

# 2024

## **Annual Comprehensive Financial Report**

With Independent Auditors' Report for Fiscal  
Years Ended December 31, 2024 and 2023

Commonwealth of Pennsylvania  
State Employees' Retirement System

A Component Unit of the  
Commonwealth of Pennsylvania





# 2024

## **Annual Comprehensive Financial Report**

With Independent Auditors' Report for Fiscal  
Years Ended December 31, 2024 and 2023

Commonwealth of Pennsylvania  
State Employees' Retirement System

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

**Joseph A. Torta**  
Executive Director

**Sara E. McSurdy**  
Chief Financial Officer

**State Employees' Retirement System**  
30 N 3rd St, Suite 150  
Harrisburg, PA 17101-1716  
1.800.633.5461  
[www.SERS.pa.gov](http://www.SERS.pa.gov)

A Component Unit of the  
Commonwealth of Pennsylvania

# INTRODUCTORY SECTION

## Table of Contents

### Introductory Section

GFOA and PPCC Award Certificates	i
Transmittal Letter	ii
SERS Mission, Vision, and Organizational Chart	vi
SERS Board	vii

### Financial Section

Independent Auditors' Report	1
Management's Discussion and Analysis (unaudited)	4
Basic Financial Statements:	
Statements of Fiduciary Net Position	13
Statements of Changes in Fiduciary Net Position	15
Notes to Basic Financial Statements	17
Required Supplementary Information (unaudited):	
Schedule 1 - Schedule of Changes in Net Pension Liability and Related Ratios	40
Schedule 2 - Schedule of Employer Contributions	41
Schedule 3 - Schedule of Investment Returns	41
Supplementary Information:	
Schedule 4 - Schedule of Administrative Expenses	42
Schedule 5 - Summary of Investment and Consultant Expenses	43

### Investment Section

Report on Investment Activity	44
Investment Policy and Objectives	46
Investment Returns	48
Pension Fund Values and Annual Returns	50
Largest Assets Held	51
Manager Fees & Expenses	53
Schedule of Trading Broker Commissions	55
Investment Summary	56
Private Equity	57
Real Estate	66
U.S. Equity	69
International Developed Markets Equity	70
Emerging Markets Equity	71
Fixed Income	72
Inflation Protection (TIPS)	73
Cash	74
Legacy Private Credit	75
Legacy Hedge Funds	76

### Investment Section (continued)

Defined Contribution Plan Investment Options	77
----------------------------------------------	----

### Actuarial Section

Actuary's Certification	80
Summary of Actuarial Assumptions and Methods	84
Schedules of Active Member Valuation Data	86
Schedule of Retirees and Beneficiaries Added to and Removed from Rolls	90
Solvency Test	91
Analysis of Financial Experience	92
Schedule of Funding Progress	93
Schedule of Contributions Under Previous Reporting Standards	94
History and Projection of Contribution Rates and Funded Ratios	95
Summary of Plan Provisions	96

### Statistical Section

Statistical Section Narrative	99
Schedule of Trend Data	101
Schedule of Additions to Fiduciary Net Position	102
Schedule of Deductions from Fiduciary Net Position	103
Schedule of Benefit and Refund Deductions from Fiduciary Net Position by Type	104
Schedule of Total Changes in Fiduciary Net Position	105
Schedule of Investment Income	106
Schedules of Active Member and Participant Statistics	107
Schedule of Retired Members by Type of Benefit	108
Schedule of Retired Members by Option	109
Schedule of Average Monthly Benefit Payments	110
Schedule of Average Annual Benefit Payments	111
Schedule of Employer/Agency Participation	112

# INTRODUCTORY SECTION

## GFOA and PPCC Award Certificates



Government Finance Officers Association

### Certificate of Achievement for Excellence in Financial Reporting

Presented to

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

For its Annual Comprehensive  
Financial Report  
For the Fiscal Year Ended

December 31, 2023

*Christopher P. Morrell*  
Executive Director/CEO

### CERTIFICATE OF ACHIEVEMENT FOR EXCELLENCE IN FINANCIAL REPORTING

The Government Finance Officer's Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to SERS for its Annual Comprehensive Financial Report for the fiscal year ended December 31, 2023. This was the 26th consecutive year that SERS has achieved this prestigious award. To be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized annual comprehensive financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year. We believe the current Annual Comprehensive Financial Report for December 31, 2024 continues to meet the Certificate of Achievement Program's requirements, and SERS will be submitting it to GFOA so they may determine SERS' eligibility for receiving another award certificate.

### PUBLIC PENSION STANDARDS AWARD

The Public Pension Coordinating Council awarded a Public Pension Standards Award for Funding and Administration to SERS for 2024. This is the 17th consecutive year that SERS has achieved this prestigious award. To be awarded a Public Pension Standards Award, a public pension program must meet professional standards for plan design and administration as set forth in the Public Pension Standards. This award is valid for a period of one year.



Public Pension Coordinating Council

### **Public Pension Standards Award For Funding and Administration 2024**

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)

*Alan H. Winkie*  
Alan H. Winkie  
Program Administrator



June 9, 2025

The Honorable Josh Shapiro, Governor, Commonwealth of Pennsylvania

Mr. Gregory C. Thall, Chairman, Pennsylvania State Employees' Retirement System

Members, Pennsylvania General Assembly

Members and Participants, Pennsylvania State Employees' Retirement System

Citizens of the Commonwealth of Pennsylvania

Dear Governor Shapiro, Chairman Thall, Legislators, Members and Participants, and Citizens:

The Pennsylvania State Employees' Retirement System (SERS) is pleased to present you with the 2024 calendar year Annual Comprehensive Financial Report (ACFR). The purpose of this report is to provide the Governor, legislature, system members, participants, and annuitants, as well as the public with a clear accounting of SERS' operations and financial position. We hope you will find this financial, investment, actuarial, and statistical material produced by SERS management to be both interesting and useful.

SERS remains committed to delivering accurate, meaningful information to policymakers and SERS members, as well as to provide context for our independently audited financial statements. Stakeholders can be assured that their retirement system is administered well, and that staff carefully manages the funds entrusted to the board. Please refer to Management's Discussion and Analysis, beginning on page 4, for an overview of SERS' financial statements, as well as significant events and circumstances that impacted the operations and performance of the fund during the past year.

SERS administers four retirement plans for state employees – three plans require mandatory employee and employer contributions and one plan allows only voluntary employee contributions:

- **Hybrid Plan** – is a combination of two Internal Revenue Code-defined plans – a traditional pension or Internal Revenue Code (IRC) section 401(a) defined benefit plan with an IRC section 401(a) defined contribution investment plan. This plan requires mandatory contributions from both the employee and the employer. There are two classes of service within the Hybrid Plan, class A-5 and class A-6.
- **Defined Contribution Plan** – is an IRC section 401(a) investment plan. This plan requires mandatory contributions from both the employee and the employer.
- **Defined Benefit Plan** – is a traditional pension plan defined by IRC section 401(a). This plan requires mandatory contributions from both the employee and the employer.
- **Deferred Compensation Plan** – is a voluntary supplemental plan defined by IRC section 457(b). This plan allows only voluntary employee contributions. (Note: The Deferred Compensation Plan has its own stand-alone financial statements and is not included in the ACFR).

Most new state employees are automatically enrolled in the Hybrid Plan A-5 class of service, with the right to opt out of that class of service into the Hybrid Plan A-6 class of service or the defined contribution-only plan. The exceptions are hazardous-duty employees and those who contributed to the traditional defined benefit pension plan in the past. In those two cases, the employee is automatically enrolled in the traditional defined benefit pension plan.

For 2024, KPMG LLP has conducted an independent audit of SERS financial statements, which are prepared in accordance with U.S. 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.

SERS again received an unmodified opinion in 2024.

The Defined Contribution Plan opened for enrollment on January 1, 2019. As of December 31, 2024, there were approximately 42,000 accounts established and the plan had a net position of approximately \$295.4 million. The plan receives participant and employer contributions and the participant can choose to invest their money in several investment options, with most plan participants investing in the default option of a target date fund. A number of important legislative changes made in 2020 helped improve the funding stability of the Defined Contribution Plan. These included establishing the ability for SERS to assess a per-participant charge to all employers to cover the fees, costs, and expenses associated with the plan, as well as allowing for SERS to utilize unvested employer contributions towards paying the administrative costs of the plan. More information regarding the Defined Contribution Plan can be found throughout this report, while the remainder of the financial information in this letter is for the Defined Benefit Plan only.

As of December 31, 2024, the SERS' Defined Benefit Plan had a net position of approximately \$38.7 billion after paying out approximately \$4.0 billion in retirement benefits to approximately 138,000 retirees and beneficiaries; approximately \$3.6 billion was paid to people living in Pennsylvania, stimulating local economies.

In 2024, SERS served approximately 245,000 total members from 97 agencies/employers.

In mature pension plans such as SERS, newly retired members entering the pension rolls tend to have higher benefits than those who die and are removed from rolls. SERS' experience reflects that trend. In 2024, approximately 5,500 SERS members retired with an average annual benefit of about \$34,100, while approximately 4,900 retirees with an average annual benefit of about \$18,900 were removed from the rolls.

SERS' investment activities are focused on accomplishing our central mission – providing benefit payments to members and participants at the lowest cost to the commonwealth and to fund the program through a carefully planned and executed investment program. These investment activities are guided by a formal *Statement of Investment Policy* that was first adopted in 1979 and periodically revised and updated to reflect and incorporate legislative changes governing investments and amendments to policies guiding investments. The governing policy in place for 2024 was adopted December 4, 2019 ("*SERS' Defined Benefit Plan Investment Policy Statement*"), with further amendments enacted throughout 2020 – 2024.

For more than a century, SERS board members and staff have worked together – along with our colleagues in the legislature and various administrations – to help ensure the health and stability of the system so that the hundreds of thousands of members and participants we have served over the years could look forward to a financially secure retirement.

During its history, SERS has faced numerous challenges – the Great Depression, World War II, the energy crisis of the mid-1970s, the savings and loan crisis of the late 1980s, the dot-com bubble of the 1990s, the Great Recession of 2008, the COVID-19 pandemic, and, most recently, the stock market decline of 2022. Thankfully, these economic upheavals have been rare anomalies in the history of the system. Nevertheless, we have persevered, and we remain committed to serving the many and varied needs of our members and participants.

During 2024, SERS saw investment gains of approximately 9.8%, net of fees, for our Defined Benefit Plan, which exceeded the fund's annual assumed rate of return of 6.875% that was in place during the year. As of December 31, 2024, the value of the SERS fund was \$38.7 billion.

In 2025, we look to continue to make progress toward our long-term goal of eliminating our unfunded liability, thanks to an investment policy that allows us to adjust for unusual economic circumstances as we saw over the past few years, ongoing efforts to implement efficiencies across SERS, and continued payment of the full annual actuarially required funding amount by the General Assembly.

Now that SERS employers are paying the full "uncollared" contribution amount, after several years of underfunding, there continues to be a positive trend toward paying down the unfunded liability. This funding is crucial for the overall long-term health of the pension system.

Based on the Governmental Accounting Standards Board Statement No. 67 accounting valuation as of December 31, 2024, the resulting net pension liability was \$18.4 billion. SERS plan fiduciary net position as a percentage of the total pension liability was 67.7%. Based on the actuarial methods used for funding purposes, as of December 31, 2024, the unfunded actuarial accrued liability was \$17.0 billion. SERS funded ratio was 70.3%.

Employer contributions in 2024 represented an increase of \$118 million – or 5% – compared to 2023. The growth was due to an increase in gross salaries paired with an increase in overall active membership, despite a slight decrease in the composite employer rate.

The annual cost of the plan continues to drop as the number of members in the newer classes of service, including the A-3 and A-4 classes and the new A-5, A-6, and defined contribution classes that opened January 1, 2019, increases. These newer classes of service comprise approximately 64% of the active member count as of December 31, 2024.

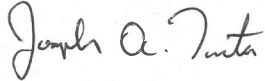
SERS continues major initiatives to improve services to our stakeholders, as well as improving efficiencies in the delivery of benefits and reducing costs in the administration of the system.

Improving customer service to our members remains a top priority for the plan. We continue to enhance our member materials, striving to make the information they provide more understandable and accessible to a range of employees. We increasingly leverage technology to deliver many of these materials electronically, allowing the plan to reduce administrative costs and employ data-driven results to help guide future communication initiatives. SERS is also working on, as part of our Strategic Plan, an independent comprehensive technology assessment detailing SERS technology architecture and the current platforms' functional potential to support a digital transformation project. Incorporated in this digital transformation; SERS is performing an analysis of strategic goals contained in this plan against the technical capabilities inventory to develop a plan to leverage/expand current solutions already owned by SERS to quickly solve new problems and incorporate where appropriate in our digital transformation.

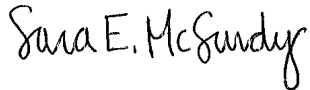
We are solely responsible for the contents of this report; however, we do wish to acknowledge the significant contributions of many SERS professionals whose work to compile, quality assure, and produce it is essential.

The commitment of the agency's 200+ employees ensures that we maintain effective internal controls to assure that assets are safeguarded, transactions are properly executed, and financial statements conform to U.S. generally accepted accounting principles – all while providing effective, high-quality member services. SERS remains dedicated to providing the highest level of service to commonwealth employers, policymakers, employees, retirees, and the SERS Board. Staff at all levels strive to provide exceptional service to those who have dedicated their careers to the citizens of Pennsylvania and maintain careful stewardship of public dollars.

Respectfully submitted,



Joseph A. Torta  
Executive Director



Sara E. McSurdy, CPA  
Chief Financial Officer

SERS Mission, Vision, and Organizational Chart

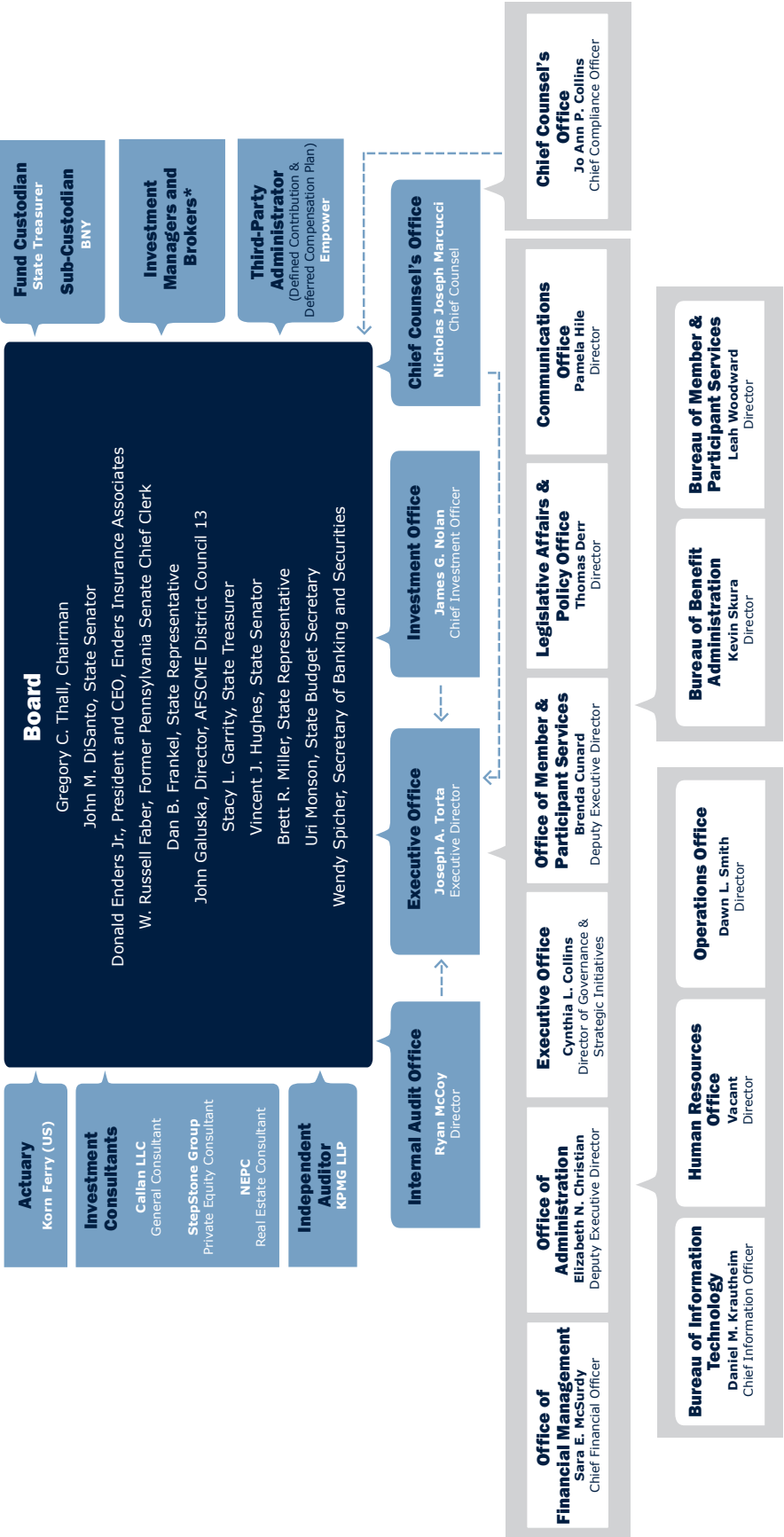
Mission

The mission of SERS is to prepare our members and participants to achieve financial security in retirement.

Vision

SERS’ vision is to be an employer of choice and an innovative leader among public pension organizations by providing best-in-class services and products to our members, participants, and stakeholders.

Organizational Chart



\*Investment managers are listed through the Investment Section on pages 44 – 76, Manager Fees and Expenses are listed in the schedule on page 53, and brokers are listed in the Schedule of Trading Broker Commissions on page 55 in the Investment Section of this ACFR.

# INTRODUCTORY SECTION

---

## **SERS Board**

December 31, 2024

**Mr. Gregory C. Thall**  
Chairman



**Honorable John M. DiSanto**  
State Senator



**Mr. Donald Enders Jr.**  
President and CEO of Enders Insurance  
Associates



**Mr. W. Russell Faber**  
Former Chief Clerk of the  
Pennsylvania Senate



**Honorable Dan B. Frankel**  
State Representative





# INTRODUCTORY SECTION

## **SERS Board**

December 31, 2024

### **Mr. John Galuska**

Executive Director of AFSCME Council 13



### **Honorable Stacy Garrity**

State Treasurer



### **Honorable Vincent J. Hughes**

State Senator



### **Honorable Brett Miller**

State Representative



### **Honorable Uri Monson**

State Budget Secretary



### **Honorable Wendy S. Spicher**

Secretary of Banking and Securities



## Financial Section





KPMG LLP  
Suite 1000  
30 North Third Street  
Harrisburg, PA 17101

## Independent Auditors' Report

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

### *Opinion*

We have audited the 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, 2024 and 2023, and the related notes to the financial statements, which collectively comprise SERS' basic financial statements for the years then ended as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the fiduciary net position of SERS as of December 31, 2024 and 2023, and the changes in fiduciary net position for the years then ended in accordance with U.S. generally accepted accounting principles.

### *Basis for Opinion*

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of SERS and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### *Responsibilities of Management for the Financial Statements*

Management is responsible for the preparation and fair presentation of the financial statements in accordance with U.S. generally accepted accounting principles, and for 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.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about SERS' ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

### *Auditors' Responsibilities for the Audit of the Financial Statements*

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.



In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit 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 SERS' internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about SERS' ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

#### *Required Supplementary Information*

U.S. generally accepted accounting principles require that the management's discussion and analysis and the required supplementary information in schedules 1 through 3 to be presented to supplement the basic financial statements. Such information is the responsibility of management and, 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 GAAS, 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 audits 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 Information*

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise SERS' basic financial statements. The supplementary information in schedules 4 and 5 are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with GAAS. In our opinion, the information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

#### *Other Information*

Management is responsible for the other information included in the annual comprehensive financial report. The other information comprises the introductory, investment, actuarial, and statistical sections but does not include the basic financial statements and our auditors' report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.



In connection with our audits of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

KPMG LLP

Harrisburg, Pennsylvania

May 27, 2025, except for the Other Information section of our report, as to which the date is June 9, 2025

# FINANCIAL SECTION

---

## Management's Discussion and Analysis

December 31, 2024 and 2023 (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 that affected the operations and performance of SERS during the years ended December 31, 2024, 2023, and 2022.

In addition to historical information, the Management's Discussion and Analysis includes forward-looking statements, which involve currently known facts and 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 and inflation rates, legislation, and global conflicts.

### Overview of the Financial Statements and Accompanying Information

SERS administers two mandatory-participation retirement plans defined by the Internal Revenue Code: the Defined Benefit Plan, for which assets are held in the State Employee Retirement Fund (Defined Benefit Plan or pension plan); and the Defined Contribution Plan, for which assets are held in a trust with ownership attributed to individual participant investment accounts. The financial statements present the financial position and activities for the Defined Benefit Plan and the Defined Contribution Plan.

**(1) Financial Statements.** SERS presents Statements of Fiduciary Net Position as of December 31, 2024 and 2023, 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 more complete understanding of the financial statements. Among other items, the notes provide information about SERS' organization; benefits and contributions; determination of investment values; contingencies and commitments; and actuarial liabilities and the associated methods and assumptions used to calculate them.

### **(3) Required Supplementary Information.**

The Required Supplementary Information (RSI) consists of:

- This Management's Discussion and Analysis (MD&A)
- A schedule of changes in net pension liability and related ratios
- A schedule of employer contributions
- A schedule of investment returns

### **(4) Other Supplementary Information**

**Schedules.** Other schedules provide details of SERS administrative, investment, and consultant expenses. Supplementary information is considered useful in understanding and evaluating the financial activities of SERS.

## Financial Highlights

- The time-weighted rate of return on investments for the pension plan was 9.8% for the year ended December 31, 2024, and 12.2% for the year ended December 31, 2023. These positive returns were mainly driven by a resilient economy, easing inflation, and robust returns in U.S. Equity, which is approximately 37% of the pension plan's assets.
- In both June 2024 and June 2023, the SERS Board deliberated and decided to maintain the 6.875% investment return assumption for the December 31, 2024, and the December 31, 2023, valuations.

## Management's Discussion and Analysis

December 31, 2024 and 2023 (unaudited)

- The Defined Benefit Plan net position increased by approximately \$2.2 billion to \$38.7 billion for the year ended December 31, 2024, compared to an increase of approximately \$2.8 billion for the year ended December 31, 2023. The increase in 2024 was mainly attributable to the combination of positive investment returns and employer contributions exceeding the benefit payments and expenses of the plan.
- The Defined Contribution Plan opened for enrollment on January 1, 2019 and continues to grow. The net position for the Defined Contribution Plan was approximately \$295.4 million as of December 31, 2024, which is an increase of approximately \$106.0 million from the December 31, 2023, net position of \$189.4 million. The increase is attributed to contributions, investment earnings, and funding from employers, exceeding total deductions of the plan.
- See Condensed Financial Information tables on page 12 for consolidated Defined Benefit Plan and Defined Contribution Plan information.
- On December 29, 2022, the SECURE 2.0 Act of 2022 was signed into law by U.S. President Joe Biden. SECURE 2.0 contains several retirement-savings provisions intended to offer more flexibility to those saving for retirement. Certain provisions of SECURE 2.0 became effective starting January 1, 2023, with additional provisions scheduled to be implemented in subsequent years. SERS management will continue to analyze SECURE 2.0 to determine its impact.
- SERS reviews all new Governmental Accounting Standards Board (GASB) pronouncements and assesses their potential impact on SERS financial reporting. For the years ended December 31, 2024 and 2023, there were no new GASB standards that materially impacted SERS.

### The Defined Benefit Plan

The Defined Benefit Plan is a traditional pension plan defined by IRC section 401(a). This plan requires mandatory contributions from both the member and employer. SERS invests the contributions to achieve returns to help ensure sufficient funds are available to make required payments to current and future retirees.

### Member Contributions

Member contributions were approximately \$452 million, \$427 million, and \$419 million for the years ended December 31, 2024, 2023, and 2022, respectively. The increase in contributions in 2024 and 2023 were due to an increase in gross salaries and active membership. The member contribution rate is set by statute and is 6.25% of gross salary for most members, with a majority of newer members contributing less into the plan at 5%. Most members hired since 2011 are subject to shared-risk and shared-gain adjustments to their contributions. To date, there have been no shared-risk/shared-gain adjustments.

### Employer Contributions

Employer contributions were approximately \$2.3 billion, \$2.2 billion, and \$2.1 billion for the years ended December 31, 2024, 2023, and 2022, respectively. The 2024 contributions represented an increase of \$118 million, or 5%, compared to 2023. The growth was due to an increase in gross salaries paired with an increase in overall active membership, despite a slight decrease in the composite employer rate from 35.32% to 33.65% on July 1, 2024. Contributions in 2023 represented an increase of \$123 million, or 6%, compared to 2022. The growth was due to an increase in gross salaries paired with an increase in overall active membership and a slight increase in the composite employer rate from 34.16% to 35.32% on July 1, 2023.

Beginning in 2005, Pennsylvania law statutorily suppressed employer contribution rates, primarily through Acts 2003-40 and 2010-120. Act 2010-120 limited the rate at which employer contributions increased in any given year after fiscal year (FY) 2011-12, up to a maximum of 4.5% each year,



FINANCIAL SECTION

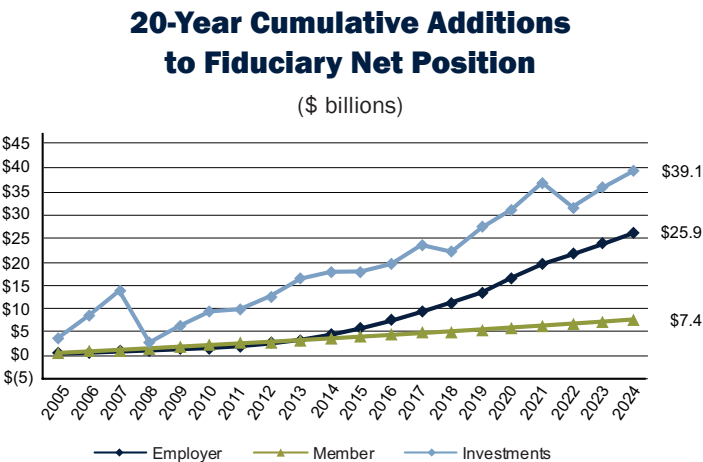
Management’s Discussion and Analysis

December 31, 2024 and 2023 (unaudited)

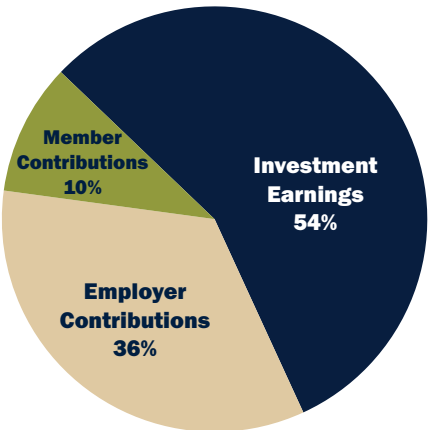
until rate collars were no longer needed. Under this schedule, commonwealth FY 2017-18 was the first year since legislatively mandated contribution rates were enacted through Act 2010-120 that collars were no longer needed and employers paid the uncollared rate. Since FY 2017-18, employers continued to show commitment by making contributions to the Defined Benefit Plan at the actuarially required rate. The FY 2025-26 composite employer contribution rate is expected to be 32.38% of payroll.

While the above-noted suppressed employer contributions have provided budgetary relief to commonwealth agencies and the taxpayers of Pennsylvania, they are a factor influencing the pension liability. The short-term benefit of the collars has resulted in the need for employers to contribute more over a 30-year period due to implied financing costs. Such financing costs are incurred because the monies were not available to invest and compound.

From 2005 through 2024, employer contributions totaled \$25.9 billion, or 36%, of total additions to fiduciary net position, compared to \$7.4 billion, or 10%, of total additions attributed to member contributions, and \$39.1 billion, or 54%, of total additions attributed to investment earnings, as illustrated in the following charts.



20-Year Cumulative Additions to Fiduciary Net Position



Net Investment Income

SERS utilizes two methodologies when analyzing Defined Benefit Plan investment returns. The two approaches may vary from each other in any given period based on the underlying methodology used. For GASB 67 accounting valuation purposes, a money-weighted return is used. A money-weighted rate of return calculates the investment performance accounting for all cash flows (contributions and withdrawals) occurring during the performance measurement period. Conversely, for investment performance reporting purposes, SERS and its investment consultants rely on a time-weighted approach. A time-weighted rate of return minimizes the impact of cash flows occurring throughout the measurement period. Defined Benefit Plan investment returns, net of manager fees, on both a money-weighted and time-weighted basis, were 9.8%, 12.2%, and -12.2% for the years 2024, 2023, and 2022, respectively.

Positive investment returns contributed approximately \$3.5 billion to net investment income in 2024. A net investment gain of approximately \$4.1 billion occurred in 2023 and a net investment loss of approximately \$5.2 billion occurred in 2022.

SERS has reviewed and modified the Defined Benefit Plan’s strategic investment plan, as necessary. In December 2019, the SERS Board adopted the *SERS Defined Benefit Plan Investment*

## Management's Discussion and Analysis

December 31, 2024 and 2023 (unaudited)

*Policy Statement*, with the latest amendment occurring in 2024. Its purpose is to outline the investment philosophy and practices of SERS and serve as the governing policy for the management of the system's defined benefit assets. The board approves the asset allocation and targets set forth in the statement, which supports the Defined Benefit Plan's long-term investment rate of return actuarial assumption.

The objective of the strategic investment plan is to provide benefit payments to annuitants and beneficiaries at the lowest cost to the commonwealth and to fund the program through a carefully planned and executed investment program with a focus on liquidity.

SERS assets are managed by external investment managers hired by the SERS Board. SERS strives to engage the highest quality investment managers for the most cost-effective price. 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.

The Defined Benefit Plan pays the majority of its fees to managers within its Private Equity and Real Estate asset classes due to the complex and time-consuming nature of managing the investments.

Defined Benefit Plan investment expenses, which include fees paid to managers, were \$166 million and \$180 million for the years ended December 31, 2024 and 2023, respectively.

### Benefits, Refunds, and Expenses

Benefit payments to annuitants are the most significant recurring deductions from the fiduciary net position. During 2024 and 2023, the SERS Defined Benefit Plan paid out approximately \$4.0 billion and \$3.9 billion in benefits and refunds, respectively. Approximately 90% of benefit payments are made to annuitants residing in Pennsylvania.

There were approximately 5,500 and 6,000 new retirees added to the annuity payroll with an average annual benefit of \$34,100 and \$32,300 in 2024 and 2023, respectively. There were approximately 4,900 and 4,600 retirees removed from the annuity payroll with an average annual benefit of \$18,900 and \$18,700 in 2024 and 2023, respectively. As is typical in mature pension plans, new retirees in 2024 received a higher annual benefit than those removed from the annuity payroll.

Benefits payments on the Defined Benefit Plan's financial statements consists of two components. A majority of the payments relate to normal monthly annuity payments, with a lesser portion related to supplemental payments. Most of the supplemental payments were paid to retiring members who chose to withdraw their contributions and interest at retirement. Such withdrawals reduce the retirees' annuity payments over their remaining life. Supplemental payments were \$427 million and \$436 million in 2024 and 2023, respectively.

Act 2010-120 lowered the benefits earned by most employees who joined SERS on or after January 1, 2011, through December 31, 2018, by reducing the retirement benefit accrual rate, increasing normal retirement age, extending the vesting period from five years to 10 years, and other provisions. Another important benefit-related aspect of Act 2010-120 was that retirement provisions for legislators elected after December 1, 2010 were reduced and made consistent with those of most rank-and-file employees.

Act 2017-5 further lowered and fundamentally changed the benefits earned by most employees who joined SERS on or after January 1, 2019, by introducing a hybrid benefit. One portion of the employee's retirement benefit comes from the Defined Benefit Plan that features guaranteed monthly payments for life based on a calculation. The other portion comes from the Defined Contribution Plan which is based on the employer and employee contributions and the amount of money the employee generates from their investment choices and market performance.

FINANCIAL SECTION

Management’s Discussion and Analysis

December 31, 2024 and 2023 (unaudited)

Employees have the option to elect to exclusively participate in the Defined Contribution Plan, as opposed to a hybrid benefit. Act 2017-5 further reduced the retirement benefit accrual rate and increased the normal retirement age under the Defined Benefit Plan. The accrual rate is determined by the employee’s class of service.

It will take considerable time to realize savings from Act 2010-120 and Act 2017-5 as detailed above. SERS expects benefit expenses to rise steadily because the number of retirees added to the rolls is projected to outpace the number of retirees removed from the rolls. Additionally, despite the benefit cost reductions for new employees, the monthly annuities for retirees in the near-term are projected to be approximately 80% higher than the annuities of those being removed from the payrolls.

SERS was established in 1923, but did not pay more than \$1 billion in annual benefits until 1997. SERS’ Defined Benefit Plan annual benefit payments reached \$2 billion in 2007, \$3 billion in 2015, and approximately \$4 billion in 2024.

Growth in Annuity Payroll

	December		
	2024	2023	2022
Monthly annuity payroll (\$ millions)	\$300	\$292	\$283
Retirees	137,620	136,972	135,647

SERS’ administrative expenses represented 0.1% of fiduciary net position in 2024 and 2023. All expenses were within budget.

SERS’ Assets

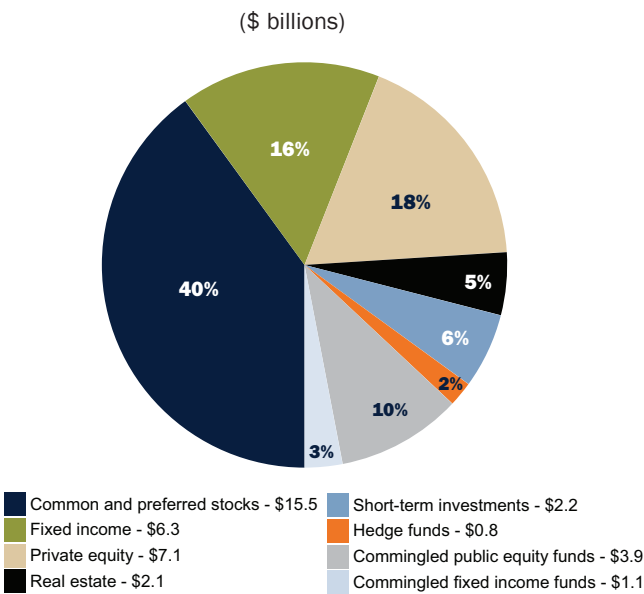
Investments are the most significant component of SERS’ assets. The total Defined Benefit Plan investment portfolio fair value was \$39.0 billion and \$36.6 billion as of December 31, 2024 and 2023, respectively. The increase in SERS’ total investments is related to the fact that the net investment income and contributions exceeded

benefit payments and expenses for the year. SERS reports investments at fair value as discussed in accounting policies note 2(c) to the financial statements. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The most significant changes to investment values were seen in common and preferred stock and commingled public equity. Common and preferred stock values increased to \$15.5 billion in 2024, from \$12.9 billion in 2023, due to favorable performance. Commingled public equity values decreased to \$3.9 billion in 2024, from \$5.7 billion in 2023, due to liquidations of fund managers within the asset class. These liquidations drove an increase in short-term investments to \$2.2 billion in 2024, from \$0.9 billion in 2023.

The total investment portfolio fair value of \$39.0 billion in 2024 was composed as shown by the chart below:

Investments at Fair Value (2024)





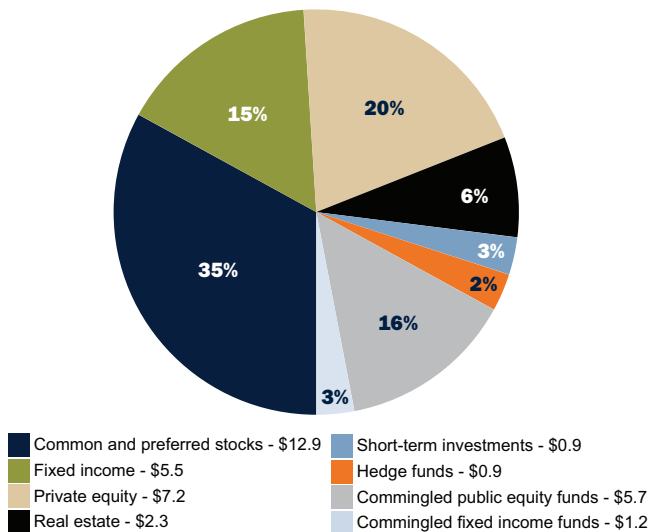
## Management's Discussion and Analysis

December 31, 2024 and 2023 (unaudited)

The total investment portfolio fair value of \$36.6 billion in 2023 was composed as shown by the chart below:

### Investments at Fair Value (2023)

(\$ billions)



SERS earns additional investment income by lending investment securities to brokers. The brokers provide collateral to SERS for borrowed securities generally equal to 102% to 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.

During 2024 and 2023, SERS' Defined Benefit Plan earned approximately \$2.0 million and \$2.7 million through securities lending, respectively. The program's guidelines provide for investment of cash collateral in highly liquid, highly-rated securities. As of December 31, 2024 and 2023, the fair value of loaned securities was \$686 million and \$571 million, respectively. The fair value of the associated collateral was \$710 million and \$589 million, respectively, of which \$135 million and \$157 million was cash, respectively.

### Derivatives

SERS' Defined Benefit Plan permits investment managers to use derivatives to hedge risks and provide market exposure to various asset classes within narrowly prescribed policy guidelines. Used properly, such derivatives cost-efficiently provide market exposures in the respective asset classes without disrupting Defined Benefit Plan liquidity needs. SERS' Defined Benefit Plan investment managers manage counterparty credit risk by entering into contracts with parties with credit ratings of at least investment grade 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

SERS' investment policy utilizes Cash as an asset class that serves as the primary source of short-term liquidity for the Defined Benefit Plan. At December 31, 2024 and 2023, the Defined Benefit Plan held approximately \$2.0 billion and \$0.6 billion in Cash, respectively, which is included in short-term investments on the Statements of Fiduciary Net Position. Specific short-term investments and fixed income holdings also offer liquidity. These investments provide a stable source for meeting the cash flow needs of the plan and protect against the risk that equity or other investments would need to be liquidated at unfavorable values in order to pay member benefits. Having adequate liquidity levels is especially vital for a mature pension plan that has growing benefit payments that exceed contributions into the plan.

### Actuarial Valuations

Annually, the SERS Defined Benefit Plan obtains two actuarial valuations, one for financial reporting purposes under GASB 67 and one that is statutorily required for funding purposes. The funding valuation is used to set the employer contribution rate for the plan.

# FINANCIAL SECTION

## Management's Discussion and Analysis

December 31, 2024 and 2023 (unaudited)

Every five years, the SERS Defined Benefit Plan is required to conduct an actuarial experience study to determine whether the assumptions used in its annual actuarial valuations remain accurate based on current and anticipated demographic trends and economic conditions.

The actuary, under oversight of the SERS Board, reviews 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). The 19th Investigation of Actuarial Experience covering the period 2015 - 2019 was released and approved by the SERS Board in July 2020, and the recommended assumption changes were effective with the December 31, 2020, valuation. SERS experience studies can be viewed at [www.SERS.pa.gov](http://www.SERS.pa.gov).

The most significant difference in actuarial methods for financial reporting under GASB 67 (accounting valuation) compared to those used for funding purposes (funding valuation) is how investment gains and losses are treated. Under the funding valuation, current investment gains and losses are deferred and smoothed into assets over five years (actuarial value of assets), whereas they are recognized immediately in the fiduciary net position balance (fair value of assets) of each respective year under the accounting valuation.

Key valuation results for the accounting valuation compared to the funding valuation for the years ended December 31, 2024 and 2023, are as shown in the following tables:

### As of December 31, 2024

(\$ millions)

GASB 67 - Accounting Valuation		Funding Valuation	
Total Pension Liability (TPL)	\$57,085	Actuarial Accrued Liability (AAL)	\$57,081
Fiduciary Net Position	38,658	Actuarial Value of Assets	40,107
<b>Net Pension Liability (NPL)</b>	<b>\$18,427</b>	<b>Unfunded AAL</b>	<b>\$16,974</b>
Ratio - Fiduciary Net Position/TPL	67.7%	Funded Ratio	70.3%

### As of December 31, 2023

(\$ millions)

GASB 67 - Accounting Valuation		Funding Valuation	
Total Pension Liability (TPL)	\$55,780	Actuarial Accrued Liability (AAL)	\$55,778
Fiduciary Net Position	36,425	Actuarial Value of Assets	38,793
<b>Net Pension Liability (NPL)</b>	<b>\$19,355</b>	<b>Unfunded AAL</b>	<b>\$16,985</b>
Ratio - Fiduciary Net Position/TPL	65.3%	Funded Ratio	69.6%

## Management's Discussion and Analysis

December 31, 2024 and 2023 (unaudited)

Under the accounting valuation, the net pension liability decreased to \$18.4 billion in 2024 from \$19.4 billion in 2023. This was due to a \$2.2 billion increase in the fiduciary net position mostly due to investment gains offset by benefit payments exceeding contributions. The increase in net position was offset by a \$1.3 billion increase in the total pension liability mostly due to service costs and interest costs, offset by benefit payments and refunds of contributions.

Under the funding valuation, the unfunded actuarial accrued liability was \$17.0 billion in both 2024 and 2023. The unfunded actuarial accrued liability is impacted primarily by the same factors as discussed above, with the exception being that current year income is less impactful due to asset smoothing.

### The Defined Contribution Plan

On June 12, 2017, Governor Wolf signed Act 2017-5 into law. The law established two new side-by-side hybrid defined benefit/defined contribution benefit options and a new defined contribution-only option for all state employees, excluding most hazardous duty employees, who first enter SERS membership on or after January 1, 2019. Additionally, all legacy SERS members had a one-time, irrevocable option to select one of the three new retirement benefit options.

While new employees are automatically enrolled in the hybrid Defined Benefit/Defined Contribution Plan A-5 class of service, they have the option to elect the other hybrid Defined Benefit/Defined Contribution Plan option A-6 class of service, or to join the stand-alone Defined Contribution Plan option. The Defined Contribution Plan, for all options, has three-year vesting for employer contributions and immediate vesting for employee contributions.

The SERS Board selects the investment options offered through the Defined Contribution Plan, and contracts with investment managers and with a third-party administrator (TPA) for the plan. The employee defined contribution accounts are maintained by the TPA. Employee and employer

contributions for the Defined Contribution Plan are deposited into participants' individual investment accounts. Employees may invest their money in several investment options including a range of target date funds, equity funds, fixed income funds, a short-term investment fund, and the self-directed brokerage option. If no active selection is made, contributions will be defaulted into one of the target date funds.

Most participants are invested in the target date funds. The benefit to which a participant is entitled to is their vested account balance at termination. Distribution of benefits can be made in installments, lump sum payments, or through an annuity.

The Defined Contribution Plan continues to grow. There were approximately 42,000 and 33,900 defined contribution accounts as of December 31, 2024 and 2023, respectively. The net position of the Defined Contribution Plan was approximately \$295.4 million as of December 31, 2024, and \$189.4 million as of December 31, 2023. Employee contributions were approximately \$55.3 million for the year ended December 31, 2024, and \$42.9 million for the year ended December 31, 2023. Employer contributions were approximately \$31.8 million for the year ended December 31, 2024, and approximately \$23.5 million for the year ended December 31, 2023. Net investment gain was approximately \$29.9 million for the year ended December 31, 2024, and a gain of \$25.1 million for the year ended December 31, 2023. The plan distributed approximately \$7.4 million in benefits and refunds for the year ended December 31, 2024, and \$4.6 million for the year ended December 31, 2023.

Administrative expenses were approximately \$5.9 million and \$5.0 million for the years ended December 31, 2024 and 2023, respectively. The fees, costs, and expenses of administering the Defined Contribution Plan are funded by participating employers through an annual per-participant charge and unvested employer contributions. There is no administrative charge to participants.

# FINANCIAL SECTION

## Management's Discussion and Analysis

December 31, 2024 and 2023 (unaudited)

The following tables present the condensed financial information as of and for the years ended December 31, 2024, 2023, and 2022:

### Condensed Financial Information

(\$ millions)

#### Fiduciary Net Position

	2024	Increase/ (Decrease)	2023	Increase/ (Decrease)	2022
Total investments	\$39,274	\$2,486	\$36,788	\$2,811	\$33,977
Net other assets and liabilities	(321)	(147)	(174)	90	(264)
<b>Net position restricted for pensions and held in trust for defined contribution plan participants</b>	<b>\$38,953</b>	<b>\$2,339</b>	<b>\$36,614</b>	<b>\$2,901</b>	<b>\$33,713</b>

#### Changes in Fiduciary Net Position

	2024	Increase/ (Decrease)	2023	Increase/ (Decrease)	2022
Contributions	\$2,855	\$163	\$2,692	\$150	\$2,542
Annual employer charge	2	1	1	—	1
Net investment income/(loss)	3,535	(617)	4,152	9,379	(5,227)
Benefit, refunds, and administrative expenses	4,053	109	3,944	32	3,912
<b>Net increase/(decrease) in net position restricted for pensions and held in trust for defined contribution plan participants</b>	<b>\$2,339</b>	<b>(\$562)</b>	<b>\$2,901</b>	<b>\$9,497</b>	<b>(\$6,596)</b>

## Statements of Fiduciary Net Position

### Statement of Fiduciary Net Position

December 31, 2024

(\$ thousands)

	Defined Benefit Plan	Defined Contribution Plan	Total
<b>Assets</b>			
Receivables			
Plan members/participants	\$5,166	\$1,015	\$6,181
Employers	16,042	349	16,391
Investment income	75,130	42	75,172
Investment proceeds and other receivables	479,438	—	479,438
Miscellaneous	438	20	458
<b>Total receivables</b>	<b>576,214</b>	<b>1,426</b>	<b>577,640</b>
Investments			
Short-term investments	2,164,529	9,278	2,173,807
Fixed income	6,269,534	—	6,269,534
Common and preferred stocks	15,540,531	—	15,540,531
Hedge funds	817,858	—	817,858
Real estate	2,062,601	—	2,062,601
Private equity	7,082,094	—	7,082,094
Target date funds	—	254,941	254,941
Commingled public equity funds	3,948,052	27,544	3,975,596
Commingled fixed income funds	1,091,584	3,695	1,095,279
Other investments	(129)	1,428	1,299
<b>Total investments</b>	<b>38,976,654</b>	<b>296,886</b>	<b>39,273,540</b>
Securities lending collateral pool	135,433	—	135,433
Other assets	21,250	1,851	23,101
<b>Total assets</b>	<b>39,709,551</b>	<b>300,163</b>	<b>40,009,714</b>
<b>Liabilities</b>			
Accounts payable and accrued expenses	55,728	1,550	57,278
Investment purchases and other liabilities	817,313	12	817,325
Obligations under securities lending	135,433	—	135,433
Other liabilities	43,553	3,171	46,724
<b>Total liabilities</b>	<b>1,052,027</b>	<b>4,733</b>	<b>1,056,760</b>
<b>Net position restricted for pensions and held in trust for defined contribution plan participants</b>	<b>\$38,657,524</b>	<b>\$295,430</b>	<b>\$38,952,954</b>

See accompanying notes to basic financial statements.

# FINANCIAL SECTION

## Statements of Fiduciary Net Position

### Statement of Fiduciary Net Position

December 31, 2023

(\$ thousands)

	Defined Benefit Plan	Defined Contribution Plan	Total
<b>Assets</b>			
Receivables			
Plan members/participants	\$1,553	\$179	\$1,732
Employers	11,290	38	11,328
Investment income	64,868	41	64,909
Investment proceeds and other receivables	572,147	57	572,204
Miscellaneous	274	82	356
<b>Total receivables</b>	<b>650,132</b>	<b>397</b>	<b>650,529</b>
Investments			
Short-term investments	950,520	9,608	960,128
Fixed income	5,492,007	—	5,492,007
Common and preferred stocks	12,906,117	—	12,906,117
Hedge funds	873,102	—	873,102
Real estate	2,252,630	—	2,252,630
Private equity	7,199,928	—	7,199,928
Target date funds	—	162,519	162,519
Commingled public equity funds	5,745,462	16,012	5,761,474
Commingled fixed income funds	1,176,563	2,839	1,179,402
Other investments	360	220	580
<b>Total investments</b>	<b>36,596,689</b>	<b>191,198</b>	<b>36,787,887</b>
Securities lending collateral pool	156,887	—	156,887
Other assets	26,170	2,232	28,402
<b>Total assets</b>	<b>37,429,878</b>	<b>193,827</b>	<b>37,623,705</b>
<b>Liabilities</b>			
Accounts payable and accrued expenses	49,058	1,155	50,213
Investment purchases and other liabilities	754,283	75	754,358
Obligations under securities lending	156,887	—	156,887
Other liabilities	44,723	3,162	47,885
<b>Total liabilities</b>	<b>1,004,951</b>	<b>4,392</b>	<b>1,009,343</b>
<b>Net position restricted for pensions and held in trust for defined contribution plan participants</b>	<b>\$36,424,927</b>	<b>\$189,435</b>	<b>\$36,614,362</b>

See accompanying notes to basic financial statements.

## Statements of Changes in Fiduciary Net Position

### Statement of Changes in Fiduciary Net Position

Year Ended December 31, 2024

(\$ thousands)

	Defined Benefit Plan	Defined Contribution Plan	Total
<b>Additions</b>			
Contributions			
Plan members/participants	\$452,051	\$55,260	\$507,311
Employers	2,316,106	31,820	2,347,926
<b>Total contributions</b>	<b>2,768,157</b>	<b>87,080</b>	<b>2,855,237</b>
Annual employer charge	—	2,309	2,309
Investment income			
From investing activities			
Net appreciation in fair value of investments	3,198,908	29,500	3,228,408
Interest	258,523	497	259,020
Dividends	205,887	—	205,887
Miscellaneous income	5,160	—	5,160
<b>Total investing activities income</b>	<b>3,668,478</b>	<b>29,997</b>	<b>3,698,475</b>
Investment expenses	(165,707)	(138)	(165,845)
Net income from investing activities	3,502,771	29,859	3,532,630
From securities lending activities			
Securities lending income	2,252	—	2,252
Securities lending expenses	(225)	—	(225)
Net income from securities lending activities	2,027	—	2,027
Net investment income	3,504,798	29,859	3,534,657
<b>Total additions</b>	<b>6,272,955</b>	<b>119,248</b>	<b>6,392,203</b>
<b>Deductions</b>			
Benefits	3,980,953	4,362	3,985,315
Refunds of contributions	23,813	3,003	26,816
Administrative expenses	35,592	5,888	41,480
<b>Total deductions</b>	<b>4,040,358</b>	<b>13,253</b>	<b>4,053,611</b>
Net increase	2,232,597	105,995	2,338,592
Net position restricted for pensions and held in trust for defined contribution plan participants			
Balance, beginning of year	36,424,927	189,435	36,614,362
<b>Balance, end of year</b>	<b>\$38,657,524</b>	<b>\$295,430</b>	<b>\$38,952,954</b>

See accompanying notes to basic financial statements.

# FINANCIAL SECTION

## Statements of Changes in Fiduciary Net Position

### Statement of Changes in Fiduciary Net Position

Year Ended December 31, 2023

(\$ thousands)

	Defined Benefit Plan	Defined Contribution Plan	Total
<b>Additions</b>			
Contributions			
Plan members/participants	\$427,368	\$42,902	\$470,270
Employers	2,198,430	23,458	2,221,888
<b>Total contributions</b>	<b>2,625,798</b>	<b>66,360</b>	<b>2,692,158</b>
Annual employer charge	—	1,696	1,696
Investment income			
From investing activities			
Net appreciation in fair value of investments	3,909,608	24,825	3,934,433
Interest	192,834	398	193,232
Dividends	200,010	—	200,010
Miscellaneous income	1,687	—	1,687
<b>Total investing activities income</b>	<b>4,304,139</b>	<b>25,223</b>	<b>4,329,362</b>
Investment expenses	(179,977)	(85)	(180,062)
Net income from investing activities	4,124,162	25,138	4,149,300
From securities lending activities			
Securities lending income	2,995	—	2,995
Securities lending expenses	(299)	—	(299)
Net income from securities lending activities	2,696	—	2,696
Net investment income	4,126,858	25,138	4,151,996
<b>Total additions</b>	<b>6,752,656</b>	<b>93,194</b>	<b>6,845,850</b>
<b>Deductions</b>			
Benefits	3,883,225	2,780	3,886,005
Refunds of contributions	27,553	1,802	29,355
Administrative expenses	24,158	4,968	29,126
<b>Total deductions</b>	<b>3,934,936</b>	<b>9,550</b>	<b>3,944,486</b>
Net increase	2,817,720	83,644	2,901,364
Net position restricted for pensions and held in trust for defined contribution plan participants			
Balance, beginning of year	33,607,207	105,791	33,712,998
<b>Balance, end of year</b>	<b>\$36,424,927</b>	<b>\$189,435</b>	<b>\$36,614,362</b>

See accompanying notes to basic financial statements.



## Notes to Basic Financial Statements

December 31, 2024 and 2023

**(1) Organization and Description of Pennsylvania State Employees' Retirement System (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 SERS Board has 11 members including the State Treasurer (ex officio), the Secretary of Banking and Securities (ex officio), two Senators, two members of the House of Representatives, and five 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 the State Employees' Retirement Fund (Defined Benefit Plan or pension plan), which is a cost-sharing multiple employer defined benefit pension plan. SERS is also the administrator of the State Employees' Defined Contribution Plan, which was established as part of Act 2017-5. The Defined Contribution Plan opened for enrollment on January 1, 2019. Both the Defined Benefit Plan and Defined Contribution Plan were established by the Commonwealth of Pennsylvania (commonwealth) to provide retirement benefits for employees of state government and certain independent agencies. The Defined Benefit and Defined Contribution Plans operate under separate trusts.

SERS is a component unit of the commonwealth, and the Defined Benefit and Defined Contribution Plans are included in the commonwealth's financial report as pension trust funds.

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.

Participation in the Defined Benefit Plan includes 35 employers with the commonwealth being classified as its largest employer. The commonwealth comprises 63 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 97 participating employers/agencies as of December 31, 2024. As of December 31, 2023, participation in the Defined Benefit Plan included 35 employers. The commonwealth comprised 64 agencies and when everything was evaluated separately, the Defined Benefit Plan had a total of 98 participating employers/agencies.

Participation in the Defined Contribution Plan includes 19 employers and the commonwealth is classified as its largest employer. The commonwealth comprises 60 agencies and when everything is evaluated separately, the Defined Contribution Plan has a total of 78 participating employers/agencies as of December 31, 2024. As of December 31, 2023, participation in the Defined Contribution Plan included 20 employers. The commonwealth comprised 60 agencies and when everything was evaluated separately, the Defined Contribution Plan had a total of 79 participating employers/agencies. Additional employers/agencies will join the Defined Contribution Plan as they hire employees who are mandated to be in the plan. At December 31, 2024 and 2023, SERS' membership consisted of the following:

**SERS Membership**

	2024	2023
<b>Defined Benefit Plan</b>		
Inactive plan members or beneficiaries currently receiving benefits	137,620	136,972
Inactive plan members entitled to but not yet receiving benefits	6,995	7,077
Active plan members	100,131	98,115
<b>Total members</b>	<b>244,746</b>	<b>242,164</b>
<b>Defined Contribution Plan</b>		
Inactive accounts	13,270	10,325
Active participants contributing to plan	28,763	23,543
<b>Total participants</b>	<b>42,033</b>	<b>33,868</b>

# FINANCIAL SECTION

---

## Notes to Basic Financial Statements

December 31, 2024 and 2023

As a result of the hybrid benefit structure established by Act 2017-5, certain employees may be included in both the defined benefit and defined contribution figures above.

### **(b) Defined Benefit Plan Benefits**

The SERS Defined Benefit Plan 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 provisions of the pension plan to the General Assembly. Member retirement benefits are determined by taking years of credited service multiplied by the final average salary multiplied by the annual accrual rate.

Most employees who entered SERS membership prior to January 1, 2011, and who retire at age 60 with three years of service, or at any age with 35 years of service, are entitled to a full 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, through December 31, 2018. Act 2010-120 created a class of service in which members earn a benefit that accrues at 2% of the member's final average salary instead of 2.5% each year and vests in 10 years instead of five. The full retirement age is 65 for most employees who entered SERS membership after January 1, 2011, and age 55 for members of the General Assembly and certain employees classified in hazardous duty positions. Act 2017-5 changed the benefit structure for most new employees effective January 1, 2019, which created two hybrid plan options as well as a defined contribution-only plan option. The two hybrid plan options contain a Defined Benefit Plan component with a full retirement age of 67 that accrues at 1.25% or 1% of the member's final average salary.

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 multiplied by 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 multiplied by 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 an A-3 class of service and an optional A-4 class for most employees who enter SERS membership for the first time on or after January 1, 2011, and December 1, 2010, for legislators newly elected in November 2010, through December 31, 2018. On or after January 1, 2019, class A-3 is only offered to hazardous duty employees. Employees who enter SERS membership under 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 multiplied by years of service, while the Class A-4 benefit accrual rate is 2.5%.

## Notes to Basic Financial Statements

December 31, 2024 and 2023

Act 2017-5 created a new A-5 hybrid class of service with optional hybrid A-6 class and straight defined contribution-only plan options for state employees (excluding most hazardous duty employees), who first enter SERS membership on or after January 1, 2019. Employees who enter SERS membership under Act 2017-5 enter as members of the A-5 class with a 45-day window to elect membership in the optional A-6 class or straight Defined Contribution Plan. The general annual benefit for Class A-5 members is 1.25% of an average of the highest five calendar years of the member's salary multiplied by years of service, while the Class A-6 benefit accrual rate is 1%. Those members choosing the straight Defined Contribution Plan do not have a benefit accrual rate and retire with their contributions, employer contributions, if vested, and any investment gains on those contributions.

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

### (c) Defined Benefit Plan Contributions

SERS' retirement code (71 Pa. C.S.) requires that all SERS participating employers make contributions to the pension plan on behalf of all active members and annuitants necessary to fund the liabilities and provide the annuity reserves required to pay benefits. The SERS Defined Benefit Plan funding policy, as set by the board, provides for periodic active member contributions at statutory rates. The Defined Benefit Plan funding policy also provides for periodic employer contributions at actuarially determined rates based on the Defined Benefit Plan 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. In FY 2017-18, the commonwealth paid the full actuarially required rate after it was collared in several of the previous years due to Act 2010-120. At December 31, 2024 and 2023, the composite actuarially determined rate was 33.65% and 35.32%, respectively. Employers may pay

individual rates higher or lower than the composite rate based on an employees' class of service. Act 2017-5 includes a savings "plow-back" provision requiring that the annual savings achieved through SERS' benefit changes flow back into the Defined Benefit Plan through the employer contribution rate rather than to other non-pension obligations.

Employer rates are computed based on SERS' fiscal year end of December 31 and applied to employers using the commonwealth's fiscal year beginning the following July 1. 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, 2024 and 2023, the blended contribution rates were 34.49% and 34.74%, 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 general membership contribution rate under Act 2017-5 for A-5 and A-6 members is 5% and 4% of salary, respectively. The contribution rate for Class D-4 Members of the General Assembly is 7.5%. Certain Judges and Magisterial District Judges have the option of electing special membership classes requiring a contribution of 10% and 7.5%, respectively. All Defined Benefit Plan 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 or elects to waive their benefits.

### (d) Defined Contribution Plan

The SERS retirement code requires that all SERS participating employers make contributions to the Defined Contribution Plan on behalf of all active participants. SERS' funding policy, as set by the SERS Board, provides for periodic employer and active participant contributions at statutory rates.

# FINANCIAL SECTION

---

## Notes to Basic Financial Statements

December 31, 2024 and 2023

Participants in the A-5 class, A-6 class, and defined contribution-only plan option contribute 3.25%, 3.5%, and 7.5% to the plan, respectively. Participants may also make additional voluntary contributions to the plan. Employers contribute 2.25%, 2%, and 3.5% for participants in the A-5 class, A-6 class, and defined contribution-only plan option, respectively. Employers do not match participant voluntary contributions to the plan. Participants are also permitted to transfer or roll over monies into the plan from other qualified plans.

While participant contributions are immediately vested, the employer contributions are not vested until a participant earns three eligibility points. Eligibility points are generally credited based on hours worked in a calendar year.

If a participant terminates employment before earning three eligibility points, any unvested employer contributions are returned to the Defined Contribution Plan to be used to offset future administrative costs to the plan. These monies are kept in a forfeiture account with the third-party administrator (TPA). There were \$3.2 million and \$2.4 million in forfeitures available to pay for administrative costs as of December 31, 2024 and 2023, respectively.

Each participant in the Defined Contribution Plan holds an individual account with the plan's TPA. The TPA is paid a fee for administering the plan. This TPA fee, and other administrative fees, costs, and expenses are incurred to operate the plan. These fees, costs, and expenses are funded through a per-participant assessment charged to employers and unvested employer contributions.

Participant accounts are credited with the participant's contributions as well as their employer's contributions and are adjusted for the investment earnings and investment management expenses associated with the investment options chosen by the participant. Participants can choose to invest their money in any of several investment options including a range of target date funds, equity funds, fixed income funds, a short-term

investment fund, and a self-directed brokerage option.

The benefit to which a participant is entitled to is their vested account balance at termination. Distribution of benefits can be made in installments, lump sum payments, or through an annuity. Participants are also permitted to transfer or roll over monies out of the plan into other qualified plans.

### (2) Summary of Significant Accounting Policies

#### (a) Basis of Accounting

SERS' financial statements 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, disbursements, and refunds are recognized when due and payable in accordance with the terms of the plans. 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 price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Defined Benefit Plan common and preferred stocks and foreign exchange contracts are generally valued based on published market prices and quotations at the close of business from national security exchanges and securities pricing services.

## Notes to Basic Financial Statements

December 31, 2024 and 2023

U.S. government securities and corporate and foreign bonds and notes are valued based on matrix pricing. Real estate separate accounts are valued using unobservable estimates and appraisals. For the Defined Contribution Plan, target date funds, self-directed brokerage accounts, commingled public equity funds, and commingled fixed income funds are reported at fair value, since these securities are considered actively traded as participants are able to actively buy and sell their interest.

Defined Benefit Plan private equity, certain real estate, hedge funds, commingled public equity funds, and commingled fixed income funds are reported at fair value as estimated and reported by general partners and investment managers, based upon the underlying net asset value (NAV) of the fund or partnership as a practical expedient of fair value. Adjustments are required when SERS expects to sell the investment at a value other than NAV.

The investments in short-term investment funds, including those managed by the treasurer of the commonwealth, are reported at cost and amortized cost. The securities lending collateral pool, which is operated by the securities lending agent, is also accounted for at amortized cost.

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' expenses and fees, as well as those expenses directly related to SERS investment operations.

### **(d) Other Assets and Other Liabilities on the Statement of Fiduciary Net Position**

Other assets consist of an internally developed software capital asset capitalized under Governmental Accounting Standards Board (GASB) Statement No. 51, leases capitalized under GASB Statement No. 87, and deferred outflows related to other post-employment benefits (OPEB) for employees of SERS recorded under GASB Statement No. 75.

SERS' employees are eligible to participate in the Retired Employees Health Program (REHP) if they meet certain criteria upon retirement. The REHP is a single employer defined benefit OPEB plan that includes commonwealth agencies and some component units. More detail regarding this at the REHP plan level can be found in the commonwealth's ACFR, which is an audited financial statement and is available at [www.budget.pa.gov](http://www.budget.pa.gov).

Intangible capital assets are amortized over the useful life of the asset once they are placed into service.

Other liabilities represent the liabilities associated with any capitalized leases and the liabilities and deferred inflows related to OPEB.

Interest and amortization expenses related to capitalized leases are reported within the real estate line on the Schedule of Administrative Expenses.

### **(e) Commitments**

As of December 31, 2024 and 2023, SERS' Defined Benefit Plan had contractual commitments totaling approximately \$2.9 billion and \$3.1 billion, respectively, to fund future private equity and real estate investments over the next several years.

### **(f) Federal Income Taxes**

The Internal Revenue Service (IRS) issued a favorable tax determination letter on May 19, 2017, confirming its prior determination that the Defined Benefit Plan is a qualified Governmental Plan under the Internal Revenue Code (IRC) § 401(a). Member contributions to SERS for current service are federal income tax deferred under IRC § 414(h).

### **(g) 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



# FINANCIAL SECTION

---

## Notes to Basic Financial Statements

December 31, 2024 and 2023

commonwealth pooled insurance programs and requires asset managers to carry certain insurance coverage. SERS is self-insured for fiduciary, director, and officer liability. During the past three fiscal years, SERS insurance settlements did not exceed insurance coverage.

### (h) Interfund Transactions

Interfund transfers of assets take place on a regular basis between the Defined Benefit Plan and Defined Contribution Plan. Interfund activity is used to properly align expenses with each plan.

### (3) Legally Required Reserves

The retirement code requires the maintenance of the following reserve accounts representing the net position held for future and current benefit payments.

The **Members' 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 pension plan. 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 the commission recapture program less any investment related administrative expenses. SERS utilizes brokers to rebate a percentage of trade commissions directly to SERS. During the years ended December 31, 2024 and 2023, SERS earned approximately

\$49,000 and \$40,000 of income resulting from the commission recapture program, respectively. During 2024 and 2023, no investment related administrative expenditures were made from the program. These commission reserves can be used to pay for future administrative 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 pension plan. In addition, all administrative and investment expenses incurred by the pension plan 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 end.

The **Benefits Completion Plan (BCP) Reserve Account** accumulates all BCP employer contributions and net earnings of the pension plan less any benefits paid out of the pension plan. Act 2002-234 amended the retirement code that directs the SERS 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. 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 retirement code.

There were 23 and 24 individuals receiving benefits from the BCP at December 31, 2024 and 2023, respectively.

## Notes to Basic Financial Statements

December 31, 2024 and 2023

Account balances at December 31, 2024 and 2023, are as follows:

### Account Balances

(\$ thousands)

	2024	2023
Members' savings account	\$5,744,448	\$5,583,794
State accumulation and interest reserve accounts	(2,587,010)	(3,897,684)
Directed commissions reserve account	3,850	3,801
Annuity reserve accounts		
Annuitants and beneficiaries	31,513,129	30,884,971
State police	3,918,415	3,788,814
Enforcement officers	53,160	50,989
Benefits completion plan reserve account	11,532	10,242
<b>Total</b>	<b>\$38,657,524</b>	<b>\$36,424,927</b>

The **State Employees' Defined Contribution Trust** accumulates Defined Contribution Plan participant and employer contributions, investment earnings, and plan expenses. The trust is comprised of individual participant investment accounts and administrative income received to cover plan costs. The assets of the plan are held in trust for the exclusive benefit of the participants and their beneficiaries and may be used for the payment of the fees, costs, and expenses related to the administration of the plan. All fees, costs, and expenses of administering the plan are being assessed to employers as a per-participant charge and through unvested employer contributions.

### (4) Investments

As provided by statute, the SERS Board has exclusive control and management responsibility of the Defined Benefit Plan and the Defined Contribution Plan with full power to invest or select investment options for the respective plans. In exercising its fiduciary responsibility to SERS' collective membership, the SERS Board is governed by the prudent expert rule in establishing investment policy. The prudent expert 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 SERS Board has adopted *SERS' Defined Benefit Plan Investment Policy Statement* and the *401(a) Defined Contribution Plan Statement of Investment Policy* to formally document investment objectives and responsibilities. These policies, as well as applicable state law, establish guidelines for permissible investments of SERS.

### Fair Value Hierarchy

SERS measures and records its investments using fair value measurement guidelines established by generally accepted accounting principles. The guidelines use a fair value hierarchy that is broken down into three levels based on inputs that market participants would use in valuing assets and liabilities derived from market data as follows:

- **Level 1 inputs:** are quoted prices in active markets for identical assets or liabilities.
- **Level 2 inputs:** are quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, or other than quoted prices that are observable.
- **Level 3 inputs:** are unobservable inputs used to measure fair value if relevant observable inputs are not available for the asset or liability at the reporting date.

Most common and preferred stocks, foreign exchange contracts, and the Defined Contribution Plan's target date funds, commingled public equity funds, commingled fixed income funds, and self-directed brokerage account are valued using prices quoted in active markets for those securities and are categorized as Level 1. They are marked-to-

# FINANCIAL SECTION

## Notes to Basic Financial Statements

December 31, 2024 and 2023

market daily with changes in fair value recognized as part of investments and investment income.

Most fixed income securities are valued using a matrix pricing technique and are categorized as Level 2. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices and recently printed security specific trading levels.

Value add/opportunistic separately managed accounts (SMA) in real estate, certain fixed income securities, and other securities classified in Level 3 reflect prices which may use several unobservable inputs, using assumptions based on market methodologies to determine the fair value of investments. A majority of the Level 3 investments are real estate investments where the fair value is determined based on appraisals using discounted cash flows, recent comparable sales, and current

market conditions. All SMA investments are to be independently appraised not less than once every three years by appraisers who meet specific professional qualifications. The valuation process involves significant judgment and estimating; thus, the value upon sale of an asset may differ from its appraised value.

Certain derivative instruments in the Defined Benefit Plan, such as foreign exchange contracts, interest rate swaps, credit default swaps, and futures, as well as the self-directed brokerage account in the Defined Contribution Plan, are included in other investments in the fair value tables.

At December 31, 2024 and 2023, the Defined Benefit Plan's investments measured at fair value are shown in the following tables:

### Defined Benefit Plan Investments Measured at Fair Value (2024)

(\$ thousands)

	Fair Value	Level 1	Level 2	Level 3
<b>Fixed income</b>				
Government	\$4,457,291	\$—	\$4,457,291	\$—
Corporates	1,266,287	—	1,259,510	6,777
Asset- and mortgage-backed securities	372,768	—	372,610	158
Private Placements	80,105	—	79,000	1,105
Sovereign debt	65,496	—	65,496	—
Agencies	27,587	—	27,587	—
<b>Total fixed income</b>	<b>6,269,534</b>	<b>—</b>	<b>6,261,494</b>	<b>8,040</b>
<b>Equity</b>				
Domestic common and preferred stocks	14,710,030	14,706,198	3,832	—
Foreign common and preferred stocks	830,501	830,501	—	—
<b>Total equity</b>	<b>15,540,531</b>	<b>15,536,699</b>	<b>3,832</b>	<b>—</b>
<b>Real estate</b>				
Value add/opportunistic SMA	245,904	—	—	245,904
<b>Other investments</b>				
Other investments	(129)	—	(129)	—
<b>Total</b>	<b>\$22,055,840</b>	<b>\$15,536,699</b>	<b>\$6,265,197</b>	<b>\$253,944</b>



## Notes to Basic Financial Statements

December 31, 2024 and 2023

### Defined Benefit Plan Investments Measured at Fair Value (2023)

(\$ thousands)

	Fair Value	Level 1	Level 2	Level 3
<b>Fixed income</b>				
Government	\$3,618,955	\$—	\$3,618,955	\$—
Corporates	1,221,523	—	1,211,955	9,568
Asset- and mortgage-backed securities	373,911	—	373,901	10
Sovereign debt	123,479	—	123,479	—
Private placements	115,982	—	113,385	2,597
Agencies	38,157	—	38,157	—
<b>Total fixed income</b>	<b>5,492,007</b>	<b>—</b>	<b>5,479,832</b>	<b>12,175</b>
<b>Equity</b>				
Domestic common and preferred stocks	11,934,623	11,932,010	2,613	—
Foreign common and preferred stocks	971,494	971,494	—	—
<b>Total equity</b>	<b>12,906,117</b>	<b>12,903,504</b>	<b>2,613</b>	<b>—</b>
<b>Real estate</b>				
Value add/opportunistic SMA	402,335	—	—	402,335
<b>Other investments</b>				
Other investments	360	69	291	—
<b>Total</b>	<b>\$18,800,819</b>	<b>\$12,903,573</b>	<b>\$5,482,736</b>	<b>\$414,510</b>

At December 31, 2024 and 2023, the Defined Contribution Plan's investments measured at fair value are shown in the following tables:

### Defined Contribution Plan Investments Measured at Fair Value (2024)

(\$ thousands)

	Fair Value	Level 1	Level 2	Level 3
<b>Target date funds</b>				
Target date funds	\$254,941	\$254,941	\$—	\$—
<b>Equity</b>				
Commingled public equity funds	27,544	27,544	—	—
<b>Commingled fixed income funds</b>				
Commingled fixed income funds	3,695	3,695	—	—
<b>Other investments</b>				
Other investments	1,428	1,428	—	—
<b>Total</b>	<b>\$287,608</b>	<b>\$287,608</b>	<b>\$—</b>	<b>\$—</b>

# FINANCIAL SECTION

## Notes to Basic Financial Statements

December 31, 2024 and 2023

### Defined Contribution Plan Investments Measured at Fair Value (2023)

(\$ thousands)

	Fair Value	Level 1	Level 2	Level 3
<b>Target date funds</b>				
Target date funds	\$162,519	\$162,519	\$—	\$—
<b>Equity</b>				
Commingled public equity funds	16,012	16,012	—	—
<b>Commingled fixed income funds</b>				
Commingled fixed income funds	2,839	2,839	—	—
<b>Other investments</b>				
Other investments	220	220	—	—
<b>Total</b>	<b>\$181,590</b>	<b>\$181,590</b>	<b>\$—</b>	<b>\$—</b>

In certain circumstances, NAV can be used as a practical expedient of fair value to establish the fair value of an investment that does not have a readily determinable fair value.

Private equity limited partnerships are valued at the NAV of SERS' ownership interest in partnership's capital, which approximates fair value. NAV is determined by the general partners. Private equity limited partnerships produce quarterly capital account statements and are audited at least annually. Since private equity investments in such partnerships are generally illiquid with holding periods lasting three to 10 years, the value realized by SERS upon disposition may differ from estimated values reflected in the financial statements. SERS' private equity investments on the Statement of Fiduciary Net Position are categorized into the following strategies in the Defined Benefit Plan Investments Measured at NAV tables:

- **Buyouts** are investments in established businesses that are undergoing a fundamental change in operations or strategy.
- **Special Situations** are investments in funds that acquire distressed companies or companies in need of restructuring, funds

from the secondary market, and funds providing mezzanine financing.

- **Growth Equity** consists of private equity investments in late-stage ventures, minority growth equity, and small buyout strategies.
- **Legacy Private Equity** consists of a consolidation of private equity funds from various sub-asset classes (Buyouts, Special Situations, and Growth Equity) that were not considered part of SERS core investment strategy. These assets are currently being managed by a third-party administrator which provides day-to-day oversight of operations.
- **Legacy Private Credit Funds** are closed-end (drawdown) limited partnership structures, often with a significant contractual cash flow component, with liquidity events in five to 10 years. SERS no longer has an asset allocation targeting this strategy as a stand-alone asset class.

Real estate limited partnerships are valued at the NAV of SERS' ownership percentage in partnership's capital. Real estate limited partnerships produce quarterly capital account statements and are audited at least annually. The

## Notes to Basic Financial Statements

December 31, 2024 and 2023

investment managers use third-party appraisals based on discounted cash flows, recent comparable sales, and current market conditions to arrive at NAV. The appraisal process involves significant judgment and estimating; thus, the value upon sale of an asset may differ from its appraised value.

Because the investments in such partnerships are generally illiquid with holding periods lasting seven to 10 years, the value realized by SERS upon disposition may differ materially from estimated values reflected in the financial statements. The following portions of SERS' real estate investments are valued at NAV:

- **Core/Core Plus** are long-term investments in high-quality real estate that generate returns primarily from stable income producing properties. These are open-ended funds.
- **Value Add/Opportunistic Funds** utilize greater leverage and development strategies relative to core strategies, thereby taking higher risks but demanding higher returns. Returns are primarily generated from capital appreciation from opportunistic investments. Strategies for this category of investing can include niche opportunities that are typically not available in core-style investing. These are closed-end funds.

Hedge funds are valued by general partners based on information provided by underlying hedge fund investments, third-party administrators, and brokers. Hedge fund investments are valued using NAV of units held at the end of the period based on the fair value of underlying investments. Hedge funds are valued on a monthly basis and are audited at least annually.

Most of the hedge fund investments are being scaled down since they are not part of the current investment strategy. Hedge funds are categorized into the following specific strategies:

- **Opportunistic Fixed Income** are investments that include directional and relative value investments through various structures, excluding closed-end funds, that may include debt securities, credit derivatives and related instruments, and/or multi-sector fixed income funds.
- **Legacy Hedge Funds** includes hedge funds that SERS is no longer actively investing in. The assets are to be sold in an orderly fashion as market conditions dictate.

The Defined Benefit Plan's commingled public equity funds and commingled fixed income funds are pooled investments in multiple securities, with each fund being valued at NAV on a monthly basis. The NAV is calculated using the closing price of the underlying investments, with the total value of the fund being apportioned to SERS based on units of ownership.

# FINANCIAL SECTION

## Notes to Basic Financial Statements

December 31, 2024 and 2023

At December 31, 2024 and 2023, the Defined Benefit Plan's investments measured at NAV are shown in the following tables:

### Defined Benefit Plan Investments Measured at NAV (2024)

(\$ thousands)

	NAV	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
<b>Private equity</b>				
Buyouts	\$3,646,280	\$1,246,664	NA	NA
Special Situations	1,788,829	852,031	NA	NA
Growth Equity	1,145,273	233,431	NA	NA
Legacy private credit	348,529	175,263	NA	NA
Legacy private equity	153,183	29,199	NA	NA
<b>Total private equity</b>	<b>7,082,094</b>	<b>2,536,588</b>		
<b>Real estate</b>				
Core/core plus	1,056,863	13,016	Quarterly	60 - 90 days
Value add/opportunistic	759,834	337,836	NA	NA
<b>Total real estate</b>	<b>1,816,697</b>	<b>350,852</b>		
<b>Hedge funds</b>				
Opportunistic fixed income	803,843	—	Quarterly	95 days
Legacy hedge funds	14,015	—	See note <sup>1/</sup>	See note <sup>1/</sup>
<b>Total hedge funds</b>	<b>817,858</b>	<b>—</b>		
<b>Commingled public equity funds</b>				
Commingled public equity funds	3,948,052	—	Daily	30 days
<b>Commingled fixed income funds</b>				
Commingled fixed income funds	1,091,584	—	Daily	1 day
<b>Total</b>	<b>\$14,756,285</b>	<b>\$2,887,440</b>		

<sup>1/</sup>The assets are to be sold in an orderly fashion as market conditions dictate.

## Notes to Basic Financial Statements

December 31, 2024 and 2023

### Defined Benefit Plan Investments Measured at NAV (2023)

(\$ thousands)

	NAV	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
<b>Private equity</b>				
Buyouts	\$3,678,808	\$1,232,599	NA	NA
Special Situations	1,746,895	932,987	NA	NA
Growth Equity	1,176,945	274,694	NA	NA
Legacy private credit	403,200	166,430	NA	NA
Legacy private equity	194,080	31,729	NA	NA
<b>Total private equity</b>	<b>7,199,928</b>	<b>2,638,439</b>		
<b>Real estate</b>				
Core/core plus	1,109,027	21,869	Quarterly	60 - 90 days
Value add/opportunistic	741,268	429,845	NA	NA
<b>Total real estate</b>	<b>1,850,295</b>	<b>451,714</b>		
<b>Hedge funds</b>				
Opportunistic fixed income	856,850	—	Quarterly	95 days
Legacy hedge funds	16,252	—	See note <sup>1/</sup>	See note <sup>1/</sup>
<b>Total hedge funds</b>	<b>873,102</b>	<b>—</b>		
<b>Commingled public equity funds</b>				
Commingled public equity funds	5,745,462	—	Daily	30 days
<b>Commingled fixed income funds</b>				
Commingled fixed income funds	1,176,563	—	Quarterly	1 day
<b>Total</b>	<b>\$16,845,350</b>	<b>\$3,090,153</b>		

<sup>1/</sup>The assets are to be sold in an orderly fashion as market conditions dictate.

SERS also has short-term investments that are not valued using fair value or NAV. SERS owns a portion of the commonwealth Treasury Department's short-term investment fund (STIF), which is valued at amortized cost. Additionally, there are other short-term investments valued at cost.

At December 31, 2024 and 2023, the Defined Benefit Plan's short-term investments totaled \$2.2 billion and \$1.0 billion respectively, and the Defined Contribution Plan's short-term investments totaled \$9.3 million and \$9.6 million respectively.

SERS' investment office, in consultation with the board and its investment consultants, updates the *SERS Defined Benefit Plan Investment Policy Statement* and the *Defined Contribution Plan Statement of Investment Policy* as necessary.

In June 2018, the board adopted the *SERS 401(a) Defined Contribution Plan Investment Policy Statement*, which was most recently amended in 2024. The policy defines the purpose of the 401(a) Plan, defines the roles of those responsible for managing the Plan, defines the investment options for the Plan and establishes investment funds performance standards and the objectives,

# FINANCIAL SECTION

## Notes to Basic Financial Statements

December 31, 2024 and 2023

standards and processes for monitoring and evaluating investment options.

In December 2019, the board adopted the *SERS Defined Benefit Plan Investment Policy Statement* and a 10-year asset allocation strategy designed to further mitigate risk, reduce external management fees, and increase fund liquidity. The target asset allocation is used to support the Defined Benefit Plan’s long-term return assumption. The policy has been amended most recently in 2024.

The following table shows the Defined Benefit Plan’s long-term 10-year strategic target asset allocation in place at December 31, 2024 and 2023:

### Target Asset Allocation

Asset Class	2024	2023
Private Equity	16%	16%
Real Estate	7	7
U.S. Equity	37	31
International Developed Markets Equity	14	14
Emerging Markets Equity	2	5
Fixed Income	19	22
Inflation Protection (TIPS)	3	3
Cash	2	2
<b>Total</b>	<b>100%</b>	<b>100%</b>

For the years ended December 31, 2024 and 2023, the money-weighted rate of return for SERS’ Defined Benefit Plan, net of manager fees, was 9.8% and 12.2% respectively. A money-weighted rate of return expresses investment performance, net of manager fees, adjusted for the changing amounts actually invested.

In June 2022, with the desire to provide an opportunity to reduce risk while maintaining the potential for achieving a reasonable long-term assumed investment rate of return, the board reduced the actuarial investment return assumption from 7.0% to 6.875%. This change became effective with the December 31, 2022, actuarial valuation, and the 6.875% return assumption remains in effect for the December 31,

2023, and December 31, 2024, actuarial valuations. The investment return assumption is reviewed annually and as a part of the normal five-year experience study cycle.

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.

Concentration of credit risk is the risk of loss attributed to the magnitude of investment in a single issuer. As of December 31, 2024 and 2023, 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 the retirement code (71 Pa. C.S. §5931(c)), the State Treasurer serves as custodian of the Defined Benefit Plan. 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, which are primarily in commingled funds, hedge funds, and limited partnerships, including real estate and private equity.

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

## Notes to Basic Financial Statements

December 31, 2024 and 2023

rating agencies such as Moody's Investors Services (Moody's), Standard and Poor's (S&P), and Fitch Ratings (Fitch).

the following tables disclose aggregate fair value, by the least favorable credit rating issued using Moody's, S&P, and Fitch credit ratings at December 31, 2024 and 2023, by debt sector.

For Defined Benefit Plan fixed income and short-term investment holdings exposed to credit risk,

### Debt Securities Exposed to Credit Risk (2024)

(\$ thousands)

	AAA	AA	A	BAA	BA and below	NA <sup>1/</sup>	Short-Term Investments <sup>2/</sup>	Total Exposed to Credit Risk <sup>3/</sup>
Short-term investments <sup>2/</sup>	\$—	\$—	\$—	\$—	\$—	\$—	\$2,164,529	\$2,164,529
Corporates	60,062	49,689	467,428	645,467	40,241	3,400	—	1,266,287
Commingled	—	—	—	—	—	1,091,584	—	1,091,584
Asset- and mortgage-backed securities	8,400	344,929	4,275	30	14,426	708	—	372,768
Private placements <sup>4/</sup>	17,803	1,449	6,626	35,137	15,072	4,018	—	80,105
Sovereign Debt	10,303	14,952	8,769	27,621	3,851	—	—	65,496
Government	1,426	17,877	11,282	386	—	—	—	30,971
Agencies	—	27,587	—	—	—	—	—	27,587
<b>Total</b>	<b>\$97,994</b>	<b>\$456,483</b>	<b>\$498,380</b>	<b>\$708,641</b>	<b>\$73,590</b>	<b>\$1,099,710</b>	<b>\$2,164,529</b>	<b>\$5,099,327</b>

<sup>1/</sup>Represents other securities that were either not rated or had a withdrawn rating.

<sup>2/</sup>Represents short-term investments mostly in the commonwealth Treasury Department's STIF, which is not rated. This category comprises 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, comprised short-term investments, commingled fixed income funds, and fixed income from the Statements of Fiduciary Net Position.

<sup>4/</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.



# FINANCIAL SECTION

## Notes to Basic Financial Statements

December 31, 2024 and 2023

### Debt Securities Exposed to Credit Risk (2023)

(\$ thousands)

	AAA	AA	A	BAA	BA and below	NA <sup>1/</sup>	Short-Term Investments <sup>2/</sup>	Total Exposed to Credit Risk <sup>3/</sup>
Corporates	\$61,068	\$45,949	\$449,103	\$626,672	\$31,206	\$7,525	\$—	\$1,221,523
Commingled	—	—	—	—	—	1,176,563	—	1,176,563
Short-term investments <sup>2/</sup>	—	—	—	—	—	—	950,520	950,520
Asset- and mortgage-backed securities	334,750	13,758	5,144	2,037	17,347	875	—	373,911
Sovereign debt	16,437	51,812	15,083	38,657	1,490	—	—	123,479
Private placements <sup>4/</sup>	12,067	—	5,253	34,788	34,682	29,192	—	115,982
Agencies	—	38,157	—	—	—	—	—	38,157
Government	2,218	21,489	9,758	3,805	—	—	—	37,270
<b>Total</b>	<b>\$426,540</b>	<b>\$171,165</b>	<b>\$484,341</b>	<b>\$705,959</b>	<b>\$84,725</b>	<b>\$1,214,155</b>	<b>\$950,520</b>	<b>\$4,037,405</b>

<sup>1/</sup>Represents other securities that were either not rated or had a withdrawn rating.

<sup>2/</sup>Represents short-term investments mostly in the commonwealth Treasury Department's STIF, which is not rated. This category comprises 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, comprised short-term investments, commingled fixed income funds, and fixed income from the Statements of Fiduciary Net Position.

<sup>4/</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.

U.S. government guaranteed securities with a fair value of \$4.4 billion and \$3.6 billion as of December 31, 2024 and 2023, respectively, are not included in the previous tables because they are not subject to credit risk.

The Defined Contribution Plan is exposed to credit risk through investment in the commonwealth Treasury Department's STIF, which is not rated. The plan had \$9.3 million and \$9.6 million in STIF as of December 31, 2024 and 2023, respectively. The plan also has indirect exposure to credit risk through the commingled fixed income funds, which had a cumulative balance of \$3.7 million and \$2.8 million, and the target date funds, which had a balance of \$254.9 million and \$162.5 million as of December 31, 2024 and 2023, respectively. These funds hold investment grade securities.

Interest rate risk is the risk that interest rate changes 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 Bloomberg 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 Basic Financial Statements

December 31, 2024 and 2023

At December 31, 2024 and 2023, SERS' Defined Benefit Plan had the following option-adjusted durations by debt sector:

### Debt Option-Adjusted Durations

(\$ thousands)

	2024		2023	
	Fair Value	Option-Adjusted Duration	Fair Value	Option-Adjusted Duration
Corporates	\$1,266,287	6.3	\$1,221,523	6.7
Sovereign Debt	65,496	6.2	123,479	8.6
Government	4,457,291	5.9	3,618,955	7.4
Commingled investment funds	1,091,584	5.6	1,176,563	5.9
Asset- and mortgage-backed securities	372,768	5.2	373,911	5.5
Agencies	27,587	3.7	38,157	3.0
Private placements <sup>1/</sup>	80,105	3.6	115,982	3.1
Short-term investments	2,164,529	0.1	950,520	0.1
<b>Total<sup>2/</sup></b>	<b>\$9,525,647</b>		<b>\$7,619,090</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>Total fair values exposed to interest rate risk comprised short-term investments, commingled fixed income funds, and fixed income from the Statements of Fiduciary Net Position.

The Defined Contribution Plan is exposed to interest rate risk through investment in the commonwealth Treasury Department's STIF, which had a duration of approximately one month at December 31, 2024 and 2023, respectively. The plan also has indirect exposure to interest rate risk through commingled fixed income funds, which have an average duration of approximately 5.1 years and 5.4 years at December 31, 2024 and

2023, respectively. The cumulative balance of these funds was \$3.7 million and \$2.8 million as of December 31, 2024 and 2023, respectively. Foreign currency risk is the risk that fluctuations 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.

# FINANCIAL SECTION

## Notes to Basic Financial Statements

December 31, 2024 and 2023

At December 31, 2024 and 2023, the SERS Defined Benefit Plan had the following currency exposures:

### Foreign Currency Exposures (2024)

(\$ thousands)

Currency	Short-Term Investments <sup>1/</sup>	Fixed Income	Common and Preferred Stocks	Other Investments	Real Estate	Private Equity	Total
European Euro	\$5,095	\$—	\$116,076	\$73	\$268,435	\$643,831	\$1,033,510
Swedish Krona	(35)	—	10,393	462	—	77,982	88,802
British Pound Sterling	43	—	51,454	—	—	—	51,497
Japanese Yen	50	—	45,141	—	—	—	45,191
Canadian Dollar	—	—	31,375	—	—	—	31,375
Swiss Franc	1,205	—	28,773	(38)	—	—	29,940
Danish Krone	489	—	27,418	(75)	—	—	27,832
Hong Kong Dollar	—	—	20,643	—	—	—	20,643
Australian Dollar	—	—	17,743	—	—	—	17,743
South Korean Won	—	—	7,147	—	—	—	7,147
Norwegian Krone	2	—	4,627	—	—	—	4,629
Mexican Peso	—	—	4,166	—	—	—	4,166
Chilean Peso	—	—	1,733	—	—	—	1,733
Indonesian Rupiah	—	—	1,415	—	—	—	1,415
Israeli Shekel	—	—	1,234	—	—	—	1,234
Other Currencies	3	—	—	—	—	—	3
<b>Total</b>	<b>\$6,852</b>	<b>\$—</b>	<b>\$369,338</b>	<b>\$422</b>	<b>\$268,435</b>	<b>\$721,813</b>	<b>\$1,366,860</b>

<sup>1/</sup>Includes investment related receivables and payables as of December 31.

## Notes to Basic Financial Statements

December 31, 2024 and 2023

### Foreign Currency Exposures (2023)

(\$ thousands)

Currency	Short-Term Investments <sup>1/</sup>	Fixed Income	Common and Preferred Stocks	Other Investments	Real Estate	Private Equity	Total
European Euro	\$8,566	\$20,043	\$129,205	(\$782)	\$280,937	\$702,338	\$1,140,307
Swedish Krona	—	—	8,478	808	—	108,291	117,577
British Pound Sterling	791	25,378	63,445	(1,625)	—	—	87,989
Japanese Yen	62	—	50,110	3,451	—	—	53,623
Swiss Franc	842	—	41,412	(21)	—	—	42,233
Canadian Dollar	137	2,250	37,967	(455)	—	—	39,899
Danish Krone	397	—	37,326	160	—	—	37,883
New Taiwan Dollar	67	—	27,280	—	—	—	27,347
South Korean Won	162	—	26,591	—	—	—	26,753
Hong Kong Dollar	(13)	—	23,695	13	—	—	23,695
Australian Dollar	27	1,195	20,519	70	—	—	21,811
Mexican Peso	57	1,147	12,030	(539)	—	—	12,695
Thai Baht	—	—	9,734	—	—	—	9,734
Turkish Lira	—	—	8,908	—	—	—	8,908
Norwegian Krone	17	—	6,615	591	—	—	7,223
South African Rand	211	—	4,000	—	—	—	4,211
Chilean Peso	—	—	3,003	—	—	—	3,003
Indonesian Rupiah	—	—	2,728	—	—	—	2,728
Philippine Peso	—	—	1,887	—	—	—	1,887
Hungarian Forint	—	—	849	—	—	—	849
Malaysian Ringgit	—	—	780	—	—	—	780
Israeli Shekel	—	—	725	—	—	—	725
Polish Zloty	119	—	596	—	—	—	715
New Zealand Dollar	139	2,347	—	(1,850)	—	—	636
Brazilian Real	535	—	—	—	—	—	535
<b>Total</b>	<b>\$12,116</b>	<b>\$52,360</b>	<b>\$517,883</b>	<b>(\$179)</b>	<b>\$280,937</b>	<b>\$810,629</b>	<b>\$1,673,746</b>

<sup>1/</sup>Includes investment related receivables and payables as of December 31.

The Defined Benefit Plan and the Defined Contribution Plan have indirect foreign currency exposure through their holdings in commingled public equity funds and commingled fixed income funds.

The Defined Contribution Plan also has indirect foreign currency exposure through its holdings in target date funds.

#### (5) Securities Lending

In accordance with a contract between the commonwealth's treasurer and its custodian,

the SERS Defined Benefit Plan participates in a securities lending program.

The custodian, acting as lending agent, lends the plan's 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

# FINANCIAL SECTION

---

## Notes to Basic Financial Statements

December 31, 2024 and 2023

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. Accordingly, neither securities collateral received from borrowers nor the related obligation to borrowers are reported on the Statement of Fiduciary Net Position.

As of December 31, 2024 and 2023, the Defined Benefit Plan's credit exposure to individual borrowers was limited because the amounts owed to the borrowers exceeded the amounts the borrowers owed the plan. The treasurer's contract with the lending agent requires the agent to indemnify the plan 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, 2024 and 2023, could be terminated on demand by either the lending agent or the borrower. Cash collateral is invested in a short-term collective investment pool, which is accounted for at amortized cost. The duration of the investments in the pool at December 31, 2024 and 2023, 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.

As of December 31, 2024 and 2023, for the Defined Benefit Plan, the fair value of loaned securities was \$686 million and \$571 million, respectively; the fair value of the associated collateral was \$710 million and \$589 million, of which \$135 million and \$157 million was cash, respectively. As of December 31, 2024 and 2023, securities collateral of \$575 million and \$432 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**

SERS mitigates its legal risk on investment holdings including derivatives by ensuring that legal requirements, including indemnification, sovereign immunity, jurisdiction, etc., are acknowledged and agreed to in the derivatives agreements to which they are subject.

Within narrowly prescribed guidelines, the SERS Defined Benefit Plan and Defined Contribution Plan permit investment managers to directly 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, forward settling mortgage instruments for liquidity as well as to gain mortgage exposure, and swaps to more efficiently gain investment exposure in the equity and credit markets.

SERS indirectly holds derivatives and financial instruments through commingled fund structures in the Defined Benefit Plan and the Defined Contribution Plan. At a fund level, these managers hold foreign exchange contracts, futures contracts, and certain swap contracts. These funds invest in instruments directly and indirectly to gain foreign exchange exposure and to manage interest rate risk by altering the average life of the portfolio. Derivatives are viewed within the context of the fund's total portfolio and are consistent with the funds' overall strategy.

SERS is exposed to counterparty credit risk on some open derivative positions. Counterparty credit risk is the risk that a derivative counterparty may fail to meet its payment obligation under the derivative contract.

SERS invests in mortgage-backed securities (MBS) in the form of specified pools to maximize yields. These securities are sensitive to prepayments of mortgages, which may result from a drop in interest rates. The system also uses MBS forwards,

## Notes to Basic Financial Statements

December 31, 2024 and 2023

which are forward-settling mortgage instruments that are used for liquidity as well as a low-cost, efficient way to gain mortgage exposure. The MBS forwards are subject to credit risk in the event of nonperformance by counterparties. For the Defined Benefit Plan, the fair value of MBS forwards was \$322 million and \$334 million as of December 31, 2024 and 2023, respectively. These investments are included in fixed income in the Statement of Fiduciary Net Position.

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 creditworthiness. The unrealized gain/loss on contracts is included in the net position and represents the fair value of the contracts on December 31.

At December 31, 2024 and 2023, the Defined Benefit Plan directly-owned contracts to purchase and sell by foreign currencies are shown in the following tables:

### Foreign Exchange Contracts (2024)

(\$ thousands)

Currency	Purchases	Unrealized Gain/(Loss)	Sales	Unrealized Gain/(Loss)
Swedish Krona	\$462	\$—	\$—	\$—
European Euro	73	—	—	—
Danish Krone	—	—	75	—
Swiss Franc	—	—	38	—
<b>Total</b>	<b>\$535</b>	<b>\$—</b>	<b>\$113</b>	<b>\$—</b>

### Foreign Exchange Contracts (2023)

(\$ thousands)

Currency	Purchases	Unrealized Gain/(Loss)	Sales	Unrealized Gain/(Loss)
Japanese Yen	\$3,512	\$188	\$62	\$—
Australian Dollar	2,254	96	2,184	(103)
European Euro	1,972	84	2,753	(49)
British Pound Sterling	1,971	13	3,596	(162)
South African Rand	1,068	6	1,068	(23)
Swedish Krona	808	80	—	—
Norwegian Krone	591	54	—	—
Danish Krone	160	7	—	—
Hong Kong Dollar	13	—	—	—
New Zealand Dollar	—	—	1,850	(79)
Mexican Peso	—	—	540	(24)
Canadian Dollar	—	—	455	(19)
Swiss Franc	—	—	21	—
<b>Total</b>	<b>\$12,349</b>	<b>\$528</b>	<b>\$12,529</b>	<b>(\$459)</b>



# FINANCIAL SECTION

## Notes to Basic Financial Statements

December 31, 2024 and 2023

Swap agreements provide for periodic payments between parties based on the change in value of underlying assets, indexes, rates, and credit worthiness. SERS’ managers use 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’ direct exposure to swap agreements was not significant at December 31, 2024 and 2023.

Futures are standardized contracts traded on an exchange. Contract details include the price and quantity of a specific asset to be transacted by either the buyer or the seller on a set date. Futures are subject to certain risks which include liquidity, interest rate, market, and credit risks. Futures are used by SERS’ managers to gain desired exposures or hedge certain risks within the portfolio. SERS’ managers do not use futures for the purpose of speculation. SERS did not have exposure to futures at December 31, 2024, or December 31, 2023.

### (7) 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. SERS makes every effort to defend its position in these proceedings.

### (8) Net Pension Liability

The components of the net pension liability of participating employers at December 31, 2024 and 2023, were as follows:

### Net Pension Liability

(\$ thousands)

	2024	2023
Total pension liability	\$57,084,414	\$55,780,367
Plan fiduciary net position	38,657,524	36,424,927
<b>Net pension liability</b>	<b>\$18,426,890</b>	<b>\$19,355,440</b>
Plan fiduciary net position as a percentage of the total pension liability	67.7%	65.3%

The total pension liability was determined by an actuarial valuation for financial reporting purposes as of December 31, 2024 and 2023, using some of the following actuarial methods and assumptions:

- Actuarial cost method: entry age
- Investment rate of return (discount rate): 6.875% including inflation for 2024 and 2023
- Projected salary increases: average of 4.58% and 4.55% for 2024 and 2023, respectively, with a range of 3.30% to 6.95% including inflation for both years
- Asset valuation method: fair value
- Inflation: 2.50%
- Mortality rate: projected PubG-2010 and PubNS-2010 Mortality Tables adjusted for actual plan experience and future improvement for retirees, beneficiaries, and survivors and rates determined by SERS’ actuaries using actual SERS experience for pre-retirement active members

The assumptions mentioned above, unless otherwise approved by the board, are based on the *19th Investigation of Actuarial Experience* study covering the periods 2015 - 2019, which was released in July 2020.

The long-term expected real rate of return on pension plan investments is determined using a building-block method in which best-estimate ranges of expected future real rates of return

## Notes to Basic Financial Statements

December 31, 2024 and 2023

(expected returns, net of 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 geometric 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, 2024 and 2023, (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	2024	2023
Private Equity	6.25%	6.00%
Real Estate	5.15	4.80
U.S. Equity	5.15	4.85
International Developed Markets Equity	5.00	4.75
Emerging Markets Equity	5.20	4.95
Fixed Income	2.85	1.75
Inflation Protection (TIPS)	2.55	1.50
Cash	0.50	0.25

The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rates 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 6.875% for 2024 and 2023, 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 (2024)

(\$ thousands)

	1% Decrease to 5.875%	Current Discount Rate of 6.875%	1% Increase to 7.875%
Net pension liability	\$24,624,951	\$18,426,890	\$13,193,980

### Sensitivity of the Net Pension Liability to Change in the Discount Rate (2023)

(\$ thousands)

	1% Decrease to 5.875%	Current Discount Rate of 6.875%	1% Increase to 7.875%
Net pension liability	\$25,400,650	\$19,355,440	\$14,250,456

## Required Supplementary Information

December 31, 2024 (unaudited)

### Schedule 1: Schedule of Changes in Net Pension Liability and Related Ratios

(\$ millions)

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
<b>Total pension liability</b>										
Service cost	\$942	\$929	\$901	\$924	\$1,003	\$982	\$965	\$961	\$953	\$955
Interest	3,764	3,687	3,635	3,594	3,458	3,409	3,334	3,262	3,271	3,123
Differences between expected and actual experience	604	453	363	(105)	35	66	167	130	(534)	378
Changes of assumptions	—	—	672	—	2,041	562	—	—	947	669
Benefit payments, including refunds of member contributions	(4,005)	(3,911)	(3,885)	(3,731)	(3,557)	(3,513)	(3,395)	(3,304)	(3,228)	(3,081)
Net change in total pension liability	1,305	1,158	1,686	682	2,980	1,506	1,071	1,049	1,409	2,044
Total pension liability - beginning	55,780	54,622	52,936	52,254	49,274	47,768	46,697	45,648	44,239	42,195
<b>Total pension liability - ending (a)</b>	<b>\$57,085</b>	<b>\$55,780</b>	<b>\$54,622</b>	<b>\$52,936</b>	<b>\$52,254</b>	<b>\$49,274</b>	<b>\$47,768</b>	<b>\$46,697</b>	<b>\$45,648</b>	<b>\$44,239</b>
<b>Plan fiduciary net position</b>										
Contributions - employer <sup>1/</sup>	2,316	2,198	2,075	2,871	3,186	2,115	2,049	1,898	1,622	1,360
Contributions - member	452	427	419	405	410	405	394	383	375	372
Net investment income/(loss)	3,506	4,128	(5,214)	5,682	3,920	5,175	(1,442)	4,066	1,587	88
Benefit payments, including refunds of member contributions	(4,005)	(3,911)	(3,885)	(3,731)	(3,557)	(3,513)	(3,395)	(3,304)	(3,228)	(3,081)
Administrative expense	(36)	(24)	(19)	(24)	(27)	(23)	(26)	(26)	(23)	(22)
Net change in plan fiduciary net position	2,233	2,818	(6,624)	5,203	3,932	4,159	(2,420)	3,017	333	(1,283)
Plan fiduciary net position - beginning	36,425	33,607	40,231	35,028	31,096	26,937	29,405	26,388	26,055	27,338
Cumulative effect of change in accounting principle	NA	NA	NA	NA	NA	NA	(48)	NA	NA	NA
Beginning balance restated	NA	NA	NA	NA	NA	NA	29,357	NA	NA	NA
Plan fiduciary net position - ending (b)	38,658	36,425	33,607	40,231	35,028	31,096	26,937	29,405	26,388	26,055
<b>Net pension liability - ending (a) - (b)</b>	<b>\$18,427</b>	<b>\$19,355</b>	<b>\$21,015</b>	<b>\$12,705</b>	<b>\$17,226</b>	<b>\$18,178</b>	<b>\$20,831</b>	<b>\$17,292</b>	<b>\$19,260</b>	<b>\$18,184</b>
Plan fiduciary net position as a percentage of the total pension liability	67.7%	65.3%	61.5%	76.0%	67.0%	63.1%	56.4%	63.0%	57.8%	58.9%
Covered payroll	\$7,272	\$6,855	\$6,548	\$6,384	\$6,442	\$6,329	\$6,179	\$5,984	\$5,912	\$5,972
Net pension liability as percentage of covered payroll	253.4%	282.3%	321.0%	199.0%	267.4%	287.2%	337.1%	288.9%	325.8%	304.5%

<sup>1/</sup>Contributions - employer include one-time lump sum payment received pursuant to Act 2019-105; \$825 million from the Pennsylvania State System of Higher Education (PASSHE) in 2021 and \$1.06 billion from Penn State University in 2020.

See accompanying independent auditors' report.

## Required Supplementary Information

December 31, 2024 (unaudited)

### Schedule 2: Schedule of Employer Contributions

(\$ millions)

Year <sup>1/</sup>	Actuarially Determined Contribution (ADC)	Contributions in Relation to the ADC	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2024 <sup>2/</sup>	\$2,304	\$2,304	\$—	\$7,272	31.69%
2023 <sup>2/</sup>	2,188	2,188	—	6,855	31.92
2022 <sup>2/</sup>	2,066	2,066	—	6,548	31.55
2021 <sup>2/</sup>	2,079	2,858 <sup>4/</sup>	(779)	6,384	44.77
2020 <sup>2/</sup>	2,164	3,175 <sup>5/</sup>	(1,011)	6,442	49.29
2019 <sup>2/</sup>	2,106	2,106	—	6,329	33.28
2018 <sup>2/</sup>	2,040	2,040	—	6,179	33.02
2017 <sup>2/ 3/</sup>	1,884	1,884	—	5,984	31.47
2016 <sup>3/</sup>	1,614	1,614	—	5,912	27.30
2015 <sup>3/</sup>	1,360	1,360	—	5,972	22.78

<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 for valuation years 2015 - 2020 and traditional entry-age for valuation years 2021 - 2024
- Asset valuation method: five-year smoothing (all years)
- Inflation: 2.75% for valuation year 2015, 2.6% for valuation years 2016 - 2019, and 2.5% for valuation years 2020 - 2024
- Projected average salary increases: 5.7% for valuation year 2015, 5.6% for valuation years 2016 - 2019, 4.6% for valuation years 2020 - 2021, 4.55% for valuation years 2022 - 2023, and 4.58% for valuation year 2024
- Assumed investment rate of return (net of manager fees including inflation): 7.5% for valuation year 2015, 7.25% for valuation years 2016 - 2018, 7.125% for valuation year 2019, 7.0% for valuation years 2020 - 2021, and 6.875% for valuation years 2022 - 2024

<sup>2/</sup>ADC excludes multiple service transfers made to SERS. These transfers are included as contributions on the Statements of Changes in Fiduciary Net Position.

<sup>3/</sup>The ADC disclosed above is based on minimum floor rates or suppressed rates resulting from collars that were required based on statutory law. These rates were 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 were applied. These “final employer contribution rates” fell within the realm of an appropriate ADC calculation under actuarial standards of practice and temporarily deferred a portion of the payments that work towards fully funding the plan.

<sup>4/</sup>Contributions include the \$825 million one-time lump sum payment received from the Pennsylvania State System of Higher Education (PASSHE) pursuant to Act 2019-105, less credits utilized during the year.

<sup>5/</sup>Contributions include the \$1.06 billion one-time lump sum payment received from Penn State University pursuant to Act 2019-105, less credits utilized during the year.

### Schedule 3: Schedule of Investment Returns

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Annual money-weighted rate of return, net of investment expense	9.8%	12.2%	-12.2%	17.2%	11.3%	18.8%	-4.5%	15.1%	6.4%	0.4%

See accompanying independent auditors' report.

# FINANCIAL SECTION

## Supplementary Information

Year Ended December 31, 2024

### Schedule 4: Schedule of Administrative Expenses

(\$ thousands)

	Defined Benefit Plan	Defined Contribution Plan	Total
Personnel services			
Salaries	\$13,201	\$1,714	\$14,915
Benefits	10,030	1,260	11,290
Temporary personnel wages and overtime	612	57	669
<b>Total personnel services</b>	<b>23,843</b>	<b>3,031</b>	<b>26,874</b>
Operational			
Travel	35	—	35
Training	92	—	92
Communication services	336	23	359
Consultants	991	102	1,093
Legal services/fees	9	—	9
Specialized services	1,565	2,161	3,726
IT consulting	3,991	22	4,013
Contracted maintenance non-IT	8	—	8
Hardware/software and maintenance	2,279	34	2,313
Real estate	1,970	102	2,072
Vehicles	40	—	40
Office equipment	102	—	102
Other rentals/leases	27	—	27
Office supplies	60	1	61
Motorized equipment maintenance	1	—	1
Postage	383	19	402
Freight	2	—	2
Printing	188	1	189
Subscriptions and licensing	237	—	237
Membership dues	69	—	69
Conference	15	—	15
Insurance, surety, and fidelity bonds	7	—	7
Other operational	1,604	2	1,606
<b>Total operational</b>	<b>14,011</b>	<b>2,467</b>	<b>16,478</b>
Total administrative expenses before OPEB	37,854	5,498	43,352
(OPEB benefit)/OPEB expense	(2,262)	390	(1,872)
<b>Total administrative expenses</b>	<b>\$35,592</b>	<b>\$5,888</b>	<b>\$41,480</b>

See accompanying independent auditors' report.

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

(\$ thousands)

**Investment Expenses**

Expense Category	Expenses
Defined Benefit Plan manager investment expenses	
Private Equity	\$87,085
Real Estate	34,045
U.S. Equity	2,776
International Developed Markets Equity	7,174
Emerging Markets Equity	4,369
Fixed Income	11,074
Inflation Protection (TIPS)	1,057
Legacy Private Credit	7,179
<b>Total Defined Benefit Plan manager investment expenses</b>	<b>154,759</b>
Investment professional personnel	6,507
Investment consultants	2,870
Custodian	987
Subscriptions and memberships	417
Operational	167
<b>Total Defined Benefit Plan investment expenses</b>	<b>165,707</b>
Defined Contribution Plan investment expenses	138
<b>Total investment expenses</b>	<b>\$165,845</b>

**Consultant Expenses**

Firm	Service Type	Expenses
Defined Benefit Plan investment consultant expenses		
StepStone Group	Private equity investments	\$1,677
Callan	General investments	433
NEPC	Real estate investments	425
Fairview Capital Partners	Investment portfolio management	229
Other	Other	106
<b>Total Defined Benefit Plan investment consultant expenses</b>		<b>2,870</b>
Defined Benefit Plan administrative consultant expenses		
Linea Solutions	Management consultant	484
Korn Ferry Hay Group	Actuary	439
Other	Multiple	68
<b>Total Defined Benefit Plan administrative consultant expenses</b>		<b>991</b>
Defined Contribution Plan consultant expenses	Multiple	102
<b>Total consultant expenses</b>		<b>\$3,963</b>

See accompanying independent auditors' report.



## Investment Section

May 27, 2025

State Employees' Retirement Board and Executive Director  
State Employees' Retirement System  
30 North Third Street, Suite 150  
Harrisburg, Pennsylvania 17101

On behalf of the Pennsylvania State Employees' Retirement System's (SERS) Investment Office, I am pleased to present the investment section of SERS Annual Comprehensive Financial Report for calendar year 2024. The SERS Board administers a Defined Benefit Plan with approximately \$38.7 billion in net position, a Defined Contribution Plan with approximately \$295.4 million in net position, and a voluntary Deferred Compensation Plan offered to members with approximately \$4.9 billion in net position.

SERS' Defined Benefit Plan investment performance for the calendar year ended December 31, 2024, was 9.8% (net of fees). The end of 2024 marks 3-, 5-, 10-, 15-, 20-, and 25-year periods of returns of 2.7%, 7.1%, 7.0%, 7.7%, 6.8%, and 6.2% (net of fees), respectively. Performance is calculated using a Modified Dietz return methodology, which is considered a time-weighted rate of return.

SERS' funded status as a percentage of the total pension liability was approximately 70.3% (actuarial value), as of December 31, 2024. SERS' Board considers its funded status in selecting its risk tolerance, and as such prioritizes an asset allocation to meet the long-term actuarial assumed rate of return, while also addressing shorter-term liquidity needs to pay benefits.

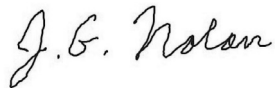
A number of key accomplishments were achieved in 2024 pertaining primarily to the Defined Benefit Plan, several of which are documented below:

- Maintained low annual investment manager fees and expenses paid to external firms of approximately 40.9 basis points or 0.41% of total plan assets
- Committed \$275 million to two best-in-class Private Equity managers, which included expanding the Private Equity co-investment program by \$200 million to access private equity strategies at more favorable terms
- Allocated \$39 million to SERS' current co-investment program to further enhance returns and reduce Private Equity fees
- Continued to restructure the Real Estate portfolio to enhance projected returns. Four partial redemption requests from Core/Core Plus and REITs managers totaling \$525 million have been executed to this point, with \$175 million of proceeds received to date

- Completed a search for General Consulting Services which included a thorough diligence process and interviews with prospective firms. The process was concluded on schedule with the selection of RVK at favorable fee terms

The investment section of this report provides further information regarding the investment program. The Investment Office continues to operate efficiently and effectively. I remain confident that with a focus on the SERS mission, thoughtful leadership from the Board, and a disciplined investment process aligned with the investment objectives, SERS and its members will continue on the path of financial security.

Sincerely,



James G. Nolan  
Chief Investment Officer

## Investment Policy and Objectives

December 31, 2024 (unaudited)

### Investment Policy

The SERS Board originally adopted a formal *Statement of Investment 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. On December 10, 2024, the SERS Board adopted the amended *SERS' Defined Benefit Plan Investment Policy Statement* (IPS).

The purpose of the IPS 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 IPS 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 expert standard as set forth in Title 71, Pennsylvania Consolidated Statutes, Section 5931(a).
- The members of the board, employees of SERS, 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 market place. The staff also reviews and analyzes the philosophies, policies, and strategies employed by the investment managers, 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 managers that possess superior capabilities in the management of assets of public retirement systems. Each manager 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.
- 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.
- A 10-year asset allocation strategy is designed to achieve or exceed the expected return, maintain exposure to less liquid non-traditional strategies, and continue the plan's commitment to liquidity through the allocation to capital preservation assets.

# INVESTMENT SECTION

---

## Investment Policy and Objectives

December 31, 2024 (unaudited)

### Investment Objectives

As indicated in SERS' IPS, 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 SERS' actuarial assumed rate of return over the long-term, net of fees.
- Achieve SERS' total fund policy benchmark return over 10-year periods, net of fees. The fund policy benchmark index will be based on the asset allocation set forth in the IPS approved by the board.

SERS' investment process requires a thorough analysis of the plan liabilities, liquidity requirements, and market opportunities. The board, in collaboration with the Chief Investment Officer, actuarial consultant, and investment consultants, establishes the actuarial assumed rate of return. Achieving, or exceeding this actuarial assumed rate of return is the primary investment performance objective of SERS' Investment Office to help meet the desired funded status.

## Investment Returns

December 31, 2024 (unaudited)

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

For the period ending December 31, 2024

Asset Class	1-Year Total Return	3-Year Total Return	5-Year Total Return	10-Year Total Return
Private Equity <sup>2/,5/</sup>	6.3%	2.5%	14.2%	11.8%
<i>Burgiss All Private Equity Custom Index<sup>3/,5/</sup></i>	<i>0.1</i>	<i>-0.6</i>	<i>9.0</i>	<i>10.1</i>
<i>Global Equity +3%<sup>4/,5/</sup></i>	<i>35.9</i>	<i>12.8</i>	<i>17.3</i>	<i>15.5</i>
Real Estate <sup>5/</sup>	-12.3	-6.4	-0.2	2.2
<i>Real Estate Custom Benchmark<sup>5/,6/</sup></i>	<i>-8.4</i>	<i>-2.2</i>	<i>1.9</i>	<i>4.9</i>
<i>Consumer Price Index +3%<sup>5/</sup></i>	<i>5.4</i>	<i>7.8</i>	<i>7.2</i>	<i>5.9</i>
U.S. Equity	23.4	7.8	13.6	11.8
<i>Russell 3000 Index</i>	<i>23.8</i>	<i>8.0</i>	<i>13.9</i>	<i>12.6</i>
<i>S&amp;P 1500 Index</i>	<i>24.0</i>	<i>8.5</i>	<i>14.1</i>	<i>12.8</i>
International Developed Markets Equity	5.0	2.0	5.9	6.1
<i>MSCI World ex U.S.</i>	<i>4.2</i>	<i>1.1</i>	<i>4.7</i>	<i>5.3</i>
Emerging Markets Equity	8.6	-2.3	3.0	4.9
<i>MSCI Emerging Markets</i>	<i>7.4</i>	<i>-1.3</i>	<i>2.6</i>	<i>3.9</i>
Fixed Income	2.5	-1.8	-0.1	1.5
<i>Bloomberg U.S. Aggregate Bond Index</i>	<i>1.3</i>	<i>-2.4</i>	<i>-0.3</i>	<i>1.4</i>
Inflation Protection (TIPS)	1.8	-2.7	1.4	2.0
<i>Bloomberg U.S. TIPS Index</i>	<i>1.8</i>	<i>-2.3</i>	<i>1.9</i>	<i>2.2</i>
Cash	5.4	4.1	2.6	2.0
<i>ICE BofAML U.S. 3-Month Treasury Bill Index</i>	<i>5.3</i>	<i>3.9</i>	<i>2.5</i>	<i>1.8</i>
Legacy Private Credit <sup>5/,8/</sup>	10.5	9.8	10.6	NA
<i>S&amp;P/LSTA Leveraged Loan Index +1%<sup>5/</sup></i>	<i>10.6</i>	<i>7.5</i>	<i>6.8</i>	<i>NA</i>
<b>Total Fund<sup>7/</sup></b>	<b>9.8%</b>	<b>2.7%</b>	<b>7.1%</b>	<b>7.0%</b>
<b>Total Fund Custom Benchmark</b>	<b>9.9%</b>	<b>3.0%</b>	<b>7.8%</b>	<b>7.7%</b>
<b>Total Fund Custom Public Market Equivalent Benchmark</b>	<b>15.2%</b>	<b>5.2%</b>	<b>8.4%</b>	<b>8.1%</b>
<b>Total Fund 60/40 Index</b>	<b>10.1%</b>	<b>2.1%</b>	<b>5.9%</b>	<b>6.1%</b>

<sup>1/</sup>Returns for periods greater than one year are annualized. Performance was calculated using the Modified Dietz return methodology, which is considered a time-weighted rate of return.

<sup>2/</sup>Historical Private Equity performance includes Buyouts, Special Situations, and Growth Equity.

<sup>3/</sup>Intended to compare the program's performance to its peers.

<sup>4/</sup>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>Private Equity, Legacy Private Credit, Real Estate and the corresponding benchmarks are reported on a quarter-lagged basis.

<sup>6/</sup>Calculated monthly using beginning of the month asset class weights applied to each corresponding primary benchmark return. The real estate custom benchmark consists of 100% NCREIF NFI-ODCE (Qtr lag).

<sup>7/</sup>Legacy Hedge Funds are in liquidation, values and performance are no longer reported. However, all performance activity continues to be reflected in SERS' Total Fund return.

<sup>8/</sup>Legacy Private Credit performance is included in the total fund starting at the composite's true inception date, July 1, 2022. The history is calculated and shown for informational purposes.



# INVESTMENT SECTION

## Investment Returns

December 31, 2024 (unaudited)

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

For the period ending June 30, 2024

Asset Class	1-Year Total Return	3-Year Total Return	5-Year Total Return	10-Year Total Return
Private Equity <sup>2/,5/</sup>	6.5%	8.3%	14.4%	11.9%
<i>Burgiss All Private Equity Custom Index<sup>3/,5/</sup></i>	0.1	3.6	9.9	10.7
<i>Global Equity +3%<sup>4/,5/</sup></i>	29.1	12.2	16.5	15.1
Real Estate <sup>5/</sup>	-15.1	-2.2	1.2	3.1
<i>Real Estate Custom Benchmark<sup>5/,6/</sup></i>	-12.3	1.8	2.7	5.6
<i>Consumer Price Index +3%<sup>5/</sup></i>	6.5	8.7	7.2	5.8
U.S. Equity	22.4	7.5	13.7	11.3
<i>Russell 3000 Index</i>	23.1	8.1	14.1	12.2
<i>S&amp;P 1500 Index</i>	23.5	9.4	14.6	12.5
International Developed Markets Equity	11.3	3.2	7.4	5.2
<i>MSCI World ex U.S. IMI</i>	10.8	2.0	6.3	4.2
Emerging Markets Equity	13.0	-5.2	4.8	3.8
<i>MSCI Emerging Markets IMI</i>	13.6	-4.1	3.9	3.1
Fixed Income	3.2	-2.4	-0.1	1.3
<i>Bloomberg U.S. Aggregate Bond Index</i>	2.6	-3.0	-0.2	1.4
Inflation Protection (TIPS)	2.4	-2.0	1.6	1.7
<i>Bloomberg U.S. TIPS Index</i>	2.7	-1.3	2.1	1.9
Cash	5.5	3.2	2.2	1.8
<i>ICE BofAML U.S. 3-Month Treasury Bill Index</i>	5.4	3.0	2.2	1.5
Legacy Private Credit <sup>5/,8/</sup>	11.7	10.7	9.8	NA
<i>S&amp;P/LSTA Leveraged Loan Index +1%<sup>5/</sup></i>	13.5	7.0	6.5	NA
<b>Total Fund<sup>7/</sup></b>	<b>9.8%</b>	<b>3.5%</b>	<b>7.5%</b>	<b>6.6%</b>
<b>Total Fund Custom Benchmark</b>	<b>10.6%</b>	<b>3.9%</b>	<b>8.1%</b>	<b>7.4%</b>
<b>Total Fund Custom Public Market Equivalent Benchmark</b>	<b>15.5%</b>	<b>4.9%</b>	<b>8.6%</b>	<b>7.6%</b>
<b>Total Fund 60/40 Index</b>	<b>11.9%</b>	<b>1.7%</b>	<b>6.3%</b>	<b>5.6%</b>

<sup>1/</sup>Returns for periods greater than one year are annualized. Performance was calculated using the Modified Dietz return methodology, which is considered a time-weighted rate of return.

<sup>2/</sup>Historical Private Equity performance includes Buyouts, Special Situations, and Growth Equity.

<sup>3/</sup>Intended to compare the program's performance to its peers.

<sup>4/</sup>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>Private Equity, Legacy Private Credit, Real Estate and the corresponding benchmarks are reported on a quarter-lagged basis.

<sup>6/</sup>Calculated monthly using beginning of the month asset class weights applied to each corresponding primary benchmark return. The real estate custom benchmark consists of 100% NCREIF NFI-ODCE (Qtr lag).

<sup>7/</sup>Legacy Hedge Funds are in liquidation, values and performance are no longer reported. However, all performance activity continues to be reflected in SERS' Total Fund return.

<sup>8/</sup>Legacy Private Credit performance is included in the total fund starting at the composite's true inception date, July 1, 2022. The history is calculated and shown for informational purposes.

## Pension Fund Values and Annual Returns

December 31, 2024 (unaudited)

### Defined Benefit Plan Values and Annual Returns

(\$ millions)

Year Ended	Pension Fund Fair Value	Annual Total Pension Fund Rate of Return <sup>1/</sup>
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
2015	26,055	0.4
2016	26,388	6.5
2017	29,405	15.1
2018	26,937	-4.6
2019	31,096	18.8
2020	35,028	11.1
2021	40,231	17.2
2022	33,607	-12.2
2023	36,425	12.2
2024	38,658	9.8

<sup>1/</sup>Returns were calculated using the Modified Dietz return methodology, which is considered a time-weighted rate of return.

# INVESTMENT SECTION

## Largest Assets Held

December 31, 2024 (unaudited)

### U.S. Equity

Holding	Fair Value
Apple Inc	\$904,314,200
Microsoft Corp	824,664,750
NVIDIA Corp	792,934,240
Amazon.Com Inc	519,874,881
Meta Platforms Inc	323,739,018
Tesla Inc	283,201,684
Alphabet Inc Class A	280,489,975
Broadcom Inc	265,940,882
Alphabet Inc Class C	262,963,932
Berkshire Hathaway Inc	209,291,615

### Non-U.S. Equity

Holding	Fair Value
Linde PLC	\$73,425,089
Accenture PLC	55,533,569
Taiwan Semiconductor Manufacturing Corp	36,810,754
Eaton Corp PLC	33,330,368
Chubb Ltd	28,122,643
Medtronic PLC	25,796,447
Novo Nordisk A/S	22,509,545
Industria De Diseno Textil SA	22,190,338
Trane Technologies PLC	21,034,483
Compass Group PLC	19,483,246

### Non-U.S. Fixed Income

Holding	Fair Value
Kreditanstalt Fuer Wiederaufba, 2.875%, April 3, 2028	\$2,864,130
Santander UK Group Holdings PLC, Variable Rate, November 3, 2028	2,406,800
Asian Development Bank, 1.500%, January 20, 2027	2,266,656
Inter-American Development Bank, 1.500%, January 13, 2027	2,266,536
Lloyds Banking Group PLC, Variable Rate, August 11, 2033	2,258,585
International Bank For Reconstruction and Development, 3.125%, June 15, 2027	2,234,266
UBS Group AG REGS, Variable Rate, August 12, 2033	2,227,806
SGSP Australia Assets PTY REGS, 3.500%, July 7, 2027	2,125,428
Nissan Motor Co Ltd 144A, 4.810%, September 17, 2030	2,062,148
Peruvian Government International, 3.000%, January 15, 2034	2,006,250

Note: A detailed list of SERS investment holdings at December 31, 2024 may be viewed at [www.SERS.pa.gov](http://www.SERS.pa.gov).

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

Holding	Fair Value
U.S. Treasury Note, 3.750%, August 31, 2026	\$86,207,407
U.S. Treasury Inflation Index Note, 0.125%, April 15, 2027	86,135,893
U.S. Treasury Inflation Index Note, 1.375%, July 15, 2033	84,180,203
U.S. Treasury Inflation Index Note, 1.125%, January 15, 2033	69,894,323
U.S. Treasury Inflation Index Note, 0.875%, January 15, 2029	69,192,175
U.S. Treasury Inflation Index Note, 0.375%, January 15, 2027	68,311,999
U.S. Treasury Inflation Index Note, 1.875%, July 15, 2034	68,094,462
U.S. Treasury Inflation Index Note, 2.125%, April 15, 2029	66,432,521
U.S. Treasury Inflation Index Note, 0.125%, April 15, 2026	62,786,790
U.S. Treasury Inflation Index Note, 3.625%, April 15, 2028	42,503,997

## U.S. Corporate Fixed Income

Holding	Fair Value
Bank Of America Corp, Variable Rate, December 20, 2028	\$4,681,784
JP Morgan Chase & Co, Variable Rate, February 01, 2028	4,404,915
Goldman Sachs Group Inc/THE, Variable Rate, March 15, 2028	3,987,701
Bank Of America Corp, Variable Rate, April 22, 2032	3,869,820
AT&T Inc, 2.550%, December 1, 2033	3,494,140
Broadstone Mezzanine A-3, Variable Rate, January 1, 2059	3,400,000
JP Morgan Chase & Co, Variable Rate, July 23, 2029	3,358,265
Goldman Sachs Group Inc/THE, Variable Rate, April 25, 2030	3,163,550
Enterprise Products Operating, 4.450%, February 15, 2043	3,072,744
Bank Of America Corp, Variable Rate, April 29, 2031	2,995,536

Note: A detailed list of SERS investment holdings at December 31, 2024, may be viewed at [www.SERS.pa.gov](http://www.SERS.pa.gov).

# INVESTMENT SECTION

## Manager Fees & Expenses

December 31, 2024 (unaudited)

SERS pays manager fees and expenses to external investment managers hired by the SERS Board to manage SERS' assets. The manager fees cover the basic costs of running and administering a fund. Many of the investment managers are paid fees 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. Manager fees are inclusive of any incentive fees paid to a manager for exceeding certain performance thresholds. Manager expenses

include, but are not limited to, operating and other recurring expenses such as legal expenses, office expenses, audit fees, accounting fees, custodial fees, and third-party vendor fees.

The managers of the SERS investment portfolio are paid from investment earnings. Their fees and expenses are treated as a reduction of the investment income of the SERS Fund, rather than as a direct administrative expense. Thus, when investment performance is reported, numbers are reported net-of-fees - that is, performance after all investment manager fees have been incurred.

### Manager Fees and Expenses

for the year ended December 31, 2024

(\$ thousands)

Asset Class	Fees/Expenses	Fees/Expenses <sup>1/</sup> (in basis points)
Private Equity	\$87,085	128.0
Real Estate	34,045	147.9
U.S. Equity	2,776	2.1
International Developed Markets Equity	7,174	15.3
Emerging Markets Equity	4,369	38.0
Fixed Income	11,074	16.0
Inflation Protection (TIPS)	1,057	10.2
Legacy Private Credit	7,179	190.3
<b>Total Manager Fees and Expenses</b>	<b>\$154,759</b>	<b>40.9</b>

<sup>1/</sup>The fees/expenses were divided by SERS total fund and asset class quarterly average values during calendar year 2024 to arrive at the basis point calculations.

### History of Manager Fees and Expenses

Calendar Year	Fees/Expenses	Fees/Expenses (in basis points)
2020	140,038,195	45.3
2021	163,242,575	43.6
2022	147,696,760	41.2
2023	169,731,607	48.6
2024	154,758,618	40.9

### Manager Fees & Expenses

December 31, 2024 (unaudited)

#### Annual Investment Manager Fees and Expenses Report

The Public Pension Management and Asset Investment Review Commission (PPMAIRC) was created as part of Act 2017-5. The PPMAIRC issued a report in December 2018, which outlined over 100 recommendations designed to achieve cost savings, streamline operations, and increase transparency at SERS. One recommendation was to publish investment management fees, costs and

expenses by manager and aggregated by asset class. Because SERS has an ongoing commitment to demonstrate transparency, while working within its legal and fiduciary framework, the SERS Board adopted this recommendation. The inaugural annual report was prepared for the period ending December 31, 2019. Each report is presented to the SERS Board and is posted for all stakeholders to see on the SERS website.

# INVESTMENT SECTION

## Schedule of Trading Broker Commissions

December 31, 2024 (unaudited)

Broker commissions on equity and fixed income investment transactions for the year ended December 31, 2024 were approximately \$1,300,000.

Below is a list of brokers receiving commissions in excess of \$20,000 during the year.

Broker Name	Commissions Paid	Shares (in thousands)	Average Cents Per Share
UBS	\$244,419	60,657	0.4
Bank of America	191,426	28,508	0.7
Nomura	110,487	79,213	0.1
Jefferies Group LLC	89,124	6,202	1.4
JP Morgan Chase	86,485	13,678	0.6
Royal Bank of Canada	76,721	6,556	1.2
Macquarie Group	55,810	20,574	0.3
Apex Fintech Solutions	55,348	1,848	3.0
TP ICAP	49,540	5,042	1.0
Citigroup	38,449	18,993	0.2
Morgan Stanley Smith Barney	36,247	2,484	1.5
Goldman Sachs	35,178	2,798	1.3
HSBC	23,282	2,913	0.8
Stifel Financial Corp	20,366	680	3.0



## Investment Summary December 31, 2024 (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 governs the investment of SERS' assets. SERS' investment plan is reviewed and updated regularly for strategic asset allocation purposes, as well as for diversification needs within each asset class.

Investments on the Statements of Fiduciary Net Position for financial reporting purposes are not based on the below asset allocation. The asset allocation is for investment reporting purposes only. As such, there may be differences between the Financial Section and the Investment Section.

### Asset Allocation

as of December 31, 2024  
(\$ millions)

Asset Class	Fair Value	% of Total Fund	Long-Term 10-Year Strategic Target
Private Equity	\$6,746.1	17.4%	16.0%
Real Estate	2,208.3	5.7	7.0
U.S. Equity	14,450.0	37.4	37.0
International Developed Markets Equity	4,463.5	11.5	14.0
Emerging Markets Equity	467.5	1.2	2.0
Fixed Income	7,006.0	18.1	19.0
Inflation Protection (TIPS)	948.9	2.5	3.0
Cash	2,046.4	5.3	2.0
Legacy Private Credit	348.5	0.9	*
Legacy Hedge Funds	14.0	0.0	**
<b>Total Fund</b>	<b>\$38,699.2</b>	<b>100.0%</b>	<b>100.0%</b>

\*SERS no longer has an asset allocation targeting this strategy as a stand-alone asset class.

\*\*Legacy Hedge Funds asset class is in liquidation.

### Number of Investment Managers and Portfolios

Asset Class	Investment Managers	Investment Portfolios
Private Equity	66	181
Real Estate	25	46
U.S. Equity	2	4
International Developed Markets Equity	9	9
Emerging Markets Equity	2	2
Fixed Income	4	5
Inflation Protection (TIPS)	2	2
Cash	1	1
Legacy Private Credit	6	7
Legacy Hedge Funds	2	2
<b>Total</b>	<b>119</b>	<b>259</b>

# INVESTMENT SECTION

## Investment Summary - Private Equity

December 31, 2024 (unaudited)

### Objective

The objective of Private Equity is to achieve a return in excess of its public equity benchmark (75% Russell 3000 Index / 25% MSCI World ex U.S. Index plus a 300 basis point premium) over 10-year periods (annualized, net of fees).

### Structure

Private Equity investments are non-traditional investments made in the form of closed-end limited partnership structures organized to make domestic and international private investments such as buyouts, special situations, and growth equity.

### Private Equity

as of December 31, 2024

(\$ millions)

	Unfunded Commitments	Fair Value	% of Total Fund
<b>Core Sub-Asset Classes</b>			
Buyouts	\$1,246.7	\$3,646.3	9.4%
Special Situations	852.0	1,788.8	4.6
Growth Equity	233.4	1,157.8	3.0
<b>Total Core Sub-Asset Classes</b>	<b>2,332.1</b>	<b>6,592.9</b>	<b>17.0</b>
<b>Non-Core Holdings</b>			
Keystone Legacy Fund <sup>1/</sup>	29.2	153.2	0.4
<b>Total Private Equity</b>	<b>\$2,361.3</b>	<b>\$6,746.1</b>	<b>17.4%</b>

<sup>1/</sup>A total of 33 legacy holdings from the Private Equity core sub-asset classes (Buyouts, Special Situations, and Growth Equity) make up the Keystone Legacy Fund, a special purpose vehicle which is managed by a third-party.

## Investment Summary - Private Equity

December 31, 2024 (unaudited)

### Portfolio Exposure

The Private Equity program is well diversified by sub-sector, geography, and industry focus.

As of September 30, 2024, based on fair value, the program's exposure was:

#### By Fund Sub-Sector

U.S. Buyout	35.3%
Non-U.S. <sup>1/</sup>	25.6
U.S. Distressed/ Opportunistic	19.2
U.S. Growth Equity	17.7
Pennsylvania-Related	2.2

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

United States	66.4%
United Kingdom	6.6
Germany	4.7
South Korea	2.1
France	2.0
China	1.7
India	1.6
Rest of World	14.9

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

Information Technology	39.1%
Consumer Discretionary	12.5
Health Care	12.0
Industrials	11.9
Financials	10.5
Energy	4.5
Telecommunication Services	4.4
Consumer Staples	2.1
Materials	1.6
Real Estate	1.0
Utilities	0.4

<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 - Private Equity

December 31, 2024 (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.

### Buyouts Committed, Drawn, and Distributed

Active Buyout Funds Limited Partnership	Strategy/ Stage	SERS Initial Funding	Capital Committed	Accumulated Capital Drawn	Accumulated Distributions <sup>1/</sup>
ABRY Partners VI	Middle	3/26/2008	\$50,000,000	\$60,116,575	\$108,246,667
ABRY Partners VII	Middle	8/10/2011	30,000,000	38,501,818	55,561,088
ABRY Partners VIII	Middle	5/5/2015	25,000,000	30,265,978	37,301,187
Advent Latin American Private Equity Fund IV	Small	8/2/2007	30,000,000	30,797,073	43,955,921
Advent International GPE VI-A	Middle	7/7/2008	35,000,000	35,146,325	70,431,146
Advent Latin American Private Equity Fund V	Small	7/5/2011	15,000,000	14,430,000	13,049,997
Advent International GPE VII-B	Global	12/6/2012	40,000,000	38,400,000	65,125,466
Advent Latin American Private Equity Fund VI	Small	8/13/2015	25,000,000	23,250,000	21,597,440
Advent International GPE VIII-B	Global	9/26/2016	50,000,000	50,000,000	61,176,048
Altaris Health Partners V	Middle	4/22/2021	50,000,000	36,143,648	812,015
Apollo Investment Fund IV	Large	9/30/1998	75,000,000	74,838,620	124,814,033
Apollo Investment Fund VI	Global	7/19/2006	40,000,000	38,911,805	64,467,407
Apollo Investment Fund IX	Global	3/15/2019	85,400,000	82,963,711	44,396,362
Asia Alternatives Capital Partners	Fund of Funds	6/26/2007	25,000,000	25,218,098	44,512,180
Asia Alternatives Capital Partners II	Fund of Funds	3/7/2008	29,949,500	29,132,586	72,682,147
Asia Alternatives Korea Buyout Investors (Hahn & Co)	Fund of Funds	7/22/2011	7,000,000	8,945,759	12,677,843
Asia Alternatives Capital Partners III	Fund of Funds	8/3/2012	50,000,000	55,759,777	78,129,162
Penn Asia Investors	Fund of Funds	9/28/2012	133,000,000	129,213,778	118,021,721
Asia Alternatives Capital Partners V	Fund of Funds	10/5/2017	50,000,000	55,416,385	15,175,121
Audax Private Equity Fund	Small	5/25/2000	35,000,000	36,839,098	56,057,910
Audax Private Equity Fund III	Small	11/7/2007	37,000,000	42,498,691	82,716,671
Audax Private Equity Fund V	Small	1/25/2016	50,000,000	46,368,950	73,942,216
Audax Private Equity Fund VI	Small	8/29/2019	75,000,000	77,381,515	47,087,455
Berkshire Fund VI	Middle	7/11/2002	20,000,000	18,819,615	58,474,990
Berkshire Fund VII	Middle	11/15/2006	32,000,000	32,613,937	68,596,870
Blackstone Communications Partners I	Global	8/29/2000	25,000,000	25,114,042	31,146,773
Blackstone Capital Partners IV	Global	2/26/2003	69,379,875	69,119,097	194,169,774
Blackstone Capital Partners V	Global	5/30/2006	150,000,000	150,135,084	250,462,149
Blackstone Capital Partners VII	Global	10/21/2016	50,000,000	55,130,071	47,672,432
Blackstone Capital Partners VIII	Global	2/22/2021	70,000,000	59,206,539	8,678,916
Capvis Equity IV	Small	1/30/2014	43,314,183	47,453,485	41,736,092
Horizon Strategic Fund - Carlyle Group	Global	1/23/2014	100,000,000	107,823,037	163,262,160
CVC Capital Partners VII	Global	12/3/2018	91,700,423	96,750,745	77,704,857

# INVESTMENT SECTION

## Investment Summary - Private Equity

December 31, 2024 (unaudited)

### Buyouts Committed, Drawn, and Distributed (continued)

Active Buyout Funds Limited Partnership	Strategy/ Stage	SERS Initial Funding	Capital Committed	Accumulated Capital Drawn	Accumulated Distributions <sup>1/</sup>
CVC Capital Partners VIII	Global	12/13/2021	\$53,548,618	\$51,682,612	\$748,403
Eureka II	Small	1/30/2006	20,000,000	21,906,935	24,443,442
Eureka Growth Capital III	Small	10/21/2013	20,000,000	17,210,666	40,332,770
Francisco Partners II	Global	7/10/2006	30,000,000	29,383,916	48,734,237
Francisco Partners III	Global	10/17/2011	20,000,000	20,514,684	58,501,352
Francisco Partners IV	Global	4/15/2015	25,000,000	24,656,280	58,359,629
Francisco Partners VII PA Co-Invest	Co-Investment	11/6/2023	50,000,000	13,547,979	—
Francisco Partners VII	Global	7/10/2024	100,000,000	16,950,000	—
Francisco Partners Agility III	Middle	*	30,000,000	—	—
FSN Capital IV	Small	12/19/2013	38,055,178	38,520,666	82,280,821
FSN Capital V	Small	1/4/2017	80,927,203	88,636,034	43,650,176
Great Hill Equity Partners IV	Middle	9/8/2008	25,000,000	25,125,662	72,240,642
GTCR Fund XI	Middle	9/2/2014	25,000,000	24,919,191	60,794,883
GTCR Fund XII	Middle	5/4/2018	32,500,000	33,975,114	22,353,038
H.I.G. Growth Buyouts & Equity Fund II	Small	7/20/2011	15,000,000	17,306,615	27,735,025
H.I.G. Europe Capital Partners II	Middle	1/10/2014	24,419,320	23,274,353	21,893,469
H.I.G. Brazil and Latin America Partners	Middle	8/12/2015	50,000,000	55,950,865	21,462,108
Hahn & Company II	Small	5/29/2015	50,000,000	57,873,825	61,468,266
Hahn & Company III	Middle	12/20/2018	56,250,000	63,905,621	14,192,472
Hahn & Company III - Supplemental Fund	Middle	12/20/2018	18,750,000	18,943,542	2,567,505
Horizon Impact Fund	Fund of Funds	10/24/2014	50,000,000	42,649,604	71,955,149
Horizon Impact Fund B	Fund of Funds	5/31/2017	100,000,000	90,500,000	39,105,000
HarbourVest PA Co-Investment Fund	Co-Investment	5/14/2020	200,000,000	179,775,000	9,487,500
HarbourVest PA Co-Investment Fund II	Co-Investment	*	200,000,000	—	—
Hellman & Friedman Capital Partners VIII	Global	9/1/2016	50,000,000	51,784,225	33,572,585
Hellman & Friedman Capital Partners IX	Global	4/7/2020	90,000,000	95,585,042	12,691,491
Hellman & Friedman Capital Partners X	Global	11/24/2021	100,000,000	85,593,175	9,875,395
Hellman & Friedman Capital Partners XI	Global	*	100,000,000	—	—
Incline Equity Partners III	Small	1/14/2013	15,000,000	16,025,410	42,017,594
Kelso VII	Global	10/18/2004	40,000,000	41,169,937	65,821,118
Kelso VIII	Global	11/29/2007	150,000,000	147,077,801	212,472,060
LLR Equity Partners III	Small	7/24/2008	30,000,000	29,108,722	65,340,347
LLR Equity Partners IV	Small	3/14/2014	50,000,000	45,485,764	108,147,756
LLR Equity Partners V	Small	3/21/2018	75,000,000	73,590,002	41,866,004
LLR Equity Partners VI	Small	5/13/2021	50,000,000	44,583,127	9,583,333
LLR Equity Partners VII	Small	*	75,000,000	—	—
Madison Dearborn Capital Partners VI	Middle	5/27/2008	50,000,000	53,296,374	120,202,206
Neuberger Berman PA Co-Investment Fund	Co-Investment	1/6/2021	200,000,000	171,108,736	20,742,740
NGP XII	Middle	11/14/2018	75,000,000	65,128,140	64,271,818
Oaktree Power Opportunities Fund III	Large	10/18/2010	25,000,000	19,267,532	29,286,578
Permira European Fund II	Large	6/7/2000	45,672,612	45,672,612	91,781,334

# INVESTMENT SECTION

## Investment Summary - Private Equity

December 31, 2024 (unaudited)

### Buyouts Committed, Drawn, and Distributed (continued)

Active Buyout Funds Limited Partnership	Strategy/ Stage	SERS Initial Funding	Capital Committed	Accumulated Capital Drawn	Accumulated Distributions <sup>1/</sup>
Permira European Fund III	Large	1/12/2004	\$127,062,518	\$127,340,454	\$218,410,198
Permira VI	Global	1/10/2017	56,322,822	52,579,759	52,682,632
Permira VII	Global	2/4/2020	75,812,782	74,429,300	8,040,052
Permira Susquehanna Opportunities - Buyout	Co-Investment	1/26/2021	40,000,000	20,875,338	99,900
Primavera Capital Fund II	Global	11/17/2015	50,000,000	59,587,059	31,669,144
Primavera Capital Fund III	Global	4/12/2019	75,000,000	81,491,052	16,599,130
Providence Equity Partners VI	Large	3/16/2007	49,976,748	54,530,937	78,181,543
Ridgemont Equity Partners II	Small	11/30/2015	50,000,000	54,598,252	80,733,212
Sentinel Capital Partners V	Middle	7/15/2014	10,000,000	9,987,204	19,289,471
Sentinel Capital Partners VII	Large	7/14/2023	100,000,000	34,715,771	31,770
Silver Lake Partners V	Global	6/12/2018	78,000,000	79,562,874	47,900,549
Sterling Group Partners IV	Small	6/15/2016	20,000,000	20,690,393	32,316,620
TDR Capital IV	Middle	11/16/2018	86,593,673	74,944,642	23,812,536
Thoma Bravo Fund XIII	Global	2/14/2019	75,000,000	92,242,744	85,031,730
Thoma Bravo Fund XIV	Global	4/15/2021	50,000,000	53,618,032	11,410,314
Thoma Bravo Discover Fund III	Middle	6/11/2021	20,000,000	20,136,476	915,833
Thoma Bravo Fund XV	Global	6/10/2022	100,000,000	79,965,247	21,669
Thoma Bravo Discover Fund IV	Middle	12/8/2022	50,000,000	36,132,616	—
Thoma Bravo Co-Invest Opportunities XV-5	Co-Investment	2/27/2023	50,000,000	20,352,148	—
TPG Partners IV	Global	12/29/2003	27,907,484	27,981,463	58,314,713
TPG Asia V	Global	2/19/2008	22,500,000	21,964,311	30,504,180
TPG Partners VI	Global	5/22/2008	44,294,641	50,576,261	74,164,934
TSG8	Large	1/3/2020	100,000,000	96,730,190	3,332,350
TSG9	Large	1/24/2023	100,000,000	35,839,857	386,165
Veritas Capital Fund VIII	Global	12/5/2022	100,000,000	83,046,378	26,715
Keystone Co-Investors Veritas VIII	Co-Investment	4/25/2024	25,000,000	7,485,030	—
Vista Equity Partners Fund VI	Global	12/29/2016	150,000,000	190,492,800	232,994,470
Vista Equity Partners Fund VII	Global	2/13/2019	75,000,000	72,157,567	7,315,154
<b>Total Active Buyouts</b>			<b>\$6,037,337,580</b>	<b>\$5,298,445,760</b>	<b>\$5,078,005,446</b>

\*Not funded as of December 31, 2024.

<sup>1/</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 - Private Equity

December 31, 2024 (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	Accumulated Capital Drawn	Accumulated Distributions <sup>1/</sup>
ABRY Advanced Securities Fund	Mezzanine	8/1/2008	\$7,262,950	\$23,529,104	\$38,786,236
ADV Opportunities Fund I	Distressed/ Turnaround	10/5/2015	50,000,000	64,045,299	47,167,822
AXA Secondary Fund V B	Secondaries	6/19/2012	75,000,000	61,682,742	97,954,290
ASF VII B	Secondaries	2/19/2016	100,000,000	76,026,654	78,341,091
ASF VII PA Co-Invest	Secondaries	5/18/2016	50,000,000	36,903,205	36,981,039
ASF VIII B	Secondaries	6/13/2019	100,000,000	79,751,113	24,631,926
ASF VIII PA Co-Invest	Secondaries	3/12/2020	50,000,000	28,213,583	4,521,017
ASF IX B	Secondaries	10/13/2022	100,000,000	16,384,927	2,032,811
ASF IX PA Co-Invest	Secondaries	4/20/2023	50,000,000	19,765,481	—
Ares PA Opportunities Fund - Distressed Debt	Distressed/ Turnaround	12/20/2019	200,000,000	159,125,542	60,030,907
Ares PA Opportunities Fund - Diversified Credit	Distressed/ Turnaround	12/15/2020	70,000,000	60,461,601	10,643,904
Ares PA Opportunities Fund - Special Situations	Distressed/ Turnaround	2/22/2021	130,000,000	136,759,654	22,667,102
Avenue Special Situations Fund VI	Distressed/ Turnaround	11/2/2010	20,000,000	20,068,464	21,075,410
Centerbridge Capital Partners III	Distressed/ Turnaround	5/21/2015	30,000,000	40,444,666	44,350,393
Clearlake Capital Partners IV	Distressed/ Turnaround	9/1/2015	15,000,000	23,504,759	38,348,669
Clearlake Capital Partners V	Distressed/ Turnaround	2/1/2018	55,000,000	82,533,455	113,954,992
Clearlake Opportunities Partners II	Distressed/ Turnaround	8/30/2019	75,000,000	61,573,235	29,031,273
Clearlake Capital Partners VI	Distressed/ Turnaround	5/22/2020	60,000,000	62,654,403	9,575,200
Clearlake Capital Partners VII	Distressed/ Turnaround	4/26/2022	100,000,000	66,620,260	268,947
Clearlake Opportunities Partners III	Distressed/ Turnaround	12/28/2022	75,000,000	17,245,610	284,018
Clearlake Capital Partners VIII	Distressed/ Turnaround	12/5/2024	100,000,000	4,959,743	—
Clearlake Capital Partners VIII PA Co-Invest	Distressed/ Turnaround	6/12/2024	20,000,000	2,441,876	—
Glendon Opportunities Fund II	Distressed/ Turnaround	10/18/2019	150,000,000	135,000,000	99,882,084
H.I.G. Bayside Debt & LBO Fund II	Distressed/ Turnaround	6/17/2008	30,000,000	31,448,253	51,691,289



# INVESTMENT SECTION

## Investment Summary - Private Equity

December 31, 2024 (unaudited)

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

Active Special Situations Funds Limited Partnership	Strategy/ Stage	SERS Initial Funding	Capital Committed	Accumulated Capital Drawn	Accumulated Distributions <sup>1/</sup>
H.I.G. Bayside Loan Opp. Fund III	Distressed/ Turnaround	6/12/2013	\$50,000,000	\$42,696,553	\$49,904,323
H.I.G. Bayside Loan Opp. Fund IV	Distressed/ Turnaround	1/16/2015	25,000,000	22,626,299	20,452,258
Dover Street VII	Secondaries	7/2/2008	30,000,000	28,696,128	41,139,248
HPS Mezzanine Partners 2019	Mezzanine	11/16/2020	75,000,000	79,441,873	43,316,046
ICG Europe Fund VII	Mezzanine	8/24/2018	90,058,854	87,923,880	60,500,131
ICG Europe Mid-Market Fund	Mezzanine	4/8/2020	72,993,681	60,221,005	32,943,133
KPS Special Situations Fund IV	Distressed/ Turnaround	5/8/2014	25,000,000	23,898,648	37,254,717
KPS Special Situations Mid-Cap Fund	Distressed/ Turnaround	11/25/2019	25,000,000	21,753,815	6,784,727
KPS Special Situations Fund V	Distressed/ Turnaround	7/13/2020	75,000,000	58,123,735	26,650,450
KPS Special Situations Fund VI	Distressed/ Turnaround	9/20/2024	75,000,000	9,315,490	8,266
KPS Special Situations Mid-Cap Fund II	Distressed/ Turnaround	*	25,000,000	—	—
LBC Credit Partners III	Mezzanine	3/4/2013	50,000,000	46,696,243	54,487,095
Lexington Capital Partners V	Secondaries	1/17/2002	75,000,000	74,623,418	125,170,164
Lexington Capital Partners VI	Secondaries	10/21/2005	50,000,000	53,066,325	73,905,823
OCM Opportunities Fund VIII	Distressed/ Turnaround	9/20/2010	12,500,000	12,583,425	18,205,746
OCM Opportunities Fund VIII b	Distressed/ Turnaround	8/22/2011	12,500,000	12,500,000	20,342,134
Oaktree Opportunities Fund IX	Distressed/ Turnaround	3/26/2013	50,000,000	50,000,000	60,958,027
Platinum Equity Capital Partners III	Distressed/ Turnaround	8/5/2013	50,000,000	46,886,064	95,125,700
RRJ Capital Master Fund III	Mezzanine	12/10/2015	50,000,000	51,245,605	45,702,378
Sentinel Junior Capital II	Middle	8/9/2023	25,000,000	6,158,665	—
Sixth Street TAO 4.0 (B)	Distressed/ Turnaround	11/9/2017	100,000,000	116,173,124	55,627,119
Sixth Street Opportunities Partners IV (A)	Distressed/ Turnaround	1/25/2019	50,000,000	40,355,923	23,159,830
Sixth Street TAO Contingent (D)	Distressed/ Turnaround	4/16/2020	150,000,000	90,946,319	39,800,038
Sixth Street Opportunities Partners V	Distressed/ Turnaround	6/7/2022	50,000,000	38,734,093	474,914
<b>Total Active Special Situations</b>			<b>\$3,005,315,485</b>	<b>\$2,385,810,259</b>	<b>\$1,764,132,687</b>

\*Not funded as of December 31, 2024.

<sup>1/</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 - Private Equity

December 31, 2024 (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.

### Growth Equity Committed, Drawn, and Distributed

Active Growth Equity Funds Limited Partnership	Strategy/ Stage	SERS Initial Funding	Capital Committed	Accumulated Capital Drawn	Accumulated Distributions <sup>1/</sup>
Battery Ventures VIII	Venture Capital	8/13/2007	\$25,000,000	\$25,050,751	\$62,968,130
Battery Ventures VIII Side Car Fund	Venture Capital	8/29/2008	6,768,000	6,803,790	18,828,496
HarbourVest Partners VII	Fund of Funds	3/24/2003	75,000,000	73,687,500	117,909,290
HarbourVest Partners VIII	Fund of Funds	10/5/2006	100,000,000	98,000,000	189,531,643
Insight Venture Partners VII	Large	4/27/2011	20,000,000	22,129,992	54,891,374
Insight Venture Partners VIII	Large	7/10/2013	50,000,000	54,916,419	124,845,449
Insight Venture Partners IX	Large	3/24/2015	50,000,000	52,784,788	109,687,987
Insight Venture Partners X	Large	4/17/2018	100,000,000	104,723,487	96,635,638
Insight Partners XI	Large	3/25/2020	75,000,000	72,975,000	6,409,603
Insight Partners XII	Large	8/27/2021	50,000,000	43,489,234	13,065
JMI Equity Fund VIII	Medium	10/1/2015	25,000,000	27,840,904	53,373,469
Lightspeed Venture Partners VII	Venture Capital	2/27/2006	18,000,000	18,000,000	55,192,795
Lightspeed Venture Partners VIII	Venture Capital	6/27/2008	15,000,000	15,000,000	39,915,887
Lightspeed India Partners I	Venture Capital	8/14/2015	15,000,000	14,572,500	4,922,264
Meritech Capital Partners IV	Venture Capital	2/10/2011	20,000,000	20,000,000	47,596,799
Meritech Capital Partners V	Venture Capital	9/3/2014	23,000,000	22,540,000	158,728,663
New Enterprise Associates X	Venture Capital	12/11/2000	35,000,000	35,028,000	39,412,034
New Enterprise Associates 11	Venture Capital	3/1/2004	25,000,000	25,000,000	64,095,694
New Enterprise Associates 12	Venture Capital	6/26/2006	35,000,000	35,631,130	48,996,151
NewSpring Growth Capital II	Small	4/20/2007	10,000,000	9,850,000	19,617,977
Providence Strategic Growth II	Small	12/7/2016	60,000,000	79,552,074	131,081,157
Providence Strategic Growth III	Small	7/26/2018	75,000,000	92,812,329	81,065,147
Providence Strategic Growth IV	Small	3/27/2020	75,000,000	86,800,202	40,149,664
Providence Strategic Growth Europe	Small	5/7/2021	72,221,900	80,164,897	24,101,318
PSG V	Small	12/23/2021	50,000,000	49,291,089	4,659,172
PSG Europe II	Small	12/12/2023	67,972,834	16,212,353	1,154,323
PSG VI	Small	*	75,000,000	—	—
SERS In-Kind Distributions <sup>2/</sup>	Various	1/3/2005	—	1,450,480,381	1,600,063,943
TCV X	Large	5/17/2019	75,000,000	56,289,972	29,366,737
Weathergag Venture Capital	Fund of Funds	6/26/2007	25,000,000	22,875,000	47,477,572
Weathergag Venture Capital II	Fund of Funds	6/29/2010	25,000,000	23,250,000	65,237,432
<b>Total Active Growth Equity</b>			<b>\$1,372,962,734</b>	<b>\$2,735,751,792</b>	<b>\$3,337,928,873</b>

\*Not funded as of December 31, 2024.

<sup>1/</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>2/</sup>SERS In-Kind Distributions acts as a stock liquidation account. All cash and stock distributions are reflected in the corresponding distributions.

# INVESTMENT SECTION

## Investment Summary - Private Equity

December 31, 2024 (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.

### Legacy Private Equity Committed, Drawn, and Distributed

Legacy Private Equity Funds Limited Partnership	Strategy/ Stage	SERS Initial Funding	Capital Committed	Accumulated Capital Drawn	Accumulated Distributions <sup>1/</sup>
Keystone Legacy Non-Core Fund <sup>2/</sup>	Various	7/1/2018	\$1,042,928,144	\$1,049,565,957	\$1,333,426,710
Total Legacy Private Equity			\$1,042,928,144	\$1,049,565,957	\$1,333,426,710

<sup>1/</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>2/</sup>A total of 33 legacy holdings from the Private Equity core sub-asset classes (Buyouts, Special Situations, and Growth Equity) make up the Keystone Legacy Fund, a special purpose vehicle which is managed by a third-party.

## Investment Summary - Real Estate

December 31, 2024 (unaudited)

### Objective

The objective of Real Estate is to generate returns through capital appreciation and current income to achieve a return in excess of its benchmark (NCREIF Fund Index – Open End Diversified Core Equity ("NFI-ODCE")) over five-year periods (annualized, net of fees). Real Estate investments may also lower overall fund volatility and provide a moderate hedge against inflation.

### Structure

Real Estate investments are non-traditional investments made in the form of individually managed accounts and pooled investment vehicles organized to invest in private market equity and debt investments in real estate and real estate related companies and public market investments in real estate investment trusts (REITs) and real estate operating companies.

### Real Estate

as of December 31, 2024

(\$ millions)

Sub-Asset Class	Unfunded Commitments	Fair Value	% of Total Fund
Core/Core Plus	\$13.0	\$1,056.9	2.7%
Value Add/Opportunistic Funds	337.9	759.8	2.0
Value Add/Opportunistic SMA	NA	245.9	0.6
Real Estate Securities	NA	145.7	0.4
<b>Total Real Estate</b>	<b>\$350.9</b>	<b>\$2,208.3</b>	<b>5.7%</b>

# INVESTMENT SECTION

## Investment Summary - Real Estate

December 31, 2024 (unaudited)

The Capital Committed column represents total dollars allocated from SERS to each fund/manager. Accumulated Capital Drawn is the portion of SERS' capital commitments drawn by the fund/manager to be invested. This amount may also include

recycled capital (capital that was distributed and later recalled by the manager to be reinvested) as well as manager fees paid outside of the fund. The Accumulated Distributions column shows the value of capital and profits returned to SERS.

### Real Estate

Active Fund / Manager	Asset Type	SERS Initial Funding	Capital Committed	Accumulated Capital Drawn	Accumulated Distributions
<b>Core/Core Plus Real Estate</b>					
Blackstone Property Partners	Diversified	1/23/2018	\$300,000,000	\$321,598,146	\$46,131,783
Blue Owl Real Estate Net Lease Property Fund	Diversified	2/8/2019	300,000,000	321,175,543	101,977,144
Heitman America Real Estate Trust	Diversified	3/29/2007	122,326,626	158,865,245	162,901,938
Henderson Park Enhanced Income Fund	Diversified	6/12/2019	310,896,738	305,517,212	64,579,673
UBS Trumbull Property Fund	Diversified	1/1/1988	32,876,856	32,876,856	135,975,683
<b>Total Core/Core Plus Real Estate</b>			<b>1,066,100,220</b>	<b>1,140,033,002</b>	<b>511,566,221</b>

### Value Add/Opportunistic Funds

Activum SG Fund VI	Diversified	12/10/2019	57,593,853	69,101,092	24,855,498
Activum SG Fund VI Pennsylvania Side-Car	Diversified	6/17/2021	54,924,317	34,723,116	915,709
AG Asia Realty Fund	Diversified	4/27/2007	20,625,000	23,500,000	27,487,500
Ares PA Opportunities Fund - Opportunistic Real Estate	Diversified	10/23/2024	100,000,000	6,957,199	—
Berwind Investment Partnership VI	Diversified	9/10/2002	25,000,000	24,543,712	44,921,380
Berwind Investment Partnership VII	Diversified	9/12/2005	25,000,000	25,549,693	18,834,244
Berwind Investment Partnership IX	Diversified	2/24/2012	25,000,000	32,233,168	48,305,881
Blackstone Real Estate Partners V	Diversified	1/24/2006	50,000,000	59,262,214	111,660,565
Blackstone Real Estate Partners VI	Diversified	3/28/2007	75,000,000	84,137,677	167,316,261
Blackstone Real Estate Partners VII	Diversified	12/12/2011	75,000,000	100,083,240	151,514,921
Blackstone Real Estate Partners X	Diversified	3/24/2023	75,000,000	22,870,915	1,521,415
Blue Moon Senior Housing II	Senior Housing	1/27/2020	50,000,000	50,355,581	2,584,213
Blue Moon Senior Housing II Sidecar	Senior Housing	5/19/2020	50,000,000	48,021,589	2,084,178
Blue Owl Real Estate Fund IV	Diversified	11/20/2017	100,000,000	103,260,289	122,483,121
Blue Owl Real Estate Fund V	Diversified	11/16/2020	50,000,000	50,000,000	19,550,277
Blue Owl Real Estate Fund VI	Diversified	1/31/2023	75,000,000	50,559,264	20,896,449
C-III Recovery Fund III	Diversified	9/24/2018	100,000,000	97,139,053	10,585,614
Hawkeye Scout Fund II	Diversified	9/28/2016	30,000,000	30,000,000	3,238,651
LEM Multifamily Fund VI	Multifamily	9/16/2022	75,000,000	39,758,152	—
Lubert Adler Fund VII	Diversified	7/15/2014	25,000,000	24,375,000	15,311,744
Mesirow Financial Real Estate Value Fund III	Multifamily	5/18/2018	25,000,000	26,607,694	11,348,879
Prudential Senior Housing Fund V	Senior Housing	5/15/2015	45,727,881	41,332,672	6,212,622

# INVESTMENT SECTION

## Investment Summary - Real Estate

December 31, 2024 (unaudited)

### Real Estate (continued)

Active Fund / Manager	Asset Type	SERS Initial Funding	Capital Committed	Accumulated Capital Drawn	Accumulated Distributions
Prudential Senior Housing Fund VI	Senior Housing	8/6/2019	\$100,000,000	\$90,235,343	\$3,268,989
Rockpoint Real Estate Fund III	Diversified	12/21/2007	50,000,000	48,568,034	66,044,031
Rockpoint Real Estate Fund V	Diversified	1/11/2016	50,000,000	52,296,389	29,383,262
Rubicon First Ascent	Office	6/28/2021	30,000,000	21,574,740	—
Rubicon First Ascent Sidecar	Office	4/4/2022	20,000,000	16,094,555	—
SRE Opportunity Fund III	Diversified	6/20/2018	50,000,000	52,339,825	22,050,000
SRE Opportunity Fund III Select	Diversified	7/25/2019	50,000,000	29,897,486	19,579,003
Starwood Fund VI	Diversified	12/30/2002	50,000,000	50,153,838	52,008,516
Starwood Fund VII	Diversified	1/10/2006	35,000,000	35,000,000	27,427,647
Starwood Fund VIII	Diversified	10/14/2009	50,000,000	45,356,281	74,097,675
ValStone Opportunity Fund V	Diversified	8/27/2014	14,663,402	18,446,426	13,947,482
Westbrook Fund VI	Diversified	5/10/2006	35,000,000	43,409,843	43,591,504
Westbrook Fund VII	Diversified	12/3/2007	50,000,000	56,376,719	56,575,755
Westbrook Fund VIII	Diversified	6/2/2010	50,000,000	59,812,883	68,911,236
<b>Total Value Add/Opportunistic Funds</b>			<b>1,843,534,453</b>	<b>1,663,933,682</b>	<b>1,288,514,222</b>

### Value Add/ Opportunistic SMA<sup>1/</sup>

Heitman I.M.A.	Diversified	1/1/1988	NA	956,142,254	1,360,984,010
hotelAVE I.M.A.	Hotel	9/30/2018	NA	96,318,281	58,015,245
LaSalle I.M.A.	Diversified	1/1/1994	NA	1,082,377,647	1,351,056,328
LaSalle Takeover I.M.A.	Diversified	9/30/2018	NA	335,112,756	189,461,692
<b>Total Value Add/Opportunistic SMA</b>			<b>NA</b>	<b>2,469,950,938</b>	<b>2,959,517,275</b>

### Real Estate Securities<sup>1/</sup>

CenterSquare Real Estate Securities	Diversified	5/14/2002	NA	191,678,947	210,000,000
<b>Total Real Estate Securities</b>			<b>NA</b>	<b>191,678,947</b>	<b>210,000,000</b>
<b>Total Active Real Estate</b>			<b>\$2,909,634,673</b>	<b>\$5,465,596,569</b>	<b>\$4,969,597,718</b>

<sup>1/</sup>Due to the nature of the investments, there are no capital commitments for value add/opportunistic SMA and real estate securities managers.

# INVESTMENT SECTION

## Investment Summary - U.S. Equity

December 31, 2024 (unaudited)

### Objective

The objective of U.S. Equity is to generate returns through capital appreciation, income from dividend payments and to generate returns comparable to its public equity benchmark (Russell 3000 Index) over five-year periods (annualized, net of fees).

### Structure

U.S. Equity investments are traditional equity investments made in the form of separate accounts and commingled funds. U.S. Equity contributes to a higher expected long-term return to the fund and is also a material contributor to volatility.

### U.S. Equity

as of December 31, 2024

(\$ millions)

Manager	Investment Style	Fair Value <sup>1/</sup>
<b>U.S. Large/Mid Cap</b>		
Mellon Investments Corporation Russell 1000	U.S. Large Cap Equity	\$13,627.7
<b>Total U.S. Large/Mid Cap</b>		<b>13,627.7</b>
<b>U.S. Small Cap</b>		
Emerald Asset Management	U.S. Small Cap Growth Equity	397.5
Mellon Investments Corporation Russell 2000 Core	U.S. Small Cap Equity	101.1
Mellon Investments Corporation Russell 2000 Value	U.S. Small Cap Value Equity	323.7
<b>Total U.S. Small Cap</b>		<b>822.3</b>
<b>Total U.S. Equity</b>		<b>\$14,450.0</b>

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



## Investment Summary - International Developed Markets Equity

December 31, 2024 (unaudited)

### Objective

The objective of International Developed Markets Equity is to generate returns through capital appreciation and income from dividend payments that meet or exceed the MSCI World ex U.S. Index over five-year periods (annualized, net of fees).

### Structure

International Developed Markets Equity investments are traditional equity investments made in the form of separate accounts and commingled funds. International Developed Markets Equity contributes to a higher expected long-term return to the fund and is also a material contributor to volatility.

### International Developed Markets Equity

as of December 31, 2024

(\$ millions)

Manager	Investment Style	Fair Value <sup>1/</sup>
Artisan Partners - Global ex U.S.	Global ex-U.S. growth	\$0.3
BlackRock MSCI World ex U.S. Index	World ex-U.S. Equity	3,234.7
Harris Associates	World ex-U.S. Small Cap Equity	148.0
Mellon Investments Corporation MSCI World ex U.S. Index	MSCI World ex-U.S. Index	1.8
Morgan Stanley Investment Management Limited-developed ex U.S.	EAFE value	0.3
Northern Trust - Equity	Transition	0.9
Templeton Investment Counsel - Global ex U.S.	Global ex-U.S. value	0.6
Walter Scott & Partners Limited	Global Equity	831.0
Xponance	International Small Cap Equity	245.9
<b>Total International Developed Markets Equity</b>		<b>\$4,463.5</b>

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

# INVESTMENT SECTION

## Investment Summary - Emerging Markets Equity

December 31, 2024 (unaudited)

### Objective

The objective of Emerging Markets Equity is to generate returns through capital appreciation and income from dividend payments that exceed the MSCI Emerging Markets Index over five-year periods (annualized, net of fees).

### Structure

Emerging Markets Equity investments are traditional equity investments generally made in the form of commingled funds since there are legal challenges for SERS to use separate accounts to open sub-custodial trading accounts in certain emerging market countries. Emerging Markets Equity contributes to a higher expected long-term return to the fund and is also a material contributor to volatility.

Emerging markets are generally regarded as less efficient than developed markets and historically have been more volatile than developed markets. Returns have been influenced by capital flows into and out of these markets; however, longer term, emerging markets can be attractive to those investors seeking to access the financial returns derived from rapidly expanding economies. Due to the high return volatility associated with emerging markets, the SERS Fund takes a diversified approach using a variety of investment strategies. The SERS Fund employs a structure diversified by investment advisor, style, and type.

### Emerging Markets Equity

as of December 31, 2024  
(\$ millions)

Manager	Investment Style	Fair Value <sup>1/</sup>
BlackRock MSCI Emerging Markets Index	Emerging Markets Equity	\$466.5
Leading Edge Investment Advisors	Emerging Markets Equity	1.0
Total Emerging Markets Equity		\$467.5

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

## Investment Summary - Fixed Income

December 31, 2024 (unaudited)

### Objective

The objective of the Fixed Income allocation is to provide liquidity to minimize capital impairment risk, diversify investment risk, and enhance return to meet the fund's obligations. It is expected that the returns from the Fixed Income allocation will meet or exceed its benchmark (Bloomberg U.S. Aggregate Bond Index) performance over five-year periods (annualized, net of fees).

### Structure

Fixed Income investments are traditional investments made in the form of separate accounts and commingled funds. They include investments in publicly-traded debt obligations of sovereign, quasi-sovereign and corporate entities and securitized assets.

### Fixed Income

as of December 31, 2024

(\$ millions)

Manager	Investment Style	Fair Value <sup>1/</sup>
<b>Core Fixed Income</b>		
Mellon Investments Corporation Bond Index	U.S. Aggregate Bond	\$4,031.9
PIMCO Core	U.S. Aggregate Bond	559.6
<b>Total Core Fixed Income</b>		<b>4,591.5</b>
<b>Nominal US Treasuries</b>		
Mellon Investments Corporation U.S. Treasury Index	U.S. Treasuries	1,581.4
<b>Total Nominal US Treasuries</b>		<b>1,581.4</b>
<b>Opportunistic Fixed Income</b>		
Blackstone Keystone	Fund-of-Funds	803.8
<b>Total Opportunistic Fixed Income</b>		<b>803.8</b>
<b>Legacy Fixed Income</b>		
Fidelity Institutional Asset Management	Commercial Mortgage-Backed Securities	29.3
<b>Total Legacy Fixed Income</b>		<b>29.3</b>
<b>Total Fixed Income</b>		<b>\$7,006.0</b>

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

# INVESTMENT SECTION

## Investment Summary - Inflation Protection (TIPS)

December 31, 2024 (unaudited)

### Objective

The objective of Inflation Protection is to protect against both expected and unexpected higher inflation, provide liquidity to minimize capital impairment risk, reduce volatility of the total fund, and contribute total return to the fund that meet or exceed its benchmark (Bloomberg U.S. TIPS Index) over five-year periods (annualized, net of fees).

### Structure

Treasury Inflation-Protected Securities (TIPS) are traditional investments made in the form of separate accounts and commingled funds. The primary advantage of TIPS is that their return

offers protection against both expected and unexpected higher inflation, as the securities' coupon payments are directly tied to the rate of inflation. TIPS, therefore, maintain the purchasing power of the investor. The coupon payments of TIPS have two components: a real coupon rate that is established at the issuance of the bond, and an accrual equal to the rate of inflation which adds to the principal balance of the security. TIPS are also useful for hedging liabilities which are affected by inflation and for hedging a cash flow stream against the need to liquidate equities and conventional bonds at depressed prices, in order to meet pension obligations during periods of unexpected inflation.

### Inflation Protection (TIPS)

as of December 31, 2024  
(\$ millions)

Manager	Investment Style	Fair Value <sup>1/</sup>
Brown Brothers Harriman	U.S. TIPS	\$485.0
NISA Investment Advisors	U.S. TIPS	463.9
Total Inflation Protection (TIPS)		\$948.9

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

Investment Summary - Cash

December 31, 2024 (unaudited)

Objective

The objective of Cash is to serve as the primary source of liquidity and generate returns that meet or exceed its benchmark (ICE BofAML U.S. 3-Month Treasury Bill Index) over a three-year period.

Structure

Cash investments emphasize the use of higher credit quality debt instruments that are liquid and have short maturities and durations, or have floating rates and have historically been invested in the Pennsylvania Treasury Group Investment Fund, a short-term investment fund.

Cash

as of December 31, 2024  
(\$ millions)

Manager	Investment Style	Fair Value <sup>1/</sup>
PA State Treasury (STIF)	Cash	\$2,046.4
Total Cash		\$2,046.4

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

# INVESTMENT SECTION

## Investment Summary - Legacy Private Credit

December 31, 2024 (unaudited)

### Objective

SERS will continue to work with existing Legacy Private Credit managers to actively achieve a return in excess of the S&P/LSTA Leveraged Loan Index plus 100 basis points for the duration of the investments.

### Structure

Private Credit investments are non-traditional investments made in the form of closed-end limited

partnership structures. The current structure of this portfolio consists of legacy investments that will continue to decrease over time as investments are realized, liquidated, and redeemed.

### Status

SERS no longer has an asset allocation targeting this strategy as a stand-alone asset class.

### Legacy Private Credit

as of December 31, 2024

(\$ millions)

Sub-Asset Class	Unfunded Commitments	Fair Value	% of Total Fund
Legacy Private Credit	\$175.3	\$348.5	0.9%

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.

### Legacy Private Credit Committed, Drawn, and Distributed

Active Legacy Private Credit Funds	Strategy/ Stage	SERS Initial Funding	Capital Committed	Accumulated Capital Drawn	Accumulated Distributions <sup>1/</sup>
Apollo Hybrid Value Fund	Diversified Credit	12/24/2018	\$100,000,000	\$136,130,196	\$140,023,052
Ares PA Opportunities Fund - Direct Lending	Direct Lending	10/12/2021	100,000,000	77,679,270	15,447,295
Audax Direct Lending Solutions Fund-A	Direct Lending	10/26/2018	100,000,000	123,209,521	89,676,629
Brightwood Capital Fund IV	Direct Lending	4/24/2018	100,000,000	100,000,000	61,859,412
ICG North American Private Debt Fund II	Direct Lending	2/27/2019	50,000,000	47,255,975	37,236,114
Permira Credit Solutions IV Master (Feeder) SCSp	Direct Lending	9/26/2019	75,000,000	62,933,547	37,411,501
Permira Susquehanna Opportunities - Credit	Direct Lending	4/7/2021	60,000,000	12,287,712	11,786,987
<b>Total Active Legacy Private Credit Funds</b>			<b>\$585,000,000</b>	<b>\$559,496,221</b>	<b>\$393,440,990</b>

<sup>1/</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 - Legacy Hedge Funds

December 31, 2024 (unaudited)

### Objective

SERS will continue to work with existing legacy managers as well as explore options to work with strategic partners to expedite the redemption process in a thoughtful and cost-effective way.

### Structure

The current structure of this portfolio consists of legacy investments that will continue to decrease over time as investments are realized, liquidated, and redeemed.

### Status

SERS is no longer actively investing in this strategy; legacy hedge fund portfolios are currently in liquidation. The remaining balance has continued to decrease as SERS has successfully redeemed assets from legacy managers.

### Legacy Hedge Funds

as of December 31, 2024

(\$ millions)

Manager	Investment Style	Fair Value <sup>1/</sup>
Legacy Hedge Funds	Fund-of-Funds	\$12.0
Luxor Capital Partners	Direct Hedge Fund	2.0
<b>Total Legacy Hedge Funds</b>		<b>\$14.0</b>

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



# INVESTMENT SECTION

---

## Defined Contribution Plan Investment Options

December 31, 2024 (unaudited)

### Investment Policy

The SERS Board originally adopted the 401(a) Defined Contribution Plan (Defined Contribution Plan) Investment Policy Statement (DC IPS) on June 13, 2018, and most recently amended the policy on December 10, 2024.

The purpose of the DC IPS 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 purpose of the Defined Contribution Plan is to provide eligible employees (employees) with a source of retirement income from accumulated employee contributions, employer contributions, and investment returns. The objective of the Defined Contribution Plan is to allow employees to defer a portion of their salary into the plan, promote and maximize capital accumulation, and enable employees to meet their personal retirement investment goals. It is the board's intent to make available an array of low-cost investment options that satisfy the following criteria:

- Each investment option is diversified within itself
- Each investment option has different risk and return and/or style characteristics; and
- Each investment option, in combination with the other available investment options, contributes to the diversification opportunities of a participant's portfolio

The board has delegated certain responsibilities related to the effective management of the Defined Contribution Plan. Various responsibilities are allocated among the board, agency staff, investment managers, investment consultant, custodian/sub-custodian, and the third-party administrator. All persons who act as agents of the board are expected to adhere to the highest standards of professional integrity and honesty. The responsibilities of the Defined Contribution Plan's service providers are governed by the applicable service agreements, as well as the DC IPS.

The board employs an investment staff and investment consultant, which are 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 market place.

### Investment Options

It is the board's intent to offer a broad range of investment options with materially different risk and return characteristics to allow participants, by choosing among such investment options, the opportunity to diversify their balances and construct portfolios consistent with their unique circumstances, goals, time horizons, and tolerance for risk. It is the objective of the board to offer investment options at a reasonable cost in terms of management, custody, other costs, and have investment characteristics that can be successfully communicated to participants. Further, it is the intent of the board to designate names for the investment options that are easily understood by participants. The Defined Contribution Plan is required to offer a minimum of ten investment options that are professionally managed by at least three investment managers. The board offers three tiers of investment options to meet various participant investment objectives. Described below are the various types of investment options. The board selects available investment options and investment managers and adds or removes such options or investment managers at any time in its discretion. The screening process for the initial selection of any investment option or manager will consider attributes relevant to the specific asset class and search objective, as developed by the board with the assistance of SERS-Investment Office staff and in consultation with its external investment consultant, where applicable.

### Target Date Fund Investment Options

Target date funds provide a series of asset allocation funds that allow participants to choose a single fund that is based on their expected target retirement date. Each target date fund includes a professionally managed portfolio of underlying investments that may include fixed income, equity

### Defined Contribution Plan Investment Options

December 31, 2024 (unaudited)

and alternative asset classes. BlackRock, the investment manager, adjusts and rebalances the allocation of assets over time to reduce the expected risk as each fund progresses toward its target date. The board recognizes that some participants may fail to make investment choices for their plan account. Therefore, the board believes it is appropriate to designate a target date fund based on the participant's age as the default investment option for any participant who fails to make an investment choice for his or her contributions.

#### Asset Class Investment Options

Additional investment options that match participants' unique investment goals, investor profile, and risk tolerance are also available. The additional investment options provide a broad

exposure to major asset classes including stocks, bonds, and capital preservation investments. The Short-Term Investment Fund is managed by the Commonwealth of Pennsylvania Treasury Department. The other funds are managed by Mellon Investments Corporation.

#### Self-Directed Brokerage Option

The self-directed brokerage option provides access to a brokerage window for participants who seek greater investment flexibility. This investment option is offered through the Charles Schwab Corporation. Participants investing in this option do so at their own risk. The board is not responsible for the monitoring or evaluation of any self-directed brokerage account investments.

# INVESTMENT SECTION

## Defined Contribution Plan Investment Options, Returns, and Expenses

December 31, 2024 (unaudited)

### Defined Contribution Plan Investment Options, Returns, and Expenses

Participation, Assets, Performance, and Fund Expense  
as of December 31, 2024

Fund Name	Participants	Fund Balance	Inception Date	Estimated Calendar Year, Net-of-Fees Returns <sup>1/</sup>				Max Total Investment Fund Expense <sup>2/</sup>
				1 Year	3 Year	5 Year	10 Year	
Post Retirement Date Fund	2,020	\$12,129,311	08-2005	7.08%	0.54%	4.01%	4.62%	0.0700%
2030 Retirement Date Fund	2,750	20,992,783	08-2005	9.12	1.57	5.68	6.33	0.0700
2035 Retirement Date Fund	3,610	25,274,151	07-2006	10.89	2.43	6.80	7.18	0.0700
2040 Retirement Date Fund	3,818	29,779,440	08-2005	12.62	3.27	7.83	7.95	0.0700
2045 Retirement Date Fund	3,986	31,647,579	07-2006	14.27	4.08	8.79	8.59	0.0700
2050 Retirement Date Fund	4,331	33,751,918	09-2007	15.57	4.66	9.40	8.95	0.0700
2055 Retirement Date Fund	4,963	35,410,958	05-2010	16.21	4.91	9.62	9.05	0.0700
2060 Retirement Date Fund	5,615	33,826,105	11-2014	16.23	4.92	9.61	9.05	0.0700
2065 Retirement Date Fund	7,489	30,291,355	09-2019	16.27	4.93	9.58	NA	0.0700
2070 Retirement Date Fund	1,937	1,836,592	09-2024	NA	NA	NA	NA	0.0700
U.S. Large Company Stock Index Fund	1,970	12,637,129	12-1994	25.00	8.93	14.53	13.11	0.0100
U.S. Small/Mid Company Stock Index Fund	1,616	4,020,367	08-1998	17.10	2.75	10.09	9.57	0.0150
U.S. All Company Stock Index Fund	1,583	3,791,318	01-2011	23.49	7.90	13.85	12.48	0.0250
Global Non-U.S. Stock Index Fund	1,519	7,094,077	03-2009	5.53	0.99	4.33	5.08	0.0350
U.S. Bond Index Fund	1,391	2,243,942	02-1995	1.25	(2.38)	(0.32)	1.33	0.0125
U.S. Short-Term Bond Index Fund	724	800,367	12-2017	4.39	1.69	1.58	NA	0.0175
U.S. Treasury Inflation Protected Security Index Fund <sup>3/</sup>	1,301	650,360	07-2007	1.84	(2.26)	1.87	NA	0.0125
Short-Term Investment Fund <sup>4/</sup>	351	4,090,062	10-1988	5.20	3.92	2.48	1.86	0.0000
Charles Schwab Self-Directed Brokerage <sup>5/</sup>	49	1,427,757	NA	NA	NA	NA	NA	NA

<sup>1/</sup>Performance is calculated using time-weighted rate of return.

<sup>2/</sup>Maximum possible expense that can be charged.

<sup>3/</sup>There was a break in the return history of the TIPS fund between 2010 and 2017, since there were no participants during that time.

<sup>4/</sup>Short-Term Investment Fund balance includes \$3.3 million in unvested employer contributions forfeited to the Plan.

<sup>5/</sup>For those in the Self-Directed Brokerage Option (SDB), the asset fee is assessed against the balance in the SDB but the actual deduction is prorated against the core investment options separately.

The Plan's monthly recordkeeping fee is \$4.55 per participant and is paid by plan employers in the form of an annual per participant charge.

## Actuarial Section

11911 FREEDOM DRIVE, SUITE 790  
RESTON, VA 20190  
+1.703.841.3100 www.kornferry.com

June 10, 2025

Mr. Joseph A. Torta  
Executive Director  
State Employees' Retirement System  
30 North Third Street - Suite 150  
Harrisburg, PA 17101-1716

Dear Mr. Torta:

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, 2024 annual actuarial valuation for funding purposes.

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 commonwealth fiscal year beginning July 1, 2025:

- (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 (Act 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 following the actuarial funding valuation determining such changes.
- (5) The extra contribution to return Act 2017-5 savings.
- (6) The amortization of legislated benefit changes, including cost-of-living increases, over 10-year periods beginning with the July following the actuarial funding 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 others contribute a lower percent of compensation, depending on the



Mr. Joseph A. Torta

June 10, 2025

benefits payable to each group's employees. The contribution amount is sufficient to cover the normal cost of benefits accruing during the year and interest on the unfunded liability.

The actuarial funding valuation is based on financial and participant data, which is prepared by SERS staff. We rely on that data and ensure that it is reviewed for internal and year-to-year consistency as well as general reasonableness prior to being used in the actuarial funding valuation.

The actuarial valuation uses various economic and demographic assumptions regarding future plan experience. These assumptions were adopted by the State Employees' Retirement Board (the Board) in July of 2020 based upon the recommendations included in our July 2020 report on the nineteenth investigation of actuarial experience of SERS, covering the years 2015 through 2019. These changes to both the economic and demographic assumptions, were implemented with the December 31, 2020 actuarial valuation. To ensure that the investment return assumption remains up-to-date and appropriate for every actuarial valuation, it is reviewed annually by the SERS actuaries and Board. The Board reduced the annual investment return assumption from 7.000% to 6.875% during its 2022 review for the December 31, 2022 valuations. It maintained the 6.875% assumption during its 2023 and 2024 reviews. We will continue to closely monitor the investment return 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*, replaced 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 were 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, 2024 actuarial funding valuation and are included herein.



Mr. Joseph A. Torta

June 10, 2025

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 from July 1, 2005 through June 30, 2015 were below the minimum amount required to meet the GASB No. 25 minimum. Originally this was a result of financing changes implemented by Act 2003-40 in December 2003. Later, this became a consequence of the contribution collars required under Act 2010-120. After June 30, 2015, because employer contributions are being made in accordance with current law, they are exceeding the GASB No. 25 minimum.

The following schedules were prepared by us, Korn Ferry, from the December 31, 2024 actuarial funding valuation: "Schedules of Active Member Valuation Data", "Solvency Test", "Analysis of Financial Experience", "Schedule of Funding Progress", "Schedule of Contributions Under Previous Reporting Standards", and "History and Projection of Contribution Rates and Funded Ratios".

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, and will continue to be, adequately funded, in accordance with generally accepted actuarial principles and procedures. The current funding policy guarantees that there are sufficient assets to pay benefits when they come due based on current assumptions.

It should be noted that, during June of 2017, Governor Tom Wolf signed into law Act 2017-5. Act 2017-5 fundamentally changed retirement options for most new hires beginning January 1, 2019. This legislation introduced two new hybrid defined benefit (DB)/defined contribution (DC) options and a straight DC option. New classes of service now apply to most State employees who first become SERS members on or after January 1, 2019; however, most hazardous duty employees are exempt from the new plan design.

In April 2020, SERS received an advance payment of \$1,061 million from the Pennsylvania State University (PSU), and in April 2021, SERS received an advance payment of \$825 million from the Pennsylvania State System of Higher Education (PASSHE). The advance payments were part of a funding agreement under Act 2019-105 that reduced PSU's and PASSHE's allocated shares of the unfunded liability and created schedules of setoff amounts that reduce the future contributions due from each. These arrangements accelerated the funding of SERS but are not expected to increase the long-term funded status of SERS since the future contributions from PSU and PASSHE will be reduced by the value of the advance payments.





Mr. Joseph A. Torta  
June 10, 2025

To ensure the expected benefit of the advance payments is allocated to PSU and PASSHE, the value of the future setoff amounts is added to the unfunded liability to determine the Amortization Liability. The Amortization Liability is used to determine the amortization payments due from all employers, prior to recognizing any setoff amounts. This allows the effect of the advance payments to be allocated only to PSU and PASSHE and have no expected effect on the contributions due from the other employers.

### Actuarial Certification

To the best of our knowledge, this report is complete and accurate and all costs and liabilities have been determined 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 report, costs, liabilities, assumptions, and methods used for funding purposes are in accordance with the parameters set by Actuarial Standards of Practice.

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

Respectfully submitted,  
Korn Ferry

By Craig R. Graby  
Craig R. Graby  
Member American Academy of Actuaries  
Enrolled Actuary No. 23-7319

By Stephen A. Catone  
Stephen A. Catone, A.S.A.  
Member American Academy of Actuaries  
Enrolled Actuary No. 23-5357

**Summary of Actuarial Assumptions and Methods**

December 31, 2024 (unaudited)

The Actuarial Section of SERS' Annual Comprehensive Financial Report presents information on the Defined Benefit Plan, unless noted otherwise. The schedules in this 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, as trustees of the State Employees' Retirement Fund. The State Employees' Retirement Code (retirement code), legislated by the General Assembly and signed into law by the Governor, establishes funding policy. The retirement code is administered by the SERS Board. The General Assembly, along with the Governor's signing, has the authority to amend the retirement code. The Financial Section, except where noted, is reported in accordance with a separate actuarial accounting valuation based on Governmental Accounting Standards Board (GASB) Statement No. 67.

For funding purposes, a five-year smoothed market value is used as the asset valuation method compared to fair value for financial reporting purposes under GASB 67. As of December 31, 2021, the traditional entry-age cost method was used for both the funding valuation and the accounting valuation. This method calculates employer normal costs based on a blend of all active members in the system in that year. For the December 31, 2020 funding valuation and prior, a statutorily required modified entry-age funding method was used. That method calculated employer normal costs based upon the cost of new hires only.

SERS uses amortization periods of 10 years and 30 years with level payments over closed periods. The current amortization schedules are 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 and from changes in assumptions after December 31, 2009, over 30-year periods beginning with the July 1 following the actuarial valuation determining such changes.

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

- The investment rate of return of 6.875% per year is based on an underlying rate of inflation of 2.5% per year.
- For current and future male non-disabled retirees, beneficiaries, and survivors, SERS uses the PubG-2010 Male Retiree Mortality Table, with post-2010 mortality improvement based on Scale MP-2019 for Males. For current and future female non-disabled retirees, beneficiaries, and survivors, SERS uses the PubG-2010 Female Retiree Mortality Table, set forward one year, with post-2010 mortality improvement based on Scale MP-2019 for Females. For current and future male disabled retirees, SERS uses the PubNS-2010 Male Disabled Retiree Mortality Table, set forward two years, with post-2010 mortality improvement based on Scale MP-2019 for Males. For current and future female disabled retirees, SERS uses the PubNS-2010 Female Disabled Retiree Mortality Table, set forward two years, with post-2010 mortality improvement based on Scale MP-2019 for Females. For all pre-retirement active members, the mortality is determined by SERS' actuaries using actual SERS experience.

# ACTUARIAL SECTION

---

## Summary of Actuarial Assumptions and Methods

December 31, 2024 (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 increases of 4.58% with a range of 3.30% to 6.95%. This increase includes an underlying assumption of 2.5% for inflation. The general salary increase and annual rate of salary increase for promotions and longevity is presented in the **Schedules of Active Member Valuation Data**.
- No cost-of-living adjustments were used in the determination of actuarial valuations.

Every five years, SERS is required to conduct an actuarial experience study to determine whether the assumptions used in its annual actuarial valuations remain accurate based on current and anticipated demographic trends and economic conditions.

The *19th Investigation of Actuarial Experience* study for the period 2015 – 2019 was released and approved by the SERS Board in July 2020. The changes in assumptions were effective with the December 31, 2020, valuation.

The most recent valuations were based on members of SERS as of December 31, 2024. 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, 2024 (unaudited)

### Withdrawal From Active Employment Before Age and Service Retirement<sup>1/</sup>

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	30.00%	NA	NA	NA	0.06%	NA	40.00%	NA	NA	NA	0.03%	NA
25	21.00	6.10%	3.00%	NA	0.06	0.01%	24.80	8.50%	2.40%	NA	0.03	0.02%
30	18.50	6.10	3.00	1.90%	0.07	0.03	21.30	7.70	2.30	2.90%	0.03	0.05
35	18.50	4.90	1.60	1.90	0.08	0.06	16.60	4.50	2.40	2.10	0.04	0.08
40	18.20	3.40	2.80	1.90	0.11	0.09	14.80	4.50	2.30	1.60	0.05	0.16
45	17.40	3.40	1.60	0.60	0.14	0.20	17.80	4.30	1.10	1.60	0.08	0.26
50	19.10	3.10	1.60	0.60	0.20	0.33	15.80	4.30	1.80	1.60	0.11	0.40
55	19.10	2.60	0.80	0.40	0.25	0.44	15.80	4.00	1.30	1.00	0.12	0.50
60	NA	NA	NA	NA	0.29	NA	NA	NA	NA	NA	0.19	NA

### Annual Rate of Retirement with Full Benefits (Superannuation)<sup>1/</sup>

Class A-3 and A-4		Class A-5 and A-6		All Other Membership Classes		
Sample Age	Rate	Sample Age	Rate	Rate		
				Sample Age	Male	Female
55	15.0%	55	15.0%	53-54	15.0%	23.0%
56	16.0	56	16.0	55-57	20.0	23.0
57	17.0	57	17.0	58	25.0	23.0
58	18.0	58	18.0	59	25.0	28.0
59	19.0	59	19.0	60	20.0	23.0
60	20.0	60	20.0	61-64	20.0	20.0
61	20.0	61	20.0	65-67	26.0	26.0
62	25.0	62	25.0	68-70	23.0	23.0
63	20.0	63	20.0	71-79	20.0	20.0
64	20.0	64	20.0	80	100.0	100.0
65	25.0	65	25.0			
66-79	20.0	66-79	20.0			
80	100.0	80	100.0			

<sup>1/</sup>The assumptions presented in the above tables were based on a review of SERS experience from 2015 - 2019. The rates are the probabilities that an event will occur in the year after the valuation. For instance, the male retirement rate of 20% at age 60 means that 200 of every 1,000 male employees age 60 and eligible for full benefits are expected to retire before they reach age 61.

# ACTUARIAL SECTION

## Schedules of Active Member Valuation Data

December 31, 2024 (unaudited)

### Annual Rate of Salary Increase<sup>1/, 2/</sup>

Completed Years of Service	Career Salary Increase	Completed Years of Service	Career Salary Increase
1	4.15%	16	1.25%
2	3.25	17	1.20
3	2.90	18	1.15
4	2.70	19	1.15
5	2.50	20	1.10
6	2.35	21	1.00
7	2.15	22	0.95
8	2.10	23	0.90
9	2.00	24	0.85
10	1.60	25	0.80
11	1.55	26	0.70
12	1.45	27	0.60
13	1.40	28	0.50
14	1.35	29	0.50
15	1.30	30+	0.50

<sup>1/</sup>The assumptions presented in the table above were based on a review of SERS experience from 2015 - 2019.

<sup>2/</sup>In addition, it is assumed that salaries will increase by 2.8% per year, which includes inflation. The table above does not include that general salary increase. It is assumed that only the general salary increase is applicable to classes D and E.

### Reduced Benefits<sup>4/</sup>

#### Class A-3 and A-4

#### Class A-5 and A-6

#### All Other Membership Classes

10 or More Years of Service				5 - 14 Years of Service			15 or More Years of Service	
Sample Age	Rate	Sample Age	Rate	Sample Age	Male	Female	Male	Female
35	1.5%	35	1.5%	25	2.2%	4.0%	NA	NA
40	1.5	40	1.5	30	2.2	2.0	NA	NA
45	1.5	45	1.5	35	1.3	2.0	0.8%	1.4%
50	2.0	50	2.0	40	1.0	1.4	0.6	1.3
55	5.5	55	5.5	45	1.0	1.4	0.6	1.3
60	5.5	60	5.5	50	1.0	1.4	1.1	1.6
61	6.0	61	6.0	55	2.0	2.3	5.0	4.5
62	20.0	62	8.0					
63	10.0	63	10.0					
64	15.0	64	10.0					
65	NA	65	15.0					
		66	20.0					
		67	NA					

<sup>4/</sup>The assumptions presented in the above tables were based on a review of SERS experience from 2015 - 2019.

## Schedules of Active Member Valuation Data

December 31, 2024 (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	125	NA	NA	NA	NA	NA	NA	125	\$42,060
20 - 24	1,927	15	NA	NA	NA	NA	NA	1,942	45,620
25 - 29	3,338	723	9	NA	NA	NA	NA	4,070	56,242
30 - 34	2,669	2,649	565	1	NA	NA	NA	5,884	67,463
35 - 39	2,035	2,207	2,225	571	10	NA	NA	7,048	74,966
40 - 44	1,613	1,498	1,597	2,116	614	9	NA	7,447	80,904
45 - 49	1,466	1,173	1,118	1,632	1,587	399	6	7,381	83,711
50 - 54	1,353	1,071	1,029	1,293	1,356	1,032	349	7,483	85,286
55 - 59	1,224	938	892	1,096	1,082	836	980	7,048	83,618
60 - 64	906	774	768	847	595	343	512	4,745	78,783
65+	719	519	486	524	337	177	310	3,072	80,173
<b>Total</b>	<b>17,375</b>	<b>11,567</b>	<b>8,689</b>	<b>8,080</b>	<b>5,581</b>	<b>2,796</b>	<b>2,157</b>	<b>56,245</b>	<b>\$76,737</b>

Average Age: 45.54

Average Service: 10.96

### 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	38	NA	NA	NA	NA	NA	NA	38	\$37,766
20 - 24	1,169	NA	NA	NA	NA	NA	NA	1,169	41,245
25 - 29	2,237	360	6	NA	NA	NA	NA	2,603	51,042
30 - 34	2,087	1,443	316	14	NA	NA	NA	3,860	58,107
35 - 39	1,982	1,503	1,081	358	10	NA	NA	4,934	63,754
40 - 44	1,902	1,352	1,061	1,175	416	20	NA	5,926	68,252
45 - 49	1,677	1,219	919	1,068	999	290	21	6,193	71,908
50 - 54	1,478	1,103	885	1,037	885	621	365	6,374	73,106
55 - 59	1,255	998	879	1,009	875	558	665	6,239	71,999
60 - 64	749	807	685	839	529	293	369	4,271	70,858
65+	359	375	403	477	295	158	212	2,279	73,136
<b>Total</b>	<b>14,933</b>	<b>9,160</b>	<b>6,235</b>	<b>5,977</b>	<b>4,009</b>	<b>1,940</b>	<b>1,632</b>	<b>43,886</b>	<b>\$67,348</b>

Average Age: 46.74

Average Service: 10.35

# ACTUARIAL SECTION

## Schedules of Active Member Valuation Data

December 31, 2024 (unaudited)

### Aggregate Active Member Valuation Data

Valuation Year Ended Dec 31	Number of Employers	Number of Active Members	Covered- Employee Payroll	Annual Average Pay	% Increase/ (Decrease) in Average Pay
2024	97 <sup>1/</sup>	100,131	\$7,271,713,000	\$72,622	3.9%
2023	98 <sup>2/</sup>	98,115	6,855,295,000	69,870	2.9
2022	101 <sup>3/</sup>	96,395	6,547,630,000	67,925	4.1
2021	101 <sup>3/</sup>	97,857	6,383,604,000	65,234	2.2
2020	102 <sup>4/</sup>	100,962	6,441,578,000	63,802	3.7
2019	102 <sup>4/</sup>	102,850	6,328,566,000	61,532	2.6
2018	102 <sup>4/</sup>	103,007	6,178,000,000	59,984	3.2
2017	102 <sup>4/</sup>	102,978	5,984,000,000	58,113	2.9
2016	103 <sup>5/</sup>	104,632	5,912,000,000	56,499	(0.6)
2015	104 <sup>6/</sup>	105,025	5,972,000,000	56,858	3.8

<sup>1/</sup>The membership includes 35 employers and the commonwealth is classified as its largest employer. The commonwealth comprises 63 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 97 participating employers/agencies.

<sup>2/</sup>The membership includes 35 employers and the commonwealth is classified as its largest employer. The commonwealth comprises 64 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 98 participating employers/agencies.

<sup>3/</sup>The membership includes 38 employers and the commonwealth is classified as its largest employer. The commonwealth comprises 64 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 101 participating employers/agencies.

<sup>4/</sup>The membership includes 38 employers and the commonwealth is classified as its largest employer. The commonwealth comprises 65 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 102 participating employers/agencies.

<sup>5/</sup>The membership includes 38 employers and the commonwealth is classified as its largest employer. The commonwealth comprises 66 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 103 participating employers/agencies.

<sup>6/</sup>The membership includes 39 employers and the commonwealth is classified as its largest employer. The commonwealth comprises 66 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 104 participating employers/agencies.

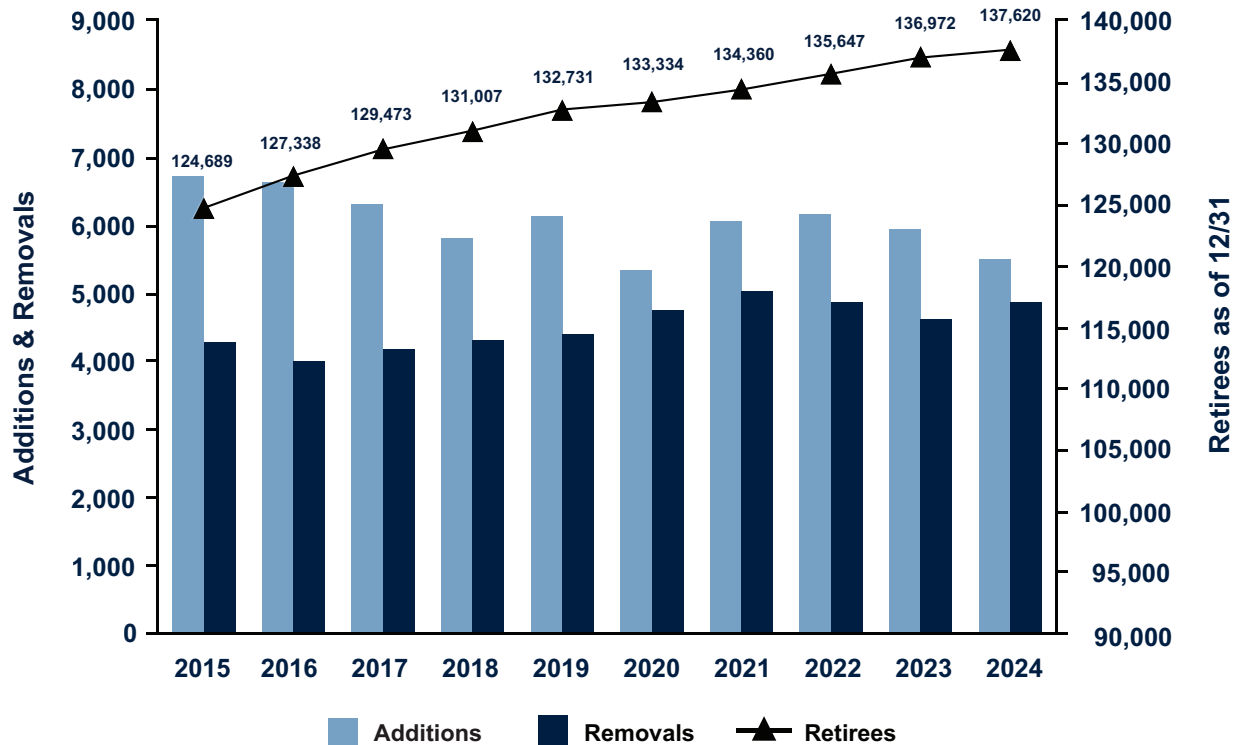
## Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

December 31, 2024 (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
2024	5,533	\$188,881,077	4,885	\$92,537,415	137,620	\$3,594,594,930	0.5%	2.7%
2023	5,951	192,261,922	4,626	86,372,653	136,972	3,498,832,326	1.0	3.1
2022	6,180	190,728,048	4,893	90,271,430	135,647	3,393,469,966	1.0	3.0
2021	6,085	194,538,188	5,059	91,133,818	134,360	3,293,477,182	0.8	3.2
2020	5,363	161,626,682	4,760	79,668,921	133,334	3,190,566,922	0.5	2.6
2019	6,132	176,664,651	4,408	72,004,815	132,731	3,108,945,258	1.3	3.5
2018	5,847	166,594,854	4,313	70,862,628	131,007	3,004,855,159	1.2	3.3
2017	6,338	178,317,205	4,203	63,576,892	129,473	2,909,267,596	1.7	4.1
2016	6,658	191,327,122	4,009	60,165,549	127,338	2,794,984,868	2.1	4.9
2015	6,743	175,810,502	4,303	63,027,188	124,689	2,664,418,763	2.0	4.4

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





# ACTUARIAL SECTION

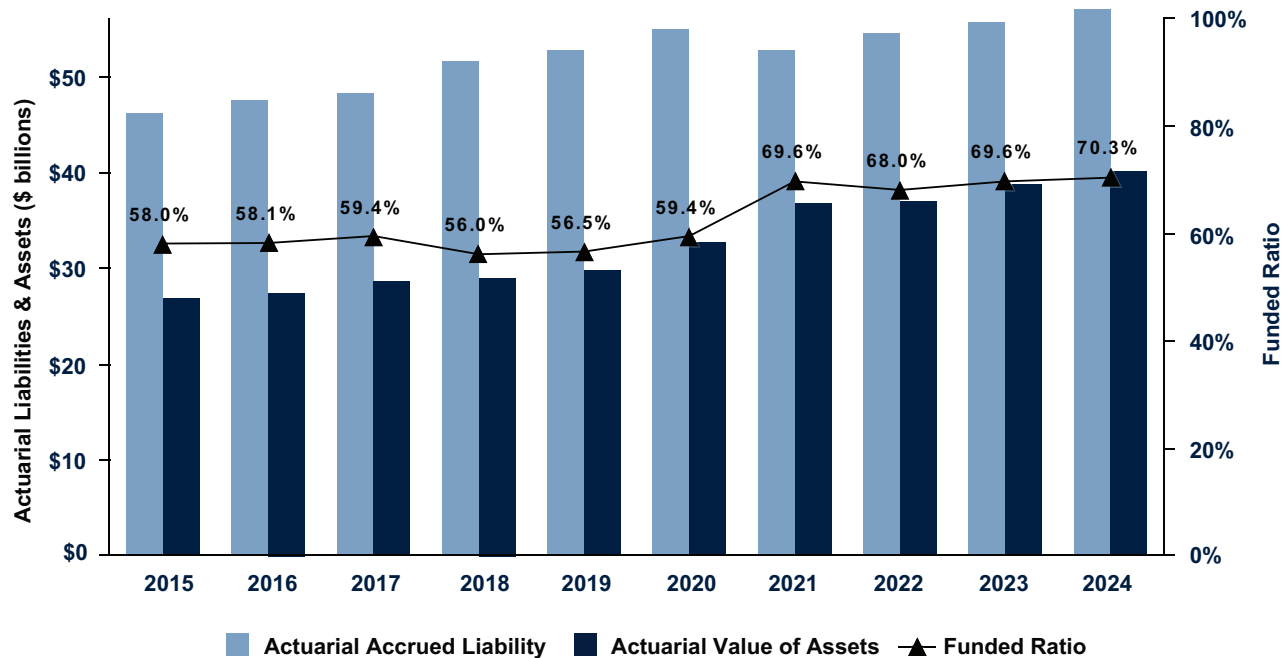
## Solvency Test

December 31, 2024 (unaudited)

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

(\$ thousands)

Valuation Year Ended Dec 31	Actuarial Accrued Liabilities For			Total Actuarial Accrued 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)						
2024	\$5,744,448	\$35,484,704	\$15,852,084	\$57,081,236	\$40,106,953	100.0%	96.8%	0.0%	70.3%
2023	5,583,794	34,724,773	15,469,102	55,777,669	38,793,394	100.0	95.6	0.0	69.6
2022	5,456,160	33,847,728	15,309,899	54,613,787	37,124,677	100.0	93.6	0.0	68.0
2021	5,414,329	32,664,861	14,847,656	52,926,846	36,846,611	100.0	96.2	0.0	69.6
2020	5,327,815	31,754,551	18,016,392	55,098,758	32,703,275	100.0	86.2	0.0	59.4
2019	5,183,195	29,651,542	18,137,838	52,972,575	29,934,024	100.0	83.5	0.0	56.5
2018	5,074,760	28,558,283	18,149,162	51,782,205	28,989,607	100.0	83.7	0.0	56.0
2017	4,965,765	27,798,045	15,675,593	48,439,403	28,776,939	100.0	85.7	0.0	59.4
2016	4,869,229	26,824,306	15,825,429	47,518,964	27,596,048	100.0	84.7	0.0	58.1
2015	4,816,121	25,156,125	16,356,683	46,328,929	26,877,127	100.0	87.7	0.0	58.0



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

## Analysis of Financial Experience

December 31, 2024 (unaudited)

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

Resulting from Differences Between Assumed Experience and Actual Experience

(\$ thousands)

Type of Activity	2024	2023	2022	2021
Gain/(loss) from investment earnings <sup>2/</sup>	\$26,176	\$460,684	(\$572,026)	\$1,383,743
Changes in demographics of new entrants	—	—	—	(51,558)
Pay increases different than assumptions	(425,860)	(316,037)	(352,661)	63,451
Differences between actual and expected demographic experience	(88,748)	(102,305)	(238,357)	(52,115)
<b>Gain/(loss) during year from financial experience</b>	<b>(488,432)</b>	<b>42,342</b>	<b>(1,163,044)</b>	<b>1,343,521</b>
Non-recurring items				
Changes in funding method <sup>3/</sup>	—	—	—	3,699,984
Changes in economic assumptions <sup>4/</sup>	—	—	(671,544)	—
<b>Composite gain/(loss)</b>	<b>(\$488,432)</b>	<b>\$42,342</b>	<b>(\$1,834,588)</b>	<b>\$5,043,505</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>Act 2017-5 required SERS to convert to the traditional entry-age funding method beginning with 2021, which brings it in line with the accounting valuation.

<sup>4/</sup>2022 change primarily due to a reduction in the annual investment return to 6.875% from 7.0%, which was approved by SERS Board at its June 10, 2022 meeting.

# ACTUARIAL SECTION

## Schedule of Funding Progress

December 31, 2024 (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 Payroll	UAAL as a Percentage of Covered Payroll
2024	\$40,106,953	\$57,081,236	70.3%	\$16,974,283	\$7,271,713	233.4%
2023	38,793,394	55,777,669	69.6	16,984,275	6,855,295	247.8
2022	37,124,677	54,613,787	68.0	17,489,110	6,547,630	267.1
2021	36,846,611	52,926,846	69.6	16,080,235	6,383,604	251.9
2020	32,703,275	55,098,758	59.4	22,395,483	6,441,578	347.7
2019	29,934,024	52,972,575	56.5	23,038,551	6,328,566	364.0
2018	28,989,607	51,782,205	56.0	22,792,598	6,178,772	368.9
2017	28,776,939	48,439,403	59.4	19,662,464	5,984,361	328.6
2016	27,596,048	47,518,964	58.1	19,922,916	5,911,603	337.0
2015	26,877,127	46,328,929	58.0	19,451,802	5,971,511	325.7

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

## Schedule of Contributions Under Previous Reporting Standards

December 31, 2024 (unaudited)

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

Annual Required Contributions Using GASB 25

(\$ thousands)

Actuarial Valuation Year Ended December 31	Annual Required Contribution (ARC)	Actual Contribution	Actual Contribution as a Percentage of ARC
2024 <sup>2/</sup>	\$2,304,367	\$2,304,367	100.0%
2023 <sup>2/</sup>	2,188,125	2,188,125	100.0
2022 <sup>2/</sup>	2,066,132	2,066,132	100.0
2021 <sup>2/</sup>	2,078,951	2,858,088 <sup>3/</sup>	137.5
2020 <sup>2/</sup>	2,164,144	3,174,854 <sup>4/</sup>	146.7
2019 <sup>2/</sup>	2,106,138	2,106,138	100.0
2018 <sup>2/</sup>	2,040,434	2,040,434	100.0
2017 <sup>2/</sup>	1,883,541	1,883,541	100.0
2016 <sup>2/</sup>	1,613,626	1,613,626	100.0
2015	1,469,116	1,359,246	92.5

<sup>1/</sup>The ARC is calculated as part of SERS funding valuation using GASB 25 requirements. Starting in 2014 GASB 25 was superseded by 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.

<sup>2/</sup>ARC excludes multiple service transfers made to SERS. These transfers are included as contributions on the Statements of Changes in Fiduciary Net Position.

<sup>3/</sup>Includes a one-time lump sum payment from the Pennsylvania State System of Higher Education, less credits utilized during the year.

<sup>4/</sup>Includes a one-time lump sum payment from Penn State University, less credits utilized during the year.

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 2015 was the result of significant provisions of Act 2010-120, which capped increases in the employer contribution rate. The capped contribution rate during that year was below the respective year's ARC contribution rate.

# ACTUARIAL SECTION

## History and Projection of Contribution Rates and Funded Ratios

December 31, 2024 (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	Preliminary Employer Contribution Rate <sup>4/</sup>	Final Employer Contribution Rate	Funded Ratio
2015 <sup>5/</sup>	\$6,255,189	6.25%	4.52%	27.62%	32.14%	29.50%	58.0%
2016	6,187,427	6.25	4.91	28.31	33.22	33.22	58.1
2017 <sup>6/</sup>	6,265,071	6.25	4.88	28.02	32.90	32.90	59.4
2018	6,469,401	6.25	1.25	32.28	33.53	33.53	56.0
2019 <sup>7/</sup>	6,657,541	6.25	1.67	31.78	33.45	33.45	56.5
2020 <sup>8/</sup>	6,700,320	6.25	1.50	32.26	33.76	33.76	59.4
2021 <sup>9/</sup>	6,649,292	6.25	8.32	25.78	34.10	34.10	69.6
2022	6,832,806	6.18	8.29	26.98	35.27	35.27	68.0
2023	7,168,727	6.09	7.94	25.66	33.60	33.60	69.6
2024	7,615,319	6.17	7.65	24.69	32.34	32.34	70.3
2025 <sup>10/</sup>	7,941,342	6.01	7.39	24.08	31.47	31.47	70.9
2026	8,122,117	5.97	7.15	24.55	31.70	31.70	70.5
2027	8,306,873	5.92	6.91	23.49	30.40	30.40	72.8
2028	8,490,912	5.89	6.67	22.79	29.46	29.46	74.6
2029	8,680,938	5.86	6.42	22.29	28.71	28.71	76.0
2030	8,879,602	5.82	6.20	21.78	27.98	27.98	77.5
2031	9,070,372	5.77	6.01	21.39	27.40	27.40	79.1
2032	9,235,790	5.76	5.82	21.11	26.93	26.93	80.7
2033	9,427,681	5.75	5.63	20.79	26.42	26.42	82.4
2034	9,650,980	5.72	5.46	20.38	25.84	25.84	84.1

<sup>1/</sup>Except as noted, 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>Prior to December 31, 2022, 6.25% was for Class AA and A-3 employees since they comprised most of SERS membership. Beginning with December 31, 2022, the expected fiscal year rate represents a blend of the membership since employee contributions for non-exempt new hires have a lower contribution rate.

<sup>4/</sup>Actuarial rate before floor and collar.

<sup>5/</sup> Act 2010-120 amended the Retirement Code to place a collar on increases to employer contribution rates starting July 1, 2011. A 4.50% collar was in place for fiscal year beginning July 1, 2013, and continued onward until the collar was deemed unnecessary.

<sup>6/</sup>Act 2010-120 amended the Retirement Code to place a permanent floor at employer normal cost after collars expire.

<sup>7/</sup>Act 2017-5 amended the Retirement Code to add two hybrid Defined Benefits (DB)/Defined Contributions (DC) plans and a DC-only plan effective January 1, 2019.

<sup>8/</sup>The Penn State \$1.061 billion one-time lump sum payment immediately reduced the total SERS unfunded liability and increased the funded ratio.

<sup>9/</sup>Act 2017-5 amended the Retirement Code to change the funding method to Traditional Entry Age. The funding method change along with the PASSHE \$825 million one-time lump sum payment immediately reduced the total SERS unfunded liability and increased the funded ratio.

<sup>10/</sup>Numbers are projected from 2025 – 2034 based on 2024 actuarial funding valuation.

**Summary of Plan Provisions**

December 31, 2024 (unaudited)

**Benefit and Contribution Provisions**

SERS makes provisions 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, 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, 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 before January 1, 2019, and all legislators who became members on or after December 1, 2010; Capitol police and park rangers who became members starting July 1, 2011; and state police officers who became members starting July 1, 2012, provided the member did not elect membership in the optional A-4 class within 45 days of becoming a member.

Starting January 1, 2019, class A-3 is only offered to state employees in exempt positions.

**Class A-4**

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

**Class A-5**

All regular state employees who enter SERS membership for the first time on or after January 1, 2019, and SERS members hired before January 1, 2019, who were given a one-time, irrevocable option to elect class A-5 as of April 1, 2019, starting July 1, 2019, while retaining prior class up to July 1, 2019, including members of the General Assembly, judges, and Magisterial District Judges.

**Class A-6**

All members who would be class A-5 but elected A-6 within 45 days of becoming a member, and SERS members hired before January 1, 2019, who were given a one-time, irrevocable option to elect class A-6 as of April 1, 2019, starting July 1, 2019, while retaining prior class up to July 1, 2019.

**Defined Contribution-Only Plan**

All members who would be class A-5 but elected the defined contribution-only plan within 45 days of becoming a member, and SERS members hired before January 1, 2019, who were given a one-time, irrevocable option to elect defined contribution-only plan as of April 1, 2019, starting July 1, 2019, while retaining prior class up to July 1, 2019. Those members choosing the defined contribution-only plan are not eligible for a benefit from the Defined Benefit Plan; but retire with their contributions, employer contributions if vested with three eligibility points, and any investment earnings on those contributions less investment expenses and fees, however SERS members hired before January 1, 2019, who elected defined contribution-only plan as of April 1, 2019, starting July 1, 2019, still retained their eligibility for a benefit from the Defined Benefit Plan for service up to July 1, 2019.

# ACTUARIAL SECTION

---

## Summary of Plan Provisions

December 31, 2024 (unaudited)

### 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 (Normal Retirement) in Defined Benefit Plan

(Full Formula Benefit)

#### Class AA/A

Age 60 with three years of service; except for members of the General Assembly, enforcement officers, correction 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.

#### Class A-3/A-4

Age 65 for most members with three years of service, and age 55, with three years of service, for members of the General Assembly, enforcement officers, correction officers, psychiatric security aides, Delaware River Port Authority police officers, and officers of the Pennsylvania State Police. Capitol police officers and park rangers can retire on full benefits at age 55 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 A-5/A-6

Age 67, with three years of service; or eligible for full formula benefits with 35 years of credited service with a superannuation score of 97.

### 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 in Defined Benefit Plan

The maximum 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. For A-5 and A-6 members the maximum single-life annuity is 2% of an average of the highest five calendar years 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.

## Summary of Plan Provisions

December 31, 2024 (unaudited)

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

### Defined Benefit Plan Multiplier for Major Classes

Class	Multiplier	Description
A <sup>1/</sup>	1.00	
AA	1.25	
A-3 <sup>1/</sup>	1.00	
A-4 <sup>1/</sup>	1.25	
A-5	0.625	
A-6	0.50	
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.

<sup>1/</sup>For state police with 20 – 24.99 years of service, the benefit is 50% of the highest annual salary; with 25 or more years of service, the benefit is 75% of the highest annual salary.

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' Annual Comprehensive Financial Report presents detailed information related to the financial statements, as well as highlights of actuarial valuations. The Statistical Section presents information on the Defined Benefit Plan as well as select information for the Defined Contribution Plan, which opened for enrollment on January 1, 2019. 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, 2024. This data includes items such as employer and member contribution rates; contributions received and benefits paid by SERS; values of assets and liabilities; and the number of annuitants, beneficiaries, and active members.

The **Schedule of Additions to Fiduciary Net Position** presents the member/participant and employer contributions, net investment income/loss, and other additions.

The **Schedule of Deductions from Fiduciary Net Position** presents the benefits, refunds of contributions, and administrative expenses.

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, 2024. Most Defined Benefit Plan 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.

### Revenue Capacity

The **Schedule of Investment Income** presents the details of the total net investment income/loss for the 10 years ended December 31, 2024. The Defined Benefit Plan has two external 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 external 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 **Schedules of Active Member and Participant Statistics** provides the total number of active members and participants, as well as the average age, average service, and average salary by gender for the 10 years ended December 31, 2024.

### 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, 2024.

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, 2024.

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, 2024.

# STATISTICAL SECTION

---

## Statistical Section Narrative

December 31, 2024 (unaudited)

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, 2024.

The **Schedule of Employer/Agency Participation** provides the number of covered members/participants and the corresponding percentage of participation for the five largest

employers/agencies for the Defined Benefit and Defined Contribution Plans, as well as a listing of additional employers/agencies participating with both plans as of December 31, 2024.

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

Schedule of Trend Data  
December 31, 2024 (unaudited)

Defined Benefit Plan Trend Data<sup>1/</sup>

Year-End Contribution Rates										
	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Employer <sup>2/3/4/</sup>	33.65%	35.32%	34.16%	33.81%	33.48%	33.59%	32.93%	33.24%	29.51% <sup>7/</sup>	25.01% <sup>7/</sup>
Member	5.95%	5.98%	6.05%	6.09%	4.96%	4.95% <sup>8/</sup>	6.25%	6.25%	6.25%	6.25%
Contributions										
Employer <sup>2/</sup>	\$2,316,106	\$2,198,430	\$2,074,999	\$2,871,253	\$3,186,445	\$2,114,882	\$2,048,594	\$1,897,404	\$1,622,123	\$1,360,431
Member	\$452,051	\$427,368	\$418,589	\$405,138	\$409,637	\$404,769	\$393,925	\$383,359	\$374,570	\$371,624
Average Annual Compensation	\$72,622	\$69,870	\$67,925	\$65,234	\$63,802	\$61,532	\$59,984	\$58,113	\$56,499	\$56,858
Fiduciary Net Position (FNP)	\$38,657,524	\$36,424,927	\$33,607,207	\$40,231,015	\$35,027,730	\$31,096,319	\$26,936,990	\$29,405,042 <sup>9/</sup>	\$26,387,889	\$26,054,890
Total Pension Liability (TPL) <sup>5/</sup>	\$57,084,414	\$55,780,367	\$54,622,092	\$52,936,505	\$52,253,754	\$49,274,314	\$47,768,011	\$46,696,751	\$45,648,214	\$44,238,721
FNP as % of TPL <sup>5/</sup>	67.7%	65.3%	61.5%	76.0%	67.0%	63.1%	56.4%	63.0%	57.8%	58.9%
Net Pension Liability <sup>5/</sup>	\$18,426,890	\$19,355,440	\$21,014,885	\$12,705,490	\$17,226,024	\$18,177,995	\$20,831,021	\$17,291,709	\$19,260,325	\$18,183,831
Actuarial Value of Assets <sup>4/</sup>	\$40,106,953	\$38,793,394	\$37,124,677	\$36,846,611	\$32,703,275	\$29,934,024	\$28,989,607	\$28,776,939	\$27,596,048	\$26,877,127
Actuarial Accrued Liability <sup>4/</sup>	\$57,081,236	\$55,777,669	\$54,613,787	\$52,926,846	\$55,098,758	\$52,972,575	\$51,782,205	\$48,439,403	\$47,518,964	\$46,328,929
Funded Ratio <sup>4/</sup>	70.3%	69.6%	68.0%	69.6%	59.4%	56.5%	56.0%	59.4%	58.1%	58.0%
Total Benefits and Refunds	\$4,004,766	\$3,910,778	\$3,885,026	\$3,731,143	\$3,556,728	\$3,512,671	\$3,394,636	\$3,303,543	\$3,227,548	\$3,080,861
Average Pension <sup>6/</sup>	\$32,669	\$31,944	\$31,331	\$30,712	\$30,050	\$29,440	\$28,880	\$28,352	\$27,722	\$27,042
Annuityants and Beneficiaries	137,620	136,972	135,647	134,360	133,334	132,731	131,007	129,473	127,338	124,689
Active Members	100,131	98,115	96,395	97,857	100,962	102,850	103,007	102,978	104,632	105,025

<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 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 purposes as required by Governmental Accounting Standards Board (GASB) Statement No. 67.

<sup>6/</sup>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 3.5% effective July 1, 2012 and 4.5% every year thereafter until no longer needed.

<sup>8/</sup>Act 2017-5 established a new side-by-side hybrid defined benefit/defined contribution benefit option and a new DC-only option to all state employees, excluding most hazardous duty employees. This reduced the member contribution rate.

<sup>9/</sup>In 2017, fiduciary net position excluded OPEB adjustment by GASB 75.

Source: Pennsylvania State Employees' Retirement System

# STATISTICAL SECTION

## Schedule of Additions to Fiduciary Net Position

December 31, 2024 (unaudited)

### Defined Benefit Plan 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>		
2024	\$452,051	\$2,316,106	31.9%	\$3,504,798	\$6,272,955
2023	427,368	2,198,430	32.1	4,126,858	6,752,656
2022	418,589	2,074,999	31.7	(5,213,344)	(2,719,756)
2021	405,138	2,871,253	45.0	5,682,480	8,958,871
2020	409,637	3,186,445	49.5	3,919,279	7,515,361
2019	404,769	2,114,882	33.4	5,175,624	7,695,275
2018	393,925	2,048,594	33.2	(1,442,291)	1,000,228
2017	383,359	1,897,404	31.7	4,066,055	6,346,818
2016	374,570	1,622,123	27.4	1,586,853	3,583,546
2015	371,624	1,360,431	22.8	87,990	1,820,045

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

### Defined Contribution Plan Additions to Fiduciary Net Position<sup>1/</sup>

(\$ thousands)

Year Ended	Participant Contributions	Employer Contributions	Annual Employer Charge/Commonwealth Funding	Net Investment Income/(Loss)	Total
2024	\$55,260	\$31,820	\$2,309	\$29,859	\$119,248
2023	42,902	23,458	1,696	25,138	93,194
2022	31,372	16,750	1,288	(14,025)	35,385
2021	22,533	11,440	1,696	7,470	43,139
2020	14,799	7,733	4,556	4,971	32,059
2019	6,124	2,836	3,852	673	13,485

<sup>1/</sup>Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Source: Pennsylvania State Employees' Retirement System

## Schedule of Deductions from Fiduciary Net Position

December 31, 2024 (unaudited)

### Defined Benefit Plan Deductions from Fiduciary Net Position

(\$ thousands)

Year Ended	Benefits	Refund of Contributions	Administrative Expenses	Total
2024	\$3,980,953	\$23,813	\$35,592	\$4,040,358
2023	3,883,225	27,553	24,158	3,934,936
2022	3,852,073	32,953	19,026	3,904,052
2021	3,705,674	25,469	24,443	3,755,586
2020	3,538,634	18,094	27,222	3,583,950
2019	3,490,311	22,360	23,275	3,535,946
2018	3,375,394	19,242	25,950	3,420,586
2017	3,287,923	15,620	26,122	3,329,665
2016	3,214,440	13,108	22,999	3,250,547
2015	3,069,328	11,533	22,072	3,102,933

### Defined Contribution Plan Deductions from Fiduciary Net Position<sup>1/</sup>

(\$ thousands)

Year Ended	Benefits	Refund of Contributions	Administrative Expenses	Total
2024	\$4,362	\$3,003	\$5,888	\$13,253
2023	2,780	1,802	4,968	9,550
2022	1,886	1,116	4,601	7,603
2021	783	868	3,971	5,622
2020	201	103	3,660	3,964
2019	52	20	5,185	5,257

<sup>1/</sup>Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

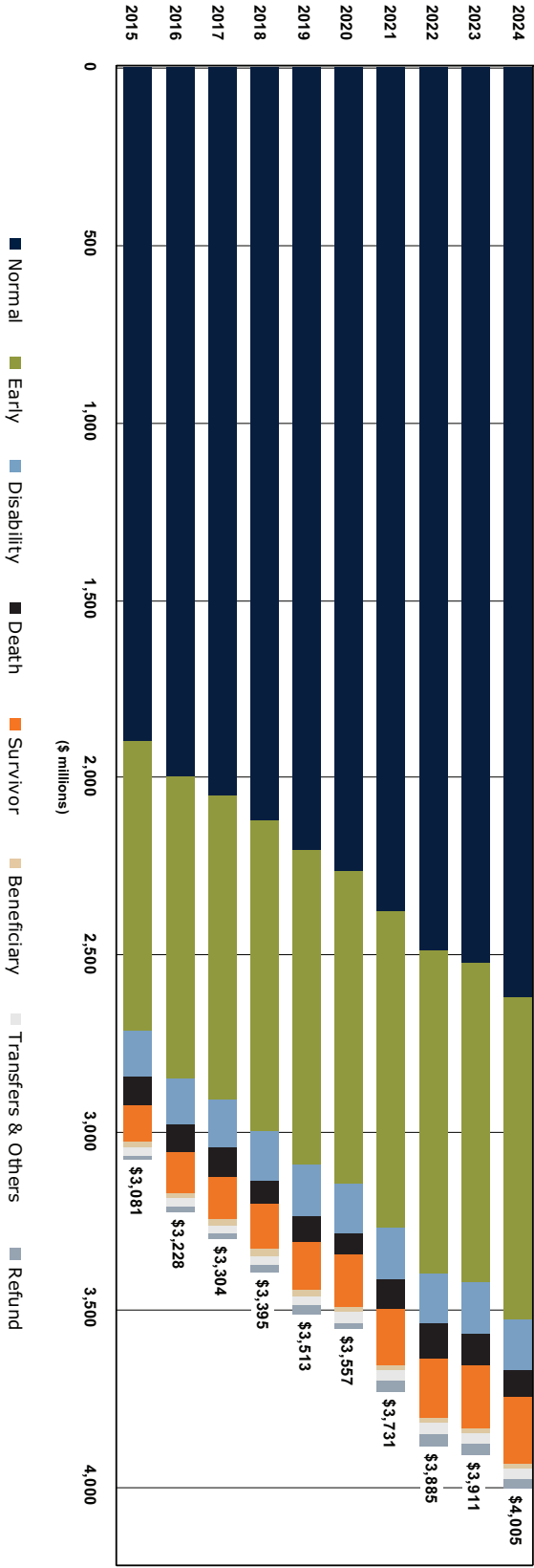
Schedule of Benefit and Refund Deductions from Fiduciary Net Position by Type

December 31, 2024 (unaudited)

Defined Benefit Plan Benefit and Refund Deductions from Fiduciary Net Position by Type

(\$ thousands)

Year Ended	Retirement							Refunds			
	Normal	Early	Disability	Death	Survivor	Beneficiary	Transfers & Other	Total Benefit Deductions	Separation of Service	Death	Total Refunds
2024	\$2,622,995	\$908,609	\$144,015	\$69,972	\$189,745	\$16,425	\$29,192	\$3,980,953	\$23,101	\$712	\$23,813
2023	2,522,684	904,749	143,764	85,098	179,205	17,515	30,210	3,883,225	26,911	642	27,553
2022	2,490,656	908,788	142,545	96,539	168,662	16,916	27,967	3,852,073	31,833	1,120	32,953
2021	2,379,999	892,807	141,257	87,658	157,459	16,856	29,638	3,705,674	24,788	681	25,469
2020	2,264,119	881,623	140,813	61,629	145,877	15,860	28,713	3,538,634	17,535	559	18,094
2019	2,207,145	888,899	139,607	74,257	137,479	16,855	26,069	3,490,311	21,932	428	22,360
2018	2,122,512	877,579	137,616	66,408	129,533	15,581	26,165	3,375,394	19,009	233	19,242
2017	2,051,059	859,554	135,707	80,322	121,511	16,510	23,260	3,287,923	15,372	248	15,620
2016	1,997,704	851,302	132,833	76,455	114,465	15,976	25,705	3,214,440	12,861	247	13,108
2015	1,900,468	816,595	129,810	75,845	106,748	16,066	23,796	3,069,328	11,302	231	11,533



Source: Pennsylvania State Employees' Retirement System

Schedule of Total Changes in Fiduciary Net Position  
December 31, 2024 (unaudited)

Defined Benefit Plan 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 Expenses	Total Deductions	
2024	\$452,051	\$2,316,106	\$3,504,798	\$6,272,955	\$3,980,953	\$23,813	\$35,592	\$4,040,358	\$2,232,597
2023	427,368	2,198,430	4,126,858	6,752,656	3,883,225	27,553	24,158	3,934,936	2,817,720
2022	418,589	2,074,999	(5,213,344)	(2,719,756)	3,852,073	32,953	19,026	3,904,052	(6,623,808)
2021	405,138	2,871,253	5,682,480	8,958,871	3,705,674	25,469	24,443	3,755,586	5,203,285
2020	409,637	3,186,445	3,919,279	7,515,361	3,538,634	18,094	27,222	3,583,950	3,931,411
2019	404,769	2,114,882	5,175,624	7,695,275	3,490,311	22,360	23,275	3,535,946	4,159,329
2018	393,925	2,048,594	(1,442,291)	1,000,228	3,375,394	19,242	25,950	3,420,586	(2,420,358)
2017	383,359	1,897,404	4,066,055	6,346,818	3,287,923	15,620	26,122	3,329,665	3,017,153
2016	374,570	1,622,123	1,586,853	3,583,546	3,214,440	13,108	22,999	3,250,547	332,999
2015	371,624	1,360,431	87,990	1,820,045	3,069,328	11,533	22,072	3,102,933	(1,282,888)

Defined Contribution Plan Total Changes in Fiduciary Net Position<sup>1/</sup>  
(\$ thousands)

Year Ended	Additions to Fiduciary Net Position				Deductions from Fiduciary Net Position					Net Increase
	Participant Contributions	Employer Contributions	Annual Employer Charge/ Commonwealth Funding	Net Investment Income/ (Loss)	Total Additions	Benefits	Refund of Contributions	Administrative Expenses	Total Deductions	
2024	\$55,260	\$31,820	\$2,309	\$29,859	\$119,248	\$4,362	\$3,003	\$5,888	\$13,253	\$105,995
2023	42,902	23,458	1,696	25,138	93,194	2,780	1,802	4,968	9,550	83,644
2022	31,372	16,750	1,288	(14,025)	35,385	1,886	1,116	4,601	7,603	27,782
2021	22,533	11,440	1,696	7,470	43,139	783	868	3,971	5,622	37,517
2020	14,799	7,733	4,556	4,971	32,059	201	103	3,660	3,964	28,095
2019	6,124	2,836	3,852	673	13,485	52	20	5,185	5,257	8,228

<sup>1/</sup>Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Source: Pennsylvania State Employees' Retirement System



Schedule of Investment Income

December 31, 2024 (unaudited)

Defined Benefit Plan Investment Income

(\$ thousands)

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
Investment income/(loss)										
From investing activities										
Net appreciation/(depreciation) in fair value of investments	\$3,198,908	\$3,909,608	(\$5,439,865)	\$5,396,397	\$3,653,648	\$4,901,079	(\$1,733,999)	\$3,710,739	\$1,233,501	(\$216,817)
Interest	258,523	192,834	171,411	204,996	199,398	162,152	142,918	126,728	126,219	130,616
Dividends	205,887	200,010	207,912	159,733	162,817	182,853	203,533	260,013	273,733	223,927
Real estate income <sup>1/</sup>	NA	NA	NA	87,796	48,510	101,283	74,115	95,533	89,327	108,844
Miscellaneous income	5,160	1,687	1,849	4,231	2,059	5,269	889	3,713	27,381	3,426
Total investing activities income/(loss)	3,668,478	4,304,139	(5,058,693)	5,853,153	4,066,432	5,352,636	(1,312,544)	4,196,726	1,750,161	249,996
Investment expenses	(165,707)	(179,977)	(157,345)	(172,375)	(149,509)	(179,344)	(133,146)	(135,079)	(167,712)	(166,610)
Net income/(loss) from investing activities	3,502,771	4,124,162	(5,216,038)	5,680,778	3,916,923	5,173,292	(1,445,690)	4,061,647	1,582,449	83,386
From securities lending activities										
Securities lending income	2,252	2,995	2,993	1,891	2,617	2,587	3,771	4,883	4,893	5,105
Securities lending expenses	(225)	(299)	(299)	(189)	(261)	(255)	(372)	(475)	(489)	(501)
Net income from securities lending activities	2,027	2,696	2,694	1,702	2,356	2,332	3,399	4,408	4,404	4,604
Net investment income/(loss)	\$3,504,798	\$4,126,858	(\$5,213,344)	\$5,682,480	\$3,919,279	\$5,175,624	(\$1,442,291)	\$4,066,055	\$1,586,853	\$87,990

<sup>1/</sup>In 2023, SERS began to report real estate income from limited partnerships and separately managed accounts as part of net appreciation/(depreciation) in fair value of investments and income from real estate investment trusts as part of dividends. Certain 2022 figures were restated to conform to 2023 reporting

Source: Pennsylvania State Employees' Retirement System

## Schedules of Active Member and Participant Statistics

December 31, 2024 (unaudited)

### Defined Benefit Plan Active Member Statistics

Year Ended	Male			Female			Total Number of Active Members
	Average Age	Average Service	Average Salary	Average Age	Average Service	Average Salary	
2024	45.54	10.96	\$76,737	46.74	10.35	\$67,348	100,131
2023	45.78	11.20	74,220	46.91	10.58	64,263	98,115
2022	46.04	11.50	72,502	47.15	10.89	61,970	96,395
2021	46.11	11.59	69,621	47.14	11.01	59,482	97,857
2020	46.11	11.57	68,125	46.93	10.90	58,182	100,962
2019	46.00	11.51	66,220	46.61	10.71	55,439	102,850
2018	46.06	11.65	64,716	46.62	10.83	53,794	103,007
2017	46.23	11.79	62,739	46.61	10.97	52,049	102,978
2016	46.15	11.73	60,965	46.51	10.95	50,629	104,632
2015	46.33	11.94	61,639	46.57	11.11	50,525	105,205

### Defined Contribution Plan Active Participant Statistics<sup>1/</sup>

Year Ended	Male			Female			Total Number of Active Participants
	Average Age	Average Service	Average Salary	Average Age	Average Service	Average Salary	
2024	41.50	1.87	\$55,967	41.44	1.89	\$53,783	28,763
2023	41.41	1.54	52,496	41.22	1.55	50,653	23,543
2022	41.30	1.30	50,329	41.16	1.29	48,233	17,711
2021	40.93	1.01	46,806	40.65	1.05	45,513	13,441
2020	40.50	0.64	44,651	39.92	0.64	43,709	10,237
2019	39.14	0.21	41,172	38.64	0.16	40,004	6,814

<sup>1/</sup>Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Source: Pennsylvania State Employees' Retirement System

# STATISTICAL SECTION

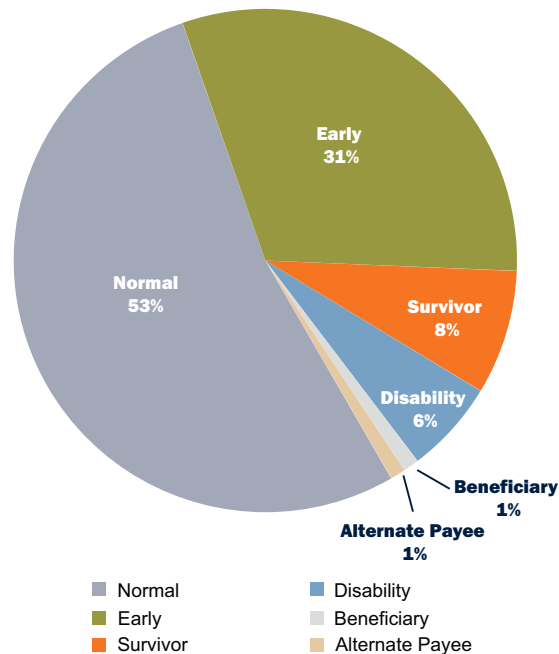
## Schedule of Retired Members by Type of Benefit

December 31, 2024 (unaudited)

### Defined Benefit Plan 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	\$5,917,378	24,663	5,139	313	15,707	396	2,496	612
> 500 to 1,000	14,471,327	19,352	8,555	2,719	4,617	304	2,563	594
> 1,000 to 1,500	21,529,421	17,340	8,953	2,145	3,666	160	1,979	437
> 1,500 to 2,000	26,310,172	15,078	8,268	1,211	4,013	106	1,274	206
> 2,000 to 2,500	30,143,260	13,443	7,865	758	3,792	60	894	74
> 2,500 to 3,000	30,023,234	10,945	6,942	429	2,915	35	577	47
> 3,000 to 3,500	30,817,223	9,505	6,378	246	2,420	24	419	18
> 3,500 to 4,000	26,355,333	7,057	5,116	130	1,568	17	221	5
> 4,000 to 4,500	22,976,398	5,429	4,160	73	1,025	16	153	2
> 4,500 to 5,000	17,903,084	3,780	2,938	31	687	7	113	4
> 5,000 to 5,500	15,284,515	2,917	2,144	20	657	7	88	1
> 5,500 to 6,000	13,043,477	2,273	1,633	13	570	4	53	—
> 6,000	44,774,756	5,838	4,511	13	1,189	4	120	1
<b>Totals</b>	<b>\$299,549,578</b>	<b>137,620</b>	<b>72,602</b>	<b>8,101</b>	<b>42,826</b>	<b>1,140</b>	<b>10,950</b>	<b>2,001</b>

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



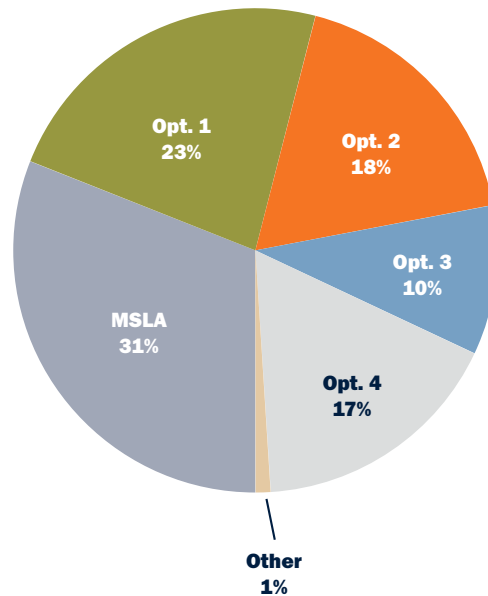
Source: Pennsylvania State Employees' Retirement System

## Schedule of Retired Members by Option

December 31, 2024 (unaudited)

### Defined Benefit Plan Retired Members by Option

Amount of Monthly Benefits	Total Monthly Benefits	Total Number of Retirees	Option Selected					
			MSLA	Opt. 1	Opt. 2	Opt. 3	Opt. 4	Other
≤ \$500	\$5,917,378	24,663	5,822	9,771	5,109	1,204	2,344	413
> 500 to 1,000	14,471,327	19,352	6,831	4,097	3,863	1,840	2,399	322
> 1,000 to 1,500	21,529,421	17,340	5,554	3,524	3,524	1,820	2,752	166
> 1,500 to 2,000	26,310,172	15,078	4,758	3,066	2,706	1,793	2,641	114
> 2,000 to 2,500	30,143,260	13,443	4,057	2,718	2,312	1,605	2,688	63
> 2,500 to 3,000	30,023,234	10,945	3,459	2,147	1,746	1,318	2,237	38
> 3,000 to 3,500	30,817,223	9,505	2,921	1,896	1,406	1,171	2,086	25
> 3,500 to 4,000	26,355,333	7,057	2,360	1,336	950	937	1,456	18
> 4,000 to 4,500	22,976,398	5,429	1,794	963	716	700	1,240	16
> 4,500 to 5,000	17,903,084	3,780	1,228	631	493	486	935	7
> 5,000 to 5,500	15,284,515	2,917	935	447	368	334	826	7
> 5,500 to 6,000	13,043,477	2,273	735	351	257	300	626	4
> 6,000	44,774,756	5,838	2,037	787	675	784	1,551	4
<b>Totals</b>	<b>\$299,549,578</b>	<b>137,620</b>	<b>42,491</b>	<b>31,734</b>	<b>24,125</b>	<b>14,292</b>	<b>23,781</b>	<b>1,197</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: Pennsylvania State Employees' Retirement System

# STATISTICAL SECTION

## Schedule of Average Monthly Benefit Payments

December 31, 2024 (unaudited)

### Defined Benefit Plan 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 1/1/2024 to 12/31/2024</b>							
Average monthly benefit	\$276	\$678	\$1,086	\$2,029	\$3,080	\$4,618	\$5,409
Average final average salary	\$37,193	\$54,257	\$62,798	\$73,059	\$84,719	\$97,694	\$93,677
Number of retired members	54	326	608	582	887	737	916
<b>Period 1/1/2023 to 12/31/2023</b>							
Average monthly benefit	\$243	\$667	\$997	\$1,937	\$2,731	\$4,486	\$5,616
Average final average salary	\$47,958	\$54,838	\$58,715	\$70,003	\$76,106	\$97,084	\$93,866
Number of retired members	45	409	653	593	868	739	931
<b>Period 1/1/2022 to 12/31/2022</b>							
Average monthly benefit	\$263	\$649	\$1,113	\$1,859	\$2,663	\$4,163	\$5,344
Average final average salary	\$45,502	\$53,553	\$58,346	\$67,185	\$74,767	\$91,570	\$91,041
Number of retired members	68	440	767	684	967	854	1,121
<b>Period 1/1/2021 to 12/31/2021</b>							
Average monthly benefit	\$379	\$664	\$1,081	\$1,750	\$2,636	\$4,327	\$4,996
Average final average salary	\$46,456	\$50,055	\$56,535	\$63,821	\$73,421	\$92,746	\$86,031
Number of retired members	55	409	832	576	1,040	829	1,179
<b>Period 1/1/2020 to 12/31/2020</b>							
Average monthly benefit	\$253	\$615	\$1,099	\$1,669	\$2,535	\$4,029	\$4,728
Average final average salary	\$41,977	\$51,381	\$55,608	\$62,136	\$72,097	\$86,841	\$83,005
Number of retired members	49	412	599	539	886	810	1,084
<b>Period 1/1/2019 to 12/31/2019</b>							
Average monthly benefit	\$258	\$570	\$1,061	\$1,606	\$2,422	\$3,778	\$4,654
Average final average salary	\$44,084	\$48,697	\$55,118	\$59,822	\$68,438	\$82,120	\$80,137
Number of retired members	76	512	839	574	861	940	1,178
<b>Period 1/1/2018 to 12/31/2018</b>							
Average monthly benefit	\$284	\$531	\$1,018	\$1,556	\$2,467	\$3,937	\$4,466
Average final average salary	\$39,834	\$46,591	\$54,260	\$58,668	\$68,305	\$84,510	\$78,312
Number of retired members	51	586	808	578	799	1,008	1,093
<b>Period 1/1/2017 to 12/31/2017</b>							
Average monthly benefit	\$226	\$488	\$928	\$1,490	\$2,352	\$3,853	\$4,495
Average final average salary	\$36,612	\$43,755	\$51,691	\$56,721	\$65,980	\$83,170	\$78,194
Number of retired members	46	681	820	526	788	1,033	1,166
<b>Period 1/1/2016 to 12/31/2016</b>							
Average monthly benefit	\$331	\$472	\$987	\$1,574	\$2,259	\$4,116	\$4,349
Average final average salary	\$48,086	\$45,428	\$51,515	\$57,976	\$63,844	\$85,896	\$75,240
Number of retired members	53	777	786	528	845	1,209	1,332
<b>Period 1/1/2015 to 12/31/2015</b>							
Average monthly benefit	\$308	\$433	\$896	\$1,369	\$2,279	\$3,396	\$4,214
Average final average salary	\$43,955	\$44,272	\$48,934	\$53,496	\$64,173	\$75,168	\$72,142
Number of retired members	71	924	744	515	772	1,036	1,454

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

Source: Pennsylvania State Employees' Retirement System

Schedule of Average Annual Benefit Payments  
December 31, 2024 (unaudited)

Defined Benefit Plan 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	\$8,677	\$9,237
25-29	NA	NA	NA	NA	NA	NA	14,795	11,533
30-34	NA	NA	\$1,356	\$1,388	\$18,522	\$17,881	8,932	9,409
35-39	NA	NA	2,441	1,714	19,362	15,438	10,387	10,965
40-44	NA	NA	3,647	2,264	22,625	17,790	11,407	10,572
45-49	NA	NA	11,952	4,292	23,856	17,253	9,808	11,179
50-54	\$60,160	\$42,734	29,528	8,452	23,793	18,988	8,495	14,527
55-59	54,697	49,161	35,513	15,149	22,282	19,751	12,298	16,020
60-64	44,367	38,189	29,416	18,949	20,485	17,879	11,990	15,925
65-69	36,114	31,730	24,907	18,058	18,859	16,877	12,869	16,794
70-74	32,092	29,241	23,339	17,593	16,753	15,818	14,161	18,118
75-79	31,959	26,374	23,770	16,270	15,405	14,112	14,352	18,180
80-84	32,702	23,077	20,723	13,527	11,691	10,904	13,792	18,168
85-89	30,845	18,993	16,413	10,787	9,256	9,105	12,795	16,472
90 and over	27,448	13,885	15,525	9,428	9,618	7,702	10,302	13,462
Total Average	\$35,762	\$28,448	\$24,483	\$15,076	\$18,822	\$16,219	\$12,933	\$16,817

	Normal	Early	Disability	Beneficiary and Survivor
Average Pension	\$32,669	\$19,876	\$17,462	\$16,331
Average Age	73.1	67.8	66.3	75.1

Source: Pennsylvania State Employees' Retirement System

# STATISTICAL SECTION

## Schedule of Employer/Agency Participation

December 31, 2024 (unaudited)

### Defined Benefit Plan Schedule of Employer/Agency Participation - 5 Largest

# - Number of active members

% - Percentage of total active members

Year Ended	Department of Corrections		Department of Human Services		Department of Transportation		Pennsylvania State University		Pennsylvania State Police		Active Members for 5 Largest Employers/Agencies	
	#	%	#	%	#	%	#	%	#	%	#	%
2024 <sup>1/</sup>	14,829	14.81	14,433	14.41	11,992	11.98	6,830	6.82	6,357	6.35	54,441	54.37
2023 <sup>2/</sup>	14,634	14.92	14,050	14.32	11,543	11.76	6,926	7.06	6,339	6.46	53,492	54.52
2022 <sup>3/</sup>	14,424	14.96	14,360	14.90	11,352	11.78	6,627	6.87	6,283	6.52	53,046	55.03
2021 <sup>3/</sup>	14,701	15.02	15,147	15.48	11,841	12.10	6,455	6.60	6,385	6.52	54,529	55.72
2020 <sup>4/</sup>	15,143	15.00	16,074	15.92	12,023	11.91	6,653	6.59	6,362	6.30	56,255	55.72
2019 <sup>4/</sup>	15,359	14.93	16,404	15.95	12,144	11.81	6,868	6.68	6,432	6.25	57,207	55.62
2018 <sup>4/</sup>	15,610	15.15	16,396	15.92	12,088	11.74	6,772	6.57	6,353	6.17	57,219	55.55
2017 <sup>4/</sup>	15,435	14.99	16,624	16.14	12,221	11.87	6,308	6.13	6,255	6.07	56,843	55.20
2016 <sup>5/</sup>	15,752	15.05	17,205	16.44	12,312	11.77	6,367	6.09	6,219	5.94	57,855	55.29
2015 <sup>6/</sup>	15,362	14.60	17,085	16.27	12,434	11.82	6,111	5.81	6,459	6.14	57,451	54.61

Numbers may not add due to rounding.

<sup>1/</sup>The membership includes 35 employers, and the commonwealth is classified as its largest employer. The commonwealth is comprised of 63 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 97 participating employers/agencies.

<sup>2/</sup>The membership includes 35 employers, and the commonwealth is classified as its largest employer. The commonwealth is comprised of 64 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 98 participating employers/agencies.

<sup>3/</sup>The membership includes 38 employers, and the commonwealth is classified as its largest employer. The commonwealth is comprised of 64 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 101 participating employers/agencies.

<sup>4/</sup>The membership includes 38 employers, and the commonwealth is classified as its largest employer. The commonwealth is comprised of 65 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 102 participating employers/agencies.

<sup>5/</sup>The membership includes 38 employers, and the commonwealth is classified as its largest employer. The commonwealth is comprised of 66 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 103 participating employers/agencies.

<sup>6/</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, the Defined Benefit Plan has a total of 104 participating employers/agencies.

Source: Pennsylvania State Employees' Retirement System

## Schedule of Employer/Agency Participation

December 31, 2024 (unaudited)

### Defined Contribution Plan Schedule of Employer/Agency Participation - 5 Largest<sup>1/</sup>

# - Number of active participants

% - Percentage of total active participants

Year Ended	Department of Transportation		Department of Human Services		Liquor Control Board		Pennsylvania State University		Department of Labor and Industry		Active Participants for 5 Largest Employers/Agencies	
	#	%	#	%	#	%	#	%	#	%	#	%
2024 <sup>2/</sup>	4,658	16.19	4,447	15.46	2,940	10.22	2,596	9.03	1,733	6.03	16,374	56.93
2023 <sup>3/</sup>	3,671	15.59	3,514	14.93	2,477	10.52	2,330	9.90	1,499	6.37	13,491	57.30
2022 <sup>4/</sup>	2,785	15.72	2,805	15.84	1,923	10.86	1,709	9.65	1,098	6.20	10,320	58.27
2021 <sup>5/</sup>	2,324	17.29	2,360	17.56	1,309	9.74	1,120	8.33	797	5.93	7,910	58.85
2020 <sup>6/</sup>	1,650	16.12	1,979	19.33	1,030	10.06	847	8.27	678	6.62	6,184	60.41
2019 <sup>7/</sup>	1,062	15.59	1,357	19.91	634	9.30	606	8.89	385	5.65	4,044	59.35

Numbers may not add due to rounding.

<sup>1/</sup>Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

<sup>2/</sup>Participation includes 19 employers, and the commonwealth is classified as its largest employer. The commonwealth is comprised of 60 agencies and when everything is evaluated separately, the Defined Contribution Plan has a total of 78 participating employers/agencies.

<sup>3/</sup>Participation includes 20 employers, and the commonwealth is classified as its largest employer. The commonwealth is comprised of 60 agencies and when everything is evaluated separately, the Defined Contribution Plan has a total of 79 participating employers/agencies.

<sup>4/</sup>Participation includes 20 employers, and the commonwealth is classified as its largest employer. The commonwealth is comprised of 59 agencies and when everything is evaluated separately, the Defined Contribution Plan has a total of 78 participating employers/agencies.

<sup>5/</sup>Participation includes 21 employers, and the commonwealth is classified as its largest employer. The commonwealth is comprised of 57 agencies and when everything is evaluated separately, the Defined Contribution Plan has a total of 77 participating employers/agencies.

<sup>6/</sup>Participation includes 20 employers, and the commonwealth is classified as its largest employer. The commonwealth is comprised of 57 agencies and when everything is evaluated separately, the Defined Contribution Plan has a total of 76 participating employers/agencies.

<sup>7/</sup>Participation includes 18 employers, and the commonwealth is classified as its largest employer. The commonwealth is comprised of 54 agencies and when everything is evaluated separately, the Defined Contribution Plan has a total of 71 participating employers/agencies.

Source: Pennsylvania State Employees' Retirement System



# STATISTICAL SECTION

## Schedule of Employer/Agency Participation

As of December 31, 2024 (unaudited)

### Complete Listing of Defined Benefit Plan Employers/Agencies<sup>1/</sup>

Administrative Office of Pennsylvania Courts*	Legislative Data Processing Center*
Bloomsburg University Community Activities	Legislative Reference Bureau*
Bucks County Community College	Lehigh Carbon Community College*
California University Student Association, Inc.	Liquor Control Board*
Capitol Preservation Committee	Local Government Commission*
Center for Rural Pennsylvania*	Luzerne County Community College*
Central Susquehanna Intermediate Unit	Mansfield University Community Services, Inc.
Clarion University Students' Association*	Milk Board*
Community College of Allegheny County*	Millersville University Student Services, Inc.
Community College of Beaver County	Montgomery County Community College
Community College of Philadelphia	Northampton Community College
Delaware County Community College	Office of Attorney General*
Delaware River Joint Toll Bridge Commission*	Office of Liquidations and Rehabilitations*
Delaware River Port Authority*	Office of the Governor*
Delaware Valley Regional Planning Commission*	Office of the Lieutenant Governor*
Department of Aging*	Patient Safety Authority*
Department of Agriculture*	Pennsylvania College of Technology*
Department of Banking and Securities*	Pennsylvania Convention Center Authority*
Department of Community and Economic Development*	Pennsylvania Emergency Management Agency*
Department of Conservation and Natural Resources*	Pennsylvania Gaming Control Board*
Department of Corrections*	Pennsylvania Health Care Cost Containment Council*
Department of Drug and Alcohol Programs*	Pennsylvania Higher Education Assistance Agency*
Department of Education*	Pennsylvania Highlands Community College
Department of Environmental Protection*	Pennsylvania Housing Finance Agency
Department of General Services*	Pennsylvania Infrastructure Investment Authority*
Department of Health*	Pennsylvania Municipal Retirement System*
Department of Human Services*	Pennsylvania Parole Board*
Department of Labor and Industry*	Pennsylvania Port Authority*
Department of Military and Veterans Affairs*	Pennsylvania State Employees' Retirement System*
Department of Revenue*	Pennsylvania State Police*
Department of State*	Pennsylvania State Senate*
Department of the Auditor General*	Pennsylvania State University*
Department of Transportation*	Pennsylvania Treasury*
East Stroudsburg University Student Activity Association, Inc.*	Pennsylvania Turnpike Commission*
Environmental Hearing Board*	Port Authority Transit Corporation*
Executive Offices*	Public School Employees' Retirement System*
Fish and Boat Commission*	Public Utility Commission*
Game Commission*	Reading Area Community College*
Harrisburg Area Community College*	Shippensburg University Student Services, Inc.
Historical and Museum Commission*	Slippery Rock Student Government Association, Inc.
House Democratic Appropriations Committee*	State Civil Service Commission*
House of Representatives*	State Ethics Commission*
Independent Fiscal Office*	State Public School Building Authority
Independent Regulatory Review Commission*	State System of Higher Education*
Indiana University Student Co-op Association*	Susquehanna River Basin Commission*
Insurance Department*	Thaddeus Stevens College of Technology*
Joint State Government Commission*	West Chester University Student Services, Inc.*
Kutztown University Student Services, Inc.	Westmoreland County Community College
Legislative Budget and Finance Committee*	

<sup>1/</sup>The membership includes 35 employers and the commonwealth is classified as its largest employer. The commonwealth is comprised of 63 agencies and when everything is evaluated separately, the Defined Benefit Plan has a total of 97 participating employers/agencies.

\*These employers currently have active participants in the Defined Contribution Plan.



**State Employees' Retirement System**

30 N 3rd St, Suite 150

Harrisburg, PA 17101-1716

1.800.633.5461

[www.SERS.pa.gov](http://www.SERS.pa.gov)