

2014

# Comprehensive Annual Financial Report

For the fiscal year ended December 31, 2014

Commonwealth of Pennsylvania  
State Employees' Retirement System

A Component Unit of the Commonwealth of Pennsylvania



2014

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State Employees' Retirement System

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Prepared by the staff of the  
Pennsylvania State Employees' Retirement System

**David E. Durbin**

Executive Director

**Anthony J. Faiola**

Chief Financial Officer

**State Employees' Retirement System**

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June 1, 2015

The Honorable Tom Wolf  
Governor, Commonwealth of Pennsylvania

The Honorable Senators and Representatives  
Pennsylvania General Assembly

The Esteemed Current and Retired Commonwealth Employees

Dear Governor Wolf, Senators, Representatives, and SERS Members,

The Pennsylvania State Employees' Retirement System (SERS) is pleased to provide you with SERS calendar year 2014 Comprehensive Annual Financial Report (CAFR). I hope you will find this financial, investment, actuarial, and statistical material to be both interesting and useful.

Each year, SERS produces a CAFR to provide the governor, legislature, system members and annuitants, as well the general public with a clear accounting of its operations and financial position. This is part of our commitment to ensure accurate, meaningful information to policymakers and SERS members, as well as provide context for our independently audited financial statements, which are required to be published on or before July 1 of each year.

As of December 31, 2014, SERS had approximately \$27.3 billion after paying out nearly \$3 billion in retirement benefits to more than 122,000 retirees and beneficiaries. We remain strong, deliberate, and prudent in our investment strategies. In the past five years, we have reduced our investment fees and expenses by more than 30% and continue to strive for the best value from the organizations that manage our portfolios.

Among other details you will find are that SERS currently serves approximately 234,000 active and retired members, and that our average retiree who worked to full retirement age was about 72 years old and received more than \$26,000 in annual pension payments in 2014. Additionally, SERS plays a significant part in the state economy, delivering approximately 90% of its benefit payments to Pennsylvania residents.

At the Act 2010-120 collared rates, SERS received approximately \$1.1 billion from participating employers during 2014. Employee contributions accounted for approximately \$366 million.

This year's report also confirms that the funds entrusted to SERS continue to be carefully managed. Despite volatility in the global markets, SERS was able to earn nearly \$1.5 billion through investment earnings net of all fees and expenses. While the system's 6.4% return fell short of the 7.5% assumed long-term rate of return, taxpayers and policy makers can remain confident that rigorous control and oversight are exercised in the administration of these public funds. Active and retired SERS members can be reassured that their retirement system is well managed.

SERS' funding calculation has recognized all of the investment losses suffered in the 2008 capital markets decline and is currently smoothing in net gains earned over the subsequent five years. This, combined with the increases in employer contribution rates set forth in Act 2010-120, continues to address the unfunded liability.

We recognize that the increasing pension burden on public funds is significant and present fiscal challenges for the commonwealth. We are also committed to working with the legislature, the administration, and employers to address pension-related issues and develop approaches to solving them. The SERS Fund is beginning to see the benefits of all of that hard work. Within the next two years, the commonwealth's required employer contributions will peak and begin a slow, steady decline while, at the same time continuing to improve the health of the SERS Fund.

SERS professionals are hard at work every day to serve commonwealth employees and retirees. Retirement counselors, investment professionals, auditors, accountants, information technology professionals, and others strive to provide careful stewardship of public dollars and exceptional service to those who have dedicated their careers to the citizens of Pennsylvania. We have improved our retirement processing timeframes; fully divested from scrutinized companies doing business in Iran and Sudan; earned over \$11 billion on our investments and reduced investment fees by nearly 30% over the past five years; and maintained recognition from the Government Finance Officers Association with a Certificate of Achievement for Excellence in Financial Reporting.

Thank you for your interest in the State Employees' Retirement System. The SERS Board and SERS professionals will continue to administer the system with tenacity and integrity.

Respectfully,



Glenn E. Becker  
Chairman of the Board

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Government Finance Officers Association

**Certificate of  
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Presented to

**Commonwealth of Pennsylvania  
State Employees' Retirement System**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**December 31, 2013**



Public Pension Coordinating Council

***Public Pension Standards Award  
For Funding and Administration  
2014***

Presented to

***Pennsylvania State Employees' Retirement System***

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 that reads "Alan H. Winkle".

Alan H. Winkle  
Program Administrator



June 1, 2015

Mr. Glenn E. Becker  
Chairman, State Employees' Retirement Board  
Commonwealth of Pennsylvania  
30 North Third Street, Suite 150  
Harrisburg, PA 17101

Dear Chairman Becker,

We are pleased to provide you with this Comprehensive Annual Financial Report (CAFR) for the Pennsylvania State Employees' Retirement System (SERS) for the calendar year ended December 31, 2014.

KPMG has conducted an independent audit of SERS 2014 financial statements, which are prepared in accordance with generally accepted accounting principles. Because the cost of a control should not exceed the benefits to be derived, the objective is to provide reasonable, rather than absolute, assurance that SERS financial statements are free of any material misstatements and fairly presented. As is our standard practice, independent auditors have full and unrestricted access to you and the board to discuss their findings regarding the adequacy of SERS internal controls and the integrity of SERS financial reporting.

We are pleased to report that SERS has again received an unmodified opinion in 2014 (see Financial Section).

As you know, founded in 1923, SERS is a component unit of the Commonwealth of Pennsylvania (commonwealth) that provides a cost-sharing, multiple-employer retirement plan for public employees. In 2014, SERS served 104 agencies/employers as well as more than 122,000 retirees and beneficiaries and 104,000 active members (see Notes to Financial Statements).

Discussion on public pensions, including interest in the appropriate system and level of benefits for state employees, cost to the commonwealth, and other pension-related issues remain a part of policymakers' conversations about the commonwealth's overall fiscal health and continue to be part of annual budget negotiations. SERS has supported policymakers by providing timely, accurate data and sharing our technical expertise to help explore and evaluate policy ideas. Despite the debate, SERS will continue to provide accurate, accountable stewardship of public funds and high-quality, responsive service to our members.

SERS implemented the requirements of Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans – an amendment of GASB Statement No. 25* (GASB 67) for the year ended December 31, 2014. GASB 67 changed various aspects of financial reporting, which is discussed in greater detail in Management's Discussion and Analysis as well as in the Notes to Financial Statements. GASB 67 established standard actuarial valuation methods and assumptions to improve the consistency of financial reporting across all governmental pension plans. Therefore, in addition to the annual actuarial funding valuation required by statute, a separate financial reporting actuarial valuation was also completed to meet the reporting standards applicable to the enclosed Financial Section of this CAFR. Most of the information related to funding valuation is disclosed in the Actuarial Section of this CAFR.

Since two separate actuarial valuations were performed this year, it is important to note the key differences between the actuarial methods used in the financial reporting and funding valuations. The actuarial cost method used for financial reporting was entry age, as opposed to a variation of entry-age for funding purposes. The

amortization method used for financial reporting purposes was straight line, as opposed to level dollar, which was used for funding purposes.

Based on the actuarial methods used for financial reporting purposes as of December 31, 2014, the resulting net pension liability was \$14.9 billion. SERS plan fiduciary net position as a percentage of the total pension liability was approximately 64.8%. Based on the actuarial methods used for funding purposes as of December 31, 2014, the unfunded actuarial accrued liability was \$18.2 billion. SERS funded ratio was 59.4%. The more favorable financial reporting valuation results, for the most part, can be specifically attributed to the actuarial cost method required under GASB 67. This cost method apportioned more of the pension costs of certain members to the normal cost and therefore lowered the amount apportioned to the unfunded liability.

Despite volatility in the global markets, SERS was able to add nearly \$1.5 billion through investment earnings. In addition, investment expenses continued their steady decline, being reduced by more than 30% net of all investment fees over the last five years. Our earnings have been positive for 17 of the last 20 years, and actual earnings have exceeded the assumed long-term rate of return for 14 of them. Over the past three, five, and 10 years, the SERS Fund has earned compounded annual returns, of 10.6%, 9.2%, and 6.6%, respectively.

In 2014, more than 6,200 new retirees were added to the annuity payroll; their average annual benefit was approximately \$25,200. More than 4,000 retirees, who had average annual benefits of about \$14,700, were removed from the rolls.

It's important to note the changing pace of SERS benefit obligations. The system was established in 1923 but did not pay more than \$1 billion in annual benefits until 1997. Annual payments reached the \$2 billion mark just a decade later – in 2007 – and this year our annual payments approached \$3 billion.

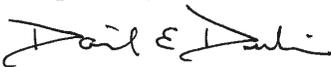
Despite the increasing outflows, SERS funded ratio is projected to continually improve as employees hired before January 2011 retire and post-January 2011 hires begin to fill employee ranks in greater proportion. In fact, if employers maintain the payment schedule provided in Act 2010-120, projections show that contribution rates will peak within the next two fiscal years and begin a slow, steady decline while, at the same time continuing to improve the health of the SERS Fund.

We are solely responsible for the contents of this report, however we do wish to acknowledge the significant contributions of many SERS professionals whose work to compile, quality assure, and produce it are essential. Moreover, we are mindful of and thankful for the nearly 200 SERS employees whose daily work enables our organization to maintain effective internal controls to assure that assets are safeguarded, transactions are properly executed, and financial statements conform to generally accepted accounting principles – all while providing effective, high-quality member services.

In addition to assisting with annual independent audits and preparation of this CAFR, these are the same professionals whose work last year earned, again, SERS the Public Pension Coordinating Council Standards Award for our “high level of plan design, funding, member communications and administrative practices” as well as a Certificate of Achievement of Excellence in Financial Reporting from the Government Finance Officers Association of the United States and Canada.

Finally, know that we remain committed to SERS members as well as our accountability to taxpayers, policymakers, SERS Board, and you.

Respectfully submitted,



David E. Durbin  
Executive Director



Anthony J. Faiola, CPA  
Chief Financial Officer

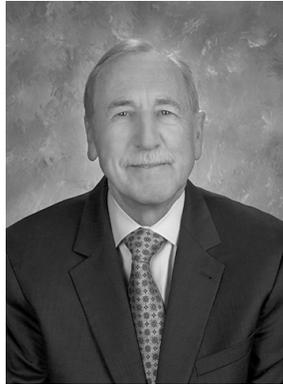
# INTRODUCTORY SECTION

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## SERS Board

as of December 31, 2014

**Glenn E. Becker**  
Chairman



**Mr. Stephen S. Aichele**  
Attorney



**Honorable Robert A. Bittenbender**  
Former State Secretary of the Budget



**David R. Fillman**  
Executive Director, AFSCME Council 13



**Honorable Dan B. Frankel**  
State Representative



# INTRODUCTORY SECTION

## SERS Board

as of December 31, 2014

**Honorable Robert W. Godshall**  
State Representative



**Honorable Vincent J. Hughes**  
State Senator



**Honorable Robert M. McCord**  
State Treasurer



**Honorable Charles T. McIlhinney, Jr.**  
State Senator



**Mr. T. Terrance Reese**  
President, Overly Manufacturing



**Honorable M. Joseph Rocks**  
Retired Member and Former State Senator



# INTRODUCTORY SECTION

## SERS Mission, Vision, and Organizational Chart

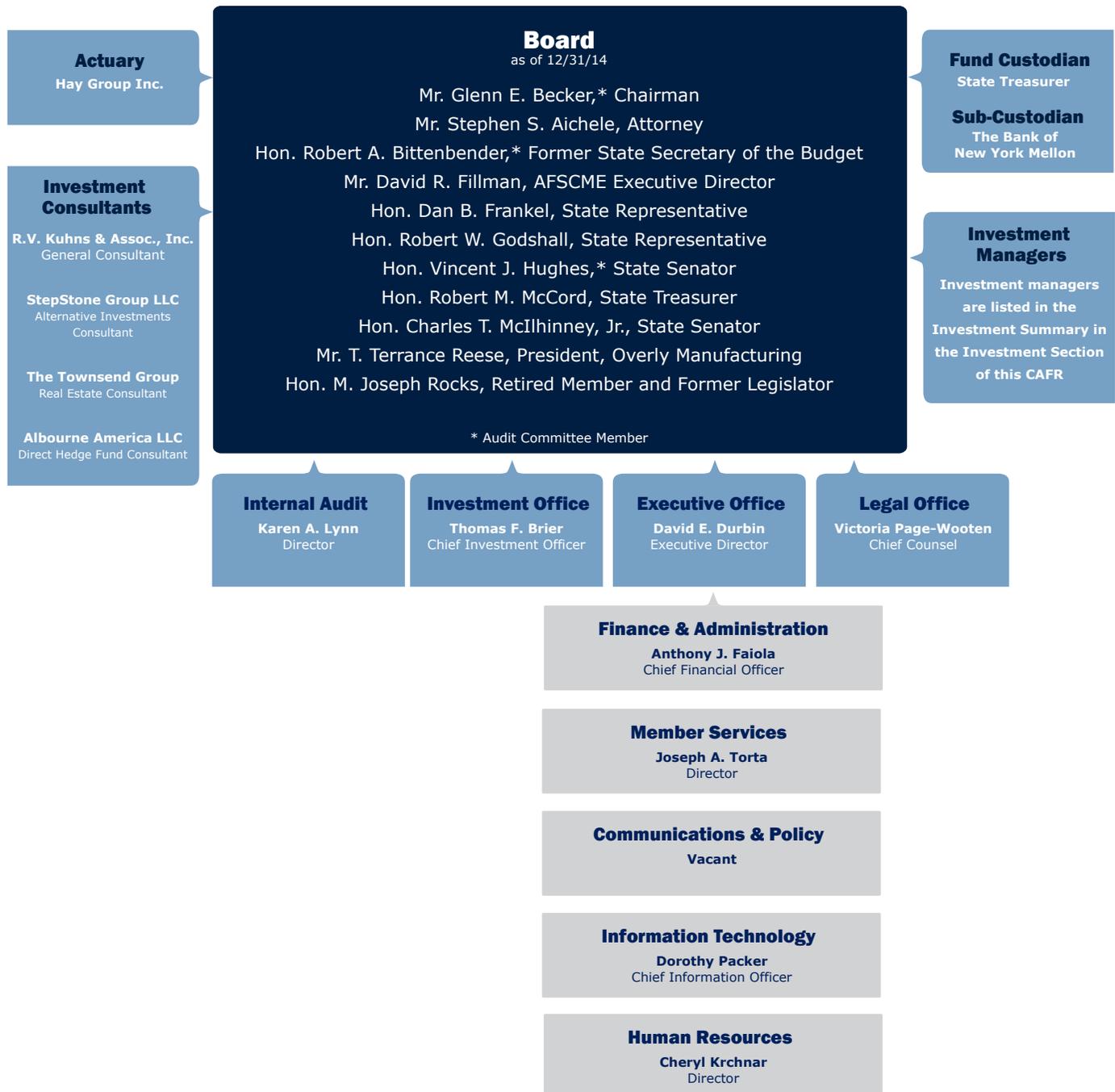
### Mission

To provide retirement benefits and services to our members through sound administration and prudent investments.

### Vision

To navigate the fiscal storm so that SERS continues to progress toward fully-funded status while sustaining effective and responsive member services.

### Organizational Chart





## Financial Section





**KPMG LLP**  
Suite 1000  
30 North Third Street  
PO Box 1190  
Harrisburg, PA 17108-1190

## **Independent Auditors' Report**

The Members of the Board  
Commonwealth of Pennsylvania  
State Employees' Retirement System:

We have audited the accompanying financial statements of the Commonwealth of Pennsylvania State Employees' Retirement System (SERS), a component unit of the Commonwealth of Pennsylvania, as of and for the years ended December 31, 2014 and 2013, and the related notes to the financial statements, which collectively comprise the SERS' basic 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 U.S. generally accepted accounting principles; 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 audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. 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.

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 fiduciary net position of the Commonwealth of Pennsylvania State Employees' Retirement System as of December 31, 2014 and 2013, and the changes in its fiduciary net position for the years then ended in accordance with U.S. generally accepted accounting principles.



### ***Emphasis of Matter***

As discussed in Note 2 to the financial statements, SERS adopted the provisions of Governmental Accounting Standards Board (GASB) Statement No. 67, Financial Reporting for Pension Plans – an amendment of GASB Statement No. 25. Our opinion is not modified with respect to this matter.

### ***Other Matters***

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

U.S. generally accepted accounting principles require that the management's discussion and analysis on pages 3–10 and the required supplementary information schedule 1 through 3 on page 30–31 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

#### ***Supplementary and Other Information***

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise SERS' basic financial statements. The supplementary information schedule 4 through 6 on page 32–34 are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supplementary information schedule 4 and 5 are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information schedule 4 and 5 are fairly stated in all material respects in relation to the basic financial statements taken as a whole.

The supplementary information schedule 6 and introductory, investment, actuarial and statistical sections have not been subject to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

**KPMG LLP**

Harrisburg, Pennsylvania  
May 27, 2015

## Management's Discussion and Analysis

December 31, 2014 and 2013 (unaudited)

This section presents Management's Discussion and Analysis of the Pennsylvania State Employees' Retirement System's (SERS) financial statements as well as the significant events and conditions which affected the operations and performance of SERS during the years ended December 31, 2014, 2013, and 2012.

This discussion and analysis includes forward-looking statements that involve certain risks and uncertainties. Actual results and performance may differ materially from those expressed or implied in the forward-looking statements due to a wide range of factors including but not limited to: changes in securities markets, general economic conditions, interest rates, energy policies, legislation, and global conflicts.

### Overview of the Financial Statements and Accompanying Information

- (1) **Fund Financial Statements.** SERS presents Statements of Fiduciary Net Position as of December 31, 2014 and 2013 as well as Statements of Changes in Fiduciary Net Position for the years then ended. These statements reflect resources available for the payment of benefits as of year end, and the sources and uses of those funds during the year.
- (2) **Notes to Financial Statements.** The notes to financial statements are an integral part of the statements. SERS encourages readers to review them because the additional detail will provide a better understanding of the financial statements. The notes provide information about SERS organization, benefits, and contributions; determination of asset values; the limited use of derivatives; contingencies and commitments; actuarial methods; assumptions; and funding.

- (3) **Required Supplementary Information.** The Required Supplementary Information (RSI) consists of:

- this Management's Discussion and Analysis,
- a schedule of changes in net pension liability and related ratios,
- a schedule of employer contributions, and
- a schedule of investment returns.

- (4) **Other Supplementary Information Schedules.** Other schedules provide details of SERS administrative, investment, and consultant expenses as well as contributions under previous reporting standards.

### Significant Financial Reporting Change

The Governmental Accounting Standards Board (GASB) issued GASB Statement No. 67, *Financial Reporting for Pension Plans – an amendment of GASB Statement No. 25* (GASB 67), for the year ended December 31, 2014. This statement replaces the requirements of Statements No. 25 and No. 50 related to pension plans that are administered through trusts or equivalent arrangements like SERS. Since the requirements for GASB 67 were effective for financial statements for fiscal years beginning after June 15, 2013, the first year that GASB 67 was applicable to SERS was 2014. The adoption of GASB 67 did not impact the fiduciary net position of SERS, however certain changes to note disclosures and RSI have been incorporated to comply with this new statement. The financial statements are now titled: *Statement of Fiduciary Net Position* and *Statement of Changes in Fiduciary Net Position*. Key changes in the notes to the financial statements include: SERS asset allocation, long-term expected real rates of return, net pension liability/asset, assumptions used in financial reporting actuarial valuation, and money-weighted rate of return. Additionally, the

# FINANCIAL SECTION

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## Management's Discussion and Analysis

December 31, 2014 and 2013 (unaudited)

new schedules reported in the RSI include: schedule of changes in net pension liability and related ratios, schedule of employer contributions, and schedule of investment returns. SERS is retroactively presenting GASB 67 disclosures for 2013. On the schedule of investment returns, SERS discloses a money-weighted rate of return that expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested, which is similar to an internal rate of return.

### Financial Analysis

SERS provides retirement benefits to the employees of the Commonwealth of Pennsylvania (commonwealth) and certain other public agencies. SERS benefits are funded through member and employer contributions as well as investment income.

SERS net position decreased approximately \$56 million for the year ended December 31, 2014 compared to an increase of approximately \$2.0 billion for the year ended December 31, 2013, as reflected in the table on page 10. SERS earned returns of 6.4%, 13.6%, and 12.0% in 2014, 2013, and 2012, respectively.

Every five years, SERS is required to conduct an actuarial experience study to determine whether the assumptions used in its annual actuarial funding valuations remain accurate based on current and anticipated trends. The funding valuations are used to establish employer contribution rates. The *17th Investigation of Actuarial Experience* study for the period 2006 – 2010 was released in January 2011. The actuary, under oversight of SERS Board, reviewed economic assumptions (such as the assumed future investment returns and salary increases) as well as demographic assumptions (such as employee turnover, retirement, disability, and death rates). As a result of this study, some assumption adjustments increased projected cost and some decreased projected cost. Overall, adopting the study's

recommendations slightly lowered costs, due primarily to a slower expected pace of future salary increases.

Economic assumption recommendations resulting from the experience study included: keeping the targeted investment return rate assumption at 8.0%, decreasing the inflation rate from 3.0% to 2.75%, and decreasing the general salary growth rate from 3.3% to 3.05%. In addition to the five-year experience study, SERS reviews its investment return assumption in light of economic conditions every year as part of its annual valuation. Based on this work, SERS actuary and investment consultants recommended and the SERS Board adopted a reduction in the actuarial assumed rate of return to 7.5% from 8.0% for the 2012, 2013, and 2014 actuarial valuations.

Most demographic assumptions remained the same as or similar to experience over the last five years, with two exceptions. First, the actuary recommended adding a margin to assumed annuitant mortality rates to anticipate continued longer lifespans. Second, the actuary recommended setting the disability rate at 85% of the experience rather than 100%.

The board adopted the actuarial assumptions set forth in the *17th Investigation of Actuarial Experience* at its January 2011 meeting. The study can be viewed at [www.SERS.pa.gov](http://www.SERS.pa.gov).

Biennially, SERS reviews and modifies, as necessary, its strategic investment plan. The ultimate objective of SERS *2014-2015 Strategic Investment Plan* is to formulate an asset allocation policy that provides a high expected probability of achieving SERS long-term actuarially assumed rate of return. The plan emphasizes liquidity, reduction of cash flow volatility, and pursuit of capital protection strategies to ensure that SERS assets are best positioned to meet the SERS Fund's continuing obligations to its beneficiaries.

**Management's Discussion and Analysis**

December 31, 2014 and 2013 (unaudited)

**Net Pension Liability**

SERS total pension liability was \$42.2 billion and \$41.1 billion as of December 31, 2014 and 2013, respectively. The plan fiduciary net position was \$27.3 billion and \$27.4 billion as of December 31, 2014 and 2013, respectively. The resulting net pension liability was \$14.9 billion and \$13.7 billion as of December 31, 2014 and 2013, respectively. SERS plan fiduciary net position as a percentage of the total pension liability was approximately 65% and approximately 67% as of December 31, 2014 and 2013, respectively. The net pension liability increased from \$13.7 billion due mostly from investment returns falling short of expectations and contributions from employers being collared by Act 2010-120.

**Member Contributions**

Member contributions were approximately \$366 million for the year ended December 31, 2014, \$352 million for the year ended 2013, and \$348 million for the year ended 2012. There was a slight increase in gross salaries, which were \$5.7 billion for 2014 and \$5.6 billion for 2013. This was a result of across the board salary increases offset by a decrease of 755 in active membership as of year end. The member contribution rate of 6.25% of gross salary for most members is set by statute and has remained unchanged for the years presented.

**Employer Contributions**

Employer contributions were approximately \$1.1 billion, \$795 million, and \$566 million for the years ended December 31, 2014, 2013, and 2012, respectively. The 2014 contributions represented an increase of \$289 million – or 36.4% – compared to 2013. The growth was due to an increase in the employer rate to 20.5% from 16.0% on July 1, 2014, (excluding the Benefits Completion Plan (BCP) as

described in note 3 to the financial statements). The \$229 million – or 40.5% – growth in 2013 from 2012 was due to an increase in the employer rate on July 1, 2013, to 16.0% from 11.5%.

Since 2005, employer contribution rates were statutorily suppressed per Pennsylvania law, primarily by the passage of Act 2003-40 and Act 2010-120. Act 2010-120 limited how much the employer contribution rate can increase each year. Act 2010-120 limited the rate at which employer contributions to SERS can increase in any given year, including a maximum of 3.5% for FY 12/13 and 4.5% each year thereafter until no longer needed. According to this schedule, employer contributions are set to rise 4.5% over the next couple of years and are expected to peak at 30.41% for FY 17/18. Act 2010-120 also prohibits the use of pension obligation bonds, which are issued by a state or local government to help meet their obligations to their pension funds. Consequently, SERS has been providing data and technical assistance to Pennsylvania policy makers as they explore possible changes to the State Employees' Retirement Code (SERC).

From 2005 through 2014, employer contributions totaled \$4.2 billion – or 17% – of total additions to fiduciary net position, compared to \$3.4 billion – or 13% – of total additions attributed to member contributions, and \$17.6 billion – or 70% – of total additions attributed to investment earnings as illustrated in the following charts.

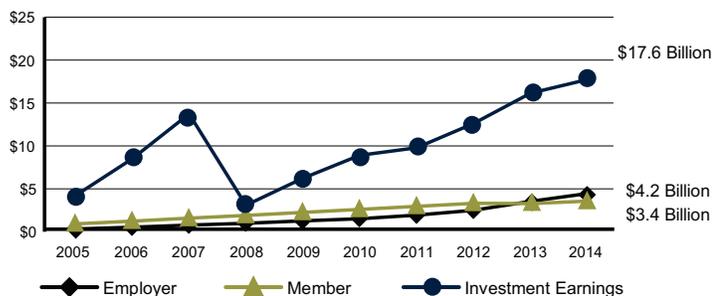
# FINANCIAL SECTION

## Management's Discussion and Analysis

December 31, 2014 and 2013 (unaudited)

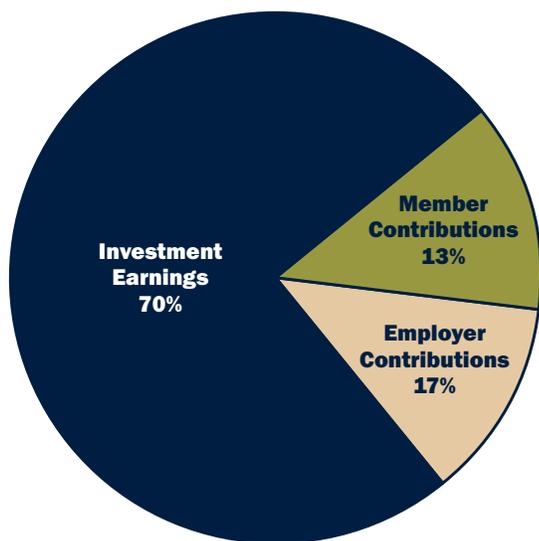
### 10-Year Cumulative Additions to Fiduciary Net Position

Additions in Dollars



### Additions by Component as a Percent of Total Additions

(10-Year History)



Lower employer contributions provide budgetary relief to commonwealth agencies and the taxpayers of Pennsylvania. However, the short-term benefits resulting from artificially suppressed rates result in employers contributing more over a 30-year period due to implied financing costs. Such financing costs are incurred because the monies are not presently available to invest and cannot compound.

### Net Investment Income

SERS investment returns, net of expenses, were 6.4%, 13.6%, and 12.0% for the years 2014, 2013, and 2012, respectively. Positive investment performance contributed approximately \$1.5 billion, \$3.7 billion, and \$2.8 billion to net investment income for the years 2014, 2013, and 2012, respectively. Strong performance in Alternative Investments asset classes helped the overall SERS Fund performance for 2014. For the most recent three years, the total annual returns and returns by asset class are disclosed in the following table.

### Annual Rates of Return

Asset Class	2014	2013	2012
Alternative Investments	13.1%	12.8%	11.4%
Global Public Equity	3.3	26.3	17.6
Real Assets	6.3	8.0	8.6
Diversifying Assets	6.7	11.2	8.6
Fixed Income	6.1	-2.2	10.0
Liquidity Reserve	0.5	0.3	0.4
<b>Total SERS Fund</b>	<b>6.4%</b>	<b>13.6%</b>	<b>12.0%</b>

## Management's Discussion and Analysis

December 31, 2014 and 2013 (unaudited)

All of SERS assets are managed by external investment managers hired by the board. Many of these managers are paid a fee based on the amount of assets under management. For private market investments, the industry practice is for the limited partners to pay fees to the general partner based on commitments to the partnership during the investment period.

### Benefits, Refunds, and Expenses

Benefit payments to annuitants are the most significant recurring deductions from fiduciary net position. During 2014 and 2013, SERS paid out approximately \$2.9 billion and \$2.8 billion in benefits and refunds.

There were approximately 6,200 new retirees added to the annuity payroll in 2014 with an average annual benefit of \$25,200. This was a decrease from the approximately 6,900 new retirees added to the annuity payroll in 2013 with an average annual benefit of \$25,700. As is typical in mature retirement plans, new retirees in 2014 received a much higher annual benefit than those removed from rolls.

There were more than 4,000 and 3,900 retirees removed from the rolls with an average annual benefit of \$14,700 and \$13,500 in 2014 and 2013, respectively. The benefits expense on the financial statement consists of two primary components: monthly annuity payments and supplemental payments. Most of the supplemental payments are paid to retiring members who choose to withdraw their contributions and interest at retirement. Supplemental payments were \$430 million and \$428 million for 2014 and 2013, respectively. Such withdrawals reduce retirees' payments over their remaining life for most members who joined SERS before January 1, 2011.

The prohibition of lump sum withdrawals upon retirement was one provision of Act 2010-120. This act also lowered the benefits earned by most employees who joined SERS on or after January 1, 2011, by reducing the retirement benefit accrual rate, increasing normal retirement age, extending the vesting period from five years to 10 years, and other provisions. Two other important benefit-related aspects of Act 2010-120 are that retirement provisions for legislators elected after December 1, 2010, were reduced and made consistent with those of most rank-and-file employees. Despite the reduction in benefits, most employees continue to contribute 6.25% of their salary and fund a greater proportion of their own retirement benefit.

It will take considerable time to realize benefits from the lower costs that are part of Act 2010-120 as detailed above, and SERS expects benefit expenses to rise steadily because the number of retirees added to the rolls is projected to be about 75% higher than the number of retirees removed from the rolls. Additionally, despite the benefit reductions, new retirees' monthly annuities are projected to be approximately 100% higher than the annuities of those being removed.

SERS was established in 1923, but did not pay more than \$1 billion in annual benefits until 1997. SERS annual benefit payments reached \$2 billion in 2007. SERS annual benefit payments reached nearly \$3 billion in 2014.

### Growth in Annuity Payroll

	December		
	2014	2013	2012
Monthly annuity payroll (\$ millions)	\$213	\$205	\$194
Retirees	122,249	120,052	117,061

# FINANCIAL SECTION

## Management's Discussion and Analysis

December 31, 2014 and 2013 (unaudited)

SERS administrative expenses represented 0.1% of fiduciary net position in 2014 and 2013. All expenses were within budget.

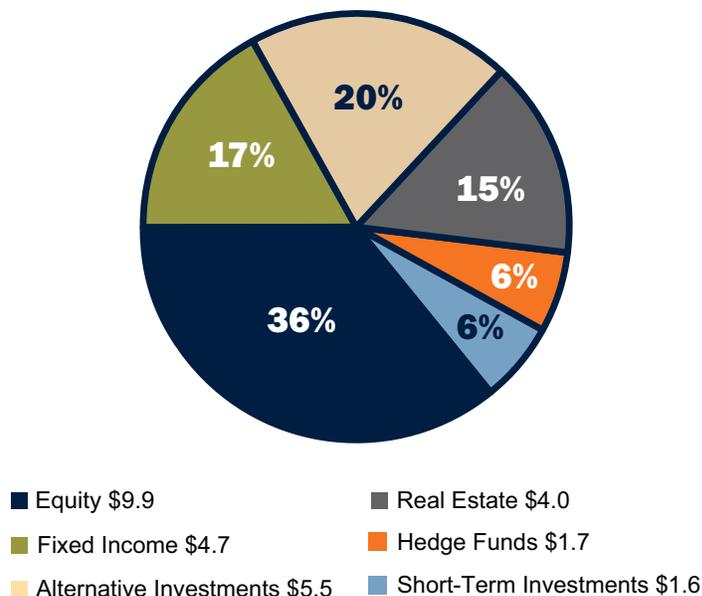
### SERS Assets

Investments are the most significant component of SERS assets. The fair value of investments decreased to \$27.4 billion in 2014 from \$27.7 billion in 2013. The decrease is related to the fact that benefit payments slightly outweighed contributions and net investment income for the year. SERS reports assets at fair value as discussed in accounting policies note 2(c) to the financial statements. Fair value is the value SERS expects to receive in a current sale between a willing buyer and a willing seller that are equally motivated; that is, not a forced or liquidation sale.

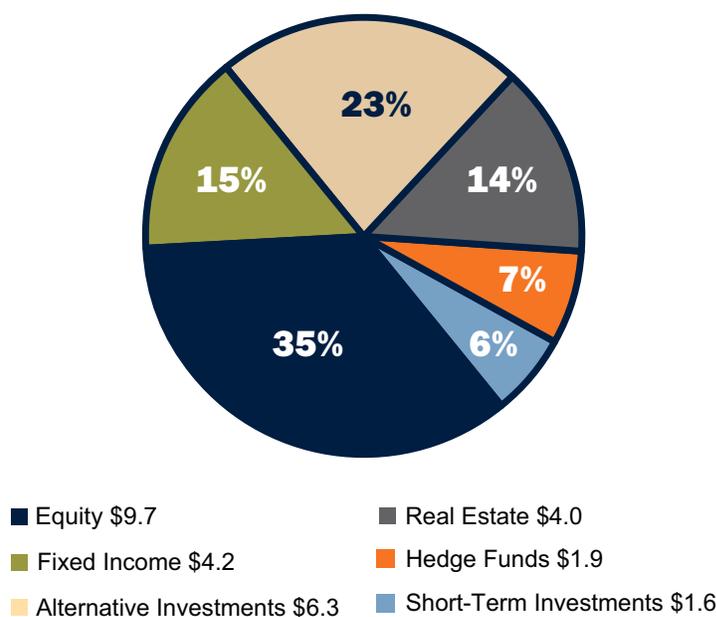
The total investment portfolio fair value was \$27.4 billion for 2014 as compared to \$27.7 billion for 2013. Equity values increased to \$9.9 billion in 2014, from \$9.7 billion in 2013. Fixed income values increased to approximately \$4.7 billion in 2014, from \$4.2 billion in 2013. Alternative investments values decreased to \$5.5 billion in 2014, from \$6.3 billion in 2013. Most of the decrease in alternative investments was due to distributions exceeding contributions. Real estate values were \$4.0 billion in 2014 and 2013, respectively. Real estate values remained unchanged as distributions exceeded contributions and were offset by positive investment returns. Hedge funds values decreased to \$1.7 billion in 2014, from \$1.9 billion in 2013. Short-term investments values were \$1.6 billion in 2014 and 2013, respectively. The total investment portfolio fair value of \$27.4 billion for 2014 was comprised as shown by the chart at the top right.

The total investment portfolio fair value of \$27.7 billion for 2013 was comprised as shown by the chart at the bottom right.

**Investments at Fair Value (2014)**  
(\$ billions)



**Investments at Fair Value (2013)**  
(\$ billions)



## Management's Discussion and Analysis

December 31, 2014 and 2013 (unaudited)

SERS earns additional investment income by lending investment securities to brokers. The brokers provide collateral to SERS for borrowed securities generally equal to 102% – 105% of the borrowed securities, and SERS invests the collateral to earn interest. Income, net of expenses, from securities lending is dependent on the volume of lending generated at the custodian bank and the spreads (profits) on loaned securities.

SERS earned more than \$57 million over the last 10 years. However, since 2008 due to the increased risk associated with the market uncertainty, SERS securities lending program was scaled back in both the number of securities on loan and the market value of those securities for which cash collateral was provided. The pool's guidelines provide for investment of cash collateral in highly-liquid, highly-rated securities.

As of December 31, 2014 and 2013, the fair value of loaned securities was \$460 million and \$287 million, respectively. The fair value of the associated collateral was \$479 million and \$295 million, of which \$362 million and \$212 million was cash, respectively.

### Derivatives

SERS permits investment managers to use derivatives to provide market exposure to various asset classes within narrowly prescribed policy guidelines. Used properly, such derivatives cost-efficiently deliver returns similar to indexed returns in the respective asset classes without disrupting SERS liquidity needs. SERS investment managers manage counterparty credit risk by entering into contracts with parties with strong credit ratings and by establishing collateral requirements. SERS monitors derivative levels and types to ensure that portfolio derivatives are consistent with their intended purpose and at the appropriate level.

### Liquidity

In the past, SERS liquidity needs were met through member and employer contributions, investment earnings, and portfolio diversification. However, increasing liquidity requirements necessitated a change in the role and strategy of SERS investment program.

SERS *2014-2015 Strategic Investment Plan* continues using Liquidity Reserve as an asset class that serves as the primary source of short-term liquidity for the SERS Fund. In periods of market distress, liquid reserves reduce capital impairment risk (i.e., selling assets below intrinsic value) and enhance fund returns by enabling the purchase of mispriced securities from distressed sellers. At December 31, 2014, the SERS Fund held approximately \$1.6 billion – or 5.7% – in Liquidity Reserve. SERS long-term 10-year strategic target for Liquidity Reserve is 3.0%.

### Pennsylvania Act 2010-120

On November 23, 2010, the governor signed HB 2497 into law as Act 2010-120. This legislation preserved the benefits in place for the current members at that time but mandated a number of benefit reductions for new members by reducing the retirement benefit accrual rate, increasing the normal retirement age, eliminating the lump sum withdrawal option, extending the vesting period from five years to 10 years, and other provisions for employees hired on or after January 1, 2011. One aspect of Act 2010-120 is that retirement provisions for legislators elected after December 1, 2010, were reduced and made consistent with those of most rank-and-file employees. Additionally, Act 2010-120 limited the rate at which employer contributions can increase in any given year to 3% in commonwealth FY 11/12, 3.5% in commonwealth FY 12/13, and 4.5% each year thereafter until no longer needed. Act 2010-120 also prohibits the use of pension obligation bonds, which are issued by a state or local government in order to meet their obligations to their pension fund. It will take considerable time to realize benefits from the lower costs of Act 2010-120.

# FINANCIAL SECTION

## Management's Discussion and Analysis

December 31, 2014 and 2013 (unaudited)

### Condensed Financial Information

(\$ millions)

#### Fiduciary Net Position

<b>Assets</b>	<b>2014</b>	<b>Increase (Decrease)</b>	<b>2013</b>	<b>Increase (Decrease)</b>	<b>2012</b>
Total receivables	\$219	\$2	\$217	\$(86)	\$303
Total investments	27,444	(233)	27,677	2,102	25,575
Securities lending collateral pool	362	150	212	9	203
Total assets	28,025	(81)	28,106	2,025	26,081
<b>Liabilities</b>					
Accounts payable and accrued expenses	56	1	55	9	46
Securities lending collateral pool payable	-	(7)	7	(3)	10
Investment purchases and other liabilities	269	(169)	438	5	433
Obligations under securities lending	362	150	212	9	203
Total liabilities	687	(25)	712	20	692
<b>Net position restricted for pensions</b>	<b>\$27,338</b>	<b>\$(56)</b>	<b>\$27,394</b>	<b>\$2,005</b>	<b>\$25,389</b>

#### Changes in Fiduciary Net Position

<b>Additions</b>	<b>2014</b>	<b>Increase (Decrease)</b>	<b>2013</b>	<b>Increase (Decrease)</b>	<b>2012</b>
Member contributions	\$366	\$14	\$352	\$4	\$348
Employer contributions	1,084	289	795	229	566
Net investment income	1,462	(2,262)	3,724	930	2,794
Total additions	2,912	(1,959)	4,871	1,163	3,708
<b>Deductions</b>					
Benefits and refunds	2,946	102	2,844	170	2,674
Administrative expenses	22	-	22	-	22
Total deductions	2,968	102	2,866	170	2,696
<b>Increase/(decrease) in net position restricted for pensions</b>	<b>\$(56)</b>	<b>\$(2,061)</b>	<b>\$2,005</b>	<b>\$993</b>	<b>\$1,012</b>

**Statements of Fiduciary Net Position**

**Statements of Fiduciary Net Position**

December 31, 2014 and 2013

(\$ thousands)

	2014	2013
<b>Assets</b>		
Receivables		
Plan members	\$1,311	\$1,086
Employers	75,571	48,361
Investment income	57,805	54,881
Investment proceeds and other receivables	79,732	108,835
Miscellaneous	4,432	3,763
Total receivables	218,851	216,926
Investments		
Short-term investments	1,648,976	1,596,487
United States government securities	2,474,798	2,281,000
Corporate and foreign bonds and notes	2,135,744	1,930,511
Common and preferred stocks	9,946,332	9,679,810
Hedge funds	1,720,740	1,887,350
Real estate	3,972,621	3,993,399
Alternative investments	5,544,714	6,308,780
Total investments	27,443,925	27,677,337
Securities lending collateral pool	362,217	211,893
Total assets	28,024,993	28,106,156
<b>Liabilities</b>		
Accounts payable and accrued expenses	56,313	55,108
Securities lending collateral pool payable	-	7,146
Investment purchases and other liabilities	268,685	437,853
Obligations under securities lending	362,217	211,893
Total liabilities	687,215	712,000
<b>Net position restricted for pensions</b>	<b>\$27,337,778</b>	<b>\$27,394,156</b>

See accompanying notes to financial statements.

# FINANCIAL SECTION

## Statements of Changes in Fiduciary Net Position

### Statements of Changes in Fiduciary Net Position

Years Ended December 31, 2014 and 2013

(\$ thousands)

	2014	2013
<b>Additions</b>		
Contributions		
Plan members	\$365,923	\$351,968
Employers	1,084,104	794,911
Total contributions	1,450,027	1,146,879
Investment Income		
From investing activities		
Net appreciation in fair value of investments	1,155,301	3,476,349
Interest	142,434	120,815
Dividends	246,528	204,214
Real estate income	93,167	99,314
Miscellaneous income	1,799	668
Total investing activities income	1,639,229	3,901,360
Investment expenses	(186,527)	(181,042)
Net income from investing activities	1,452,702	3,720,318
From securities lending activities		
Securities lending income	9,917	4,326
Securities lending expenses	(568)	(606)
Net income from securities lending activities	9,349	3,720
Net investment income	1,462,051	3,724,038
Total additions	2,912,078	4,870,917
<b>Deductions</b>		
Benefits	2,936,591	2,833,676
Refunds of contributions	9,874	10,609
Administrative expenses	21,991	21,811
Total deductions	2,968,456	2,866,096
Net increase/(decrease)	(56,378)	2,004,821
Net position restricted for pensions		
Balance, beginning of year	27,394,156	25,389,335
<b>Balance, end of year</b>	<b>\$27,337,778</b>	<b>\$27,394,156</b>

See accompanying notes to financial statements.

**Notes to Financial Statements**

December 31, 2014 and 2013

**(1) Organization and Description of SERS**

**(a) Organization**

SERS was established as of June 27, 1923, under the provisions of Public Law 858, No. 331. SERS was developed as an independent administrative agency of the board, which exercises control and management of SERS, including the investment of its assets. The State Employees' Retirement Board has 11 members including the State Treasurer (ex officio), two members from the Senate, two members of the House of Representatives, and six members appointed by the Governor, one of whom is an annuitant of SERS. At least five board members must be active members of SERS and at least two must have 10 or more years of credited service.

SERS is the administrator of a cost-sharing, multiple-employer defined benefit pension plan established by the Commonwealth of Pennsylvania (commonwealth) to provide pension benefits for employees of state government and certain independent agencies. SERS is a component unit of the commonwealth and is included in the commonwealth's financial report as a pension trust fund. Administration costs are financed through contributions and investment earnings.

Membership in SERS is mandatory for most state employees. Members and employees of the General Assembly, certain elected or appointed officials in the executive branch, department heads, and certain employees in the field of education are not required, but are given the option to participate. The membership includes 39 employers and the commonwealth is classified as its largest employer. The commonwealth is comprised of 66 agencies and when everything is evaluated separately, SERS has a total of 104 participating employers/agencies.

At December 31, 2014 and 2013, SERS membership consisted of the following:

**SERS Membership**

	2014	2013
Inactive plan members or beneficiaries currently receiving benefits	122,249	120,052
Inactive plan members entitled to but not yet receiving benefits	7,054	6,395
Active plan members	104,431	105,186
<b>Total members</b>	<b>233,734</b>	<b>231,633</b>

**(b) Pension Benefits**

SERS provides retirement, death, and disability benefits. Cost of Living Adjustments (COLA) are provided ad hoc at the discretion of the General Assembly. Article II of the Commonwealth of Pennsylvania's Constitution assigns the authority to establish and amend the benefit provision of the plan to the General Assembly. Member retirement benefits are determined by taking years of credited service times final average salary times 2% times class of service multiplier.

Prior to Act 2010-120, employees who retire at age 60 with three years of service, or with 35 years of service if under age 60, are entitled to a normal annual retirement benefit. Members of the General Assembly and certain employees classified in hazardous duty positions can retire with full benefits at age 50, with at least three years of service. Act 2010-120 preserved all benefits in place for members, but mandated a number of benefit reductions for new members effective January 1, 2011. The benefit reduction included a new class of membership that accrues benefits at 2% of their final average salary instead of the previous 2.5%. The new vesting period changed from five to 10 years of credited service, and the option to withdraw lump-sum accumulated

# FINANCIAL SECTION

## Notes to Financial Statements

December 31, 2014 and 2013

deductions was eliminated. The new normal retirement age is 65 for most employees, and age 55 for members of the General Assembly and certain employees classified in hazardous duty positions.

Most members of SERS, and all state employees hired after June 30, 2001 and prior to January 1, 2011 (except state police officers and certain members of the judiciary and legislators), are Class AA members. Each class of benefits is based on a multiple of the base accrual rate of 2%, which is called the multiplier. The multiplier for Class AA is 1.25, which translates into an annual benefit of 2.5% of the member's highest three-year average salary times years of service and became effective for members July 1, 2001. The general annual benefit for Class A members is 2% of the member's highest three-year average salary times years of service.

State police are entitled to a benefit equal to a percentage of their highest annual salary, excluding their year of retirement. The benefit is 75% of salary for 25 or more years of service and 50% of salary for 20 – 24.99 years of service. Judges are entitled to a benefit of 4% of final average salary for each of the first 10 years of service and 3% for subsequent years. Magisterial District Judges are entitled to a benefit of 3% of final average salary for each year of service. Legislators taking office before December 1, 2010 are Class D-4. The multiplier for Class D-4 is 1.5, which translates into an annual benefit of 3% of the final average salary for each year of service.

Act 2010-120 created a new A-3 class of service and an optional A-4 class for most employees that entered SERS membership for the first time on or after January 1, 2011 and December 1, 2010 for legislators newly elected in November 2010. Employees who enter SERS membership after the effective date of Act 2010-120 enter as members of the A-3 class with a 45-day window to elect membership in the optional

A-4 class. The general annual benefit for Class A-3 members is 2% of the member's highest three-year average salary times years of service while the Class A-4 benefit accrual rate is 2.5%.

According to the State Employees' Retirement Code (SERC), all obligations of SERS will be assumed by the commonwealth should SERS terminate.

### (c) Contributions

Section 5507 of the SERC (71 Pa. C.S. §5507) requires the commonwealth and other employers whose employees are SERS members to make contributions to the fund on behalf of all active members and annuitants necessary to fund the liabilities and provide the annuity reserves required to pay benefits. SERS funding policy, as set by the board, provides for periodic active member contributions at statutory rates. The SERS funding policy also provides for periodic employer contributions at actuarially determined rates based on SERS funding valuation, expressed as a percentage of annual retirement covered payroll, such that they, along with employee contributions and an actuarially determined rate of investment return, are adequate to accumulate assets to pay benefits when due. However, Act 2010-120 imposes rate increase collars (limits on annual rate increases) on employer contributions that keep the employer contribution rate below the rates established in accordance with actuarial parameters. The collar for commonwealth FY 11/12 was 3%. The commonwealth FY 12/13 collar was 3.5%. The collar for commonwealth FY 13/14 was 4.5% and will remain at that rate until no longer needed. At December 31, 2014, the statutorily required composite contribution rate as collared by Act 2010-120 including the Benefits Completion Plan (BCP) was 20.53% while the actuarially determined rate would have been 31.41%. As of December 31, 2013, the statutorily required

composite contribution rate as collared by Act 2010-120 including BCP was 16.05% while the actuarially determined rate would have been 31.22%.

Employer rates are computed based on SERS full year ended December 31 and applied to the commonwealth based on its fiscal year end of June 30; therefore, the employer contribution rates, in effect for SERS full year ended December 31, reflect a blended average of calculated rates. As of December 31, 2014 and 2013, the blended contribution rates, which include the BCP, were 18.29% and 13.82%, respectively.

The general membership contribution rate for all Class A and Class AA members is 5% and 6.25% of salary, respectively. The general membership contribution rate under Act 2010-120 for A-3 and A-4 members is 6.25% and 9.3% of salary, respectively. The contribution rate for Class D-4 members is 7.5%. Judges and Magisterial District Judges have the option of electing special membership classes requiring a contribution of 10% and 7.5%, respectively. All employee contributions are recorded in individually identified accounts that are credited with interest, calculated at 4% per annum, as mandated by statute. Accumulated employee contributions and credited interest vest immediately and are returned to the employee upon termination of service if the employee is not eligible for other benefits.

## **(2) Summary of Significant Accounting Policies**

### **(a) Basis of Accounting**

The financial statements of SERS are prepared using the accrual basis of accounting and economic resources measurement focus. Plan member contributions are recognized in the period in which the contributions are due. Employer contributions are recognized when due and the employer has a legal

requirement to provide the contributions. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Investment purchases and sales are recorded on a trade-date basis.

### **(b) Use of Estimates**

Management of SERS has made certain estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent assets and liabilities to prepare these financial statements in conformity with U.S. generally accepted accounting principles. Actual results could differ from those estimates.

### **(c) Valuation of Investments**

SERS investments are reported at fair value. Fair value is the amount that a plan can reasonably expect to receive for an investment in a current sale between a willing buyer and a willing seller – that is, other than in a forced or liquidation sale. U.S. government securities, corporate and foreign bonds and notes, and common and preferred stocks, are generally valued based on published market prices and quotations at the close of business from national security exchanges and securities pricing services. Securities that are not traded on a national security exchange are valued by the asset manager, valued by third parties based on similar sales, or valued by valuation committees. Such prices are affected by liquidity, current events, the size of lots being traded, and other factors.

The investments in short-term investment funds, including those managed by the treasurer of the commonwealth, are reported at cost plus allocated interest, which approximates fair value. The securities lending collateral pool, which is a fund operated by the securities lending agent, also is accounted for at cost plus accrued interest, which approximates fair value.

# FINANCIAL SECTION

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## Notes to Financial Statements

December 31, 2014 and 2013

Foreign exchange, futures, and swap contracts are marked to market daily with changes in fair value recognized as part of investments and investment income. Commingled funds are generally valued using the net asset value of the fund. SERS reports a limited number of commingled funds in their respective asset classes.

Real estate is valued by the investment manager using discounted cash flows, recent comparable sales, and current market conditions to arrive at net asset value. Net asset value approximates fair value. Real estate funds estimated fair values are updated by routine independent appraisals by appraisers who meet specific professional qualifications. The appraisal process involves significant judgment and estimating; thus, the value upon sale of an asset may differ from its appraised value.

Alternative investment and real estate limited partnerships are valued at net asset value, which are determined by the general partners using processes that have been reviewed and approved by valuation committees. The partnerships' investments, as well as the assumptions and estimates used in developing the net asset values, approximate fair value. Because the investments in such partnerships are generally illiquid and holding periods may last for several years, the value realized by SERS upon disposition may differ materially from estimated values reflected in the financial statements.

Unsettled investment sales are reported as investment proceeds receivable and unsettled investment purchases are reported as investment purchases payable. Investment expenses consist of investment managers' fees and those expenses directly related to SERS investment operations.

### (d) Commitments

As of December 31, 2014 and 2013, SERS had contractual commitments totaling approximately \$1.4 billion to fund future alternative investments over the next several years, and \$157 million and \$163 million, respectively, to fund future real estate investments over the next several years.

### (e) Federal Income Taxes

The Internal Revenue Service (IRS) issued a favorable tax determination letter on September 30, 2013, qualifying SERS as a Governmental Plan under the Internal Revenue Code (IRC). Therefore, SERS is exempt from federal income taxes. This tax determination is conditioned on the General Assembly enacting certain corrective amendments to the SERC to satisfy the qualification requirements.

### (f) Risk Management

SERS is exposed to various liabilities and risks of loss related to theft or destruction of assets, injuries to employees, and court challenges to fiduciary decisions. SERS is accorded sovereign immunity as an administrative agency of the commonwealth. SERS participates in certain commonwealth pooled insurance programs and requires asset managers to carry certain insurance coverage. SERS is self-insured for fiduciary and director and officer liability. During the past two fiscal years, SERS insurance settlements did not exceed insurance coverage.

### (g) Newly Adopted Accounting Pronouncements

SERS implemented the requirements of Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans – an amendment of GASB Statement No. 25 (GASB 67)*. GASB 67 applies to pension plans that

administer pension benefits for governments through a trust or equivalent arrangement that meets certain specified criteria. GASB establishes standards of financial reporting for separately issued financial reports and specifies the required approach to measuring the net pension liability/asset of employers for benefits provided through the pension plan, about which information is required to be presented. Adoption of GASB 67 did not impact the fiduciary net position of SERS, however, certain changes to note disclosures and required supplementary information (RSI) have been incorporated to comply with the new standard. The requirements of GASB 67 were effective for financial statements for fiscal years beginning after June 15, 2013.

### (3) Legally Required Reserves

The SERC requires SERS to maintain the following accounts representing the net position held for future and current benefit payments:

The **Member Savings Account** accumulates contributions and interest earnings of active employees. Member balances are transferred to the Annuity Reserve Accounts as members retire.

The **State Accumulation Account** accumulates contributions of the employer and the net earnings of the SERS Fund. Funds are transferred to the Annuity Reserve Accounts as members retire. The amount transferred is actuarially determined. Negative balances represent the amounts transferred to other reserve account balances in excess of accumulated employer contributions and net earnings.

The **Directed Commissions Reserve Account** accumulates the income from commission recapture program less any administrative expenses. SERS has commission recapture contracts with several brokers. These contracts generally stipulate that the

brokers rebate a percentage of commissions earned on investments directly to SERS. During the years ended December 31, 2014 and 2013, SERS earned approximately \$98 thousand and \$109 thousand of income resulting from a commission recapture program, respectively. As of December 31, 2014, SERS used the program to pay approximately \$397 thousand of administrative expenses. As of December 31, 2013, no expenditures were made from the program. At December 31, 2014 and 2013, SERS had accumulated commission reserves of \$3.8 million and \$4.1 million, respectively. These commission reserves can be used to pay for future expenditures.

The **Annuity Reserve Accounts** are the accounts from which all death and retirement benefits and supplemental annuities are paid. The balances in these accounts are actuarially determined.

The **Interest Reserve Account** accumulates all income earned by the SERS Fund. In addition, all administrative and investment expenses incurred by the SERS Fund and the board necessary for the operation of SERS are paid from this account. Any balance in this reserve is transferred to the State Accumulation Account at year's end.

The **Benefits Completion Plan (BCP) Reserve Account** accumulates all BCP employer contributions and net earnings of the SERS Fund less any benefits paid out of the SERS Fund. Act 2002-234 amended the SERC by adding Section 5941 to the SERC. Section 5941 directs the board to establish and serve as trustee of a retirement benefit plan that is in conformity with IRC Section 415(m), the BCP. The BCP is a separate trust fund established to provide benefits to all annuitants of SERS defined benefit plan and their survivor annuitants and beneficiaries whose retirement benefit exceeds the IRC Section 415(b) limits.

# FINANCIAL SECTION

## Notes to Financial Statements

December 31, 2014 and 2013

A monthly annuity or death benefit is paid under the BCP only if a corresponding monthly annuity or death benefit is paid from the defined benefit plan to the extent permitted by IRC Section 415(b) and the SERC. There were 24 and 25 individuals receiving benefits from the BCP at December 31, 2014 and 2013, respectively.

Account balances at December 31, 2014 and 2013 are as follows:

### Account Balances (\$ thousands)

	2014	2013
Member savings account	\$4,733,833	\$4,636,219
State accumulation account	(1,277,415)	(296,824)
Directed commissions reserve account	3,833	4,133
Annuity reserve accounts		
Annuitants and beneficiaries	21,648,580	20,908,046
State police	2,179,406	2,093,166
Enforcement officers	44,672	45,505
Benefits completion plan reserve account	4,869	3,911
<b>Total</b>	<b>\$27,337,778</b>	<b>\$27,394,156</b>

### (4) Investments

As provided by statute, the board has exclusive control and management responsibility of SERS funds and full power to invest the funds. In exercising its fiduciary responsibility to SERS membership, the board is governed by the prudent investor rule in establishing investment policy. The prudent investor rule, requires the exercise of that degree of judgment, skill, and care under the circumstances then prevailing which investors of prudence, discretion, and intelligence, who are familiar with such matters, exercise in the management of their own affairs not in regard to

speculation, but in regard to permanent disposition of the funds, considering the probable income to be derived there from, as well as the probable safety of their capital. The board has adopted its *Statement of Investment Policy* to formally document investment objectives and responsibilities. This policy, as well as applicable state law, establishes guidelines for permissible investments of SERS.

For the years ended December 31, 2014 and 2013, the money-weighted rate of return for SERS, net of investment expense, was 6.4% and 13.6%, respectively. A money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

In June 2014, the board approved the SERS *2014-2015 Strategic Investment Plan*. SERS assets are managed according to this plan with a long-term objective of achieving and maintaining a fully funded status for the benefits provided by SERS. The following table shows the target asset allocations as of December 31, 2014 and 2013:

### Target Asset Allocations

Asset Class	2014	2013
	Long-Term 10-Year Strategic Target	Long-Term 10-Year Strategic Target
Alternative Investments	15%	13%
Global Public Equity	40	38
Real Assets	17	15
Diversifying Assets	10	12
Fixed Income	15	19
Liquidity Reserve	3	3
<b>Total</b>	<b>100%</b>	<b>100%</b>

As shown in the preceding table, the previous target asset allocation for 2013 was amended at the beginning of 2014 to increase the allocation to Alternative Investments, Global Public Equity, and Real Assets while decreasing the allocation to Diversifying Assets and Fixed Income.

Under this plan, Fixed Income is structured to generate income to pay benefits; provide liquidity to minimize capital impairment risk; reduce volatility in the total fund; protect the fund against deflation (and inflation via inflation protection securities); and contribute to total fund return when market conditions permit. This plan established a long-term 10-year strategic target allocation to the Fixed Income asset class of 15%. This allocation is divided among distinct segments, each of which fulfills a specific role within the scope of the Fixed Income structure. The segments are as follows:

- **Core Plus and Core Fixed Income** provides excess return when performance conditions are favorable, provides capital protection in difficult market conditions, and may offer risk mitigation due to the low correlation with equities.
- **Global Treasury Inflation Protected Securities (TIPS)** protects SERS Fund against inflation.
- **Nominal U.S. Treasuries** protects SERS Fund against deflation and provides liquidity.
- **Liquidity Reserve** provides an additional source of liquidity to pay benefits.

SERS investments are subject to various risks. Among these risks are concentration of credit risk, custodial credit risk, credit risk, interest rate risk, and foreign currency risk. Each of these is discussed in more detail on the following pages.

Concentration of credit risk is the risk of loss attributed to the magnitude of investment in a single issuer. As of December 31, 2014 and 2013, SERS had no single issuer that exceeded 5% of total investments. Investments issued or explicitly guaranteed by the U.S. government and investments in mutual funds, external investment pools, and other pooled investments were excluded.

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, SERS would be unable to recover the value of investment or collateral securities that are in the possession of an outside party. Pursuant to Title 71, Pennsylvania Consolidated Statutes Section 5931(c), the State Treasurer serves as custodian of SERS Fund. In accordance with a contractual relationship between the commonwealth's Treasury Department and its custodial agent, substantially all investments, where securities are used as evidence of the investment, are held by the custodian in book-entry form in SERS name. Those investments are defined as insured or registered investments for which the securities are held by SERS or its agent and, therefore, have a very minimal level of custodial credit risk losses. All remaining investments do not have securities that are used as evidence of the investments. These investments are primarily in commingled funds, hedge funds, and limited partnerships, which include real estate and alternative investments.

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The credit risk of a debt instrument is measured by nationally recognized statistical rating agencies such as Moody's Investors Services (Moody's), Standard and Poor's (S&P), and Fitch Ratings (Fitch).

# FINANCIAL SECTION

## Notes to Financial Statements

December 31, 2014 and 2013

For securities exposed to credit risk in the Fixed Income portfolio, the following table discloses aggregate fair value, by the least favorable credit rating issued using Moody's, S&P, and Fitch credit ratings at December 31, 2014 and 2013:

### Debt Securities Exposed to Credit Risk

(\$ thousands)

Rating	Fair Value	
	2014	2013
AAA	\$295,911	\$280,903
AA	566,803	537,357
A	387,201	282,703
BAA	724,815	680,549
BA and below	711,498	700,249
NA <sup>1/</sup>	48,343	29,541
Short-term investments <sup>2/</sup>	1,647,734	1,568,708
<b>Total exposed to credit risk<sup>3/</sup></b>	<b>\$4,382,305</b>	<b>\$4,080,010</b>

<sup>1/</sup>NA represents securities that were either not rated or had a withdrawn rating. NA also includes the fair value of certain swaps, which do not have credit quality ratings. See note 6 for additional information regarding swap agreements.

<sup>2/</sup>Represents short-term investments mostly in the Commonwealth of Pennsylvania Treasury Department's Short-Term Investment Fund (STIF). This category is comprised of short-term, investment grade securities, which are mainly U.S. treasuries, agencies, or repurchase agreements.

<sup>3/</sup>Debt securities exposed to credit risk and U.S. government guaranteed securities, as noted in the subsequent paragraph, are comprised of short-term investments, U.S. government securities, and corporate and foreign bonds and notes from the Statements of Fiduciary Net Position.

U.S. government guaranteed securities with a fair value of \$ 1.9 billion and \$1.7 billion as of December 31, 2014 and 2013, respectively, were not included in the previous table because they are not subject to credit risk.

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. As a means for limiting SERS exposure to fair value losses arising from rising interest rates, SERS long-term asset allocation policy diversifies its fixed income core segment between intermediate duration and longer duration strategies based on the Barclays U.S. Aggregate Bond Index. Duration is a measure of an investment's sensitivity to changes in interest rates. The higher the duration, the greater the changes in fair value when interest rates change. SERS measures interest rate risk using option-adjusted duration, which considers the effect of a security's embedded options on cash flows.

## Notes to Financial Statements

December 31, 2014 and 2013

At December 31, 2014 and 2013, SERS Fixed Income portfolio had the following option-adjusted durations by debt sector:

### Debt Option-Adjusted Durations

(\$ thousands)

	2014		2013	
	Fair Value	Option-Adjusted Duration	Fair Value	Option-Adjusted Duration
Sovereign debt	\$298,930	8.0	\$316,618	8.0
Government	1,832,702	6.6	1,726,087	6.9
Corporates	919,501	5.7	800,839	5.6
Agencies	132,605	4.3	128,108	4.5
Private placements <sup>1/</sup>	495,477	4.3	436,712	3.9
Mortgage-backed securities	589,472	3.6	530,793	4.5
Asset-backed securities	328,272	3.1	300,028	3.1
Short-term investments	1,647,734	0.1	1,568,708	0.1
Other investments <sup>2/</sup>	14,825	NA	105	NA
<b>Total<sup>3/</sup></b>	<b>\$6,259,518</b>		<b>\$5,807,998</b>	

<sup>1/</sup> Private placements raise capital via offerings directly to qualified investors rather than through public offerings. Private placements do not have to register with the Securities and Exchange Commission if the securities are purchased for investment as opposed to resale. These private placements have exposure to various fixed income securities.

<sup>2/</sup> Other investments represent certain securities and the value of swaps and futures agreements as of December 31, for which the duration is not available.

<sup>3/</sup> Total fair values exposed to interest rate risk are comprised of short-term investments, U.S. government securities, and corporate and foreign bonds and notes from the Statements of Fiduciary Net Position.

# FINANCIAL SECTION

## Notes to Financial Statements

December 31, 2014 and 2013

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. As part of SERS program to manage risk and enhance returns, SERS invests in global markets. At December 31, 2014 and 2013, SERS had the following currency exposures:

### Foreign Currency Exposures (2014)

(\$ thousands)

Currency	Short-Term Investments <sup>1/</sup>	Fixed Income	Equity	Real Estate	Alternative Investments	Total
European Euro	\$2,615	\$16,776	\$955,217	\$21,141	\$690,422	\$1,686,171
British Pound Sterling	2,079	43,952	690,845	20,281	14,774	771,931
Japanese Yen	3,564	1,819	571,691	43,544	-	620,618
Swiss Franc	2,336	-	368,363	1,263	-	371,962
Hong Kong Dollar	(292)	-	314,929	21,023	-	335,660
Australian Dollar	1,044	10,218	163,696	16,230	-	191,188
Canadian Dollar	453	12,551	163,982	983	-	177,969
South Korean Won	1,014	-	130,127	-	-	131,141
Swedish Krona	(276)	851	71,523	996	22,246	95,340
New Taiwan Dollar	788	-	87,015	-	-	87,803
Mexican Peso	107	27,631	22,797	22,451	-	72,986
Singapore Dollar	197	-	56,149	10,951	-	67,297
Brazilian Real	632	8,543	46,325	-	-	55,500
Danish Krone	4	273	46,282	-	-	46,559
South African Rand	296	6,779	37,309	-	-	44,384
Norwegian Krone	30	-	34,047	-	-	34,077
Indonesian Rupiah	183	8,234	14,164	-	-	22,581
Thai Baht	28	-	18,681	-	-	18,709
Chilean Peso	16	14,822	2,790	-	-	17,628
Malaysian Ringgit	44	3,788	12,350	-	-	16,182
Turkish Lira	21	623	14,346	-	-	14,990
Hungarian Forint	107	7,358	4,449	-	-	11,914
Other currencies (9)	1,356	11,397	23,868	-	-	36,621
<b>Total</b>	<b>\$16,346</b>	<b>\$175,615</b>	<b>\$3,850,945</b>	<b>\$158,863</b>	<b>\$727,442</b>	<b>\$4,929,211</b>

<sup>1/</sup>Includes receivables and payables as of December 31 for securities sold and purchased.

## Notes to Financial Statements

December 31, 2014 and 2013

### Foreign Currency Exposures (2013)

(\$ thousands)

Currency	Short-Term Investments <sup>1/</sup>	Fixed Income	Equity	Real Estate	Alternative Investments	Total
European Euro	\$7,483	\$17,741	\$1,072,160	\$22,112	\$877,349	\$1,996,845
British Pound Sterling	2,357	41,768	766,957	15,052	21,724	847,858
Japanese Yen	6,029	1,916	604,980	52,696	-	665,621
Swiss Franc	3,281	-	380,624	1,301	-	385,206
Hong Kong Dollar	(230)	-	278,645	17,108	-	295,523
Canadian Dollar	687	12,221	170,325	2,501	-	185,734
Australian Dollar	115	1,390	165,021	16,420	-	182,946
South Korean Won	7	9,031	147,531	-	-	156,569
Swedish Krona	157	1,701	73,318	2,197	14,768	92,141
Mexican Peso	147	31,878	28,539	25,898	-	86,462
New Taiwan Dollar	963	-	77,392	-	-	78,355
Brazilian Real	473	11,491	55,938	-	-	67,902
Singapore Dollar	(153)	-	50,735	11,109	-	61,691
Norwegian Krone	76	-	44,809	-	-	44,885
Danish Krone	550	-	42,025	-	-	42,575
South African Rand	231	9,893	32,386	-	-	42,510
Malaysian Ringgit	30	1,859	25,473	-	-	27,362
Thai Baht	86	-	20,111	-	-	20,197
Indonesian Rupiah	49	5,913	8,340	-	-	14,302
New Turkish Lira	80	2,749	8,349	-	-	11,178
Hungarian Forint	364	8,414	1,694	-	-	10,472
Chilean Peso	-	9,204	1,195	-	-	10,399
Indian Rupee	-	9,187	1,072	-	-	10,259
Other currencies (10)	1,693	3,009	34,854	-	-	39,556
<b>Total</b>	<b>\$24,475</b>	<b>\$179,365</b>	<b>\$4,092,473</b>	<b>\$166,394</b>	<b>\$913,841</b>	<b>\$5,376,548</b>

<sup>1/</sup>Includes receivables and payables as of December 31 for securities sold and purchased.

# FINANCIAL SECTION

## Notes to Financial Statements

December 31, 2014 and 2013

### (5) Securities Lending

In accordance with a contract between the commonwealth's treasurer and its custodian, SERS participates in a securities lending program.

The custodian, acting as lending agent, lends SERS equity, debt, and money market securities for cash, securities, or letter of credit collateral. Collateral is required at 102% of the fair value of the securities loaned except for the equity securities of non-U.S. corporations, for which collateral of 105% is required. Collateral is marked to market daily. If the collateral falls below guidelines for the fair value of the securities loaned, additional collateral is obtained. Cash collateral is invested by the lending agent in accordance with investment guidelines approved by the board. The lending agent cannot pledge or sell securities collateral unless the borrower defaults.

As of December 31, 2014 and 2013, SERS credit exposure to individual borrowers was limited because the amounts SERS owed the borrowers exceeded the amounts the borrowers owed SERS. The treasurer's contract with the lending agent requires the agent to indemnify SERS if the borrowers fail to return the underlying securities and the collateral is inadequate to replace the loaned securities or if the borrowers fail to pay income distributions on the loaned securities.

All loaned securities at December 31, 2014 and 2013 could be terminated on demand by either the lending agent or the borrower. Cash collateral is invested in a short-term collective investment pool. The duration of the investments in the pool at December 31, 2014 and 2013 was two days. Interest rate risk may be posed by mismatched maturities and could be affected by other program features, such as the lending agent's ability to reallocate loaned securities among all of its lending customers.

In 2008, certain securities purchased with cash collateral by the lending agent had values at levels significantly less than amortized cost reflected on the custodian records. SERS established an approximately \$25 million liability on its financial statement related to this loss. Subsequent securities lending income was being used to repay the liability. This liability was settled during 2014 so the remaining balance of the liability as of December 31, 2014 was zero. The balance of the liability at December 31, 2013 was \$7.1 million.

As of December 31, 2014 and 2013, the fair value of loaned securities was \$460 million and \$287 million, respectively; the fair value of the associated collateral was \$479 million and \$295 million, of which \$362 million and \$212 million was cash, respectively. As of December 31, 2014 and 2013, noncash collateral of \$117 million and \$83 million, respectively, was invested in U.S. government guaranteed securities which are not subject to credit risk.

### (6) Derivative and Structured Financial Instruments and Restricted Assets

Within narrowly prescribed guidelines, SERS permits investment managers to enter into certain derivative and structured financial instruments primarily to hedge risk and reduce the volatility of its portfolio. Typically, investment managers enter into foreign exchange contracts to make payment for international investments and to hedge currency risk, futures contracts to manage interest rate risk, and swaps to more efficiently gain investment exposure in the equity and credit markets.

SERS is exposed to counterparty credit risk on all open derivative positions. Counterparty credit risk is the risk that a derivative counterparty may fail to meet its payment obligation under the derivative contract. As of December 31, 2014 and 2013, SERS

## Notes to Financial Statements

December 31, 2014 and 2013

counterparty credit risk was not significant. SERS mitigates its legal risk on investment holdings including derivatives by ensuring that all of our legal requirements (indemnification, sovereign immunity, jurisdiction, etc.) are acknowledged and agreed to in all of the derivatives agreements to which they are subject.

SERS managers also indirectly hold foreign exchange contracts, futures contracts, and certain swap contracts through its investments in commingled funds and hedge funds. These funds invest in instruments directly and indirectly through a securities lending collateral pool, to gain foreign exchange exposure, to synthetically create equity-like returns, and to manage interest rate risk by altering the average life of the portfolio.

Foreign exchange contracts are agreements to

exchange the currency of one country for the currency of another country at an agreed upon price and settlement date. The investment manager uses these contracts primarily for its international investments to settle pending trades that occur more than two business days after trade date. The contracts are used by the investment manager for the purpose of eliminating foreign exchange risk. As a matter of policy, the investment managers enter into these contracts at their full discretion to protect currency fluctuations. To reduce the risk of counterparty nonperformance, the investment managers generally enter into these contracts with institutions regarded as meeting high standards of credit worthiness. The unrealized gain/loss on contracts is included in SERS net position and represents the fair value of the contracts on December 31. At December 31, 2014 and 2013, SERS contracts to purchase and sell by foreign currencies are shown in the following tables:

### Foreign Exchange Contracts (2014)

(\$ thousands)

Currency	Purchases	Unrealized Gain/(Loss)	Sells	Unrealized Gain/(Loss)
Chilean Peso	\$14,822	\$(553)	\$15	\$ -
Australian Dollar	9,538	(253)	28,380	2,578
Indian Rupee	9,033	(83)	-	-
South Korean Won	8,677	(280)	8,677	89
European Euro	4,063	(89)	26,651	959
Norwegian Krone	3,660	(131)	6,315	1,512
Mexican Peso	2,657	(25)	2,669	122
British Pound Sterling	2,021	7	3,089	11
Canadian Dollar	905	5	-	-
Colombian Peso	640	2	1,279	20
Swiss Franc	222	(1)	19,671	461
Polish Zloty	96	-	4,334	253
New Zealand Dollar	-	-	6,726	211
Other (6)	1,133	(2)	1,009	-
<b>Total</b>	<b>\$57,467</b>	<b>\$(1,403)</b>	<b>\$108,815</b>	<b>\$6,216</b>

# FINANCIAL SECTION

## Notes to Financial Statements

December 31, 2014 and 2013

### Foreign Exchange Contracts (2013)

(\$ thousands)

Currency	Purchases	Unrealized Gain/(Loss)	Sells	Unrealized Gain/(Loss)
Chilean Peso	\$9,204	\$(186)	\$ -	\$ -
Indian Rupee	9,187	81	-	-
South Korean Won	9,031	112	-	-
European Euro	7,887	47	47,195	(665)
British Pound Sterling	6,919	84	3,132	(25)
Indonesian Rupiah	3,602	(392)	-	-
Canadian Dollar	2,742	8	3,093	(22)
Australian Dollar	1,444	(1)	34,862	953
Turkish Lira	1,085	(50)	1,085	50
Swedish Krona	1,060	19	4,052	(101)
Swiss Franc	-	-	29,009	(912)
Polish Zloty	-	-	11,039	(262)
New Zealand Dollar	-	-	10,512	(43)
Norwegian Krone	-	-	7,618	191
Other (8)	1,122	(1)	4,553	-
<b>Total</b>	<b>\$53,283</b>	<b>\$(279)</b>	<b>\$156,150</b>	<b>\$(836)</b>

Futures contracts are standardized, exchange-traded contracts to purchase or sell a specific financial instrument at a predetermined price. Gains and losses on futures contracts are settled daily based on a notional (underlying) principal value and do not involve an actual transfer of the specific instrument. The exchange assumes the risk that the counterparty will not pay and generally requires margin payments to minimize such risk. Futures are generally used to achieve the desired market exposure of a security or index or to rebalance the total portfolio. SERS exposure to futures contracts was not significant at December 31, 2014 and 2013.

Swap agreements provide for periodic payments between parties based on the change in value of underlying assets, indexes, rates, and credit worthiness. SERS uses contracts with multiple counterparties as well as collateral posting

requirements to manage its counterparty credit risk. Credit default swaps are agreements with counterparties to either purchase or sell credit protection. SERS managers use credit default swaps to either increase or decrease credit exposure to certain credit markets. Interest rate swaps are over-the-counter contracts that allow counterparties to exchange a fixed rate liability for a floating rate liability or vice versa. SERS managers use interest rate swaps as a cost effective way of gaining exposure to certain sectors of the fixed income market. SERS exposure to swap agreements was not significant at December 31, 2014 and 2013.

### (7) Other Post Employment Benefits (OPEB) for Employees of SERS

SERS makes employer contributions to the pension plan. SERS employees' contribution requirements and

## Notes to Financial Statements

December 31, 2014 and 2013

benefits are described in note 1. SERS contributions for the years ended December 31, 2014, 2013, and 2012 were \$1.9 million, \$1.3 million, and \$0.9 million, respectively. The contributions were equal to the statutorily required contributions each year.

SERS also participates in the Commonwealth of Pennsylvania Office of Administration's (OA) Retired Employees Health Program (REHP). The REHP is a single employer plan and provides certain healthcare benefits to qualifying individuals meeting specified age and/or service requirements. The OA, in its sole discretion, determines available REHP benefits on an ongoing basis.

The REHP is administered through the Pennsylvania Employees' Benefit Trust Fund (PEBTF) as a third-party administrator for the commonwealth. Employer costs for retiree healthcare benefits are charged as a component of payroll expenditures on a "pay as you go" basis. During 2014, SERS funded REHP benefits by paying \$305 (actual dollars) per pay period from January 1 to June 30, 2014, and \$334 (actual dollars) per pay period from July 1 to December 31, 2014 for each active SERS employee.

For REHP, the following table details the commonwealth's Annual Required Contribution (ARC), SERS allocated portion of the ARC, and SERS allocated portion of the OPEB liability based on aggregate REHP qualifying contributions:

### OPEB Liability

As of the commonwealth's FY ending June 30  
(\$ thousands)

Year	Commonwealth ARC	SERS ARC	SERS Net OPEB
2014	\$898,330	\$2,315	\$536
2013	869,140	2,240	658
2012	870,200	1,975	550
<b>Three-year cumulative OPEB</b>			<b>\$1,744</b>

In the previous table, the commonwealth's 2013 biennial actuarial valuation was used for 2014 and 2013 while the commonwealth's 2011 biennial actuarial valuation was used for 2012. Both valuation reports can be viewed in their entirety on the Office of the Budget's website at:  
[http://www.budget.state.pa.us/portal/server.pt/community/financial\\_reports/4574](http://www.budget.state.pa.us/portal/server.pt/community/financial_reports/4574).

### (8) Litigation and Contingencies

SERS is involved in various individual lawsuits, generally related to benefit payments, which, in the event of an adverse result, could increase estimated actuarial liabilities by approximately \$1 billion. Some of the cases involve legal issues that, if extended to the entire membership, may result in significant costs to SERS. If such an event were to occur, the additional costs would be recovered by SERS through adjustments to the employer contribution rate.

### (9) Net Pension Liability

The components of the net pension liability of participating employers at December 31, 2014 and 2013, were as follows:

### Net Pension Liability

(\$ thousands)

	2014	2013
Total pension liability	\$42,195,186	\$41,057,541
Plan fiduciary net position	27,337,778	27,394,156
<b>Net pension liability</b>	<b>\$14,857,408</b>	<b>\$13,663,385</b>
Plan fiduciary net position as a percentage of the total pension liability	64.8%	66.7%

# FINANCIAL SECTION

## Notes to Financial Statements

December 31, 2014 and 2013

The total pension liability was determined by an actuarial valuation for financial reporting purposes as of December 31, 2014 and 2013, using some of the following actuarial methods and assumptions:

- Actuarial cost method: entry age
- Investment rate of return: 7.50% net of expenses including inflation
- Projected salary increases: average of 6.10% with range of 4.30% – 11.05% including inflation
- Asset valuation method: fair (market)
- Inflation: 2.75%
- Mortality rate: projected RP-2000 Mortality Tables adjusted for actual plan experience and future improvement

Some of the assumptions mentioned above are based on the *17th Investigation of Actuarial Experience* study covering the periods 2006 – 2010, which was released in January 2011. The next experience study is expected to be released in 2016.

The long-term expected real rate of return on pension plan investments are determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation in note 4 as of December 31, 2014 and 2013 (see the discussion of the pension plan's investment policy) are summarized in the following table:

### Long-Term Expected Real Rate of Return

Asset Class	2014 Long-Term Expected Real Rate of Return	2013 Long-Term Expected Real Rate of Return
Alternative Investments	8.50%	8.90%
Global Public Equity	5.40	5.80
Real Assets	4.95	5.40
Diversifying Assets	5.00	5.20
Fixed Income	1.50	1.70
Liquidity Reserve	0.00	0.00

**Notes to Financial Statements**

December 31, 2014 and 2013

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and that contributions from participating employers will be made at actuarially determined rates as set by statute. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on

pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

The following presents the net pension liability calculated using the discount rate of 7.50%, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current rate:

**Sensitivity of the Net Pension Liability to Change in the Discount Rate**

(\$ thousands)

	<b>1% Decrease (6.50%)</b>	<b>Current Discount Rate (7.50%)</b>	<b>1% Increase (8.50%)</b>
2014 Net pension liability	\$19,017,125	\$14,857,408	\$11,280,725
2013 Net pension liability	17,733,939	13,663,385	10,164,331

# FINANCIAL SECTION

## Required Supplementary Information

December 31, 2014 (unaudited)

### Schedule 1 Schedule of Changes in Net Pension Liability and Related Ratios (\$ millions)

	2014	2013
<b>Total pension liability</b>		
Service cost	\$944	\$943
Interest	3,042	2,975
Changes of benefit terms	-	-
Differences between expected and actual experience	98	(143)
Changes of assumptions	-	-
Benefit payments, including refunds of member contributions	(2,946)	(2,844)
Net change in total pension liability	1,138	931
Total pension liability - beginning	41,057	40,126
Total pension liability - ending (a)	42,195	41,057
<b>Plan fiduciary net position</b>		
Contributions - employer	1,084	795
Contributions - member	366	352
Net investment income	1,462	3,724
Benefit payments, including refunds of member contributions	(2,946)	(2,844)
Administrative expense	(22)	(22)
Net change in plan fiduciary net position	(56)	2,005
Plan fiduciary net position - beginning	27,394	25,389
Plan fiduciary net position - ending (b)	27,338	27,394
<b>Net pension liability (asset) - ending (a) - (b)</b>	<b>\$14,857</b>	<b>\$13,663</b>
Plan fiduciary net position as a percentage of the total pension liability	64.8%	66.7%
Covered-employee payroll	\$5,720	\$5,598
Net pension liability (asset) as percentage of covered-employee payroll	259.7%	244.1%

See accompanying independent auditors' report.

**Schedule 2**  
**Schedule of Employer Contributions**  
(\$ millions)

<b>Year<sup>1/</sup></b>	<b>Actuarially determined contribution (ADC)<sup>2/</sup></b>	<b>Contributions in relation to the ADC</b>	<b>Contribution deficiency (excess)</b>	<b>Covered-employee payroll</b>	<b>Contributions as a percentage of covered-employee payroll</b>
2014	\$1,084	\$1,084	\$ -	\$5,720	18.95%
2013	795	795	-	5,598	14.20
2012	566	566	-	5,539	10.22
2011	392	392	-	5,582	7.02
2010	273	273	-	5,597	4.88
2009	253	253	-	5,595	4.52
2008	235	235	-	5,428	4.33
2007	244	244	-	5,299	4.60
2006	196	196	-	5,118	3.83
2005	148	148	-	4,929	3.00

<sup>1/</sup> The rates used in developing the ADC in the above schedule of contributions are calculated as of December 31, two years prior to the first half, January 1 – June 30, of the year in which contributions are reported and one year prior to the second half, July 1 – December 31, of the year in which contributions are reported. The following funding valuation actuarial methods and assumptions were used to determine contribution rates reported in this schedule as of the December 31 annual funding valuations:

- Actuarial cost method: variation of entry age cost method (all years)
- Asset valuation method: 5-year smoothing (all years)
- Inflation: 3.0% from valuation years 2005-2009 and 2.75% from valuation years 2010-2014
- Projected average salary increases: 7.1% from valuation years 2005-2009, 6.2% from valuation years 2010-2012, and 6.1% from valuation years 2013-2014
- Investment rate of return (net of expenses including inflation): 8.50% from valuation years 2005-2007, 8.0% from valuation years 2008-2010, and 7.50% from valuation years 2011-2014

<sup>2/</sup> The ADC disclosed above is based on minimum floor rates or suppressed rates resulting from collars that are required based on statutory law. These rates are determined by SERS actuary during the annual funding valuation and include an adjustment to the "preliminary employer contribution rate" calculated before the minimum floor or collars are applied. These "final employer contribution rates" fall within the realm of an appropriate ADC calculation under actuarial standards of practice and temporarily defer a portion of the payments that work towards fully funding the plan.

**Schedule 3**  
**Schedule of Investment Returns**

	<b>2014</b>	<b>2013</b>
Annual money-weighted rate of return, net of investment expense	6.4%	13.6%

See accompanying independent auditors' report.

# FINANCIAL SECTION

## Supplementary Information

December 31, 2014 (unaudited)

### Schedule 4 Schedule of Administrative Expenses (\$ thousands)

Personnel services	
Salaries	\$8,942
Benefits	5,669
Temporary personnel wages, overtime, and outservice training	96
Total personnel services	14,707
Professional services	
Treasury department services	1,061
Information technology services	918
Consultant fees	475
Other commonwealth services	338
Legal fees	203
Total professional services	2,995
Rentals	
Real estate rent	1,765
Other equipment rental	80
Total rentals	1,845
Communication	
Postage	506
Telephone	294
Printing and advertising	160
Total communication	960
Other expenses	
Maintenance	1,024
Supplies	193
EDP and office equipment	178
Subscriptions and memberships	57
Travel and conferences	32
Total other expenses	1,484
<b>Total administrative expenses</b>	<b>\$21,991</b>

See accompanying independent auditors' report.

December 31, 2014 (unaudited)

**Schedule 5**  
**Summary of Investment and Consultant Expenses**

(\$ thousands)

**Investment Expenses**

Expense Category	Expenses
Manager investment expenses	
Alternative Investments	\$70,185
Real Assets	49,507
Global Public Equity	27,581
Diversifying Assets	18,425
Fixed Income	11,130
Liquidity Reserve	555
Total manager investment expenses	177,383
Investment consultants	3,739
Investment professional personnel	3,373
Custodian	1,140
Legal	434
Subscription and membership	380
Operational	78
<b>Total investment expenses</b>	<b>\$186,527</b>

**Consultant Expenses**

Firm	Service Type	Expenses
Investment consultant expenses		
StepStone Group	Alternative investments	\$1,975
R.V. Kuhns & Associates	General investments	561
Albourne America	Direct hedge fund investments	400
The Townsend Group	Real estate investments	343
GCM Customized Investment Group	Investment portfolio management	207
Korn Ferry	Personnel search firm	112
Institutional Shareholder Services	Proxy services	94
Abel/Noser	Transaction cost analysis	47
Total investment consultant expenses		3,739
Administrative consultant expenses		
The Hay Group	Actuary	415
Other	Miscellaneous	60
Total administrative consultant expenses		475
<b>Total consultant expenses</b>		<b>\$4,214</b>

See accompanying independent auditors' report.

# FINANCIAL SECTION

## Supplementary Information

December 31, 2014 (unaudited)

### Schedule 6

#### Contributions Under Previous Reporting Standards<sup>1/</sup>

Annual Required Contributions Using Governmental Accounting Standards Board Statement No. 25  
(\$ thousands)

Actuarial Valuation Year Ended December 31	Annual Required Contribution (ARC)	Actual Contribution	ARC as a Percentage of Actual Contribution
2014	\$1,407,361	\$1,081,826	76.9%
2013	1,314,925	790,996	60.2
2012	1,044,632	562,883	53.9
2011	913,778	391,189	42.8
2010	866,822	272,525	31.4
2009	643,861	251,870	39.1
2008	584,248	233,138	39.9
2007	617,253	242,337	39.3
2006	548,745	195,407	35.6
2005	319,190	147,163	46.1

<sup>1/</sup>The ARC is calculated as part of SERS funding valuation using Governmental Accounting Standards Board Statement No. 25 (GASB 25) requirements. Starting in 2014, GASB 25 was superseded by Governmental Accounting Standards Board Statement No. 67 (GASB 67) for accounting purposes. GASB 67 replaces the ARC with an actuarially determined contribution (ADC). While no longer applicable to 2014 and subsequent years, this disclosure is being provided for informational purposes.

See accompanying independent auditors' report.

For developing the ARC, GASB 25 established a range of actuarial cost and amortization methods for the unfunded actuarial accrued liability. The scheduled contributions for the years shown above have been below the amount required to meet the GASB minimum under previous standards. Underfunding of the ARC in 2008 and 2009 was the result of significant provisions of Act 2003-40, which changed the periods in which unfunded

liabilities were amortized in a manner that artificially suppressed the employer contribution rate below the ARC. Underfunding of the ARC from 2010 through 2014 was the result of significant provisions of Act 2010-120, which capped increases in the employer contribution rate. The capped contribution rates during those years were below the respective years' ARC contribution rates.

# Investment Section



May 30, 2015

Dear Members:

On behalf of SERS investment office, I am pleased to report on SERS investment program for the calendar year 2014.

As a long-term investor, SERS remains committed to utilizing best practices in governance, asset allocation, and managing risks. Specifically, SERS will continue to enhance its efficiency, lower total investment costs by continuing to invest in low-cost index funds and by only allocating resources to assets where the board, investment office, and external consultants have the highest conviction that active management could provide the best opportunity to generate excess return.

Several significant accomplishments were achieved in 2014:

- SERS continued to lower its manager investment expenses to approximately 65 basis points (0.65%) of the total fund.
- SERS hired nine best in class Alternative Investment funds and two Real Asset funds with a historical average internal rate of return of over 21%. SERS Alternative Investment Program accounts for 40% of SERS investment management fees. However, over the past decade ending December 2014 (quarter lag), SERS Alternative Investments earned 12.6% (net of fees), which is 50% greater than a low-cost equity index (Russell 3000) return of 8.4%. SERS Alternative Investments added an additional \$3.2 billion of value (net of fees) over the Russell 3000 Index.
- SERS updated its primary investment governance documents. SERS *Statement of Investment Policy* formalizes the board's investment objectives. A key objective is to provide benefit payments to participants and beneficiaries at the lowest cost to the commonwealth, and to fund the program through a carefully planned and executed investment program.
- SERS updated its *Strategic Investment Plan*. The ultimate objective of this plan is to formulate an asset allocation policy that provides a high expected probability of achieving SERS long-term actuarially assumed rate of return, consistent with the board's tolerance for risk, while continuing to meet obligations to beneficiaries.
- SERS established an *Investment Advisor Monitoring Policy* to provide the board with an enhanced communication tool to keep the board informed and to formalize the identification and application of qualitative and quantitative criteria employed by SERS with respect to the monitoring of current investment advisors.

In preparation of updating SERS *Strategic Investment Plan*, one new initiative is worth mentioning. SERS board, investment office, and external consultant will review the current structure of SERS Global Public Equity Program to determine the optimal mix of active and passive allocations within each section of the program. Although the current program has approximately 44% invested in index funds, SERS is committed to enhancing efficiencies and lowering investment costs by effectively allocating assets and resources.

Although various markets seem to continue to reach high valuation levels, we still live in a world of unpleasant surprises. What we know is that economic growth and inflation have the most significant impact on SERS investment returns. What we do not know is when or to what degree economic growth and inflation will expand or contract. And more often than not, market disruptions come from unexpected sources.

With that in mind, SERS considers liquidity to be the predominant risk and constructs an asset allocation policy that provides a high expected probability of achieving SERS long-term actuarially assumed rate of return, consistent with the board's tolerance for risk, while continuing to meet obligations to beneficiaries. SERS board, investment professionals, and external consultants spend a considerable amount of time thinking about and discussing liquidity, capital markets, expected returns, and expected risks. SERS historical adherence to its asset allocation process generated investment returns that added 70% of the assets in the fund over the past decade. Employee contributions added 13% and employer contributions added 17% of the assets to the fund. During the same time period, SERS paid over \$24 billion in retirement benefits.

SERS investment professionals and consultants vigilantly monitor economic conditions and market events, working to position the fund to achieve its performance objectives under a wide variety of economic scenarios. Under the supervision and guidance of the board, please be assured that SERS will continue to do our best to ensure that our members receive the financial security they have earned and deserve.

Sincerely,



Thomas F. Brier  
Chief Investment Officer

*The data contained in the Investment Section that follows was compiled by SERS investment, accounting, and auditing professionals; SERS consultants, RVK, Inc., StepStone Group LLC, the Townsend Group and Albourne America LLC; and SERS sub-custodian, BNY Mellon. Performance was calculated using the Modified Dietz day-weighted return methodology.*

## Investment Policy and Objectives

December 31, 2014 (unaudited)

### Investment Policy

The SERS Board originally adopted a formal *Statement of Investment Policy* (policy) in 1979. It has been revised periodically to reflect and incorporate legislative changes governing investments and amendments to policies and procedures guiding the investment of the defined benefit portfolio. The policy was last amended in 2014.

The purpose of the policy is to formalize the board's investment objectives and policies, and to define the duties and responsibilities of the various individuals and entities involved in the investment process.

The major elements of the policy are:

- The assets of the SERS Fund will be managed with the primary objectives of the payment of benefit obligations to participants in the plans as well as to maximize return with acceptable risk considerations and sufficient liquidity so that employer contributions can be minimized.
- The SERS Fund's overall investment objective is to provide a total rate of return, over full economic cycles, which achieves SERS long-term actuarially assumed rate of return consistent with the board's tolerance for risk.
- The board's investment authority is governed by the prudent investor standard as set forth in Title 71, Pennsylvania Consolidated Statutes, Section 5931(a).
- The members of the board, employees of the board, and agents thereof shall stand in a fiduciary relationship to the members of the system regarding the investments and disbursements of any of the moneys of the fund and shall not profit either directly or indirectly with respect thereto.
- The board employs an investment staff which is responsible to the board to review and analyze the current investment climate, and to recommend adjustments with respect to the policy that are appropriate to take optimum advantage of new conditions and strategies as they arise in the marketplace. The staff also reviews and analyzes the philosophies, policies, and strategies employed by the investment advisors, evaluating the appropriateness of their decision-making processes and their investment styles in relation to present and projected investment horizons.
- The board continually seeks to employ investment advisors that possess superior capabilities in the management of assets of public retirement systems. Each advisor has full discretion to carry out its investment mandate subject to the investment strategy statement contained in the investment management agreement and will be expected to conduct business on behalf of SERS in accordance with the mandate for which they were retained.

# INVESTMENT SECTION

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## Investment Policy and Objectives

December 31, 2014 (unaudited)

- SERS will employ investment consultants, who act as fiduciaries to the fund, and who will provide investment consulting services in their respective areas of expertise.
- Where investment characteristics are equivalent, the policy will favor investments that will have a positive impact on the economy of the Commonwealth of Pennsylvania.

## Investment Objectives

As indicated in SERS *Statement of Investment Policy*, the objectives of the SERS Fund are to provide benefit payments to participants and beneficiaries at the lowest cost to the commonwealth and to fund the program through a carefully planned and executed investment program.

Consistent with achieving these objectives, the board has established the following goals relative to investment performance:

- Achieve a net total return equivalent to the actuarial interest rate assumption, or preferably, in excess of this rate in order to improve the funded ratio of the SERS Fund through investment earnings and favorably impact future employer and employee contribution rates.
- Achieve a net, total long-term return that meets or exceeds an appropriate, composite plan benchmark index on a five- to 10-year rolling time horizon. The composite benchmark index will be based on the asset allocation set forth in the *Strategic Investment Plan* approved by the board.

## Investment Returns

December 31, 2014 (unaudited)

### Calendar Year, Net-of-Fees Returns <sup>1/</sup>

Asset Class	1-Year Total Return	3-Year Total Return	5-Year Total Return	10-Year Total Return
Alternative Investments <sup>2/, 5/</sup>	13.1%	12.4%	13.3%	12.6%
<i>Burgiss All Private Equity Custom Index <sup>3/, 5/</sup></i>	15.5	14.5	14.4	13.1
<i>Russell 3000 Index + 3% <sup>4/, 5/</sup></i>	21.3	26.8	19.2	11.7
Global Public Equity	3.3	15.4	10.5	5.8
<i>MSCI ACW Investable Market Index (Net)</i>	3.8	14.3	9.5	6.4
Real Assets <sup>5/</sup>	6.3	7.6	7.3	7.2
<i>Real Assets Custom Index <sup>5/</sup></i>	5.4	8.6	8.5	6.0
<i>Consumer Price Index + 3%</i>	3.8	4.4	4.7	5.2
Diversifying Assets	6.7	8.8	6.1	NA
<i>HFRI FOF Strategic Index</i>	4.1	10.7	7.7	NA
Fixed Income	6.1	4.5	6.3	5.9
<i>Barclays U.S. Aggregate Bond Index</i>	6.0	2.7	4.4	4.7
Liquidity Reserve	0.5	0.4	0.3	1.8
<i>BofA ML 3 Month U.S. T-Bill Index</i>	0.0	0.1	0.1	1.5
<b>Total Fund</b>	<b>6.4%</b>	<b>10.6%</b>	<b>9.2%</b>	<b>6.6%</b>
<i>Total Fund Custom Benchmark</i>	<i>6.3%</i>	<i>10.4%</i>	<i>9.2%</i>	<i>7.6%</i>
<i>Total Fund Custom Public Market Equivalent Benchmark</i>	<i>7.6%</i>	<i>12.9%</i>	<i>10.1%</i>	<i>8.0%</i>

<sup>1/</sup>Returns for periods greater than one year are annualized. Performance was calculated using the Modified Dietz day-weighted return methodology.

<sup>2/</sup>Historical Alternative Investment performance includes Private Equity, Special Situations, and Venture Capital.

<sup>3/</sup>The Burgiss All Private Equity Custom Index is intended to compare the program's performance to its peers.

<sup>4/</sup>The Russell 3000 Index + 3% is a long-term benchmark by which SERS measures its private market performance. Shorter term variances (1-year and 3-year) can be pronounced due to the nature of private assets and are not as relevant for benchmark purposes.

<sup>5/</sup>Alternative Investments, its corresponding benchmarks, the Private Energy, Non-Core Real Estate, Core Real Estate, and REITs sections of Real Assets, and the corresponding Real Assets Custom Index are reported on a quarter lagged basis.

# INVESTMENT SECTION

## Fund Value and Annual Return History

December 31, 2014 (unaudited)

### Fund Values and Annual Returns

(\$ millions)

Year Ended	SERS Fund Fair Value	Annual Total Fund Rate of Return <sup>1/</sup>
1985	\$6,157	23.1%
1986	7,120	15.2
1987	7,367	3.3
1988	8,312	12.8
1989	9,785	17.8
1990	9,886	1.0
1991	11,940	22.6
1992	12,453	7.4
1993	13,701	13.2
1994	13,330	-1.1
1995	16,343	25.2
1996	18,492	15.4
1997	21,312	18.5
1998	24,123	16.3
1999	28,093	19.9
2000	27,880	2.2
2001	24,706	-7.9
2002	20,880	-10.9
2003	24,536	24.3
2004	26,641	15.1
2005	28,752	14.5
2006	32,053	16.4
2007	35,516	17.2
2008	22,796	-28.7
2009	24,662	9.1
2010	25,886	11.9
2011	24,377	2.7
2012	25,389	12.0
2013	27,394	13.6
2014	27,338	6.4

<sup>1/</sup>Returns were calculated using the Modified Dietz day-weighted return methodology.

# INVESTMENT SECTION

## Largest Assets Held

December 31, 2014 (unaudited)

### U.S. Equity

Holding	Fair Value
Apple Inc	\$107,265,739
Microsoft Corp	98,654,876
Exxon Mobil Corp	59,763,655
Proctor and Gamble Co	57,028,352
TJX Companies Inc	55,740,315
JPMorgan Chase and Co	55,430,360
Walt Disney Co	53,815,080
Johnson and Johnson	53,533,566
Facebook Inc	52,769,841
Citigroup Inc	52,577,821

### Non-U.S. Equity

Holding	Fair Value
Roche Holdings AG	\$69,374,608
Nestle SA	68,267,662
Novartis AG	57,089,150
Toyota Motor Corp	54,105,935
Bayer AG	49,388,917
AIA Group Ltd	43,249,878
Reckitt Benckiser Group PLC	38,238,139
Sanofi SA	35,864,731
HSBC Holdings PLC	32,027,973
Samsung Electronics Co Ltd	30,289,865

### Non-U.S. Fixed Income

Holding	Fair Value
Russian Federation Bond, Variable Rate March 31, 2030	\$13,017,271
Buoni Poliennali Del Tes, 5.000% August 1, 2039	12,729,517
United Kingdom Gilt, 2.750% January 22, 2015	10,693,658
United Mexican States, 7.750% November 13, 2042	10,286,311
United Mexican States, 8.500% May 31, 2029	8,609,392
United Mexican States, 8.500% November 18, 2038	8,193,333
United Kingdom Gilt Inflation Linked, 1.250% November 22, 2027	7,756,219
Brazilian National Treasury Note, 10.000% January 1, 2023	6,928,563
Queensland Treasury Corp, 6.250% February 21, 2020	6,788,711
Kommunalbanken AS 144A, Variable Rate March 27, 2017	6,101,996

Note: A detailed list of SERS investment holdings at December 31, 2014, may be viewed at [www.SERS.pa.gov](http://www.SERS.pa.gov).

# INVESTMENT SECTION

## Largest Assets Held

December 31, 2014 (unaudited)

### U.S. Government and Government Related Fixed Income

Holding	Fair Value
U.S. Treasury Note, 2.250% November 15, 2024	\$203,146,029
U.S. Treasury Note, 2.375% August 15, 2024	197,516,491
U.S. Treasury Inflation Index Note, 0.125% January 15, 2023	56,985,699
U.S. Treasury Inflation Index Note, 2.375% January 15, 2025	55,528,562
U.S. Treasury Inflation Index Note, 0.125% January 15, 2022	46,919,696
U.S. Treasury Note, 2.000% August 31, 2021	42,930,540
U.S. Treasury Inflation Index Note, 0.125% April 15, 2018	42,162,759
U.S. Treasury Inflation Index Note, 0.125% April 15, 2019	41,236,464
U.S. Treasury Inflation Index Note, 0.125% April 15, 2017	37,785,515
U.S. Treasury Inflation Index Note, 1.250% July 15, 2020	37,408,267

### U.S. Corporate Fixed Income

Holding	Fair Value
SRERS Funding Ltd, Variable Rate May 9, 2046	\$12,122,077
Resolution Funding Corp, 0.000% April 15, 2030	9,197,350
Goldman Sachs Group Inc, 5.750% January 24, 2022	9,080,802
Countrywide Home Equity Loan Trust, Variable Rate November 15, 2035	6,854,016
Morgan Stanley, 4.750% March 22, 2017	6,593,526
Goldman Sachs Group Inc, Variable Rate November 15, 2018	6,018,408
Bank of America Corp, 1.350% November 21, 2016	5,095,488
Morgan Stanley, 5.750% January 25, 2021	5,050,980
Gramercy Real Estate CDO 144A, Variable Rate August 15, 2056	4,960,967
Municipal Electric Authority of Georgia, 6.655% April 1, 2057	4,560,626

Note: A detailed list of SERS investment holdings at December 31, 2014, may be viewed at [www.SERS.pa.gov](http://www.SERS.pa.gov).

**Schedule of Trading Broker Commissions**

December 31, 2014 (unaudited)

Broker fees on equity and fixed income investment transactions for the year ended December 31, 2014 were \$4.3 million. Below is a list of brokers receiving fees in excess of \$20,000 during the year.

<b>Broker</b>	<b>Commissions</b>	<b>Broker</b>	<b>Commissions</b>
UBS	\$413,247	Bloomberg Tradebook	\$36,584
Merrill Lynch	401,441	KCG Holdings	36,025
JP Morgan Chase	280,293	Citation Group	32,673
Morgan Stanley Smith Barney	279,800	Pershing	30,048
Credit Suisse First Boston	263,571	CITIC	29,712
Goldman Sachs	236,137	RBC Dominion Securities	28,813
Citigroup	180,843	Greentree Brokerage Services	27,288
Deutsche Bank	172,666	Stifel Nicolaus	25,059
Liquidnet	131,654	Raymond James & Associates	23,194
Barclays	113,001	Itau Securities	22,908
Investment Technology Group	112,896	Exane	22,692
Sanford C Bernstein & Company	108,158	BTIG	22,660
HSBC Securities	94,903	KeyCorp	22,565
Credit Agricole	81,680	Redburn Partners	22,519
Nomura Group	76,784	Santander	22,504
Macquarie Bank	57,194	Boenning & Scattergood	21,955
Wells Fargo and Company	51,928	Loop Capital	21,327
BNP Paribas	50,120	CL King & Associates	21,059
Sturdivant and Company	49,538	ISI	20,480
Jefferies and Company	37,374		

# INVESTMENT SECTION

## Investment Summary

December 31, 2014 (unaudited)

The assets of SERS are administered by the board. The board adopted an investment policy that incorporates the provisions of the Retirement Code which govern the investment of SERS assets. SERS investment plan is reviewed and updated biennially for strategic asset allocation purposes, as well as for diversification needs within each asset class.

### Asset Allocation

(\$ millions)

Asset Class	Market Exposure <sup>1/</sup>	% of Total Fund	Long-Term 10-Year Strategic Target
Alternative Investments	\$5,428.5	19.9%	15.0%
Global Public Equity	9,985.7	36.5	40.0
Real Assets	4,194.8	15.4	17.0
Diversifying Assets	1,721.0	6.3	10.0
Fixed Income	4,417.7	16.2	15.0
Liquidity Reserve	1,552.5	5.7	3.0
<b>Total Fund</b>	<b>\$27,300.2</b>	<b>100.0%</b>	<b>100.0%</b>

<sup>1/</sup> Market exposure includes receivables and accruals at year's end.

### Number of Investment Managers

Asset Class	Investment Managers
Alternative Investments	144
Global Public Equity	16
Real Assets	37
Diversifying Assets	17
Fixed Income	16
Liquidity Reserve	3
<b>Total Managers</b>	<b>233</b>

### Number of Investment Portfolios

Asset Class	Investment Portfolios
Alternative Investments	337
Global Public Equity	18
Real Assets	74
Diversifying Assets	17
Fixed Income	19
Liquidity Reserve	4
<b>Total Portfolios</b>	<b>469</b>

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Asset Class Description

The Alternative Investments program includes SERS Fund assets held in partnerships that pursue private market strategies in private equity, special situations, and venture capital with investments typically made over a multi-year period and which offer premium returns to compensate for illiquidity.

### Role in the SERS Fund

The program seeks high, long-term capital appreciation to enhance total SERS Fund returns with an investment return horizon that is typically seven or more years.

### Portfolio Exposure

The Alternative Investments program is well diversified by sub-sector, geography, and industry focus. As of September 30, 2014, based on fair value, the program's exposure was:

#### By Fund Sub-Sector

U.S. Private Equity	36.0%
Non-U.S. <sup>1/</sup>	24.3
U.S. Venture Capital	21.5
Distressed/Opportunistic	12.8
Pennsylvania-Related	5.4

#### By Geography<sup>2/</sup>

United States	66.7%
United Kingdom	5.5
China	4.0
Italy	2.7
Germany	1.5
Canada	1.4
France	1.3
Rest of World	16.9

#### By Industry<sup>2/</sup>

Financials	23.0%
Information Technology	18.8
Consumer Discretionary	18.6
Health Care	13.9
Industrials	11.8
Energy	5.7
Consumer Staples	3.3
Materials	2.4
Telecommunication Services	1.3
Utilities	1.0
Other	0.2

<sup>1/</sup>Some managers with a domestic investment focus may invest globally. Thus, non-U.S. exposure measured on a portfolio company basis will be greater.

<sup>2/</sup>Geography and industry are determined by the portfolio company.

# INVESTMENT SECTION

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Benchmarks

The program's objective is to generate investment returns that exceed the total return of public equity markets by at least 3% and that exceed the mean return for the asset class over a seven- to 10-year period.

Performance is measured relative to the following benchmarks:

- Public Market Benchmark – Russell 3000 + 300 basis points (illiquidity premium)
- Private Market Benchmark – Burgiss All Private Equity Custom Index

### Alternative Investments

Sub-Asset Class	Unfunded Commitments (\$ millions)	Fair Value (\$ millions)	% of Total Fund
Private Equity	\$1,025.0	\$3,212.7	11.8%
Special Situations	246.2	842.6	3.1
Venture Capital	129.6	1,373.2	5.0
<b>Total Alternative Investments</b>	<b>\$1,400.8</b>	<b>\$5,428.5</b>	<b>19.9%</b>

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

The capital committed column represents total dollars allocated from SERS to each limited partnership. Accumulated capital drawn is the portion of SERS capital commitments drawn by the general partner to be invested with underlying portfolio companies along with any reinvested capital. The accumulated distributions column shows the value of capital and profits returned to SERS.

### Private Equity Committed, Drawn, and Distributed

Active Private Equity Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>v</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>2/</sup>
1. ABRY Broadcast Partners III	Growth Equity	02/07/1997	\$25,000,000	\$22,746,123	\$28,386,169
ABRY Partners IV	Middle	03/30/2001	35,000,000	25,380,806	52,812,428
ABRY Partners V	Middle	07/29/2005	45,000,000	41,576,047	75,360,823
ABRY Partners VI	Middle	03/26/2008	50,000,000	58,799,487	61,689,191
ABRY Partners VII	Middle	08/10/2011	30,000,000	32,878,265	7,068,890
ABRY Partners VIII	Middle	*	25,000,000	0	0
2. ABS Capital Partners III	Growth Equity	03/26/1999	35,000,000	29,428,915	18,757,336
ABS Capital Partners IV	Growth Equity	10/13/2000	35,000,000	30,984,280	66,247,486
ABS Capital Partners V	Growth Equity	11/14/2005	20,000,000	19,704,037	21,751,321
ABS Capital Partners VI	Growth Equity	03/13/2009	40,000,000	37,663,354	2,975,636
3. Advent Latin American Private Equity Fund IV	Middle	08/02/2007	30,000,000	29,297,073	28,071,689
Advent International GPE VI-A	Large	07/07/2008	35,000,000	33,466,330	19,601,527
Advent Latin American Private Equity Fund V	Middle	05/17/2010	15,000,000	11,175,000	1,792,500
Advent International GPE VII-B	Large	12/06/2012	40,000,000	22,400,000	799,715
4. Alpha Private Equity Fund 4	Small	05/15/2002	26,508,000	35,605,050	77,986,040
Alpha Private Equity Fund 5	Small	04/01/2006	57,796,800	65,860,056	78,388,189
5. APAX Europe IV	Mega	03/31/1999	32,424,000	29,909,800	39,370,494
APAX Excelsior VI	Small	07/03/2000	35,000,000	34,151,324	55,619,181
APAX Europe V	Mega	04/27/2001	53,262,000	70,385,477	144,730,834
APAX Europe VI	Mega	05/19/2005	76,349,190	76,400,840	83,849,158
APAX Europe VII	Mega	06/27/2007	132,170,235	138,287,004	50,520,808
6. Apollo Investment Fund IV	Mega	09/30/1998	75,000,000	74,838,620	124,738,828
Apollo Investment Fund V	Mega	08/23/2001	50,000,000	46,670,022	121,731,819
Apollo Investment Fund VI	Mega	07/19/2006	40,000,000	38,908,796	41,229,269
7. Asia Alternatives Capital Partners	Fund of Funds	06/26/2007	50,000,000	24,359,013	14,516,147
Asia Alternatives Capital Partners II	Fund of Funds	03/07/2008	50,000,000	24,907,452	6,786,175
Asia Alternatives Korea Buyout Investors (Hahn & Co)	Small	07/22/2011	7,000,000	6,765,375	1,236,179
Asia Alternatives Capital Partners III	Fund of Funds	08/03/2012	50,000,000	26,734,898	3,418,429
Penn Asia Investors	Fund of Funds	09/28/2012	83,000,000	17,033,802	3,710,862
8. Asia Pacific Growth Fund III	Growth Equity	09/28/1999	15,000,000	15,334,963	14,833,684

# INVESTMENT SECTION

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Private Equity Committed, Drawn, and Distributed (continued)

	Active Private Equity Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>y</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>z</sup>
9.	Audax Private Equity Fund	Middle	05/25/2000	\$35,000,000	\$36,839,098	\$55,479,437
	Audax Private Equity Fund II	Middle	06/17/2005	25,000,000	25,517,169	41,526,587
	Audax Private Equity Fund III	Middle	11/07/2007	37,000,000	40,479,677	31,204,684
10.	Bain Capital Fund VII	Mega	07/06/2000	25,000,000	25,000,000	47,882,600
	Bain Capital Fund VIII-E	Mega	12/15/2004	12,144,000	13,438,215	15,494,080
	Bain Capital Fund IX	Mega	04/10/2006	75,000,000	74,362,538	79,676,496
	Bain Capital IX Coinvestment Fund	Mega	04/20/2006	15,000,000	15,288,873	16,641,915
	Bain Capital Asia Fund	Middle	10/18/2007	12,000,000	11,430,000	6,185,905
	Bain Capital Fund X	Mega	01/15/2008	90,000,000	87,255,000	27,816,062
	Bain Capital Europe III	Mega	07/10/2008	72,432,276	64,039,370	21,185,437
	Bain Capital X Coinvestment Fund	Mega	07/28/2008	5,000,000	1,225,000	225,935
11.	Baring Vostok Private Equity Fund IV	Middle	03/10/2008	30,000,000	27,168,763	8,185,945
	Baring India Private Equity Fund III Limited	Small	10/10/2008	5,000,000	5,053,649	588,859
12.	BC European Capital VII	Large	07/28/2000	32,658,500	37,921,760	96,576,440
	BC European Capital VII Top Up	Large	07/02/2001	10,046,300	12,351,504	32,386,202
	BC European Capital VIII	Large	12/13/2005	98,107,500	96,125,543	77,650,129
	BC European Capital IX	Large	09/16/2011	26,472,535	15,233,737	2,361,238
13.	Berkshire Fund VI	Middle	07/11/2002	20,000,000	19,012,265	38,529,500
	Berkshire Fund VII	Middle	11/15/2006	32,000,000	30,079,617	28,614,407
	Berkshire Fund VIII	Middle	08/25/2011	30,000,000	14,201,519	543,427
14.	Blackstone Communications Partners I	Mega	08/29/2000	25,000,000	25,110,848	27,605,755
	Blackstone Capital IV	Mega	02/26/2003	75,000,000	68,828,073	158,956,063
	Blackstone Capital Partners V	Mega	05/30/2006	150,000,000	148,490,094	90,795,125
15.	Brait IV	Small	12/11/2006	25,000,000	21,663,974	2,873,282
16.	Brynwood Partners V	Small	07/31/2005	10,000,000	10,491,974	18,302,663
	Brynwood Partners VI	Small	10/13/2009	10,000,000	10,901,080	10,460,234
17.	Capvis Equity IV	Middle	01/30/2014	49,855,591	10,527,552	0
18.	Charterhouse Capital Partners VII	Middle	01/17/2003	62,609,567	54,972,470	101,039,283
	Charterhouse Capital Partners VIII	Middle	04/19/2006	81,688,223	72,469,750	47,258,270
	Charterhouse Capital Partners IX	Middle	04/28/2009	66,385,000	51,260,296	19,871,804
19.	Chequers Capital XV	Middle	07/05/2006	31,133,996	32,668,266	32,213,221
20.	Clayton Dubilier & Rice VI	Middle	12/31/1998	50,000,000	36,437,713	57,754,625
21.	Clessidra Capital Partners II	Middle	11/05/2008	25,631,168	15,283,617	16,688,583
22.	Code Hennessy & Simmons III	Middle	09/30/1997	40,000,000	38,724,000	56,329,887
	Code Hennessy & Simmons IV	Middle	09/16/1999	100,000,000	100,000,000	156,498,466
	Code Hennessy & Simmons V	Middle	11/10/2005	50,000,000	53,741,751	51,181,053
23.	DLJ Merchant Banking Fund II	Large	03/31/1997	75,000,000	83,261,424	105,370,005
	DLJ Merchant Banking Fund III	Large	08/14/2001	85,000,000	88,209,507	185,335,045

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Private Equity Committed, Drawn, and Distributed (continued)

	Active Private Equity Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>y</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>z</sup>
24.	Elevation Partners	Middle	11/10/2005	\$35,000,000	\$30,934,889	\$47,214,491
25.	Eureka II	Growth Equity	01/30/2006	20,000,000	18,376,280	12,134,151
	Eureka Growth Capital III	Growth Equity	10/21/2013	20,000,000	4,164,597	3,982,122
26.	Excelsior Capital Asia Partners III	Small	08/17/2006	25,000,000	25,058,095	12,514,810
27.	Francisco Partners	Middle	07/27/2000	50,000,000	47,825,987	47,816,733
	Francisco Partners II	Middle	07/10/2006	30,000,000	28,127,870	30,006,763
	Francisco Partners III	Middle	10/17/2011	20,000,000	15,150,000	769,322
28.	FSN Capital IV	Middle	12/19/2013	46,049,703	12,006,477	(68,173)
29.	Great Hill Equity Partners	Middle	04/12/1999	30,000,000	30,000,000	30,444,856
	Great Hill Equity Partners II	Middle	03/28/2001	35,000,000	35,063,336	70,640,735
	Great Hill Equity Partners III	Middle	03/07/2006	35,000,000	34,037,500	22,715,000
	Great Hill Equity Partners IV	Middle	09/08/2008	25,000,000	23,350,662	14,388,162
30.	Gryphon Partners II	Small	11/03/1999	35,000,000	34,700,788	41,953,023
	Gryphon Partners III	Small	09/08/2004	30,000,000	37,461,599	44,351,177
31.	GTCR VI	Middle	09/30/1998	50,000,000	50,000,000	43,229,799
	GTCR VII	Middle	03/15/2000	55,000,000	50,074,671	121,784,179
	GTCR VIII	Middle	07/07/2003	75,000,000	69,393,599	101,658,818
	GTCR IX	Middle	12/01/2006	50,000,000	46,666,718	37,541,989
	GTCR Fund XI	Middle	09/02/2014	25,000,000	1,812,500	0
32.	H.I.G. Growth Buyouts & Equity Fund II	Growth Equity	07/20/2011	15,000,000	5,464,671	0
	H.I.G. Europe Capital Partners II	Small	01/10/2014	27,544,596	345,686	0
33.	Hahn & Company II	Middle	*	50,000,000	0	0
34.	Halpern Denny Fund III	Growth Equity	04/26/2000	25,000,000	24,886,871	28,097,819
35.	HarbourVest IPEP III	Fund of Funds	06/30/1998	40,000,000	39,400,000	58,800,683
	HarbourVest Partners VI	Fund of Funds	05/07/1999	200,000,000	196,586,055	206,655,781
	HarbourVest IPEP IV	Fund of Funds	04/09/2001	40,000,000	39,000,000	57,938,066
	HarbourVest Partners VII	Fund of Funds	03/24/2003	75,000,000	72,562,500	53,163,000
	HIPEP V-Asia Pacific & Rest of World	Fund of Funds	05/09/2006	30,000,000	27,645,316	17,012,072
	HarbourVest Partners VIII	Fund of Funds	10/05/2006	100,000,000	92,500,000	47,106,310
36.	Hellman & Friedman Capital Partners V	Large	12/20/2004	80,000,000	71,603,785	185,626,126
	Hellman & Friedman Capital Partners VI	Large	06/05/2007	125,000,000	118,450,321	158,446,666
	Hellman & Friedman Capital Partners VIII	Large	*	50,000,000	0	0
37.	Horizon Strategic Fund - Carlyle Group	Small	09/19/2014	100,000,000	23,131,680	(39,827)
	Horizon Impact Fund - BAML	Small	*	50,000,000	0	0

# INVESTMENT SECTION

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Private Equity Committed, Drawn, and Distributed (continued)

	Active Private Equity Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>1/</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>2/</sup>
38.	Incline Equity Partners III	Small	01/14/2013	\$15,000,000	\$3,916,863	\$145,468
39.	InterMedia Partners VII	Small	01/05/2007	15,000,000	17,364,948	2,803,002
40.	Invemed Catalyst Fund	Small	10/19/1999	25,000,000	14,559,574	11,020,750
41.	J.H. Whitney IV	Small	02/01/2000	20,000,000	17,958,772	6,970,458
	J.H. Whitney VI	Small	01/05/2006	50,000,000	49,681,452	37,034,626
	J.H. Whitney VII	Small	10/12/2010	25,000,000	17,725,228	3,542,606
42.	J.W. Childs Equity Partners III	Middle	08/20/2002	40,000,000	41,966,505	76,500,901
43.	JMI Equity Fund V	Growth Equity	06/07/2005	24,000,000	24,009,205	117,002,561
	JMI Equity Fund VI	Growth Equity	06/27/2007	40,000,000	39,120,000	31,145,764
	JMI Equity Fund VII	Growth Equity	02/14/2011	10,000,000	7,860,000	1,296,923
	JMI Equity Fund VIII	Growth Equity	*	25,000,000	0	0
44.	Kelso VII	Middle	10/18/2004	40,000,000	41,125,677	64,480,172
	Kelso VIII	Middle	11/29/2007	150,000,000	129,925,643	32,868,682
45.	Leeds Equity Partners IV	Small	11/12/2004	20,000,000	20,396,199	21,192,794
46.	LLR Equity Partners	Middle	02/04/2000	25,000,000	24,576,062	52,500,490
	LLR Equity Partners II	Middle	01/29/2004	25,000,000	25,000,000	35,570,591
	LLR Equity Partners III	Middle	07/24/2008	30,000,000	29,108,721	18,231,244
	LLR Equity Partners IV	Middle	03/14/2014	50,000,000	7,292,708	0
47.	Madison Dearborn Capital Partners IV	Middle	04/02/2001	90,000,000	90,632,507	159,090,333
	Madison Dearborn Capital Partners V	Middle	07/31/2006	75,000,000	71,229,812	44,398,826
	Madison Dearborn Capital Partners VI	Middle	05/27/2008	50,000,000	39,942,877	26,527,726
48.	Meridian Venture Partners II	Small	02/11/2005	10,000,000	10,000,000	8,987,734
49.	Motion II B	Middle	11/02/2005	48,204,998	47,303,925	18,911,354
50.	New York Life Capital Partners III	Fund of Funds	06/30/2006	50,000,000	52,167,446	21,006,167
	New York Life Capital Partners IV	Fund of Funds	04/04/2008	50,000,000	52,865,187	36,641,532
51.	NewSpring Growth Capital II	Growth Equity	12/05/2006	10,000,000	9,350,000	8,082,443
	NewSpring Growth Capital III	Growth Equity	07/27/2012	25,000,000	7,473,959	(32,603)
52.	Nordic Capital V	Middle	05/07/2004	34,996,500	46,006,701	128,686,228
	Nordic Capital VI	Middle	07/25/2006	54,369,000	64,343,827	46,749,935
	Nordic Capital VII	Middle	05/02/2008	92,519,165	88,457,662	13,666,572
53.	Oakhill Capital Partners	Middle	05/17/1999	50,000,000	53,718,802	93,747,595
54.	Palamon European Equity	Growth Equity	07/23/1999	29,779,989	38,406,197	55,442,800
	Palamon European Equity II	Growth Equity	10/25/2005	36,114,000	43,737,582	43,083,839
55.	Parthenon Investors II	Small	08/09/2001	20,000,000	22,170,045	33,644,564
56.	Patriot Financial Partners	Small	06/12/2008	25,000,000	25,017,767	8,813,334

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Private Equity Committed, Drawn, and Distributed (continued)

Active Private Equity Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>1/</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>2/</sup>
57. Permira European Fund	Large	09/30/1997	\$33,494,536	\$32,159,947	\$84,005,717
Permira European Fund II	Large	06/07/2000	48,000,000	45,672,612	87,060,380
Permira European Fund III	Large	01/12/2004	115,960,000	125,707,519	182,896,681
Permira IV	Large	12/14/2006	127,779,198	131,056,449	95,285,498
58. PNC Equity Partners II	Small	08/30/2007	15,000,000	13,241,362	11,610,156
59. Providence Equity Partners IV	Large	11/27/2000	25,000,000	23,426,313	54,283,066
Providence Equity Partners V	Large	04/04/2005	45,000,000	42,507,364	38,982,836
Providence Equity Partners VI	Large	03/16/2007	50,000,000	51,041,157	29,654,435
60. Segulah IV	Middle	09/25/2008	16,705,647	15,934,984	4,872,298
61. Sentinel Capital Partners V	Middle	07/15/2014	10,000,000	1,392,451	0
62. ShoreView Capital Partners	Small	06/16/2003	38,000,000	32,432,631	49,197,847
ShoreView Capital Partners II	Small	03/27/2008	40,000,000	36,052,659	20,138,015
63. Siguler Guff BRIC Opportunities Fund	Fund of Funds	05/08/2006	10,000,000	9,558,299	4,528,841
Siguler Guff BRIC Opportunities Fund II	Fund of Funds	04/09/2008	25,000,000	22,263,557	1,587,016
64. Sterling Capital Partners I	Middle	10/31/2002	15,000,000	14,979,168	27,762,291
Sterling Capital Partners II	Middle	08/18/2005	30,000,000	29,893,709	22,770,689
Sterling Capital Partners III	Middle	08/13/2007	32,000,000	31,191,575	8,957,399
65. Summit IV	Middle	09/30/1995	25,000,000	24,250,000	183,419,644
Summit V	Growth Equity	03/31/1998	37,500,000	36,187,500	49,906,903
Summit Ventures VI	Growth Equity	03/23/2001	62,000,000	63,914,751	119,079,287
Summit Partners Private Equity Fund VII	Middle	02/09/2006	97,134,500	97,134,505	56,365,040
66. TA IX	Middle	09/20/2000	45,000,000	43,741,796	105,463,424
TA X	Middle	04/25/2006	70,000,000	69,732,009	52,932,009
67. Thomas H. Lee Equity Fund V	Large	07/03/2001	100,000,000	104,813,679	173,187,961
Thomas H. Lee Equity Fund VI	Large	11/14/2006	50,000,000	51,082,043	28,308,516
68. TPG Partners III	Mega	01/13/2000	75,000,000	64,119,169	163,679,936
Newbridge Asia III	Middle	02/15/2001	15,000,000	14,438,357	55,620,782
TPG Partners IV	Mega	12/29/2003	30,000,000	27,981,463	48,457,028
Newbridge Asia IV	Middle	09/27/2005	40,000,000	38,903,378	62,206,598
TPG Partners V	Mega	06/27/2006	100,000,000	92,333,915	41,641,145
TPG Asia V	Large	02/19/2008	22,500,000	21,603,940	7,504,636
TPG Partners VI	Mega	05/22/2008	45,000,000	45,027,107	19,609,789
69. Vestar Capital Partners III	Middle	06/30/1997	25,000,000	24,362,534	27,746,687
Vestar Capital Partners IV	Middle	01/25/2000	100,000,000	97,632,498	170,311,374
Vestar Capital Partners V	Middle	01/25/2006	50,000,000	51,278,152	16,818,188

# INVESTMENT SECTION

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Private Equity Committed, Drawn, and Distributed (continued)

	Active Private Equity Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>1/</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>2/</sup>
70.	Weston Presidio III	Growth Equity	12/31/1998	\$35,000,000	\$31,989,586	\$30,440,421
	Weston Presidio IV	Growth Equity	06/21/2000	35,000,000	34,451,015	38,399,714
	Weston Presidio V	Growth Equity	12/08/2005	50,000,000	48,397,829	52,298,132
71.	Yucaipa American Alliance Fund II	Middle	01/13/2009	25,000,000	28,126,647	11,283,471
	<b>Total Active Private Equity</b>			<b>\$7,883,326,713</b>	<b>\$7,046,925,830</b>	<b>\$8,009,183,370</b>

Cash flows as of September 30, 2014.

\*Not funded as of September 30, 2014.

<sup>1/</sup>Commitments as of December 31, 2014.

<sup>2/</sup>Distributions include stock distributions. Distributions may include fees that are recorded as negative distributions to be offset against future distributions of the underlying limited partnership investment.

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

The capital committed column represents total dollars allocated from SERS to each limited partnership. Accumulated capital drawn is the portion of SERS capital commitments drawn by the general partner to be invested with underlying portfolio companies along with any reinvested capital. The accumulated distributions column shows the value of capital and profits returned to SERS.

### Special Situations Committed, Drawn, and Distributed

Active Special Situations Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>1/</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>2/</sup>
1. ABRY Mezzanine Partners	Mezzanine	03/15/2002	\$30,000,000	\$26,698,593	\$46,795,147
ABRY Senior Equity II	Mezzanine	07/27/2006	30,000,000	27,700,250	42,291,814
ABRY Advanced Securities Fund	Distressed/Restructuring	08/01/2008	25,000,000	23,383,525	37,475,518
2. AG Capital Recovery Partners IV	Distressed/Restructuring	02/04/2003	50,000,000	35,415,216	55,975,314
AG Capital Recovery Partners V	Distressed/Restructuring	04/17/2006	20,000,000	20,000,000	19,424,613
3. Avenue Special Situations Fund IV	Distressed/Restructuring	03/27/2006	50,000,000	50,000,000	68,816,017
Avenue Asia Special Situations Fund IV	Distressed/Restructuring	06/30/2006	50,000,000	31,897,973	22,557,858
Avenue Special Situations Fund V	Distressed/Restructuring	06/04/2007	70,000,000	70,004,050	92,444,416
Avenue Europe Special Situations Fund	Distressed/Restructuring	07/30/2008	38,632,500	25,749,356	37,140,680
Avenue Special Situations Fund VI	Distressed/Restructuring	11/02/2010	20,000,000	20,068,464	8,983,643
4. AXA Secondary Fund III	Secondaries	11/19/2004	26,000,000	21,604,560	35,016,216
AXA Secondary Fund III-2	Secondaries	11/24/2004	14,000,000	11,595,111	17,852,445
AXA Secondary Fund IV	Secondaries	02/26/2007	80,000,000	67,414,866	50,914,276
AXA Secondary Fund V B	Secondaries	06/19/2012	75,000,000	50,317,529	13,613,554
5. Centerbridge Capital Partners I	Distressed/Restructuring	02/27/2007	50,000,000	56,251,691	85,047,694
6. Cerberus Institutional Partners	Distressed/Restructuring	03/05/1999	35,000,000	35,000,000	79,427,565
Cerberus Institutional Partners Series Two	Distressed/Restructuring	10/09/2001	35,000,000	30,100,793	93,008,440
Cerberus Institutional Partners Series Three	Distressed/Restructuring	11/13/2003	35,000,000	22,321,354	41,597,958
Cerberus Institutional Partners Series Four	Distressed/Restructuring	11/27/2006	75,000,000	69,258,215	51,859,192
7. CVI Global Value Fund	Distressed/Restructuring	02/23/2007	60,000,000	57,151,667	65,206,581
8. Dover Street VII	Secondaries	07/02/2008	30,000,000	28,295,287	20,402,018

# INVESTMENT SECTION

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Special Situations Committed, Drawn, and Distributed (continued)

	Active Special Situations Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>1/</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>2/</sup>
9.	H.I.G. Bayside Debt & LBO Fund II	Distressed/ Restructuring	06/17/2008	\$30,000,000	\$21,100,000	\$14,315,131
	H.I.G. Bayside Loan Opportunities Fund III	Distressed/ Restructuring	06/12/2013	50,000,000	19,243,996	494,108
	H.I.G. Bayside Loan Opportunities Fund IV	Distressed/ Restructuring	*	25,000,000	0	0
10.	JP Morgan U.S. Corp Finance Investors II	Distressed/ Restructuring	01/14/2003	50,000,000	52,778,782	62,338,738
11.	KPS Special Situations Fund IV	Distressed/ Restructuring	05/08/2014	25,000,000	2,053,119	0
12.	Landmark Equity IV	Secondaries	03/31/1995	14,923,291	12,495,850	18,728,790
	Landmark Equity Partners V	Secondaries	12/31/1995	19,624,113	19,434,947	23,521,627
13.	LBC Credit Partners III	Mezzanine	03/04/2013	50,000,000	22,276,834	2,183,653
14.	Lexington Capital Partners II	Secondaries	06/30/1998	40,000,000	39,538,000	51,929,777
	Lexington Capital Partners III	Secondaries	01/26/1999	35,000,000	34,516,449	42,143,167
	Lexington Capital Partners V	Secondaries	01/17/2002	75,000,000	74,623,418	115,674,584
	Lexington Capital Partners VI	Secondaries	10/21/2005	50,000,000	53,066,325	43,139,674
15.	Matlin Patterson Global Opportunities Partners	Distressed/ Restructuring	05/31/2001	35,000,000	30,091,262	56,689,513
	Matlin Patterson Global Opportunities Partners II	Distressed/ Restructuring	06/30/2004	30,000,000	30,410,597	10,578,309
16.	OCM Opportunities Fund II	Distressed/ Restructuring	03/31/1998	40,000,000	40,000,000	60,332,637
	OCM Opportunities Fund III	Distressed/ Restructuring	01/20/2000	60,000,000	60,007,890	89,277,812
	OCM Principal Opportunities II	Distressed/ Restructuring	04/24/2001	25,000,000	25,000,000	43,867,500
	OCM Opportunities Fund IV	Distressed/ Restructuring	09/26/2001	70,000,000	70,000,000	115,463,024
	Oaktree Capital Management	Distressed/ Restructuring	05/28/2004	40,000,000	40,581,778	93,945,691
	OCM Opportunities Fund V	Distressed/ Restructuring	08/12/2004	40,000,000	40,003,507	62,981,710
	OCM Opportunities Fund VI	Distressed/ Restructuring	09/28/2005	40,000,000	40,000,000	58,630,983
	OCM Principal Opportunities Fund IV	Distressed/ Restructuring	01/24/2007	20,000,000	20,400,000	20,590,668
	OCM Opportunities Fund VII	Distressed/ Restructuring	05/16/2007	40,000,000	40,000,000	47,570,292
	OCM Opportunities Fund VIIb	Distressed/ Restructuring	06/03/2008	40,000,000	36,000,000	55,389,168
	OCM Opportunities Fund VIII	Distressed/ Restructuring	09/20/2010	12,500,000	12,583,425	8,206,679
	OCM Opportunities Fund VIIIb	Distressed/ Restructuring	08/22/2011	12,500,000	12,500,000	0

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Special Situations Committed, Drawn, and Distributed (continued)

Active Special Situations Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>1/</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>2/</sup>
Oaktree Opportunities Fund IX	Distressed/Restructuring	03/26/2013	\$50,000,000	\$37,500,000	\$0
17. Platinum Equity Capital Partners III	Distressed/Restructuring	08/05/2013	50,000,000	19,183,057	12,856,311
18. Sankaty Credit Opportunities III	Distressed/Restructuring	03/08/2007	50,000,000	50,000,000	37,092,674
Sankaty Credit Opportunities IV	Distressed/Restructuring	07/15/2008	40,000,000	38,000,000	43,203,686
19. Templeton Strategic Emerging Markets Fund III	Distressed/Restructuring	05/29/2009	100,000,000	93,367,388	17,709,920
20. Versa Capital Partners	Distressed/Restructuring	10/16/2005	20,000,000	23,611,753	15,988,714
Versa Capital Partners II	Distressed/Restructuring	07/31/2008	15,000,000	14,404,364	5,867,313
21. W Capital Partners II	Secondaries	08/08/2007	40,000,000	39,034,444	36,848,578
<b>Total Active Special Situations</b>			<b>\$2,233,179,904</b>	<b>\$1,944,035,685</b>	<b>\$2,253,411,390</b>

Cash flows as of September 30, 2014.

\*Not funded as of September 30, 2014.

<sup>1/</sup>Commitments as of December 31, 2014.

<sup>2/</sup>Distributions include stock distributions. Distributions may include fees that are recorded as negative distributions to be offset against future distributions of the underlying limited partnership investment.

# INVESTMENT SECTION

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

The capital committed column represents total dollars allocated from SERS to each limited partnership. Accumulated capital drawn is the portion of SERS capital commitments drawn by the general partner to be invested with underlying portfolio companies along with any reinvested capital. The accumulated distributions column shows the value of capital and profits returned to SERS.

### Venture Capital Committed, Drawn, and Distributed

Active Venture Capital Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>1/</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>2/</sup>
1. Abingworth Bioventures IV	Balanced	09/01/2003	\$20,000,000	\$19,626,273	\$9,460,344
Abingworth Bioventures V	Balanced	01/23/2007	33,775,000	25,792,179	29,502,522
2. Accel Europe	Early Stage	07/02/2001	15,000,000	11,350,000	12,076,190
3. Adams Capital Management II	Early Stage	10/01/1999	30,000,000	30,000,000	3,800,000
Adams Capital Management III	Early Stage	11/21/2000	30,000,000	30,000,000	7,011,905
4. Advanced Technology Ventures VI	Balanced	03/09/2000	10,000,000	10,000,000	4,047,939
Advanced Technology Ventures VII	Balanced	07/11/2001	27,000,000	27,000,000	24,378,062
5. Alloy Ventures 2000	Early Stage	05/19/2000	20,000,000	20,000,000	5,125,846
Alloy Ventures 2002	Early Stage	07/22/2002	25,000,000	25,000,000	14,527,240
Alloy Annex I	Early Stage	10/31/2003	5,000,000	5,000,000	1,271,247
Alloy Ventures 2005	Early Stage	08/11/2005	25,000,000	25,000,000	4,095,478
6. APEX Investment Fund V	Early Stage	04/19/2002	20,000,000	20,645,068	7,347,556
7. Artiman Ventures II	Early Stage	10/27/2006	25,000,000	25,000,000	13,141,575
Artiman Ventures III	Early Stage	08/09/2010	20,000,000	14,860,000	0
8. Atlas Venture Fund V	Early Stage	02/07/2000	37,200,000	37,211,109	40,115,109
Atlas Venture Fund VI	Early Stage	08/01/2001	24,800,000	24,800,000	11,117,236
9. Austin Ventures VIII	Balanced	07/26/2001	20,932,140	21,100,362	29,270,607
Austin Ventures IX	Balanced	01/09/2006	15,000,000	14,999,182	10,904,019
10. Battery Ventures VIII	Balanced	08/13/2007	25,000,000	24,416,202	25,222,296
Battery Ventures VIII Side Car Fund	Balanced	08/29/2008	9,000,000	6,405,956	15,212,353
11. Birchmere Ventures III	Early Stage	05/05/2005	10,000,000	10,288,515	8,692,184
12. Care Capital Investments III	Balanced	02/08/2006	25,000,000	20,099,654	3,133,157
13. Charles River Partnership XI	Early Stage	02/15/2001	11,032,259	11,032,259	14,360,660
14. CID Greater China Venture Capital Fund II	Balanced	08/10/2007	20,000,000	17,780,000	11,692,180
15. Clearstone Venture Partners III-A	Early Stage	12/22/2004	25,000,000	23,000,000	267,818
16. Cross Atlantic Technology Fund	Balanced	02/14/2000	20,000,000	20,149,041	23,742,240
Cross Atlantic Technology Fund II	Balanced	01/28/2002	32,900,000	32,900,000	27,178,304
17. Devon Park Bioventures	Balanced	12/15/2006	10,842,697	8,857,861	950,627
18. Draper Fisher Jurvetson Fund VI	Early Stage	08/13/1999	8,000,000	8,000,000	4,973,853
Draper Triangle Ventures	Early Stage	12/20/1999	20,000,000	20,708,909	11,357,493
Draper Fisher Jurvetson Fund VII	Early Stage	09/22/2000	20,000,000	20,000,000	3,178,088
Draper Triangle Ventures II	Early Stage	10/13/2004	12,000,000	12,808,420	8,441,643
Draper Triangle Ventures III	Early Stage	*	10,000,000	0	0

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Venture Capital Committed, Drawn, and Distributed (continued)

Active Venture Capital Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>1/</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>2/</sup>
19. Fairview Capital	Fund of Funds	09/30/1994	\$10,000,000	\$10,000,000	\$4,543,128
Fairview II	Fund of Funds	03/31/1998	10,000,000	9,870,000	3,982,519
20. Frazier Healthcare III	Balanced	03/31/1999	30,000,000	30,000,000	12,516,529
Frazier Healthcare IV	Balanced	09/27/2001	30,000,000	29,820,000	24,579,485
Frazier Healthcare V	Balanced	05/10/2005	30,000,000	29,625,000	36,246,683
21. Grotech Partners V	Early Stage	09/30/1998	25,000,000	25,000,000	24,521,934
22. Guggenheim Technology Ventures I	Early Stage	11/17/2008	2,000,000	2,000,000	472,424
23. Healthcare Ventures V	Early Stage	12/31/1997	25,000,000	25,000,000	52,355,501
Healthcare Ventures VI	Early Stage	06/19/2000	35,000,000	35,000,000	4,722,059
Healthcare Ventures VII	Early Stage	10/29/2002	35,000,000	35,000,000	16,404,798
Healthcare Ventures VIII	Early Stage	08/22/2005	30,000,000	26,925,000	9,581,777
24. Highland Capital Partners VI	Early Stage	10/25/2001	25,000,000	25,000,000	33,190,168
Highland Capital Partners VII	Early Stage	10/13/2006	35,000,000	34,301,991	11,962,505
Highland Consumer Fund I	Early Stage	05/04/2007	25,000,000	23,263,199	0
25. IP II	Balanced	12/17/2001	8,600,000	8,584,073	2,602,522
IP III	Balanced	11/19/2004	10,500,000	9,555,000	11,329,558
IP IV	Balanced	09/21/2007	14,000,000	13,300,000	9,431,296
26. Insight Venture Partners VI	Balanced	08/21/2007	30,000,000	32,244,176	33,178,523
Insight Venture Partners VII	Balanced	04/27/2011	20,000,000	20,001,495	6,006,383
Insight Venture Partners VIII	Balanced	07/10/2013	50,000,000	39,850,000	0
27. InterWest Partners VIII	Early Stage	08/25/2000	25,000,000	25,000,000	10,757,162
InterWest Partners IX	Balanced	10/19/2005	20,000,000	18,000,000	13,368,315
InterWest Partners X	Balanced	10/30/2008	30,000,000	24,000,000	1,120,736
28. JP Morgan Venture Capital Investors	Fund of Funds	07/08/1999	100,000,000	107,275,187	63,515,230
JP Morgan Venture Capital Investors II	Fund of Funds	09/08/2000	100,000,000	111,212,081	83,819,234
JP Morgan Venture Capital Investors III	Fund of Funds	06/20/2006	100,000,000	104,381,072	44,333,849
29. Kline Hawkes Pacific	Balanced	08/30/2000	15,000,000	15,100,498	6,974,159
30. Knightsbridge Venture Capital VI	Fund of Funds	12/07/2004	20,000,000	18,266,667	6,500,612
31. Lightspeed Venture Partners VII	Early Stage	02/27/2006	18,000,000	17,737,490	6,375,151
Lightspeed Venture Partners VIII	Early Stage	06/27/2008	15,000,000	13,650,000	11,342,199
32. Media/Communications Ventures Fund V	Growth Equity	09/27/2000	35,000,000	34,812,205	53,978,276
33. Meritech Capital Partners II	Late Stage	01/02/2001	26,475,166	24,842,529	36,426,221
Meritech Capital Partners III	Late Stage	04/05/2006	35,000,000	34,475,000	148,541,444
Meritech Capital Partners IV	Late Stage	02/10/2011	20,000,000	18,300,000	2,995,054
Meritech Capital Partners V	Late Stage	09/03/2014	23,000,000	1,265,000	0
34. Mid-Atlantic Venture Fund III	Early Stage	06/30/1997	20,008,308	20,000,000	5,654,702
Mid-Atlantic Venture Fund IV	Early Stage	05/04/2000	30,000,000	30,246,718	9,177,849

# INVESTMENT SECTION

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Venture Capital Committed, Drawn, and Distributed (continued)

	Active Venture Capital Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>1/</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>2/</sup>
35.	Morgenthaler Partners VII	Balanced	07/26/2001	\$35,000,000	\$35,143,798	\$26,973,415
	Morgenthaler Partners VIII	Balanced	10/03/2005	35,000,000	34,004,696	21,353,695
	Morgenthaler Partners IX	Balanced	11/25/2008	20,000,000	16,000,000	10,221,827
36.	NEPA Venture-II	Balanced	12/31/1992	7,500,000	7,500,000	34,879,769
37.	New Enterprise Associates VI	Early Stage	03/31/1994	25,000,000	25,000,000	200,407,487
	New Enterprise Associates VII	Early Stage	12/31/1996	30,000,000	30,000,000	102,186,705
	New Enterprise Associates IX	Early Stage	11/15/1999	20,000,000	19,600,000	6,543,630
	New Enterprise Associates X	Early Stage	12/11/2000	35,000,000	34,503,000	31,350,264
	New Enterprise Associates 11	Early Stage	03/01/2004	25,000,000	24,500,000	44,650,921
	New Enterprise Associates 12	Early Stage	06/26/2006	35,000,000	34,479,833	28,077,626
38.	Novitas Capital III	Early Stage	04/17/2003	10,000,000	9,675,000	3,924,047
39.	Oak Investment Partners XI	Late Stage	07/21/2004	35,000,000	35,000,000	15,565,248
	Oak Investment Partners XII	Late Stage	07/10/2006	40,000,000	40,000,000	15,753,874
40.	Permira UK Venture Fund IV	Balanced	09/30/1996	15,248,000	15,993,572	23,494,012
41.	Pitango Venture Capital Fund IV	Early Stage	07/19/2004	20,000,000	19,601,534	9,809,664
	Pitango Venture Capital Fund V	Early Stage	08/22/2007	30,000,000	26,963,295	14,796,485
42.	Polaris Venture Partners II	Balanced	09/30/1998	25,000,000	24,750,000	40,118,427
	Polaris Venture Partners III	Balanced	01/21/2000	50,000,000	49,500,000	27,935,600
	Polaris Venture Partners IV	Balanced	09/30/2002	50,000,000	49,750,000	32,145,764
	Polaris Venture Partners V	Balanced	08/08/2006	50,000,000	49,000,000	28,903,318
43.	Quaker BioVentures	Balanced	02/20/2003	20,000,000	20,000,000	3,526,430
	Quaker BioVentures II	Balanced	04/03/2007	25,000,000	21,250,000	9,856,556
44.	SCP Private Equity Partners II	Late Stage	06/15/2000	25,000,000	25,000,000	6,219,887
45.	Sofinnova Venture Partners VII	Early Stage	01/18/2007	20,000,000	18,600,000	18,201,465
46.	Summit Accelerator Fund	Early Stage	11/15/1999	8,000,000	7,609,500	13,127,408
	Summit Partners Venture Capital Fund II	Early Stage	09/22/2006	15,000,000	15,823,703	19,105,860
47.	T. Rowe Price Stock Distribution Account <sup>3/</sup>	Late Stage	01/03/2005		See footnote	
48.	Three Arch Capital	Balanced	12/20/2000	20,000,000	19,500,000	12,962,104
	Three Arch Partners IV	Balanced	06/04/2004	20,000,000	19,050,000	8,825,412
49.	TL Ventures IV	Early Stage	05/13/1999	35,000,000	35,000,000	25,582,809
	TL Ventures V	Early Stage	10/18/2000	40,000,000	40,048,219	14,122,113
50.	U.S. Venture Partners VII	Balanced	02/18/2000	13,750,000	13,750,000	4,800,279
	U.S. Venture Partners VIII	Early Stage	06/01/2001	26,250,000	25,830,000	28,701,153

## Investment Summary - Alternative Investments

December 31, 2014 (unaudited)

### Venture Capital Committed, Drawn, and Distributed (continued)

Active Venture Capital Funds Limited Partnership	Strategy/Stage	SERS Initial Funding	Capital Committed <sup>1/</sup>	Accumulated Capital Drawn	Accumulated Distributions <sup>2/</sup>
51. Weathergag Venture Capital	Fund of Funds	06/26/2007	\$25,000,000	\$22,875,000	\$9,288,524
Weathergag Venture Capital II	Fund of Funds	06/29/2010	25,000,000	18,750,000	488,697
52. Worldview Technology Partners IV	Balanced	01/31/2001	18,130,023	16,951,175	7,034,048
<b>Total Active Venture Capital</b>			<b>\$2,703,943,593</b>	<b>\$2,607,737,696</b>	<b>\$2,089,038,279</b>

Cash flows as of September 30, 2014.

\*Not funded as of September 30, 2014.

<sup>1/</sup>Commitments as of December 31, 2014.

<sup>2/</sup>Distributions include stock distributions. Distributions may include fees that are recorded as negative distributions to be offset against future distributions of the underlying limited partnership investment.

<sup>3/</sup>T. Rowe Price acts as a stock liquidation account. All cash and stock distributions are reflected in the corresponding distributions.

# INVESTMENT SECTION

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## Investment Summary - Global Public Equity

December 31, 2014 (unaudited)

### Asset Class Description

Global Public Equity includes SERS Fund assets held in publicly traded securities of companies throughout the developed world and in emerging markets.

These companies have a wide range of market capitalizations in many industries and sectors, and offer vastly different return opportunities.

Global Public Equity is the most highly volatile asset class in SERS Fund, and thus, the largest contributor to total SERS Fund volatility. This asset class contributes a high expected long-term return to SERS Fund but also brings the largest measure of near-term downside risk.

### Role in the SERS Fund

The program seeks high total return, which may be accompanied by higher volatility. This asset class offers a high degree of immediate liquidity in normal market conditions and can provide moderate inflation protection.

### Program Structure

The Global Public Equity program accomplishes its objective through active and passive ownership of large, mid, and small capitalization stocks worldwide.

The program maintains a neutral profile compared to the composition of the program's benchmark. Regional and capitalization exposures emulate

the benchmark. This neutral structure reduces uncompensated risk and makes security selection the primary determinant of excess return performance.

Within the context of benchmark neutrality, the portfolio is organized in a core/satellite structure. In developed markets, core investments include low-cost index funds, which provide equity market exposure in the most efficient regions of the global equity market. In emerging markets, core investments include diverse, actively-managed strategies that provide moderate excess return expectations. The goal of the core portion in less-efficient emerging markets is to capture all available excess returns while controlling risk.

Regardless of region, satellite investments include aggressive investment strategies with moderate-to-high excess return targets. Such investments generally have concentrated exposures. When combined, these investments complement and diversify each other, providing opportunity for more stable, high, risk-adjusted returns.

While passive mandates are routinely employed, the program maintains a moderate bias toward active management, particularly in portions of the equity universe where historical returns have been commensurate with active risk taken. This bias is examined on a periodic basis.

## Investment Summary - Global Public Equity

December 31, 2014 (unaudited)

### Asset Class Benchmark

The objective of the program is to generate annualized total net returns that exceed the benchmark by approximately 100 basis points over a three- to five-year period. Performance is measured and evaluated relative to the MSCI All-Country World Investable Market Index (ACWI-IMI).

### Global Public Equity

Manager	Investment Style	Market Exposure as of 12/31/14 <sup>4/</sup> (\$ millions)
<b>Global Mandates</b>		
1. Walter Scott & Partners Limited	Growth	\$653.8
<b>Total Global Mandates</b>		<b>653.8</b>
<b>U.S. Equity</b>		
2. Cornerstone Growth	Large-cap growth	356.0
3. Diamond Hill Concentrated	Large-cap concentrated	420.1
4. Emerald Advisers - PA Companies	Small-cap PA companies	446.5
5. Epoch Value	Large-cap value	399.5
6. Iridian Asset Management LLC	Mid-cap private business value	406.2
7. Mellon Capital Management Corp - PA Companies	Small-cap PA companies	278.9
Mellon Capital Management Russell 1000 Index	Russell 1000 Index	2,860.2
<b>Total U.S. Equity</b>		<b>5,167.4</b>
<b>Non-U.S. Developed Markets Equity</b>		
8. Artisan Partners - Global ex U.S.	Global ex-U.S. growth	430.1
9. Harris Associates	Small-cap intrinsic value	483.2
Mellon Capital Management MSCI World ex U.S. Index	MSCI World ex-U.S. Index	1,426.6
10. Morgan Stanley Investment Management Limited-developed ex U.S.	EAFE value	403.4
11. Templeton Investment Counsel - Global ex U.S.	Global ex-U.S. value	592.8
<b>Total Non-U.S. Developed Markets Equity</b>		<b>3,336.1</b>
<b>Emerging Markets Equity</b>		
12. Ashmore EMM	Small-cap value	117.9
13. BlackRock/Emerging Markets Index Non-Lendable Fund	MSCI Emerging Markets Index	143.3
14. Delaware Investment Advisers	Mid/large cap value	252.4
15. GlobeFlex Capital	Small-cap - GARP	80.4
16. Martin Currie Investment Management	All-cap	234.4
<b>Total Emerging Markets Equity</b>		<b>828.4</b>
<b>Total Global Public Equity</b>		<b>\$9,985.7</b>

<sup>4/</sup> Includes securities and cash, which the manager had available for investment.

# INVESTMENT SECTION

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## Investment Summary - Real Assets

December 31, 2014 (unaudited)

### Asset Class Description

Real Assets include SERS Fund's investments that predominantly own or develop physical assets and are more correlated to inflation than most other asset classes. There are two categories of investments in this class:

#### Private Real Assets

- *Private, closed-end, commingled funds and/or limited partnerships* with long-term capital commitments and limited liquidity, including real estate, energy, infrastructure assets, agriculture, timber, mining, water, and other natural resources
- *Investments through separate account relationships* with reasonable levels of liquidity over a 12- to 18-month period
- *Private, open-ended funds* with investor redemption rights with reasonable levels of liquidity over a six- to 12-month period

#### Public Real Assets

- *REITs* are publicly traded real estate investment trusts.
- *Commodities, listed infrastructure, and master limited partnerships* provide exposure to oil and gas, natural resources, and infrastructure projects.

### Role in the SERS Fund

The program is intended to generate competitive long-term returns through capital appreciation and current income. Real Assets generally offer lower volatility than the equity markets and provide at least moderate protection against inflation. The asset class provides significant diversification benefits due to its relatively low correlation to stocks and bonds.

### Program Structure

The Real Assets portfolio contains both public and private investments, direct and indirect investments, and investments across a variety of sub-asset classes; however, it is currently dominated by exposure to real estate and commodities. Focus during the plan period is to diversify into other real assets sectors.

## Investment Summary - Real Assets

December 31, 2014 (unaudited)

### Asset Class Benchmark

Performance is measured and evaluated over a three- to five-year period relative to a custom stylized benchmark including market-based sub-asset class indices where available (such as real estate, timber, agriculture), or CPI + 3% where not available, with the various components weighted according to long-term allocation targets within the class.

### Real Assets

Manager	Vintage Year	Asset Type	Investment Structure	Fair Value as of 12/31/14 (\$ millions)
<b>Private Energy</b>				
1. Carlyle Energy Mezz Opp Fund <sup>1/</sup>	2012	Energy	Limited Partnership	\$35.7
2. Denham Commodity VI	2012	Energy	Limited Partnership	21.2
3. Energy Spectrum Partners IV	2004	Energy	Limited Partnership	0.2
Energy Spectrum Partners V	2007	Energy	Limited Partnership	1.6
4. First Reserve Fund X	2004	Energy	Limited Partnership	0.2
First Reserve Fund XI	2006	Energy	Limited Partnership	20.3
First Reserve Fund XII	2008	Energy	Limited Partnership	31.4
5. Lime Rock Partners III	2004	Energy	Limited Partnership	2.3
Lime Rock Resources	2005	Energy	Limited Partnership	2.2
Lime Rock Partners IV	2006	Energy	Limited Partnership	31.6
Lime Rock Partners V	2008	Energy	Limited Partnership	19.9
6. OCM/GFI Power Opportunities Fund II	2005	Energy	Limited Partnership	1.4
Oaktree Power Opportunities Fund III	2010	Energy	Limited Partnership	12.8
7. SFC Energy Partners I <sup>1/</sup>	2007	Energy	Limited Partnership	6.1
SFC Energy Partners II <sup>1/</sup>	2011	Energy	Limited Partnership	6.6
<b>Total Private Energy</b>				<b>193.5</b>
<b>Non-Core Real Estate</b>				
8. AG Asia Realty Fund	2007	Diversified	Limited Partnership	8.8
9. Apollo Real Estate Fund III	1998	Diversified	Limited Partnership	1.5
10. Berwind Investment Partnership V	1999	Diversified	Limited Partnership	0.3
Berwind Investment Partnership VI	2002	Diversified	Limited Partnership	6.3
Berwind Investment Partnership VII	2005	Diversified	Limited Partnership	15.9
Berwind Investment Partnership VIII	2007	Diversified	Limited Partnership	13.1
Berwind Investment Partnership IX	2012	Diversified	Limited Partnership	17.9
11. Blackstone Real Estate Partners III	1999	Diversified	Limited Partnership	0.6
Blackstone Real Estate Partners IV	2003	Diversified	Limited Partnership	13.9
Blackstone Real Estate Partners V	2006	Diversified	Limited Partnership	47.1
Blackstone Real Estate Partners VI	2007	Diversified	Limited Partnership	83.8
Blackstone Real Estate Partners VII	2011	Diversified	Limited Partnership	81.2

# INVESTMENT SECTION

## Investment Summary - Real Assets

December 31, 2014 (unaudited)

### Real Assets (continued)

Manager	Vintage Year	Asset Type	Investment Structure	Fair Value as of 12/31/14 (\$ millions)
<b>Non-Core Real Estate (continued)</b>				
12. Clerestory Small Cap Fund I	2007	Diversified	Limited Partnership	\$11.1
13. Colony Investors VIII	2007	Diversified	Limited Partnership	6.4
14. Fillmore East Fund	2005	Debt	Limited Partnership	1.0
Fillmore West Fund	2008	Debt	Limited Partnership	17.3
15. Grosvenor Residential Investment Partners I	2007	Residential	Limited Partnership	0.3
16. Hawkeye Scout Fund I	2006	Diversified	Limited Partnership	22.3
17. LEM Real Estate High-Yield Debt Fund III	2012	Debt	Limited Partnership	18.8
18. Lubert Adler Fund III	2000	Diversified	Limited Partnership	0.2
Lubert Adler Fund IV <sup>1/</sup>	2004	Diversified	Limited Partnership	2.5
Lubert Adler Fund V <sup>1/</sup>	2006	Diversified	Limited Partnership	8.1
Lubert Adler Fund VI <sup>1/</sup>	2008	Diversified	Limited Partnership	12.0
Lubert Adler Fund VII	2014	Diversified	Limited Partnership	2.1
19. OCM Real Estate Opp Fund III	2003	Diversified	Limited Partnership	2.1
20. Oxford GSA Fund	2006	Diversified	Limited Partnership	12.3
21. Prudential Latin America Retail Fund I	2006	Retail	Limited Partnership	22.5
Prudential Senior Housing Fund III	2006	Senior housing	Limited Partnership	3.1
Prudential Latin America Residential Fund III	2007	Residential	Limited Partnership	20.6
Prudential Senior Housing Fund IV	2011	Senior housing	Limited Partnership	22.1
22. Rockpoint Real Estate Fund I	2004	Diversified	Limited Partnership	0.1
Rockpoint Real Estate Fund II	2005	Diversified	Limited Partnership	11.3
Rockpoint Finance Fund I	2006	Diversified	Limited Partnership	1.3
Rockpoint Real Estate Fund III	2007	Diversified	Limited Partnership	8.0
23. Starwood Fund IV	1997	Diversified	Limited Partnership	0.2
Starwood Fund VI	2001	Diversified	Limited Partnership	17.5
Starwood Fund VII	2005	Diversified	Limited Partnership	17.6
Starwood Fund VIII	2007	Diversified	Limited Partnership	42.7
24. Valstone Opportunity Fund	2014	Diversified	Limited Partnership	6.4
25. Westbrook Fund IV	2000	Diversified	Limited Partnership	0.3
Westbrook Fund V	2004	Diversified	Limited Partnership	2.9
Westbrook Fund VI	2005	Diversified	Limited Partnership	14.3
Westbrook Fund VII	2006	Diversified	Limited Partnership	27.1
Westbrook Fund VIII <sup>1/</sup>	2009	Diversified	Limited Partnership	26.2
<b>Total Non-Core Real Estate</b>				<b>651.1</b>

## Investment Summary - Real Assets

December 31, 2014 (unaudited)

### Real Assets (continued)

Manager	Vintage Year	Asset Type	Investment Structure	Fair Value as of 12/31/14 (\$ millions)
<b>Core Real Estate</b>				
26. Fidelity Real Estate Opportunistic Income Fund	2007	Debt	Limited Partnership	\$61.4
27. Forest I.M.A.	1992	Timber	Separate Account	152.6
28. Heitman I.M.A.	1988	Diversified	Separate Account	173.0
Heitman America Real Estate Trust	2007	Diversified	Limited Partnership	152.8
29. LaSalle I.M.A.	1994	Diversified	Separate Account	351.6
30. Lowe I.M.A.	1994	Diversified	Separate Account	516.1
Lowe GTO	2012	Diversified	Separate Account	333.3
31. UBS Trumbull Property Fund	1988	Diversified	Open-Ended Fund	63.7
UBS Trumbull Property Income Fund	1988	Diversified	Open-Ended Fund	57.1
<b>Total Core Real Estate</b>				<b>1,861.6</b>
<b>REITs</b>				
32. CBRE Clarion Real Estate Securities	1996	REITs	Separate Account	289.7
33. CenterSquare Real Estate Securities	2002	REITs	Separate Account	63.3
<b>Total REITs</b>				<b>353.0</b>
<b>Commodities and Infrastructure</b>				
34. BAAM Commodities	2007	Commodities	Open-Ended Fund	456.7
35. Harvest Fund MLP	2013	MLPs	Separate Account	188.6
36. Kayne Anderson MLP	2013	MLPs	Separate Account	169.6
37. Wellington DIH	2004	Commodities	Open-Ended Fund	320.7
<b>Total Commodities and Infrastructure</b>				<b>1,135.6</b>
<b>Total Real Assets</b>				<b>\$4,194.8</b>

<sup>1</sup>Fair values for these managers have not been received as of year-end. The values are third quarter fair values adjusted by fourth quarter cash flows.

# INVESTMENT SECTION

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## Investment Summary - Diversifying Assets

December 31, 2014 (unaudited)

### Asset Class Description

The Diversifying Assets program includes investments designed to provide total returns comparable to the total SERS Fund return but with less volatility and lower correlation to other asset classes.

### Role in the SERS Fund

The program seeks to provide competitive returns and protect capital in all market conditions by investing in a diverse set of strategies including long/short equity, global macro, relative value, credit, event driven, and other hedge fund strategies—all with attractive long-term, risk-adjusted returns. The program targets a liquidity profile less than that of public equities but significantly more than private equity.

### Program Structure

The program contains both direct and fund-of-funds investments, which invest across a wide variety of strategies.

### Asset Class Benchmark

Performance is measured and evaluated over a three-to five-year period relative to the HFRI Fund-of-Funds Strategic Index.

## Investment Summary - Diversifying Assets

December 31, 2014 (unaudited)

### Diversifying Assets

Manager	Investment Style	Market Exposure as of 12/31/14 <sup>4/</sup> (\$ millions)
<b>Absolute Return Strategies</b>		
1. Arden	Fund-of-Funds	\$25.9
2. Blackstone - Stable Alpha	Fund-of-Funds	54.9
3. Mesirow Financial	Fund-of-Funds	33.1
4. Morgan Stanley Alternative Investment Partners	Fund-of-Funds	15.3
5. PAAMCO	Fund-of-Funds	12.1
6. Robeco Investment	Fund-of-Funds	0.6
7. Rock Creek	Fund-of-Funds	13.5
<b>Total Absolute Return Strategies</b>		<b>155.4</b>
<b>Hedged Strategies</b>		
8. Arden Keystone	Fund-of-Funds	145.9
9. Blackstone Keystone	Fund-of-Funds	994.1
10. Entrust Keystone	Fund-of-Funds	313.7
11. Tiger Keystone	Fund-of-Funds	3.3
<b>Total Hedged Strategies</b>		<b>1,457.0</b>
<b>Direct Investments</b>		
12. Hoplite Capital	Direct Hedge Fund	21.8
13. Luxor Capital Partners	Direct Hedge Fund	18.0
14. MKP Opportunity Fund	Direct Hedge Fund	14.7
15. Pine River Fund	Direct Hedge Fund	21.1
16. Samlym Onshore Fund	Direct Hedge Fund	15.9
17. Stelliam Fund	Direct Hedge Fund	17.1
<b>Total Direct Investments</b>		<b>108.6</b>
<b>Total Diversifying Assets</b>		<b>\$1,721.0</b>

<sup>4/</sup>Includes securities and cash, which the manager had available for investment.

# INVESTMENT SECTION

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## Investment Summary - Fixed Income/Liquidity Reserve

December 31, 2014 (unaudited)

### Asset Class Description

Fixed Income includes investments in publicly traded debt obligations of sovereign, quasi-sovereign, and corporate entities. The asset class generates current income and the repayment of principal at maturity. Fixed income investments have substantially lower volatility than equities and most fixed income investments are significantly uncorrelated with equity returns.

The Liquidity Reserve has a distinct mandate to support regular disbursement of SERS Fund obligations and is invested in liquid and short-term instruments either directly or through a fund structure.

### Role in the SERS Fund

The program is structured to generate income to pay benefits, provide liquidity to minimize capital impairment risk, reduce volatility in SERS Fund, protect SERS Fund against deflation (via Treasuries) and inflation (via TIPS), and contribute to SERS Fund return when market conditions permit.

### Program Structure

There are four key components to the Fixed Income program. The size of each is based on SERS Fund's liabilities and expected cash flows, general liquidity conditions in the capital markets, inflation and economic growth expectations, the risk level of SERS

Fund, and current valuations of various fixed income strategies. Components of the program include:

- *Core and Core Plus Fixed Income* provide excess return when performance conditions are favorable, offer varying potential return with a corresponding variance in expected risk, provide capital protection in difficult market conditions, and offer risk mitigation due to low correlation with equity depending on the mix of core and core plus exposures in the composite.
- *Inflation Protection Securities* preserve purchasing power due to high positive correlation to inflation and predominantly includes U.S. Treasury Inflation Protection Securities (TIPS) and some foreign inflation protection securities.
- *Nominal U.S. Treasuries* provide SERS Fund with a deflation hedge and a ready source of liquidity to pay benefits.
- *The Liquidity Reserve* includes cash equivalents and short-duration notes that mature within five years.

## Investment Summary - Fixed Income/Liquidity Reserve

December 31, 2014 (unaudited)

### Asset Class Benchmarks

Performance is evaluated over a five-year period relative to the following benchmarks:

- Fixed Income – Barclays U.S. Aggregate Bond Index
- Liquidity Reserves – BofA ML 3 Month U.S. T-Bill Index

### Fixed Income

Manager	Investment Style	Market Exposure as of 12/31/14 <sup>1/</sup> (\$ millions)
<b>Core Plus</b>		
1. Brandywine Global	Global Sovereign Credit	\$197.3
2. PIMCO EMD	Emerging Market Debt (liquidating)	0.1
3. OCM Mezzanine Fund	High Yield (liquidating)	0.1
4. Pyramis Global Advisors	Commercial Mortgage-Backed Securities	303.3
5. SEI Structured Credit Fund	High Yield Bank Loans	238.6
6. Stone Harbor	Emerging Market Debt	126.0
Stone Harbor	Global High Yield	196.7
7. W.R. Huff	High Yield (liquidating)	14.6
8. Waterfall Asset Management	Asset-Backed Securities	175.0
<b>Total Core Plus</b>		<b>1,251.7</b>
<b>Core</b>		
9. BNY Mellon Cash Investment Strategies	Barclays Aggregate	1,142.3
10. MacKay Shields Core	Barclays Aggregate	198.2
PIMCO Core	Barclays Aggregate ex. Treasuries	250.4
11. Taplin, Canida & Habacht (TCH)	U.S. Credit	179.8
12. UBS Core Bond	Barclays Aggregate	103.2
<b>Total Core</b>		<b>1,873.9</b>
<b>Global Treasury Inflation Protected Securities (TIPS)</b>		
13. Brown Brothers Harriman	Global TIPS	202.8
14. New Century Advisors	Global TIPS	106.8
15. NISA Investment Advisors	U.S. TIPS	457.9
<b>Total Global Treasury Inflation Protected Securities (TIPS)</b>		<b>767.5</b>
<b>Nominal U.S. Treasuries</b>		
PIMCO U.S. Treasuries	Domestic Treasuries	262.9
16. Wellington U.S. Treasuries	Domestic Treasuries	261.7
<b>Total Nominal U.S. Treasuries</b>		<b>524.6</b>
<b>Total Fixed Income</b>		<b>\$4,417.7</b>

<sup>1/</sup>Includes securities and cash, which the manager had available for investment.

# INVESTMENT SECTION

## Investment Summary - Fixed Income/Liquidity Reserve

December 31, 2014 (unaudited)

### Liquidity Reserve<sup>1/</sup>

Manager	Investment Style	Market Exposure as of 12/31/14 <sup>2/</sup> (\$ millions)
<b>Short-Term Notes</b>		
1. PNC Short Duration	Short Duration Government Credit	\$232.4
2. StoneRidge Short Duration	Short Duration Government Credit	116.4
<b>Total Short-Term Notes</b>		<b>348.8</b>
<b>Cash Equivalent</b>		
3. PA State Treasury (STIF)	Cash	1,190.9
PA Treasury Overnight Cash	Cash	12.8
<b>Total Cash Equivalent</b>		<b>1,203.7</b>
<b>Total Liquidity Reserve</b>		<b>\$1,552.5</b>

<sup>1/</sup>The SERS Liquidity Reserve is jointly managed by SERS Fixed Income investment staff and the Pennsylvania Treasury.

<sup>2/</sup>Includes securities and cash, which the manager had available for investment.

# Actuarial Section



May 4, 2015

Mr. David E. Durbin  
Executive Director  
State Employees' Retirement System  
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Dear Mr. Durbin:

The purpose of this letter is to certify the actuarial adequacy of the contributions being made by the Commonwealth of Pennsylvania and other participating agencies to the Pennsylvania State Employees' Retirement System (SERS), and to discuss the approach currently being taken toward meeting the financing objectives of the plan. The results provided herein are based upon the December 31, 2014 annual actuarial valuation.

The funding objective of the plan is set forth in the State Employees' Retirement Code (SERC). The annual employer contribution is equal to the sum of the following for the fiscal year beginning July 1, 2015:

- (1) The employer share of the normal cost.
- (2) The fresh start amortization of the December 31, 2009 unfunded liability over a 30-year period beginning July 1, 2010 and ending on June 30, 2040.
- (3) The amortization of the change in liability due to Act 2010-120 over a 30-year period beginning July 1, 2011 and ending on June 30, 2041.
- (4) The amortization of changes in liability due to actual experience differing from assumed experience after December 31, 2009 over 30-year periods beginning with the July first following the actuarial valuation determining such changes.
- (5) The amortization of legislated benefit changes, including cost-of-living increases, over 10-year periods beginning with the July first following the actuarial valuation determining such changes. (Note: There are currently no 10-year amortizations being funded.)

The amortization payments are level dollar amounts over the remaining applicable amortization periods. The employer cost is determined as a percent of retirement covered compensation. The total employer cost is the average contribution amount that needs to be received from the employer groups participating in the system. Some employer groups contribute a higher percent of compensation, and some employer groups contribute a lower percent of compensation depending on the benefits payable to their employees.

The actuarial valuation is based on financial and participant data, which is prepared by SERS staff. The data are reviewed for internal and year-to-year consistency as well as general reasonableness prior to their use in the actuarial valuation.

Mr. David E. Durbin  
May 4, 2015  
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The actuarial valuation uses assumptions regarding future rates of investment return and rates of retirement, withdrawal, death, and disability among SERS members and their beneficiaries. The current set of assumptions used in the December 31, 2014 actuarial valuation, with the exception of the investment return assumption, was adopted by the State Employees' Retirement Board (the Board) based upon actual experience of SERS during the years 2006 through 2010. Based upon subsequent review of SERS investment data and results, the Board approved a reduction in the assumed annual investment return from 8.0% to 7.5% effective as of the December 31, 2011 actuarial valuation and the 7.5% assumption has remained in effect since then. We will continue to closely monitor this assumption and will recommend changing it if conditions warrant such change. The actuarial value of assets is developed by recognizing the difference between the expected actuarial value of assets and the market value of assets over a five-year period.

Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans*, replaced the requirements of GASB Statement No. 25, *Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans*, effective for financial statements for fiscal years ending on or after June 30, 2014. GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, will replace the requirements of GASB Statement No. 27, *Accounting for Pensions by State and Local Governmental Employers*, effective for fiscal years ending on or after June 30, 2015. GASB 67 is designed for financial reporting by pension plans and GASB 68 is designed for financial reporting by entities that participate in pension plans. The objective of both statements is to provide more useful, transparent, and comparable financial information related to pensions. The Financial Section now includes new schedules in response to the reporting requirements of GASB Statement No. 67. Although two schedules that were required disclosures under Statement No. 25 are being discontinued, namely the "Schedule of Funding Progress" and the "Schedule of Employer Contributions," these schedules remain of interest and, therefore, have been updated to reflect the December 31, 2014 actuarial valuation and are included herein.

GASB Statement No. 25, although it has been replaced by GASB Statement No. 67, established the Annual Required Contribution (ARC), which was recognized for many years as the minimum annual contribution required by GASB. How a pension plan's actual contributions compare to the ARC is likely to remain of interest despite the fact that GASB has discontinued the ARC. For SERS, the scheduled contributions since July 1, 2005 have been below the minimum amount required to meet the GASB No. 25 minimum. Previously this was a result of financing changes implemented by Act 2003-40 in December 2003. Currently this is a result of the contribution collars required under Act 2010-120. After June 30, 2015, provided that employer contributions are made in accordance with current law, we expect employer contributions to exceed the GASB No. 25 minimum.

Mr. David E. Durbin  
May 4, 2015  
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With the exception of the "Schedule of Retirees and Beneficiaries Added to and Removed from Rolls" and the "Summary of Plan Provisions", the schedules appearing in the Actuarial Section were derived from the December 31, 2014 actuarial valuation.

Based upon the valuation results, it is our opinion that, provided future employer contributions are made in accordance with current law, the Pennsylvania State Employees' Retirement System is in sound condition in accordance with generally accepted actuarial principles and procedures. It should be noted that, with the passage of Act 2010-120 (Act 120), significant changes to many key benefit provisions of SERS have been legislated. This was in response to the significant funding challenges SERS has been facing in recent years, and will continue to face in coming years. By reducing pensions for future Commonwealth employees and providing funding relief to SERS employers through the use of contribution collars, Act 120 addressed both SERS' long-term and short-term funding challenges.

As actuaries for SERS, Hay Group considers it important to note that the establishment of contribution collars results in employer funding for FY2015 and FY2016 (and likely FY2017) at levels below the otherwise applicable pre-collared contribution levels. This is not to say that required employer contributions will never be made; rather, Act 120 provides that they will be deferred and paid in future years. It is therefore essential to the long-term funding of the system that the Commonwealth adhere not only to the short-term collars provided by Act 120 but also to the long-term funding obligations that the statute established. We expect that the contribution collars will govern employer contribution levels for the next actuarial valuation, and the collars will continue to apply until such time as the pre-collared contribution level is below the collared contribution level. While Hay Group would prefer that SERS funding be based upon the pre-collared contribution levels, we recognize, given the extraordinary funding challenges the Commonwealth of Pennsylvania is facing over coming years, that the contribution collars represent an important and necessary funding deferral mechanism for a temporary period, after which funding on an uncollared contribution basis will resume.

#### **Actuarial Certification**

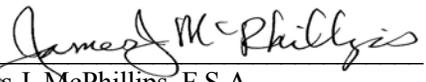
To the best of our knowledge, the results shown in this section are complete and accurate, and all costs and liabilities have been determined in conformance with generally accepted actuarial principles and on the basis of actuarial assumptions and methods which are reasonable (taking into account the past experience of SERS and reasonable expectations) and which represent our best estimate of anticipated experience under the plan.

The actuaries certifying to this valuation are members of the Society of Actuaries or other professional actuarial organizations, and meet the General Qualification Standards of the American Academy of Actuaries for purposes of issuing Statements of Actuarial Opinion.

Mr. David E. Durbin  
May 4, 2015  
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Respectfully submitted,  
Hay Group, Inc.

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By   
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## Summary of Actuarial Assumptions and Methods

December 31, 2014 (unaudited)

The schedules in this Actuarial Section are reported in accordance with SERS actuarial funding valuation based on statutory requirements. For funding purposes, actuarial methods are specified by statute while actuarial assumptions are recommended by SERS actuary and approved by the SERS Board of Trustees. The State Employees' Retirement Code (SERC), legislated by the General Assembly and signed into law by the Governor, establishes funding policy. The SERC is administered by the SERS Board. The General Assembly, along with the Governor's signing, has the authority to amend the SERC. However, most of the Financial Section, except where noted, is reported in accordance with SERS actuarial accounting valuation based on Governmental Accounting Standards Board Statement No. 67 (GASB 67). For funding purposes, a variation of the entry-age actuarial cost method is used, which is discussed in additional detail below.

For funding purposes, this variation of the entry-age normal actuarial cost method, which is used to determine the liabilities and costs related to SERS benefits, is based on the benefits and contributions for new members rather than for all current members from their date of entry. Ultimately, this variation should produce approximately the same results as the typical entry-age method over the long run. SERS uses amortization periods of 10 years and 30 years with level payments over closed periods as follows:

(1) Act 2010-120 established a fresh start amortization of the December 31, 2009 unfunded liability over a 30-year period beginning July 1, 2010, and ending June 30, 2040.

(2) The amortization of the change in liability due to Act 2010-120 over a 30-year period beginning July 1, 2011, and ending on June 30, 2041.

(3) The amortization of changes in liability due to actual experience differing from assumed experience after December 31, 2009, over 30-year periods beginning with the July 1 following the actuarial valuation determining such changes.

However, as noted previously for financial reporting purposes under GASB 67, the entry-age actuarial cost method is used rather than a variation of the entry-age actuarial cost method for funding purposes as described above. For participating employer financial reporting purposes, the amortization period for investment gains/losses is five years while the amortization period for assumption changes and non-investment gains/losses is over the average expected remaining service lives of all employees that are provided benefits.

For funding purposes, a five-year smoothed market approach is used as the asset valuation method compared to fair (market) for financial reporting purposes.

Actuarial methods and assumptions used for both funding purposes as well as financial reporting purposes include:

- The investment rate of return of 7.5% per year is based on an underlying rate of inflation of 2.75% per year.
- For current and future non-disabled retirees, beneficiaries, and survivors, SERS uses the RP-2000 Healthy Annuitant Mortality Table projected to 2008 and updated to reflect actual SERS experience through 2010. For current and future disabled retirees, SERS uses the RP-2000 Disabled Retiree Annuitant Mortality Table projected to 2008 and updated to reflect actual SERS experience through 2010. For all pre-retirement active members, the mortality is based on actual SERS experience.

# ACTUARIAL SECTION

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## Summary of Actuarial Assumptions and Methods

December 31, 2014 (unaudited)

- The rates for probability of retirement and the probabilities of withdrawal from active service, including death, before age and service retirements, which are presented in the **Schedules of Active Member Valuation Data**.
- The projected average salary increase of 6.10% with a range of 4.30% to 11.05%. This increase includes an underlying assumption of 2.75% for inflation. The annual rate of salary increase for promotions and longevity for members is presented in the **Schedules of Active Member Valuation Data**.
- No cost-of-living adjustments were used in the determination of actuarial valuations.

SERS periodically prepares a study using actual experience in order to develop assumptions for use in its actuarial valuations. The latest study was completed January 12, 2011 for the period January 1, 2006 through December 31, 2010.

The most recent valuations were based on members of SERS as of December 31, 2014. All census and asset data was supplied by SERS and was subject to reasonable consistency checks. The actuarial computations were prepared by, or under the supervision of, a Member of the American Academy of Actuaries (M.A.A.A.).

**Schedules of Active Member Valuation Data**

December 31, 2014 (unaudited)

**Table A<sup>1/</sup>**  
**Withdrawal From Active Employment Before Age and Service Retirement**  
 Annual Rate of Active Members Separating Within the Next Year

Sample Age	Male						Female					
	Withdrawal Years of Service				Death	Disability	Withdrawal Years of Service				Death	Disability
	0	5	9	14+			0	5	9	14+		
20	20.70%	NA	NA	NA	0.04%	NA	22.40%	NA	NA	NA	0.02%	NA
25	16.20	0.80%	0.80%	NA	0.04	0.02%	20.50	2.70%	1.90%	NA	0.02	0.04%
30	13.90	0.80	0.60	0.60%	0.05	0.07	17.90	2.40	1.70	1.80%	0.02	0.09
35	13.60	0.70	0.40	0.40	0.06	0.12	12.80	1.90	1.20	1.30	0.03	0.16
40	13.00	0.50	0.40	0.40	0.08	0.19	10.00	1.90	0.70	0.50	0.04	0.21
45	12.10	0.50	0.20	0.20	0.12	0.33	9.80	1.80	0.70	0.50	0.06	0.33
50	11.30	0.50	0.20	0.20	0.22	0.46	9.80	1.80	0.40	0.50	0.09	0.50
55	11.30	0.60	0.60	0.60	0.27	0.60	9.80	1.50	1.20	1.20	0.14	0.63
60	NA	NA	NA	NA	0.32	NA	NA	NA	NA	NA	0.24	NA

**Table B<sup>1/</sup>**  
**Annual Rate of Retirement**

Sample Age	Full Benefits	
	Male	Female
53	25.0%	23.0%
54	26.0	23.0
55	27.0	23.0
56	28.0	23.0
57-59	30.0	23.0
60	25.0	25.0
61	20.0	20.0
62	25.0	25.0
63-64	20.0	20.0
65	25.0	25.0
66-79	20.0	20.0
80	100.0	100.0

<sup>1/</sup>The assumptions presented in Table A and Table B were based on a review of SERS experience from 2006–2010. The rates are the probabilities that an event will occur in the year after the valuation. For instance, the male retirement rate of 25% at age 62 means that 250 of every 1,000 male employees age 62 and eligible for full benefits are expected to retire before they reach age 63.

# ACTUARIAL SECTION

## Schedules of Active Member Valuation Data

December 31, 2014 (unaudited)

**Table C**  
**Annual Rate of Salary Increase**

Completed Years of Service	Increase	Completed Years of Service	Increase
1	8.00%	16	2.50%
2	6.00	17	2.40
3	4.50	18	2.30
4	4.00	19	2.20
5	3.75	20	2.10
6	3.50	21	2.00
7	3.25	22	1.90
8	3.20	23	1.80
9	3.15	24	1.70
10	3.10	25	1.60
11	3.00	26	1.50
12	2.90	27	1.40
13	2.80	28	1.30
14	2.70	29	1.25
15	2.60	30+	1.25

**Table D**  
**Reduced Benefits**

Sample Age	5 - 14 Years of Service		15 or More Years of Service	
	Male	Female	Male	Female
25	1.0%	1.0%	NA	NA
30	1.5	1.5	NA	NA
35	1.5	1.5	1.5%	1.5%
40	1.0	1.0	1.5	1.5
45	1.0	1.0	1.5	1.5
50	1.0	1.0	2.0	2.0
55	1.0	1.0	5.5	5.5

# ACTUARIAL SECTION

## Schedules of Active Member Valuation Data

December 31, 2014 (unaudited)

### Active Members by Age and Years of Service - Male

Age Group	Years of Service							Total	Average Salary
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+		
< 20	27	NA	NA	NA	NA	NA	NA	27	\$25,405
20 - 24	1,066	2	NA	NA	NA	NA	NA	1,068	31,970
25 - 29	3,348	689	11	NA	NA	NA	NA	4,048	42,325
30 - 34	2,453	2,621	621	8	NA	NA	NA	5,703	50,786
35 - 39	1,703	2,098	1,789	456	9	NA	NA	6,055	55,704
40 - 44	1,567	1,673	1,791	1,859	802	24	NA	7,716	62,056
45 - 49	1,401	1,504	1,523	1,700	2,523	833	15	9,499	66,205
50 - 54	1,430	1,344	1,430	1,157	1,526	1,616	628	9,131	62,753
55 - 59	1,205	1,276	1,289	1,097	1,094	1,254	1,235	8,450	61,619
60 - 64	836	982	1,018	799	634	523	640	5,432	61,903
65+	437	524	506	383	227	162	302	2,541	64,320
<b>Total</b>	<b>15,473</b>	<b>12,713</b>	<b>9,978</b>	<b>7,459</b>	<b>6,815</b>	<b>4,412</b>	<b>2,820</b>	<b>59,670</b>	<b>\$59,228</b>

Average Age: 46.55  
Average Service: 12.12

### Active Members by Age and Years of Service - Female

Age Group	Years of Service							Total	Average Salary
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30+		
< 20	35	NA	NA	NA	NA	NA	NA	35	\$23,138
20 - 24	1,038	20	NA	NA	NA	NA	NA	1,058	28,559
25 - 29	2,298	559	11	NA	NA	NA	NA	2,868	36,638
30 - 34	1,881	1,626	515	20	NA	NA	NA	4,042	42,624
35 - 39	1,525	1,438	1,223	353	22	NA	NA	4,561	46,993
40 - 44	1,360	1,389	1,131	821	471	45	NA	5,217	49,278
45 - 49	1,372	1,383	1,135	832	912	638	40	6,312	50,934
50 - 54	1,315	1,473	1,236	859	901	951	787	7,522	52,022
55 - 59	1,100	1,297	1,281	870	994	869	1,064	7,475	52,741
60 - 64	561	859	845	682	466	393	483	4,289	52,694
65+	192	305	295	215	115	99	161	1,382	52,543
<b>Total</b>	<b>12,677</b>	<b>10,349</b>	<b>7,672</b>	<b>4,652</b>	<b>3,881</b>	<b>2,995</b>	<b>2,535</b>	<b>44,761</b>	<b>\$48,825</b>

Average Age: 46.77  
Average Service: 11.44

# ACTUARIAL SECTION

## Schedules of Active Member Valuation Data

December 31, 2014 (unaudited)

### Aggregate Active Member Valuation Data

Valuation Year Ended Dec 31	Number Employers	Number Active Members	Covered Employee Payroll	Annual Average Pay	% Increase/(Decrease) in Average Pay
2014	104 <sup>1/</sup>	104,431	\$5,720,000,000	\$54,769	2.8%
2013	104	105,186	5,598,000,000	53,224	1.9
2012	105	106,048	5,539,000,000	52,230	0.1
2011	107	107,021	5,582,000,000	52,159	1.8
2010	106	109,255	5,597,000,000	51,228	0.8
2009	106	110,107	5,595,000,000	50,813	3.8
2008	108	110,866	5,428,000,000	48,957	1.3
2007	108	109,610	5,299,000,000	48,345	4.8
2006	108	110,972	5,118,000,000	46,118	2.9
2005	108	109,981	4,920,000,000	44,815	(1.2)

<sup>1/</sup> The membership includes 39 employers and the commonwealth is classified as its largest employer. The commonwealth is comprised of 66 agencies and when everything is evaluated separately, SERS has a total of 104 participating employers/agencies.

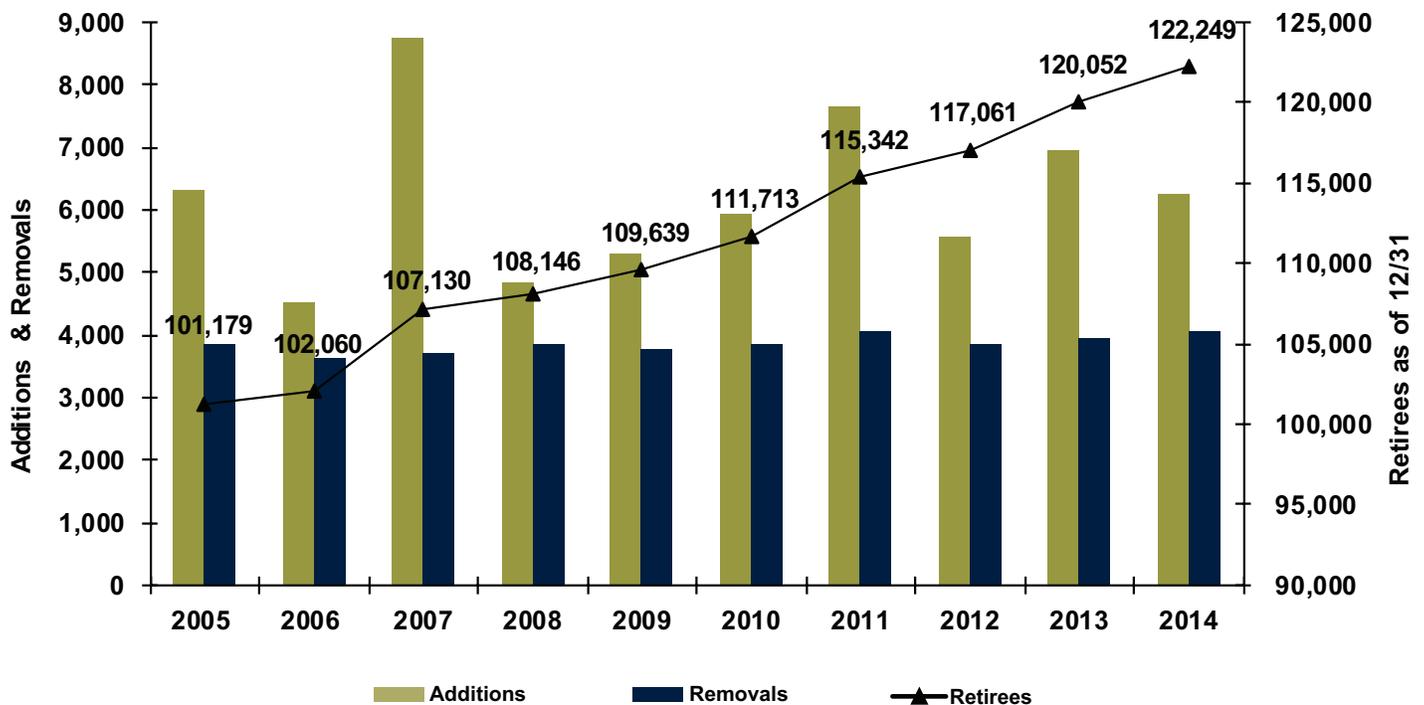
## Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

December 31, 2014 (unaudited)

### Retirees and Beneficiaries Added to and Removed from Rolls

Year Ended	Added to Rolls		Removed from Rolls		Rolls - End of Year		Percentage Change	
	No.	Allowances	No.	Allowances	No.	Allowances <sup>1/</sup>	No.	Allowances
2014	6,245	\$157,593,809	4,048	\$59,524,055	122,249	\$2,552,077,530	1.83%	3.98%
2013	6,944	178,392,487	3,953	53,186,262	120,052	2,454,388,693	2.56	5.36
2012	5,572	138,363,766	3,853	50,453,118	117,061	2,329,489,208	1.49	3.92
2011	7,669	205,521,876	4,040	50,132,667	115,342	2,241,716,566	3.25	7.43
2010	5,906	148,169,231	3,832	48,182,212	111,713	2,086,701,831	1.89	5.01
2009	5,278	125,610,303	3,785	45,195,072	109,639	1,987,109,540	1.38	4.19
2008	4,841	105,374,596	3,825	45,068,366	108,146	1,907,133,859	0.95	3.22
2007	8,761	234,585,550	3,691	42,238,843	107,130	1,847,681,816	4.97	11.58
2006	4,514	96,324,336	3,633	40,351,097	102,060	1,655,881,296	0.87	3.44
2005	6,298	149,935,613	3,846	40,984,887	101,179	1,600,772,520	2.48	7.22

<sup>1/</sup> Calculated by multiplying monthly benefit for December 31 by 12 to arrive at an annual amount.



# ACTUARIAL SECTION

## Solvency Test

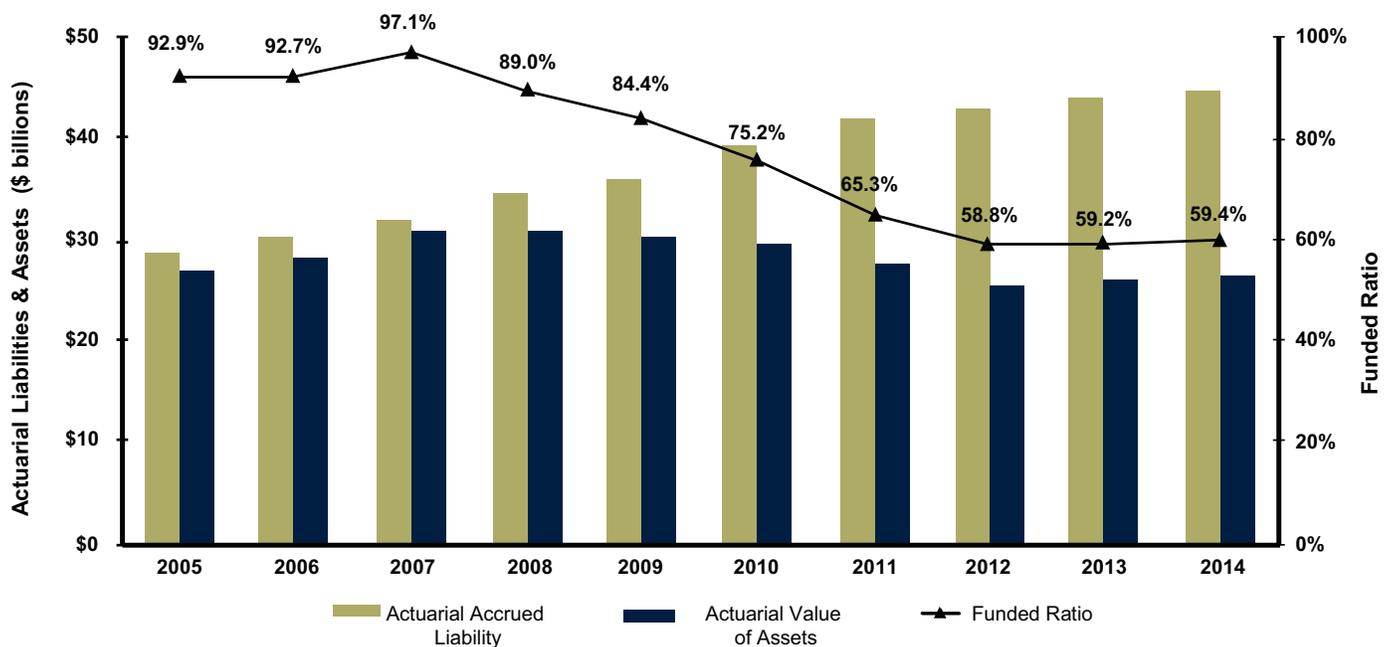
December 31, 2014 (unaudited)

### Fund Solvency<sup>1/</sup>

(\$ thousands)

#### Aggregate Accrued Liabilities For

Valuation Year Ended Dec 31	Aggregate Accrued Liabilities For			Total Actuarial Liability (AAL)	Actuarial Value of Assets	Portion of Accrued Liabilities Covered by Reported Assets			Funded Ratio
	(1)	(2)	(3)			(1)	(2)	(3)	
	Active Member Contributions	Retirees and Beneficiaries	Active Members (Employer Financed Portion)						
2014	\$4,733,833	\$23,872,658	\$16,144,179	\$44,750,670	\$26,584,948	100.0%	91.5%	0.0%	59.4%
2013	4,636,219	23,046,717	16,191,644	43,874,580	25,975,185	100.0	92.6	0.0	59.2
2012	4,551,507	22,095,052	16,409,005	43,055,564	25,302,688	100.0	93.9	0.0	58.8
2011	4,406,306	21,222,075	16,653,481	42,281,862	27,618,461	100.0	100.0	11.9	65.3
2010	4,409,444	18,995,355	15,774,795	39,179,594	29,443,945	100.0	100.0	38.3	75.2
2009	4,280,680	17,962,741	13,553,596	35,797,017	30,204,693	100.0	100.0	58.7	84.4
2008	4,068,036	17,305,971	13,063,389	34,437,396	30,635,621	100.0	100.0	70.9	89.0
2007	3,849,293	16,255,843	11,648,835	31,753,971	30,839,877	100.0	100.0	92.2	97.1
2006	3,916,841	14,474,525	11,973,631	30,364,997	28,148,834	100.0	100.0	81.5	92.7
2005	3,696,477	14,000,196	11,155,043	28,851,716	26,793,782	100.0	100.0	81.6	92.9



<sup>1/</sup> Based on statutory funding requirements.

**Analysis of Financial Experience**

December 31, 2014 (unaudited)

**Gains and Losses in Accrued Liabilities<sup>1/</sup>**

Resulting from Differences Between Assumed Experience and Actual Experience  
(\$ thousands)

Type of Activity	2014	2013	2012	2011
Gain/(loss) from investment earnings <sup>2/</sup>	\$237,982	\$559,502	\$(2,541,098)	\$(2,113,087)
Changes in demographics of new entrants	(31,582)	(6,131)	(54,250)	12,149
Pay increases different than assumptions	86,914	248,583	383,003	5,916
Differences between actual and expected demographic experience	(35,152)	(160,323)	(90,631)	(296,743)
<b>Gain/(loss) during year from financial experience</b>	<b>258,162</b>	<b>641,631</b>	<b>(2,302,976)</b>	<b>(2,391,765)</b>
Non recurring items				
Changes in economic assumptions	-	-	-	(2,148,326) <sup>3/</sup>
Loss due to collar restrictions	(740,401) <sup>4/</sup>	(985,902) <sup>4/</sup>	(941,267) <sup>4/</sup>	(477,988) <sup>4/</sup>
<b>Composite (loss)</b>	<b>\$(482,239)</b>	<b>\$(344,271)</b>	<b>\$(3,244,243)</b>	<b>\$(5,018,079)</b>

<sup>1/</sup> Based on statutory funding requirements.

<sup>2/</sup> Net gains and losses from returns different than the assumed rate of return that are amortized over a five-year period.

<sup>3/</sup> Adoption of a 7.5% annual investment return assumption effective December 31, 2011 (versus 8.0% assumed in prior years) resulted in this increase in accrued liability.

<sup>4/</sup> Act 2010-120 capped the growth of employer contributions to 3% for commonwealth FY 11/12, 3.5% for commonwealth FY 12/13, and 4.5% for each subsequent year until no longer needed.

# ACTUARIAL SECTION

## Schedule of Funding Progress

December 31, 2014 (unaudited)

### Funding Progress<sup>1/</sup> (\$ thousands)

Actuarial Valuation Year Ended December 31	Actuarial Value of Assets	Actuarial Accrued Liabilities (AAL)	Ratio of Assets to AAL	Unfunded Actuarial Accrued Liability (UAAL)	Covered- Employee Payroll	UAAL as a Percentage of Covered- Employee Payroll
2014	\$26,584,948	\$44,750,670	59.4%	\$18,165,722	\$5,719,581	317.6%
2013	25,975,185	43,874,580	59.2	17,899,395	5,598,420	319.7
2012	25,302,688	43,055,564	58.8	17,752,876	5,538,887	320.5
2011	27,618,461	42,281,862	65.3	14,663,401	5,582,108	262.7
2010	29,443,945	39,179,594	75.2	9,735,649	5,596,915	173.9
2009	30,204,693	35,797,017	84.4	5,592,324	5,594,867	100.0
2008	30,635,621	34,437,396	89.0	3,801,775	5,427,667	70.0
2007	30,839,877	31,753,971	97.1	914,094	5,299,095	17.3
2006	28,148,834	30,364,997	92.7	2,216,163	5,117,807	43.3
2005	26,793,782	28,851,716	92.9	2,057,934	4,928,799	41.8

<sup>1/</sup> Based on statutory funding requirements.

## History and Projection of Contribution Rates and Funded Ratios

December 31, 2014 (unaudited)

### Contribution Rates and Funded Ratios<sup>1/</sup>

(\$ thousands)

For FY Beginning July 1 Following Valuation Year<sup>2/</sup>

Valuation Year Ended Dec 31	Funding Payroll	Member Contribution Rate <sup>3/</sup>	Employer Normal Cost Rate	Unfunded Liability Rate <sup>4/</sup>	Preliminary Employer Contribution Rate <sup>5/</sup>	Final Employer Contribution Rate	Funded Ratio
2005 <sup>6/</sup>	\$5,138,377	6.25%	8.39%	-6.32%	2.07%	4.00%	92.9%
2006 <sup>7/</sup>	5,661,675	6.25	8.21	-6.30	1.91	4.00	92.7
2007	5,529,069	6.25	8.42	-9.57	-1.15	4.00	97.1
2008	5,660,319	6.25	9.51	-5.88	3.63	4.00	89.0
2009 <sup>8/</sup>	5,935,988	6.25	9.53	-3.89	5.64	5.00	84.4
2010 <sup>9/</sup>	5,851,704	6.25	4.08	14.85	18.93	8.00	75.2
2011	5,890,704	6.25	5.10	21.29	26.39	11.50	65.3
2012	5,836,402	6.25	5.01	26.21	31.22	16.00	58.8
2013	5,897,627	6.25	5.00	26.41	31.41	20.50	59.2
<b>2014</b>	<b>6,021,688</b>	<b>6.25</b>	<b>4.95</b>	<b>26.56</b>	<b>31.51</b>	<b>25.00</b>	<b>59.4</b>
2015 <sup>10/</sup>	6,205,349	6.25	4.95	26.44	31.39	29.50	59.7
2016 <sup>11/</sup>	6,394,613	6.25	4.95	25.46	30.41	30.41	61.4
2017	6,589,648	6.25	4.95	24.45	29.40	29.40	63.2
2018	6,790,633	6.25	4.95	23.87	28.82	28.82	64.2
2019	6,997,747	6.25	4.95	23.20	28.15	28.15	65.4
2020	7,211,178	6.25	4.95	22.57	27.52	27.52	66.6
2021	7,431,119	6.25	4.95	21.97	26.92	26.92	67.8
2022	7,657,768	6.25	4.95	21.39	26.34	26.34	68.9
2023	7,891,330	6.25	4.95	20.83	25.78	25.78	70.0
2024	8,132,016	6.25	4.95	20.28	25.23	25.23	71.2
2025	8,380,042	6.25	4.95	19.75	24.70	24.70	72.3

<sup>1/</sup> The projection of contribution rates is based on the assumption that there are no changes in SERS statutory funding methodology, no changes in demographics or economic assumptions, no changes in benefit provisions, and no actuarial gains or losses on the actuarial value of assets that result from recognizing currently deferred gains or losses on the fair value of assets. All information on this page is based on statutory funding requirements.

<sup>2/</sup> Rates and values are for the fiscal year beginning July 1 following the valuation year and do not include Benefits Completion Plan contributions.

<sup>3/</sup> Member contribution rate is for Class AA and A-3 employees, as they comprise most of SERS membership.

<sup>4/</sup> Act 2003-40 imposed a split amortization that recognized Cost of Living Adjustments and certain large gains over 10 years, while recognizing other gains and losses over 30 years. The effect was to suppress the unfunded liability rate for 10 years ending in 2011.

<sup>5/</sup> Actuarial rate before floor and collar.

<sup>6/</sup> Act 2003-40 amended the Retirement Code to place a floor of 3.00% and 4.00% for fiscal years beginning July 1, 2005 and 2006, respectively, for the employer contribution rate.

<sup>7/</sup> Act 2007-8 amended the Retirement Code to place a permanent floor of 4.00% on the employer contribution rate.

<sup>8/</sup> Act 2010-46 amended the Retirement Code to set the employer contribution rate at 5.00% for fiscal year beginning July 1, 2010.

<sup>9/</sup> Act 2010-120 amended the Retirement Code to collar increases to the employer contribution rate at 3.00% and 3.50% for fiscal years beginning July 1, 2011 and 2012, respectively. The employer contribution rate is collared at 4.50% for fiscal years beginning July 1, 2013, and thereafter until collar becomes unnecessary.

<sup>10/</sup> Numbers are projected from 2015 - 2025 based on 2014 actuarial funding valuation.

<sup>11/</sup> Act 2010-120 amended the Retirement Code to place a permanent floor at employer normal cost after collars expire.

# ACTUARIAL SECTION

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## Summary of Plan Provisions

December 31, 2014 (unaudited)

### Benefit and Contribution Provisions

SERS makes provision for retirement, disability, and death benefits for all state employees, except for those specifically excluded under section 5301 of the State Employees' Retirement Code, and certain other eligible groups. The major provisions may be summarized as follows:

### Eligible Employees

#### Class A

All regular state employees, employees of certain commissions and authorities, employees of state-owned educational institutions, and the Pennsylvania State University (unless such employees have joined the Public School Employees' Retirement System (PSERS), TIAA-CREF, or Alternative Retirement Program (ARP)) hired before July 1, 2001, who did not elect into the class AA membership as of December 31, 2001. This excludes judges and Magisterial District Judges who have elected class E-1 or class E-2.

#### Class AA

All regular state employees who are hired after June 30, 2001 and before January 1, 2011, and former class A state employees hired before July 1, 2001, who elected into class AA as of December 31, 2001. This includes employees of certain commissions and authorities, employees of state-owned educational institutions, and the Pennsylvania State University (unless such employees have joined PSERS, TIAA-CREF, or ARP), but excludes state police troopers, judges, Magisterial District Judges, and legislators with class D-4.

#### Class A-3

All regular state employees who enter SERS membership for the first time on or after January 1, 2011, and all legislators who became members on or after December 1, 2010; Capitol

police and park rangers who became members after July 1, 2011; and state police officers who became members after July 1, 2012, provided the member did not elect membership in the optional A-4 class within 45 days of becoming a member.

#### Class A-4

All members who would be class A-3 but elected A-4 within 45 days of becoming a member.

#### Class D-4

Legislators coming into service after June 30, 2001 and before December 1, 2010, who elect to be SERS members and legislators who elected class D-4 before July 1, 2001.

#### Class E-1

Judges who elect class E-1.

#### Class E-2

Magisterial District Judges who elect class E-2.

### Age and Service Requirements for Superannuation

(Full Formula Benefit)

#### Class AA/A

Age 60 with three years of service; except for members of the General Assembly, enforcement officers, corrections officers, psychiatric security aides, and officers of the Delaware River Port Authority for whom the requirement is age 50 with three years of service. Members of class AA/A with 35 years of credited service are entitled to full formula benefits regardless of age. State police officers can retire on full benefits after age 50 or with 20 years of service. Capitol police and park rangers can retire on full benefits at age 50 with 20 years of Capitol police or park ranger service.

**Summary of Plan Provisions**

December 31, 2014 (unaudited)

**Class A-3/A-4**

Age 65 for most members and age 55 for members of the General Assembly, enforcement officers, corrections officers, psychiatric security aides, Delaware River Port Authority police officers, officers of the Pennsylvania State Police, and for Capitol police officers and park rangers with 20 or more years of credited service in the classification. Members of class A-3/A-4 are eligible for full formula benefits with 35 years of credited service with a superannuation score of 92.

**Class D-4**

Age 50, with three years of service.

**Class E-1**

Age 60, with three years of service; or 35 or more years of credited service, regardless of age.

**Class E-2**

Age 60, with three years of service; or 35 or more years of credited service, regardless of age.

**Formula for Superannuation (Normal) Annuity**

The standard single-life annuity for most members is 2% of the highest three-year average salary of the member multiplied by years and fractions of credited service multiplied by the multiplier of the class of membership.

The annuity paid to a member shall not exceed the member's highest salary during any period of 12 consecutive months of creditable service.

The multiplier for each of the major classes are as follows:

**Multiplier for Major Classes**

Class	Multiplier	
A	1.00	For state police with years of service between 20 and 25, the minimum annuity is 50% of highest annual salary; with more than 25 years of service the minimum annuity is 75% of highest annual salary.
AA	1.25	
A-3	1.00	
A-4	1.25	
D-4	1.50	
E-1	2.00	For each of the first 10 years of judicial service dropping to 1.5 for each subsequent year of judicial service.
E-2	1.50	For each year of judicial service.

NOTE: There are conditions under which long-service members or members retiring at advanced ages may receive somewhat larger benefits than those described above. Further, benefit limitations exist for most members of SERS.



## **Statistical Section**



The Statistical Section of SERS CAFR presents detailed information related to the financial statements, as well as highlights of actuarial valuations. The schedules in this section are classified into the following four categories: financial trends, revenue capacity, demographic and economic information, and operating information.

### Financial Trends

The **Schedule of Trend Data** provides key financial, actuarial, and demographic data for 10 years ended December 31, 2014. This data includes items such as employer and member contribution rates, contributions received and benefits paid by SERS, fair value and actuarial value of assets, and the number of annuitants; beneficiaries; and active members.

The **Schedule of Additions to Fiduciary Net Position** presents the member and employer contributions, as well as the net investment income/loss for the 10 years ended December 31, 2014. SERS investment returns have the most significant impact on fiduciary net position.

The **Schedule of Deductions from Fiduciary Net Position** presents the benefits, refunds of contributions, and administrative expenses for the 10 years ended December 31, 2014. Of these three categories, SERS benefit payments have the most significant impact on the total deductions from fiduciary net position.

The **Schedule of Benefit and Refund Deductions from Fiduciary Net Position by Type** presents the amount of benefit payments and refunds by type for the 10 years ended December 31, 2014. Most benefit types are either normal or early, which is determined by the number of years of service and/or age at retirement.

The **Schedule of Total Changes in Fiduciary Net Position** combines the additions to and deductions from fiduciary net position from the Schedule of Additions to Fiduciary Net Position and Schedule of Deductions from Fiduciary Net Position to arrive at net increase/decrease of changes in fiduciary net position for the 10 years ended December 31, 2014.

### Revenue Capacity

The **Schedule of Investment Income** presents the details of the total net investment income/loss for the 10 years ended December 31, 2014. SERS has two outside sources of revenue and one own-source (internal) of revenue. Employer contributions and member contributions, which information is provided for in the Schedule of Additions to Fiduciary Net Position, are the two outside sources of revenue, and investment income is SERS own-source revenue. Since investment income/loss has the greatest impact to SERS, this schedule provides more detail on the major components of the investment income/loss, which is also disclosed in total on the Schedule of Additions to Fiduciary Net Position.

### Demographic and Economic Information

The **Schedule of Active Member Statistics** provides the total number of active members, as well as the average age, average service, and average salary by gender for the 10 years ended December 31, 2014.

# STATISTICAL SECTION

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## Statistical Section Narrative

December 31, 2014 (unaudited)

### Operating Information

The **Schedule of Retired Members by Type of Benefit** presents, for given benefit ranges, the total number of retirees, total monthly benefits, and total number of retirees by retirement type as of December 31, 2014.

The **Schedule of Retired Members by Option** presents, for given benefit ranges, the total number of retirees, total monthly benefits, and total number of retirees by retirement option as of December 31, 2014.

The **Schedule of Average Monthly Benefit Payments** presents, in five-year increments of credited service, the average monthly benefit, average final average salary, and number of retired members for the 10 years ended December 31, 2014.

The **Schedule of Average Annual Benefit Payments** presents, in five-year age increments and by gender, the average annual benefit for each major retirement type as of December 31, 2014.

The **Schedule of Employer Participation** provides the number of covered members and the corresponding percentage of participation for the 20 largest employers for the 10 years ended December 31, 2014, as well as a listing of additional employers participating with SERS as of December 31, 2014.

Sources: Unless otherwise noted, the information for these schedules is derived from the Financial Section and Actuarial Section of the Comprehensive Annual Financial Report for the relevant year.

Schedule of Trend Data

December 31, 2014 (unaudited)

Trend Data<sup>1/</sup>

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
<b>Year End Contribution Rates</b>										
Employer <sup>2/,3/,4/</sup>	20.53% <sup>7/</sup>	16.05% <sup>7/</sup>	11.59% <sup>7/</sup>	8.01% <sup>7/</sup>	5.01% <sup>8/</sup>	4.01% <sup>9/</sup>	4.04% <sup>9/</sup>	4.04% <sup>9/</sup>	4.02% <sup>10/</sup>	3.02% <sup>10/</sup>
Member	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%	6.25%
<b>Contributions</b>										
Employer <sup>2/</sup>	\$1,084,104	\$794,911	\$565,621	\$391,749	\$273,083	\$253,250	\$235,288	\$243,936	\$196,420	\$148,375
Member	\$365,923	\$351,968	\$347,937	\$350,852	\$349,049	\$348,805	\$336,833	\$333,818	\$317,790	\$305,624
Average Annual Compensation	\$54,769	\$53,224	\$52,230	\$52,159	\$51,228	\$50,813	\$48,957	\$48,345	\$46,118	\$44,815
Fiduciary Net Position (FNP)	\$27,337,778	\$27,394,156	\$25,389,335	\$24,377,179	\$25,886,102	\$24,661,949	\$22,795,813	\$35,516,198	\$32,052,830	\$28,751,871
Total Pension Liability (TPL) <sup>5/</sup>	\$42,195,186	\$41,057,541	NA	NA	NA	NA	NA	NA	NA	NA
FNP as % of TPL <sup>5/</sup>	64.8%	66.7%	NA	NA	NA	NA	NA	NA	NA	NA
Net Pension Liability <sup>5/</sup>	\$14,857,408	\$13,663,385	NA	NA	NA	NA	NA	NA	NA	NA
Actuarial Value of Assets <sup>4/</sup>	\$26,584,948	\$25,975,185	\$25,302,688	\$27,618,461	\$29,443,945	\$30,204,693	\$30,635,621	\$30,839,877	\$28,148,834	\$26,793,782
Actuarial Accrued Liability <sup>4/</sup>	\$44,750,670	\$43,874,580	\$43,055,564	\$42,281,862	\$39,179,594	\$35,797,017	\$34,437,396	\$31,753,971	\$30,364,997	\$28,851,716
Funded Ratio <sup>4/</sup>	59.4%	59.2%	58.8%	65.3%	75.2%	84.4%	89.0%	97.1%	92.7%	92.9%
Total Benefits and Refunds	\$2,946,465	\$2,844,285	\$2,674,133	\$2,705,263	\$2,449,253	\$2,273,372	\$2,204,579	\$2,336,368	\$1,919,426	\$1,943,643
Average Pension <sup>6/</sup>	\$26,426	\$25,839	\$25,083	\$24,448	\$23,491	\$22,695	\$21,965	\$21,326	\$20,025	\$19,372
Annuity and Beneficiaries	122,249	120,052	117,061	115,342	111,713	109,639	108,146	107,130	102,060	101,179
Active Members	104,431	105,186	106,048	107,021	109,255	110,107	110,866	109,610	110,972	109,981

<sup>1/</sup> All dollar amounts are in thousands, except Average Annual Compensation and Average Pension.

<sup>2/</sup> Includes Benefits Completion Plan contribution.

<sup>3/</sup> Employer rate represents total contributions as a percent of covered-employee payroll at December 31.

<sup>4/</sup> Based on actuarial valuation for funding purposes as required by statute.

<sup>5/</sup> Based on actuarial valuation for financial reporting purposes as required by Governmental Accounting Standards Board Statement No. 67 (GASB 67). Information for 10 years will be displayed in the future to coincide with financial reporting requirements under GASB 67.

<sup>6/</sup> Average pension amount represents average annual pension only for members who have reached superannuation through age or service credits.

<sup>7/</sup> Act 2010-120 set collars on the increase of the employer contribution rate at 3% effective July 1, 2011, 3.5% for July 1, 2012, and 4.5% every year thereafter until no longer needed.

<sup>8/</sup> Act 2010-46 set the employer contribution rate at 5% effective July 1, 2010.

<sup>9/</sup> Act 2007-8 established a permanent minimum employer contribution rate floor of 4%.

<sup>10/</sup> Act 2003-40 established a minimum employer contribution rate of 3% and 4% effective July 1, 2005 and 2006, respectively.

Source: State Employees' Retirement System

# STATISTICAL SECTION

## Schedule of Additions to Fiduciary Net Position

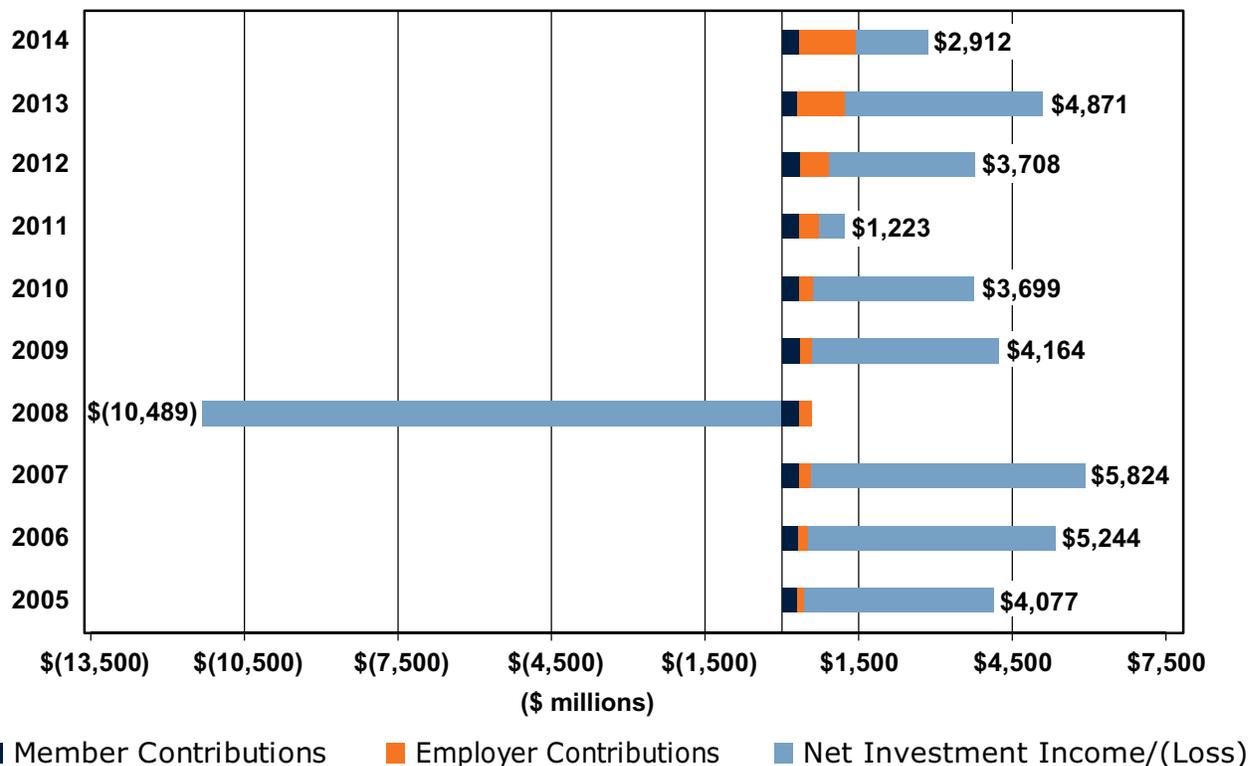
December 31, 2014 (unaudited)

### Additions to Fiduciary Net Position

(\$ thousands)

Year Ended	Member Contributions	Employer Contributions		Net Investment Income/(Loss)	Total
		Dollar Amount	% of Covered-Employee Payroll <sup>1/</sup>		
2014	\$365,923	\$1,084,104	19.0%	\$1,462,051	\$2,912,078
2013	351,968	794,911	14.2	3,724,038	4,870,917
2012	347,937	565,621	10.2	2,794,940	3,708,498
2011	350,852	391,749	7.0	480,445	1,223,046
2010	349,049	273,083	4.9	3,076,410	3,698,542
2009	348,805	253,250	4.5	3,561,526	4,163,581
2008	336,833	235,288	4.3	(11,061,207)	(10,489,086)
2007	333,818	243,936	4.6	5,246,730	5,824,484
2006	317,790	196,420	3.8	4,730,043	5,244,253
2005	305,624	148,375	3.0	3,622,820	4,076,819

<sup>1/</sup> Calculated by dividing employer contributions by total annualized compensation (covered-employee payroll) provided by actuary.



Source: State Employees' Retirement System

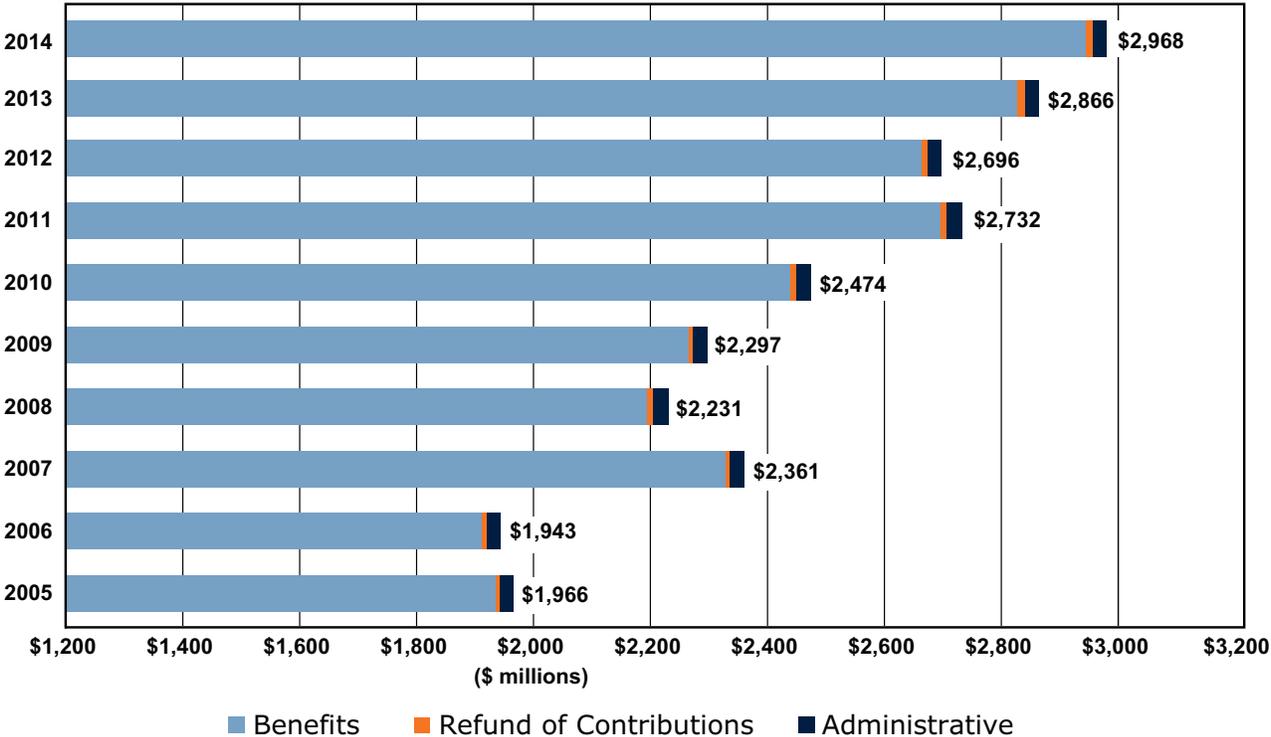
**Schedule of Deductions from Fiduciary Net Position**

December 31, 2014 (unaudited)

**Deductions from Fiduciary Net Position**  
(\$ thousands)

Year Ended	Benefits	Refund of Contributions	Administrative	Total
2014	\$2,936,591	\$9,874	\$21,991	\$2,968,456
2013	2,833,676	10,609	21,811	2,866,096
2012	2,664,242	9,891	22,209	2,696,342
2011	2,695,732	9,531	26,706	2,731,969
2010	2,440,246	9,007	25,136	2,474,389
2009	2,265,404	7,968	24,073	2,297,445
2008	2,195,206	9,373	26,720	2,231,299
2007	2,328,185 <sup>1/</sup>	8,183	24,748	2,361,116
2006	1,911,330	8,096	23,868	1,943,294
2005	1,936,428	7,215	22,704	1,966,347

<sup>1/</sup> 22% increase from prior year is due to large number of employees retiring as a result of changes in health care benefits.



Source: State Employees' Retirement System

# STATISTICAL SECTION

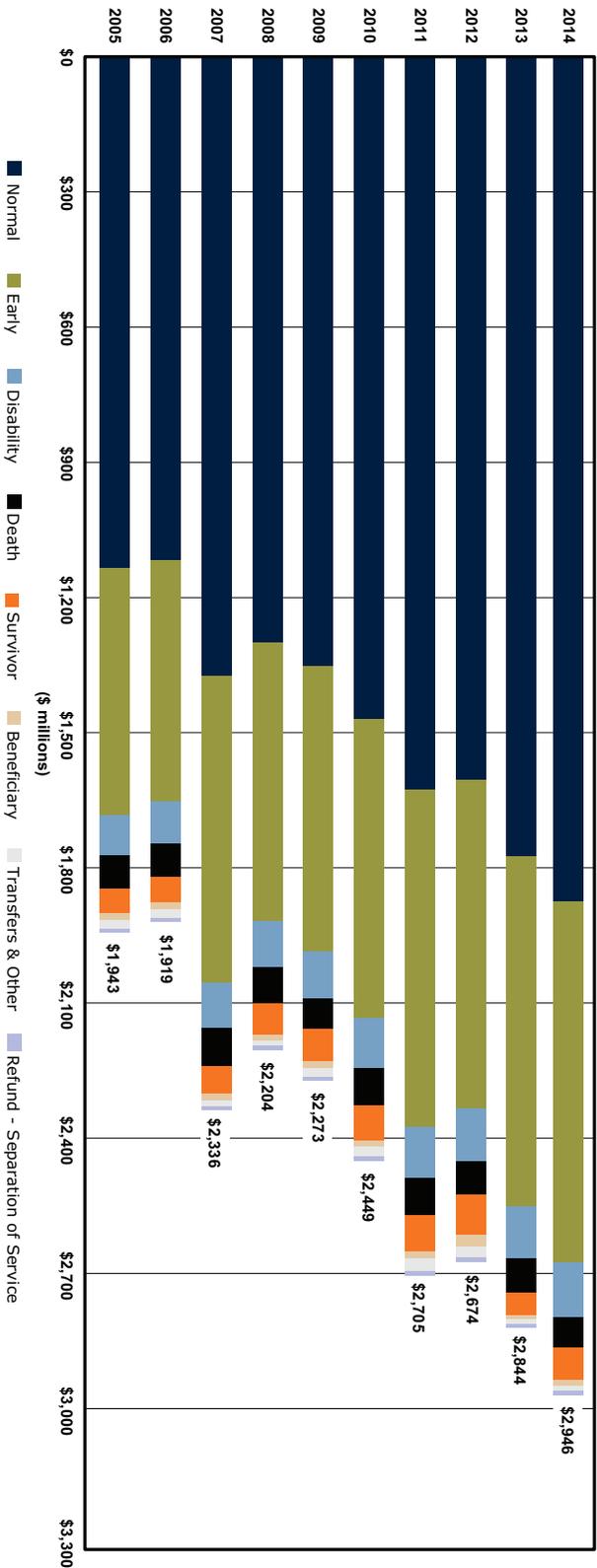
## Schedule of Benefit and Refund Deductions from Fiduciary Net Position by Type

December 31, 2014 (unaudited)

### Benefit and Refund Deductions from Fiduciary Net Position by Type ( \$ thousands)

Year Ended	Retirement										Refunds			Total Refunds
	Normal	Early	Disability	Death	Survivor	Beneficiary	Transfers & Other	Total Benefit Deductions	Separation of Service	Death	Refunds			
2014	\$1,803,669	\$789,723	\$126,457	\$78,580	\$100,527	\$15,510	\$22,125	\$2,936,591	\$9,723	\$151	\$9,874			
2013	1,737,107	769,385	121,640	71,216	93,919	17,271	23,138	2,833,676	10,318	291	10,609			
2012	1,604,985	728,719	116,914	75,254	88,055	26,497	23,818	2,664,242	9,673	218	9,891			
2011	1,626,233	749,180	112,575	82,123	82,467	15,093	28,061	2,695,732	9,271	260	9,531			
2010	1,470,101	663,004	109,506	84,878	77,384	14,039	21,334	2,440,246	8,693	314	9,007			
2009	1,351,710	633,880	105,207	65,873	72,466	14,143	22,125	2,265,404	7,824	144	7,968			
2008	1,300,312	618,027	102,250	81,728	67,623	14,209	11,057	2,195,206	9,222	151	9,373			
2007	1,372,909	683,467	98,605	83,687	62,726	13,949	12,842	2,328,185 <sup>1/</sup>	8,007	176	8,183			
2006	1,117,801	535,156	93,358	73,885	58,038	14,988	18,104	1,911,330	7,971	125	8,096			
2005	1,133,694	550,437	88,250	74,312	53,873	14,650	21,212	1,936,428	7,086	129	7,215			

<sup>1/</sup> For most members who retired after July 1, 2007, members must contribute to medical insurance premiums as a result of AFSCME agreement dated July 1, 2007.



**Schedule of Total Changes in Fiduciary Net Position**

December 31, 2014 (unaudited)

**Total Changes in Fiduciary Net Position**  
(\$ thousands)

Year Ended	Additions to Fiduciary Net Position				Deductions from Fiduciary Net Position				Net Increase/ (Decrease)
	Member Contributions	Employer Contributions	Investment Income/ (Loss)	Total Additions	Benefits	Refund of Contributions	Administrative Deductions	Total Deductions	
2014	\$365,923	\$1,084,104	\$1,462,051	\$2,912,078	\$2,936,591	\$9,874	\$21,991	\$2,968,456	\$(56,378)
2013	351,968	794,911	3,724,038	4,870,917	2,833,676	10,609	21,811	2,866,096	2,004,821
2012	347,937	565,621	2,794,940	3,708,498	2,664,242	9,891	22,209	2,696,342	1,012,156
2011	350,852	391,749	480,445	1,223,046	2,695,732	9,531	26,706	2,731,969	(1,508,923)
2010	349,049	273,083	3,076,410	3,698,542	2,440,246	9,007	25,136	2,474,389	1,224,153
2009	348,805	253,250	3,561,526	4,163,581	2,265,404	7,968	24,073	2,297,445	1,866,136
2008	336,833	235,288	(11,061,207)	(10,489,086)	2,195,206	9,373	26,720	2,231,299	(12,720,385)
2007	333,818	243,936	5,246,730	5,824,484	2,328,185	8,183	24,748	2,361,116	3,463,368
2006	317,790	196,420	4,730,043	5,244,253	1,911,330	8,096	23,868	1,943,294	3,300,959
2005	305,624	148,375	3,622,820	4,076,819	1,936,428	7,215	22,704	1,966,347	2,110,472

Source: State Employees' Retirement System

# STATISTICAL SECTION

## Schedule of Investment Income

December 31, 2014 (unaudited)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Investment income/(loss) From investing activities										
Net appreciation/(depreciation) in fair value of investments <sup>1/</sup>	\$1,155,301	\$3,476,349	\$2,268,730	\$614,117	\$2,211,065	\$2,456,209	\$(9,979,685)	\$4,164,231	\$3,723,160	\$2,811,470
Commingled funds appreciation/ (depreciation) and income <sup>1/</sup>	NA	NA	275,103	(267,177)	810,147	1,063,673	(1,377,568)	798,941	641,718	420,888
Interest	142,434	120,815	144,431	165,082	146,995	149,040	342,163	347,507	350,783	368,610
Dividends	246,528	204,214	190,733	78,823	61,964	69,400	154,779	149,488	152,690	128,480
Real estate income	93,167	99,314	97,641	82,707	73,355	73,561	109,523	112,148	145,871	112,057
Miscellaneous income	1,799	668	4,583	2,316	6,471	3,499	5,969	6,149	3,519	3,537
Total investing activities income/(loss)	1,639,229	3,901,360	2,981,221	675,868	3,309,997	3,815,382	(10,744,819)	5,578,464	5,017,741	3,845,042
Investment expenses	(186,527)	(181,042)	(189,722)	(197,505)	(235,826)	(260,376)	(310,454)	(344,707)	(298,204)	(234,760)
Net income/(loss) from investing activities	1,452,702	3,720,318	2,791,499	478,363	3,074,171	3,555,006	(11,055,273)	5,233,757	4,719,537	3,610,282
From securities lending activities										
Securities lending income	9,917	4,326	3,953	2,376	2,511	7,092	41,319	155,067	170,675	116,477
Securities lending expenses	(568)	(606)	(512)	(294)	(272)	(572)	(47,253)	(142,094)	(160,169)	(103,939)
Net income/(loss) from securities lending activities	9,349	3,720	3,441	2,082	2,239	6,520	(5,934)	12,973	10,506	12,538
<b>Net investment income/(loss)</b>	<b>\$1,462,051</b>	<b>\$3,724,038</b>	<b>\$2,794,940</b>	<b>\$480,445</b>	<b>\$3,076,410</b>	<b>\$3,561,526</b>	<b>\$(11,061,207)</b>	<b>\$5,246,730</b>	<b>\$4,730,043</b>	<b>\$3,622,820</b>

<sup>1/</sup> In 2014, SERS began to report commingled funds as part of net appreciation/(depreciation) in fair value of investments. Certain 2013 figures were restated to conform to 2014 reporting.

Source: State Employees' Retirement System

### Investment Income (\$ thousands)

**Schedule of Active Member Statistics**

December 31, 2014 (unaudited)

**Active Member Statistics**

Year Ended	Male			Female			Total Number of Active Members
	Average Age	Average Service	Average Salary	Average Age	Average Service	Average Salary	
2014	46.55	12.12	\$59,228	46.77	11.44	\$48,825	104,431
2013	46.63	12.19	57,416	46.92	11.64	47,583	105,186
2012	46.64	12.23	56,118	46.90	11.79	46,981	106,048
2011	46.55	12.17	56,008	46.70	11.70	46,992	107,021
2010	46.58	12.36	54,983	46.71	11.91	46,206	109,255
2009	46.50	12.35	54,414	46.52	12.00	45,987	110,107
2008	46.23	12.21	52,536	46.18	11.79	44,176	110,866
2007	46.11	12.22	51,663	45.95	11.76	43,888	109,610
2006	46.39	12.80	49,455	46.20	12.49	41,616	110,972
2005	46.12	12.71	48,129	45.91	12.46	40,331	109,981

Source: State Employees' Retirement System

# STATISTICAL SECTION

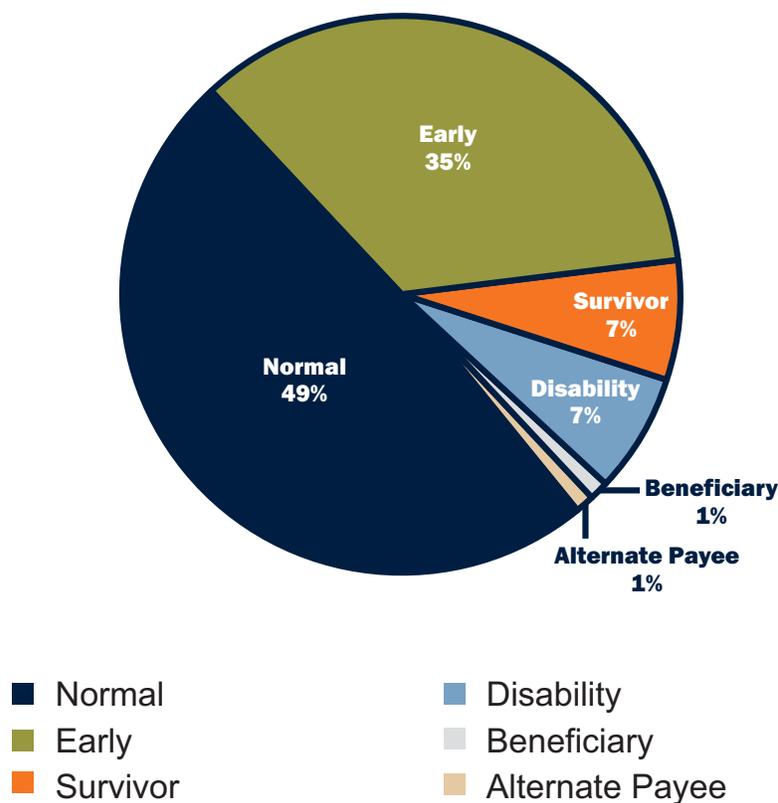
## Schedule of Retired Members by Type of Benefit

December 31, 2014 (unaudited)

### Retired Members by Type of Benefit

Amount of Monthly Benefits	Total Monthly Benefits <sup>1/</sup>	Total Number of Retirees	Type of Benefit					
			Normal	Disability	Early	Beneficiary	Survivor	Alternate Payee
≤ \$500	\$6,787,981	27,844	6,203	577	16,840	471	3,328	425
> 500 to 1,000	16,444,966	22,152	10,410	3,659	5,060	297	2,381	345
> 1,000 to 1,500	21,161,118	17,125	9,128	1,988	4,361	123	1,312	213
> 1,500 to 2,000	23,194,882	13,307	7,125	1,006	4,364	64	661	87
> 2,000 to 2,500	24,463,894	10,914	6,197	550	3,680	43	419	25
> 2,500 to 3,000	22,961,541	8,382	5,115	324	2,684	24	224	11
> 3,000	97,658,745	22,525	16,053	310	5,694	62	396	10
<b>Totals</b>	<b>\$212,673,127</b>	<b>122,249</b>	<b>60,231</b>	<b>8,414</b>	<b>42,683</b>	<b>1,084</b>	<b>8,721</b>	<b>1,116</b>

<sup>1/</sup> Does not include supplemental payments and transfers.



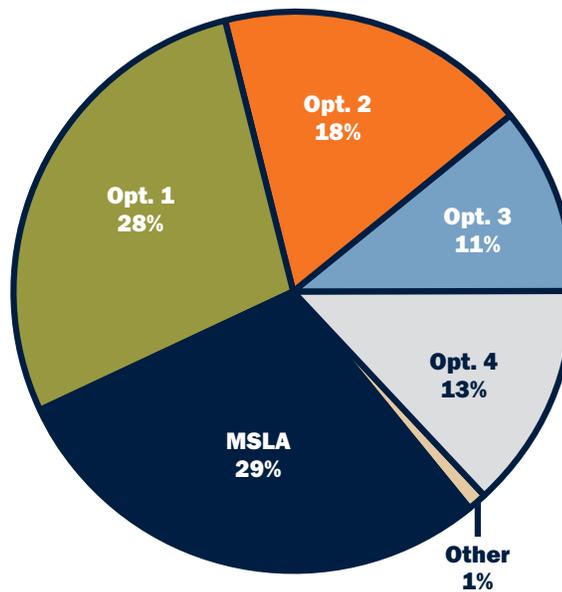
Source: State Employees' Retirement System

**Schedule of Retired Members by Option**

December 31, 2014 (unaudited)

**Retired Members by Option**

Amount of Monthly Benefit	Total Monthly Benefits	Total Number of Retirees	Option Selected					
			MSLA	Opt. 1	Opt. 2	Opt. 3	Opt. 4	Other
≤ \$500	\$6,787,981	27,844	6,384	11,345	6,032	1,861	1,719	503
> 500 to 1,000	16,444,966	22,152	7,527	5,821	4,371	2,126	1,973	334
> 1,000 to 1,500	21,161,118	17,125	5,163	4,369	3,400	1,843	2,205	145
> 1,500 to 2,000	23,194,882	13,307	4,042	3,297	2,293	1,600	1,996	79
> 2,000 to 2,500	24,463,894	10,914	3,206	2,546	1,817	1,395	1,901	49
> 2,500 to 3,000	22,961,541	8,382	2,506	1,886	1,307	1,083	1,569	31
> 3,000	97,658,745	22,525	7,447	4,420	2,802	3,115	4,674	67
<b>Totals</b>	<b>\$212,673,127</b>	<b>122,249</b>	<b>36,275</b>	<b>33,684</b>	<b>22,022</b>	<b>13,023</b>	<b>16,037</b>	<b>1,208</b>



- MSLA - Maximum Single Life Annuity
- Opt. 1 - Beneficiary receiving remainder of present value when member dies
- Opt. 2 - Survivor receiving 100% of the member's annuity when member dies
- Opt. 3 - Survivor receiving 50% of the member's annuity when member dies
- Opt. 4 - Member designs a different plan approved by SERS not covered under the above options
- Other - Death benefit or domestic relations order

Source: State Employees' Retirement System

# STATISTICAL SECTION

## Schedule of Average Monthly Benefit Payments

December 31, 2014 (unaudited)

### Average Monthly Benefit Payments<sup>1/</sup>

Retirement Effective Dates	Years of Credited Service						
	< 5	5-9	10-14	15-19	20-24	25-29	30+
<b>Period 1/1/2014 to 12/31/2014</b>							
Average monthly benefit	\$300	\$453	\$892	\$1,462	\$2,177	\$3,256	\$4,061
Average final average salary	\$43,879	\$43,513	\$48,310	\$55,258	\$61,462	\$72,587	\$70,590
Number of retired members	91	963	814	473	912	1,018	1,344
<b>Period 1/1/2013 to 12/31/2013</b>							
Average monthly benefit	\$262	\$399	\$845	\$1,466	\$2,178	\$3,408	\$4,036
Average final average salary	\$40,035	\$42,368	\$47,413	\$55,071	\$61,526	\$74,649	\$69,812
Number of retired members	68	947	779	496	814	1,049	1,451
<b>Period 1/1/2012 to 12/31/2012</b>							
Average monthly benefit	\$261	\$406	\$823	\$1,495	\$2,101	\$3,464	\$4,073
Average final average salary	\$38,197	\$42,106	\$46,477	\$54,120	\$58,807	\$74,455	\$70,238
Number of retired members	94	899	724	535	680	908	1,184
<b>Period 1/1/2011 to 12/31/2011</b>							
Average monthly benefit	\$263	\$445	\$843	\$1,430	\$2,095	\$2,994	\$3,829
Average final average salary	\$36,895	\$44,808	\$46,588	\$52,687	\$58,928	\$67,793	\$66,989
Number of retired members	103	851	716	769	856	1,134	2,276
<b>Period 1/1/2010 to 12/31/2010</b>							
Average monthly benefit	\$254	\$398	\$788	\$1,332	\$2,109	\$2,938	\$3,818
Average final average salary	\$39,114	\$41,128	\$44,562	\$50,607	\$57,784	\$66,053	\$65,579
Number of retired members	75	755	505	646	712	846	1,662
<b>Period 1/1/2009 to 12/31/2009</b>							
Average monthly benefit	\$209	\$374	\$740	\$1,337	\$1,936	\$2,919	\$3,767
Average final average salary	\$32,925	\$38,184	\$43,520	\$50,161	\$55,113	\$65,193	\$64,685
Number of retired members	60	543	448	545	539	710	1,287
<b>Period 1/1/2008 to 12/31/2008</b>							
Average monthly benefit	\$198	\$340	\$729	\$1,266	\$1,903	\$2,968	\$3,782
Average final average salary	\$30,280	\$39,066	\$45,753	\$48,823	\$55,471	\$65,893	\$65,569
Number of retired members	64	646	484	788	586	705	938
<b>Period 1/1/2007 to 12/31/2007</b>							
Average monthly benefit	\$219	\$322	\$674	\$1,214	\$1,883	\$2,538	\$3,464
Average final average salary	\$31,359	\$37,629	\$42,759	\$45,817	\$53,241	\$58,974	\$60,726
Number of retired members	53	637	476	1,057	759	1,258	3,384
<b>Period 1/1/2006 to 12/31/2006</b>							
Average monthly benefit	\$174	\$316	\$690	\$1,171	\$1,878	\$2,487	\$3,489
Average final average salary	\$27,898	\$35,283	\$42,358	\$45,225	\$53,513	\$58,031	\$60,582
Number of retired members	51	584	491	667	471	627	1,205
<b>Period 1/1/2005 to 12/31/2005</b>							
Average monthly benefit	\$197	\$335	\$695	\$1,161	\$1,844	\$2,409	\$3,464
Average final average salary	\$31,822	\$34,767	\$40,577	\$45,052	\$51,985	\$55,391	\$60,758
Number of retired members	57	579	544	785	588	885	2,034

<sup>1/</sup> Includes normal retirement, early retirement, and disability benefits for new retirees in the years listed.

Source: State Employees' Retirement System

**Schedule of Average Annual Benefit Payments**

December 31, 2014 (unaudited)

**Average Annual Benefit Payments**

Age	Normal		Early		Disability		Beneficiary and Survivor	
	Male	Female	Male	Female	Male	Female	Male	Female
Under 25	NA	NA	NA	NA	NA	NA	\$8,943	\$6,713
25-29	NA	NA	\$762	\$648	\$11,967	\$9,939	10,291	5,343
30-34	NA	NA	1,153	865	13,070	11,294	20,743	8,773
35-39	NA	NA	1,564	1,262	14,123	13,367	15,605	16,028
40-44	NA	NA	4,039	2,164	15,282	12,598	11,270	8,083
45-49	NA	NA	21,025	4,474	17,735	14,818	11,314	10,160
50-54	\$39,193	\$33,059	24,780	9,543	18,241	16,028	6,438	10,851
55-59	40,457	40,122	21,087	14,332	19,031	17,124	7,920	12,536
60-64	34,760	32,761	22,635	17,381	17,015	15,862	11,198	13,488
65-69	31,577	26,276	23,088	16,131	14,807	14,011	11,839	14,554
70-74	30,599	22,342	19,840	13,382	11,404	10,704	10,567	14,950
75-79	27,105	17,963	15,363	10,359	9,138	8,964	9,666	12,792
80-84	22,829	13,610	15,029	9,325	8,926	7,793	9,558	11,150
85-89	19,174	11,318	14,521	8,096	9,497	7,559	9,117	9,499
90 and over	17,065	9,109	14,332	7,530	8,478	7,462	8,945	7,662
<b>Total Average</b>	<b>\$29,522</b>	<b>\$22,184</b>	<b>\$20,022</b>	<b>\$12,978</b>	<b>\$15,612</b>	<b>\$14,046</b>	<b>\$10,268</b>	<b>\$11,822</b>

	Normal	Early	Disability	Beneficiary and Survivor
<b>Average Pension</b>	\$26,426	\$16,608	\$14,797	\$11,651
<b>Average Age</b>	72.4	63.7	62.7	74.6

Source: State Employees' Retirement System

## Schedule of Employer Participation - 20 Largest

December 31, 2014 (unaudited)

# - Number of active members

% - Percentage of total active members

Employer Name	2014 <sup>1/</sup>		2013		2012		2011		2010		2009		2008		2007		2006		2005	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Dept of Human Services	16,870	16.15	16,668	15.85	16,764	15.81	17,087	15.97	18,007	16.48	18,201	16.53	18,618	16.79	18,761	17.12	19,355	17.44	19,781	17.99
Dept of Corrections	14,916	14.28	15,529	14.76	15,682	14.79	15,764	14.73	16,133	14.77	16,174	14.69	16,075	14.50	15,523	14.16	15,151	13.65	15,126	13.75
Dept of Transportation	12,325	11.80	12,656	12.03	12,729	12.00	12,826	11.98	12,427	11.37	12,548	11.40	12,494	11.27	12,264	11.19	12,484	11.25	12,388	11.26
Pennsylvania State Police	6,323	6.05	6,084	5.78	6,012	5.67	6,033	5.64	6,084	5.57	6,102	5.54	6,222	5.61	6,266	5.72	6,172	5.56	6,127	5.57
Pennsylvania State University	6,123	5.86	6,210	5.90	6,368	6.00	6,532	6.10	6,653	6.09	6,608	6.00	6,468	5.83	6,210	5.67	6,265	5.65	6,210	5.65
Dept of Labor and Industry	4,981	4.77	5,113	4.86	5,474	5.16	5,768	5.39	5,919	5.42	5,719	5.19	5,178	4.67	5,234	4.78	5,692	5.13	5,608	5.10
State System of Higher Education	4,977	4.77	5,109	4.86	5,123	4.83	5,138	4.80	5,375	4.92	5,556	5.05	5,521	4.98	5,316	4.85	5,344	4.82	5,240	4.76
Liquor Control Board	4,340	4.16	4,264	4.05	4,141	3.90	4,080	3.81	4,286	3.92	4,303	3.91	4,097	3.70	3,969	3.62	4,102	3.70	3,994	3.63
PA Higher Education Assistance Agency	3,225	3.09	2,983	2.84	2,776	2.62	2,460	2.30	2,265	2.07	2,230	2.03	2,135	1.93	2,494	2.28	2,524	2.27	2,378	2.16
Dept of Environmental Protection	2,510	2.40	2,571	2.44	2,632	2.48	2,643	2.47	2,623	2.40	2,677	2.43	2,802	2.53	2,767	2.52	2,921	2.63	2,836	2.58
Dept of Military and Veterans Affairs	2,481	2.38	2,487	2.36	2,385	2.25	2,471	2.31	2,505	2.29	2,478	2.25	2,568	2.32	2,545	2.32	2,540	2.29	2,492	2.27
Dept of Conservation and Natural Resources	2,100	2.01	2,063	1.96	2,037	1.92	1,909	1.78	1,913	1.75	2,031	1.84	2,111	1.90	2,080	1.90	2,093	1.89	1,971	1.79
PA Turnpike Commission	2,062	1.97	2,108	2.00	2,126	2.00	2,104	1.97	2,132	1.95	2,164	1.97	2,254	2.03	2,232	2.04	2,276	2.05	2,227	2.02
Administrative Office of PA Courts	2,009	1.92	1,967	1.87	2,018	1.90	1,977	1.85	2,025	1.85	1,992	1.81	2,015	1.82	1,988	1.81	1,989	1.79	1,953	1.78
Dept of Revenue	1,943	1.86	1,962	1.87	1,994	1.88	2,059	1.92	2,166	1.98	2,170	1.97	2,366	2.13	2,289	2.09	2,319	2.09	2,322	2.11
Executive Offices	1,689	1.62	1,739	1.65	1,851	1.75	1,949	1.82	2,006	1.84	2,155	1.96	2,257	2.04	2,201	2.01	2,247	2.02	2,246	2.04
House of Representatives	1,589	1.52	1,676	1.59	1,590	1.50	1,792	1.67	1,825	1.67	1,779	1.62	1,736	1.57	1,758	1.60	1,701	1.53	1,706	1.55
Board of Probation and Parole	1,210	1.16	1,176	1.12	1,161	1.09	1,096	1.02	1,100	1.01	1,108	1.01	1,098	0.99	1,009	0.92	974	0.88	1,010	0.92
Dept of Health	1,119	1.07	1,142	1.09	1,262	1.19	1,333	1.25	1,335	1.22	1,409	1.28	1,473	1.33	1,433	1.31	1,479	1.33	1,435	1.30
Dept of General Services	925	0.89	955	0.91	961	0.91	1,022	0.95	1,108	1.01	1,208	1.10	1,270	1.15	1,267	1.16	1,340	1.21	1,306	1.19
<b>Active members for 20 largest employers</b>	<b>93,717</b>	<b>89.74</b>	<b>94,462</b>	<b>89.80</b>	<b>95,086</b>	<b>89.66</b>	<b>96,043</b>	<b>89.74</b>	<b>97,887</b>	<b>89.59</b>	<b>98,612</b>	<b>89.56</b>	<b>98,758</b>	<b>89.08</b>	<b>97,606</b>	<b>89.05</b>	<b>98,968</b>	<b>89.18</b>	<b>98,356</b>	<b>89.43</b>
Total number of active members	104,431		105,186		106,048		107,021		109,255		110,107		110,866		109,610		110,972		109,981	

Numbers may not add due to rounding.

<sup>1/</sup> The membership includes 39 employers and the commonwealth is classified as its largest employer. The commonwealth is comprised of 66 agencies and when everything is evaluated separately, SERS has a total of 104 participating employers/agencies.

Source: State Employees' Retirement System

**Schedule of Employer Participation**

December 31, 2014 (unaudited)

**Remaining Employers<sup>1/</sup>**

Bloomsburg University Community Activities	Kutztown University Student Services
Bucks County Community College	Lancaster-Lebanon Intermediate Unit
Bucks County Health Department	Legislative Budget and Finance Committee
California University Student Association	Legislative Data Processing Center
Capitol Preservation Committee	Legislative Reference Bureau
Center for Rural Pennsylvania	Lehigh Carbon Community College
Central Susquehanna Intermediate Unit	Lieutenant Governor's Office
Chester County Health Department	Local Government Commission
Civil Service Commission	Luzerne County Community College
Clarion University Student Association	Mansfield University Community Services
Community College of Allegheny County	Milk Marketing Board
Community College of Philadelphia	Millersville Student Services
Delaware County Community College	Montgomery County Community College
Delaware River Joint Toll Bridge	Northampton Community College
Delaware River Port Authority	Office of Attorney General
Delaware Valley Regional Planning Commission	Office of Liquidations
Department of Aging	Pennsylvania College of Technology
Department of Agriculture	Pennsylvania Convention Center Authority
Department of Banking	Pennsylvania E-Health Partnership Authority
Department of Community & Economic Development	Pennsylvania Emergency Management Agency
Department of Drug and Alcohol Programs	Pennsylvania Gaming Control Board
Department of Education	Pennsylvania Health Care Cost Containment Council
Department of State	Pennsylvania Highlands Community College
Department of the Auditor General	Pennsylvania Housing Finance Agency
East Stroudsburg University Student Association	Pennsylvania Infrastructure Investment Authority
Edinboro University Services Inc.	Pennsylvania Municipal Retirement System
Environmental Hearing Board	Pennsylvania Port Authority
Erie County Health Department	Port Authority Transit Corporation
Fish and Boat Commission	Public School Employees' Retirement System
Game Commission	Public Utility Commission
Governor's Office	Reading Area Community College
Harrisburg Area Community College	Senate of Pennsylvania
Historical and Museum Commission	Shippensburg University Student Services Inc.
House Appropriations Committee(D)	Slippery Rock Student Government
House Appropriations Committee(R)	State Employees' Retirement System
Independent Fiscal Office	State Ethics Commission
Independent Regulatory Review Commission	State Public School Building Authority
Indiana University Student Co-op	Susquehanna River Basin Commission
Insurance Department	Thaddeus Stevens College of Technology
Intergovernmental Cooperation Authority	Treasury Department
Joint Legislative Conservation Committee	West Chester University Student Services
Joint State Government Commission	Westmoreland County Community College

<sup>1/</sup> The membership includes 39 employers and the commonwealth is classified as its largest employer. The commonwealth is comprised of 66 agencies and when everything is evaluated separately, SERS has a total of 104 participating employers/agencies.



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