁰Represents 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





May 15, 2018

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, 2017

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 Retirement System Funding and Administration Act of 2017 was signed into law April 25, 2017, and became effective on July 1, 2017. This legislation amended Section 9-1-1085 of the South Carolina Code, such that the employer and member contribution rate for the South Carolina Retirement System in effect for the fiscal year ending June 30, 2018 are 13.56% 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 five subsequent fiscal years (i.e. an ultimate employer contribution rate of 18.56% of pay for fiscal year 2023). Similarly, this legislation amended the employer and member contribution rate for the Police Officers Retirement System to be 16.24% and 9.75%, respectively, for the fiscal year ending June 30, 2018. Also, the employer contribution rate is scheduled to increase at the rate of 1.00% of pay for each of the five 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 Statute specifies that the maximum amortization period is 30 years as of July 1, 2017 and the maximum amortization period will decrease by one year in each of the next ten 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 decrease in the assumed rate of return from 7.50% to 7.25% and the recognition of investment losses that occurred in prior years, the funded ratio decreased from 60.3% in 2016 to 57.1% in 2017 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, 2017 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. The investment return assumption is a prescribed assumption in Section 9-16-335 in South Carolina State Code and the Retirement System Funding and Administration Act of 2017 decreased the assumed rate of return from 7.50% to 7.25% for the July 1, 2017 actuarial valuation. There were no other 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, 2017, 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' Contributions*.



DATA

Member data for retired, active and inactive members was supplied as of July 1, 2017, by the PEBA staff. The staff also supplied asset information as of July 1, 2017. 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, 2017. 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.

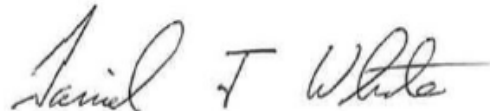
The undersigned are independent actuaries and consultants. Mr. Newton and Mr. White are Enrolled Actuaries and Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries. Both are experienced in performing valuations for large public retirement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

Sincerely,

Gabriel, Roeder, Smith & Co.



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



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



South Carolina Retirement System

Actuarial Balance Sheet

(Amounts expressed in thousands)

	<u>July 1, 2017</u>	<u>July 1, 2016</u>
1. Assets		
a. Current assets (actuarial value)		
i. Employee annuity savings fund	\$ 7,938,850	\$ 7,447,442
ii. Employer annuity accumulation fund	<u>19,302,720</u>	<u>19,846,526</u>
iii. Total current assets	\$ 27,241,570	\$ 27,293,968
b. Present value of future member contributions	\$ 6,215,042	\$ 5,909,771
c. Present value of future employer contributions		
i. Normal contributions	\$ 510,498	\$ 185,409
ii. Accrued liability contributions	<u>21,133,155</u>	<u>18,565,938</u>
iii. Total future employer contributions	\$ 21,643,653	\$ 18,751,347
d. Total assets	<u>\$ 55,100,265</u>	<u>\$ 51,955,086</u>
2. Liabilities		
a. Employee annuity savings fund		
i. Past member contributions	\$ 7,938,850	\$ 7,447,442
ii. Present value of future member contributions	<u>6,215,042</u>	<u>5,909,771</u>
iii. Total contributions to employee annuity savings fund	\$ 14,153,892	\$ 13,357,213
b. Employer annuity accumulation fund		
i. Benefits currently in payment	\$ 30,745,598	\$ 29,830,649
ii. Benefits to be provided to other members	<u>10,200,775</u>	<u>8,767,224</u>
iii. Total benefits payable from employer annuity accumulation fund	\$ 40,946,373	\$ 38,597,873
c. Total liabilities	<u>\$ 55,100,265</u>	<u>\$ 51,955,086</u>

Police Officers Retirement System

Actuarial Balance Sheet

(Amounts expressed in thousands)

	<u>July 1, 2017</u>	<u>July 1, 2016</u>
1. Assets		
a. Current assets (actuarial value)		
i. Employee annuity savings fund	\$ 1,034,549	\$ 968,722
ii. Employer annuity accumulation fund	<u>3,446,345</u>	<u>3,386,131</u>
iii. Total current assets	\$ 4,480,894	\$ 4,354,853
b. Present value of future member contributions	\$ 923,875	\$ 812,866
c. Present value of future employer contributions		
i. Normal contributions	\$ 440,704	\$ 386,370
ii. Accrued liability contributions	<u>2,628,718</u>	<u>2,212,544</u>
iii. Total future employer contributions	\$ 3,069,422	\$ 2,598,914
d. Total assets	<u>\$ 8,474,191</u>	<u>\$ 7,766,633</u>
2. Liabilities		
a. Employee annuity savings fund		
i. Past member contributions	\$ 1,034,549	\$ 968,722
ii. Present value of future member contributions	<u>923,875</u>	<u>812,866</u>
iii. Total contributions to employee annuity savings fund	\$ 1,958,424	\$ 1,781,588
b. Employer annuity accumulation fund		
i. Benefits currently in payment	\$ 4,136,503	\$ 3,881,514
ii. Benefits to be provided to other members	<u>2,379,264</u>	<u>2,103,531</u>
iii. Total benefits payable from employer annuity accumulation fund	\$ 6,515,767	\$ 5,985,045
c. Total liabilities	<u>\$ 8,474,191</u>	<u>\$ 7,766,633</u>

General Assembly Retirement System

Actuarial Balance Sheet

(Amounts expressed in thousands)

	<u>July 1, 2017</u>	<u>July 1, 2016</u>
1. Assets		
a. Current assets (actuarial value)		
i. Employee annuity savings fund	\$ 6,852	\$ 7,334
ii. Employer annuity accumulation fund	<u>28,035</u>	<u>28,592</u>
iii. Total current assets	\$ 34,887	\$ 35,926
b. Present value of future member contributions ¹	\$ 1,171	\$ 1,394
c. Present value of future employer contributions		
i. Normal contributions	\$ 1,010	\$ 1,174
ii. Accrued liability contributions	<u>39,968</u>	<u>39,070</u>
iii. Total future employer contributions	\$ 40,978	\$ 40,244
d. Total assets	<u>\$ 77,036</u>	<u>\$ 77,564</u>
2. Liabilities		
a. Employee annuity savings fund		
i. Past member contributions	\$ 6,852	\$ 7,334
ii. Present value of future member contributions ¹	<u>1,171</u>	<u>1,394</u>
iii. Total contributions to employee annuity savings fund	\$ 8,023	\$ 8,728
b. Employer annuity accumulation fund		
i. Benefits currently in payment	\$ 58,042	\$ 57,314
ii. Benefits to be provided to other members	<u>10,971</u>	<u>11,522</u>
iii. Total benefits payable from employer annuity accumulation fund	\$ 69,013	\$ 68,836
c. Total liabilities	<u>\$ 77,036</u>	<u>\$ 77,564</u>

¹ Includes expected contributions from special contributors.

Judges and Solicitors Retirement System

Actuarial Balance Sheet

(Amounts expressed in thousands)

	<u>July 1, 2017</u>	<u>July 1, 2016</u>
1. Assets		
a. Current assets (actuarial value)		
i. Employee annuity savings fund	\$ 26,703	\$ 25,082
ii. Employer annuity accumulation fund	<u>133,486</u>	<u>133,755</u>
iii. Total current assets	\$ 160,189	\$ 158,837
b. Present value of future member contributions	\$ 14,450	\$ 14,008
c. Present value of future employer contributions		
i. Normal contributions	\$ 25,875	\$ 22,842
ii. Accrued liability contributions	<u>135,441</u>	<u>124,467</u>
iii. Total future employer contributions	\$ 161,316	\$ 147,309
d. Total assets	<u>\$ 335,955</u>	<u>\$ 320,154</u>
2. Liabilities		
a. Employee annuity savings fund		
i. Past member contributions	\$ 26,703	\$ 25,082
ii. Present value of future member contributions	<u>14,450</u>	<u>14,008</u>
iii. Total contributions to employee annuity savings fund	\$ 41,153	\$ 39,090
b. Employer annuity accumulation fund		
i. Benefits currently in payment	\$ 203,030	\$ 200,323
ii. Benefits to be provided to other members	<u>91,772</u>	<u>80,741</u>
iii. Total benefits payable from employer annuity accumulation fund	\$ 294,802	\$ 281,064
c. Total liabilities	<u>\$ 335,955</u>	<u>\$ 320,154</u>

South Carolina National Guard Supplemental Retirement Plan

Actuarial Balance Sheet

(Amounts expressed in thousands)

	<u>July 1, 2017</u>	<u>July 1, 2016</u>
1. Assets		
a. Current assets (actuarial value)	\$ 27,807	\$ 26,751
b. Present value of future member contributions	0	0
c. Present value of future employer contributions		
i. Normal contributions	\$ 7,456	\$ 6,830
ii. Accrued liability contributions	<u>38,699</u>	<u>37,694</u>
iii. Total future employer contributions	\$ 46,155	\$ 44,524
d. Total assets	<u><u>\$ 73,962</u></u>	<u><u>\$ 71,275</u></u>
2. Liabilities		
a. Benefits to be paid to retired members	\$ 35,391	\$ 34,562
b. Benefits to be paid to former members entitled to deferred pensions	11,251	11,154
c. Benefits to be paid to current active members	<u>27,320</u>	<u>25,559</u>
d. Total liabilities	<u><u>\$ 73,962</u></u>	<u><u>\$ 71,275</u></u>

South Carolina Retirement System

Results of the Valuation as of July 1, 2017

(Amounts expressed in thousands)

	<u>July 1, 2017</u>
1. Actuarial Present Value of Future Benefits	
a. Present retired members and beneficiaries	\$ 30,745,598
b. Present active and inactive members	<u>24,354,667</u>
c. Total actuarial present value	\$ 55,100,265
2. Present Value of Future Normal Contributions	
a. Employee	\$ 6,215,042
b. Employer	<u>510,498</u>
c. Total future normal contributions	\$ 6,725,540
3. Actuarial Liability	\$ 48,374,725
4. Current Actuarial Value of Assets	\$ 27,241,570
5. Unfunded Actuarial Liability	\$ 21,133,155
6. UAAL Amortization Rates Based on an Employer Contribution Rate of 14.56%	
a. Active members	12.84%
b. TERI members (including employee contributions)	23.56%
c. ORP members	9.56%
d. Re-employed retirees (including employee contributions)	23.56%
7. Unfunded Actuarial Liability Liquidation Period	24 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, 2017

(Amounts expressed in thousands)

	<u>July 1, 2017</u>
1. Actuarial Present Value of Future Benefits	
a. Present retired members and beneficiaries	\$ 4,136,503
b. Present active and inactive members	<u>4,337,688</u>
c. Total actuarial present value	\$ 8,474,191
2. Present Value of Future Normal Contributions	
a. Employee	\$ 923,875
b. Employer	<u>440,704</u>
c. Total future normal contributions	\$ 1,364,579
3. Actuarial Liability	\$ 7,109,612
4. Current Actuarial Value of Assets	\$ 4,480,894
5. Unfunded Actuarial Liability	\$ 2,628,718
6. Unfunded Actuarial Liability Rate in Effect for FY 2019	12.26%
7. Unfunded Actuarial Liability Liquidation Period	23 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, 2017

(Amounts expressed in thousands)

	<u>July 1, 2017</u>
1. Actuarial Present Value of Future Benefits	
a. Present retired members and beneficiaries	\$ 58,042
b. Present active and inactive members	<u>18,994</u>
c. Total actuarial present value	\$ 77,036
2. Present Value of Future Normal Contributions	
a. Employee	\$ 1,171
b. Employer	<u>1,010</u>
c. Total future normal contributions	\$ 2,181
3. Actuarial Liability	\$ 74,855
4. Current Actuarial Value of Assets	\$ 34,887
5. Unfunded Actuarial Liability	\$ 39,968
6. Unfunded Actuarial Liability Liquidation Period from the Valuation Date	10 years

Judges and Solicitors Retirement System

Results of the Valuation as of July 1, 2017

(Amounts expressed in thousands)

	<u>July 1, 2017</u>
1. Actuarial Present Value of Future Benefits	
a. Present retired members and beneficiaries	\$ 203,030
b. Present active and inactive members	<u>132,925</u>
c. Total actuarial present value	\$ 335,955
2. Present Value of Future Normal Contributions	
a. Employee	\$ 14,450
b. Employer	<u>25,875</u>
c. Total future normal contributions	\$ 40,325
3. Actuarial Liability	\$ 295,630
4. Current Actuarial Value of Assets	\$ 160,189
5. Unfunded Actuarial Liability	\$ 135,441
6. UAAL Amortization Rates Based on an Employer Contribution Rate of 52.49%	
a. Active members	33.19%
b. DROP and Retired-in-Place Members (including employee contributions)	62.49%
7. Unfunded Actuarial Liability Liquidation Period	30 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, 2017

(Amounts expressed in thousands)

	<u>July 1, 2017</u>
1. Actuarial Present Value of Future Benefits	
a. Present retired members and beneficiaries	\$ 35,391
b. Present active and inactive members	<u>38,571</u>
c. Total actuarial present value	\$ 73,962
2. Present Value of Future Normal Contributions	
a. Employee	\$ 0
b. Employer	<u>7,456</u>
c. Total future normal contributions	\$ 7,456
3. Actuarial Liability	\$ 66,506
4. Current Actuarial Value of Assets	\$ 27,807
5. Unfunded Actuarial Liability	\$ 38,699
6. Unfunded Actuarial Liability Liquidation Period¹	19 years

¹ There are four years remaining in the amortization of the unfunded liability attributable to the 2006 legislation change and 19 years remaining in the amortization of the unfunded liability due to other plan experience. The disclosure of a 19 year funding period is to better communicate 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 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, 2017 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 rate of service retirement or TERI entry 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 Rates¹

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%

¹Retirement 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 Rates¹

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%

¹Retirement 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 Rates¹

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%

¹Retirement 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).

²The "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.

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 and members participating in TERI 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 ACT 278 and TERI will be completely eliminated after June 30, 2018.
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 TERI, ORP and rehired retiree participants) 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 separately for TERI, and return to work employees 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)

		<u>Year Ending</u> <u>June 30, 2017</u>	
1.	Actuarial value of assets at beginning of year	\$	27,293,968
2.	Market value of assets at beginning of year	\$	23,996,362
3.	Net new investments		
a.	Contributions	\$	1,995,783
b.	Disbursements		(3,050,531)
c.	Subtotal		(1,054,748)
4.	Market value of assets at end of year	\$	25,732,829
5.	Net earnings (Item 4. - Item 2. - Item 3.c.)	\$	2,791,215
6.	Assumed investment return rate for fiscal year		7.50%
7.	Expected return (Item 6. x (Item 2. + 1/2 Item 3.c.))	\$	1,760,174
8.	Excess return (Item 5. - Item 7.)	\$	1,031,041
9.	Excess return on assets as of June 30, 2017:		
	<u>Fiscal Year</u>	<u>Excess</u>	<u>Percent</u>
	<u>Ending June 30,</u>	<u>Return/(Shortfall)</u>	<u>Deferred</u>
a.	2017	\$ 1,031,041	80%
b.	2016	(2,027,545)	60%
c.	2015	(2,792,616)	40%
d.	2014	N/A	20%
e.	2013	N/A	0%
f.	Total		(1,508,741)
10.	Actuarial value of assets as of June 30, 2017 (Item 4. - Item 9.f.)	\$	27,241,570
11.	Expected actuarial value as of June 30, 2017	\$	28,246,715
12.	Asset gain (loss) for year (Item 10. - Item 11.)	\$	(1,005,145)
13.	Asset gain (loss) as % of the actuarial value of assets		(3.7%)
14.	Ratio of actuarial value to market value		105.9%

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 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, 2017 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		Male	Female
Class Two	Class Three		
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, 5 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 plan'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 ACT 278.
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)

				<u>Year Ending June 30, 2017</u>
1.	Actuarial value of assets at beginning of year			\$ 4,354,853
2.	Market value of assets at beginning of year			\$ 3,876,036
3.	Net new investments			
a.	Contributions			\$ 319,861
b.	Disbursements			(377,689)
c.	Subtotal			(57,828)
4.	Market value of assets at end of year			\$ 4,274,123
5.	Net earnings (Item 4. - Item 2. - Item 3.c.)			\$ 455,915
6.	Assumed investment return rate for fiscal year			7.50%
7.	Expected return (Item 6. x (Item 2. + 1/2 Item 3.c.))			\$ 288,534
8.	Excess return (Item 5. - Item 7.)			\$ 167,381
9.	Excess return on assets as of June 30, 2017:			
	<u>Fiscal Year</u>	<u>Excess</u>	<u>Percent</u>	<u>Deferred</u>
	<u>Ending June 30,</u>	<u>Return/(Shortfall)</u>	<u>Deferred</u>	<u>Amount</u>
a.	2017	\$ 167,381	80%	\$ 133,905
b.	2016	(321,987)	60%	(193,192)
c.	2015	(368,711)	40%	(147,484)
d.	2014	N/A	20%	N/A
e.	2013	N/A	0%	N/A
f.	Total			\$ (206,771)
10.	Actuarial value of assets as of June 30, 2017 (Item 4. - Item 9.f.)			\$ 4,480,894
11.	Expected actuarial value as of June 30, 2017			\$ 4,621,470
12.	Asset gain (loss) for year (Item 10. - Item 11.)			\$ (140,576)
13.	Asset gain (loss) as % of the actuarial value of assets			(3.1%)
14.	Ratio of actuarial value to market value			104.8%

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 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, 2017 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	101%	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, 2017				
1.	Actuarial value of assets at beginning of year	\$	35,926			
2.	Market value of assets at beginning of year	\$	30,188			
3.	Net new investments					
a.	Contributions	\$	5,007			
b.	Disbursements		(6,735)			
c.	Subtotal		(1,728)			
4.	Market value of assets at end of year	\$	31,789			
5.	Net earnings (Item 4. - Item 2. - Item 3.c.)	\$	3,329			
6.	Assumed investment return rate for fiscal year		7.50%			
7.	Expected return (Item 6. x (Item 2. + 1/2 Item 3.c.))	\$	2,199			
8.	Excess return (Item 5. - Item 7.)	\$	1,130			
9.	Excess return on assets as of June 30, 2017:					
	Fiscal Year Ending June 30, Excess Return/(Shortfall) Percent Deferred Deferred Amount					
a.	2017	\$	1,130	80%	\$	904
b.	2016		(2,645)	60%		(1,587)
c.	2015		(6,037)	40%		(2,415)
d.	2014		N/A	20%		N/A
e.	2013		N/A	0%		N/A
f.	Total				\$	(3,098)
10.	Actuarial value of assets as of June 30, 2017 (Item 4. - Item 9.f.)	\$	34,887			
11.	Expected actuarial value as of June 30, 2017	\$	36,828			
12.	Asset gain (loss) for year (Item 10. - Item 11.)	\$	(1,941)			
13.	Asset gain (loss) as % of the actuarial value of assets					(5.6%)
14.	Ratio of actuarial value to market value					109.7%

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 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, 2017 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 RIP 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, 2017
1.	Actuarial value of assets at beginning of year	\$		158,837
2.	Market value of assets at beginning of year	\$		140,717
3.	Net new investments			
a.	Contributions	\$		13,461
b.	Disbursements			(18,426)
c.	Subtotal			(4,965)
4.	Market value of assets at end of year	\$		152,151
5.	Net earnings (Item 4. - Item 2. - Item 3.c.)	\$		16,399
6.	Assumed investment return rate for fiscal year			7.50%
7.	Expected return (Item 6. x (Item 2. + 1/2 Item 3.c.))	\$		10,368
8.	Excess return (Item 5. - Item 7.)	\$		6,031
9.	Excess return on assets as of June 30, 2017:			
	<u>Fiscal Year</u>	<u>Excess</u>	<u>Percent</u>	<u>Deferred</u>
	<u>Ending June 30,</u>	<u>Return/(Shortfall)</u>	<u>Deferred</u>	<u>Amount</u>
a.	2017	\$ 6,031	80%	\$ 4,825
b.	2016	(11,747)	60%	(7,048)
c.	2015	(14,537)	40%	(5,815)
d.	2014	N/A	20%	N/A
e.	2013	N/A	0%	N/A
f.	Total			(8,038)
10.	Actuarial value of assets as of June 30, 2017 (Item 4. - Item 9.f.)	\$		160,189
11.	Expected actuarial value as of June 30, 2017	\$		165,599
12.	Asset gain (loss) for year (Item 10. - Item 11.)	\$		(5,410)
13.	Asset gain (loss) as % of the actuarial value of assets			(3.4%)
14.	Ratio of actuarial value to market value			105.3%

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 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, 2017 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	145.0%	145.0%	95.0%	95.0%

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, 2017	
1.	Actuarial value of assets at beginning of year	\$	26,751
2.	Market value of assets at beginning of year	\$	23,350
3.	Net new investments		
a.	Contributions	\$	4,591
b.	Disbursements	\$	(4,438)
c.	Subtotal		153
4.	Market value of assets at end of year	\$	26,036
5.	Net earnings (Item 4. - Item 2. - Item 3.c.)	\$	2,533
6.	Assumed investment return rate for fiscal year		7.50%
7.	Expected return (Item 6. x (Item 2. + 1/2 Item 3.c.))	\$	1,757
8.	Excess return (Item 5. - Item 7.)	\$	776
9.	Excess return on assets as of June 30, 2017:		
	<u>Fiscal Year</u>	<u>Excess</u>	<u>Percent</u>
	<u>Ending June 30,</u>	<u>Return/(Shortfall)</u>	<u>Deferred</u>
a.	2017	\$ 776	80%
b.	2016	(1,884)	60%
c.	2015	(3,156)	40%
d.	2014	N/A	20%
e.	2013	N/A	0%
f.	Total		\$ (1,771)
10.	Actuarial value of assets as of June 30, 2017 (Item 4. - Item 9.f.)	\$	27,807
11.	Expected actuarial value as of June 30, 2017	\$	28,916
12.	Asset gain (loss) for year (Item 10. - Item 11.)	\$	(1,109)
13.	Asset gain (loss) as % of the actuarial value of assets		(4.0%)
14.	Ratio of actuarial value to market value		106.8%

South Carolina Retirement System Summary of Historical Active Membership

July 1,	Number of Employers ²	Active Members		Covered Payroll ¹		Average Annual Pay		Average Age	Average Service
		Number	Percent Increase/ (Decrease)	Amount in Thousands	Percent Increase/ (Decrease)	Amount	Percent Increase/ (Decrease)		
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
2008	776	192,820	2.6%	7,559,172	6.6%	39,203	3.89%	45	10

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

²Number 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

July 1,	Number of Employers ²	Active Members		Covered Payroll ¹		Average Annual Pay		Average Age	Average Service
		Number	Percent Increase/ (Decrease)	Amount in Thousands	Percent Increase/ (Decrease)	Amount	Percent Increase/ (Decrease)		
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
2008	313	26,427	3.0%	1,060,747	6.8%	40,139	3.68%	N/A	N/A

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

²Number 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

July 1,	Number of Employers ²	Active Members		Covered Payroll ¹		Average Annual Pay		Average Age	Average Service
		Number	Percent Increase/ (Decrease)	Amount in Thousands	Percent Increase/ (Decrease)	Amount	Percent Increase/ (Decrease)		
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
2008	2	170	0.0%	3,854	0.0%	22,671	0.0%	N/A	N/A

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

²Number 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

July 1,	Number of Employers ²	Active Members		Covered Payroll		Average Annual Pay		Average Age	Average Service
		Number ¹		Amount in Thousands ¹	Amount	Percent Increase/ (Decrease)			
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
2008	3	144		18,661	129,590	1.10%		54	15

¹Includes filled and unfilled positions and members in DROP or retired-in-place.

²Number 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

<u>July 1,</u>	<u>Number of</u>	<u>Number of</u>	<u>Annual</u>	<u>Average</u>	<u>Percent</u>	<u>Average</u>	<u>Average</u>
	<u>Employers</u>	<u>Members</u>	<u>Payroll¹</u>	<u>Pay¹</u>	<u>Increase in</u>	<u>Age</u>	<u>Service</u>
					<u>Average Pay¹</u>		
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
2008	1	12,559	N/A	N/A	N/A	31	8

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

South Carolina Retirement System Summary of Active Membership Data

As of July 1, 2017

(Dollar amounts expressed in thousands)

Group	Number ¹	Annual Compensation ²
State employees	51,775	\$ 2,441,830
Public school employees	86,239	3,485,110
Other agency employees	55,971	2,343,931
Total	<u>193,985</u>	<u>\$ 8,270,871</u>

¹In addition, there are 176,045 inactive members with contributions still in the system.

The results of the valuation were adjusted to take these members into account.

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

Police Officers Retirement System Summary of Active Membership Data

As of July 1, 2017

(Dollar amounts expressed in thousands)

Group	Number ¹	Annual Compensation ²
State employees	9,152	\$ 368,221
Public school employees	0	0
Other agency employees	17,904	795,369
Total	<u>27,056</u>	<u>\$ 1,163,590</u>

¹In addition, there are 16,004 inactive members with contributions still in the system.

The results of the valuation were adjusted to take these members into account.

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

General Assembly Retirement System Summary of Active Membership Data

As of July 1, 2017

(Dollar amounts expressed in thousands)

<u>Number¹</u>	<u>Annual Compensation</u>
87	\$ 1,961

¹There are 35 inactive members with contributions still in the system, and there are 19 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, 2017

(Dollar amounts expressed in thousands)

<u>Number¹</u>	<u>Annual Compensation</u>
160	\$ 22,347

¹The number of active members reflects the number of seats, including 22 participants who are either in the DROP or have retired in place and are receiving retirement benefits while continuing in office. There are three 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, 2017	July 1, 2016
1. Service retirees		
a. Number ¹	117,727	115,338
b. Total annual benefits	\$2,540,974,363	\$2,469,794,069
c. Average annual benefits	\$ 21,584	\$ 21,414
d. Average age at the valuation date	70.2	69.8
2. Disabled retirees		
a. Number	12,879	13,133
b. Total annual benefits	\$ 180,736,448	\$ 182,525,500
c. Average annual benefits	\$ 14,033	\$ 13,898
d. Average age at the valuation date	64.8	64.2
3. Beneficiaries		
a. Number	9,682	9,384
b. Total annual benefits	\$ 120,014,180	\$ 114,143,577
c. Average annual benefits	\$ 12,396	\$ 12,164
d. Average age at the valuation date	67.8	67.7

¹Includes members in TERI and working retirees.

Police Officers Retirement System Summary of Membership Data

	July 1, 2017	July 1, 2016
1. Service retirees		
a. Number	13,853	13,361
b. Total annual benefits	\$ 289,442,139	\$ 276,148,284
c. Average annual benefits	\$ 20,894	\$ 20,668
d. Average age at the valuation date	65.3	64.9
2. Disabled retirees		
a. Number	2,663	2,578
b. Total annual benefits	\$ 55,341,936	\$ 53,142,503
c. Average annual benefits	\$ 20,782	\$ 20,614
d. Average age at the valuation date	55.1	54.8
3. Beneficiaries		
a. Number	1,371	1,349
b. Total annual benefits	\$ 17,136,546	\$ 16,583,402
c. Average annual benefits	\$ 12,499	\$ 12,293
d. Average age at the valuation date	67.6	67.7

General Assembly Retirement System

Summary of Membership Data

	July 1, 2017	July 1, 2016
1. Service retirees		
a. Number	279	279
b. Total annual benefits	\$ 5,470,720	\$ 5,498,678
c. Average annual benefits	\$ 19,608	\$ 19,709
d. Average age at the valuation date	73.8	73.5
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	75	79
b. Total annual benefits	\$ 1,060,790	\$ 1,115,212
c. Average annual benefits	\$ 14,144	\$ 14,117
d. Average age at the valuation date	74.1	76.9

Judges and Solicitors Retirement System

Summary of Membership Data

	July 1, 2017	July 1, 2016
1. Service retirees		
a. Number ¹	157	155
b. Total annual benefits	\$ 16,267,077	\$ 16,123,054
c. Average annual benefits	\$ 103,612	\$ 104,020
d. Average age at the valuation date	71.7	71.1
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	56	55
b. Total annual benefits	\$ 1,633,030	\$ 1,593,995
c. Average annual benefits	\$ 29,161	\$ 28,982
d. Average age at the valuation date	70.8	69.8

¹Includes members in DROP and retired-in-place. It does not include three unfilled positions.

South Carolina National Guard Supplemental Retirement Plan Summary of Membership Data

	<u>July 1, 2017</u>	<u>July 1, 2016</u>
1. Active members		
a. Males	9,813	9,998
b. Females	2,303	2,255
c. Total members	12,116	12,253
d. Average age	32.3	32.2
e. Average service	9.8	9.7
2. Vested inactive members		
a. Number	1,901	1,969
b. Total annual deferred benefits	\$ 1,508,760	\$ 1,551,840
c. Average annual deferred benefits	\$ 794	\$ 788
3. Service retirees		
a. Number	4,789	4,709
b. Total annual benefits	\$ 4,357,440	\$ 4,296,660
c. Average annual benefit	\$ 910	\$ 912
d. Average age	70.8	70.6

South Carolina Retirement System

Schedule of Retirants Added to and Removed from Rolls¹

(Amounts except average allowance expressed in thousands)

Added to Rolls ²			Removed from Rolls ³		Rolls End of the Year		% Increase in Annual Benefit	Average Annual Benefit
July 1,	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits		
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
2008	6,021	132,856	2,396	30,178	104,522	1,909,098	5.7%	18,265

¹Includes Teacher and Employee Retention Incentive (TERI) participants.

²Annual benefits added to rolls includes the benefit adjustments provided to continuing retirees.

³The 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		% Increase in Annual Benefit	Average Annual Benefit
July 1,	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits		
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
2008	779	17,458	194	2,691	11,286	203,441	7.8%	18,026

²Annual benefits added to rolls includes the benefit adjustments provided to continuing retirees.

³The 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		% Increase in Annual Benefit	Average Annual Benefit
July 1,	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits		
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
2008	19	337	10	134	342	6,286	3.3%	18,380

²Annual benefits added to rolls includes benefit adjustments provided to continuing retirees.

³The 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 Rolls¹

(Amounts except average allowance expressed in thousands)

Added to Rolls ²			Removed from Rolls ³		Rolls End of the Year		% Increase in Annual Benefit	Average Annual Benefit
July 1,	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits		
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
2008	6	545	3	156	178	13,100	3.1%	73,596

¹Beginning July 1, 2007, includes participants who have retired in place.

²Annual benefits added to rolls includes benefit adjustments provided to continuing retirees.

³The 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		% Increase in Annual Benefit	Average Annual Benefit
	July 1, Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits		
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
2008	364	331	76	75	3,492	3,284	8.5%	940

Schedule of Funding Progress¹

(Amounts expressed in thousands)

SCRS	Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Annual Covered Payroll ²	UAAL as % of Payroll
	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%
	2008	24,699,678	35,663,419	10,963,741	69.3%	7,559,172	145.0%

PORS	Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Annual Covered Payroll ²	UAAL as % of Payroll
	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%
	2008	3,363,136	4,318,955	955,819	77.9%	1,060,747	90.1%

¹Funding progress for July 1, 2011, valuation adjusted to reflect pension reform legislation in Act 278.

²Covered payroll does not include payroll attributable to members in State ORP, TERI 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 enactment of Act 278. Act 278 became law in June 2012, 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.

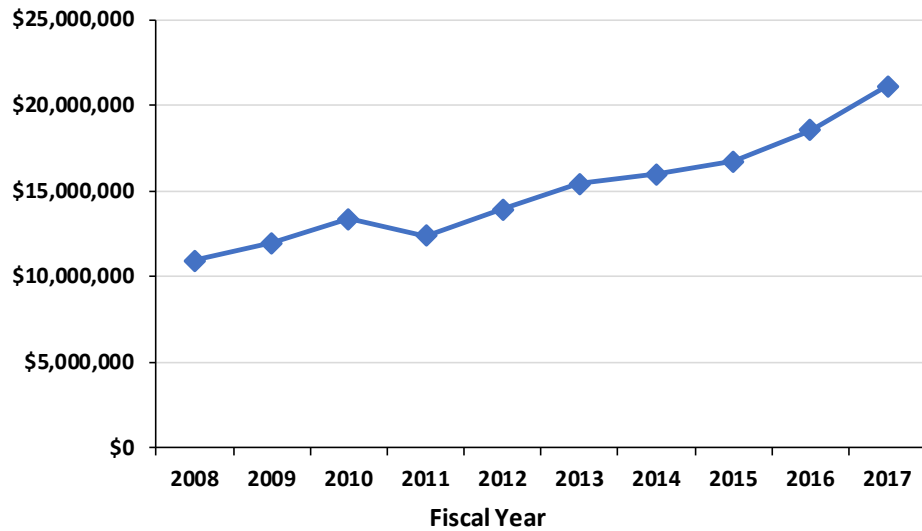
Effective July 1, 2017, the Retirement System Funding and Administration Act of 2017 became law. The legislation lowered the retirement systems' assumed rate of return from 7.50 percent to 7.25 percent and reduced the maximum amortization period for the retirement systems from 30 years to 20 years over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

South Carolina Retirement System

Funding Progress with Funded Ratios¹

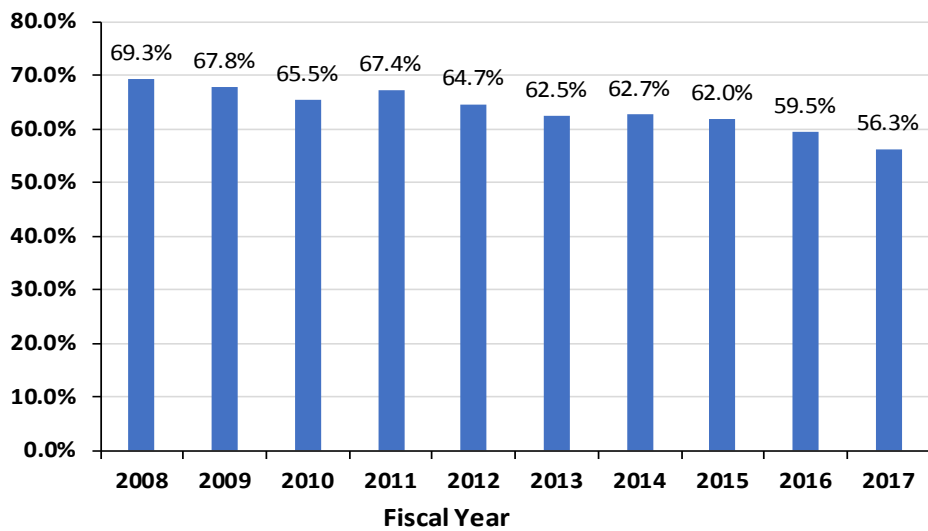
Unfunded Accrued Liabilities

(Amounts expressed in thousands)



Funded Ratios

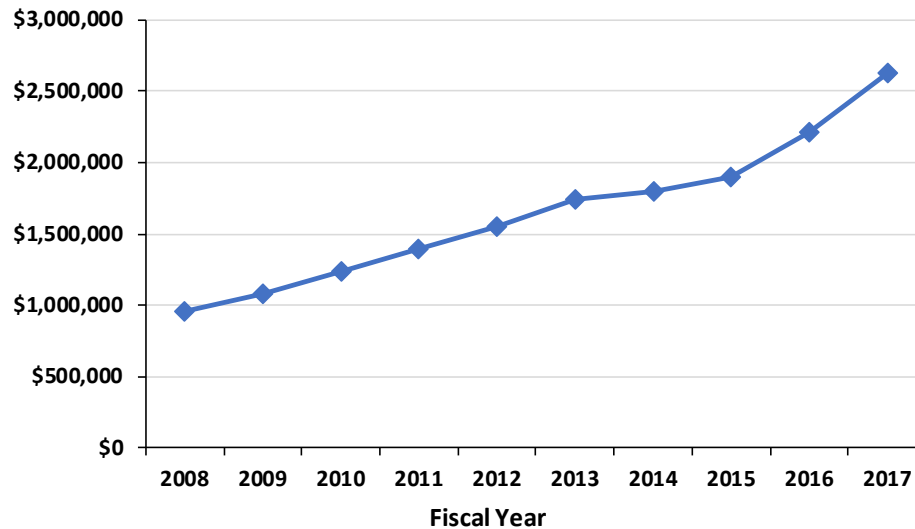
(Actuarial assets as a percentage of actuarial accrued liabilities)



¹A 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' Contributions.

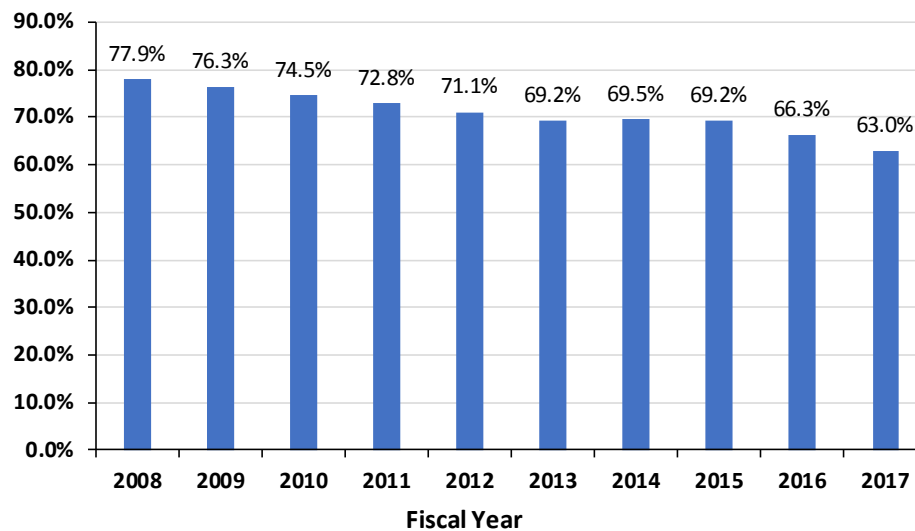
Police Officers Retirement System Funding Progress with Funded Ratios¹ Unfunded Accrued Liabilities

(Amounts expressed in thousands)



Funded Ratios

(Actuarial assets as a percentage of actuarial accrued liabilities)



¹A 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' Contributions.

Schedule of Funding Progress

(Amounts expressed in thousands)

GARS	Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Annual Covered Payroll ¹	UAAL as % of Payroll
	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%
	2008	47,189	69,122	21,933	68.3%	3,854	569.1%

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

JSRS	Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Annual Covered Payroll	UAAL as % of Payroll
	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%
	2008	138,323	213,406	75,083	64.8%	18,661	402.4%

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.

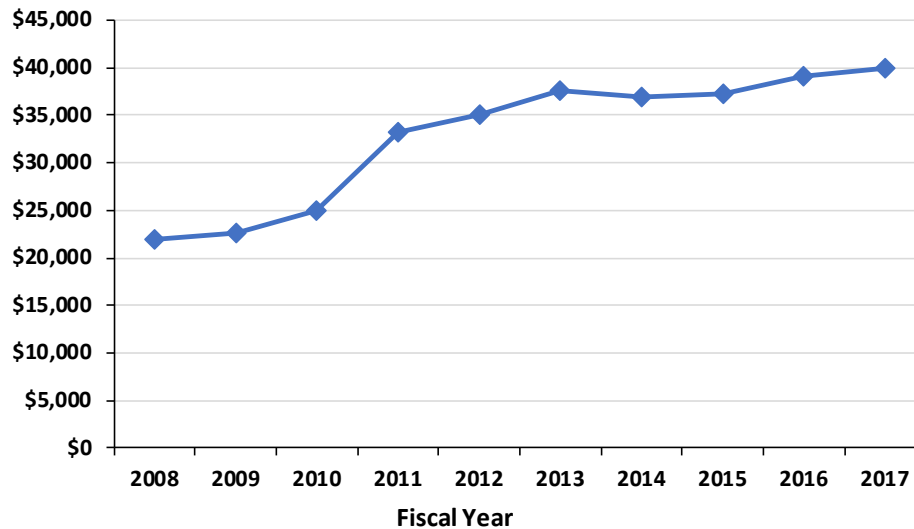
Effective July 1, 2012, Act 278 became law in June 2012 and increased the member contribution rate from 10 percent of pay to 11 percent of pay effective January 1, 2013 for GARS members. The legislation also closed GARS to new members. Newly elected members of the General Assembly on or after the general election of 2012 shall elect to become members of SCRS, State ORP or non-membership.

Effective July 1, 2016, actuarial assumptions were changed as a result of a 5 year experience study. The inflation assumption, post-retirement mortality tables and pre-retirement mortality assumption were revised for both GARS and JSRS. 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 GARS and JSRS. In addition, there were changes to the disability rates for GARS and changes to the rate of salary increases, COLA, payroll growth assumption, rates of retirement and disability for JSRS.

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.

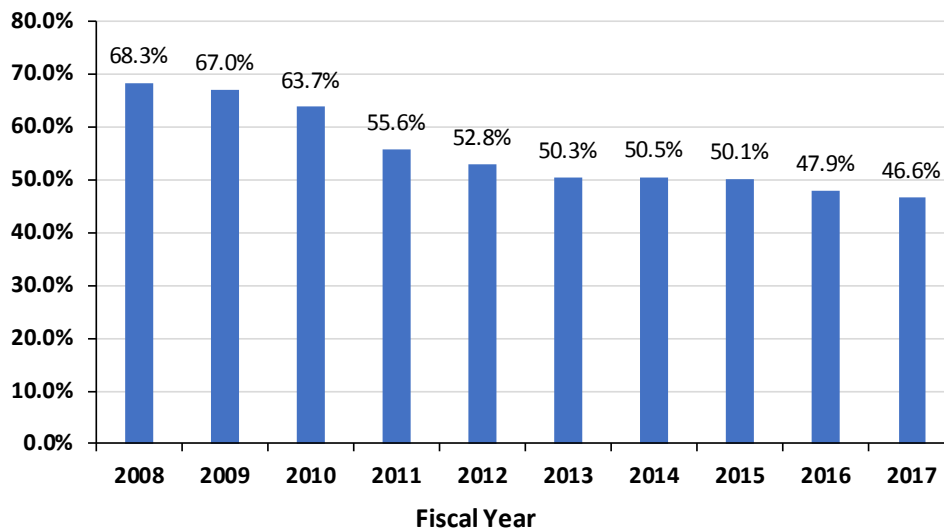
General Assembly Retirement System Funding Progress with Funded Ratios¹ Unfunded Accrued Liabilities

(Amounts expressed in thousands)



Funded Ratios

(Actuarial assets as a percentage of actuarial accrued liabilities)



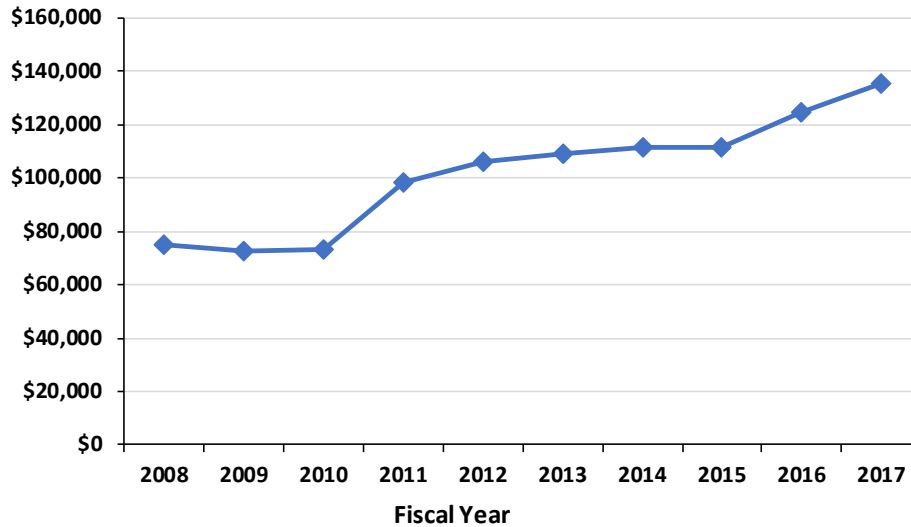
¹ A 10-year schedule of actuarially determined and actual contributions can be found in the Required Supplementary Information portion of the Financial Section as part of the Schedule of Employers' Contributions.

Judges and Solicitors Retirement System

Funding Progress with Funded Ratios¹

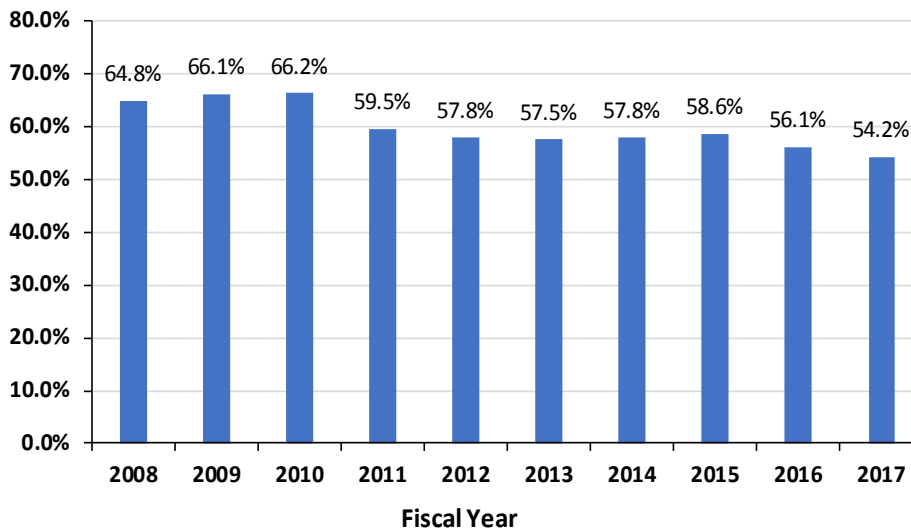
Unfunded Accrued Liabilities

(Amounts expressed in thousands)



Funded Ratios

(Actuarial assets as a percentage of actuarial accrued liabilities)



¹A 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' Contributions.

Schedule of Funding Progress

(Amounts expressed in thousands)

SCNG	Valuation Date	Actuarial Value of Assets (AVA)	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Funded Ratio	Annual Covered Payroll	UAAL as % of Payroll
	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
	2008	17,426	53,534	36,108	32.6%	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.

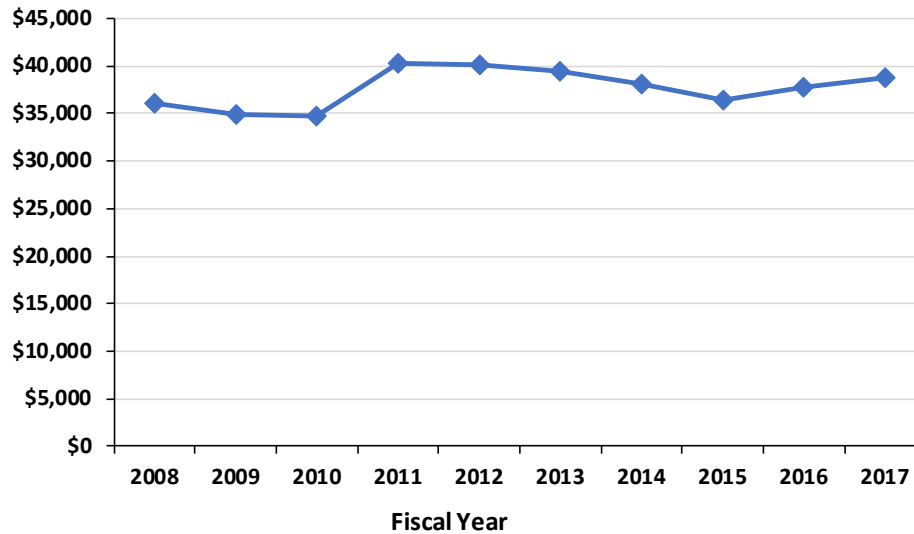
Effective July 1, 2016, actuarial assumptions were changed as a result of a 5 year experience study. The inflation assumption, rate of salary increases, payroll growth assumption, post-retirement mortality tables, pre-retirement mortality assumption and rates of withdrawal, disability and retirement 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.

South Carolina National Guard Supplemental Retirement Plan Funding Progress with Funded Ratios¹

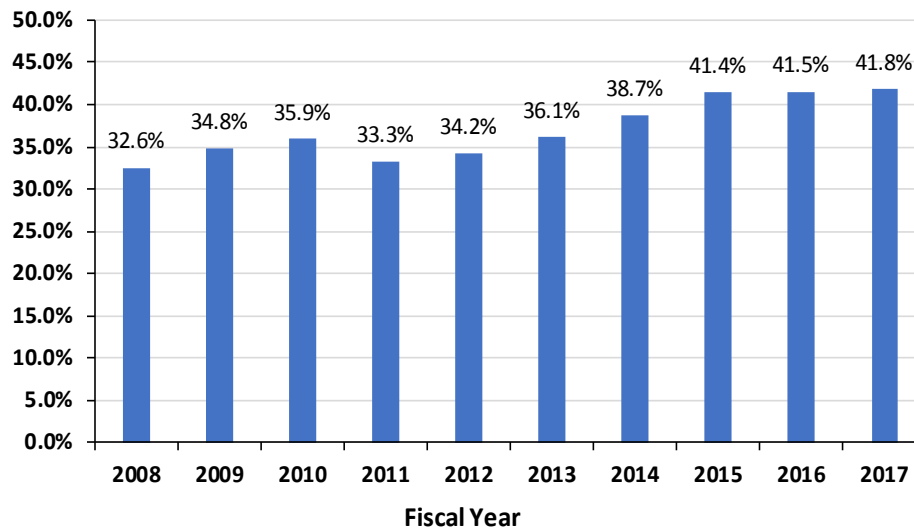
Unfunded Accrued Liabilities

(Amounts expressed in thousands)



Funded Ratios

(Actuarial assets as a percentage of actuarial accrued liabilities)



¹A 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' Contributions.

South Carolina Retirement System Reconciliation of UAAL

As of July 1, 2017
(Amounts expressed in thousands)

Item	<u>Amount of Increase/Decrease</u>
Beginning of year UAAL	\$ 18,565,938
Interest on UAAL	1,392,445
Amortization payment	(1,112,307)
Assumption/method changes	1,309,385
Asset experience	1,005,145
Salary experience	147,345
Other liability experience	(174,796)
Legislative changes	0
End of year UAAL	<u>\$ 21,133,155</u>

Police Officers Retirement System Reconciliation of UAAL

As of July 1, 2017
(Amounts expressed in thousands)

Item	<u>Amount of Increase/Decrease</u>
Beginning of year UAAL	\$ 2,212,544
Interest on UAAL	165,941
Amortization payment	(144,518)
Assumption/method changes	213,979
Asset experience	142,806
Salary experience	70,073
Other liability experience	(32,107)
Legislative changes	0
End of year UAAL	<u>\$ 2,628,718</u>

General Assembly Retirement System Reconciliation of UAAL

As of July 1, 2017
(Amounts expressed in thousands)

Item	<u>Amount of Increase/Decrease</u>
Beginning of year UAAL	\$ 39,070
Interest on UAAL	2,930
Amortization payment	(4,593)
Assumption/method changes	1,510
Asset experience	1,851
Other liability experience	(800)
Legislative changes	0
End of year UAAL	<u>\$ 39,968</u>

Judges and Solicitors Retirement System Reconciliation of UAAL

As of July 1, 2017
(Amounts expressed in thousands)

Item	<u>Amount of Increase/Decrease</u>
Beginning of year UAAL	\$ 124,467
Interest on UAAL	9,341
Amortization payment	(8,675)
Assumption/method changes	9,577
Asset experience	5,410
COLA	(5,276)
Salary experience	(409)
Other liability experience	1,006
Legislative changes	0
End of year UAAL	<u>\$ 135,441</u>

South Carolina National Guard Supplemental Retirement Plan Reconciliation of UAAL

As of July 1, 2017

(Amounts expressed in thousands)

Item	<u>Amount of Increase/Decrease</u>
Beginning of year UAAL	\$ 37,694
Interest on UAAL	2,827
Amortization payment	(4,115)
Assumption/method changes	1,829
Asset experience	1,123
Other liability experience	(659)
Legislative changes	0
End of year UAAL	<u>\$ 38,699</u>

Solvency Test

(Amounts expressed in thousands)

SCRS	July 1,	Actuarial Accrued Liability				Portion of Aggregate Accrued Liabilities Covered by Assets		
		Active	Retirants &	Active & Inactive	Valuation	Active	Retirants	ER Financed
		Member Contributions	Beneficiaries	Members (Employer Financed)				
	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%
	2008	5,708,022	20,624,862	9,329,937	24,699,678	100%	92.1%	0%
PORS	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%
	2008	697,423	2,183,645	1,437,887	3,363,136	100%	100.0%	33.5%

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.

July 1, 2011, valuation adjusted to reflect pension reform legislation in Act 278.

Effective July 1, 2012, disability and retirement rates were updated to more appropriately reflect the anticipated plan experience as a result of the enactment of Act 278. Act 278 became law in June 2012, 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.

Solvency Test

(Amounts expressed in thousands)

		Actuarial Accrued Liability							
		Active	Active & Inactive			Portion of Aggregate Accrued			
		Member	Retirants &	Members		Valuation	Liabilities Covered by Assets		
GARS	July 1,	Contributions	Beneficiaries	(Employer Financed)		Assets	Active	Retirants	ER Financed
	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%	
	2008	7,265	53,240	8,617	47,189	100%	75.0%	0%	
JSRS	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%	
	2008	17,367	141,510	54,529	138,323	100%	85.5%	0.0%	

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 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, Act 278 became law in June 2012 and 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.

Effective July 1, 2016, actuarial assumptions were changed as a result of a 5 year experience study. The inflation assumption, post-retirement mortality tables and pre-retirement mortality assumption were revised for both GARS and JSRS. 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 GARS and JSRS. In addition, there were changes to the disability rates for GARS and changes to the rate of salary increases, COLA, payroll growth assumption, rates of retirement and disability for JSRS.

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.

Solvency Test

(Amounts expressed in thousands)

SCNG	July 1,	Actuarial Accrued Liability			Valuation Assets	Portion of Aggregate Accrued Liabilities Covered by Assets		
		Active Member	Retirants & Beneficiaries	Active & Inactive Members (Employer Financed)		Active	Retirants	ER Financed
		Contributions						
	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%
	2008	0	25,554	27,980	17,426	N/A	68.2%	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, 2017

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 13.41% of earnable compensation	Class II& III 15.84% of earnable compensation	\$5,428,000 paid annually	49.42% of earnable compensation	Annual lump-sum appropriation of \$4,590,798
Death Benefit Program 0.15% of earnable compensation	Death Benefit Program 0.2% 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 0.2% 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. 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.	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			
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.	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
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.				
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 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 consecutive quarters and includes an amount for up to 45 days termination pay at retirement for unused annual leave.	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.
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 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.			

SCRS	PORS	GARS	JSRS	SCNG
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9. Requirements for Disability Retirement

Class II Permanent incapacity to perform the regular duties of the member's job; 5 years of earned service, unless injury is job related.	Class II Permanent incapacity to perform the regular duties of the member's job; 5 years of earned service, unless injury is job related.	5 years of credited service. Must be disabled based on job specific standard.	5 years of credited service. Must be disabled based on job specific standard.	Not applicable
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Class III Permanent incapacity to perform the regular duties of the member's job; 8 years of earned service, unless injury is job related.	Class III Permanent incapacity to perform the regular duties of the member's job; 8 years of earned service, unless injury is job related.
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For applications received after 12/31/2013, a member of SCRS will have to be approved for disability benefits from the Social Security Administration in order to be eligible for SCRS disability retirement benefits.

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
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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 A (Maximum/Retiree Only) Formula benefit as calculated in item 8. Non-recovered contributions paid upon death.	Maximum Benefit (Retiree Only) Formula benefit as calculated in item 8. Non-recovered contributions paid upon death.	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.	Formula benefit as calculated in item 8.
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 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 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.	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).	
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.	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.	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.		
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.	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.	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.		

SCRS	PORS	GARS	JSRS	SCNG
12. Deferred Retirement Option Programs				
Class II TERI is a deferred retirement option program (DROP). Upon meeting normal retirement eligibility, a member can elect to retire and continue working under the TERI program for a maximum of five years, after which employment will cease. During the TERI participation, the retirement annuity is not paid to the TERI retirees, but monthly benefits are accumulated in TERI accounts and are distributed to the members upon termination of employment. For members retiring after June 30, 2005, a payment for annual leave is not included in calculating benefits. Upon termination, however, benefits are increased prospectively to include payment for up to 45 days annual leave paid at termination of employment. No interest is credited to the TERI account. TERI participants who entered the program after June 30, 2005, must continue to contribute at the same rate as active members. No additional service credit is earned during this period and participants are ineligible for disability retirement benefits. 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
Class III TERI program is not available.				

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 <i>Continued on Next Page</i>	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. 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.	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
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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.

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.	Retired member receives benefit based on current salary for member’s position.	Retired member receives benefit based on current salary for member’s position.	Post retirement increases are not provided.
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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
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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. TERI participants and 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 that does not exceed 30 years. 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 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 also the actuarial cost method used for financial reporting purposes.	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 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 also the actuarial cost method used for financial reporting purposes.	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.
19. Funding Policy				
SC State Statute establishes the base funding policy for SCRS. Additionally, the PEBA Board shall increase the employer contribution rate as necessary to meet the amortization period set in statute.	SC State Statute establishes the base funding policy for PORS. Additionally, the PEBA Board shall increase the employer contribution rate as necessary to meet the amortization period set in statute.	The PEBA Board is responsible for establishing and maintaining the funding policy. The funding policy currently in place was adopted by the Budget and Control Board in April 1996 in an effort to establish and set forth the essential funding goals and methods by which to measure progress toward those goals.	The PEBA Board is responsible for establishing and maintaining the funding policy. The funding policy currently in place was adopted by the Budget and Control Board in April 1996 in an effort to establish and set forth the essential funding goals and methods by which to measure progress toward those goals.	The PEBA Board is responsible for establishing and maintaining the funding policy. The funding policy currently in place was adopted by the Budget and Control Board in April 1996 in an effort to establish and set forth the essential funding goals and methods by which to measure progress toward those goals.

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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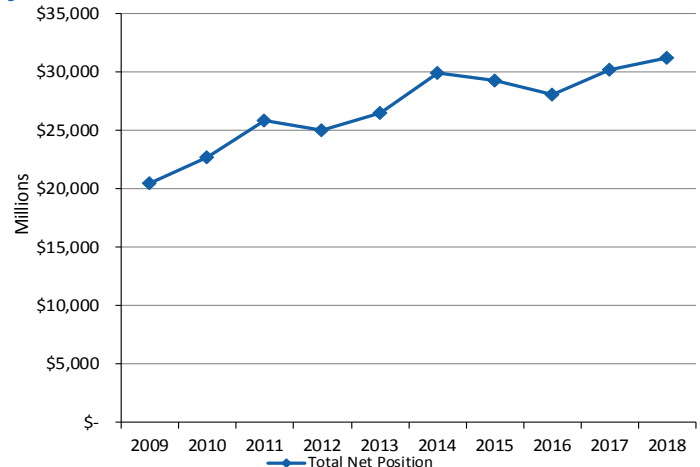
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Financial Trends Information

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.

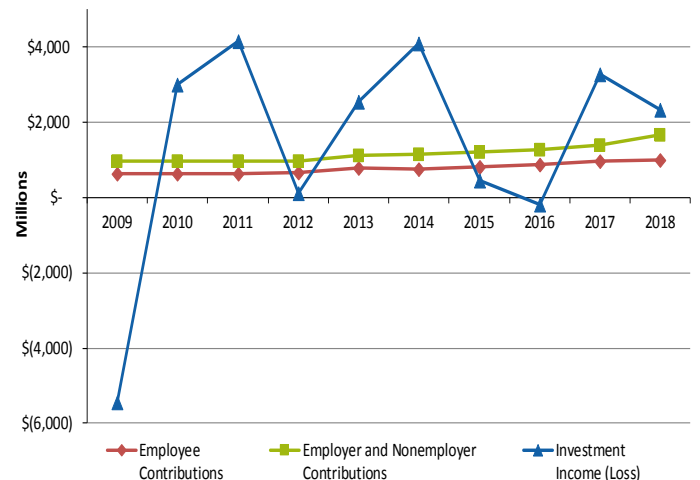
Trend of Total Fiduciary Net Position Values

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 increase in 2017 and 2018 was primarily attributable to both increased contributions and positive investment performance.



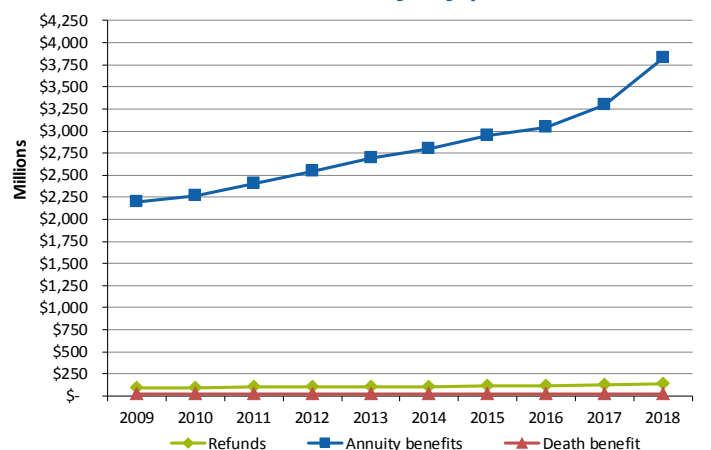
Trend of Total Pension Trust Funds Additions by Source

The overall trend in the dollar amount of employee and employer contributions has 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 effective July 1, 2017 increased the employer and employee contribution rates and established a ceiling on SCRS and PORS employee contribution rates. The General Assembly funded 1 percent of the SCRS and PORS contribution increases for fiscal year 2018 as a nonemployer contribution. 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 an increase 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 2017 and 2018.



South Carolina Retirement Systems

10 Year Summary of Fiduciary Net Position

As of June 30

(Amounts expressed in thousands)

	2018	2017	2016	2015	2014
Assets					
Cash and cash equivalents, receivables, and prepaid expenses	\$ 3,359,600	\$ 3,712,085	\$ 4,979,349	\$ 3,622,210	\$ 4,063,173
Investments, at fair value	29,243,863	27,995,164	24,790,218	27,093,961	26,754,819
Securities lending cash collateral invested	34,612	123,275	55,737	70,177	72,645
Capital assets, net of accumulated depreciation	2,362	2,537	2,741	3,005	2,912
Total assets	32,640,437	31,833,061	29,828,045	30,789,353	30,893,549
Liabilities					
Deferred retirement benefits	377,263	95,327	71,693	68,104	56,901
Obligations under securities lending	34,612	123,275	55,737	70,177	72,645
Other liabilities	1,021,458	1,397,531	1,633,962	1,345,382	836,292
Total liabilities	1,433,333	1,616,133	1,761,392	1,483,663	965,838
Net Position Restricted for Pensions	\$ 31,207,104	\$ 30,216,928	\$ 28,066,653	\$ 29,305,690	\$ 29,927,711

	2013 ¹	2012 ²	2011	2010	2009
Assets					
Cash and cash equivalents, receivables, and prepaid expenses	\$ 4,023,274	\$ 3,416,972	\$ 3,977,880	\$ 5,298,443	\$ 3,403,752
Investments, at fair value	24,587,950	23,157,144	23,870,891	18,829,568	17,915,982
Securities lending cash collateral invested	106,633	184,025	229,161	324,593	1,845,862
Capital assets, net of accumulated depreciation	3,083	2,984	3,103	3,221	3,340
Total assets	28,720,940	26,761,125	28,081,035	24,455,825	23,168,936
Liabilities					
Deferred retirement benefits	68,344	386,302	364,005	323,093	431,503
Obligations under securities lending	106,633	184,025	229,161	324,593	1,845,862
Other liabilities	1,645,150	1,211,693	1,596,020	1,116,479	399,193
Total liabilities	1,820,127	1,782,020	2,189,186	1,764,165	2,676,558
Net Position Restricted for Pensions	\$ 26,900,813	\$ 24,979,105	\$ 25,891,849	\$ 22,691,660	\$ 20,492,378

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 FY 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)

	2018	2017	2016	2015	2014
Additions					
Employee contributions	\$ 868,681	\$ 826,543	\$ 754,153	\$ 716,107	\$ 652,631
Employer contributions	1,300,477	1,168,847	1,072,659	1,022,478	962,798
Nonemployer contributions	104,974				
Net investment income (loss)	1,986,948	2,791,215	(165,394)	374,152	3,517,324
Other income	355	393	611	514	587
Total additions	4,261,435	4,786,998	1,662,029	2,113,251	5,133,340
Deductions					
Refunds	113,867	105,169	93,694	95,104	90,250
Annuity benefits	3,427,005	2,907,666	2,668,819	2,590,806	2,462,146
Death benefits	22,284	22,677	20,659	20,144	19,240
Administrative and other expenses	16,192	15,019	14,323	13,890	14,235
Total deductions	3,579,348	3,050,531	2,797,495	2,719,944	2,585,871
Net increase (decrease) in Net Position	682,087	1,736,467	(1,135,466)	(606,693)	2,547,469
Net Position Restricted for Pensions					
Beginning of year	25,732,829	23,996,362	25,131,828	25,738,521	23,191,052
End of year	<u>\$ 26,414,916</u>	<u>\$ 25,732,829</u>	<u>\$ 23,996,362</u>	<u>\$ 25,131,828</u>	<u>\$ 25,738,521</u>
	2013 ¹	2012	2011	2010	2009
Additions					
Employee contributions	\$ 674,783	\$ 586,818	\$ 562,170	\$ 561,261	\$ 564,872
Employer contributions	948,157	824,652	808,343	818,523	827,502
Net investment income (loss)	2,195,648	109,307	3,598,069	2,612,663	(4,754,668)
Other income	657	733	884	957	1,233
Total additions	3,819,245	1,521,510	4,969,466	3,993,404	(3,361,061)
Deductions					
Refunds	87,212	83,134	84,591	75,814	73,882
Annuity benefits	2,368,510	2,256,519	2,134,031	2,014,418	1,956,446
Death benefits	19,133	18,295	16,485	19,921	17,908
Administrative and other expenses	16,629	21,683	20,467	19,593	20,371
Total deductions	2,491,484	2,379,631	2,255,574	2,129,746	2,068,607
Net increase (decrease) in Net Position	1,327,761	(858,121)	2,713,892	1,863,658	(5,429,668)
Net Position Restricted for Pensions					
Beginning of year	21,863,291	22,395,029	19,681,137	17,817,479	23,247,147
End of year	<u>\$ 23,191,052</u>	<u>\$ 21,536,908</u>	<u>\$ 22,395,029</u>	<u>\$ 19,681,137</u>	<u>\$ 17,817,479</u>

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)

	2018	2017	2016	2015	2014
Additions					
Employee contributions	\$ 138,652	\$ 127,840	\$ 115,188	\$ 106,854	\$ 96,004
Employer contributions	211,793	192,006	175,223	166,451	155,608
Nonemployer contributions	13,122				
Net investment income (loss)	331,529	455,914	(24,636)	58,705	538,386
Other income	1,547	1,293	1,192	1,083	2,286
Total additions	<u>696,643</u>	<u>777,053</u>	<u>266,967</u>	<u>333,093</u>	<u>792,284</u>
Deductions					
Refunds	23,899	19,964	19,178	17,453	16,184
Annuity benefits	371,283	354,749	339,536	324,829	313,216
Death benefits	2,751	2,104	1,960	2,150	2,410
Administrative and other expenses	2,402	2,149	2,082	1,938	1,820
Total deductions	<u>400,335</u>	<u>378,966</u>	<u>362,756</u>	<u>346,370</u>	<u>333,630</u>
Net increase (decrease) in Net Position	296,308	398,087	(95,789)	(13,277)	458,654
Net Position Restricted for Pensions					
Beginning of year	4,274,123	3,876,036	3,971,825	3,985,102	3,526,448
End of year	<u>\$ 4,570,431</u>	<u>\$ 4,274,123</u>	<u>\$ 3,876,036</u>	<u>\$ 3,971,825</u>	<u>\$ 3,985,102</u>

	2013 ¹	2012	2011	2010	2009
Additions					
Employee contributions	\$ 97,164	\$ 84,470	\$ 79,334	\$ 77,051	\$ 77,014
Employer contributions	143,389	134,299	129,314	123,163	124,148
Net investment income (loss)	329,467	17,198	519,531	362,566	(638,389)
Other income	3,043	1,957	1,944	1,308	1,671
Total additions	<u>573,063</u>	<u>237,924</u>	<u>730,123</u>	<u>564,088</u>	<u>(435,556)</u>
Deductions					
Refunds	14,983	15,162	14,902	13,673	13,753
Annuity benefits	297,631	265,582	244,443	224,977	211,873
Death benefits	1,985	1,851	1,984	2,019	1,720
Administrative and other expenses	2,006	2,872	2,735	2,577	2,537
Total deductions	<u>316,605</u>	<u>285,467</u>	<u>264,064</u>	<u>243,246</u>	<u>229,883</u>
Net increase (decrease) in Net Position	256,458	(47,543)	466,059	320,842	(665,439)
Net Position Restricted for Pensions					
Beginning of year	3,269,990	3,317,533	2,851,474	2,530,632	3,196,071
End of year	<u>\$ 3,526,448</u>	<u>\$ 3,269,990</u>	<u>\$ 3,317,533</u>	<u>\$ 2,851,474</u>	<u>\$ 2,530,632</u>

¹In 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)

	2018	2017	2016	2015	2014
Additions					
Employee contributions	\$ 287	\$ 468	\$ 292	\$ 369	\$ 384
Employer contributions	5,428	4,539	4,501	4,275	4,063
Net investment income (loss)	2,376	3,329	(266)	500	4,545
Other income		19			15
Total additions	8,091	8,355	4,527	5,144	9,007
Deductions					
Refunds			22		41
Annuity benefits	6,452	6,678	6,625	6,639	6,799
Death benefits	16	59	9	21	20
Administrative and other expenses	18	17	165	36	17
Total deductions	6,486	6,754	6,821	6,696	6,877
Net increase (decrease) in Net Position	1,605	1,601	(2,294)	(1,552)	2,130
Net Position Restricted for Pensions					
Beginning of year	31,789	30,188	32,482	34,034	31,904
End of year	<u>\$ 33,394</u>	<u>\$ 31,789</u>	<u>\$ 30,188</u>	<u>\$ 32,482</u>	<u>\$ 34,034</u>
	2013 ¹	2012	2011	2010	2009
Additions					
Employee contributions	\$ 1,091	\$ 724	\$ 624	\$ 544	\$ 706
Employer contributions	2,831	2,532	2,414	2,598	2,495
Net investment income (loss)	3,111	172	5,682	4,642	(9,409)
Other income	199		1	36	84
Total additions	7,232	3,428	8,721	7,820	(6,124)
Deductions					
Refunds	3	31	57	4	33
Annuity benefits	6,720	6,570	6,528	6,512	6,416
Death benefits	16	35	58	6	14
Administrative and other expenses	20	30	179	33	116
Total deductions	6,759	6,666	6,822	6,555	6,579
Net increase (decrease) in Net Position	473	(3,238)	1,899	1,265	(12,703)
Net Position Restricted for Pensions					
Beginning of year	31,431	34,669	32,770	31,505	44,208
End of year	<u>\$ 31,904</u>	<u>\$ 31,431</u>	<u>\$ 34,669</u>	<u>\$ 32,770</u>	<u>\$ 31,505</u>

¹In 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)

	2018	2017	2016	2015	2014
Additions					
Employee contributions	\$ 3,016	\$ 2,928	\$ 2,303	\$ 3,153	\$ 2,448
Employer contributions	11,043	10,534	10,202	10,109	9,659
Net investment income (loss)	11,723	16,399	(871)	2,216	19,962
Other income		253	27	286	195
Total additions	<u>25,782</u>	<u>30,114</u>	<u>11,661</u>	<u>15,764</u>	<u>32,264</u>
Deductions					
Refunds		629	60		
Annuity benefits	17,655	17,679	16,989	16,832	16,675
Death benefits	156	293	143	4	10
Administrative and other expenses	86	79	105	71	68
Total deductions	<u>17,897</u>	<u>18,680</u>	<u>17,297</u>	<u>16,907</u>	<u>16,753</u>
Net increase (decrease) in Net Position	7,885	11,434	(5,636)	(1,143)	15,511
Net Position Restricted for Pensions					
Beginning of year	152,151	140,717	146,353	147,496	131,985
End of year	<u>\$ 160,036</u>	<u>\$ 152,151</u>	<u>\$ 140,717</u>	<u>\$ 146,353</u>	<u>\$ 147,496</u>
	2013 ¹	2012	2011	2010	2009
Additions					
Employee contributions	\$ 2,596	\$ 2,299	\$ 2,209	\$ 2,343	\$ 2,524
Employer contributions	8,667	8,414	8,414	8,414	8,414
Net investment income (loss)	12,605	783	20,092	14,646	(26,741)
Other income	184	261	193	114	83
Total additions	<u>24,052</u>	<u>11,757</u>	<u>30,908</u>	<u>25,517</u>	<u>(15,720)</u>
Deductions					
Refunds	57	134			
Annuity benefits	15,745	15,171	14,750	14,168	13,484
Death benefits	134	134	128	11	134
Administrative and other expenses	76	111	104	101	104
Total deductions	<u>16,012</u>	<u>15,550</u>	<u>14,982</u>	<u>14,280</u>	<u>13,722</u>
Net increase (decrease) in Net Position	8,040	(3,793)	15,926	11,237	(29,442)
Net Position Restricted for Pensions					
Beginning of year	123,945	127,152	111,226	99,989	129,431
End of year	<u>\$ 131,985</u>	<u>\$ 123,359</u>	<u>\$ 127,152</u>	<u>\$ 111,226</u>	<u>\$ 99,989</u>

¹In 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)

	2018	2017	2016	2015	2014
Additions					
State appropriated contributions	\$ 4,814	\$ 4,591	\$ 4,591	\$ 4,591	\$ 4,586
Net investment income (loss)	1,902	2,533	(121)	313	2,806
Other income					
Total additions	<u>6,716</u>	<u>7,124</u>	<u>4,470</u>	<u>4,904</u>	<u>7,392</u>
Deductions					
Annuity benefits	4,411	4,425	4,310	4,249	4,248
Administrative and other expenses	14	13	12	11	10
Total deductions	<u>4,425</u>	<u>4,438</u>	<u>4,322</u>	<u>4,260</u>	<u>4,258</u>
Net increase (decrease) in Net Position	2,291	2,686	148	644	3,134
Net Position Restricted for Pensions					
Beginning of year	26,036	23,350	23,202	22,558	19,424
End of year	<u>\$ 28,327</u>	<u>\$ 26,036</u>	<u>\$ 23,350</u>	<u>\$ 23,202</u>	<u>\$ 22,558</u>
	2013¹	2012	2011	2010	2009
Additions					
State appropriated contributions	\$ 4,539	\$ 3,937	\$ 3,904	\$ 4,052	\$ 4,052
Net investment income (loss)	1,671	94	2,533	1,865	(4,020)
Other income		-	-	-	-
Total additions	<u>6,210</u>	<u>4,031</u>	<u>6,437</u>	<u>5,917</u>	<u>32</u>
Deductions					
Annuity benefits	4,193	4,065	4,011	3,624	3,432
Administrative and other expenses	10	15	13	13	15
Total deductions	<u>4,203</u>	<u>4,080</u>	<u>4,024</u>	<u>3,637</u>	<u>3,447</u>
Net increase (decrease) in Net Position	2,007	(49)	2,413	2,280	(3,415)
Net Position Restricted for Pensions					
Beginning of year	17,417	17,466	15,053	12,773	16,188
End of year	<u>\$ 19,424</u>	<u>\$ 17,417</u>	<u>\$ 17,466</u>	<u>\$ 15,053</u>	<u>\$ 12,773</u>

¹In 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)					
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
2009	564,953	827,502	(4,754,668)	1,152	(3,361,061)
Police Officer's Retirement System (PORS)					
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
2009	78,018	124,769	(638,389)	46	(435,556)
General Assembly Retirement System (GARS)					
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
2009	790	2,495	(9,409)		(6,124)
Judges and Solicitors Retirement System (JSRS)					
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
2009	2,607	8,414	(26,741)		(15,720)
South Carolina National Guard Supplemental Retirement Plan (SCNG)					
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
2009		4,052	(4,020)		32

¹Includes transfers between systems. SCNG employer contributions are provided annually by a State appropriation.

²Includes 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

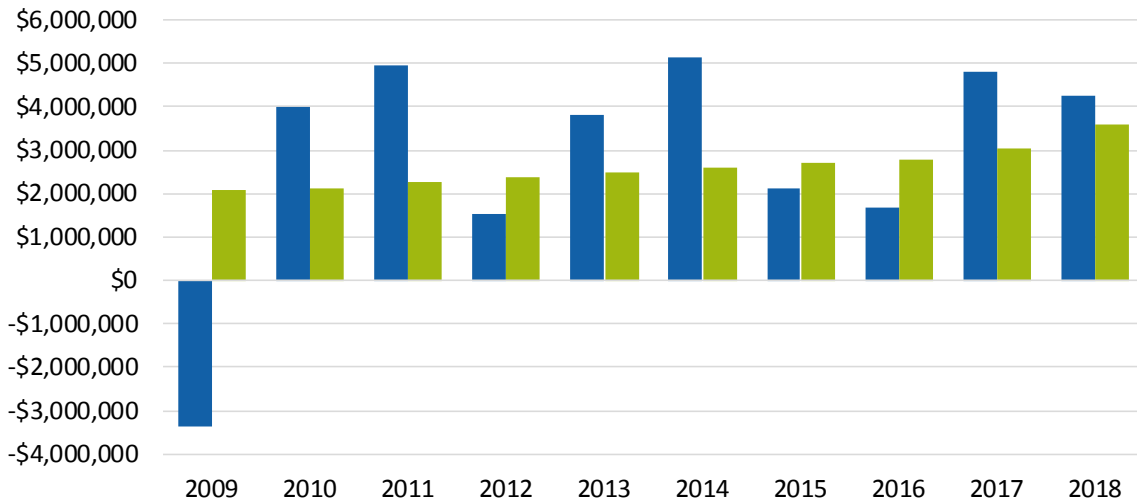
(Amounts expressed in thousands)

Year Ended June 30,	Refunds	Annuity benefits	Death benefits	Administrative and other expenses ¹	Total deductions
South Carolina Retirement System (SCRS)					
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
2009	73,882	1,956,446	17,908	20,371	2,068,607
Police Officer's Retirement System (PORS)					
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
2009	13,753	211,873	1,720	2,537	229,883
General Assembly Retirement System (GARS)					
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
2009	33	6,416	14	116	6,579
Judges and Solicitors Retirement System (JSRS)					
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
2009		13,484	134	104	13,722
South Carolina National Guard Supplemental Retirement Plan (SCNG)					
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
2009		3,432		15	3,447

¹In 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

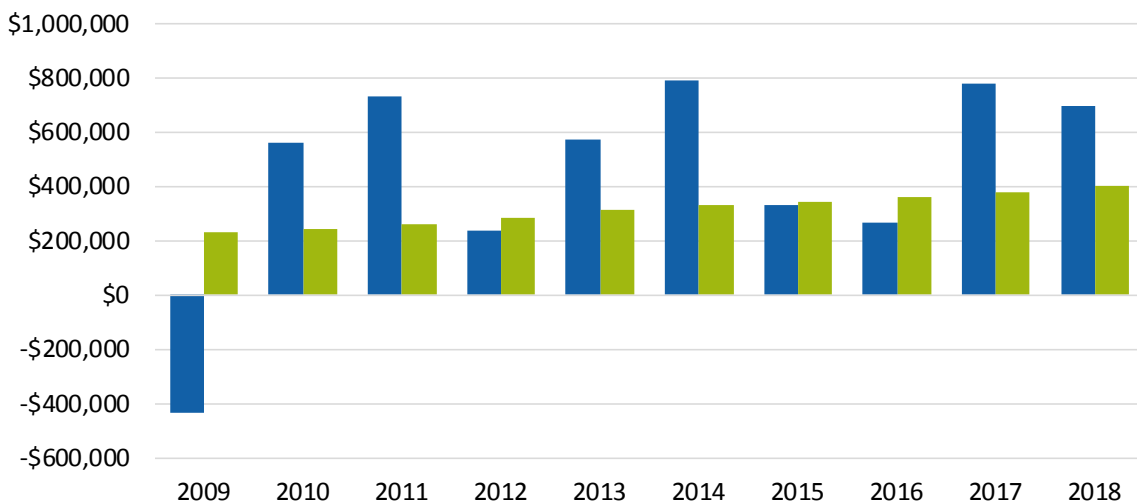
(Amounts expressed in thousands)



- Total Additions (Employee and Employer Contributions, Investment Income/Loss and Other)
- Total Deductions (Refunds, Annuity Benefits, Death Benefits & Administrative and Other Expenses)

Police Officers Retirement System Pension Trust Funds Additions and Deductions

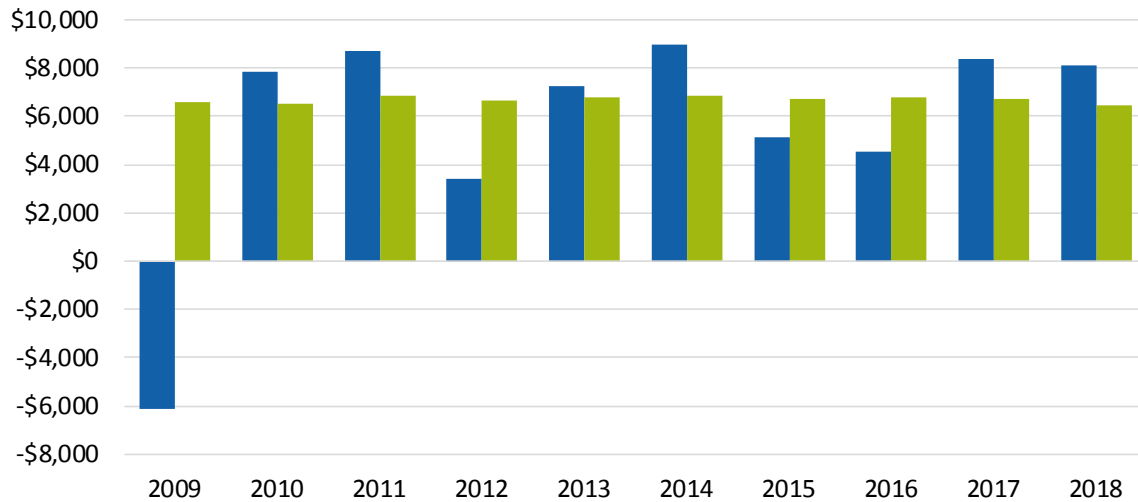
(Amounts expressed in thousands)



- Total Additions (Employee and Employer Contributions, Investment Income/Loss and Other)
- Total Deductions (Refunds, Annuity Benefits, Death Benefits & Administrative and Other Expenses)

General Assembly Retirement System Pension Trust Funds Additions and Deductions

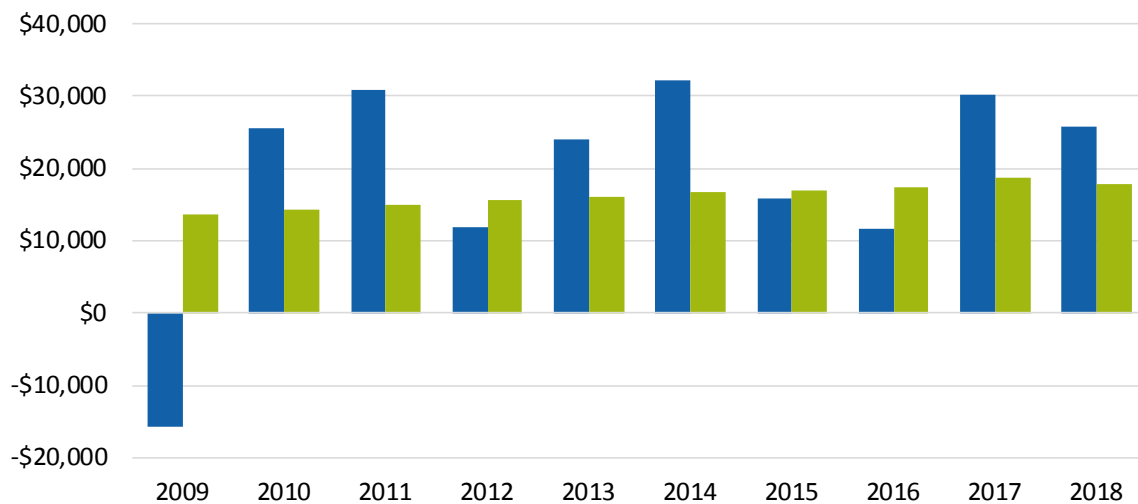
(Amounts expressed in thousands)



- Total Additions (Employee and Employer Contributions, Investment Income/Loss and Other)
- Total Deductions (Refunds, Annuity Benefits, Death Benefits & Administrative and Other Expenses)

Judges and Solicitors Retirement System Pension Trust Funds Additions and Deductions

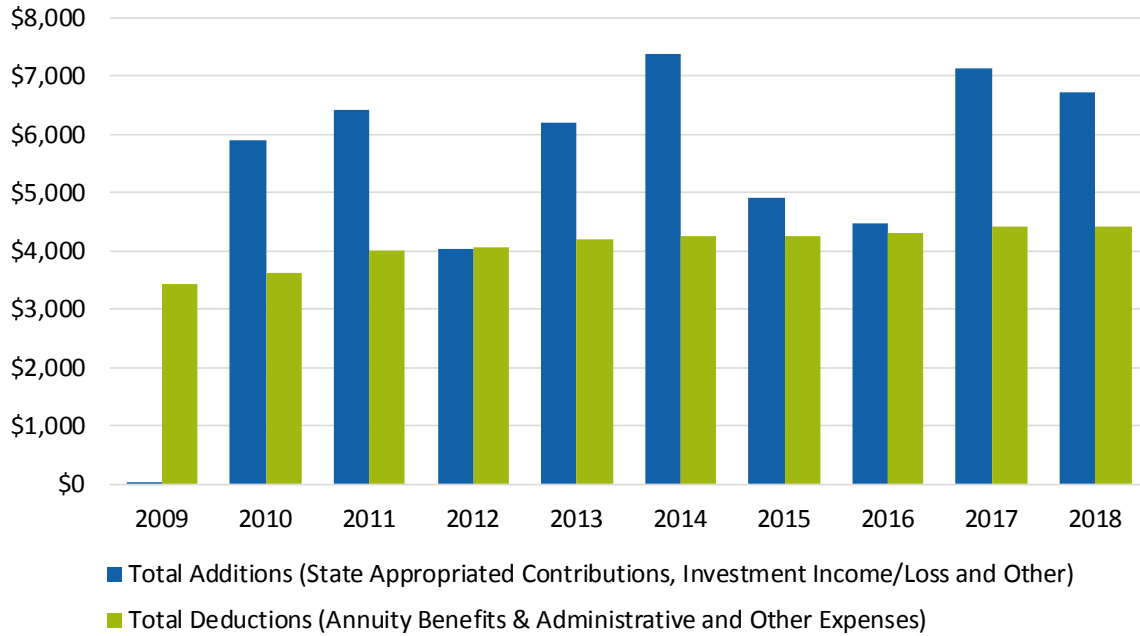
(Amounts expressed in thousands)



- Total Additions (Employee and Employer Contributions, Investment Income/Loss and Other)
- Total Deductions (Refunds, Annuity Benefits, Death Benefits & Administrative and Other Expenses)

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 June 30,	Refunds		Annuity Benefits		Death Benefits		Total							
	Member	Survivor/Other	Member	Survivor/Other	Active	Retired								
South Carolina Retirement System (SCRS)														
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
2009		68,762		5,120		1,873,998		82,448		8,063		9,845		2,048,236
Police Officer's Retirement System (PORS)														
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
2009		13,243		510		197,529		14,344		936		784		227,346
General Assembly Retirement System (GARS)														
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
2009		33				5,187		1,229				14		6,463
Judges and Solicitors Retirement System (JSRS)														
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
2009						11,668		1,816		130		4		13,618
South Carolina National Guard Supplemental Retirement Plan (SCNG)														
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
2009						3,431		1						3,432

¹In 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, 2018, more than 166,000 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, 2018

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	26,846	20,365	274	2,707	2,469	1,031	18,294	97	1,347	444	220	4,632	1,812
\$ 501 - \$1,000	26,309	18,567	758	2,028	4,213	743	18,230	85	966	360	429	4,121	2,118
\$1,001 - \$1,500	19,931	14,522	1,176	1,297	2,610	326	12,973	60	581	180	791	3,376	1,970
\$1,501 - \$2,000	16,878	13,217	1,226	804	1,487	144	10,144	51	384	159	1,233	3,032	1,875
\$2,001 - \$2,500	17,777	15,275	1,012	498	926	66	10,176	58	227	122	1,467	3,468	2,259
\$2,501 - \$3,000	16,314	14,970	475	308	535	26	11,041	43	164	92	613	2,486	1,875
\$3,001 - \$3,500	7,888	7,270	179	189	234	16	5,083	24	129	63	288	1,320	981
\$3,501 - \$4,000	4,232	3,943	75	100	108	6	2,591	8	93	41	172	730	597
\$4,001 - \$4,500	2,554	2,389	39	75	48	3	1,559	8	66	37	88	416	380
\$4,501 - \$5,000	1,460	1,372	21	39	25	3	835	6	33	26	39	293	228
Over \$5,000	2,463	2,340	29	73	20	1	1,174	11	84	68	25	610	491
Totals	142,652	114,230	5,264	8,118	12,675	2,365	92,100	451	4,074	1,592	5,365	24,484	14,586
Type 1: Normal Retirement for Age and Service						Option 0: Maximum Benefit							
Type 2: Early Retirement						Option 1: 10 Year Beneficiary Protection							
Type 3: Beneficiary Payment ²						Option 2: Survivor Benefit, Full Payment							
Type 4: Disability Payment						Option 3: Survivor Benefit, Half Payment							
Type 5: Beneficiary Payment, Disability 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, 2018

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	2,752	1,793	356	402	120	81	1,618	117	51	93	649	224
\$ 501 - \$1,000	3,273	2,121	225	408	414	105	1,973	155	56	117	649	323
\$1,001 - \$1,500	2,925	1,715	245	304	604	57	1,659	90	53	128	627	368
\$1,501 - \$2,000	2,987	1,869	256	172	667	23	1,658	65	33	223	618	390
\$2,001 - \$2,500	2,671	1,936	156	84	482	13	1,558	34	13	121	562	383
\$2,501 - \$3,000	1,803	1,407	77	49	267	3	1,100	19	15	73	342	254
\$3,001 - \$3,500	947	799	27	21	98	2	619	14	11	29	158	116
\$3,501 - \$4,000	582	509	9	8	56		394	5	6	14	75	88
\$4,001 - \$4,500	315	285	2	6	22		212	4		5	44	50
\$4,501 - \$5,000	153	145		2	6		90	1	6	3	20	33
Over \$5,000	223	214	2	3	4		152	4	4	6	14	43
Totals	18,631	12,793	1,355	1,459	2,740	284	11,033	508	248	812	3,758	2,272
Type 1: Normal Retirement for Age and Service						Option 0: Maximum Benefit						
Type 2: Early Retirement						Option 1: Survivor Benefit, Full Payment						
Type 3: Beneficiary Payment ²						Option 2: Survivor Benefit, Half Payment						
Type 4: Disability Payment						Option 3: Social Security Option						
Type 5: Beneficiary Payment, Disability Payment						Option 5: Survivor Benefit, Full Payment, Revert to Maximum						
						Option 6: Survivor Benefit, Half Payment, Revert to Maximum						

¹Monthly benefit amounts represent current payment levels for all annuitant payees receiving monthly benefits, including any applicable benefit adjustments.

²Beneficiary 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, 2018

<u>Monthly Benefit¹</u>	<u>Number of Annuitant Payees</u>	<u>Type 1</u>	<u>Type 2</u>	<u>Type 3</u>	<u>Type 4</u>	<u>Type 5</u>	<u>Opt 0</u>	<u>Opt 1</u>	<u>Opt 2</u>	<u>Opt 5</u>	<u>Opt 6</u>
\$ 1 - \$ 500	29	9	4	16			8	9	4	3	5
\$ 501 - \$1,000	64	37	4	23			20	18	5	14	7
\$1,001 - \$1,500	67	44	6	17			22	22	9	7	7
\$1,501 - \$2,000	105	72	23	10			45	29	12	13	6
\$2,001 - \$2,500	45	32	6	7			18	9	4	10	4
\$2,501 - \$3,000	24	22	1	1			10	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	346	225	45	76			130	95	36	54	31

Type 1: Normal Retirement for Age and Service

Type 2: Early Retirement

Type 3: Beneficiary Payment²

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, 2018

<u>Monthly Benefit¹</u>	<u>Number of Annuitant Payees</u>	<u>Type 1</u>	<u>Type 2</u>	<u>Type 3</u>	<u>Type 4</u>	<u>Type 5</u>	<u>Opt 0</u>	<u>Opt 1</u>
\$ 1 - \$ 500	1	1					1	
\$ 501 - \$1,000	11			11			1	10
\$1,001 - \$1,500	2			2			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	144	143		1			137	7
Totals	213	150		63			188	25

Type 1: Normal Retirement for Age and Service

Type 2: Early Retirement

Type 3: Beneficiary Payment²

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

¹Monthly benefit amounts represent current payment levels for all annuitant payees receiving monthly benefits, including any applicable benefit adjustments.

²Beneficiary 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

<u>Monthly Benefit¹</u>	<u>Number of Annuitant Payees</u>	<u>Type 1</u>	<u>Opt 0</u>
\$ 1 - \$ 500	4,831	4,831	4,831
\$ 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	4,831	4,831	4,831

Type 1: Normal Retirement for Age and Service

Option 0: Maximum Benefit

¹Monthly 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	Avg/Tot
Period 07/01/2008 to 06/30/2009								
Average Monthly benefit	\$ 185.74	\$ 367.59	\$ 618.82	\$ 946.54	\$ 1,304.08	\$ 2,165.59	\$ 2,971.67	\$ 1,462.50
Average AFC	\$ 28,729.29	\$ 30,154.09	\$ 34,626.66	\$ 38,205.49	\$ 42,049.14	\$ 53,625.28	\$ 65,133.55	\$ 44,749.97
Number of Retired members	121	786	892	689	645	2,197	451	5,781
Period 07/01/2009 to 06/30/2010								
Average Monthly benefit	\$ 208.16	\$ 383.08	\$ 645.19	\$ 981.09	\$ 1,345.57	\$ 2,221.79	\$ 2,908.79	\$ 1,486.34
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	\$ 377.33	\$ 657.18	\$ 1,010.08	\$ 1,368.85	\$ 2,283.43	\$ 2,888.47	\$ 1,444.60
Average AFC	\$ 30,617.92	\$ 31,040.25	\$ 35,794.70	\$ 40,267.14	\$ 43,960.69	\$ 56,937.57	\$ 63,063.96	\$ 45,577.18
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	\$ 383.42	\$ 676.60	\$ 1,059.95	\$ 1,360.21	\$ 2,311.98	\$ 2,875.91	\$ 1,635.75
Average AFC	\$ 33,828.02	\$ 33,027.56	\$ 37,681.65	\$ 43,536.93	\$ 44,369.67	\$ 58,054.09	\$ 62,467.71	\$ 49,130.11
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	\$ 374.95	\$ 667.56	\$ 1,018.97	\$ 1,402.10	\$ 2,306.82	\$ 2,938.70	\$ 1,669.24
Average AFC	\$ 33,386.42	\$ 33,020.07	\$ 36,764.77	\$ 41,934.39	\$ 45,275.03	\$ 57,733.13	\$ 63,666.37	\$ 49,326.26
Number of Retired members	126	1,057	1,207	937	832	3,366	1,144	8,669
Period 07/01/2013 to 06/30/2014								
Average Monthly benefit	\$ 171.12	\$ 412.55	\$ 699.74	\$ 1,043.87	\$ 1,432.54	\$ 2,189.72	\$ 3,086.94	\$ 1,468.30
Average AFC	\$ 38,671.40	\$ 37,744.27	\$ 39,396.03	\$ 43,661.58	\$ 46,499.65	\$ 55,483.20	\$ 66,547.53	\$ 48,092.13
Number of Retired members	109	965	1,050	1,004	755	2,159	533	6,575
Period 07/01/2014 to 06/30/2015								
Average Monthly benefit	\$ 99.03	\$ 348.76	\$ 623.08	\$ 948.41	\$ 1,394.21	\$ 2,172.37	\$ 2,909.44	\$ 1,375.86
Average AFC	\$ 32,198.66	\$ 35,057.45	\$ 37,785.99	\$ 41,820.87	\$ 47,728.27	\$ 55,159.49	\$ 61,603.02	\$ 46,389.11
Number of Retired members	105	906	1,030	903	784	2,018	394	6,140
Period 07/01/2015 to 06/30/2016								
Average Monthly benefit	\$ 122.68	\$ 383.20	\$ 648.33	\$ 980.84	\$ 1,432.78	\$ 2,167.54	\$ 2,844.30	\$ 1,367.47
Average AFC	\$ 34,897.45	\$ 37,247.33	\$ 39,210.50	\$ 42,880.43	\$ 48,902.80	\$ 55,035.66	\$ 60,776.04	\$ 46,985.88
Number of Retired members	77	831	1,067	987	770	1,908	329	5,969
Period 07/01/2016 to 06/30/2017								
Average Monthly benefit	\$ 114.40	\$ 364.72	\$ 643.95	\$ 989.33	\$ 1,435.13	\$ 2,235.37	\$ 2,944.60	\$ 1,403.14
Average AFC	\$ 38,072.38	\$ 36,438.01	\$ 39,404.29	\$ 43,017.24	\$ 48,644.15	\$ 56,345.60	\$ 61,725.36	\$ 47,496.84
Number of Retired members	92	767	986	853	712	1,653	401	5,464
Period 07/01/2017 to 06/30/2018								
Average Monthly benefit	\$ 110.93	\$ 366.20	\$ 678.22	\$ 1,053.87	\$ 1,479.16	\$ 2,266.76	\$ 3,058.03	\$ 1,385.90
Average AFC	\$ 33,547.27	\$ 35,983.93	\$ 41,436.38	\$ 45,249.83	\$ 50,099.61	\$ 56,822.12	\$ 64,399.02	\$ 48,074.43
Number of Retired members	80	691	1,018	862	725	1,342	337	5,055
Ten year Averages								
Average Monthly benefit	\$ 159.10	\$ 376.93	\$ 657.28	\$ 1,005.83	\$ 1,395.18	\$ 2,239.42	\$ 2,933.84	\$ 1,487.57
Average AFC	\$ 33,319.88	\$ 33,992.68	\$ 37,790.94	\$ 42,230.68	\$ 46,054.51	\$ 56,208.75	\$ 63,294.87	\$ 47,329.52
Number of Retired members	1,151	8,761	10,744	8,836	7,757	21,958	5,977	65,184

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 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	Avg/Tot
Period 07/01/2008 to 06/30/2009								
Average Monthly benefit	\$ 359.33	\$ 666.06	\$ 1,060.74	\$ 1,460.31	\$ 1,945.46	\$ 2,551.22	\$ 3,777.66	\$ 1,761.35
Average AFC	\$ 41,358.25	\$ 40,388.45	\$ 41,602.78	\$ 43,217.29	\$ 49,465.82	\$ 56,365.99	\$ 67,110.63	\$ 49,025.04
Number of Retired members	67	133	136	88	106	272	63	865
Period 07/01/2009 to 06/30/2010								
Average Monthly benefit	\$ 417.61	\$ 699.54	\$ 984.23	\$ 1,359.39	\$ 1,975.74	\$ 2,447.52	\$ 3,581.54	\$ 1,633.37
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	\$ 708.00	\$ 1,021.53	\$ 1,474.19	\$ 1,929.16	\$ 2,482.99	\$ 3,569.41	\$ 1,584.62
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	\$ 225.26	\$ 644.56	\$ 1,061.28	\$ 1,544.22	\$ 1,920.39	\$ 2,420.06	\$ 3,640.68	\$ 1,671.14
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	\$ 869.09	\$ 1,202.08	\$ 1,448.14	\$ 2,051.64	\$ 2,363.73	\$ 4,282.03	\$ 1,482.20
Average AFC	\$ 43,936.82	\$ 40,536.10	\$ 43,476.29	\$ 45,089.53	\$ 50,432.14	\$ 52,417.06	\$ 76,060.04	\$ 46,688.99
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	\$ 1,378.34	\$ 1,923.84	\$ 2,562.22	\$ 3,469.56	\$ 1,509.08
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	\$ 281.58	\$ 761.82	\$ 1,098.14	\$ 1,444.82	\$ 2,029.49	\$ 2,456.72	\$ 3,375.67	\$ 1,580.64
Average AFC	\$ 44,518.34	\$ 41,012.07	\$ 42,669.93	\$ 45,791.64	\$ 52,667.52	\$ 54,734.15	\$ 61,777.51	\$ 48,112.86
Number of Retired members	66	153	137	128	118	204	35	841
Period 07/01/2016 to 06/30/2017								
Average Monthly benefit	\$ 249.11	\$ 753.34	\$ 1,109.77	\$ 1,573.83	\$ 1,964.83	\$ 2,644.64	\$ 3,763.61	\$ 1,733.95
Average AFC	\$ 43,820.41	\$ 42,060.03	\$ 44,968.57	\$ 48,696.31	\$ 51,139.16	\$ 58,377.87	\$ 71,064.90	\$ 50,955.72
Number of Retired members	78	127	148	141	131	221	61	907
Period 07/01/2017 to 06/30/2018								
Average Monthly benefit	\$ 309.89	\$ 729.54	\$ 1,092.10	\$ 1,610.22	\$ 1,942.73	\$ 2,753.51	\$ 3,842.49	\$ 1,785.93
Average AFC	\$ 45,183.41	\$ 44,821.64	\$ 44,938.87	\$ 50,285.98	\$ 50,179.73	\$ 61,131.21	\$ 68,055.83	\$ 52,073.41
Number of Retired members	68	122	154	123	143	219	60	889
Ten year Averages								
Average Monthly benefit	\$ 289.29	\$ 725.09	\$ 1,068.11	\$ 1,472.05	\$ 1,971.48	\$ 2,511.84	\$ 3,686.52	\$ 1,662.05
Average AFC	\$ 42,780.62	\$ 40,480.04	\$ 42,448.87	\$ 45,581.47	\$ 49,875.76	\$ 56,188.49	\$ 67,151.32	\$ 48,666.83
Number of Retired members	802	1,500	1,509	1,320	1,395	2,724	448	9,698

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 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	Avg/Tot
Period 07/01/2008 to 06/30/2009								
Average Monthly benefit		\$ 683.40	\$ 971.68	\$ 1,324.67	\$ 1,738.19	\$ 2,416.04	\$ 2,590.37	\$ 1,587.90
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		2	3	4	7	2	2	20
Period 07/01/2009 to 06/30/2010								
Average Monthly benefit				\$ 1,298.78		\$ 2,476.92		\$ 1,887.50
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	\$ 1,485.73	\$ 2,008.43	\$ 1,696.83	\$ 2,202.97	\$ 1,526.80
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
Ten year Averages								
Average Monthly benefit	\$ 259.06	\$ 691.63	\$ 1,026.91	\$ 1,350.12	\$ 1,849.66	\$ 2,258.10	\$ 2,514.66	\$ 1,591.63
Average AFC	\$ 23,300.00	\$ 22,400.00	\$ 22,400.00	\$ 22,400.00	\$ 22,544.00	\$ 23,373.33	\$ 23,400.00	\$ 22,728.00
Number of Retired members	4	5	22	18	25	15	11	100

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 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	Avg/Tot
Period 07/01/2008 to 06/30/2009								
Average Monthly benefit			\$ 7,742.70		\$ 6,985.17	\$ 8,743.82	\$ 9,446.04	\$ 8,358.22
Average AFC			\$ 130,312.00		\$ 128,026.00	\$ 130,312.00	\$ 128,597.50	\$ 128,788.00
Number of Retired members			1		3	1	4	9
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	\$ 9,808.35
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
Ten year Averages								
Average Monthly benefit		\$ 2,828.74	\$ 4,899.60	\$ 7,095.02	\$ 7,633.50	\$ 8,535.96	\$ 9,841.13	\$ 8,424.03
Average AFC		\$ 141,354.00	\$ 133,261.00	\$ 131,863.40	\$ 131,868.42	\$ 134,218.00	\$ 133,536.00	\$ 133,215.18
Number of Retired members		1	4	5	19	15	28	72

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	Avg/Tot
Period 07/01/2008 to 06/30/2009								
Average Monthly benefit				\$ 50.00	\$ 60.90	\$ 90.77	\$ 100.00	\$ 73.35
Average AFC								
Number of Retired members				60	143	71	73	347
Period 07/01/2009 to 06/30/2010								
Average Monthly benefit				\$ 50.00	\$ 61.55	\$ 90.29	\$ 100.00	\$ 73.43
Average AFC								
Number of Retired members				59	135	51	80	325
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	\$ 73.43
Average AFC								
Number of Retired members				49	106	39	62	256
Period 07/01/2012 to 06/30/2013								
Average Monthly benefit				\$ 50.00	\$ 61.66	\$ 88.02	\$ 100.00	\$ 72.67
Average AFC								
Number of Retired members				49	105	48	56	258
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	\$ 62.34	\$ 90.58	\$ 100.00	\$ 76.76
Average AFC								
Number of Retired members				23	64	34	46	167
Period 07/01/2015 to 06/30/2016								
Average Monthly benefit				\$ 50.00	\$ 61.43	\$ 89.68	\$ 100.00	\$ 73.80
Average AFC								
Number of Retired members				28	87	47	38	200
Period 07/01/2016 to 06/30/2017								
Average Monthly benefit				\$ 50.00	\$ 61.72	\$ 90.31	\$ 100.00	\$ 73.59
Average AFC								
Number of Retired members				29	90	48	36	203
Period 07/01/2017 to 06/30/2018								
Average Monthly benefit				\$ 50.00	\$ 61.76	\$ 89.26	\$ 100.00	\$ 74.54
Average AFC								
Number of Retired members				27	71	34	42	174
Ten year Averages								
Average Monthly benefit				\$ 50.00	\$ 61.63	\$ 89.80	\$ 100.00	\$ 73.92
Average AFC								
Number of Retired members				397	996	465	550	2,408

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 2018 and Ten Years Prior Fiscal Year 2009

	Fiscal Year 2018					Fiscal Year 2009				
	Covered		Percentage	Total	Total	Covered		Percentage	Total	Total
<u>Participating Government</u>	<u>Employees¹</u>	<u>Rank</u>	<u>of Total</u>	<u>Active</u>	<u>Working</u>	<u>Employees¹</u>	<u>Rank</u>	<u>of Total</u>	<u>Active</u>	<u>Working</u>
			<u>System</u>	<u>Members</u>	<u>Retirees</u>			<u>System</u>	<u>Members</u>	<u>Retirees</u>
State Agency ²	33,028	1	14.09%	29,152	3,876	36,286	1	15.87%	31,428	4,858
School District of Greenville County	9,066	2	3.86%	7,899	1,167	9,339	2	4.08%	8,012	1,327
Horry County School District	6,281	3	2.68%	5,774	507	5,004	6	2.18%	4,521	483
Lexington Medical Center	6,151	4	2.62%	5,947	204	3,913	9	1.71%	3,774	139
University of South Carolina	5,829	5	2.48%	4,953	876	5,355	4	2.34%	4,386	969
MUSC Hospital	5,221	6	2.22%	4,926	295	4,786	7	2.09%	4,556	230
Charleston County School District	5,139	7	2.19%	4,685	454	5,603	3	2.45%	4,904	699
Richland County School District 1	4,357	8	1.85%	3,693	664	4,439	8	1.94%	3,675	764
Spartanburg Regional Medical Center	4,208	9	1.79%	3,896	312	5,122	5	2.24%	4,887	235
Berkeley County Department of Education	4,172	10	1.78%	3,777	395	3,828	10	1.67%	3,363	465
 All Other	 150,889		 64.44%	 135,032	 15,857	 144,894		 63.43%	 128,003	 16,891
Total ³	234,341		100.00%	209,734	24,607	228,569		100.00%	201,509	27,060

In 2018, "All Other" consisted of:

<u>Type</u>	<u>Number</u>	<u>Employees</u>
Higher Ed/Quasi-State	31	19,803
City/County	575	56,091
Public Schools	112	74,995
Total	718	150,889

In 2009, "All Other" consisted of:

<u>Type</u>	<u>Number</u>	<u>Employees</u>
Higher Ed/Quasi-State	31	18,549
City/County	580	52,025
Public Schools	105	74,320
Total	716	144,894

¹Employers 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 TERI participants.

²Although 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.

³Fiscal Year 2018 total includes 728 governmental entities and fiscal year 2009 total includes 726 governmental entities.

Police Officers Retirement System

Principal Participating Employers in Fiscal Year 2018 and Ten Years Prior Fiscal Year 2009

	Fiscal Year 2018					Fiscal Year 2009				
	Covered		Percentage	Total	Total	Covered		Percentage	Total	Total
<u>Participating Government</u>	<u>Employees¹</u>	<u>Rank</u>	<u>of Total</u>	<u>Active</u>	<u>Working</u>	<u>Employees¹</u>	<u>Rank</u>	<u>of Total</u>	<u>Active</u>	<u>Working</u>
			<u>System</u>	<u>Members</u>	<u>Retirees</u>			<u>System</u>	<u>Members</u>	<u>Retirees</u>
State Agency ²	10,365	1	4.42%	9,561	804	11,124	1	36.19%	10,312	812
Horry County Council	999	2	0.42%	922	77	834	4	2.71%	808	26
County Council of Richland County	991	3	0.42%	831	160	964	2	3.13%	846	118
City of Columbia	897	4	0.38%	842	55	853	3	2.77%	792	61
Greenville County Council	891	5	0.38%	770	121	805	5	2.61%	712	93
City of Charleston	799	6	0.34%	768	31	719	7	2.33%	664	55
County of Charleston	733	7	0.31%	619	114	736	6	2.39%	644	92
County of Lexington	714	8	0.30%	639	75	556	8	1.80%	494	62
City of North Charleston	627	9	0.26%	603	24	555	9	1.80%	535	20
Spartanburg County Council	578	10	0.24%	462	116	523	10	1.70%	449	74
All Other	15,170		92.53%	13,246	1,924	13,066		42.57%	11,719	1,347
Total ³	32,764		100.00%	29,263	3,501	30,735		100.00%	27,975	2,760

In 2018, "All Other" consisted of:

<u>Type</u>	<u>Number</u>	<u>Employees</u>
Higher Ed/Quasi-State	30	652
City/County	322	14,322
Public Schools	58	196
Total	410	15,170

In 2009, "All Other" consisted of:

<u>Type</u>	<u>Number</u>	<u>Employees</u>
Higher Ed/Quasi-State	25	542
City/County	298	12,402
Public Schools	46	122
Total	369	13,066

¹Employers 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.

²Although 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.

³Fiscal Year 2018 total includes 420 governmental entities and fiscal year 2009 total includes 379 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 effective July 1, 2018 for both SCRS and PORS by 1 percentage point to 14.56 percent and 17.24 percent, respectively. Employer contribution rates are scheduled to 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.

Pension reform legislation also authorized 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 legislation set rates sufficient 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 legislation, 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
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
2009	6.50%	6.50%	10.00%	10.00%	N/A

¹The 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 Rates¹

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
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%
2009	9.240%	0.15%	10.650%	0.20%	0.20%	45.09%

¹This 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.

²For 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.

³The 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. State agencies, institutions of higher education, and public school districts are covered by South Carolina State Statute. The list of participating employers includes employers covered by separate agreement. This list includes employers for which contributions were reported during the fiscal year ending June 30, 2018.

Participating Employers

As of June 30, 2018

Participating Employers Covered by Statute	<u>SCRS</u>	<u>PORS</u>
State Agencies/Quasi-State & Institutions of Higher Education	34	31
Public School Districts	117	58
Participating Employers Covered by Separate Agreement	577	331
<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
ABBEVILLE COUNTY COUNCIL	Y	Y
AIKEN BAMBERG BRNWELL EDGEFLD REG LIB BD	Y	
AIKEN COUNTY COMM ON ALCOHOL&DRUG ABUSE	Y	Y
ALLENDAL COUNTY COUNCIL	Y	Y
ALLENDAL COUNTY OFFICE ON AGING	Y	
ALLENDAL HAMPTON JASPER REG LIBRARY	Y	
ALLENDAL-BARNWELL DIS & SPEC NEEDS BD	Y	
ALLIGATOR RURAL WATER & SEWER CO	Y	
ANDERSON CO COMM ON ALCOHOL & DRUG ABUSE	Y	
ANDERSON CO COUNCIL-FINANCE OFFICE	Y	Y
ANDERSON CO DISABILITIES & SPEC NEEDS BD	Y	
ANDERSON CO 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 CO DISBILITIES & SPEC NEEDS BD	Y	
BAMBERG COUNTY COUNCIL	Y	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 DIST	Y	
BEAUFORT-JASPER CO WATER AUTHORITY	Y	
BEECH ISLAND RURAL COMMUNITY WATER DIST	Y	
BELMONT FIRE & SANITATION DIST COMM	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 GOVT-ATTN:FINANCE DEPT	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

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
BOILING SPRINGS FIRE DISTRICT	Y	Y
BROADWAY WATER AND SEWER DISTRICT	Y	
BROWNS CREEK WATER COMPANY, INC.	Y	Y
BUCKSPORT WATER SYSTEM, INC.	Y	
BURTON CTR FOR DIS & SPC ND	Y	Y
BURTON FIRE DISTRICT	Y	Y
CALHOUN CO DISABILITIES & SPEC NEEDS BD	Y	
CALHOUN COUNTY COUNCIL	Y	Y
CALHOUN COUNTY COUNCIL ON AGING	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 AUTHOR	Y	
CHARLESTON AREA TRANSPORTATION AUTHORITY	Y	
CHARLESTON CO HOUSING & REDEV AUTHORITY	Y	
CHARLESTON CO HUMAN SERVICES DBA PALMETTO COMMUNITY ACTION	Y	
CHARLESTON CO PARK AND RECREATION COMM	Y	
CHARLESTON COMMISSIONERS OF PUBLIC WORKS	Y	Y
CHARLESTON COUNTY AIRPORT DISTRICT	Y	Y
CHARLESTON COUNTY LIBRARY	Y	
CHARLESTON NAVAL COMPLEX REDEVELOPMENT	Y	
CHEROKEE CO COMM ON ALCOHOL & DRUG ABUSE	Y	
CHEROKEE CO DISABILITIES & SPEC NEEDS BD	Y	
CHEROKEE COUNTY COUNCIL	Y	Y
CHEROKEE COUNTY DEVELOPMENT BOARD	Y	
CHEROKEE COUNTY PUBLIC LIBRARY	Y	
CHEROKEE COUNTY RECREATION DIST	Y	
CHEROKEE SPRINGS FIRE DISTRICT		Y
CHESCO SERVICES	Y	Y
CHESTER CO BD OF DIRECTORS	Y	Y
CHESTER CO HOSPITAL & NURSING CTR., INC.	Y	
CHESTER COUNTY LIBRARY	Y	
CHESTER METRO DISTRICT	Y	
CHESTER SEWER DISTRICT	Y	
CHESTER/LANCASTER CO DSN BOARD, INC.	Y	
CHESTERFIELD CO RURAL WATER CO INC	Y	Y
CHESTERFIELD COUNTY COUNCIL	Y	Y
CHESTERFIELD SOIL & WATER CONS 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

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
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
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

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
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
CITY OF WEST COLUMBIA	Y	Y
CITY OF WOODRUFF	Y	Y
CITY OF YORK	Y	Y
CLARENDON CO COMM ON ALCOHOL & DRUG ABUS	Y	
CLARENDON CO DISB & SPECIAL NEEDS BOARD	Y	Y
CLARENDON COUNTY	Y	Y
CLEAR SPRING FIRE-RESCUE	Y	Y
CLINTON NEWBERRY NATURAL GAS AUTHORITY	Y	Y
COLLETON CO DISABILITIES & SPEC NEED BD	Y	
COLUMBIA HOUSING AUTHORITY	Y	
COLUMBIA MUSEUM OF ART	Y	
COMBINED UTILITY SYSTEM	Y	
COMM OF PUBLIC WORKS MUNICIPAL UTILITIES	Y	
COMMISSION ON PUBLIC WORKS	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 COMM OF YORK COUNTY	Y	Y
DARLINGTON CO COMMUNITY ACTION AGENCY	Y	
DARLINGTON CO DISAB & SPECIAL NEEDS BD	Y	Y
DARLINGTON CO SOIL & WATER CONS DISTRICT	Y	
DARLINGTON CO WATER & SEWER COMMISSION	Y	
DARLINGTON COUNTY COUNCIL	Y	Y
DARLINGTON COUNTY COUNCIL ON AGING	Y	
DARLINGTON COURT LIBRARY COMM	Y	
DAUFUSKIE ISLAND FIRE DISTRICT		Y
DILLON COUNTY COUNCIL	Y	Y
DILLON SOIL & WATER CONSERVATION DIST	Y	
DONALDS-DUE WEST WATER & SEWER AUTHORITY	Y	
DONALDSON FIRE SERVICE AREA	Y	

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
DORCHESTER CO BD OF DIS & SPECIAL NEEDS	Y	
DORCHESTER CO COMM ON ALCOHOL&DRUG ABUSE	Y	
DORCHESTER COUNTY LIBRARY	Y	
DORCHESTER COUNTY WATER AUTHORITY	Y	
DORCHESTER SENIORS, INC	Y	
DUNCAN CHAPEL FIRE DISTRICT	Y	
EASLEY CENTRAL WATER DISTRICT	Y	
EAST RICHLAND CO PUBLIC SERVICE DIST	Y	
EDGEFIELD COUNTY COUNCIL	Y	Y
EDGEFIELD COUNTY WATER & SEWER AUTHORITY	Y	
ELLOREE COMMISSION OF PUBLIC WORKS	Y	
FAIRFIELD CO DISAB & SPECIAL NEEDS BD	Y	Y
FAIRFIELD CO SUBSTANCE ABUSE COMMISSION	Y	
FAIRFIELD COUNTY COUNCIL	Y	Y
FAIRFIELD COUNTY COUNCIL ON AGING	Y	
FAIRFIELD COUNTY LIBRARY	Y	
FAIRFIELD MEMORIAL HOSPITAL	Y	
FLINT HILL FIRE DISTRICT		Y
FLORENCE CO COMM ON ALCOHOL & DRUG ABUSE	Y	
FLORENCE CO DISABILITIES & SPEC NEEDS BD	Y	Y
FLORENCE COUNTY COUNCIL	Y	Y
FLORENCE REGIONAL AIRPORT	Y	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 CO ALCOHOL & DRUG ABUSE COMM	Y	
GEORGETOWN CO DISAB & SPECIAL NEED BD	Y	
GEORGETOWN COUNTY COUNCIL	Y	Y
GEORGETOWN COUNTY WATER AND SEWER DIST	Y	
GEORGETOWN SOIL & WATER CONSERVATION DIS	Y	
GILBERT-SUMMIT RURAL WATER DISTRICT	Y	
GLASSY MOUNTAIN FIRE SERVICE AREA	Y	Y
GLEAMNS HUMAN RESOURCES COMMISSION	Y	
GLENDAL FIRE DEPARTMENT	Y	
GLENN SPRINGS-PAULINE FIRE DEPT		Y
GRAND STRAND WATER & SEWER AUTHORITY	Y	
GRASSY POND WATER CO.INC.	Y	
GREATER GREENVILLE SANITATION COMM	Y	
GREENVILLE AIRPORT COMMISSION	Y	
GREENVILLE AREA DEVELOPMENT CORPORATION	Y	
GREENVILLE CO COM ON ALCOHOL-DRUG ABUSE	Y	
GREENVILLE CO DISAB & SPECIAL NEEDS BD	Y	Y
GREENVILLE CO MUSEUM COMMISSION	Y	
GREENVILLE COMM OF PUBLIC WORKS	Y	
GREENVILLE COUNTY COUNCIL	Y	Y

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
GREENVILLE COUNTY LIBRARY	Y	Y
GREENVILLE REDEVELOPMENT AUTHORITY	Y	
GREENVILLE-SPARTANBURG AIRPORT DISTRICT	Y	Y
GREENWOOD CO COUNCIL-ADM & FIN OFFICE	Y	Y
GREENWOOD COMM OF PUBLIC WORKS	Y	
GREENWOOD COUNTY LIBRARY	Y	
GREENWOOD METROPOLITAN DISTRICT COMM	Y	
GREENWOOD SOIL & WATER CONSERVATON DIST	Y	
GREER COMMISSION OF PUBLIC WORKS	Y	Y
GREER DEVELOPMENT CORP	Y	
HAMPTON CO DISABILITIES & SPEC NEEDS BD	Y	Y
HARTSVILLE COMMUNITY CENTER BLDG COMM	Y	
HARVIN CLARENDON COUNTY LIBRARY	Y	
HAZEL PITTMAN CENTER	Y	
HIGH HILLS RURAL WATER CO., INC.	Y	
HILLTOP FIRE DISTRICT		Y
HILTON HEAD NO 1 PUBLIC SERVICE DISTRICT	Y	
HOLLY SPRINGS FIRE-RESCUE DISTRICT		Y
HOMELAND PARK WATER DISTRICT	Y	
HORRY CO COUNCIL	Y	Y
HORRY CO DISABILITIES & SPECIAL NEEDS BD	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	
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 CHAS	Y	
HOUSING AUTHORITY OF THE CITY OF SPARTANBURG	Y	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 DIST COMM	Y	Y

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
JASPER CO BD OF DIS & SPECIAL NEEDS	Y	
JASPER COUNTY COUNCIL	Y	Y
JOHNSONVILLE FIRE DEPARTMENT	Y	Y
JOINT MUNICIPAL WATER & SEWER COMMISSION	Y	
KEOWEE FIRE TAX DISTRICT		Y
KERSHAW CO BD DOF DIS & SPECIAL NEEDS	Y	
KERSHAW CO COMM ON ALCOHOL & DRUG ABUSE	Y	
KERSHAW COUNTY COUNCIL	Y	Y
KINGSTREE HOUSING AUTHORITY	Y	
LADYS ISLAND - ST HELENA FIRE DISTRICT	Y	Y
LAKE CITY HOUSING AUTHORITY	Y	
LAKE CUNNINGHAM FIRE DISTRICT	Y	Y
LANCASTER CO COMM ON ALCOHOL&DRUG ABUSE	Y	
LANCASTER CO WATER & SEWER DISTRICT	Y	
LANCASTER COUNTY COUNCIL	Y	Y
LANCASTER COUNTY COUNCIL ON AGING	Y	
LANCASTER COUNTY NATURAL GAS AUTHORITY	Y	
LANCASTER SOIL & WATER CONSERVATION DIST	Y	
LAURENS CO DISABILITIES & SPEC NEEDS BD	Y	
LAURENS COMMISSIONERS OF PUBLIC WORKS	Y	
LAURENS COUNTY DEVELOPMENT CORPORATION	Y	
LAURENS COUNTY WATER & SEWER COMMISSION	Y	
LEE CO DISABILITIES & SPECIAL NEEDS BD	Y	
LEE COUNTY COUNCIL	Y	Y
LEXINGTON MEDICAL CENTER	Y	Y
LEX-RICH ALCOHOL & DRUG ABUSE COUNCIL	Y	Y
LIBERTY-CHESNEE-FINGERVILLE WATER DIST	Y	
LITTLE RIVER WATER & SEWER CO., INC	Y	
LOWCOUNTRY COUNCIL OF GOVERNMENTS	Y	
LOWCOUNTRY REGIONAL EMS COUNCIL	Y	
LOWCOUNTRY REGIONAL TRANSPORTATION AUTH	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 CO., INC.	Y	
MARION CO COM ON ALCOHOL & DRUG ABUSE	Y	
MARION COUNTY COUNCIL	Y	Y
MARION COUNTY LIBRARY	Y	
MARION-DILLON CO DISAB & SPEC NEEDS BD	Y	
MARLBORO CO DISABILITIES & SPEC NEEDS BD	Y	
MARLBORO WATER COMPANY	Y	
MCCORMICK COMM 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	

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
MONCKS CORNER WATER WORKS COMMISSION	Y	
MT PLEASANT WATER & SEWER COMM	Y	
MUNICIPAL ASSOCIATION OF SOUTH CAROLINA	Y	
MURRELLS INLET-GARDEN CITY FIRE DIST	Y	Y
N SPARTANBURG AREA FIRE & RESCUE DIST	Y	
NEW ELLENTON COMM OF PUBLIC WORKS	Y	
NEW LIFE CENTER	Y	
NEWBERRY CO DISABILITIES & SP ND BD	Y	Y
NEWBERRY CO WATER AND SEWER AUTHORITY	Y	
NEWBERRY COUNTY LIBRARY	Y	
NORTH CHARLESTON SEWER DISTRICT	Y	
NORTH GREENVILLE FIRE DISTRICT		Y
OCONEE COUNTY	Y	Y
OCONEE DISABILITIES & SPEC NEEDS BD	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 CO DISAB & SPECIAL NEEDS BD	Y	Y
ORANGEBURG COUNTY COUNCIL	Y	Y
ORANGEBURG DEPT OF PUBLIC UTILITIES	Y	
PALMETTO STATE TEACHERS ASSOCIATION	Y	
PARKER SEWER & FIRE SUBDISTRICT	Y	Y
PEE DEE REGIONAL COUNCIL OF GOVERNMENTS	Y	
PEE DEE REGIONAL EMS, INC	Y	
PEE DEE REGIONAL TRANSPORTATION AUTH	Y	Y
PELHAM BATESVILLE FIRE DEPARTMENT	Y	Y
PENDLETON DIS HISTORICAL & REC COMM	Y	
PICKENS CO COMM ON ALCOHOL & DRUG ABUSE	Y	
PICKENS CO DISABILITIES & SPEC NEEDS BD	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	
REC DIST & REC COMM OF RICHLAND COUNTY	Y	Y
RECREATION DIST LEXINGTON CO	Y	Y
REIDVILLE FIRE DISTRICT		Y
RENEWABLE WATER RESOURCES(RE-WA)	Y	
RICH/LEX CO DISAB & SPECIAL NEEDS BD	Y	
RICHLAND COUNTY PUBLIC LIBRARY	Y	Y
RICHLAND LEXINGTON AIRPORT DISTRICT	Y	Y
RICHLAND MEMORIAL/PALMETTO HEALTH	Y	
RIVERBANKS PARK COMMISSION	Y	
ROCKY CREEK WATER COMPANY, INC.	Y	
ROEBUCK FIRE DEPARTMENT		Y

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
RUBICON	Y	
RURAL COMM WATER DIST OF GEORGETOWN CO	Y	
S C EDUCATION ASSN	Y	
S C HIGH SCHOOL LEAGUE	Y	
S C STATE EMPLOYEES' ASSOCIATION	Y	
SALUDA COMMISSION OF PUBLIC WORKS	Y	
SALUDA COUNTY COUNCIL	Y	Y
SALUDA COUNTY WATER & SEWER AUTHORITY	Y	
SANDY SPRINGS WATER COMPANY	Y	
SANTÉE COOPER COUNTIES PROMOTION COMM	Y	
SANTÉE FIRE SERVICE DISTRICT	Y	Y
SANTÉE-LYNCHES COUNCIL FOR GOVERNMENTS	Y	
SANTÉE-WATEREE REG TRANSPORTATION AUTH	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 LAW ENFORCEMENT OFFICERS ASSOCIATION	Y	
SC MIDLANDS EMER MED SER MGM ASSOC	Y	
SC STATE CREDIT UNION	Y	
SC STATE FIREMENS ASSOCIATION	Y	
SHELDON FIRE DISTRICT	Y	Y
SHORELINE BEHAVIORAL HEALTH SERVICES	Y	
SIX MILE RURAL WATER DISTRICT	Y	
SLATER-MARIETTA FIRE DEPT		Y
SOUTH CAROLINA SHERIFFS' ASSOCIATION	Y	
SOUTH CAROLINA TECHNOLOGY & AVIATION CTR	Y	
SOUTH GREENVILLE AREA FIRE DISTRICT	Y	Y
SOUTH ISLAND PUBLIC SERVICE DISTRICT	Y	
SOUTH LYNCHES FIRE DEPARTMENT		Y
SOUTHSIDE RURAL COMMUNITY WATER DIST	Y	
SPARTANBURG COMRS OF PUBLIC WORK	Y	Y
SPARTANBURG COUNTY COUNCIL	Y	Y
SPARTANBURG PUBLIC LIBRARY	Y	Y
SPARTANBURG REGIONAL MEDICAL CENTER	Y	Y
SPARTANBURG SANITARY SEWER DIST	Y	
ST ANDREWS PARISH PARKS & PLAYGROUNDS	Y	
ST ANDREWS PUBLIC SERVICE DIST COMM	Y	
ST GEORGE WATER AND SEWER DEPARTMENT	Y	
ST JOHNS FIRE DISTRICT	Y	Y
ST PAULS FIRE DISTRICT	Y	Y
STARR-IVA WATER COMPANY	Y	
STARTEX JACKSON WELLFD DUNCAN WATER DIST	Y	
SUMTER CO COM ON ALCOHOL & DRUG ABUSE	Y	
SUMTER CO DISABILITIES & SPEC NEEDS BD	Y	Y
SUMTER CONSERVATION DISTRICT	Y	
SUMTER COUNTY COUNCIL	Y	Y

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
SUMTER COUNTY LIBRARY	Y	
TAYLORS FIRE AND SEWER DISTRICT	Y	Y
THE ERNEST E KENNEDY CENTER	Y	
THE PEE DEE TOURISM COMMISSION	Y	
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

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
TOWN OF ESTILL	Y	Y
TOWN OF EUTAWVILLE	Y	Y
TOWN OF FAIRFAX	Y	Y
TOWN OF FORT LAWN	Y	Y
TOWN OF FORT MILL	Y	Y
TOWN OF GASTON	Y	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	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	
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	
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 MONCK'S CORNER	Y	Y
TOWN OF MONETTA	Y	
TOWN OF MT PLEASANT	Y	Y

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
TOWN OF MT. CROGHAN	Y	
TOWN OF NICHOLS	Y	Y
TOWN OF NINETY-SIX	Y	Y
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 PINESWOOD	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 RUBY	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 SULLIVANS ISLAND	Y	Y
TOWN OF SUMMERTON	Y	Y
TOWN OF SUMMERVILLE	Y	Y
TOWN OF SURFSIDE BEACH	Y	Y
TOWN OF SWANSEA	Y	Y

<u>Name</u>	<u>SCRS</u>	<u>PORS</u>
TOWN OF TIMMONSVILLE	Y	Y
TOWN OF TRENTON	Y	Y
TOWN OF TURBEVILLE	Y	Y
TOWN OF VARNVILLE	Y	Y
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 COMM ON ALCOHOL & DRUG ABUSE	Y	
TRI-COUNTY SOLID WASTE AUTHORITY	Y	
TYGER RIVER FIRE DISTRICT	Y	Y
UNA FIRE DEPARTMENT		Y
UNION CO DISABILITIES & SPECIAL NEEDS BD	Y	
UNION COUNTY CARNEGIE LIBRARY	Y	
UNION COUNTY COUNCIL OF AGING	Y	
UNION COUNTY DEVELOPMENT 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 AUTH	Y	
WADE HAMPTON FIRE & SEWER DISTRICT	Y	Y
WEST FLORENCE RURAL VOLUNTEER FIRE DIST		Y
WESTVIEW BEHAVIORAL HEALTH SERVICES	Y	
WESTVIEW-FAIRFOREST FIRE DEPARTMENT	Y	Y
WHITESVILLE RURAL VOL FIRE DEPT		Y
WHITMIRE COMM OF PUBLIC WORKS	Y	
WHITNEY AREA FIRE DEPT		Y
WILLIAMSBURG CO DISAB & SPECIAL NEEDS BD	Y	
WILLIAMSBURG COUNTY COUNCIL	Y	Y
WILLIAMSBURG COUNTY LIBRARY	Y	
WINDY HILL VOLUNTEER FIRE COMPANY		Y
WOODRUFF ROEBUCK WATER DISTRICT	Y	
YORK CO CONVENTION & VISITORS BUREAU	Y	
YORK CO DISABILITIES & SPECIAL NEEDS BD	Y	
YORK COUNTY	Y	Y
YORK COUNTY COUNCIL ON AGING	Y	
YORK COUNTY LIBRARY	Y	
YORK SOIL & WATER CONSERVATION DIST	Y	

This page contains no other content.



202 Arbor Lake Drive
Columbia, SC 29223

803.737.6800 | 888.260.9430
www.peba.sc.gov